

People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research
University "Frères Mentouri", Constantine 1
Faculty of Letters and Languages
Department of Letters and English

**The Effects of Image-Schema-Based Instruction on Learning/
Acquiring Polysemous Prepositions**

The Case of Second Year Students of English at the University

"Frères Mentouri", Constantine 1

**Thesis submitted to the Department of Letters and English
in candidacy for the degree of Doctorat LMD
in "Didactique des Langues Etrangères"**

By: BOUCHENEK Hasna Lamis

Supervisor: Prof. ABDERRAHIM Farida

Board of Examiners:

Chairman: Prof. BELOUAHEM Riad	University "Frères Mentouri", Constantine 1
Supervisor: Prof. ABDERRAHIM Farida	University "Frères Mentouri", Constantine 1
Examiner: Prof. OUSKOURT Mohamed	University "Emir Abdelkader", Constantine 1
Examiner: Prof. BEGHOUL Youcef	University "Frères Mentouri", Constantine 1
Examiner: Dr. MERROUCHE Sarah	University "Larbi Ben M'hidi", Oum El Bouaghi
Examiner: Dr. CHELLI Saliha	University "Mohamed Khider", Biskra

2017

Dedication

In the Name of God, the Most Gracious, the Most Merciful

This thesis is dedicated with love and affection to my dear parents and to my beloved brothers: *Mondher Islem*, *Nour al Amine* and *Imed Eddine* who always light up my life, support me emotionally and be there for me.

The dedication also extends to all my family.

May Allah bless you all with good health and righteous long life. Amen!

This work is also dedicated to the memory of my grandmother, *Cherifa*, to my grandfathers, *Ibrahim* and *Mohamed*, and to my aunt, *Akila*. May Allah have mercy upon them. Amen!

Acknowledgements

First and foremost, I wish to thank God for the strength and courage He provided me to complete this doctoral thesis. It was a lengthy journey which would not have been possible without Him.

I would also like to express my deepest appreciation and gratitude to my supervisor, Prof. ABDERRAHIM Farida, who guided me to develop my study and offered me valuable suggestions. A great deal of regards goes to her for all her support, professional guidance and supervision throughout the completion of this research.

I am very honoured and thankful to Prof. BELOUAHM Riad, Prof. OUSKOURT Mohamed, Prof. BEGHOUL Youcef, Dr. MERROUCHE Sarah and Dr. CHELLI Saliha for their acceptance to be members of the board of examiners, and for the time and efforts which they devoted to evaluate this research work. Your comments and suggestions are highly valued and appreciated.

I want to express my innermost gratefulness and heartfelt thanks to my mother, my father, my brothers, my aunt and her family for their immense support, faith in me, encouragement, understanding and patience that have endured my ups and downs during my study. Special thanks to my brother, *Mondher Islem*, for lifting a big weight from my shoulders by helping me with innumerable details throughout the writing of this thesis.

Furthermore, I offer my thanks to Second Year students of English at the University “Frères Mentouri”, Constantine 1, who contributed to this research. I am appreciative of their assistance during the practical work. Finally, I owe a debt of thanks to my teachers, my friends and to all those who guided me in any case during the completion of this study as well as my life.

Abstract

Polysemous prepositions, which express various meanings, represent a real challenge for students. The many meanings of these words have always been pedagogically treated in a piecemeal fashion and as largely arbitrary, or they have not been given the proper attention they deserve. This makes their learning more complicated because learners keep on experiencing difficulty with their semantics. However, the use of a new way to teach polysemous prepositions such as applying image-schemas seems to be very promising. The present study aims at presenting the characteristics of the semantics of polysemous prepositions and examining the efficacy of image-schema-based instruction on learning the semantics of the English prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through* which serve as representative examples. It also investigates the students' attitudes towards the usefulness of this form of instruction through administering a Students' Questionnaire. Eighty students studying English as a foreign language at the University "Frères Mentouri", Constantine 1 were chosen randomly. They were divided into a Control Group and an Experimental Group. Comparisons of the pre-test and post-test results show that the group who received instruction based on image-schemas experienced a change in their understanding and use of the semantics of the target prepositions. The analysis of the Students' Questionnaire also reveals that the students held positive attitudes towards the use of image-schema-based instruction. On the basis of the results of the Students' Questionnaire and the Experiment, it can be deduced that image-schema-based instruction plays an important role in improving the learning of polysemous prepositions, and it can serve as a vital tool in teaching them. This study provides evidence for the importance of dealing with polysemous prepositions and how revisiting the way they are taught through applying image-schema-based instruction can bring forth a new breath to their learning.

Keywords: polysemous prepositions, image-schema-based instruction, semantics, polysemy.

List of Abbreviations

CL: Cognitive Linguistics

Det: Determiner

EFL: English as a Foreign Language

FL: Foreign Language

ISBI: Image-Schema-Based Instruction

LM: Landmark

LMD: Licence Master Doctorate

N: Noun

No.: Number

NP: Noun Phrase

PLE: Principle of Least Effort

TR: Trajector

vs.: Versus

List of Tables

	Pages
Table 1.1: Words with the Greatest Number of Senses in the Merriam-Webster Pocket Dictionary (Amsler, 1980; cited in Hirst, 1987, p. 5)	11
Table 4.1: The Distribution of the Treatment Sessions	136
Table 4.2: The Number of Senses Included in Part One	139
Table 4.3: The Awareness of the ' <i>Inclusion Sense</i> ': The Control Group/the Pre-Test	142
Table 4.4: The Awareness of the ' <i>Preference Sense</i> ': The Control Group/the Pre-Test	143
Table 4.5: The Awareness of the ' <i>all over Sense</i> ': The Control Group/the Pre-Test	143
Table 4.6: The Awareness of the ' <i>Distribution Sense</i> ': The Control Group/the Pre-Test	144
Table 4.7: The Awareness of the ' <i>Completion Sense</i> ': The Control Group/the Pre-Test	145
Table 4.8: The Awareness of ' <i>Metaphorical Contact</i> ': The Control Group/the Pre-Test	146
Table 4.9: The Awareness of the ' <i>above-Sense of over</i> ': The Control Group/the Pre-Test	147
Table 4.10: The Awareness of the ' <i>Completion Sense of through</i> ': The Control Group/ the Pre-Test	147
Table 4.11: The Awareness of the ' <i>Superior Sense</i> ': The Control Group/the Pre-Test	148
Table 4.12: The Awareness of the ' <i>Excess Sense</i> ': The Control Group/the Pre-Test	149
Table 4.13: The Awareness of ' <i>Get across</i> ': The Control Group/the Pre-Test	150
Table 4.14: The Awareness of ' <i>Partial Enclosure</i> ': The Control Group/the Pre-Test	150
Table 4.15: The Awareness of the ' <i>Repetition Sense</i> ': The Control Group/the Pre-Test	151
Table 4.16: The Awareness of the ' <i>Static Sense of out</i> ': The Control Group/the Pre-Test	152
Table 4.17: The Awareness of the ' <i>by Means of Sense</i> ': The Control Group/the Pre-Test	153
Table 4.18: The Awareness of the ' <i>Basic Sense of across</i> ': The Control Group/	

the Pre-Test	153
Table 4.19: The Awareness of the ‘ <i>Basic Sense of on</i> ’: The Control Group/ the Pre-Test	154
Table 4.20: The Awareness of the ‘ <i>Dynamic Sense of over</i> ’: The Control Group/ the Pre-Test	155
Table 4.21: The Awareness of ‘ <i>Metaphorical Containment</i> ’: The Control Group/ the Pre-Test	156
Table 4.22: The Awareness of the ‘ <i>Separation Sense</i> ’: The Control Group/the Pre-Test	156
Table 4.23: The Awareness of the ‘ <i>Exclusion Sense</i> ’: The Control Group/the Pre-Test	157
Table 4.24: The Awareness of the ‘ <i>Covering Sense</i> ’: The Control Group/the Pre-Test	158
Table 4.25: The Awareness of the ‘ <i>Static Sense of through</i> ’: The Control Group/ the Pre-Test	159
Table 4.26: The Awareness of the ‘ <i>State Sense</i> ’: The Control Group/the Pre-Test	160
Table 4.27: The Awareness of the ‘ <i>Dynamic Sense of on</i> ’: The Control Group/ the Pre-Test	160
Table 4.28: The Awareness of the ‘ <i>Static Sense of over</i> ’: The Control Group/ the Pre-Test	161
Table 4.29: The Awareness of the ‘ <i>Basic Sense of in</i> ’: The Control Group/the Pre-Test	162
Table 4.30: The Awareness of the ‘ <i>Basic Sense of above</i> ’: The Control Group/ the Pre-Test	163
Table 4.31: The Awareness of the ‘ <i>Cause Sense</i> ’: The Control Group/the Pre-Test	163
Table 4.32: The Awareness of the Sense ‘ <i>Recovered from</i> ’: The Control Group/	

the Pre-Test	164
Table 4.33: The Awareness of the ' <i>No More Sense</i> ': The Control Group/the Pre-Test	165
Table 4.34: The Awareness of the ' <i>Rotated Schema of on</i> ': The Control Group/ the Pre-Test	166
Table 4.35: The Awareness of the ' <i>Appearance Sense</i> ': The Control Group/the Pre-Test	167
Table 4.36: The Awareness of the ' <i>Activity Sense</i> ': The Control Group/the Pre-Test	167
Table 4.37: The Awareness of the ' <i>above-across Sense</i> ': The Control Group/ the Pre-Test	168
Table 4.38: The Awareness of ' <i>Come across</i> ': The Control Group/the Pre-Test	169
Table 4.39: The Awareness of the ' <i>Dynamic Sense of above</i> ': The Control Group/ the Pre-Test	169
Table 4.40: The Awareness of the ' <i>Dynamic Sense of in</i> ': The Control Group/ the Pre- Test	170
Table 4.41: The Awareness of ' <i>Contact Indicated by over</i> ': The Control Group/ the Pre-Test	171
Table 4.42: The Awareness of the ' <i>More than Sense</i> ': The Control Group/ the Pre-Test	172
Table 4.43: The Awareness of the ' <i>Basic Sense of out</i> ': The Control Group/ the Pre-Test	172
Table 4.44: The Awareness of the ' <i>Blockage Sense</i> ': The Control Group/the Pre-Test	173
Table 4.45: The Awareness of the ' <i>Static Sense of across</i> ': The Control Group/ the Pre-Test	174
Table 4.46: The Awareness of the ' <i>Control Sense</i> ': The Control Group/the Pre-Test	175

Table 4.47: The Awareness of the ' <i>Basic Sense of through</i> ': The Control Group/ the Pre-Test	175
Table 4.48: The Awareness of the ' <i>Earlier Sense</i> ': The Control Group/the Pre-Test	176
Table 4.49: The Awareness of the ' <i>More Sense</i> ': The Control Group/the Pre-Test	177
Table 4.50: The Awareness of the ' <i>Use of in to Indicate Shapes</i> ': The Control Group/ the Pre-Test	177
Table 4.51: The Awareness of the ' <i>Burden Metaphor</i> ': The Control Group/the Pre-Test	178
Table 4.52: The Control Group's Use of the ' <i>Dynamic Sense of in</i> ' in the Pre-Test	179
Table 4.53: The Control Group's Use of <i>Get across</i> in the Pre-Test	180
Table 4.54: The Control Group's Use of the ' <i>Separation Sense of above</i> ' in the Pre-Test	181
Table 4.55: The Control Group's Use of the ' <i>Static Sense of across</i> ' in the Pre-Test	182
Table 4.56: The Control Group' Use of the ' <i>Static Sense of on</i> ' in the Pre-Test	183
Table 4.57: The Control Group's Use of the ' <i>Dynamic Sense of through</i> ' in the Pre-Test	184
Table 4.58: The Control Group's Use of the ' <i>Burden Metaphor</i> ' in the Pre-Test	185
Table 4.59: The Control Group's Use of the ' <i>Dynamic Sense of over</i> ' in the Pre-Test	185
Table 4.60: The Spatial Use of <i>above</i> by the Control Group in the Pre-Test	186
Table 4.61: The Control Group's Use of the ' <i>Dynamic Sense of on</i> ' in the Pre-Test	187
Table 4.62: The Control Group's Use of the ' <i>Dynamic Sense of out</i> ' in the Pre-Test	188
Table 4.63: The Control Group's Use of the ' <i>Static Sense of in</i> ' in the Pre-Test	189
Table 4.64: The Control Group's Use of the ' <i>Covering Sense of over</i> ' in the Pre-Test	190
Table 4.65: The Control Group's Use of the ' <i>Distribution Sense of out</i> ' in the Pre-Test	190
Table 4.66: The Control Group's Use of the ' <i>Dynamic Sense of above</i> ' in the Pre-Test	191
Table 4.67: The Control Group's Use of the ' <i>State Sense of in</i> ' in the Pre-Test	192

Table 4.68: The Control Group’s Use of the ‘ <i>Static Sense of out</i> ’ in the Pre-Test	192
Table 4.69: The Control Group’s Use of the ‘ <i>Completion Sense of over</i> ’ in the Pre-Test	193
Table 4.70: The Control Group’s Use of the ‘ <i>Dynamic Sense of over</i> ’ in the Pre-Test	194
Table 4.71: The Control Group’s Use of <i>through</i> Spatially in the Pre-Test	194
Table 4.72: The Control Group’s Use of the ‘ <i>Means Sense</i> ’ in the Pre-Test	195
Table 4.73: The Awareness of the ‘ <i>Inclusion Sense</i> ’: The Experimental Group/ the Pre-Test	196
Table 4.74: The Awareness of the ‘ <i>Preference Sense</i> ’: The Experimental Group/ the Pre-Test	197
Table 4.75: The Awareness of the ‘ <i>All over Sense</i> ’: The Experimental Group/ the Pre-Test	198
Table 4.76: The Awareness of the ‘ <i>Distribution Sense</i> ’: The Experimental Group/ the Pre-Test	198
Table 4.77: The Awareness of the ‘ <i>Completion Sense of over</i> ’: The Experimental Group/ the Pre-Test	199
Table 4.78: The Awareness of ‘ <i>Metaphorical Contact</i> ’: The Experimental /the Pre-Test	200
Table 4.79: The Awareness of the ‘ <i>above-Sense of over</i> ’: The Experimental Group/ the Pre-Test	201
Table 4.80: The Awareness of the ‘ <i>Completion Sense of through</i> ’: The Experimental Group/the Pre-Test	201
Table 4.81: The Awareness of the ‘ <i>Superior Sense</i> ’: The Experimental Group/ the Pre-Test	202
Table 4.82: The Awareness of the ‘ <i>Excess Sense</i> ’: The Experimental Group/the Pre-Test	203

Table 4.83: The Awareness of ' <i>Get across</i> ': The Experimental Group/the Pre-Test	203
Table 4.84: The Awareness of ' <i>Partial Enclosure</i> ': The Experimental Group/ the Pre-Test	204
Table 4.85: The Awareness of the ' <i>Repetition Sense</i> ': The Experimental Group/ the Pre-Test	205
Table 4.86: The Awareness of the ' <i>Static Sense of out</i> ': The Experimental Group/ the Pre-Test	206
Table 4.87: The Awareness of the ' <i>by Means of Sense</i> ': The Experimental Group/ the Pre-Test	206
Table 4.88: The Awareness of the ' <i>Basic Sense of across</i> ': The Experimental Group/ the Pre-Test	207
Table 4.89: The Awareness of the ' <i>Basic Sense of on</i> ': The Experimental Group/ the Pre-Test	208
Table 4.90: The Awareness of the ' <i>Dynamic Sense of over</i> ': The Experimental Group/ the Pre-Test	209
Table 4.91: The Awareness of ' <i>Metaphorical Containment</i> ': The Experimental Group/ the Pre-Test	209
Table 4.92: The Awareness of the ' <i>Separation Sense</i> ': The Experimental Group/ the Pre-Test	210
Table 4.93: The Awareness of the ' <i>Exclusion Sense</i> ': The Experimental Group/ the Pre-Test	211
Table 4.94: The Awareness of the ' <i>Covering Sense</i> ': The Experimental Group/	

the Pre-Test	212
Table 4.95: The Awareness of the ' <i>Static Sense of through</i> ': The Experimental Group/ the Pre-Test	212
Table 4.96: The Awareness of the ' <i>State Sense</i> ': The Experimental Group/the Pre-Test	213
Table 4.97: The Awareness of the ' <i>Dynamic Sense of on</i> ': The Experimental Group/ the Pre-Test	214
Table 4.98: The Awareness of the ' <i>Static Sense of over</i> ': The Experimental Group/ the Pre-Test	215
Table 4.99: The Awareness of the ' <i>Basic Sense of in</i> ': The Experimental Group/ the Pre-Test	215
Table 4.100: The Awareness of the ' <i>Basic Sense of above</i> ': The Experimental Group/ the Pre-Test	216
Table 4.101: The Awareness of the ' <i>Cause Sense</i> ': The Experimental Group/ the Pre-Test	217
Table 4.102: The Awareness of the Sense ' <i>Recovered from</i> ': The Experimental Group/ the Pre-Test	218
Table 4.103: The Awareness of the ' <i>No More Sense</i> ': The Experimental Group/ the Pre-Test	218
Table 4.104: The Awareness of the ' <i>Rotated Schema of on</i> ': The Experimental Group/ the Pre-Test	219
Table 4.105: The Awareness of the ' <i>Appearance Sense</i> ': The Experimental Group/ the Pre-Test	220
Table 4.106: The Awareness of the ' <i>Activity Sense</i> ': The Experimental Group/	

the Pre-Test	221
Table 4.107: The Awareness of the ' <i>above-across Sense</i> ': The Experimental Group/ the Pre-Test	221
Table 4.108: The Awareness of ' <i>Come across</i> ': The Experimental Group/the Pre-Test	222
Table 4.109: The Awareness of the ' <i>Dynamic Sense of above</i> ': The Experimental Group/ the Pre-Test	223
Table 4.110: The Awareness of the ' <i>Dynamic Sense of in</i> ': The Experimental Group/ the Pre- Test	224
Table 4.111: The Awareness of ' <i>Contact Indicated by over</i> ': The Experimental Group/the Pre-Test	224
Table 4.112: The Awareness of the ' <i>More than Sense</i> ': The Experimental Group/ the Pre-Test	225
Table 4.113: The Awareness of the ' <i>Basic Sense of out</i> ': The Experimental Group/ the Pre-Test	226
Table 4.114: The Awareness of the ' <i>Blockage Sense</i> ': The Experimental Group/ the Pre-Test	227
Table 4.115: The Awareness of the ' <i>Static Sense of across</i> ': The Experimental Group/ the Pre-Test	228
Table 4.116: The Awareness of the ' <i>Control Sense</i> ': The Experimental Group/ the Pre-Test	228
Table 4.117: The Awareness of the ' <i>Basic Sense of through</i> ': The Experimental Group/ the Pre-Test	229
Table 4.118: The Awareness of the ' <i>Earlier Sense</i> ': The Experimental Group/	

the Pre-Test	230
Table 4.119: The Awareness of the ‘ <i>More Sense</i> ’: The Experimental Group/the Pre-Test	231
Table 4.120: The Awareness of the ‘ <i>Use of in to Indicate Shapes</i> ’: The Experimental Group/the Pre-Test	231
Table 4.121: The Awareness of the ‘ <i>Burden Metaphor</i> ’: The Experimental Group/ the Pre-Test	232
Table 4.122: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of in</i> ’ in the Pre-Test	233
Table 4.123: The Experimental Group’s Use of ‘ <i>Get across</i> ’ in the Pre-Test	234
Table 4.124: The Experimental Group’s Use of the ‘ <i>Separation Sense of above</i> ’ in the Pre Test	235
Table 4.125: The Experimental Group’s Use of the ‘ <i>Static Sense of across</i> ’ in the Pre-Test	236
Table 4.126: The Experimental Group Use of the ‘ <i>Static Sense of on</i> ’ in the Pre-Test	236
Table 4.127: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of through</i> ’ in the Pre-Test	237
Table 4.128: The Experimental Group’s Use of the ‘ <i>Burden Metaphor</i> ’ in the Pre-Test	238
Table 4.129: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of over</i> ’ in the Pre-Test	239
Table 4.130: The Spatial Use of <i>above</i> by the Experimental Group in the Pre-Test	239
Table 4.131: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of on</i> ’ in the Pre-Test	240
Table 4.132: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of out</i> ’ in	

the Pre-Test	241
Table 4.133: The Experimental Group’s Use of the ‘ <i>Static Sense of in</i> ’ in the Pre-Test	242
Table 4.134: The Experimental Group’s Use of the ‘ <i>Covering Sense of over</i> ’ in the Pre-Test	242
Table 4.135: The Experimental Group’s Use of the ‘ <i>Distribution Sense of out</i> ’ in the Pre-Test	243
Table 4.136: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of above</i> ’ in the Pre-Test	244
Table 4.137: The Experimental Group’s Use of the ‘ <i>State Sense of in</i> ’ in the Pre-Test	245
Table 4.138: The Experimental Group’s Use of the ‘ <i>Static Sense of out</i> ’ in the Pre-Test	245
Table 4.139: The Experimental Group’s Use of the ‘ <i>Completion Sense of over</i> ’ in the Pre-Test	246
Table 4.140: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of across</i> ’ in the Pre-Test	247
Table 4.141: The Experimental Group’s Use of <i>through</i> Spatially in the Pre-Test	247
Table 4.142: The Experimental Group’s Use of the ‘ <i>Means Sense</i> ’ in the Pre-Test	248
Table 4.143: The Awareness of the ‘ <i>Inclusion Sense</i> ’: The Control Group/the Post-Test	249
Table 4.144: The Awareness of the ‘ <i>Preference Sense</i> ’: The Control Group/the Post-Test	250
Table 4.145: The Awareness of the ‘ <i>all over Sense</i> ’: The Control Group/the Post-Test	251
Table 4.146: The Awareness of the ‘ <i>Distribution Sense</i> ’: The Control Group/ the Post-Test	251
Table 4.147: The Awareness of the ‘ <i>Completion Sense</i> ’: The Control Group/	

the Post-Test	252
Table 4.148: The Awareness of ' <i>Metaphorical Contact</i> ': The Control Group/ the Post-Test	253
Table 4.149: The Awareness of the ' <i>above-Sense of over</i> ': The Control Group/ the Post-Test	254
Table 4.150: The Awareness of the ' <i>Completion Sense of through</i> ': The Control Group/ the Post-Test	254
Table 4.151: The Awareness of the ' <i>Superior Sense</i> ': The Control Group/the Post-Test	255
Table 4.152: The Awareness of the ' <i>Excess Sense</i> ': The Control Group/the Post-Test	256
Table 4.153: The Awareness of ' <i>Get across</i> ': The Control Group/the Post-Test	256
Table 4.154: The Awareness of ' <i>Partial Enclosure</i> ': The Control Group/the Post-Test	257
Table 4.155: The Awareness of the ' <i>Repetition Sense</i> ': The Control Group/the Post-Test	258
Table 4.156: The Awareness of the ' <i>Static Sense of out</i> ': The Control Group/ the Post-Test	259
Table 4.157: The Awareness of the ' <i>by Means of Sense</i> ': The Control Group/ the Post-Test	259
Table 4.158: The Awareness of the ' <i>Basic Sense of across</i> ': The Control Group/ the Post-Test	260
Table 4.159: The Awareness of the ' <i>Basic Sense of on</i> ': The Control Group/ the Post-Test	261
Table 4.160: The Awareness of the ' <i>Dynamic Sense of over</i> ': The Control Group/ the Post-Test	262

Table 4.161: The Awareness of ‘ <i>Metaphorical Containment</i> ’: The Control Group/ the Post-Test	262
Table 4.162: The Awareness of the ‘ <i>Separation Sense</i> ’: The Control Group/ the Post-Test	263
Table 4.163: The Awareness of the ‘ <i>Exclusion Sense</i> ’: The Control Group/the Post-Test	264
Table 4.164: The Awareness of the ‘ <i>Covering Sense</i> ’: The Control Group/the Post-Test	265
Table 4.165: The Awareness of the ‘ <i>Static Sense of through</i> ’: The Control Group/ the Post-Test	265
Table 4.166: The Awareness of the ‘ <i>State Sense</i> ’: The Control Group/the Post-Test	266
Table 4.167: The Awareness of the ‘ <i>Dynamic Sense of on</i> ’: The Control Group/ the Post-Test	267
Table 4.168: The Awareness of the ‘ <i>Static Sense of over</i> ’: The Control Group/ the Post-Test	268
Table 4.169: The Awareness of the ‘ <i>Basic Sense of in</i> ’: The Control Group/the Post-Test	268
Table 4.170: The Awareness of the ‘ <i>Basic Sense of above</i> ’: The Control Group/ the Post-Test	269
Table 4.171: The Awareness of the ‘ <i>Cause Sense</i> ’: The Control Group/the Post-Test	270
Table 4.172: The Awareness of the Sense ‘ <i>Recovered from</i> ’: The Control Group/ the Post-Test	271
Table 4.173: The Awareness of the ‘ <i>No More Sense</i> ’: The Control Group/the Post-Test	271
Table 4.174: The Awareness of the ‘ <i>Rotated Schema of on</i> ’: The Control Group/ the Post-Test	272

Table 4.175: The Awareness of the ' <i>Appearance Sense</i> ': The Control Group/ the Post-Test	273
Table 4.176: The Awareness of the ' <i>Activity Sense</i> ': The Control Group/the Post-Test	273
Table 4.177: The Awareness of the ' <i>above-across Sense</i> ': The Control Group/ the Post-Test	274
Table 4.178: The Awareness of ' <i>Come across</i> ': The Control Group/the Post-Test	275
Table 4.179: The Awareness of the ' <i>Dynamic Sense of above</i> ': The Control Group/ the Post-Test	276
Table 4.180: The Awareness of the ' <i>Dynamic Sense of in</i> ': The Control Group/ the Post-Test	276
Table 4.181: The Awareness of ' <i>Contact Indicated by over</i> ': The Control Group/ the Post-Test	277
Table 4.182: The Awareness of the ' <i>More than Sense</i> ': The Control Group/ the Post-Test	278
Table 4.183: The Awareness of the ' <i>Basic Sense of out</i> ': The Control Group/ the Post-Test	278
Table 4.184: The Awareness of the ' <i>Blockage Sense</i> ': The Control Group/the Post-Test	279
Table 4.185: The Awareness of the ' <i>Static Sense of across</i> ': The Control Group/ the Post-Test	280
Table 4.186: The Awareness of the ' <i>Control Sense</i> ': The Control Group/the Post-Test	281
Table 4.187: The Awareness of the ' <i>Basic Sense of through</i> ': The Control Group/ the Post-Test	281

Table 4.188: The Awareness of the ' <i>Earlier Sense</i> ': The Control Group/the Post-Test	282
Table 4.189: The Awareness of the ' <i>More Sense</i> ': The Control Group/the Post-Test	283
Table 4.190: The Awareness of the ' <i>Use of in to Indicate Shapes</i> ': The Control Group/ the Post-Test	283
Table 4.191: The Awareness of the ' <i>Burden Metaphor</i> ': The Control Group/the Post-Test	284
Table 4.192: The Control Group's Use of the ' <i>Dynamic Sense of in</i> ' in the Post-Test	285
Table 4.193: The Control Group's Use of <i>Get across</i> in the Post-Test	286
Table 4.194: The Control Group's Use of the ' <i>Separation Sense of above</i> ' in the Post-Test	287
Table 4.195: The Control Group's Use of the ' <i>Static Sense of across</i> ' in the Post-Test	288
Table 4.196: The Control Group' Use of the ' <i>Static Sense of on</i> ' in the Post-Test	288
Table 4.197: The Control Group's Use of the ' <i>Dynamic Sense of through</i> ' in the Post-Test	289
Table 4.198: The Control Group's Use of the ' <i>Burden Metaphor</i> ' in the Post-Test	290
Table 4.199: The Control Group's Use of the ' <i>Dynamic Sense of over</i> ' in the Post-Test	290
Table 4.200: The Spatial Use of <i>above</i> by the Control Group in the Post-Test	291
Table 4.201: The Control Group's Use of the ' <i>Dynamic Sense of on</i> ' in the Post-Test	292
Table 4.202: The Control Group's Use of the ' <i>Dynamic Sense of out</i> ' in the Post-Test	292
Table 4.203: The Control Group's Use of the ' <i>Static Sense of in</i> ' in the Post-Test	293
Table 4.204: The Control Group's Use of the ' <i>Covering Sense of over</i> ' in the Post-Test	294
Table 4.205: The Control Group's Use of the ' <i>Distribution Sense of out</i> ' in the Post-Test	295
Table 4.206: The Control Group's Use of the ' <i>Dynamic Sense of above</i> ' in the Post-Test	295
Table 4.207: The Control Group's Use of the ' <i>State Sense of in</i> ' in the Post-Test	296

Table 4.208: The Control Group’s Use of the ‘ <i>Static Sense of out</i> ’ in the Post-Test	297
Table 4.209: The Control Group’s Use of the ‘ <i>Completion Sense of over</i> ’ in the Post-Test	297
Table 4.210: The Control Group’s Use of the ‘ <i>Dynamic Sense of over</i> ’ in the Post-Test	298
Table 4.211: The Control Group’s Use of <i>through</i> Spatially in the Post-Test	299
Table 4.212: The Control Group’s Use of the ‘ <i>Means Sense</i> ’ in the Post-Test	299
Table 4.213: The Awareness of the ‘ <i>Inclusion Sense</i> ’: The Experimental Group/ the Post-Test	300
Table 4.214: The Awareness of the ‘ <i>Preference Sense</i> ’: The Experimental Group/ the Post-Test	301
Table 4.215: The Awareness of the ‘ <i>All over Sense</i> ’: The Experimental Group/ the Post-Test	302
Table 4.216: The Awareness of the ‘ <i>Distribution Sense</i> ’: The Experimental Group/ the Post-Test	302
Table 4.217: The Awareness of the ‘ <i>Completion Sense of over</i> ’: The Experimental Group/ the Post-Test	303
Table 4.218: The Awareness of ‘ <i>Metaphorical Contact</i> ’: The Experimental / the Post-Test	304
Table 4.219: The Awareness of the ‘ <i>above-Sense of over</i> ’: The Experimental Group/ the Post -Test	305
Table 4.220: The Awareness of the ‘ <i>Completion Sense of through</i> ’: The Experimental Group/the Post-Test	305

Table 4.221: The Awareness of the ' <i>Superior Sense</i> ': The Experimental Group/ the Post-Test	306
Table 4.222: The Awareness of the ' <i>Excess Sense</i> ': The Experimental Group/ the Post-Test	307
Table 4.223: The Awareness of ' <i>Get across</i> ': The Experimental Group/the Post-Test	307
Table 4.224: The Awareness of ' <i>Partial Enclosure</i> ': The Experimental Group/ the Post-Test	308
Table 4.225: The Awareness of the ' <i>Repetition Sense</i> ': The Experimental Group/ the Post-Test	309
Table 4.226: The Awareness of the ' <i>Static Sense of out</i> ': The Experimental Group/ the Post-Test	309
Table 4.227: The Awareness of the ' <i>by Means of Sense</i> ': The Experimental Group/ the Post-Test	310
Table 4.228: The Awareness of the ' <i>Basic Sense of across</i> ': The Experimental Group/ the Post-Test	311
Table 4.229: The Awareness of the ' <i>Basic Sense of on</i> ': The Experimental Group/ the Post-Test	312
Table 4.230: The Awareness of the ' <i>Dynamic Sense of over</i> ': The Experimental Group/ the Post-Test	312
Table 4.231: The Awareness of ' <i>Metaphorical Containment</i> ': The Experimental Group/ the Post-Test	313
Table 4.232: The Awareness of the ' <i>Separation Sense</i> ': The Experimental Group/ the Post-Test	314

Table 4.233: The Awareness of the ' <i>Exclusion Sense</i> ': The Experimental Group/ the Post-Test	315
Table 4.234: The Awareness of the ' <i>Covering Sense</i> ': The Experimental Group/ the Post-Test	315
Table 4.235: The Awareness of the ' <i>Static Sense of through</i> ': The Experimental Group/ the Post-Test	316
Table 4.236: The Awareness of the ' <i>State Sense</i> ': The Experimental Group/the Post-Test	317
Table 4.237: The Awareness of the ' <i>Dynamic Sense of on</i> ': The Experimental Group/ the Post-Test	317
Table 4.238: The Awareness of the ' <i>Static Sense of over</i> ': The Experimental Group/ the Post-Test	318
Table 4.239: The Awareness of the ' <i>Basic Sense of in</i> ': The Experimental Group/ the Post -Test	319
Table 4.240: The Awareness of the ' <i>Basic Sense of above</i> ': The Experimental Group/ the Post-Test	319
Table 4.241: The Awareness of the ' <i>Cause Sense</i> ': The Experimental Group/ the Post-Test	320
Table 4.242: The Awareness of the Sense ' <i>Recovered from</i> ': The Experimental Group/ the Post-Test	321
Table 4.243: The Awareness of the ' <i>No More Sense</i> ': The Experimental Group/ the Post-Test	321
Table 4.244: The Awareness of the ' <i>Rotated Schema of on</i> ': The Experimental Group/ the Post-Test	322

Table 4.245: The Awareness of the ' <i>Appearance Sense</i> ': The Experimental Group/ the Post-Test	323
Table 4.246: The Awareness of the ' <i>Activity Sense</i> ': The Experimental Group/ the Post-Test	324
Table 4.247: The Awareness of the ' <i>above-across Sense</i> ': The Experimental Group/ the Post-Test	324
Table 4.248: The Awareness of ' <i>Come across</i> ': The Experimental Group/the Post-Test	325
Table 4.249: The Awareness of the ' <i>Dynamic Sense of above</i> ': The Experimental Group/ the Post-Test	326
Table 4.250: The Awareness of the ' <i>Dynamic Sense of in</i> ': The Experimental Group/ the Post-Test	326
Table 4.251: The Awareness of ' <i>Contact Indicated by over</i> ': The Experimental Group/the Post-Test	327
Table 4.252: The Awareness of the ' <i>More than Sense</i> ': The Experimental Group/ the Post-Test	328
Table 4.253: The Awareness of the ' <i>Basic Sense of out</i> ': The Experimental Group/ the Post-Test	328
Table 4.254: The Awareness of the ' <i>Blockage Sense</i> ': The Experimental Group/ the Post-Test	329
Table 4.255: The Awareness of the ' <i>Static Sense of across</i> ': The Experimental Group/ the Post-Test	330
Table 4.256: The Awareness of the ' <i>Control Sense</i> ': The Experimental Group/ the Post-Test	330

Table 4.257: The Awareness of the ' <i>Basic Sense of through</i> ': The Experimental Group/ the Post-Test	331
Table 4.258: The Awareness of the ' <i>Earlier Sense</i> ': The Experimental Group/ the Post-Test	332
Table 4.259: The Awareness of the ' <i>More Sense</i> ': The Experimental Group/the Post-Test	332
Table 4.260: The Awareness of the ' <i>Use of in to Indicate Shapes</i> ': The Experimental Group/the Post-Test	333
Table 4.261: The Awareness of the ' <i>Burden Metaphor</i> ': The Experimental Group/ the Post-Test	334
Table 4.262: The Experimental Group's Use of the ' <i>Dynamic Sense of in</i> ' in the Post-Test	334
Table 4.263: The Experimental Group's Use of ' <i>Get across</i> ' in the Post-Test	335
Table 4.264: The Experimental Group's Use of the ' <i>Separation Sense of above</i> ' in the Post-Test	336
Table 4.265: The Experimental Group's Use of the ' <i>Static Sense of across</i> ' in the Post-Test	336
Table 4.266: The Experimental Group Use of the ' <i>Static Sense of on</i> ' in the Post-Test	337
Table 4.267: The Experimental Group's Use of the ' <i>Dynamic Sense of through</i> ' in the Post-Test	338
Table 4.268: The Experimental Group's Use of the ' <i>Burden Metaphor</i> ' in the Post-Test	338
Table 4.269: The Experimental Group's Use of the ' <i>Dynamic Sense of over</i> ' in the Post-Test	339

Table 4.270: The Spatial Use of <i>above</i> by the Experimental Group in the Post-Test	340
Table 4.271: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of on</i> ’ in the Post-Test	340
Table 4.272: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of out</i> ’ in the Post-Test	341
Table 4.273: The Experimental Group’s Use of the ‘ <i>Static Sense of in</i> ’ in the Post-Test	342
Table 4.274: The Experimental Group’s Use of the ‘ <i>Covering Sense of over</i> ’ in the Post-Test	342
Table 4.275: The Experimental Group’s Use of the ‘ <i>Distribution Sense of out</i> ’ in the Post-Test	343
Table 4.276: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of above</i> ’ in the Post-Test	344
Table 4.277: The Experimental Group’s Use of the ‘ <i>State Sense of in</i> ’ in the Post-Test	344
Table 4.278: The Experimental Group’s Use of the ‘ <i>Static Sense of out</i> ’ in the Post-Test	345
Table 4.279: The Experimental Group’s Use of the ‘ <i>Completion Sense of over</i> ’ in the Post-Test	346
Table 4.280: The Experimental Group’s Use of the ‘ <i>Dynamic Sense of across</i> ’ in the Post-Test	346
Table 4.281: The Experimental Group’s Use of <i>through</i> Spatially in the Post-Test	347
Table 4.282: The Experimental Group’s Use of the ‘ <i>Means Sense</i> ’ in the Post-Test	348
Table 5.1: The Control Group’s Attitudes towards the Difficult Parts of Speech	356
Table 5.2: Reasons behind the Difficulty of Prepositions: The Control Group	357
Table 5.3: How Often the Use of Prepositions is Difficult: The Control Group	358

Table 5.4: The Difficult Senses of Prepositions: The Control Group	359
Table 5.5: The Control Group’s Views on Polysemous Prepositions	359
Table 5.6: Ways of Learning Polysemous Prepositions: The Control Group	362
Table 5.7: The Control Group’s Responses to the Instruction of Polysemous Prepositions	363
Table 5.8: The Types of instruction the Control Group has received	364
Table 5.9: The Control Group’s Attitudes towards the Different Types of Instruction	365
Table 5.10: The Control Group’s Attitudes towards Using Image-Schemas	366
Table 5.11: The Control Group’s Views on the Role of Teachers’ Competence	368
Table 5.12: The Experimental Group’s Attitudes towards the Difficult Parts of Speech	371
Table 5.13: Reasons behind the Difficulty of Prepositions: The Experimental Group	372
Table 5.14: How Often the Use of Prepositions is Difficult: The Experimental Group	373
Table 5.15: The Difficult Senses of Prepositions: The Experimental Group	374
Table 5.16: The Experimental Group’s Views on Polysemous Prepositions	374
Table 5.17: Ways of Learning Polysemous Prepositions: The Experimental Group	377
Table 5.18: The Experimental Group’s Responses to the Instruction of Polysemous Prepositions	378
Table 5.19: The Types of instruction the Experimental Group has received	379
Table 5.20: Attitudes towards the Different Types of Instruction: The Experimental Group	380
Table 5.21: The Experimental Group’s Attitudes towards Using Image-Schemas	380
Table 5.22: The Experimental Group’s Views on the Role of Teachers’ Competence	383

List of Figures

Figure 1.1: Homophones, Homographs and Homonyms (Birch, 2007, p. 160)	20
Figure 1.2: A Screenshot of the entries for <i>Lie</i> and <i>Bring</i> (adapted from Stevenson, 2010, p. 216-1019)	21
Figure 2.1: Definitions of Cognitive Linguistics, Cognitive Semantics and Cognitive Approaches to Grammar (Evans & Green, 2006, p. 50)	54
Figure 2.2: Graphic Representation of the CONTAINER Schema (adapted from Evans & Green, 2006, p. 181)	64
Figure 2.3: An illustrative instantiation of the CONTAINER Schema	65
Figure 2.4: The Source-Path-Goal Image-Schema (Johnson, 1987, p. 28)	66
Figure 2.5: The Schematic Diagram for <i>enter</i> (Langacker, 2013, p. 33)	69
Figure 2.6: Schematic Representation of <i>Come</i> and <i>Go</i> (adapted from Radden & Dirven, 2007, p. 25)	70
Figure 2.7: Image-Schema for <i>Climb</i> (Langacker, 1987, p. 311)	71
Figure 2.8: Image-Schema for <i>break</i> (Tanaka, 1987b; cited in Morimoto & Loewen, 2007, p. 350)	73
Figure 2.9: Image-Schema of <i>break</i> in a Literal Sense (Morimoto & Loewen, 2007, p. 370)	74
Figure 2.10: Image-Schema of <i>break</i> in a Figurative Sense (Morimoto & Loewen, 2007, p. 370)	75

Figure 3.1: The Central Image-Schema for <i>above</i>	104
Figure 3.2: Langacker's Schematic Representation of <i>above</i> (adapted from Langacker, 2008, p. 71)	104
Figure 3.3: Schematic Representation of <i>above</i> with <i>Table</i> and <i>Lamp</i> (Langacker, 2006, p. 54-56)	105
Figure 3.4: Schematic Representation of the Dynamic Sense of <i>above</i> (adapted from Lindstromberg, 2010, p. 111)	106
Figure 3.5: Diagrammatic Representation of <i>across</i> (adapted from Lindstromberg, 2010, p. 123)	110
Figure 3.6: The Static Sense of <i>across</i> (Langacker, 1987, p. 218)	111
Figure 3.7: Image-Schemas for <i>in</i> (adapted from Murphy, 2010, p. 75)	113
Figure 3.8: Schematic Depiction of Partial Enclosure Expressed by <i>in</i> (adapted from Lindstromberg, 2010, p. 72)	114
Figure 3.9: The Dynamic Sense of <i>in</i> (adapted from Lindstromberg, 2010, p. 29)	115
Figure 3.10: Image-Schema for <i>on</i> (adapted from Lindstromberg, 2010, p. 51)	118
Figure 3.11: Rotated Schemas for <i>on</i> (adapted from Lindstromberg, 2010, p. 14)	119
Figure 3.12: The Dynamic Schema for <i>on</i>	119
Figure 3.13: Schematic Representation of the <i>out</i> Image-Schema (Ungerer & Schmid, 2006, p. 169)	121
Figure 3.14: The Static Sense of <i>out</i> (Peña Cervel, 1998-99, p. 266)	121

Figure 3.15: The <i>above-across</i> Sense of <i>over</i> (Lakoff, 1987, p. 419)	123
Figure 3.16: The <i>above-across</i> Sense of <i>over</i> : An Arching Path (adapted from Lindstromberg, 2010, p. 112)	124
Figure 3.17: Two Different Kinds of Landmark Specifications of Dynamic <i>over</i> (Lakoff, 1990, p. 421)	125
Figure 3.18: Schematic Representation of ‘Sam walked <i>over</i> the hill’ (Lakoff, 1987, p.422)	126
Figure 3.19: Schematic Representation of ‘Sam lives <i>over</i> the hill’ (Lakoff, 1987, p. 440)	126
Figure 3.20: The <i>above</i> Sense of <i>over</i> (Lakoff, 1987, p. 425)	127
Figure 3.21: The Covering Sense of <i>over</i> (Lakoff, 1987, p. 427)	128
Figure 3.22: Schematic Depiction of <i>through</i>	131
Figure 6.1: Schematic Representation of the Core Senses of Some Prepositions (taken from www.tes.com)	396

CONTENTS

General Introduction

1. Statement of the Problem	1
2. Aims of the Study	4
3. Research Questions and Hypotheses	4
4. Means of Research	5
5. Structure of the Study	6

Chapter One: The Notion of Polysemy in Linguistics

Introduction	9
1.1 Definition of Polysemy	9
1.2 Issues Related to Polysemy	13
1.2.1 The Polysemy Paradox	14
1.2.2 Polysemy and Related Concepts	15
1.2.2.1 Polysemy vs. Ambiguity and Vagueness	15
1.2.2.2 Polysemy vs. Homonymy	19
1.2.3 Refining the Concept of Polysemy	26
1.2.4 Reasons for the Occurrence of Polysemy	29
1.3 Types of Polysemy	34

1.3.1 Metaphor	35
1.3.2 Metonymy	42
1.3.3 Meaning Extension via Metaphor and Metonymy	46
Conclusion	49
 Chapter Two: Image-Schema and Image-Schema-Based Instruction	
Introduction	50
2.1 Definition of an Image-Schema	50
2.2 Theoretical Underpinnings of Image-Schemas	52
2.2.1 Image-Schemas within Cognitive Linguistics	52
2.2.2 Embodiment, Image-Schemas and Language	55
2.3 Characteristics of Image-Schemas	59
2.4 Utilization of Image-Schemas	68
2.4.1 Image-Schemas as Semantic Representations	68
2.4.2 Image-Schemas, Image-Schema Transformations and Polysemy	72
2.4.2 Image-Schemas and Language Teaching/ Learning	78
Conclusion	83
 Chapter Three: Image-Schemas and Polysemous Prepositions in English	
Introduction	84
3.1 English Prepositions	84

3.1.1 Definition of Prepositions	84
3.1.2 Linguistic Properties of Prepositions	86
3.1.2.1 Prepositions and Morphology	87
3.1.2.2 Prepositions and Syntax	89
3.1.2.3 Prepositions and Semantics	94
3.2 The Relationship between Prepositions, Polysemy and Image-Schemas	97
3.2.1 Using Image-Schemas to Illustrate the Senses of Prepositions	98
3.2.2 Semantic Analysis of <i>above, across, in, on, out, over</i> and <i>through</i>	103
3.2.2.1 <i>Above</i>	103
3.2.2.2 <i>Across</i>	109
3.2.2.3 <i>In</i>	113
3.2.2.4 <i>On</i>	117
3.2.2.5 <i>Out</i>	120
3.2.2.6 <i>Over</i>	123
3.2.2.7 <i>Through</i>	131
Conclusion	132
 Chapter Four: Applying Image-Schema to Instructing Polysemous Prepositions	
Introduction	133

4.1 The Sample	133
4.2 Instruction	134
4.3 The Test	137
4.3.1 Description of the Test	138
4.3.2 Analysis and Interpretation of the Results of the Test	141
4.3.2.1 The Pre-Test	141
4.3.2.2 The Post-Test	249
4.3.3 Overall Analysis	348
Conclusion	352
Chapter Five: Students' Attitudes towards Using Image-Schema-Based Instruction	
Introduction	353
5.1 Description of the Students' Questionnaire	353
5.2 Analysis and Interpretation of the Results of the Students' Questionnaire	355
5.2.1 The Control Group	355
5.2.2 The Experimental Group	367
5.3 Overall Analysis	386
Conclusion	389

Chapter Six: Pedagogical Implications

Introduction	390
6.1 Importance of Revisiting what to Teach	390
6.2 Teaching Polysemous Prepositions through Image-Schema-Based Instruction	394
Conclusion	397
General Conclusion	398
REFERENCES	401

APPENDICES

Appendix I: The Test

Appendix II: Teaching Materials for the Experimental Group

Appendix III: The Students' Questionnaire

General Introduction

1. Statement of the Problem

2. Aims of the Study

3. Research Questions and Hypotheses

4. Means of Research

5. Structure of the Study

1. Statement of the Problem

When learning English, building up a comprehensive understanding of how to use prepositions properly is one of the most difficult feats learners of English as a foreign language accomplish. On first inspection, a source of difficulty arises from the very nature of their semantics. Prepositions are characterized by a high degree of polysemy: the same preposition can be used in many contexts, each of which conveys a different meaning. Although most students can look them up in a dictionary, one should be aware of the fact that the real meanings are often far more complex than the simple dictionary definitions would lead them to suppose. *In*, for instance, is usually defined as *inside* or *within*, but it is much more often employed in expressions like *in* pain, *in* words and *in* medicine which seem to be distinct. Besides, students can certainly come across a number of other meanings that are highly idiomatic. The preposition, *on*, even more interestingly, is frequently used with means of transport such as ‘He came *on* the bus’, but its use in ‘He came *on* the car’, sounds odd and unnatural. In dictionaries, there exists a quite different distribution of meanings which are described in lists that are difficult to remember or use. It is a colossal task for students to understand the variety and complexity of the numerous meanings associated with even a single preposition or to realize its exact underlying meaning. In turn, students are left with more questions than answers.

In terms of instruction, teachers cannot define the meanings without using other ones in the explanation. The latter turns out often to be vague and confusing since prepositions are not perfectly synonymous. Tyler and Evans (2003) state that it is not easy to characterize the meanings as well as the differences between prepositions like *over* and *above*. For instance, if ‘The picture is *over* the mantle,’ then it is interpreted as ‘The picture is *above* the mantle.’ However, the sentence ‘Mary crawled *over* the bridge’ has a completely different meaning

from ‘Mary crawled *above* the bridge’. Similarly, we might say that ‘The tablecloth is *on* the table.’ But, suppose now that the cloth covers the table. In this case, in English, it is more natural to say that ‘The cloth is *over* the table’ and much less natural to say it is *on*. It follows that pairs of prepositions seldom if ever have exactly similar communicative effect (Lindstromberg, 2010).

On closer inspection, in particular, in the process of teaching polysemous prepositions at the Department of Letters and English, University “Frères Mentouri”, Constantine 1, the explanation given to the students shows them as if they were either words with one meaning or words with arbitrary meanings. The students are often provided with a list of various prepositions accompanied with illustrative examples. The explanation focuses mainly on presenting one literal meaning of each preposition included in the lesson through using dictionary-like definitions, and the students learn the others incidentally. The crux of the problem is that the multiple uses are sometimes not addressed although they are essential to ensure that the students develop a rich repertoire that fills the gaps in their knowledge concerning these words, given the myriad of ideas they can speak about using them. Quite the opposite, if the senses are addressed, they are scattered over long lists of meanings randomly. The relation between the complex set of senses associated with a single preposition remains unexplained, along with the nuances between prepositions.

Consequently, the students are left frustrated about getting a fragmented picture of these words, with an apprehension that polysemous prepositions are a hard nut to crack; they constitute a semantic labyrinth which is better not to be given great attention. Lam (2009; cited in Tyler, Mueller & Ho, 2010a, p. 182) found out that using correctly the spatial language is among the last aspects learned, and even learners with an advanced level are not able to reach a native speaker-like use. In this case, the students at university resort to rote

memorization of the meanings, which leads to their constant misuse—an unsatisfactory situation to say the least.

The reason why teachers' instruction is not helpful could be attributed to the fact that despite the systematic enquiries in the field of second and foreign language acquisition, polysemous prepositions continue to defy attempts of developing a coherent and effective solution to them. Traditional accounts (Bloomfield, 1933; Frank, 1972; Chomsky, 1995; cited in Tyler, Mueller & Ho, 2010a, p. 182) have always treated the meanings of prepositions as unsystematic and arbitrary. They have provided little aid to students because they just consolidate rote memorization of them. Thus, one would be tempted to beg the question about the reason behind the polysemantic nature of prepositions. In other words, it is striking that why the same preposition and not other ones are used to express various senses and how to know the relation between the different senses as well as the nuances between prepositions so that they can be taught easily by teachers and used appropriately by students.

In the face of such a bewildering variety of problems, it is vital that teachers develop effective instructional methods in order to analyze the traditional method of teaching polysemous prepositions. One way is to adopt the theory of image-schema. An image-schema is a key concept in Cognitive Linguistics. It has shed fresh light on the description of the meanings of prepositions different from those of the other traditions of linguistic studies. It offers an alternative perspective, suggesting that the meanings of polysemous prepositions are image-schematic in nature and systematically motivated. Image-schema-based instruction can help understand the meanings of prepositions and can show that these meanings do not arise at random but due to specific cognitive mechanisms. It can capture what they are, how to use them and when to use them.

2. Aims of the Study

The present study aims at examining the effectiveness of applying image-schema-based instruction on the teaching and learning of the semantics of polysemous prepositions. In particular, it sheds light on the prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through*, which constitute good candidates for investigation. Our purpose is to raise the students' awareness of the various senses associated with each preposition by deepening the understanding of the relations between them. It also aims at helping the students realize the nuances in meanings, noticing how their meanings differ or are similar in order to be used appropriately. Another concern of this research is to gain insight into the students' attitudes towards using this type of instruction, and whether it can serve as an aid in the teaching as well as learning of polysemous prepositions.

3. Research Questions and Hypotheses

The study addresses the following research questions:

- (a) Can image-schema-based instruction help the students under study realize the meanings of the target prepositions and the relationship between them?
- (b) Can image-schema-based instruction enable the students to distinguish between the senses of the target prepositions, as measured by the students' performance on the test?
- (c) Does the application of image-schema-based instruction enable the students to think critically about the meanings of the target prepositions and use them properly?
- (d) Which type of senses (spatial or non-spatial) is likely to present difficulties and affect the performance of the students?

(e) Can image-schema-based instruction, as a pedagogical tool, change and improve the learning of polysemous prepositions for the better than the traditional method?

(f) How will the application of image-schema-based instruction be accepted and viewed by the students under study, and to what extent it can help them in learning/acquiring polysemous prepositions?

In order to answer these questions, we hypothesize that applying image-schema-based instruction in the classroom would improve the students' outcome and understanding of the target prepositions. We also hypothesize that image-schema-based instruction would have a positive impact on the students' attitudes towards applying it to learn polysemous prepositions.

4. Means of Research

The empirical data are collected through a test and a Students' Questionnaire. In order to test the first hypothesis, we have opted for an experimental design, a pre-test post-test group design. Two groups from Second Year LMD (License Master Doctorate) students studying English as a foreign language at the University "Frères Mentouri", Constantine 1 are selected. At the beginning, both groups are given a pre-test. The aim of the pre-test is to see the extent to which the students are aware of the polysemy of the prepositions under investigation, and whether they are able to identify the differences between them. Then, the Control Group receives instruction that is based on the traditional method of teaching prepositions which focuses mainly on definitions and examples. The Experimental Group is taught the semantics of *above*, *across*, *in*, *on*, *out*, *over* and *through* by applying image-schema-based instruction. The latter aims at raising the students' awareness of the different senses of these prepositions as well as the relationship between them. After the instruction,

the post-test is administered to test the students' outcomes and the effects of both types of instruction on their achievement.

The Students' Questionnaire is administered to the students under investigation to test the second hypothesis. It gives information about the students' opinions about polysemous prepositions, how they learn them and their preferences in learning them. This questionnaire also attempts to elicit the students' views about the application of image-schema-based instruction in the classroom.

5. Structure of the Study

The present thesis consists of six chapters. Chapters One, Two and Three are concerned with the research theoretical background. Building upon the theoretical part, the subsequent Chapters, Four, Five and Six lay out the practical part. The aim of the first chapter, "The Notion of Polysemy in Linguistics," is to discuss the phenomenon of polysemy by reviewing the way it has been treated from different perspectives inherent in Linguistics. It throws light on the origins of the term, and the problems it creates in language theory. This chapter is intended to delimitate the notion of polysemy since the idea underlying it can describe other notions with which it overlaps. In addition, it provides information about the recent conception and the characteristics of polysemous words. It also elucidates the reasons that have led to the emergence of polysemy by presenting various points of view of researchers. The first chapter further draws on the cognitive mechanisms, metaphor and metonymy, that have been widely used to account for the phenomenon of polysemy.

The second chapter, "Image-Schema and Image-Schema-Based Instruction," has to do with the term image-schema as a theoretical notion in Cognitive Linguistics. It gives information about the theoretical foundations upon which this theory is based by highlighting the basic tenets of Cognitive Linguistics that serve to comprehend it. The chapter is further

elaborated by presenting the properties of image-schemas, and how the latter are applied in the semantic analyses of words' meanings. Then, it discusses the connection between image-schemas and polysemy by supplying information about how the concept of polysemy can be explained in terms of image-schemas and their transformations. More specifically, the second chapter ends up with describing the theoretical rationales of the role of image-schemas in language teaching and learning.

The third chapter, "Image-Schemas and Polysemous Prepositions in English," dives into the realm of English prepositions. It analyses English prepositions, in general, in terms of morphology, syntax and semantics. It establishes the framework and foundation for the essential links between image-schemas, polysemy and prepositions. It gives a bird's-eye view of the basic concepts and key terms that make the relationship more explicit. In continuation, it presents an analysis of the semantics of *above*, *across*, *in*, *on*, *out*, *over* and *through* in order to fit into the overall picture of how image-schemas illustrate the meanings of polysemous prepositions.

Regarding Chapter Four, "Applying Image-Schema to Instructing Polysemous Prepositions," is devoted to the analysis of the data of the experimental design. Its aim is to measure the impact of image-schema-based instruction on the students' achievement concerning the prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through*. It discusses the sample, the test, which is administered to the participants of the study, and it provides a description of the instructional treatment and the scoring procedures. In this chapter, the findings as well as the results of the study are also presented.

Chapter Five, "Students' Attitudes towards Using Image-Schema-Based Instruction," leads us to the Students' Questionnaire. It sheds light on the students' awareness along with their opinions about polysemous prepositions, how they learn them, and the attitudes they

have towards the use of image-schema-based instruction in the classroom. It supplies a description of the sections of the questionnaire, an analysis and interpretation of the questionnaire responses.

In Chapter Six, “Pedagogical Implications,” the attention is turned to the pedagogical implications derived from the findings of the study. It highlights the importance of considering polysemous prepositions in foreign language classrooms. It touches on various issues regarding the teaching of their semantics that need to be reviewed for the sake of promoting their acquisition by foreign language students. It offers recommendations for teachers on how to incorporate image-schema-based instruction in teaching polysemous prepositions by suggesting some ideas that help implement it successfully.

Chapter One: The Notion of Polysemy in Linguistics

Introduction

1.1 Definition of Polysemy

1.2 Issues Related to Polysemy

1.2.1 The Polysemy Paradox

1.2.2 Polysemy and Related Concepts

1.2.2.1 Polysemy vs. Ambiguity and Vagueness

1.2.2.2 Polysemy vs. Homonymy

1.2.3 Refining the Concept of Polysemy

1.2.4 Reasons for the Occurrence of Polysemy

1.3 Types of Polysemy

1.3.1 Metaphor

1.3.2 Metonymy

1.3.3 Meaning Extension via Metaphor and Metonymy

Conclusion

Introduction

Words have always been regarded as the building blocks of human languages. They trip off the tongue so easily in a careful way to build up meaningful utterances and fluency of lifelong usage. This is a process which is very familiar or quite simple to us but not to linguistic theorists. Philosophers of language and linguists have long been interested in investigating what the word is, and how it is formed in order to bring knowledge about the nature of its meaning. In recent years, studying words' meanings has become a vivid area within linguistic studies. It has gained more attention by researchers due to the challenging issues it raises. The results of these studies have shown that the ambiguity in meaning manifests itself in the way words are being used by speakers. In the English language, for example, the meanings of words are highly diverse. The same word can be used in a variety of contexts to express different things; this phenomenon has been labelled polysemy. The latter is the pivot of semantic analysis and a main issue that should not be ignored. Polysemy has always puzzled scholars who have repeatedly tried, in many domains, to give a sound description of its ubiquity. However, its new conception as a motivated instead of an arbitrary phenomenon, which can be accounted for in a systematic way, has utterly turned it from an enduring problem into an opportunity to uncover the hidden secrets of human languages.

1.1 Definition of Polysemy

The term polysemy is not a new one. It dates back to the Greek language in which 'poly' means 'many' or 'several', and 'semy' or 'sema' means 'meaning' (Hancock & Todd, 2005, p. 411). Polysemy (also polysemia) is, then, a term which is widely used in linguistics to refer to the phenomenon of words that have more than one sense. It is also called multiplication or radiation to describe a lexeme which acquires a number of different meanings (Kisno, 2012). For example, the word *move* is polysemous because it has more than

five senses listed in the Cambridge International Dictionary of Contemporary English, the Collins-Cobuild Dictionary of English, the Longman Dictionary of Contemporary English and the Oxford Advanced Learner's Dictionary. Similarly, the word *board* is polysemantic, for it is defined in at least the following ways: (a) a long thin flat piece of cut wood, (b) a flat surface of wood with patterns, used for playing a game on, (c) a flat piece of hard material used for putting food on, and (d) the cost of meal and a committee or association, as of company directors or government officials, set up for a special responsibility (Longman Dictionary of Contemporary English, 1978, p. 105; cited in Jackson & Zé Amvela, 2004, p. 58). The opposite of polysemy is monosemy, which is usually reserved for words like *cousin*; “offspring of parent's sibling,” that have only a single meaning (Riemer, 2010, p. 161). Note that the terms ‘sense’ and ‘meaning’ are used interchangeably throughout this research.

The multiplicity of words' meanings, that is, the coexistence of many possible interpretations for the same word is one of the characteristic features of the English language. While there exist considerable differences among researchers concerning the number of the senses of the words they have analyzed, there appears to be little doubt with regard to the fact that many, if not most, of English words manifest a large number of senses. According to Amsler (1980, p. 55-57; cited in Hirst, 1987, p. 5), the following table lists some adjectives, nouns and verbs that have the greatest number of meanings in the Merriam-Webster pocket dictionary:

WORD	CATEGORY	NO. OF SENSES	WORD	CATEGORY	NO. OF SENSES
go	verb	63	take	verb	24
fall	verb	35	dead	adj	21
run	verb	35	good	adj	21
turn	verb	31	have	verb	21
way	noun	31	line	noun	21
work	verb	31	pass	verb	21
do	verb	30	touch	verb	21
draw	verb	30	dry	adj	20
play	verb	29	wing	noun	20
get	verb	26	draft	noun	19
form	noun	24	give	verb	19
make	verb	24	turn	noun	19
strike	verb	24			

Table 1.1: Words with the Greatest Number of Senses in the Merriam-Webster Pocket Dictionary (Amsler, 1980; cited in Hirst, 1987, p. 5)

In 2002, Priss conducted an analysis of Word Net’s most polysemous nouns as well as verbs and found that the noun *head* has 30 senses, whereas the verb *break* has 63 senses. Barcelona and Valenzuela (2011) note that, approximately, 40 percent of entries in Webster’s Seventh Dictionary exhibit more than one meaning. In this dictionary, the commonly used verb *to run*, for example, has 29 senses with nearly 125 sub-senses. In fact, the description of words’ meanings in the aforementioned dictionaries shows that the phenomenon of polysemy can virtually be observed in almost every word. Murphy (2002, p. 404-5) states that the word *table* which seems very simple and easy possesses ten senses:

1. A four-legged piece of furniture: ‘Put it on *the table*.’
2. The class of all such items: ‘*The table* is America’s most popular furniture.’
3. A painting, sculpture or photograph of the piece of furniture: ‘*The table* is painted very soulfully.’
4. The stuff that makes up a table: ‘After the explosion, there was *table* all over the ceiling.’

5. The setting of a dinner table: ‘*The table* is not suitable for company; get the good silverware.’
6. Food served at the table: ‘Count Drago keeps the best *table* in the country.’
7. The company of people eating at a table: ‘The entire *table* shared the pate.’
8. A flat or level area: ‘The ranch sits on a *table* of land south of the mountains.’
9. An arrangement of words or numbers, usually in columns: ‘*Table 3* shows the results of the experiment.’
10. A synopsis: ‘*The table* of contents is incomplete.’

A further point which is frequently added to the above definition is that the term “polysemy” (or polysémie), albeit an old one which lies in the Greek philosophy, started to be investigated as an inspirational subject in the eighteenth century and continued in the nineteenth century by historical linguists and lexicographers. They were keen to look into the multiplicity of words’ meanings “from the point of view of etymology, historical lexicography or historical semantics” (Nerlich & Clarke, 1997, p. 351; cited in Cuykens & Zawada, 2001, p. x). In the late of the nineteenth century, the term polysemy was popularized and introduced into general linguistics by the French semanticist Michel Bréal. Early works on polysemy by Bréal uncovered the hidden problems related to this term and the captivating facts it may involve. It first appeared in his review of two seminal books: Arsène Darmesteter's book *La Vie des Mots* (1887) and the second edition of Hermann Paul's book *Prinzipien der Sprachgeschichte, ‘Principles of the History of Language’* (1886) as well as in his famous *Essai de sémantique* in 1897 (Nerlich, 2003, p. 67).

As a matter of fact, Bréal’s treatment of polysemy was the starting point that paved the way to provide the conditions to free the research into polysemy from lexicography and etymology in order to study it as a linguistic, historical and a cognitive phenomenon.

He introduced many interesting ideas that fruitfully explored as well as made advances in psycholinguistics, general linguistics, sociolinguistics, language acquisition, computational linguistics and cognitive semantics (Nerlich, 2003).

Furthermore, when it comes to the issue of polysemy, it should be noted that since Bréal created the term, it has posed serious problems in linguistic research. Many linguists, especially structural linguists (Lyons 1977; Wunderli 1995), have doubted the existence of polysemy. They have made great efforts to maintain the theorem of “one form, one meaning.” Others like (Victorri, 1997; Kleiber, 1999) have claimed that it does not exist and it “is only an artefact of linguistic analysis” (cited in Nerlich & Clarke, 2003, p. 4). In lexical semantics, however, polysemy is accepted, but it has been proved to be an insurmountable difficulty because there are still many questions to be answered, and polysemy research has moved in various directions. Even so, the challenges created by polysemy have known a conspicuous change in Cognitive Linguistics (CL). With the arrival of CL, polysemy has become the centre of gravity around which modern cognitive linguists and semanticists studies as well as analyses rotate. New theories and ideas have helped to have a clear and thorough understanding of this muddy phenomenon (Nerlich & Clarke, 2003).

1.2 Issues Related to Polysemy

Polysemy raises a host of challenging issues related to the way speakers use polysemous words and to the way these words behave. This has led to the analysis of the paradox of polysemy, its relationship to other concepts, and how the concept of polysemy has been refined.

1.2.1 The Polysemy Paradox

Polysemy is, without doubt, an inescapable phenomenon that constantly attracts the attention of researchers as it permanently unleashes seemingly self-contradictory characteristics. For many researchers like (Falkum, 2009; Ravin & Leacock, 2000), polysemy is a source of confusion. On the one hand, it presents itself as unproblematic from the perspective of communication. Many polysemous words are used naturally in everyday life. Speakers of any language talk to each other in a smooth way, and they hardly ever get disturbed by the many senses a word may have; their thoughts are communicated successfully and language users can understand what is being referred to in any conversation. Besides, the selection of the appropriate senses of polysemous words is done effortlessly and unconsciously (Ravin & Leacock, 2000). That is:

In normal circumstances, speakers can trust their audience to quickly and reliably figure out the meaning they intend to communicate when using a linguistic item that could take on a different meaning in a different context. On most occasions speakers and hearers are not even aware of the potential polysemy of the words they are using, and only upon reflection may they come to identify some of their other possible meanings. (Falkum, 2009, p. 13).

On the other hand, despite this apparent simplicity, the multiplication of meanings with the label 'polysemy' is so misleading and puzzling as a linguistic feature in words and sentences. It creates many theoretical problems in semantic theory and semantic applications, such as lexicography and translation. The difficulty arising from polysemy in linguistics lies in the way this phenomenon is accounted for and conceptualized by linguists (Falkum, 2007). Hence, generating a contradiction which combines between easiness in communication and

complicatedness as well as ambiguity in semantic theory, polysemy gives rise to what is referred to as ‘the polysemy paradox’ (Ravin & Leacock, 2000; Tylor, 2003). Such a paradoxical situation, which, in fact, was observed many years ago by Bréal, has raised many issues that have burst the researchers’ curiosity to find a sound solution to them.

1.2.2 Polysemy and Related Concepts

Even though the term polysemy is commonly used to refer to the plurality of meaning, it is worth to emphasize that words carrying more than one meaning are not particularly polysemous. One of the most notable issues related to polysemy is how it should be defined. In other words, the conception of polysemy is not yet a clear-cut one as it overlaps with some other terms, such as lexical ambiguity, vagueness as well as homonymy, which are described as instances of meaning variation too.

1.2.2.1 Polysemy vs. Ambiguity and Vagueness

Ambiguity and vagueness refer to cases in which a word or an utterance has more than one interpretation; however, they are in many respects very different. Vagueness involves unity, while ambiguity implies separation of distinct meanings (Tuggy, 2006). Vagueness occurs when a message is not precisely understood due to the use of terms that are inherently vague. A vague word (or a vague linguistic expression) is the one which has one general meaning that refers to a variety of different things. This word lacks a clear sense (Murphy, 2010). The word *friend* is not ambiguous but vague because its meaning is not precise with respect to gender. To put it in simpler terms, this word has one general sense, which is ‘a person whom someone has a relationship of mutual affection’, but it does not specify whether the person is a male or a female; in many contexts, it happens that it may denote a *female friend* and in others a *male friend*:

Example: Ben is *my friend*. He's a fine fellow.

Georgia is *my friend*. She's a wonderful woman.

This means that *friend* does have two distinct meanings, but it indicates an indefinite sense because “we can make a single definition that covers both cases in the above examples” (Murphy 2010, p. 85). In the same way, the word *clock* is vague because it has one general sense, ‘a device for measuring hours,’ that fits all the instances it may refer to, such as *digital clocks*, *analog clocks*, *alarm clocks* and *cuckoo clocks* (Murphy, *ibid.*).

English words of this type, when used in a given context, they do not help the hearer understand the intended meaning the speaker is trying to communicate. Typical examples include gradable adjectives, words of measurements, like *tall*, *short*, *good*, *some*, *few*, *heavy*, *light*, kinship terms like *child* and words such as *neighbour* (Chaffee, 2015, p. 272; Geeraets, 2016, p. 234-5; Löbner, 2013, p. 47). As an illustration, the utterance, ‘our *neighbour* is leaving for a vacation,’ is vague because of the word *neighbour*. When receiving this utterance, we may understand two possibilities, ‘a female dweller next door’ and ‘a male dweller next door’. If we want to interpret it, the word *neighbour* does not provide the receiver with specific details that help make out the intended meaning. It is much more likely that the general meaning, “a person who lives next door” is activated regardless of being a man or a woman (Geeraets, 2016, p. 234-5).

The phenomenon of vagueness can become even more complicated when it leads to confusion in the receiver's mind, especially, those words which do not have the same meaning for different people. Their exact meanings are subject to varying interpretations through relying on the specific context in which they occur and on the special perspective of their users (Chaffee, 2015). For instance, the meaning of the gradable adjective *tall* is imprecise enough. If we try to fill the blanks in the sentence, ‘A *tall* person is one who is

over... feet...inches tall,” the exact answers are flexible depending on the context in which it is used and the perspective of the listener or the reader (Chaffee, 2015, p. 272). The concept of tallness will differ considerably from the perspective of a ten-year child to a professional basketball player (Wechsler, 2015).

With this in mind, it follows that vagueness is a matter of having terms which are unspecified in regard to their meanings, or they give a general idea and unclear description. To specify the meaning of these terms, we give a set of interpretations for its use in a given context. However, no matter how carefully we try to specify and clarify the meanings of these terms, there always exist different readings given by people because the actual applications of these vague terms are indeterminate. After all, vagueness is a matter of degree.

In contrast to vagueness, ambiguity is a matter of having a word or an expression that exhibits precise but different senses. It occurs when more than one possible and conventional interpretation is given to a context because there is uncertainty about the appropriate sense the context denotes. A classic example is the word *bank* in a sentence like, ‘The man decided to wait by *the bank*.’ Here, both meanings of *bank* are activated at the same time in a plausible way that either of which seems to fit in it. It can mean ‘The man decided to wait by a financial institution’ or ‘by the edge of the river’. The word *spring* shows a strong ambiguity since it does not only refer to a season, but also to a type of mechanical device and water source (Barsalou & Billman, 1989, p. 146). In light of these two examples, it seems, on the whole, that the phenomenon of ambiguity is more about contexts (or words) which indicate more than one sense and create confusion when it comes to deciding on the intended meaning because insufficient information is provided.

Ambiguity, in more detail, has always been an issue in the formulation of linguistic theory, and an area which psycholinguistic studies have also focused upon in the last few

decades. The results that arise from all inquiries into ambiguity have shown that it is divided into two types, syntactic and semantic ambiguity (Small, Cottrell & Tanenhaus, 1988).

Syntactic ambiguity occurs when a sentence has more than one meaning due to the grammar of this sentence. In other words, it has two or more dissimilar meanings because of its structure (or the arrangement of its words). To take simple examples, the sentences ‘The chicken is ready to eat,’ ‘Two sisters reunited after 18 years in the checkout counter,’ and ‘She watched the man with the binoculars’ can reasonably be understood in more than one way. The first sentence can either be interpreted as ‘The chicken is ready *to eat the food,*’ or ‘The chicken is ready *to be eaten*’ (Beavers & Sells, 2013, p. 410). The second example is a newspaper headline which has two alternative syntactic representations that make it a funny one. It can be paraphrased as: ‘It was the first time, *after 18 years,* the two sisters had seen each other,’ or ‘The two sisters were in the checkout counter *18 years.*’ In the latter case, it is humorous because what can be interpreted from this headline is that the women have to suffer a very long wait (18 years) in the checkout queue (Dooly, 2006, p. 53). Similarly, in the third sentence, the phrase ‘with the binocular’ can mean ‘She watched the man *through the binoculars,*’ or ‘It was the man *who had the binoculars*’ (Löbner, 2013, p. 46). Syntactic ambiguity occurs frequently that language users seldom notice it. It is typically resolved by the context or by prosodic cues such as intonation. According to Fox Tree and Meijer (2000), these two types of clues have an effect on the interpretation given to syntactically ambiguous sentences; they play a significant role in determining the intended meaning and help people work out the final interpretation.

Semantic ambiguity simply happens when a sentence contains at least a word which has more than one meaning. It occurs “when the structure of a sentence remains the same, but the individual words are interpreted in different ways” (Braisby & Gellatly, 2012, p. 701). For

example, ‘She watched *the ball*’ is a semantically ambiguous sentence. The source of ambiguity lies in the use of the ambiguous word *ball* between the sense on which it means ‘a round object’ and the sense on which it means a ‘dancing event’ (Meyer, 2005, p. 148).

In theoretical linguistics, semantic lexical ambiguity has been found to be neither a homogenous nor a uniform phenomenon, but rather, it is subdivided into two kinds, polysemy and homonymy (Klepousniotou, 2002). The latter and the former are potential sources of everyday communication ambiguity. Homonymy is actually another case of words that are characterized by the multiplicity of their meanings. Because both of them bear on words which carry more than one meaning, understanding how polysemy should be defined requires analysing what homonymy is alongside it.

1.2.2.2 Polysemy vs. Homonymy

Polysemy and homonymy are two central notions in lexical semantics. They have taken a crucial part in evolving its theories from the last two decades of the twentieth century till now (Maienborn, Heusinger & Portner, 2011). Nevertheless, for many years, polysemy has always been discussed in contrast to homonymy. They are so different, and a distinction is always drawn between them in order to decide whether a word with several meanings is a case of homonymy or polysemy.

While polysemy involves one form with a wide range of meanings, homonymy represents a relation that connects between two separate lexemes. The term homonymy derives from the Greek words ‘homos’ meaning ‘same,’ and ‘onyma,’ meaning ‘name’. In lexical semantics, a homonym is a word which is spelled and sound exactly the same like another one, but whose meanings are different (Matthews, 2014). It arises when a lexical item

involved, we rule out polysemy and vice versa. Dictionaries make the task even simpler than it seems to be. For so long, producers of dictionaries have treated homonymous and polysemous words differently. Yule (2014) points out that homonyms are presented in separate entries whereas polysemes in one entry with a list (that have numbers) of their various meanings. So, it makes sense, then, to consider, for instance, the word *lie* as a homonym and *bring* as a polysemous one by just consulting a dictionary. The Oxford Dictionary of English may serve as an example:

bring ▶ verb (past and past participle **brought**) [with obj.]
1 take or go with (someone or something) to a place: *she brought Luke home from hospital* | [with two objs] *Liz brought her a glass of water.* ■ cause (someone or something) to come to a place: *what brings you here?* | *a felony case brought before a jury* | figurative *his inner confidence has brought him through his ordeal.* ■ (**bring someone in**) involve (someone) in a particular activity: *he has brought in a consultancy company.* ■ cause someone to receive (an amount of money) as income or profit: *two important Chippendale lots brought £10,000 each* | [with two objs] *five more novels brought him £150,000.* ■ cause (someone or something) to move in a particular direction: *he brought his hands out of his pockets* | *heavy rain brought down the ceiling.* ■ cause (something): *the bad weather brought famine.*
2 cause (someone or something) to be in a particular state or condition: *an economic policy that would have brought the country to bankruptcy* | *I'll give you an aspirin to bring down your temperature.*
3 initiate (legal action) against someone: *riot and conspiracy charges should be brought against them.*
4 [usu. with negative] (**bring oneself to do something**) force oneself to do something unpleasant: *she could not bring herself to mention it.*

lie¹ ▶ verb (**lies, lying**; past **lay**; past participle **lain**) [no obj., with adverbial] **1** (of a person or animal) be in or assume a horizontal or resting position on a supporting surface: *the body lay face downwards on the grass* | *I had to lie down because I was groggy* | *Lily lay back on the pillows and watched him.* ■ (of a thing) rest flat on a surface: *a book lay open on the table.* ■ (of a dead person) be buried in a particular place.
2 be, remain, or be kept in a specified state: *the abbey lies in ruins today* | *putting homeless families into private houses that would otherwise lie empty.* ■ (of something abstract) reside or be found: *the solution lies in a return to traditional values.*
3 (of a place) be situated in a specified position or direction: *Kexby lies about five miles due east of York.* ■ (of a scene) extend from the observer's viewpoint in a specified direction: *stand here, and all of Amsterdam lies before you.* ■ Brit. (of a competitor or team) be in a specified position during a competition or within a group: *United are currently lying in fifth place.*

lie² ▶ noun an intentionally false statement: *they hint rather than tell outright lies* | *the whole thing is a pack of lies.* ■ used with reference to a situation involving deception or founded on a mistaken impression: *all their married life she had been living a lie.*
▶ verb (**lies, lying, lied**) [no obj.] tell a lie or lies: *why had Ashenden lied about his visit to London?* | [with direct speech] *'I am sixty-five,' she lied.* ■ (of a thing) present a false impression: *the camera cannot lie.*

Figure 1.2: A Screenshot of the entries for *Lie* and *Bring* (adapted from Stevenson, 2010, p. 216-1019)

In this regard, if we look closely at the way dictionary compilers order the entries of homonyms and polysemes in the various dictionaries of English, it is possible that we find many differences. In some dictionaries, homonyms are presented in one entry instead of two entries. The verb *school* along with its senses is treated in one entry for both noun and verb in COBUILD and in a separate entry (*school*²) in Longman Dictionary of Contemporary English (cited in Moerdijk, 2003). One reason for this is that the treatment of homonymy and polysemy takes distinct attitudes by dictionary makers. Palmer (1981) stated, many years ago, that the decisions made by compilers are in many cases arbitrary, and he insisted on questioning the reasons for these decisions. In effect, this leads us to say that dictionaries, on their own, tell us very little about what polysemy is, and how it can be differentiated from homonymy.

To the questions, what is the difference in theory between polysemy and homonymy? (Lyons, 1995), or how do we know if we have separate lexical items rather than a single word with different senses? (Finegan, 2015), researchers in semantics have proposed two main criteria. The first criterion has to do with the historical origins of words. If similar forms have different origins, they are considered as homonymous and as polysemous if they have the same historical source (Herbst, 2010). According to the etymological criterion, the word *ear*¹ ‘the organ of hearing’ and *ear*² ‘head of corn’ are homonymous because the words, from which they originally derive, were formally different in Old English. *Ear*¹ derives from the Old English *ēare* which means ‘organ of hearing’ and *ear*² comes from the *ēar* with the meaning ‘spike of corn’ (McArthur, 2005; Lipka, 2002). On the same view, the word *nail*, with the meanings ‘horny growth on fingers and toes’ and *nail* ‘pointed fastening device knocked in by a hammer’, is polysemous because both of them share the same etymological root (Jackson, 2013). The etymological criterion is what lexicographers take into consideration in making dictionaries. They present words with different origins in separate

headwords and treat them as homonyms, while those that share the same root are treated as polysemes and are dealt with in one headword.

Nevertheless, the attempt to take etymology as a criterion by linguists is, in many cases, highly debatable and insufficient. The majority of scholars (for example, Finegan, 2015; Lipka, 2002; Lyons 1977) agree upon the fact that this criterion, no matter how helpful it is, cannot be a decisive one for several reasons. To begin with, either the etymological derivation of many words is unknown and indefinite or, sometimes, trustworthy historical information is lacking. Second, because they go back to hundreds of years, “it is not always clear how far back [researchers] should go in tracing the history of words” (Lyons, 1977, p. 551). In the same vein, the etymological criterion is inappropriate in the synchronic analysis of languages. The history of a language does not all the time mirror its present state. Numerous words which are etymologically identical have developed different senses in present-day English and vice versa. For instance, *flower* ‘part of a plant’ and *flour* ‘powder made by crushing grain’ share the same etymological origin, and both of them come from the Middle English word *flour*; yet, they are treated as homonyms in Modern English (Lipka 2002, p. 154). Lipka (2002) goes on to support his view by giving some other pairs of words, such as *glamour* and *grammar*, as well as *skirt* and *shirt*, which are historically related and as such should be examples of polysemy, but they are assigned separate entries in the dictionary. Thirdly, the majority of native speakers are not even aware of the historical development of many words in English. Presumably, it seems that relying on the etymological information as a diagnostic test in every lexical item to identify new instances of homonymy and polysemy other than the ones discussed by linguists is very often unsuccessful and contradictory. In other words, etymology turns out to play very little to help differentiate between these phenomena.

The second decisive factor that has been proposed for the distinction between homonymy and polysemy is the semantic criterion. The latter is totally synchronic, and it is connected with the relatedness or unrelatedness of meaning. It is seen as a kind of ‘psychological relatedness’ rather than ‘etymological relatedness’ because it depends on native speakers’ intuition towards words, i.e. the native speakers’ feeling that some senses are related or not. If the senses of a word are considered by native speakers to be related, then it is polysemous and homonymous if they are not related (Hurford, Heasley, & Smith, 2007; Lipka, 2002). Intuitively, native speakers consider the noun *mouth* as a polysemous lexeme whose senses are related to each other. Native speakers of English would not use words like ‘lexeme’, ‘polysemous’ or any technical term in their explanation, but their feeling is described by means of examples. They might tell that the senses of the word *mouth* as in ‘*the mouth of the river*’, ‘*the mouth of the bottle*’ and ‘don’t speak with your *mouth* full’ are clearly the same (and, hence, linked) because they share the same concept which is ‘an aperture in the face through which men and animal take food, breathe, emit vocal signals’ (Lyons, 1977, p. 552). That is to say, the concept of openings and apertures evoked by the lexeme *mouth* has generated the use of the same word in many other contexts to refer to other kinds of openings rather than the ones of men and animals. If native speakers cannot establish conceptual closeness between the senses of a word, it is logical for them to regard it as a case of homonymy. For example, English speakers consider the lexeme *bank* (of a river) and *bank* (a financial institution) as homonyms because they do not share a clear conceptual relation. Following this argument, the word *mug* (drinking vessel) and *mug* (gullible person) are two separate words that just sound alike, but their senses are far apart from each other (Hurford, Heasley, & Smith, 2007, p. 130).

At this stage, the reference to the native speakers’ feeling and the conclusions they draw when deciding between polysemy and homonymy adds further insights into our

understanding of what polysemy is, but, at the same time, it still makes the decision doubtful or rather inconclusive. In the first place, native speakers' intuitive judgment can be quite different, possibly, because the conceptual connection between the senses can be seen from different perspectives, and this gives rise to divergent opinions; words that are considered as homonyms by a group of people may not be conceived so by others. Besides, native speakers, at times, are unable to get along with the exact interpretation, which can vary over time, too (Lyons, 1977). Some see a connection between *ear*¹ (of corn) and *ear*² (organ of hearing), while others claim that there is no relation between the two senses (Koskela & Murphy, 2010). Accordingly, semantic relatedness is a matter of degree (Rainer, 2014).

In fact, all of these pieces of evidence presented by researchers are not far from the views introduced by Lyons in 1995. Most of them actually recycle and confirm them. It is then worthwhile highlighting his point of view concerning the fact that the etymological criterion supports what he called 'the native speaker's untutored intuitions.' For many English users, the lexemes *bat*¹ (a furry mammal with membranous wings) and *bat*² (implement for striking a ball in certain games) are homonyms, and their intuition is supported by the etymological information: *bat*¹ comes from a regional variant of Middle English *bake*, whereas *bat*² dates back to the Old English *batt* which means *club* or *cudgel*. Nonetheless, in a large number of cases, their intuition does not always match up with the etymological derivation of words. People think that *shock*¹ (shock of corn) and *shock*² (shock of hair) are one lexeme with different meanings; however, etymologically, they have distinct roots (Lyons, 1995, p. 59).

Having looked at the arguments in favour of etymology and relatedness of meaning, we can conclude that these two criteria have proven to be full of fundamental flaws and, to some extent, unconvincing or not foolproof. These traditional approaches have led Lyons (1977, 1995) to avow that the distinction between polysemy and homonymy is impossible to

be drawn precisely. Instead, other researchers like (klepousniotou, 2002; Lipka, 2002) have reported that polysemy and homonymy are not absolute opposites, but rather relative concepts. “Thus, they must be regarded as “two end-points of a scale with a continuum in between” (Lipka, 2002, p. 157).

From this quote, it follows that the phenomena of polysemy and homonymy do exist in human languages. Even though, in theory, there are criteria that can help distinguish between them, in addition to the fact that dictionaries treat them in a very plausible way, in reality, it is often problematic to see them as two opposite concepts. There are cases of pure homonymy (unrelatedness of meaning) and cases of pure polysemy (relatedness of meaning), but drawing a sharp distinction between the two that can be applied to all instances of a language is not all the time definite, and it is ironically difficult. On the one hand, the incompatibility between the two criteria have created a wide-ranging debate among lexicographers and linguists as both of them yield to unsatisfactory results; words that are historically related are not considered to be connected by native speakers and vice versa. On the other hand, an overreliance on one rather than the other does not give clear cut decisions about many instances in languages. The reason for this is that these two phenomena continue to overlap with each other in some points (or cases), which we can call ‘points of clash’, where they appear to be almost the same. Hence, instead of a dichotomy between the two, we can say that there is a graded continuum of meaning going from homonymy at one end to polysemy at the other end.

1.2.3 Refining the Concept of Polysemy

The concept of polysemy has always been changed by researchers in pursuit of arriving at a straightforward definition. Throughout the literature, we find that the term is originally used in lexical semantics to refer to lexical items with more than one meaning. This

definition has considerably been seen as traditional and to a great extent a forked one, simply because it refers to several concepts at the same time. The reason which has led many researchers to puzzle over it again and to ponder many questions in order to make a new headway that can figure the puzzle out. Consequently, polysemy has changed from a term that refers to words with many meanings to a term that describes words which have more than one related meanings. Although the latter has enlightened the idea of what polysemy is, it raises more issues as well as questions. With the advent of CL, researchers have started to look into the ins and the outs of this phenomenon from a different perspective; the idea of relatedness of meaning is retained, but it has been given another understanding.

Within CL, the main characteristic of a word to be polysemous is not only the plurality of its meanings, but the fact that these meanings are naturally, systematically and not arbitrarily connected (Saeed, 2009). A word is polysemous if it has a basic meaning which is termed the core meaning, and the latter can serve as the base for the other senses to extend systematically and naturally. The core meaning is also called the central or the literal meaning, while the other senses are termed the secondary (non-literal or figurative) meanings (McGregor, 2009). For instance, the verb *to feed* in ‘to give food to someone/something or ‘to eat food’ has a literal usage versus (vs.) ‘to feed your imagination’ and ‘to feed lines to an actor’ are figurative usages (Knowles & Moon, 2006, p. 16). Similarly, the verb *to run* has a central meaning which is ‘to go by moving the feet rapidly’ and its secondary (or extended) senses are: *to compete*; ‘run an office’, *to operate or test*; ‘run a computer program’ and *to manage*; ‘run an organization’ (Liu, 2014, p. 176).

In consonant with the CL standpoint, the New Oxford Dictionary (Stevenson, 2010, p. x) defines each word, or each part of speech, through showing its core meaning, under which various subsenses appear. According to Stevenson (2010), the basic sense, which is the first definition given, plays the role of a gateway to other subsidiary senses. The core sense in this

dictionary and the organization of the other senses exhibit a logical relationship that helps us build up an understanding of how they are linked in a more legible way. On top of that, he presents the following view:

Core meanings represent typical, central uses of the word in question in modern Standard English. The core meaning is the one accepted by native speakers as the most literal and central in ordinary modern usage. This is not necessarily the same as the oldest meaning, because word meanings change over time. Nor is it necessarily the most frequent meaning, because sometimes the most frequently used modern sense of a word is a figurative or extended one. (Stevenson, 2010, p. xi).

The implication is that considering the core sense to be the most frequent or the oldest one is not an accurate definition. Instead, the core sense is the most literal or, as Goddard (2000) and Wierzbicka (1996) put it, it is an invariant semantic core, i.e., it is the same whenever the word is used (cited in Enfield, 2015, p. 3). Liu (2014) adds that the primary meaning of polysemous words is the same across languages, while the non-core senses vary from one language to another. He also believes that not all the meanings of a polysemous word occur with the same frequency in language use. Sometimes, some of the extended senses may appear to be more peripheral because of their low frequency of use.

Thus, what has emerged in CL in lieu of the traditional approaches leads us to assert that the nature of the conceptual link between the extended senses and its core meaning is by virtue of the similarity between them; there exist certain features that are shared by the senses. As a case in point, in English, the word *paper* is used to mean *newspaper*, *document* and *academic lecture*, which are held together by the following common core sense: ‘important written or printed material for public use’ (Taylor, 2003, p. 108). On the same view, Almela

and Sanchez (2007, p. 36) explain this intelligibly through the word *agenda*. The primary sense of *agenda*, which is ‘things to be done’, contains the features that are mapped onto its secondary senses. The analogy that exists between the literal and the extended senses are reflected by the definitions themselves. There are three cases in which this word can be used: (a) ‘*political programme*; things that are planned to be done by a government,’ (b) ‘*schedule*; lists of tasks and the times at which each of them should be done,’ (c) ‘*lists of items*; either points or issues to be discussed at a meeting.’ Altogether, the senses of *agenda* result from applying the meaning ‘things to be done’ in specific domains, such as *decisions*, *timing* and *discussion*. In other words, the general association between the secondary senses can be traced back to this primary sense.

1.2.4 Reasons for the Occurrence of Polysemy

The fact that the same word is variably used in many contexts, representing meanings which are completely distinguishable and, at the same time, seem to be related, has led many linguists to question about the reason behind the emergence of polysemy. Nerlich and Clarke (2003) claim that polysemy does not exist only in dictionaries, but it is an ordinary language and life phenomenon. It is not specific to some languages, but it is ubiquitous to all languages. Becoming aware of its ever-present existence, theorists like (Falkum, 2015; Murphy, 2010), have ceaselessly been stimulated to find out answers to these questions: ‘what makes our languages exhibit polysemy?’ That is, ‘what is it about our language systems that make them so susceptible to polysemy?’ ‘What is the motivation for it?’ ‘Why do we rather use the same word to describe a set of different things than have a distinct word for each sense?’ ‘Why and how is it that word meanings get extended to have these different senses?’ Even if the answers to these questions are not intertwined harmoniously in a way that presents a coherent

understanding of the why question, they can be summed up in the following elucidative views.

Overall, polysemy primarily appears to be the rule more than the exception for lexical items of moderate to high frequency. In most languages, they are the trigger and so susceptible to develop additional meanings. The more often a word is used, the more polysemous it tends to be (Murphy, 2002; Zipf, 1945; cited in Crossley, Salsbury, & McNamara, 2010).

It is fair to mention that the aforementioned questions return us to some of the early insights made by the father of polysemy. In fact, understanding why it occurs was already noticed and crystallised by Michel Bréal in 1897 whose thoughts have later guided much of the work of linguists in the contemporary research on polysemy. He provided this explanation:

Le sens nouveau, quel qu'il soit, ne met pas fin a l'ancien. Ils existent tous les deux l'un a cote de l'autre. Le meme terme peut s'employer tour a tour au sens propre ou au sens metaphorique, au sens restreint ou au sens etendu, au sens abstrait ou au sens concret ... A mesure qu'une signification nouvelle est donnee au mot, il a l'air de se multiplier et de produire des exemplaires nouveaux, semblables de forme, mais differents de valeur. Nous appelons ce phenomene de multiplication la *polysemie*. (Bréal, 1897; cited in Blank, 2003, p. 268).

To Bréal, the new meaning, which is assigned to a word, does not replace the old one, but rather it can be employed in a strict, metaphoric, abstract or concrete way, allowing a new signification to be given to the word which, in turn, leads to producing new examples having the same form but differ in meanings. From this quote, wherein the nature of polysemy is described, there is an indication that it is a consequence of semantic change. According to Nerlich and Clarke (1997), who agreed with Bréal, polysemy is the synchronic pattern of

meanings clustering in a word which is the ever changing result of semantic change (cited in Cuyckens & Zawada, 2001, p. xi). When speakers add new senses to the already existing ones, these old meanings do not disappear automatically. The parallel coexistence of the new and the old meanings of a word in a language, during a period of time, gives rise to polysemy, i.e. this resultant state of a word, which is termed polysemy by Bréal, is the synchronic side result of semantic change (Rainer, 2014). For example, historically, the verb *launch* meant ‘to wield a lance’ and, then, after a period of time, it has acquired a new meaning which is ‘to throw an object forward with force’. In Modern English, the verb *launch* is used more with *rockets* and *ships* rather than *lances*. Synchronically, this new sense is considered as the core sense; it is related more to our daily experience of the world than a *lance*, and it can easily explain the related secondary senses that are derived from it, as in ‘The magazine was *launched* last week’ (Vespoor & Lowie, 2003, p. 8).

Given the high level of polysemy in languages, people find it easier to use the same words and extend their meanings instead of creating new ones (Murphy, 2002). The development of the secondary meanings is a process that is referred to as ‘layering’ (Aitchison, 2004, 2012, 2013). This term has been increasing in use in recent years, especially, in grammaticalization studies. It was originally coined by Paul Hopper in 1991. Layering can occur at any one synchronic moment in time. It accounts for the persistence of older forms and meanings together with newer forms and meanings. When new layers (senses) of a word are continually emerging without discarding but keeping and interacting with the original ones (Aitchison, 2008), it leads to full-blown polysemy. That is, polysemy develops from layering (Aitchison & Lewis, 2003; Hopper & Traugott, 2003).

Nerlich and Clarke (2003) point out that words do not have many meanings randomly. It is the consequence of human need to structure their experience, knowledge and language. Blank (2003) proclaims that polysemy is caused because the lexicon is limited, but

human imagination is not limited, let alone the endless things we can talk about. Inevitably, the meanings a word can convey are various. Moreover, words may expand their range of secondary senses due to the lexical gaps in a language or the cultural conditions impose an innovative change for the linguistic community so that it copes with the present situation, like introducing new products or practices. “The result of these influences could be that the senses tend to be idiosyncratic to that word and that language” (Zhu & Malt, 2014, p. 1).

Filling the lexical gaps by extending the usual meanings is motivated by the so called *the law of least effort* (Crossley, Salsbury, & McNamara, 2010). It is also known as Zipf’s law. Zipf was the first scholar who formulated it in his book *Human Behavior and the Principle of Least Effort: an introduction to human ecology* in 1949, with an intention to account for human behaviour through presenting a broad principle (Case, 2005). The idea behind the PLE is simple, and the term in its own right is a great descriptor. Case (2005) states that in performing actions or activities such as speaking and writing, people’s choices are governed by a tendency to adopt a course of action in which they “expend the probable least average of their work—the least effort” (p. 289). To put it simply, people have an inclination to behave in a way that requires the least amount of efforts; they do not choose or perform tasks that make their life harder. Taken at face value, this is a fact that manifests itself in the nature of words as well as the very high number of their senses (by definition, polysemous), and a principle which underlies the preferred route taken by people when it comes to generating new senses of a lexical item from the old ones.

Adhering to this belief, it is necessary to make some reference to the economy principle which is tightly related to that of least effort and comes into play when we want to understand the reason behind polysemy. Filipec (1994) considered it as a manifestation of language economy. People follow the economy principle to facilitate their communication. It requires them to talk in the most economical way possible (to say as little as possible while

still being understandable) through minimizing complexity and maximizing the ease of transmitting informative content (Halford, 1996; Horn, 2008; Tyler, Takada, Kim, & Marinova, 2005). On this point, polysemy is an important means of language economy. Mindful of its essentiality, the emergence of new meanings in an individual word safeguards the language system. In other words, without this semantic extension, the vocabulary would increase infinitely; we would need a bulk of unique words to express our ideas and to refer to the unlimited things in the world (Ricoeur, 2004).

Taken all the aforementioned views together, the argument goes like this: given the need to structure their various experiences, the act of communication requires people to convey their ideas with the minimum amount of efforts and, at the same time, in the most efficient way using less numerous words. To realize this, instead of inventing new words, speakers gradually extend the original existing meanings of words to subsume an array of new meanings (the latter refer to many other creative ideas or new things) and group them under one form. It is no wonder then that it is thought of polysemy as a ‘healthy’ characteristic of languages, and if there were no polysemy, the language economy principle would be violated (Ricoeur, *ibid.*). Due to this tendency towards expansion, speakers will economize their vocabulary because the creation of new words can be somewhat decreased. Consequently, it lessens the burden on people’s memory and ultimately allows for conserving lexical storage space. In addition, it helps avoid redundancy that may overwhelm their communication (Crossley, Salsbury, & McNamara, 2010; Ricoeur, 2004; Tyler, Takada, Kim, & Marinova, 2005).

By way of illustration, words denoting parts of human body, in English, represent very lucid examples of enriching this language with new meanings starting from their original ones:

- **eye:** eye¹ (body part), eye² (way of seeing/understanding: a critical eye), eye³ (needle: the eye of the needle), eye⁴ (camera: the eye of the camera),
- **face:** face¹ (front of your head), face² (person: new/different/familiar face), face³ (mountain/cliff: the north face of Mont Blanc, the cliff face), face⁴ (clock: the face of a clock),
- **foot:** foot¹ (body part), foot² (bottom part: the foot of the stairs, mountain),
- **hand:** hand¹ (part of a body), hand² (help), hand³ (control), hand⁴ (worker), hand⁵ (hand of a clock),
- **leg:** leg (body part), leg² (meat: roast leg of lamb) leg³ (furniture: the leg of the table), leg⁴ (clothing: the legs of my jeans),
- **tongue:** tongue¹ (mouth), tongue² (language: mother tongue), tongue³ (food: the tongue of a cow), tongue⁴ (shoe: the tongue of a shoe) (Mayor, 2009; cited in Kovács, 2009, p. 11).

In all of these instances, the secondary senses are conceptually linked to their basic senses. In this regard, if we see beyond the narrowing confines of the traditional accounts of polysemy, i.e. being aware of the idea of the central sense and that meaning extends from the old senses, we find ourselves in a situation that gives us pause for thought about the manner in which these senses are connected. In particular, ‘what is it meant by relatedness of meaning precisely?’ or ‘how do polysemous senses arise?’ The now sizable literature concerning this issue provides many explanations on the derivation rules implied in the sense elaboration which are worth exploring in more detail.

1.3 Types of Polysemy

The analysis of the synchronic variability of lexical items’ senses shows that most of them are figurative, and the semantic interrelation with the central sense is by means of metaphor and metonymy. These are two ways of construing new meanings from old ones to generate non-literal applications of languages and figures of speech that people live by. Although they are distinct, they are very often interlocking mechanisms. Meaning extension

via metaphor and metonymy offers a descriptive account of polysemy in a more theoretical framework.

1.3.1 Metaphor

The concept of metaphor has had a long-established history through which it has variously been defined and explored extensively from different perspectives, starting as far back as Aristotle until the modern view that relates it to polysemy. By metaphor, we simply speak about words or phrases that are assembled together in the right order, thereby to compose a meaning that is quite different from what is directly expressed. A typical definition is echoed in the Oxford Advanced Learner's Dictionary online: metaphor refers to words or phrases that describe people or things, “in a way that is different from its normal use, in order to show that the two things have the same qualities and to make the description more powerful, for example, ‘She has a heart of *stone*’”. Even though this definition sounds straightforward since it is plainly formulated, it does no more than represent only part of what researchers say about metaphor. In fact, it is largely congruent with what philosophers thought of it in the first place; it reflects the classical view of metaphor.

The modern-day theory of metaphor has drawn its force from the philosophical views introduced many years ago that serve as a foundation for understanding its power. In the past, metaphor was considered a purely linguistic device related to words rather than thought. Such a belief arose out of a set of prevailing assumptions which entrenched so firmly in the Western philosophical thinking as well as literary traditions for twenty-five hundred years. Using expressions metaphorically was quite limited and unimportant in everyday language; metaphor was not viewed as part of ordinary conversational speech but one type, or in particular, a basic characteristic of figurative language (Johnson, 1981; Lakoff, 1993; Lakoff & Johnson, 1999). In brief, figurative language has to do with those words or expressions that

are stripped of their literal meaning in such a way that another non-literal meaning takes its place to make writing more descriptive and to compel more attention.

Some philosophers, like Socrates and Plato admitted that figurative speech is a strong way to win arguments, but they criticized the poets or those who used rhetoric because this language did not show truth. In fact, ancient philosophers preferred language to be literal; they favoured literal language over figurative language (including metaphors). In classical theories of language, speech was narrowly conceived under the lens of reality. They thought that the main role of languages was to convey information about reality literally and basic truths about the world objectively. If an expression referred to something exists in the world, then it was true; otherwise, it was untrue. That is to say, words and expressions were merely employed to name things, to express logical relations between them and to describe events as they were in reality. They argued that literal language was the only trustful medium to express thoughts accurately, whereas metaphor (or non-literal language) was claimed to be emotive—just for evoking emotions instead of revealing truth, with the fact that it could not communicate logic (Johnson, 1981; Way, 1991). Further, they tended to consider metaphor as parasitic upon literal usage, believing that the understanding of the metaphorical meaning is inseparable of the literal one; part of its meaning derives from the literal meaning of the words used to make it. In this sense, it depends on it to be explained (Hintikka & Sandu, 1994; Johnson, 1981). Understood in this way, traditional accounts of metaphor made it seem an unessential linguistic phenomenon with the potential to mislead and create confusion.

The philosophical devaluation of metaphor was particularly given another flourishing reputation by Aristotle. He was the leading philosopher who made the first formal study of metaphor through providing an influential explanation about its nature in a more systematic way. He handled it in his two seminal books, *Poetics* and *Rhetoric*. In his *Rhetoric* (1405a) and *Poetics* (1459a), Aristotle showed that it was a hallmark of genius which neither could be

instructed nor learnt; it was a figure of speech that only gifted persons could have a command of, “since a good metaphor implies an intuitive perception of the similarity in dissimilar,” or in another famous saying, creating it implies “an eye for resemblance” (cited in Johnson 1981, p. 48). Aristotle believed that it involves an implicit and indirect comparison based upon analogy (Ortony, 1993). In his poetics, he stressed that “metaphor consists in giving the thing a name that belongs to something else” (cited in Harris & Taylor, 1997, p. 20). Accordingly, metaphor is about having the ability to see resemblances between two disparate things that are connected in some respects—an elliptical simile without using ‘as’ or ‘like’.

According to Nuessel (2010), the Aristotelian conception is now called ‘**The Comparison Theory**’. Its formula states that the properties of B are transferred to A, so that A is B or A implies B in order to convey information about A. Thus, to return to the example, “She has a heart of *stone*”, cited on page 35, we would say that the sentence is an abbreviated form of simile; in place of “She is like a *stone*”, the phrase is shortened to “She has a heart of *stone*.” Literally, this is a false statement since it refers to something which does not exist in reality. Figuratively, comparing the girl’s heart (A) with the stone (B) is possible due to the similarity between them and the shared properties. Again, on this approach, given that the metaphorical meaning is parasitic on the literal one, the suggestion is that her *heart* is as hard as the *stone*, or she is unemotional and incapable of being friendly. In other words, Barcelona (2005) adds, the sentence expresses the idea of insensitivity.

On the basis of such views embedded in Greek thought, metaphor was a deviant form of languages, the aim of which was aesthetic and artistic. Johnson and Lakoff (1999) assert that words or expressions, which did not refer to the world objectively, were left to poetic, rhetoric or fiction where truth about the world was not important. What made Aristotle’s description different was that he praised authors who employed metaphors to achieve good poetry and eloquent prose because, to him, it was a powerful means to transmit messages or

meanings effectively. Even though he valued metaphor, he was a literalist who regarded it as a deviant use of language (an occasional aberration), for it involves employing words that express meanings which depart from the literal norm. Therefore, metaphor was basically an expressive tool to be utilized only in imaginative phrases to beautify and to give ideas more impact for the recipient; a kind of decoration to be added to ordinary language (Mahon, 1999). More exactly, metaphor was seen as a stylistic ornament, i.e. an alternative tool to express some literal ideas that would be difficult to be conveyed through the literal language (Way, 1991). According to Gibbs (1994), metaphor was a useful way to give a verbal description of thoughts like emotional states, sadness, swiftness or ungraspability. For example, the non literal statement ‘The thought slipped my mind like a squirrel behind a tree’ cannot be easily expressed literally, and even if it is translated into literal terms or described verbally, the language remains metaphorical; ‘The thought went away’ or ‘The thought evaded me.’

In a succinct narration, the Aristotelian way of looking at metaphor has opened the door to a rich understanding of it, but it fails to account for the development of meanings in words. Many theorists have routinely elaborated on his claim in order to offer descriptive theoretical models that best give answers on what constitutes metaphor. Nuessel (2010) points out that the comparison theory has been criticized over time, but its main promise remains intact. Richards (1936) and Black (1955) are, two among many of metaphor theorists, who broke with the Aristotelian traditions and revived the study of metaphor (cited in Gibbs, 1994, p. 211-213). In fact, they offered another perspective, upon which the contemporary conception of metaphor is based. However, the current theory, proposed by Lakoff and Johnson in 1980, has succeeded in achieving considerable impact on every discipline concerned with metaphor. It has brought into being a radically new direction in the perception of it. Both of them has taken the idea of metaphor a step further and challenged the classical understanding in their book *Metaphors we Live By* (1980). Their conception is known as “the

cognitive linguistic view of metaphor” (kövecses, 2010). The claims they presented about metaphor can help us understand the systematic metaphorical relationship between the senses of a polysemous word.

Lakoff and Johnson (1980, 1999) assert that the comparison theory has fostered a number of empirically false beliefs. Metaphors are not simply a matter of linguistic expressions used figuratively by gifted people in order to express flowery language. In their view, they are not just mere ornamentation or, as many people think, a poetic or rhetorical tool that is used to deviate from the norm of literalness. While this may be true for highly imaginative metaphors, it is not true for the ones we commonly use. In fact, metaphors govern and pervade our thinking as well as our talking. They are fundamentally a matter of thought. That is, metaphors exist in language because they exist in thought (kövecses, 2005). They are used without efforts by people to deal with the mundane details of life. For instance, sentences like ‘we’re *at crossroads* in our relationship’ (Lakoff & Johnson, 1999, p. 123), ‘She *shouldered* the task with ease’, ‘She’s *loaded with* responsibilities’ (Riemer, 2010, p. 247), ‘Politicians are being blamed for the *ills* of society,’ ‘Her career was *in ruins*’, ‘Scientists *have taken a big step* in understanding Alzheimer’s disease’ (kövecses, 2010, X) and ‘The dollar is *falling sharply*’ (Finegan, 2015, p. 205), are far from being unusual (i.e. used for certain aesthetic or artistic purposes). Instead, they are basic and normal expressions reflected in daily conversations. In other words, metaphors are not only a literary tool, but a valuable cognitive tool that people or even poets cannot live without (kövecses, *ibid.*).

The conceptual system in terms of which we act and think is metaphorical in nature. In CL, metaphor is not haphazardly formed, but rather it is conceptual (a property of concepts) or connected to conceptualization. To explain their theory, Lakoff and Johnson (1980) introduce the terms **conceptual metaphors** and differentiate them from **metaphorical linguistic expressions**. The term conceptual metaphor has to do with those metaphorical

concepts of the world around us that are situated in our minds. They are the result of understanding one concept in terms of another one. For example, speakers of English often think and talk unconsciously about arguments in terms of war, theories in terms of buildings, journeys in terms of life, and ideas are conceptualized in terms of food...etc (kövecses, 2010, p. 6). In Lakoff and Johnson's work (1980), together with kövecses (2005, 2006, 2010), we can see that English has many metaphors we may not always notice. By convention, conceptual metaphors are represented in capital letters: AN ARGUMENT IS WAR, IDEAS ARE FOOD, THEORIES ARE BUILDINGS and LIFE IS A JOURNEY....etc. Each conceptual metaphor in people's conceptual system gives rise to a number of linguistic manifestations in language referred to as metaphorical linguistic expressions. Usually, there are many metaphorical linguistic expressions (i.e. linguistic metaphors) that reflect a particular conceptual metaphor (i.e. a metaphor in the mind) (kövecses, 2006). Hence, metaphorical linguistic expressions are ways of talking; they are the whole range of linguistic expressions or words produced by people, which reflect and make manifest the conceptual metaphors (i.e. ways of thinking) (kövecses, 2010). The following italicized linguistic expressions are some of the linguistic examples of the corresponding conceptual metaphors mentioned above respectively:

AN ARGUMENT IS WAR

Example 1: He *attacked every weak point* in my argument.

Example 2: I *demolished* his argument.

Example 3: Your claims are *indefensible*.

THEORIES ARE BUILDINGS

Example 4: Is that the *foundation* for your theory?

Example 5: We need *to buttress* the theory with *solid* arguments.

Example 6: So far we have *put together* only the *framework* of the theory.

IDEAS ARE FOOD

Example 7: There are too many facts here for me *to digest* them all.

Example 8: I just can't *swallow* that claim.

Example 9: That's *food* for thought.

Example 10: She *devoured* the book. (kövecses, 2010, p. 6-7)

Specifically, Lakoff and Johnson (1980) assume that the function of metaphors is to understand and to structure abstract or new concepts (like arguments) in terms of another less complicated and familiar concepts (like war). In other words, metaphors are developed by people because there is no direct way of understanding certain abstract concepts of human knowledge. They are the means to comprehend complex concepts such as emotions by connecting them to better-known and easier to understand ones in our experiences in the physical world (Radden & Dirven, 2007). Technically defined, conceptual metaphors involve two concepts or two domains, the source and the target domains. The concept we try to understand is called the target domain, whereas the source domain is the concrete or less complex concept, through which we comprehend the target domain, and from which the metaphorical linguistic expressions are drawn (kövecses, 2010). Thus, in the above examples, theories, arguments and ideas constitute the target domains, while buildings, war and food are the source domains.

A conceptual metaphor is therefore a conceptual mapping between two domains. These domains come from different parts of the conceptual system. In other words, they are often quite different, but they are connected systematically; either both of them can share some abstract similarities (from perceived resemblance) (kövecses, 2006) or they may correlate in our every day experience (kövecses, 2015). Accordingly, the metaphorical expression '*to waste time*' reflects how time is thought of in English and also in many languages. It is a manifestation of the conceptual metaphor TIME IS MONEY represented by

Lakoff and Johnson in 1980. This metaphor means that *time* (the target domain) is compared to *money* (the source domain). The features of *money* are different from *time*, but we talk about *time* in *money* terms because of the abstract similarities between them, in that, *time* is a precious asset which is possessed by human beings; it can be saved and wasted in the same way as we do with *money* (Croft & Cruse, 2004, p. 55).

Given the idea of correlation, experiencing the feeling of *anger* (the target domain) is correlated with and increases the body *heat* (the source domain). Since our emotional experience co-occurs together with our bodily experience, they form the basis for the conceptual metaphor ANGER IS HEAT. In English, this is indicated by metaphorical expressions for *anger*, such as ‘*boil with anger*’, ‘*make one’s blood boil*’, and ‘*be burned up*’. It should be noted that correlation between two events does not mean that they are similar, but these events accompany each other repeatedly or just habitually (kövecses, 2010, p. 81).

1.3.2 Metonymy

Metonymy is another important way people use to convey information to each other. For quite a long period of time, the study of metonymy has remained confined primarily to the realm of rhetoric in the context of which it was considered to be a figure of speech and a mere decoration of language. Similar to metaphor, in the traditional conception, it was chiefly seen as one type of tropes; a characteristic of language rather than thought. Basic insights into metonymy started with Aristotle who treated it under metaphor. This figure of speech has to do with names of things. It refers to linguistic expressions where a word is substituted by another one that is tightly connected to it (Radden & kövecses, 1999). In the sentences (a) and (b), *Shakespeare*, *Washington* and *Moscow* are metonymies for other ‘things’, i.e., they do not refer to what they actually stand for:

(a) I am reading *Shakespeare*

(b) *Washington* is negotiating with *Moscow*.

These words draw our attention to other ‘things’ which they substitute:

(a) I am reading *one of Shakespeare’s works*.

(b) *The American government* is negotiating with *the Russian government* (kövecses, 2010, p. 171-2).

Metonymy has recurrently been discussed with metaphor. Like metaphor, metonymy is claimed to be not a figure of speech but one of thought. Everyday talk reflects people’s ability to think metonymically. To put it simply, people tend to conceptualize one thing by means of its relation to something else (Lakoff & Johnson, 1980). Metonymy is often used without conscious awareness. Gibbs (1994) points out that it is an omnipresent part of our way of thinking and expressing information about people, places, events as well as things. Metonymy, then, is a conceptual phenomenon. The presence of metonymy in our everyday thinking means that it leaves traces in language; the conceptual metonymies are revealed by metonymic linguistic expressions (kövecses, 2010; Littlemore, 2015). Unlike metaphor whose function is to understand abstract concepts, metonymy is used for reference. While the former implies a comparison between seemingly unrelated entities, the latter proposes the idea of contiguity between two concepts. In Radden and Kövecses’s definition (1999), metonymy is a process whereby “one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target” (p. 21).

In a nutshell, we can illustrate the above idea by the example given by Littlemore (2015, p. 4): ‘The *trains* are on strike’. At first glance, literally, this sentence seems meaningless. However, it is a meaningful and a usual way people follow to facilitate communication. Our shared knowledge of *trains* (i.e. their parts, together with the fact they run only with drivers and without them, the trains will not run) helps us infer that the *drivers* are the ones who are on strike not the *trains*. The use of *trains* (the vehicle) provides mental

access and directs our attention to another conceptual entity which are the *drivers* (the target entity). In this case, in order to understand what is meant by the sentence, we draw upon our knowledge of the relationship between *trains* and their *drivers*. Therefore, it seems that the reason why we think metonymically and produce metonymical linguistic expressions in many situations lies in the fact that this enables us to put what we know about the world into a manageable form so that we communicate with fewer words (Littlemore, *ibid.*).

According to Gibbs (1994), language users take the well-understood characteristic of something to provide mental access to the thing as a whole. Littlemore (2015) states that metonymy entails employing a concrete or simple concept to refer to another complex or even a sensitive thing. In other words, instead of conveying the literal meaning, an expression or a word is used to express various kinds of relationships. Language users very frequently establish a relationship between the product and its producer, an event and the place in which it occurs, or they relate the whole to the part and the part to the whole. The following examples are some instances of conceptual relationships between entities. The relationships are stated in small capitals, while conceptual metonymies are in capital letters:

CONCEPTUAL METONYMIES

Metonymical Expressions

INSTRUMENT FOR ACTION

“She *shampooed* her hair.”

THE PLACE FOR THE EVENT

“America doesn’t want another *Pearl Harbor*.”

THE PLACE FOR THE INSTITUTION

“*Hollywood* is putting out terrible movies.”

THE PRODUCER FOR THE PRODUCT

“Does he own any *Hemingway*?”

(Kövecses, 2010, p. 172)

These sentences are not arbitrary. They are some metonymic concepts in terms of which thought is organized. Specifically, the entities participating in each metonymy are connected. In the first example, the instrument provides mental access to the action. The word *shampoo*

stands metonymically for what one might do with it, i.e., the action of washing hair involves using *shampoo*. This noun turns into a verb expressing the action done with it. In the second example, *Pearl Harbor* is used metonymically to stand for the sensitive event that happened in that place. The sentence indicates indirectly that ‘America doesn’t want another *major defeat in war*’ (Kövecses, 2010, p. 171). Similarly, when we say ‘*Hollywood* is putting out terrible movies’, we do not only indirectly refer to the institution located in that place but also to suggest the importance of the institution the place represents. In the same way, the name of a writer or any producer can be used to denote the product that has been produced or the work that has been written, as in ‘Does he own any *Hemingway*?’ (Kövecses, *ibid.*).

Although metaphor and metonymy seem to be two different processes, they cannot be stated in absolute terms. Scholars like (Barcelona, 2011; Kövecses, 2010) note that, in certain cases, they interact in fairly intricate ways. Sometimes, a linguistic expression may be interpreted as metaphorical, metonymic or a combination of both depending on the context, the interpreter’s choice or the background knowledge. An example of interaction between metaphor and metonymy is the expression ‘to shoot one’s mouth off’. This case is categorized by Kövecses (2010) “metonymy within metaphor”. Figuratively, the expression means ‘to talk foolishly about something that one doesn’t know much about or should not talk about’ (p. 188). A metaphorical reading implies a source domain item, *the gun*, which is mapped onto the target domain, *the mouth*, i.e. the organ of speech. In simpler terms, using a firearm foolishly is mapped onto the situation of foolish and thoughtless talk. In the mean time, the use of *mouth* can be considered the vehicle which provides mental access to the faculty of speech. Accordingly, the metaphor here incorporates a metonymy within the same linguistic expression. Doubtless, despite the difficulties that may be encountered in distinguishing between metaphor and metonymy, each term helps in accounting for the meaning creation that undergoes lexical items.

1.3.3 Meaning Extension via Metaphor and Metonymy

Speakers of a language do not use words literally all the time. In day to day speaking and writing, words (or expressions) are sometimes used metonymically and other times metaphorically. They flow effortlessly from our mouth in order to speak about the world precisely. Metaphor and metonymy are two natural, yet different kinds of, processes whereby we generate a variety of concepts, ideas and hence new multiple meanings. The formulation of secondary meanings is systematically done by applying pre-existing ones, without erasing them, to new situations. The co-existence of new meanings of words whatever they may be with old ones in one form results in polysemy. Within this conception, how does polysemy (meaning extension) embrace metaphor and metonymy?

Particularly, Zhu & Malt (2014) propose, among others, an explanation for the tendency of people to generate polysemy and how senses come about. In doing so, they have provided two examples related to human body, namely *head* and *nose*. To them, the features that are shared by the senses of a polysemous word are the “salient characteristics of the default referents” of the central sense, which pave the way to sense expansion. Language users are aware of the referents of the word *head*; that is, an organ that consists of substances, flesh, blood and bones. However, these features are not so much salient or important because they are not likely to be the ones speakers call to mind when remembering or using this word. Rather, characteristics like ‘located at top of body’ as well as ‘organ of decision making’ are the salient characteristics associated with the primary sense of the word *head*. These are used as a basis for further extensions found in expressions like ‘*head* of the table’ and ‘*head* of the department.’ Concerning the word *nose*, the salient properties are different. Its locality in the body may not be as important as its role, i.e., “olfaction”. It is because of this function, the additional smell-related senses of *nose*, for example, are created (Zhu & Malt, 2014, p. 934-

35). In the Oxford Advanced Learners Dictionary online, we find the following expression, ‘a dog with a good nose.’

Moreover, in 1725, the historian Giambattista Vico (cited in Yu, 2015) stated that the imagination of human beings is structured by metaphor and metonymy. On the one hand, via metaphor, meaning extension arises by the process of mapping one meaning onto another. Language users take on the familiar meaning to express the abstract concept. That is, the properties of the primary sense are transferred to the target concept. As an example, consider the word *brain*. In addition to its basic sense, it is used for electronic devices, as in ‘The microprocessor is *the brain* of a computer.’ This secondary sense is metaphorically motivated. In English, the domain of electronics (the target domain) is understood in terms of human beings (the source domain). Here, the sentence does not refer to a human brain, but rather to a specific part in the computer. The way a microprocessor functions in a computer is conceptualized in terms of the way the brain functions; the brain of the human being is mapped onto the microchip of a computer. Additionally, people also talk about electronics by projecting different elements related to human body, such as memory, virus and brood. For example, ‘The computer is *brooding* over the problem’ describes the computer in terms of humans (Radden & Dirven, 2007, p. 13-14).

On the other hand, via metonymy, meaning extension typically involves related entities. Metonymy stands for the central sense of the word in use, and both are linked up to create a new complex sense (Radden & Kövecses, 1999). Radden, Köpcke, Berg, and Siemund (2007) believe that language utterances are underspecified. They give insufficient information because they cannot express all the aspects which are needed for their understanding; it is impossible to encapsulate all the aspects of our intended meaning in the language that we use. According to Frisson (2009), we require inferences to comprehend the intended meaning (cited in Littlemore, 2015). Littlemore (2015) adds, it is even unworkable

to activate the knowledge that we have about a given concept instantly and consciously. If we were asked to think of *France*, we might picture a place in *France* that we visited, an iconic representation of *France* such the Eiffel Tower or a rough map of it. It is not possible to imagine all the country immediately because the information could not be held in our working memory, even if we have travelled many times to France. Therefore, people are likely to pick out a particular element of something to represent the thing as a whole concept. They use it as ‘a point of access’ to the entire concept.

In English, one of the secondary senses of the word *crown* is developed by means of metonymy, specifically the PART FOR WHOLE one. *The crown* is a part of a monarch’s attire. It is an object made of gold and precious stones worn by the king or the queen. *The crown* is also the “symbol of its royal wearer and, more abstractly, of the monarchy” (Radden & Dirven, 2007, p. 14). In short, it is the distinguishing feature we never miss out. The shift in meaning occurs by taking the easily perceived aspect, *the crown*, as a reference point to provide mental access or to draw our attention to another conceptual entity, *the monarch*. Accordingly, speakers of English have added a new meaning to the word *crown* by using a well-understood **part** (*the crown*) to stand for a **whole** (*the monarch* or *the monarchy*) which can be found in a sentence like ‘*The Crown* never rejects a bill approved by Parliament’ (Radden & Dirven, *ibid*).

Interestingly, the extended meanings are not necessarily metonymical in a given word and metaphorical in another. Despite the fact that they are different mechanisms, polysemy can combine metaphor and metonymy. That is, the senses of a polysemous word are related to each other by means of metaphoric and metonymic extensions from the primary sense. Let us take the word *head*, again, which has a variety of extended meanings. The diverse uses of *head* are grouped under three major categories linked semantically by means of metaphor and metonymy: one signifies the central meaning, the second designates metaphorically extended

senses, and the third shows metonymically extended ones. If *head* is seen as the top and the vital part that controls the human body, then *head* is used by means of metaphor to designate things and people that are high and in charge. Hence, we speak about ‘*the head* of the school,’ ‘*the head* of the company or organization’, and ‘*the head* of the stairs.’ As being that part of the body that contains the brain, the meaning of *head* is used to stand metonymically for persons or their mental abilities, like in ‘I can’t get that song out of *my head*’, ‘An exceptional analyst who could do complex maths in his *head*,’ or ‘Two *heads* are better than one’ (Dancygier & Sweetser, 2014, p. 102; Piquer Píriz, 2008, p. 221).

Conclusion

The need for new vocabulary is inevitable to name things or to rename new concepts in different ways in our changeable world. The sheer number of words that are created may exceed the capacity of human memory and make the communication even more difficult. Owing to the PLE, people take existing words and extend their meanings in order to deal with various experiences. The more the semantic scope of a word is expanded, the more frequent it tends to be. Splitting an original word’s meaning into more than one sense changes its name from monosemous into polysemous. A polysemous lexical item is assumed to contain a primary sense, from which the other figurative senses are derived by means of metaphor and metonymy. These are flexible patterns of meaning in mind and language whose locus is in our conceptual system. Both of them play a pivotal role in explaining the process of semantic extension. It has become clear that the phenomenon of polysemy is a topic of paramount importance since it mirrors our ability to think outside the box, endowing our speech with indispensable flexibility.

Chapter Two: Image-Schema and Image-Schema-Based Instruction

Introduction

2.1 Definition of an Image-Schema

2.2 Theoretical Underpinnings of Image-Schemas

2.2.1 Image-Schemas within Cognitive Linguistics

2.2.2 Embodiment, Image-Schemas and Language

2.3 Characteristics of Image-Schemas

2.4 Utilization of Image-Schemas

2.4.1 Image-Schemas as Semantic Representations

2.4.2 Image-Schemas, Image-Schema Transformations and Polysemy

2.4.3 Image-Schemas and Language Teaching/ Learning

Conclusion

Introduction

The ability to use language to communicate a variety of meanings in order to bring any mundane details into fruition constitutes just one side of a triangle; the other two sides of which are the human mind and the external world. The way the world presents itself to us is in experience. We do not only experience the spatial-physical world but also the socio-cultural world. We make sense of the surrounding reality through our cognition that allows us to do that by forming concepts. The crucial fact about language is that it externalizes the vast body of knowledge about the world which we carry in our minds, by presenting it in flexible, structured and tightly woven systematicity. Since the world of concepts is not something we are normally aware of, language is then a window into the human mind or the conceptual system, and how meaning is mentally represented. The confluence of language, experience and human mind finds an expression in the formation of the theory of image-schema. The latter has been widely used to give an account of meaning as well as the way we understand the world. It does not have established itself as a viable and attractive model of linguistic description in theory, but also in lending itself as a theoretical insight to be applied in language teaching.

2.1 Definition of an Image-Schema

The theory of image-schema originated in philosophy, but it has been deeply discussed in CL. It is considered a touchstone notion because it makes us aware of a basic feature of human thought and language. It was first articulated in the landmark book *The Body in the Mind* by the philosopher Johnson in 1987 and simultaneously in Lakoff's *Women, Fire and Dangerous Things*. Johnson defines it as:

An image schema is a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience. [...] “Experience,” then, is to be understood in a very rich sense as including basic perceptual, motor-program, emotional, historical, social and linguistic dimensions. [...] experience involves everything that makes us human [which are] combined in complex interactions that make up our understanding of our world. (Johnson, 1987, p. xiv- xvi).

An image-schema to Johnson is an important key to understanding and explaining human thought and how it emerges. The definition implies that an image-schema is a mental representation in the mind which is linked to various experiences people encounter very often in the physical world.

The conception of an image-schema, ever since the term was introduced in the literature, has marked a continual progress that has attracted the interest of many researchers. The theory of image-schema has provided valuable or innovative insights regarding the nature of language and human thinking. In many fields of the humanities and the sciences, the concept has been utilized to deal with particular problems, resulting in a number of deep and fruitful investigations. Oakley (2007) points out that this theory has become influential in playing a vital role in linguistic theories of grammar by Langacker (1987), in literary criticism by Tuner (1987, 1991), in poetics by Lakoff and Tuner (1989), in cognitive development by Mandler (1992), in psycholinguistic investigations by Gibbs (1994), as well as Gibbs and Colton (1995), and in mathematics (Lakoff and Núñez, 2000). Image-schemas are more than elements of linguistic theory. It has been argued by experimental research by Gibbs and Colton in 1995 in psycholinguistics, cognitive psychology and developmental psychology that they have psychological reality (cited in Croft & Cruse, 2004).

At first glance, despite the evolving use of the term image-schema in many researches, its definition is somewhat vaguely presented by Johnson (1987). In order to get a better handle on this theory, it is worth describing some of its assumptions and theoretical underpinnings. The following insights are not intended to be exhaustive, but their purpose, instead, is to give some sense of the notion of image-schema we will be discussing in this chapter and to help us clarify the definition.

2.2 Theoretical Underpinnings of Image-Schemas

The theoretical underpinnings of image-schemas are linked primarily to the principles of CL that draws heavily on the concept of embodied experience.

2.2.1 Image-Schemas within Cognitive Linguistics

CL is a contemporary school of thought in Linguistics which provides a relatively new understanding regarding the nature of language. Evans (2012) states that it started in the 1970s by a small number of researchers like (Fillmore, 1975; Lakoff, 1975, 1977; Talmy, 1975, 1978; Langacker, 1978). The origins of this modern approach to language are in part philosophical as it appears in the book *Metaphors we Live By* by Lakoff and Johnson in 1980. It emerges as an alternative approach to formal approaches to language, for instance, Generative Grammar (Chomsky, 1965, 1981) and Montague Grammar (1970). It has adopted many assumptions, and it has been influenced by theories as well as findings from the other cognitive sciences, such as cognitive psychology, the brain sciences, together with cognitive neuroscience. The overarching concern of CL is typically with investigating language in relation to what is known about the mind from other disciplines.

What makes CL distinctive is that it takes into account the human perceptual system and their experiences of the spatial-physical-social world. It is guided by the belief that

language is “based on [or reflects] our experience of the world, the way we perceive and conceptualize it” (Ungerer & Schmid, 1996, p. x). Importantly, CL focuses more on human cognition and language. It stands in sharp contrast to the modular view held by Generative Linguistics which regards language as independent of other mental and cognitive abilities. From the perspective of CL, language is not separate from general cognitive processes; it is an integral part of cognition, and it mirrors conceptual structure (Cadierno & Lund, 2004). CL assumes that language is not only related to cognition and cognitive processes, but also depends on them and influenced by them. Both of them are intuitively connected in that cognitive processes and mental abilities interact with language.

In particular, CL criticizes Generative Linguistics because it puts more emphasis on linguistic competence (knowledge of language). The latter is considered by Generative Linguistics as the proper subject to be dealt with in linguistic investigations. In contrast, CL looks into linguistic performance (use of language) through taking into consideration the functions of language. While Generative Linguistics sees grammar, or mainly syntax, as an autonomous system that is separate from semantics, in CL, grammar is meaningful and bound up with semantics (Cadierno & Lund, 2004). The Editorial Statement of the very first issue of the journal CL, published in 1990, says that this approach views “language as an instrument for organizing, processing, and conveying information –as something primarily semantic, in other words” (cited in Geeraerts, 2006, p. 3). CL deals with language as a mental phenomenon through making reference to how human think; it describes the way they express their thought, which in turn helps provide an adequate understanding of it. Evans and Green (2006) assert that the focal point of CL is meaning and language use. The clear-cut division between competence and performance is rejected by cognitive linguists on the basis of the claim that knowledge of language emerges from patterns of language use. According to this view, knowledge of language is knowledge of how it is used. Hence, language use is central to our

knowledge of language, to our language system or mental grammar. It follows that the organisation of our language system is linked to how language is used in reality. The assumption that language structure cannot be investigated without considering the nature of language use is what makes CL a functionalist rather than a formalist approach to language (Evans & Green, 2006).

CL is generally divided into two major branches, namely Cognitive Semantics and Cognitive Approaches to Grammar. Figure 2.1 is an illustration of the study of meaning and grammar in CL:

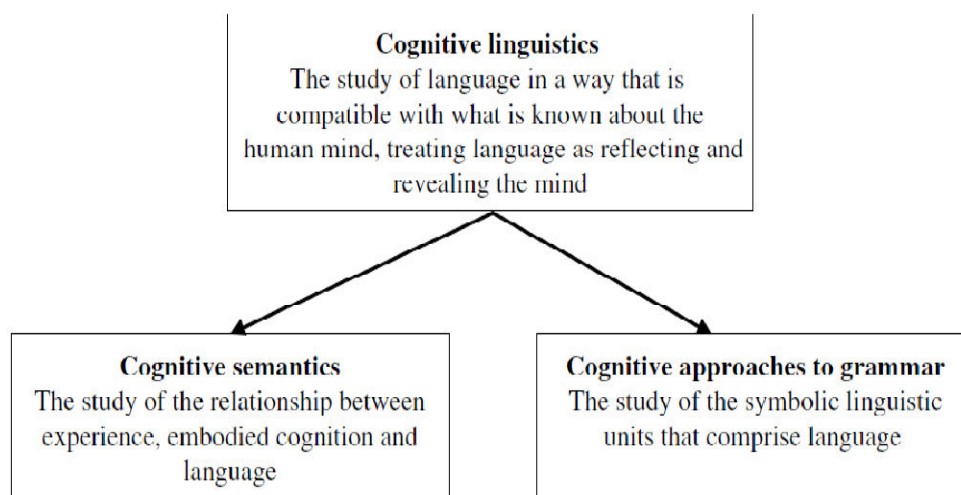


Figure 2.1: Definitions of Cognitive Linguistics, Cognitive Semantics and Cognitive Approaches to Grammar (Evans & Green, 2006, p. 50)

From the scheme above, it seems that Cognitive Approaches to Grammar focus on the linguistic system. They investigate the units of language or the language system in its own right, whereas a cognitive approach to semantics tries to understand how the linguistic system is linked to the conceptual system as well as embodied experience. Thus, cognitive semantics and cognitive (approaches to) grammar complement each other (Evans & Green, 2006).

The theory of image-schema, the present chapter is about, was developed in Cognitive Semantics. Many researchers like (Clausner, 2005; Liebert, Redeker, & Waugh, 1997; Turner, 1996) believe that image-schemas are important in enabling us to structure and give meaning to every experience we go through. In this respect, the key notion image-schema is related to the development of the embodied cognition thesis or the embodied view of meaning, which is one of the guiding assumptions of Cognitive Semantics.

2.2.2 Embodiment, Image-Schemas and Language

The concept of embodiment is employed extensively in CL. It was proposed notably by Johnson (1987) and Lakoff (1987). The term has been also widely used in cognitive science (for example, Evans & Green, 2006; Gibbs, 2005; Johnson, 1987; Lakoff, 1987; Lakoff & Johnson, 1999; Maalej & Yu, 2011) to refer to the centrality of the human body; understanding the role that the human body plays in their everyday cognition, and how it influences the way they think and speak. The assumption is that there is a tight relationship between the kinds of concepts human beings form and the nature of the physical bodies they have. Embodiment has to do with the claim that the body has a key role to play in conceptualizing the external world. In other words, human experiences and the nature of their bodies interact together to generate meaning. According to Johnson (1987), our bodies are always connected to the world, (i.e. the body is the means by which human experience the environment), so our rationality is connected to our bodily interactions in the environment.

Embodiment is indispensable to know what meaning is and to our ability to be creative. The essentiality of human embodiment affects what and how things are meaningful to us. It also influences the ways we comprehend our experiences and to reason about them. Hence, the embodied thesis holds that human cognition is shaped by embodied experience. It

follows that the nature of concepts along with the way they are structured and organized is limited by the nature of our embodied experience (Evans, 2007).

Johnson (1987) and Lakoff (1987) emphasize the role of the body in the formation of linguistic concepts by arguing against the traditional accounts of meaning; they have criticized the views held by the objectivist paradigm. The body was traditionally believed to be separate from the mind; the seat of perception, beliefs, feelings and desires...etc. In the Western philosophical tradition, the nature of meaning was thought to be objective. The body was ignored due to the subjective elements it may introduce. That is, language expressed concepts that presented reality. Words were arbitrary symbols; they got their meanings by referring to things and objects in reality (see Chapter One, Sub-section 1.3.1 Metaphor, p. 36). Language was first and foremost literal; holding “a one to one or mirror image relationship with the external world” (Yu, 1998, p. 21). Neither the nature of human beings as functioning organisms with their ability to comprehend nor the way they understand their experiences were taken into consideration.

Contrary to this, Johnson (1987) stresses the significance of human bodily experiences in shaping their thought. Humans use their bodies to interact with the external world, to manipulate objects, undergo many situations as well as experience many things. Due to the distinctive characteristics of our physical bodies, we have a specific view of the world around us. Thus, the interpretation of reality is likely to be mediated by the nature of our bodies; our particular anatomical and neurological architecture (Evans & Green, 2006; Tyler, 2012). By way of illustration, our embodiment affects the nature of experience in terms of the range of colours we can see. Some living beings can see in the infrared range like rattlesnakes, but humans are not capable to see in this range. “The nature of our visual apparatus—one aspect of our physical embodiment—determines the nature and range of our visual experience” (Evans, 2015, p. 20; Evans & Green, 2006, p. 45).

Moreover, all human experiences are filtered through extralinguistic faculties such as perception and memory (Gärdenfors, 2007; Regier, 1996). The way we perceive the spatio-physical and social world makes us generate our internal conceptions about it. Unquestionably, humans have a unique perception of the world which differs from all other animate entities. This means that the world is described as it is organized within people's conceptual system. The concepts we have access to are our subjective and human specific conceptualizations (Tyler, 2012). Because of our particular conceptualization of the world, the language we use will inevitably be influenced. According to Evans and Green (2006), we are only able to think and talk about the matters we can perceive and conceive which derive from embodied experience. The language we use does not mirror the description of the real world but human perception of reality (Janda, 2006; cited in Thang, 2009). In this new view, thought and language are alleged to be inherently embodied.

In fact, language cannot be investigated without taking into account human embodiment. It has been found that the body, which is in ongoing engagement with the environment, contributes to making sense of the world. The fact that language is embodied can be confirmed by some expressions used in English and Arabic when we talk about the names of objects in the world. These include some of body-related concepts, such as 'the hands of a clock', 'the mouth of a river', 'the foot of a hill,' 'swallow an idea', 'sink their teeth into the theory' and 'keep an eye on something' (Thang, 2009, p. 3). In Arabic, we speak of 'أرجل الطاولة' (The legs of the table), 'رأس القلم' (The head of the pencil) and 'أنف الجبل' (The mountain peak). In these figurative expressions, relating different words to body parts fleshes out their meanings; it contributes to understanding their shapes or their positions. Such expressions embody our conception of ourselves and our world.

In specific terms, if language is the vehicle of meaning, then meaning is embodied too-it has a conceptual nature. Linguistic meaning comes from the interaction between the

experience of the listeners/speakers together with the sensory, motor and internal states that accompany it (Bach, 2012). Investigating how these three elements (the meanings expressed by language, the human conceptual system as well as the physical experience) are connected is one of the primary tasks of Cognitive Semantics. The latter does not treat linguistic meaning as an independent system, but rather it claims that meaning is influenced by cognitive mechanisms, especially perception; it is related to the way people see the world. Many words' meanings are associated with what speakers of language do (Gärdenfors, 2007). For example, understanding the concept of a *chair* does not depend only on how it looks or how its parts are interrelated, but also on how we interact with this entity; what we do with our bodies in relation to it, like sitting on it or using it to support our body weight (Allan, 2009, p. 82).

Cognitive Semantics holds that the semantic structure—that is the meaning of a word or any linguistic unit—is equated with the conceptual structure. Meanings are in the head, and they are likened to concepts in people's mind. To put it tersely, the meanings of words or expressions do not correspond to entities in the world, but to concepts held in the mind which themselves refer to real world entities (Evans, 2007). Despite the fact that it is still unknown how the brain handles words' meanings, cognitive linguists provide a common assumption about how they are mentally represented (Gärdenfors, 2007). Researchers like (Johnson, 1987; Langacker, 1987; Cienki, 1998; Johnson-Laird & Byrne, 1991; cited in Evans & Tyler, 2005) assert that concepts are not structured in our minds in the form of semantic features or represented in a way that resembles words. If so, this will not really help us understand what words mean because we would have a mental language expressed by an ordinary language (Gärdenfors, 2007). Conceptual representations are in the form of what termed by Johnson (1987) **image-schemas, schemas or embodied schemas.**

Therefore, image-schemas are relatively abstract conceptual representations that are formed directly from our bodily interaction with and observation of the world (Evans & Green, 2006). They are mental representations which are abstracted from recurrent patterns of experience. Notice that the term experience has been used in a very broad sense in so far; it involves everything that makes us human (see Definition of an Image-Schema, p. 51). They represent (or summarize) information about the spatial relationships between objects and the physical movement in the world (Gärdenfors, 2014; Mandler & Pagán Cánovas, 2014). They organize our experiences, shape our thoughts, actions as well as languages. They play a crucial role in describing a wide variety of linguistic structure. They serve as the bridge that connects the transition from conceptual to linguistic representation (Mandler & Pagán Cánovas, 2014). They underlie a large number of lexical concepts which are represented by words we use in language (Evans & Green, 2006). According to Gärdenfors (2007), words' meanings are based on (or correspond) to image-schemas. Taken all these ideas together, the point being made here is that "image-schemas represent the essential glue that binds embodied experience, thought and language" (Gibbs, 2005, p. 113).

2.3 Characteristics of Image-Schemas

Image-schemas have been studied in detail in CL and have been presented in different lists. Johnson (1987) was a pioneer in developing a list of the various types of image-schemas. The list consists of twenty seven image-schemas, and it is so brief because it contains only the basic ones. According to Johnson (1987), a thorough understanding of image-schemas makes it possible to be extended into a lengthy one. Following Johnson, some scholars such as (Clausner & Croft, 1999, p. 15; Evan & Green, 2006, p. 191) have started to develop an account of these recurrent patterns and to compile their own richly detailed lists. Although they have offered different lists, the types of image schemas that have been proposed so far in

the literature seem to be an expansion of the original one. Even if a closed set of image-schemas have not yet been introduced, and the authors' lists may be open to include new ones, for the purpose of facilitating the discussion as well as the coordination of the ideas presented in this section and for the sake of space, explaining every single image-schema is beyond the scope of this study due to the details that vary considerably from an author to another. Throughout this chapter, and later in the following one, only the most prominent and particularly some relevant image-schemas for the present research will be discussed.

CL has demonstrated that image-schemas are the foundations of the conceptual system which have four important properties. Firstly, they are analogical representations of the various embodied physical experiences which are repeatedly undergone by people. They emerge from our sensorimotor activities when we move, use objects or orient ourselves. The perceived information that generates an image-schema may come from all modes. That is, the term 'image' does not merely refer to visual perception, but in CL and psychology, it has a broader application. Image-schemata are abstract concepts which emerge from all types of sensory-perceptual experiences: visual, auditory, kinesthetic, and tactile (Evans & Green, 2006; Gibbs, 2005; Gibbs & Colston, 2006).

In his book, *The Body in the Mind*, Johnson (1987) gives the example of the CONTAINER schema. The latter results from our encounter with containers or from experiencing constant physical containment in our environment. According to him, in everyday life, there are many activities we unconsciously perform. We regularly use our bodies to move in and out of a *room*. We also manipulate objects or put them in containers, like *cups*, *bags* or *boxes*. The experiences of being contained in something or of locating something within something else leave traces in our brain which give rise to a mental representation (i.e. an image schema). In this case, it is called "the CONTAINER image-schema." The latter denotes the concept of containment, i.e., the capacity to understand that a

given object can contain another one. It should be noted that the term ‘containers’ here is not merely used by Johnson (1987) to signify objects but to anything in the world that has an opening if something or someone is to go inside, such as *a house, a car, a box and a building*.

As a matter of fact, image-schemas emerge from our earliest moments we begin to develop our understanding of reality. Relying on the insights given by Johnson (1987), the developmental psychologist Jean Mandler (1992, 2004) has demonstrated through a series of studies and findings from different researchers that image-schemas begin to emerge during early childhood in conjunction with our physical and psychological development as a result of our interaction with the world. The CONTAINER schema arises, for example, when infants attend to moving objects, experience putting things and food into their mouths (cited in Evans & Green, 2006, p. 178).

In exploring the world around us, we develop the VERTICALITY image-schema. It emerges from numerous instances of activities we experience on a daily basis wherein we employ an up-down orientation. We grasp verticality whenever we stand upright, climb stairs, measure the height of children, experience the level of water when it rises in the bathtub, perceive a tree, form an image of a flagpole and see poles as well as chimneys. The VERTICALITY schema is the abstract structure of these experiences (Gibbs, 2002; Johnson, 1987). On the basis of these examples, it entails that image-schemas are mental representations of recurrent shapes or patterns that look like the perceived objects or activities (Johnson, 1987). Although these patterns derive from all the perceptual information, they are analogical representations, in that they no longer have visual, kinesthetic or auditory properties. They just consist of the crucial elements of the experience. Image-schemas are created through abstracting “key information about events, which is then recorded into a non-perceptual form that represents a meaning” (Mandler, 1988, 1992; cited in Goswami, 1998, p.

54). In this sense, image-schemata are mental representations which do not consist of all the details we can find in an image (Gibbs, 2005; Mandler, 1992, 2004).

Secondly, reading back through the previous accounts, we can say that image-schemas which are generated in the brain are not images. Although the very term 'image-schemata' may direct us to think about them, they are neither rich, specific or concrete images nor mental images. Evans & Green (2006) reflect on the idea by arguing that images are fundamentally different from image-schemas because they contain many details concerning their own shapes and colours. Mental images are the consequence of a conscious cognitive process which requires recalling visual memory. We can close our eyes, imagine the face of a close friend or any person, but we cannot bring into awareness an image-schema in the same way we can think up the sight of a person's face. "Image-schemas are buried 'deeper' within the cognitive system [...] and as such are not available to conscious introspection" (Evans & Green, 2006, p.186). They are more abstract, general and schematic than ordinary images. In another sense of that term, image-schemas are schematic versions of images (Croft & Cruse, 2004).

The train of thought discussed so far is summed up by Holmqvist (1993, p. 31): an image-schema represents the remaining part of a picture when all its structure is taken away, apart from the part which can be described linguistically in a morpheme, a sentence or a piece of text (cited in Gärdenfors, 2007, p. 63). Consider the example given by Johnson (1987):

You can easily form an image of a human face that is full of detail—it can have eyes that are wide open, with one pupil larger than another; lips cracked from exposure to the sun; ears that stick out un-usually far; a scar running beneath the left eyes; a mole just to the right and below the left corner of the mouth; and on and on through one detail after another. Now, in contrast with this

“information rich” image, our schema for a face has only a few basic features—lines for eyes, nose, curve of face, etc. This schema can, therefore, be instantiated in a huge number of different images of faces. (Johnson, 1987, p. 24).

The quote suggests that image-schemas are summaries of a number of basic elements that structurally can cover all the cases of a face. An image-schema is a generic representation. It manifests a recurring underlying structure of what is common to objects, experiences, bodily movements and events. No particular rich image corresponds to this schema because it can take a variety of instantiations. Above and beyond these insights, it seems that the role of the human body is twofold. It does not only take part in the formation of image-schemas, but also researchers rely on it to provide a clearer understanding of what they are. On the basis of how the body is structured, Turner (1991) describes image-schemas as highly “skeletal images” that are used in our cognitive operations to recognize events, objects, and through which, we organize our experience, structure (or generate) our images. For example, a skeletal image of “a flat bounded planar space inheres within our rich images of tables, floors and individual plateaus” (Turner, 1991, p. 57).

Thirdly, to get the idea of the nature of image-schemas, what they look like and the structural elements they can have, cognitive linguists illuminate their description with diagrams. Every image-schema is accompanied with a parallel graphic representation which depicts to a certain extent the experience that creates it. Evan and Green (2006) point out that cognitive linguists name the various image-schemata with normal words, while the benefit of diagrams is to represent concepts without relying on language so that linguistic meaning is shown in an economical and memorable way. Gärdenfors (2007) goes on to say that the schematic diagrams are not meant to liken a picture of how the world looks like or to

resemble a mental picture, but they are solely simple visual aids (schemas) that show the main constituents of every image-schema. Accordingly, if we take the CONTAINER schema again as an example, the diagrammatic representation will look like the following:

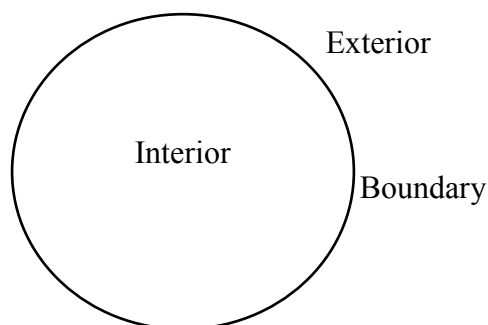


Figure 2.2: Graphic Representation of the CONTAINER Schema
(adapted from Evans & Green, 2006, p. 181)

The diagram in Figure 2.2 is a skeletal image that is general; it does not resemble any rich image of a container. It only shows the shared characteristics of all kinds of containers like bounded spaces, which can be fully or partially enclosed, including *rooms, buildings, bathrooms, cabinets* and many other containers, such as *bags, jars, cans* and *boxes*. The structural elements of the CONTAINER schema, as indicated by Murphy and Koskela (2010), are made up of an interior, exterior and a boundary between them. It is a gestalt structure in that the parts are none sense without the whole. “There is no inside without a boundary and an outside, no outside without a boundary and an inside, and no boundary without sides” (Lakoff & Johnson, 1999, p. 32). The schematic diagram in Figure 2.2 can be physically instantiated in different forms as well as myriad of images. For example, it can be fleshed out into a picture of cups as it is shown in Figure 2.3:

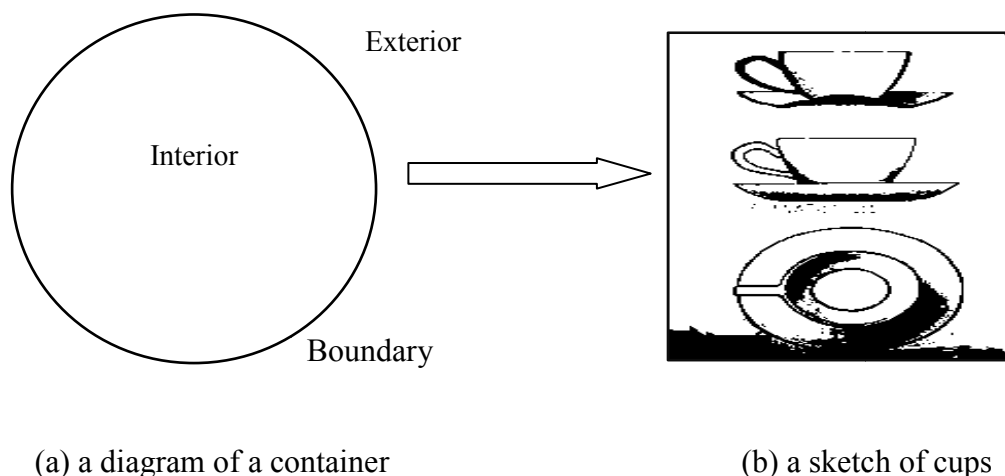


Figure 2.3: An illustrative instantiation of the CONTAINER Schema

The schematic depiction in (a) represents what is implicitly inferred in (b). The image-schema in Figure 2.3 in (a) is neutral, i.e. it can be expanded into other shapes and images of any cups. The sketch (b) is not an adequate picture of a container, but it just serves as an example of an object with a definite boundary such that it has an inside and an outside—it can contain anything else. The diagrams presented by cognitive linguists to illustrate the different schemata may take different (not fixed) shapes, yet the basic structural elements which underlie each one remain the same. In the case of the CONTAINMENT schema, a square is also used to depict the basic structural configuration, but the verbal explanation are similar to that of a circle.

As another example of an image-schema, we should consider the SOURCE-PATH-GOAL (or PATH, for short). It is one of the most pervasive structures of our embodied experiences. It describes our bodily motion along a path (i.e. moving from one place to another). The PATH schema is a recurrent pattern that emerges from the time we start to crawl and remains till adulthood. We frequently experience traversing a distance to reach anything we want in the world or experience the movement of other entities, such as walking from one place to another; giving a present to a person, throwing a baseball or walking to the

refrigerator to get some food. In fact, life is full of paths. The path can start from the bed to the bathroom, from the stove to the kitchen table, from the house to the grocery store and even from the Earth to the Moon. Some paths have an actual physical surface that we traverse, like the path from the house to the store, while others have a projected path, such as the path of a bullet shot into the air, or paths that are, at the present, in our imagination such as the path from the Earth to the nearest star outside our solar system. For each of these dissimilar experiences, wherein we use our bodies, the movement characteristically has a place it starts from, an end, a sequence of places on the way, which connect the starting with the ending points, and a direction towards our destination. In effect, the PATH schema emerges from a multitude of physical activities involving motion from one location to another (Boers, 1996; Johnson, 1987; Lakoff, 1988; Lakoff & Johnson, 1999; Saeed, 2009). On this ground, without taking into account the details of the motion through space, our conceptualization of paths has the same image-schema with the same structure. There is a single recurrent image-schematic pattern with a definite internal structure: a source, a path and a goal. As with the CONTAINER schema, the PATH schema is shown in the following diagram:

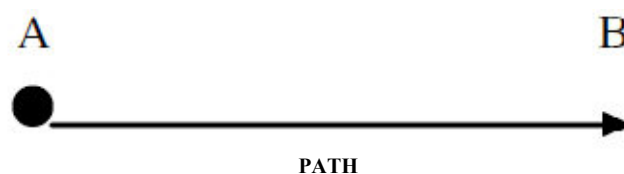


Figure 2.4: The Source-Path-Goal Image-Schema (Johnson, 1987, p. 28)

In Figure 2.4, (A) refers to the source which is the starting point of the moving entity, (B) is the final point where it winds up at, while the arrow represents the route it traverses on the way from the source to the intended destination. The PATH schema is not detailed as an image of a path; it does not specify the speed of motion, obstacles to motion or whether the

path is shrunk or deformed. In many cases, the path is conceptualized as a line. THE SOURCE-PATH-GOAL schema depicts our knowledge (or understanding) of motion, and any extensions of it are implicit in its structure (Lakoff & Johnson, 1999).

Many researchers (for example, Evans, 2015; Evans & Green, 2006) state that the internal structure of the path schema consists of parts, but it appears as a coherent whole. The PATH schema is accordingly a complex configuration because it consists of different aspects that can be referred to. An example of the way in which this holistic image can be deconstructed into its constituent parts can be expressed in language by the use of different lexical items. The internal elements of the PATH schema are indicated by the brackets in this example:

- (a) SOURCE: John left [England].
- (b) GOAL: John travelled [to France].
- (c) SOURCE-GOAL: John travelled [from England] [to France].
- (d) PATH-GOAL: John travelled [through the Chunnel] [to France].
- (e) SOURCE-PATH-GOAL: John travelled [from England] [through the
Chunnel] [to France] (Evans & Green, 2006, p. 185)

Fourthly, although the visual diagrams which represent image-schemas make them seem to be fixed, they are in fact dynamic and applied in flexible ways. Image-schemas are patterns of activities that can be altered into different dimensions. In other words, they can be modified to fit many experiential contexts having the same underlying structure (Johnson, 1987). For example, the CONTAINER schema can be applied to three dimensional (a box) or two dimensional (a bounded area) entities (Boers, 1996). More to this point, image-schemas have also a dynamic vs. a static character. They can show a state of being (or an entity) and a

process. The state represented by most image schemas can be perceived as the trace of a process. The PATH schema can be construed as dynamic when representing movement; the linear motion of an entity that goes from one place to another, or as static to indicate the static trace of the motion when representing the spatial route the entity has traversed, or that it can traverse. The CONTAINER schema is experienced in a static manner; however, it can also be construed through the ongoing movement of an object in a cyclical path (for example, imagine a sheep dog running around a herd of sheep). It should be noted that almost all image-schemas can be realized dynamically or statically; it is not only a property that is common to the CONTAINER and PATH schemas (Cienki, 1997, 2005).

2.4 Utilization of Image-Schemas

The use of image-schemas manifests itself in the representations of the semantic analyses of words' meanings. Image-schemas undergo various transformations which provide another important understanding of the phenomenon of polysemy and of the process of meaning extension. The key characteristics of image-schemas allow them to gain certain theoretical rationale applicable to language teaching and to learning the meanings of words in a more meaningful way.

2.4.1 Image-Schemas as Semantic Representations

Image-schemas have abundantly been used in CL, especially, in Cognitive Grammar. They are the means whereby the meanings of words and many relations are represented. To kövecses (2006), the words' meanings in parentheses are based on the image-schemas we dealt with earlier: CONTAINER (for example, *in-out*, *inside-outside*, *through*, *leave* and *enter*), PATH (for instance, *walk*, *run*, *swim*, *from*, *to*, *along*), VERTICALITY (*above*, *over*, *under*, *up-down* and *high-low*). Researchers like (Fauconnier, 1994; Langacker, 2000; Talmy,

1988; cited in Mandler, 2006) assert that image-schemas do not only underlie the semantic but also the syntactic meanings of languages. In fact, many semantic analyses have made use of image-schemas as a tool to describe most notably the meanings of prepositions, modal verbs and verbs. Some of the studies mentioned by Soares da Silva (2003) include the study of *over* by Brugman (1981), Lakoff (1987), and Dewell (1994), the analysis of *take* by Norvig and Lakoff (1987), as well as the study of *stand* by Gibbs (1995).

Making use of image-schemas to visualize the meanings of words will necessarily differ in many ways. The pictorial representations which characterize the properties of a particular sense can be made up of a single schema or, oftentimes, different image-schemas are integrated to portray the same meaning. For example, the verb *enter*, according to Langacker (2013, p. 33), can be understood through a combination of more than one schema: the OBJECT schema, the PATH schema and the CONTAINER schema. The resultant schema of *enter* can be shown in the following way:

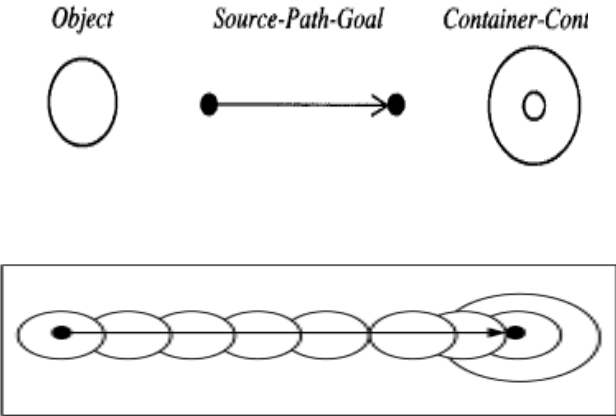


Figure 2.5: The Schematic Diagram for *enter* (Langacker, 2013, p. 33)

The schema of *enter* in Figure 2.5 denotes a movement of an entity which changes its location along a path to go into a larger entity (a container such as *a car*, *a room* or *a house*). The first circle refers to the smaller movable entity (or the object in focus) which traverses a path

indicated by the arrow until it enters the larger entity where the end point of this path is inside it.

In a different way, Radden and Dirven (2007) use the PATH schema in two diagrams to represent the difference between the senses of the verbs *go* and *come*. The verb *come* designates motion of an entity towards the speaker (the goal), while *go* refers to an entity which moves away from the speaker (S) to a new location. The illustration is shown by a line for the motion and a circle for the speaker (S):

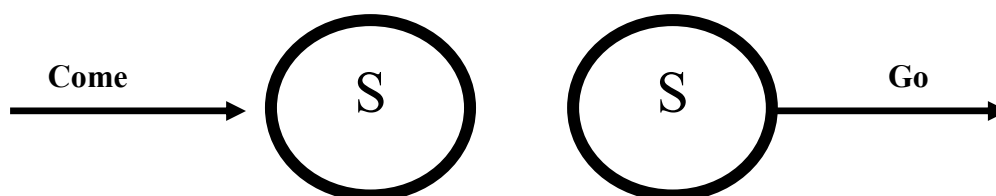


Figure 2.6: Schematic Representation of *Come* and *Go* (adapted from Radden & Dirven, 2007, p. 25)

Seemingly, even though the information gleaned from the diagrams that cognitive linguists draw to explain the meanings of words are somewhat abstract (i.e. they do not contain many details), they are in many cases revealing in themselves. They make up a coherent form which is supported by verbal explanations with the intention to provide a better understanding of them. Yet, given the complex nature of some concepts, when we probe into the literature on image schemata, we find that in some other cases, the schematic diagrams which represent the meanings of words are complex too. For this reason, accompanying a visual depiction with the verbal explanation is essentially necessary and beneficial in order

not to give different interpretations to the same diagram and to avoid incompatible or even opposing understandings of it. Consider the image-schema for the verb *climb*:

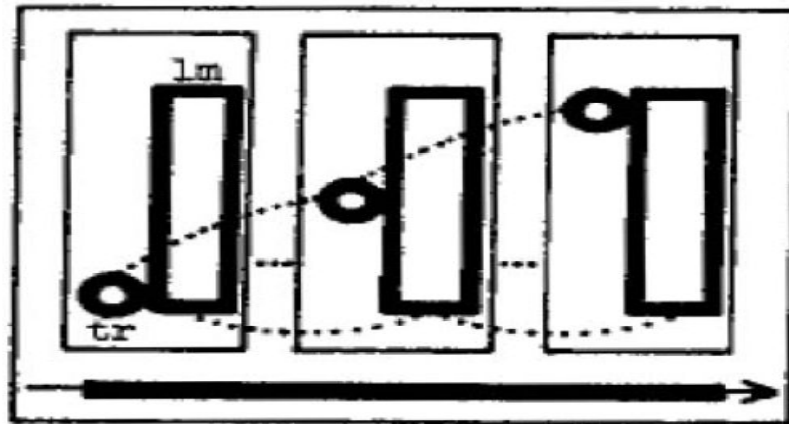


Figure 2.7: Image-Schema for *Climb* (Langacker, 1987, p. 311)

In this diagram, the abbreviations TR and LM stand for trajector and landmark, respectively. They are two widely used terms to explain the meanings of linguistic units in CL. Both of them refer to entities in the world without specifying any details about them. The TR and the LM are entities which are perceived to have certain characteristics. The TR is smaller and capable of motion, whereas the LM is an entity which is larger than the TR and immobile (Brenda, 2014; Evans, 2004) (more on the terms trajector and landmark, see Chapter Three, Sub-section 3.2.1 Using Image-Schemas to Illustrate the Senses of Prepositions, p. 99-101).

The image-schema for *climb* does not contain any information about which objects or entities the TR and LM are; it depicts the meaning in general to encompass the situations where the word can be employed. The verb *climb* expresses a process in time. Langacker (1987, p. 312) states that the trajector (the thing doing the climbing), “through time, assumes a succession of positions on the surface of a landmark thereby defining an upward path along the vertical axis.” In Figure 2.7, two dimensions are relevant: the vertical and the temporal. The LM (the thick rectangular) is assumed to be vertically extended, and the TR (the small

circle) is the entity that moves in contact with the LM, which is the thing that is being climbed. This process can be construed in terms of three stages: one schema part for the beginning (the first schema), the other part for the middle (the second schema) and the last one for the end of the process (the third schema). In the above image-schema, time is represented by a thick line below the three stages because the temporal aspect is in focus (Gärdenfors, 2007, p. 61).

In view of what has been said, we come to the point that the schematic images preserve important information. They show how information is organized since they expose explicitly the meaning structure than what a verbal explanation would do. Goddard (2011) states that the verbal explanations' role is interpretive, and none of the diagrams correspond to what they mean perfectly. The schematic representations cannot be duplicated in words; they provide gestalt or figural properties that are not exactly the same in every detail when expressed in words. These properties contribute to our comprehension of how language functions as part of the cognitive system.

2.4.2 Image-Schemas, Image-schema Transformations and Polysemy

Image-schemas have always been cited as central to the phenomenon of polysemy. They help understand the relationships between the senses and can explain the switch of meaning from concrete to abstract; it has been said to play a role in meaning extensions. Johnson (1987) regards polysemy as one of the most powerful evidence for the presence of image-schema. A term has related meanings because they share an underlying image-schema that is extended in various figurative ways, typically from the physical domain to the non-physical (abstract) domain. The schemas assumedly carry their gestalt structure across distinct polysemic senses of the same lexical form (Lewandowska-Tomaszczyk, 2007). Scholars like

(Lakoff & Tuner, 1989; Lakoff, 1990, 1993) have shown that image-schemas serve as source domains for many metaphors as well as metonymies. In other words, image-schemas serve to provide the key blueprint for their interpretation (cited in Díez Velasco, 2001). Gibbs, Bietel, Harrington, and Sanders (1994) have demonstrated through experimental studies that people make sense of the distinct meanings of *stand* as a result of their tacit understanding of the image-schemas that emerge partly from their bodily experience of standing. These researchers have shown that these image-schemas lie at the basis of many physical meanings of *stand* (where the physical act of standing is expressed), and also underlie peoples' understanding of its figurative uses. Thus, people perceive that the various senses of *stand*, such as the physical idea of standing in 'to stand at attention', and the metaphorical senses of *stand* in 'let the issue stand' and 'to stand the test of time' are related to one another because they share similar image-schematic information (Gibbs, 2005; Gibbs & Colston, 2006; Gibbs & Matlock, 2001).

In this respect, image-schemas can also be used to understand the behavior of the verb *break*. Morimoto & Loewen (2007) account for the semantic extension of *break* by focusing on how its senses can be derived from its image-schema. On the basis of Tanakas's analysis (1987b), they draw it as follows:

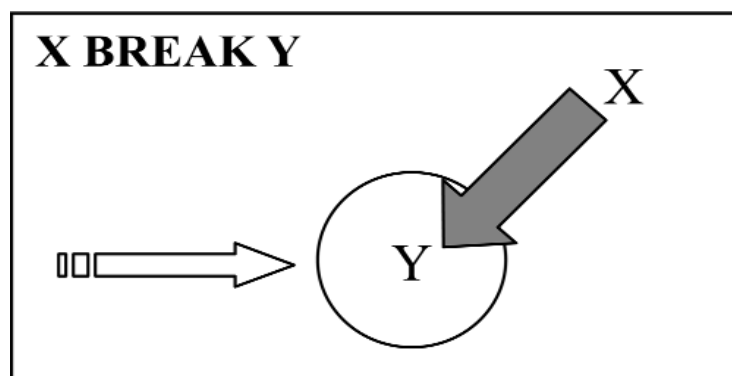


Figure 2.8: Image-Schema for *break* (Tanaka, 1987b; cited in Morimoto & Loewen, 2007, p. 350)

In Figure 2.8, the terms TR and LM are not employed. Morimoto and Loewen (2007) utilize other symbols, X and Y. According to them, the core meaning of *break* can be stated as: “[if] X BREAK[S] Y, X exerts energy to Y, the result of which is the impairment of Y’s shape or function and continuity” (Morimoto & Loewen, 2007, p.350). They assume that this common meaning underlies all the senses of *break*. In order to understand their hypothesis, they give a few examples of the many meanings of *break* which are commonly employed in writing as well as everyday speech. Given the sentences, ‘My father *broke* the chair’, ‘Eri *broke* her mother’s cup’, ‘Who *broke* this radio?’ ‘His idea finally *broke* the deadlock’, ‘You cannot *break* your contract now’, ‘The sound of the telephone ringing *broke* my concentration’ and ‘We *broke* our journey to Rome at Venice’, we can notice that some of these senses refer to physical or concrete objects, while others have non-physical or figurative interpretations. In order to get a grip on how these seemingly chaotic senses of *break* are semantically related, the basic image-schema serves as the blueprint for analyzing the different aspects of the literal and metaphorical usages of this verb. To put it tersely, if X and Y are specified, the primary image-schema generates other image-schemas which represent the physical and the abstract meanings of *break*. If Y is a physical object such as a *radio*, it means that its form or its function is destroyed when it is broken. The latter description can be visualized in the image-schema shown in Figure 2.9:

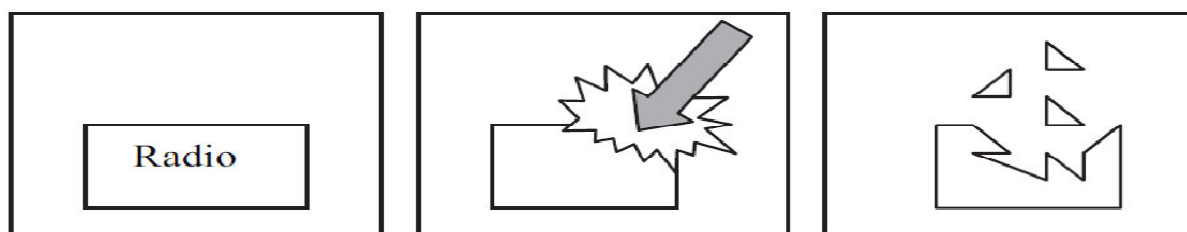


Figure 2.9: Image-Schema of *break* in a Literal Sense (Morimoto & Loewen, 2007, p. 370)

Figure 2.9 indicates that X (for instance, a person) breaks or exerts energy, which is represented by the thick arrow, to Y which is the radio, and the result of this action is the impairment of the shape of the radio. In contrast, if Y is abstract in nature, then “metaphorical energy exerted [by X] to Y leading to Y’s discontinuation” (Morimoto & Loewen, 2007, p. 350-370). Among the above mentioned examples, the sentence, ‘We *broke* our journey to Rome at Venice’, implies that “We exerted metaphorical energy upon our journey to Rome at Venice so that it ceased to continue” (Morimoto & Loewen, *ibid.*). That is, metaphorically, Y’s continual state (in this case the journey) will be put to an end. The same idea is also exemplified in ‘He *broke* his contract now’. This sentence, for example, can have the following diagram:

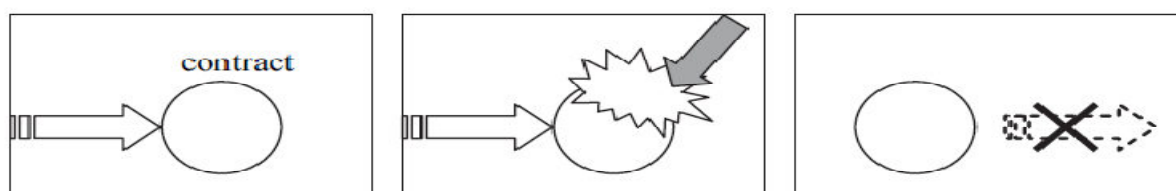


Figure 2.10: Image-Schema of *break* in a Figurative Sense (Morimoto & Loewen, 2007, p. 370)

Figure 2.10 focuses more on the unbroken and consistent existence of the contract over time, but once an external factor puts an end to it, it leads to the discontinuation of the contract. This resultant state is represented by an arrow in the last schema on the right. The concept of ‘breaking something’, which implies destroying the function of something, is used as a metaphor to express the same idea in another domain, i.e. to refer to an abstract concept which mirrors the idea that ‘something is so powerful puts an end to something that has been continued.

Thus, one may form a rule that the senses of *break* are not arbitrary, but they are semantically related to one another and can be analysed in terms of image-schemas. There exists a basic image-schema- the prototype- and the other senses of *break* vary from it. The topology of the underlying image-schema remains invariant through its different linguistic manifestations. The primary image-schema (generally depicting the primary sense) shown in Figure 2.8 serves to describe different variations on what it means to *break* something; it helps us, along with the verbal decoding, interpret the literal and metaphorical senses.

In the same spirit, we have seen in the first chapter that polysemous lexical items form a network of senses which develop from the core or prototypical (the literal) senses to the less salient or peripheral (figurative) ones. The senses are linked to each other by means of meaning extension processes or general cognitive principles, such as metaphor and metonymy. A third way of extending the semantic network of a word is known as image-schema transformations. The concept of image-schema transformation was introduced by Lakoff in 1987 (Dewell, 1997). Distinct senses can emerge by means of image-schema transformations through widening the applicability of a particular sense (Brenda, 2014; Tyler & Evans, 2003). Image-schema transformations, then, are essential in the creation of linguistic meaning that gives rise to polysemy (Peña Cervel & Ruiz de Mendoza Ibáñez, 2009). Image-schemas can be transformed because many situations are subject to be perceived in a variety of ways (Hampe, 2002). People tend to transform a given canonical view of a scene or an object, either physically or mentally (through visual imagery), in a way that enables them to imagine what it would look like if it were seen differently (Brenda, 2014). In other words, image-schema transformations have to do with “the construal of a scene according to a particular perspective” (Evans & Green, 2006, p. 337). That is:

we have the cognitive ability selectively to focus attention on different components of complex mental images, to consider them from different perspectives, to zoom in and zoom out mentally, to trace path through them, to turn them over in our minds, and to experience them as processes, that is, to play them back in our minds and view them at different phases (Palmer, 1996, p. 68-69).

Therefore, perceiving a given situation in our experience can be manipulated mentally and transformed from one schema into another one. Langacker (1987) claims that since linguistic meaning resides in conceptualization, the transformation of one conceptualization into another is common in language use. Transformations of conceptualizations keep to some degree the same content of a scene, while there is a change in the construal of this scene (Brenda, 2014; Langacker, 1987). In order to get a sense of what this means, consider the grammatical behaviour of nouns which are countable, but in many cases, they are uncountable. According to Evans and Green (2006), we have the ability to grammatically encode entities in terms of mass or count. In English, count nouns can be transformed into mass and vice versa. Count but not mass nouns are accompanied with the indefinite article. The image-schema underlying count nouns is the COUNT schema which denotes entities that can be counted, while the MASS schema is related to those nouns which are perceived as homogenous. The reason why the count noun can be used as a mass noun is because of an image-schema transformation. Consider the following examples from Evans and Green (2006, p. 187):

Example 1: I have **a tomato**.

***I have tomato.**

Example 2: After my fall there was **tomato** all over my face.

*After my fall there was **a tomato** all over my face.

The noun, *tomato* in example (1) takes on the indefinite article ‘a’ because it is conceived as a count noun. So, without using the article, the sentence is grammatically incorrect (*I have **tomato**). When the same noun is conceived as a mass, it takes on the grammatical characteristics of a mass noun, as in (2). The noun *tomato* does not take the indefinite article before it because the underlying image-schema is transformed from COUNT into MASS. In (2), the content of the scene is the same, but there is a change in its conceptualization. Accordingly, by means of an image-schema transformation, the applicability of the word *tomato* has been widened grammatically to be either a mass or count noun.

In the literature, image-schema transformations are clearly described in relation to prepositions along with their semantic representations. The relevance of image-schema transformations to polysemy will be explored more in chapter three when describing, for instance, how some of the meanings of the English preposition *over* get extended through image-schema transformations.

2.4.3 Image-Schema and Language Teaching/Learning

The theory of image-schema from the field of CL outwardly appears to lend itself to be applied in the classroom. The use of image-schemas finds its way into language teaching in the form of image-schema-based instruction (ISBI). This type of instruction displays a set of interrelated advantages, which are considered as the theoretical rationale behind its use. By definition, ISBI is “a form of vocabulary instruction in which the process of learning a word is mediated by the use of image-schema” (Morimoto & Loewen, 2007, p. 351). ISBI is the act of

building into the mind the knowledge of words with multiple meanings and deepening the understanding of the relations as well as principles that tie those meanings together.

Learning polysemous words is one of the most interesting and pressing issues. On the one hand, it is impossible to know all the words of a given language along with their meanings. On the other hand, learning the meanings of words is essential to understand any language. Besides, without having that knowledge, speech will sound nonsensical or hamper any communication among people. When it comes to words with several meanings, they really need considerable time to be spent on them by teachers and learners, particularly, in foreign language (FL) learning contexts. Polysemes may confuse students who tend to learn only one frequent meaning. For example, the first meaning learned of *command* is ‘to give orders,’ but learners may not be familiar with the secondary meaning ‘to deserve and receive’ that is found in an expression like ‘*to command* authority’ (Vadasy & Nelson, 2012). Vespoor and Tyler (2009) state that it is not an easy task for learners to comprehend and to acquire the various meanings of a word. Learners do not stop thinking about a given meaning of a word they know even if it is meaningless in the context in which it is used. In 2000, Schmitt noticed, in his study, that even advanced learners were rarely knowledgeable about the meanings of polysemous words, let alone the process of learning them was slow, unorganized and patchy (cited in Vespoor and Tyler, *ibid.*). Furthermore, words’ meanings develop incrementally, so learners’ previous knowledge needs to be reconsidered, modified and consolidated in their minds. As such, the mental lexicon will be widened or enriched to fit into the meaning diversity inherent in language, with the intention to be used properly in the future.

The instructional implication which flows from these insights is that ISBI is an organized form of instruction which engages learners in the learning process. When applying ISBI, the teacher does not teach the many meanings of a word exhaustively, but rather it aims

at giving “learners with a basis on which they can effectively process the various meanings in subsequent input” (Morimoto & Loewen, 2007, p. 351). The assumption provided by researchers (Bolinger, 1965; Ruhl, 1989; Tyler and Evans, 2004; cited in Morimoto & Loewen, 2007) holds that if learners become more conscious of the underlying core meaning of a given polysemous word, this can serve as a basis for comprehending figurative usages. In other words, its purpose is to bring about meaningful learning through raising the learners’ awareness of the semantic unity of a given word. This, in turn, can increase their ability to grasp, internalize and transmit what is learned, allowing them to use the language appropriately.

At this point, the concept of meaningful learning is very important as opposed to rote learning. The former takes place when learners are exposed to an input which is organized logically and unambiguously. It enables them to associate the new information consciously with the experiences as well as ideas stored in long-term memory (Snowman, McCown, & Biehler, 2012). The cognitive psychologist Ausubel in 1968 argued that learning is akin to gathering the pieces of a puzzle with each other to form a whole. It is an incessant process in which new information is added to the existing one to make a meaningful whole similar to that of a finished puzzle. Learning makes sense if the material is potentially meaningful to learners (Semonsky & Spielberger, 2004). The meaningfulness of the information helps learners to be active participants in the learning process. It can eliminate rote memorized material which depends on repetition rather than on understanding the meaning or the relationships (the relevance of what they learn) involved in the material. Consequently, they can get rid of the habit of learning without thinking or understanding. According to Westwood (2004), the information learned by repetition-that is, forced to be stored by rote in memory by

learners without comprehension-remains isolated (has no connection with other knowledge) in their long-term memory. It is characterized by being difficult to be recalled when they require it, and it is forgotten if it is not practised very often. On the contrary, a large amount of information can be remembered and employed easily provided that it is organized (Aitchison, 2012).

The use of image-schemas is meaningful since they are schematic and summative representations of meaning. They show how the intra-lexical structure of a given word is organized; how non-literal senses come from a prototype (Morimoto & Loewen, 2007). Csábi (2004) claims that learners, who are made aware of how the cognitive mechanisms make up the meanings of polysemous words, will learn, remember and use them easily than those who are not taught this fact. In fact, image-schemas have a dual function. It visualizes the senses of various polysemous words in a way that helps students think visually. At the same time, it enables them to know the reasons behind the multiplicity of meaning in a word, which supports and aids the learning process.

ISBI promotes the deep processing of words and meanings. The depth of processing hypothesis was introduced by Craik and Lockhart in 1972. They maintained that the deeper the processing of a word, the better it is learned (Kersten, 2010). The more learners are engaged in deep mental processing of a word, the more they will be able to retain it; it does not remain in short-term memory, but it will be stored in long-term memory. ISBI requires learners to employ more cognitive efforts to manipulate the various meanings of a word and to think consciously about its core meaning (Morimoto & Loewen, 2007). It gives them an opportunity to examine how its meanings are applied to different contexts, how they can be differentiated from other meanings, and it fosters their comprehension in the classroom because it makes them integrate these meanings in their existing knowledge. The latter may

include synonyms, antonyms, connotations or idiomatic expressions. In brief, ISBI involves going beyond the surface meaning of words.

In a related vein, ISBI can play an efficient role in vocabulary learning. In 1978, Hatch stated that in learning a second language or a FL, learners are repeatedly engaged in the processes of ‘data-gathering’ and ‘rule-forming’ (cited in Morimoto & Loewen, 2007). Since polysemous words tend to be the most frequent, they are encountered so often. Given the fact that the different occurrences of the same word result in contextual variations, and, in many cases, learners come across words in a contextualized manner, the number of encounters with the same word having dissimilar meanings may leave them with incomplete pieces of knowledge, i.e. they may not notice that the senses are connected. For instance, when encountering sentences, such as ‘He *broke* the glass’ and ‘Tom *broke* his leg yesterday’, learners may form a rule that this verb is used only to talk about concrete objects. Later on, they may come across other contexts where the meanings are quite different, like in ‘The sad news *broke* his heart’ and ‘They *broke* their journey to Auckland’ (Morimoto & Loewen, 2007, p. 352). When teachers teach such differences in meaning, the systematic link between the senses remains unexplained. Inevitably, Tyler and Evans (2004) proclaim that students will come up with the conclusion that the meanings are arbitrary and idiosyncratic.

More importantly, in English as a foreign language (EFL) classrooms, such a process might have other impacts since students receive limited amounts of input. The information they get may not enable them to be familiar with the commonly used meanings of the polysemous words in focus. Besides, it is likely that the representation of words in their minds can be biased; they may employ a meaning to contexts where it is not appropriate, which gives rise to overgeneralization of this sense (Taylor, 1985; cited in Morimoto & Loewen, 2007). Hence, rather than learning polysemous words incidentally and teaching the range of

meanings in a piecemeal fashion, applying image-schemas appears to be effective (Morimoto & Loewen, *ibid.*).

Last but not least, ISBI has the potential to make learners comprehend a word meaning without relying heavily on their first language. The first language knowledge affects the process of learning a FL, and this influence manifests itself in the form of negative or positive transfer. While the latter can facilitate the process of language learning if the two languages are similar, the former occurs as a result of the differences between the two languages and creates problems to learners. ISBI enables learners to learn the semantic range of a word without limiting them with their first language equivalents (Morimoto & Loewen, 2007).

Conclusion

As we can see, meaning is much more complex if we need to consider its nature. CL offers the view that it is not decomposed into semantic features bundles. Instead, the semantic representations are non-linguistic in nature and can be shown in the form of image-schemas. These are conceptual representations which develop out of our bodily experiences. They are not equated with mental images or indicate schemas in the familiar senses of both terms. They are schematic structures that can be expanded into rich images. Image-schemas are clearly understood via diagrammatic depictions. When it comes to language teaching/learning, it is only recently that many theoretical arguments have been proposed in favour of integrating image-schemas into classroom instruction. Their use can help explain the polysemantic nature of words and can offer potential for demystifying the learning of these words, by making them more accessible to learners.

Chapter Three: Image-Schemas and Polysemous Prepositions in English

Introduction

3.1 Prepositions in English

3.1.1 Definition of Prepositions

3.1.2 Linguistic Properties of Prepositions

3.1.2.1 Prepositions and Morphology

3.1.2.2 Prepositions and Syntax

3.1.2.3 Prepositions and Semantics

3.2 The Relationship between Prepositions, Polysemy and Image-Schemas

3.2.1 Using Image-Schemas to Illustrate the Senses of Prepositions

3.2.2 Semantic Analysis of *above, across, in, on, out, over* and *through*

3.2.2.1 *Above*

3.2.2.2 *Across*

3.2.2.3 *In*

3.2.2.4 *On*

3.2.2.5 *Out*

3.2.2.6 *Over*

3.2.2.7 *Through*

Conclusion

Introduction

Prepositions have always been treated as little function words which are typically viewed as a characteristic of language alone—a matter of ordinary and peculiar part of speech rather than words which have an intrinsic semantic interest. For this reason, most people think that they can get along perfectly well without paying great attention to them since they do not embellish their speech with various and figurative senses. However, prepositions provide a typical representation of the nature of linguistic meaning. Their intricacy and importance do not come out of thin air. Rather, they are one of the most intriguing words that reflect the interaction between human physical experience of the world, thought and language. They mirror the way human beings experience space, and how it is encoded grammatically and semantically in language. The expressive force of prepositions lies in exhibiting a diversity of semantic contents of a very literal and figurative character which is motivated by the underlying image-schemas that result from human bodily interaction and different experiences with the external world. Prepositions are such an ingrained part of language and the human conceptual system.

3.1 English Prepositions

Prepositions in English have a definite purpose, and they are characterized by the fact that they share common properties which exhibit a set of grammatical and semantic features.

3.1.1 Definition of Prepositions

Prepositions are used to link words to each other and to show relationship between things, people or events (Sullivan, 2015). Words such as *in*, *below*, *up*, *down* are some examples of English prepositions. In general, prepositions are included in a broader category referred to as adpositions. These are a class of words that connect two parts of a sentence to

form an adpositional phrase (Brenda, 2014). The latter is made up of an adposition which is the syntactic head of the phrase, followed by a complement so as to express a communicational content (Payne, 2006). An adposition is either called a preposition or a postposition, depending on where in the sentence it is placed with respect to the complement. When it occurs before its complement, it is called a postposition and a preposition if it appears after it (Hagège, 2010; cited in Brenda, 2014). Postpositions are more likely to appear in languages, such as Japanese and Turkish, where the nominal object (O) comes before the verb (V) (OV), whereas in (VO) languages, such as English and French, where the object occurs after the verb, there exist prepositions rather than postpositions (Bybee, 2015). In English, adpositions are mostly prepositions except for the postpositions *ago* as well as *hence*. *Ago* is used to mean ‘gone by’, as in ‘in three weeks ago’ and *hence* means ‘from now’, like in ‘three weeks hence’ (Allerton, 2008, p. 50; Brenda, 2014, p. 59).

English prepositions are a set of words which are not prone to accept new members. Traditionally, words are usually classified into two groups, known as the open class and closed class of items. The open class comprises content words. It includes adjectives, nouns, verbs and adverbs. They are words which are semantically rich, meaningful and can refer to many things, situations or properties, i.e., they carry the main content of sentences. The term open alludes to the fact that membership is not restricted. New members or unlimited words can be created or added to these categories. This takes place regularly as a sign that language may undergo a change. For instance, *text message*, *e-mail* and *fax* are recent verbs (they can also be nouns) which have been added to English. Advances of technology have led to the emergence of *blog*, *website* and *internet*. New adjectives include *crunch* and *fetch* (Denham & Lobeck, 2013; Endley, 2010; Murphy, 2010).

On the contrary, closed class words belong to function or grammatical words. They are articles, conjunctions, demonstratives, pronouns, quantifiers and prepositions. This class is

said to be semantically poor; their meanings are not detailed. In this sense, function words are syncategorematic, i.e., they get their meaning and function from the way they are combined with other words (Brenda, 2014; Lyons, 1995). Consider nouns, such as *jackhammer* and *mechanic*, and pronouns, like *she*, *it* and *them*. The latter refer only to things in the world; either to males, females, animate or inanimate things, while the former encode the details which enable us to understand directly what they designate. Thus, the essential feature of these words is to bind sentences together rather than to contribute to meaning in them (Murphy, 2010). Unlike the open class, the closed class words consist of a small and fixed number of elements. Their membership is limited; the addition of new members is not frequent, and they tend to evolve steadily over centuries. Speakers may come across many new verbs as well as nouns during the next year, but it is unlikely that they encounter a new article or lose one. In the case of prepositions, although their membership has been expanded to include participles (for example, *concerning*), it is not easy that a new preposition can be added to English (Akmajian, Demer, Farmer & Harnish, 2001; Downing & Locke, 2006; Endley, 2010).

Having said this, one may undoubtedly come to the conclusion that since prepositions belong to the closed class of words, they tend to provide vital grammatical information without making rich semantic contributions to the contexts in which they occur. It follows that they are non-lexical words. However, recent views argue that prepositions do have some lexical content.

3.1.2 Linguistic Properties of Prepositions

As any word class, prepositions possess a number of morphological, syntactic and semantic characteristics.

3.1.2.1 Prepositions and Morphology

From a morphological viewpoint, prepositions are invariable word forms. The decomposition of words into parts is a process that is limited if not absent in English prepositions. They almost never take any inflections. They are separate words; they are not subject to be combined with affixes to form a different form of the same preposition with a different meaning. Ritchie, Russell, Black, and Pullman (1992) point out that prepositions do not act as stems, they are not derived by affixation from other categories, and there are no grammatical elements called prepositional affixes. They assumedly add, prepositions, such as *within*, *into* and *outside* cannot successfully be analyzed into smallest meaningful units. For instance, the preposition *inside* cannot be attached to prefixes, like *in* or *un* to form a corresponding negative antonym **uninside*, **unby*, **unon* or **unfrom*. In addition, the superlative suffix *-est* cannot be combined with a preposition like *down* to form **downest* (Radford, 2004, p. 34-63). Yet, there comes a point where certain cases form a remarkable exception. The exception is the suffix *-ward(s)* which has been used since Old English. It is the most productive one because it does not only create new prepositions but also new nouns, by just adding it to the end of words. The suffix *-ward(s)* and the preposition *to* make the preposition *towards* as well as other prepositions: *after (afterward)*, *back (backward)*, *in (inward)*, *on (onward)* and *out (outward)* (Bauer, Lieber & Plag, 2013, p. 328). Nonetheless, *leftward*, *south-westward* (Nevalainen, 1999, p. 406), along with *eastwards*, *homeward(s)*, *north-westwards* and others (Bauer, Lieber & Plag, *ibid.*) are some other words which end with the suffix *-ward(s)*, but they do not have prepositional bases.

Creating various meanings is one of the further peculiarities of prepositions which is tied to the process of prefixation. Prepositions are added as prefixes to the beginning of a wide variety of bases, including verbs, nouns and adjectives in order to make new words. Some examples of these combinations are given by Yates (1999, p. 207-211): *byline*, *for-profit*, *off-*

chance, *ongoing*, *output*, *overkill*, *underdog*, *upgrade* and *withdraw*. Similarly, Lieber (2004, p. 125) lists the following: *Aftershock*, *downspout*, *downplay* and *undervalue*. Interestingly, it is common for prepositional prefixes to give the same word two completely opposite meanings than the original one. For instance, words like the *downside* meaning ‘the negative aspect’ and the *upside* for ‘the positive aspect’.

As for their morphological structure, English prepositions are morphemically simple and complex. Prepositions are mostly simple. In 2006, Saint-Dizier points out that there are approximately fifty simple prepositions in English which are: *aboard*, *about*, *above*, *across*, *after*, *against*, *along*, *amid*, *among*, *anti*, *around*, *as*, *at*, *before*, *behind*, *below*, *beneath*, *beside*, *besides*, *between*, *beyond*, *by*, *despite*, *down*, *during*, *except*, *excepting*, *excluding*, *following*, *for*, *from*, *in*, *inside*, *into*, *like*, *near*, *of*, *off*, *on*, *onto*, *opposite*, *outside*, *over*, *past*, *per*, *plus*, *round*, *save*, *since*, *than*, *through*, *to*, *toward*, *towards*, *under*, *underneath*, *unlike*, *until*, *up*, *upon*, *versus*, *via*, *with*, *within* and *without* (p. 2). Simple prepositions are realized by one word or one morpheme. They can be either monosyllabic, such as *at* and *in* or polysyllabic, including *about*, *above*, *across* and *before*, etc (Brenda, 2014, p. 61). Morphemically, some of the simple prepositions are made up of word sequences. Words like *abroad*, *beside*, *behind*, *towards* are considered as morpheme sequences because they are made up of two parts; they comprise sequences of a prefix or a preposition (*a-*, *be-*, *to*) and nominal elements (*board*, *side*, *hind*, *ward*) (Allerton, 2008, p. 53; Brenda, 2014, p. 62). Others include what is called participial prepositions, like *counting* and *following*.

Complex (or composite) prepositions are not much the same as simple ones. They consist of two and three-word sequences. Two-word sequences, such as *according to*, *because of* and *instead of* have two parts: the first part can be an adverb, an adjective or a conjunction, while the second one is a simple commonly used preposition. They can be also bimorphemic;

the first morpheme is a preposition and the second is a preposition too, for instance, *along with* (Brenda, 2014, p. 63). Other prepositions consist of a preposition and a noun like *for example* (Brenda, *ibid.*). Complex prepositions with three-word combinations act as a single unit. Most of them have the pattern **simple preposition + noun + simple preposition**. They can appear in three structures. First, they can be prepositions with the fullest kind of phrase, having the structure **preposition 1 + NP [Det [Article] + N] + preposition 2**, like in *at the side of* or *at the end of*. They convey orientational meanings through the words *side* and *end*. Second, this basic pattern for complex prepositions is reduced to **preposition 1 + NP [N] + preposition 2**. In this form, the article determiner is dropped (Allerton, 2008, p. 53-54). In the complex preposition *by means of*, the article determiner is absent in the pattern (Allerton, 2008, p. 54; Brenda, 2014, p. 64). Thirdly, a further reduction can have the pattern: **NP [N] + preposition 2**, wherein the article and the first preposition are dropped, as in *north of* instead of *to the north of* (Allerton, *ibid.*).

Up to this point, we have thus observed that prepositions are classified into simple and complex according to their structure. However, there are other structures which belong to the category of prepositions. These are compound prepositions and double prepositions. The first group behaves very much like prepositions. They are formed by prefixing prepositions and adverbs, such as *herein*, *thereof* as well as *wherein* (Huddelston & Pullum, 2002; cited in Brenda, 2014, p. 64). Double prepositions are employed to express the intended meaning of the speaker sufficiently, as in *from among* (Bruckfield, 2012, p. 24).

3.1.2.2 Prepositions and Syntax

The syntax of English prepositions has to do basically with how they are combined into larger structures. They can be described on two levels, phrase level and clause level. Syntactically, prepositions are generally discussed in terms of the types of complements they

take, their functions in the sentence and the fact that they take modifiers. According to Huddleston and Pullum (2000; cited in Brenda, 2014), these three characteristics are the most distinguishing syntactic properties of prepositions. The very name ‘pre-position’ indicates that it is positioned before the words it governs, forming a construction known as a prepositional phrase. Any prepositional phrase is composed of two elements: a head which is the preposition itself and the other element is called a completer or a prepositional object or a prepositional complement (Young, 1984). The preposition cannot stand alone although it is the head word of the phrase; it needs a complement to be called a prepositional phrase (Payne, 2011).

An important feature of prepositions is that they are complemented by a noun phrase or a pronoun (Brenda, 2014). The underlined words below are examples of these complements:

Example 1: He went *over* the hill. (preposition + a noun phrase)

Example 2: I am glad to work *with* you. (preposition + a pronoun)

It is frequent to see some prepositions without a noun phrase or a pronoun. Transitive and intransitive prepositions are relevant here. The former are followed by a noun phrase or a pronoun, like *with* as well as *at*, and the latter do not take a complement, such as *away* and *nearby*. Some prepositions can be both transitive and intransitive, depending on the context wherein they are used like *around* (Cowper, 1992; Hurford, 1994; Tallerman, 2015; Thorne, 2012).

Additionally, only few prepositions can take prepositional phrases to be their complements. In the expression ‘*from under* the car’, *from* is the head word, whereas *under* is the head of the noun phrase that comes after (Huddleston, 1984, p. 345). According to Huddleston (ibid.), the prepositional phrase ‘*under* the car’ is a complement within the larger

prepositional phrase '*from under* the car', which can be found in a sentence like 'The cat emerged *from under* the car'. Specifically, sometimes, the role of the main preposition is to determine the second preposition used in the prepositional phrase, and other times, it may not have an effect on the choice of the following preposition (Huddleston & Pullum 2002; cited in Brenda, 2014, p, 74). In the sentence 'Why is the Earth moving *away from the sun*?' The use of *away* specifies the preposition *from* because there are no other alternatives, while in the sentence 'What has happened *since after the flood*?' The preposition *since* does not impose any specific limitations on the choice of the following preposition; it does not determine *after* because it can be replaced by another one such as *before*. Nevertheless, sequences like *for later, for once, before long, until recently* are prepositional phrases with an adverbial complement (Huddleston and Pullum, 2002, p. 640; cited in Brenda, *ibid.*, p. 75).

Besides these types of complements, prepositions license a notable variety of clause complements. They can take 'a *wh*-clause', as in 'Researching usually involves a topic *about which you know few information*', or 'an *ing*-clause', like in 'Nowadays, most people use e-mails to send messages *instead of writing letters*'. In addition to these, prepositions can be followed by a comparative clause (3), an infinitival interrogative clause (4), an interrogative clause (5) and a verbless clause (6) (Huddleston, 1988, p. 125; Huddleston & Pullum, 2002; cited in Brenda, 2014, p. 75). They are respectively exemplified in the following sentences:

Example 3: She is not *as happy as she used to be*.

Example 4: They couldn't agree *on how much to change*.

Example 5: They talked *about whether he would come*.

Example 6: She stood *with her back to the door*.

Even so, it is ungrammatical for a preposition to precede structures, like a '*that*-clause', an infinitive clause, and a subjective case form of a personal pronoun, as in (7), (8) and (9):

Example 7: *He informed us *of* that he does not want to play football anymore.

Example 8: *He was surprised *at* to hear that.

Example 9: *He was interested *in* they.

In (7), the preposition *of* and the ‘*that*-clause’ make an incorrect sentence. Alternatively, if the preposition is dropped from the sentence, it becomes grammatically correct. Similarly, in (8), *at* cannot be complemented by an infinitive clause. The same sentence becomes syntactically correct if the preposition is not used before the infinitive clause. Concerning the last example (9), the pronoun *them* would be a correct alternative so that the sentence becomes grammatical (Brenda, 2014, p. 72). Although prepositions do not normally allow an infinitival complement, an exception occurs when they are followed by a ‘*wh*-item’, for example, ‘*apart from* where to stay’ (Downing, 2015, p. 471). Bruckfield (2012, p. 248) states that the words that generally come before *that* often belong to word classes other than prepositions. Most important, perhaps, is the view that a *that*-clause may serve as a prepositional complement when preceded by some participial prepositions such as *considering*, as in ‘He should have done better, *considering* that he is smart.’

Furthermore, prepositions can appear with non-expandable content clauses as complements. A non-expandable content clause is a clause which cannot be modified by adding the subordinator *that*. In the sentence ‘We left *before* the meeting ended’, *before* is the head word of the phrase, and the non-expandable clause is ‘the meeting ended’ because adding *that* after the preposition *before* makes a grammatically incorrect sentence ‘*We left *before that* the meeting ended’ (Huddleston and Pullum, 2002; cited in Brenda, 2014, p. 73). The word *before* in this example is considered by Quirk, Greenbaum, Leech, and Svartvik (1985; cited in Brenda, 2014) a subordinator not a preposition. However, *before* is a word which can be a preposition and a subordinator on the basis of its function in the sentence (Brenda, *ibid.*).

In terms of function, a prepositional phrase plays different syntactic roles depending on the word or the group of words that appear in a sentence. It can be part of the subject or the predicate (Lindner, 2005). Here, we examine the basic and the commonly agreed on functions. This type of phrase can function as a post modifier, as an adjunct, a subjunct, a disjunct, a conjunct and a complement of verbs as well as adjectives (Brenda, 2014, p. 75). These functions are illustrated in the examples below:

Example 10: A young child *with glasses* was sitting alone. (a postmodifier)

Example 11: the girls were playing *near the house*. (an adjunct)

Example 12: *From my point of view*, grammar is very interesting. (a subjunct)

Example 13: *In all fairness*, she did try to phone the police. (a disjunct)

Example 14: *On the other hand*, he made no attempt to help her. (a conjunct)

Example 15: We were looking *at his awful* paintings. (a complement of a verb)

Example 16: I'm sorry *for his parents*. (a complement of an adjective)

When a prepositional phrase is used to describe a noun, the phrase functions as an adjective (17) and an adverb when describing a verb (18):

Example 17: Our neighbors *to the west* have a dog.

Example 18: *In the evening*, you can hear the dog bark.

In (17), the prepositional phrase *to the west* describes the noun our neighbours. The phrase *to the west* works as an adjective. In the following example (18), the prepositional phrase indicates when the action of the verb takes place (Lindner, 2005, p. 75).

Last but not least, the ability to take modifiers is another marked feature of the syntactic properties of prepositions. In English, prepositions are teamed up with specific modifiers which form a syntactic constituent with them. These are *straight*, *right*, *well* and

just, as in ‘She pushed the box *well under* the bed’, ‘Go *right to* the top of the stairs!’ ‘The library is *just beside* the town hall’ and ‘Go *straight along* this route’. Others include phrases which specify time and space, like *two minutes* and *two feet*, as in ‘*two feet behind* me’ and *two minutes before* my arrival’. Similar to degree adverbs, these modifiers specify the prepositional phrase (Brinton & Brinton, 2010, p. 200; Tallerman, 2015, p. 66). Crucially, not all prepositions can be used with these intensifiers. It is ungrammatical to intensify the prepositions *of* and *with* in phrases such as ‘*a man *right/ straight* of great courage or ‘*a house with *straight/ right* shattered windows’ (Radford, 1997, p. 42).

3.1.2.3 Prepositions and Semantics

Prepositions and semantics have always been unstable. Prepositions have been viewed differently depending on the theoretical position taken by researchers. They have been frequently regarded as abstract elements which have too little semantic content or lexical words which deserve an accurate semantic description (Baldwin, 2006). According to Rauh (1993), proposals made by Fries (1952) and subsequent structuralists (for example, Hockett, 1958; Gleason, 1955, 1963; Stageberg, 1965) were about considering prepositions as functors. They claimed that prepositions are different from nouns, verbs, adjectives and adverbs; they are grouped with affixes, conjunctions, auxiliaries and articles because they lack lexical meaning (Fries, 1952), or due to the fact that they form a closed group (Stageberg, 1965). In Fillmore’s view (1968, 1969), prepositions were described within the framework of Case Grammar. For this author, they are markers on noun phrases. He maintained that the distinction between a prepositional phrase and a noun phrase is no longer necessary, let alone it has constantly been a ‘terminological nuisance’.

Quite the opposite, in Jackendoff’s approach (1973, 1977, 1983), prepositions were described as elements of an autonomous lexical category related to categories, such as verbs,

nouns and adjectives (cf. Van Riemsdijk, 1978; Stowell, 1983; Chomsky, 1986a; Baker, 1988) (cited in Rauh, 1993, p. 100). According to Jackendoff (1973), “linguists never seem to have taken prepositions seriously”. He claimed that the structure of prepositional phrases have to be studied like other structures (cited in Gazdar, Klein, pullum, & Sag, 1985, p. 131). In other words, they are not merely function words; they are similar to other phrase classes: noun phrases, verb phrases and adverbial phrases.

Gazdar et al. (1985) went further and distinguished between two groups of prepositions, those which are grammatical, and those which have semantic content. In this respect, Rauh (1993) called them non-lexical and lexical prepositions. From the perspective of Radford (1997, p. 38), prepositions have descriptive content if they have antonyms, i.e., if prepositions come in pairs, like *inside* and *outside*, they are lexical categories just like nouns, verbs, adjectives and adverbs. However, the view presented by Radford (1997) is not decisive all the time since a preposition like *of* does not have an antonym. So, we cannot be sure whether we consider it as a content word or not. Hagège (2010) has rather affirmed the importance of adpositions and argued that they exhibit various forms and combinations with complex, rich and wide-ranging semantic contents as well as cognitive implications; they cover an “enormous field of meanings” (cited in Brenda, 2014, p. 59-60).

Without getting entangled in the theoretical orientations debate, prepositions, regardless of their categorical status, are generally chosen because of the independent meaning they have, or they are tightly embedded in other words. These are called free and bound prepositions, respectively. The latter are two broad types of prepositional meanings. The distinction between them was introduced by Biber et al. in 1999 (cited in Brenda, 2014). The first type is selected freely on the basis of the language users’ intentions (for example, *in*, *on*, *by*, *near*), like in ‘Let us place the lamp *in* the corner/ *on* the desk/ *by* the armchair/ *near* the table’. The use of the second type depends on the particular nouns, verbs or adjectives that

come before them (for instance, *a threat to*, *I agree with*, *bored with*) (Downing, 2015, p. 479). Oftentimes, the same preposition can be free in a given context and bound in another (Biber et al. 1999; cited in Brenda, *ibid.*). In fact, the picture gets complicated with verbs. When a verb is used with a preposition, it is called either a phrasal verb or a prepositional verb. A phrasal verb is a verb that is combined with a preposition (or an adverb), and its meaning cannot be easily deduced from the meanings of the two words taken individually like *look up*, whereas a prepositional verb is a verb that takes a specific preposition, and both are semantically connected; its meaning can be understood from the meaning of the verb and the preposition such as *depend on* (cf. Hampe, 2002, p. 16).

Furthermore, semantically, prepositions are the means whereby talking about time, location, movement as well as many abstract relationships is possible in many languages. Some of the abstract relationships used in English include: cause, ‘die *of* cancer’; instrumentality, ‘*with* spade’; means, ‘*through* effort’; and purpose, ‘*in order to* succeed’ (Thatcher, 2014, p. 27). Traditionally, the different relationships expressed by prepositions are analyzed with respect to these four groups: prepositions of path, prepositions of place, prepositions of time and metaphorical prepositions (cf. Allsop, 1983; Bennett, 1975). Nevertheless, Lindstromberg (1997) contends that this division is fuzzy (cited in Roslim, 2014). Although the traditional accounts provide useful information concerning the meanings of prepositions, they lack a basic understanding of the motivation behind them. According to Tyler and Evans (2003), even though prepositions have been accounted for by the homonymy approach, it fails to explain the ubiquity of their senses. This approach cannot account for the way prepositions appear to behave because it overlooks and denies any systematic relationships among the senses. In view of the foregoing, the senses are arbitrarily linked, and the process of meaning extension is in its own nature arbitrary. The homonymy approach is then inappropriate to account for the distinct senses of prepositions, for it claims that they lack

motivation, and these meanings accidentally arise. Adhering to this view, the meanings of prepositions are listed in unorganized manner (Tyler, 2012).

Within CL, however, an extraordinary burgeoning interest in prepositions has “contributed to the ennoblement of the humble preposition” (Taylor, 1993, p. 151). Particularly, it has given birth to another understanding of them. The prepositional category in the view of CL differs from the traditional prepositional category in the sense that it can extend its meaning, and all the senses of prepositions are grounded in human experiences. They are regarded as complex lexical categories which have many distinct but related senses (Rice, 2003). CL tries to bring knowledge about how the many meanings of prepositions are linked to each other (Cosme & Gilquin, 2008). By doing this, cognitive linguists like (Lakoff, 1987; Tyler & Evans, 2003) have demonstrated that it is possible to arrive at linguistically important generalizations concerning their polysemy, and why it makes sense to use the same preposition in different contexts in order to convey distinct meanings. In essence, CL holds that prepositions “encode [...] diverse information both grammatical and semantic” (Benda, 2014, p. xiii), and the information expressed by them is schematic rather than detailed.

3.2 The Relationship between Prepositions, Polysemy and Image-Schemas

According to the polysemy view, a preposition has a primary sense and extended (abstract) senses. These are termed the spatial and non-spatial senses. The polysemous nature of prepositions is dealt with in CL by means of image-schemas. Among the variety of English prepositions, the behaviour of *above*, *across*, *in*, *on*, *out*, *over* and *through* can exemplify the capacity for prepositions to have different but related meanings.

3.2.1 Using Image-Schemas to Illustrate the Senses of Prepositions

Spatial relations coded by prepositions are reflection of spatial scenes. According to CL, the spatio-physical world and the spatial relationships are meaningful for us. Humans always experience viewing spatial scenes. These are about the relation of entities to each other, which exist independently of human beings, in certain recurring ways. The spatial scenes are perceived, then analysed and understood in ways which rely entirely upon the specificity of the neural architecture of the human brain, the idiosyncrasies of the human body and how human interact with the world, i.e., it depends on our uniquely human understanding and experience of the physical world (Tyler, 2012; Tyler & Evans, 2003). The conceptualized relations are reflected linguistically through prepositions. For instance, the scene prompted for by a sentence like ‘The book is *under* the bed’, involves conceptualizing a relation between *the book* and *the bed*. Both are understood as sharing a particular spatial relation in which the location of *the book* is in a position lower than *the bed*. The spatial scene described by ‘She put the book *near* the telephone’, represents another spatial relation between entities we encounter in the world around us and with which we interact. It follows that spatial relationships mirror different kinds of scenes. Thus, our conceptualization of spatial scenes is grounded in the spatio-physical world (Tyler & Evans, 2003). Since prepositions provide the primary means of expressing spatial relationships, the central sense is conceptualized as a spatial scene. Most typically, the basic sense of a preposition, around which the other meanings are organized, is schematic and refers to a particular spatio-physical relationship between two entities (Tyler, 2008).

The spatial relations between the entities designated by English prepositions can be represented by image-schemas. Our conceptualization of spatial scenes is arranged by our perceptual system in terms of **figure** and **ground** (or foreground and background). These terms have been taken from Gestalt psychology to describe the way humans perceive objects

and their relations in the world (Tyler, 2012). The segregation of any scene into figure-ground organization was first proposed by the Danish psychologist Rubin almost a century ago, and then later, it was integrated into Gestalt psychology, which appeared at the end of the nineteenth century (cf. Evans and Green, 2006, p. 65; Ungerer & Schmid, 1996, p. 163). Both notions were introduced into CL by Talmy to account for the expression of spatial relations (Talmy, 1972, 1983, 2000; cited in Croft & Cruse, 2004). The way to illustrate spatial relations by image-schemas lies in the discussion and the work of Talmy (1978, 2000) concerning the distinction between figure and ground. He claims that within a spatial scene, one entity is the figure, whereas the other one is the ground. The figure is a moving object whose motion or site is in focus and “the ground object is a reference-point having a stationary setting [...], with respect to which the figure’s path, or site [is characterized]” (Talmy, 1978, p. 628). Every spatial relation in language is described by specifying the location of the figure relative to the ground(s). The figure/ground dichotomy has been adopted by Cognitive Semantics to describe spatial relations found in a simple sentence like ‘The cat is *near* the house’, wherein the figure is *the cat* and *the house* functions as the reference point or the background. Depending on the context, the figure-ground relation changes; the object that is a figure in a given relation can be a ground in another one, as in ‘I found a flea [**figure**] on the cat [**ground**]’ or ‘I want the house [**figure**] to be behind Susan [**ground**]!’ (The person wants to compose a scene for a photograph) (Croft & Cruse, 2004, p. 57).

The underlying idea behind figure/ground alignment has been influentially applied by Langacker (1987, 2013) in terms of **trajector (TR)** and **landmark (LM)**. Langacker (1987) maintains that the TR and LM are “one linguistic instantiation [a special case] of figure/ground alignment” (p. 231), while the figure and ground are treated in relation to perception or as “a manifestation in perception” (Langacker, 2013, p. 58). Therefore, prepositions, in their spatial senses, refer to a relation between two or more participant entities, the TR and

LM; the TR stands for the figure and the LM for the ground. The TR is an entity which is perceived as dominant in a scene. In other words, it is the primary focus in the spatial scenes or relations profiled by prepositions. It is the entity being assessed, located and described with respect to the LM, which is the secondary focus within the profiled relationships. Characteristically, the TR is smaller, mobile and geometrically simpler. When the TR is perceived, it is more salient. The LM, in contrast, is larger, more complex and more stationary. The LM is more independent than the dependent TR, for which it acts as a reference point (Brenda, 2014; Croft & Cruse, 2004; Taylor, 1993). Given the sentence ‘The old woman is sitting *behind* the counter’, *the old woman* describes the TR, *the counter* the LM. The preposition *behind* joins them through designating the location of *the woman* in relation to *the counter*, i.e., it locates *the old woman* at the back of *the counter*.

The relation between the TR and the LM is asymmetrical, and it is not always static. Consider the examples (19), (20):

Example 19: The bike is *near* the house.

Example 20: * The house is *near* the bike.

Even though (19) and (20) are well-formed sentences, the use of *near* in (20) is odd because the LM is typically the immovable entity that only locates the TR (Evans & Green, 2006, p. 69; Talmy, 2000, p. 314). Since the larger entity is *the house* and the smaller one is *the bike*, it is logical to describe the relation between *the bike* and *the house* as in (19), rather than saying ‘*The house is *near* the bike’, wherein the TR is *the house* and *the bike* is the LM. Although the term TR suggests motion (when it moves through a spatial trajectory), and the LM is usually static, the former can be applied to dynamic and static relationships (Langacker, 1987). Hence, the asymmetry between the TR and LM does not only manifest in static

relations, but also in dynamic ones which indicate the motion as well as the orientation of the TR. The examples below illustrate the point:

Example 21: The cat jumped *onto* the dinner table.

Example 22: James, will you move the dinner table a bit more *under* the chandelier?

In (21), the TR, *the cat*, performs a route with respect to the top of the LM, *the dinner table*. If we reverse the TR and LM, the sentence will sound odd, as in ‘*The table received the cat’. In (22), *the dinner table* is the TR, and the end point of the motion is the area vertically below the chandelier. Again, in this situation, the relation between the TR and the LM cannot be changed (Radden & Dirven, 2007, p. 306).

From what has been said, the connection between image-schemas and prepositions boils down to the following essence: image-schemas are structures for organizing our experiences and comprehension (cf. Johnson, 1987, p. 29). Recall that image-schemas derive from our bodily interaction with the external world (see Chapter Two, Sub-section 2.2.2 Embodiment, Image-Schemas and Language, p. 58-59). They are an attempt to understand concepts not in terms of propositional information (cf. Tyler and Evans, 2003, p. 30). On this view, concepts which emerge from human interaction with the spatio-physical world, like the spatial relations encoded by prepositions, have an embodied basis, and they “are better represented as being more gestalt-like and image-schematic in nature rather than as linguistic propositions or semantic feature bundles” (Evans & Tyler, 2005, p. 2-3). According to Tuner (1992; p. 728; cited in Dannenberg, 2008), human naturally structure scenes when they understand them in terms of such elementary “image-schemas”.

Following Talmy (1985a; cited in Adamson, 2009) and Langacker (1987), the spatial senses of prepositions assume image-schemas that are expressed in terms of two basic entities, a TR and LM (Talmy used figure and ground for the expression of spatial relations).

The graphic representations of image-schemas can characterize the TR/ LM configurations, being static or dynamic, without showing details about their nature or shape. They depict the spatial relationships in a schematic way to describe the meanings of prepositions. Note that spatial relations or spatial prepositions refer to any prepositions which locate an object in space or describe a path (a change of location in space). Some grammarians have differentiated between prepositions of place and prepositions of path (or prepositions of direction, or of movement, or of motion). Generally, prepositions of place can be used as prepositions of path and vice versa. For this reason, the umbrella term is 'spatial preposition' (Lindstromberg, 2010).

Image-schemas do not only underlie the spatial meanings of prepositions, but they are also the source of the semantics of the non-spatial senses. Language speakers recurrently expand their understanding of physical-spatial relations as well as entities to non-physical domains, and the extended conceptualizations are reflected in the linguistic system. The spatial sense of a preposition forms the primary meaning component of its semantics in that it provides the base for the process of meaning extension from the spatial to the more abstract (Evans & Tyler, 2005; Tyler & Evans, 2003). Hence, the various non-spatial senses underlying a given preposition are motivated systematically by the central spatial meaning, on the basis of which the relationship between them can be accounted for (cited in Evans & Tyler, 2005). In particular, the meanings associated with prepositions form a semantic web in which the peripheral meanings are organized around a central image-schema. Researchers like (Brugman, 1981; Dewell, 1994; Evans & Tyler, 2004; Lindner, 1981; Tyler & Evans, 2004) have found that the links between the additional meanings of polysemous prepositions, which are extended from central and prototypical senses (or in other words, which derive from the primary image-schemas), are motivated through cognitive processes, such as image-schema

transformations, metonymy and metaphor (cited in Boers & Lindstromberg, 2008; Taylor, Cuykens & Dirven, 2003).

In sum, the polysemy of prepositions can be explained on the basis of image-schemas, image-schematic transformations, metaphoric and metonymic links that give rise to their semantic network (Höche, 2009). The latter description of prepositions in CL stands in strong contrast with the traditional views (for example, Chomsky, 1995; Frank, 1972; cited in Tyler & Evans, 2004) that treated them as an array of unrelated senses (Ungerer & Schmid, 2006). Besides, it has played a significant role in their semantic description.

3.2.2 Semantic Analysis of *above, across, in, on, out, over* and *through*

The question of how the above discussed assumptions can be applied to the analysis of the semantics of prepositions requires considering a few representative examples. Given that English prepositions are highly polysemous words, it would be impossible to discuss them all along with their rich set of meanings. So, the polysemy exhibited by the prepositions *above, across, in, on, out, over* and *through* provides good evidence that prepositional meanings are extended from the spatial to abstract domains. However, there are certain points that should be borne in mind. Following Boers (1996), these polysemous prepositions may occur as adverbs, adjectives or particles in some verb-particle constructions, yet we shall use the blanket term prepositions since our focal point is their meanings. Equally important, space limitation will not allow us to discuss all their extended meanings. The analysis will build upon the work of major linguists' views on their main senses.

3.2.2.1 *Above*

In its spatial primary sense, *above* expresses a motionless state where a TR is higher than a LM. The image-schema for *above* can look as follows:

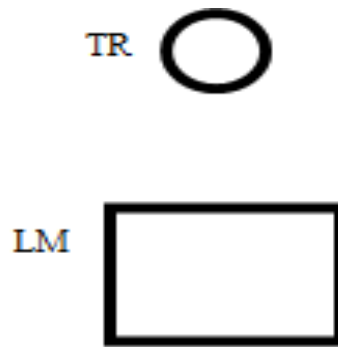


Figure 3.1: The Central Image-Schema for *above*

Figure 3.1 depicts many spatial scenes (or relations) we may see in the world. The TR and LM are not specified with respect to shape or volume. Some examples include: ‘The insect (TR) was *above* her head (LM)’ and ‘It is enjoyable to see the blue sky and the clouds (TRs) *above* us (LM) in daytime’. As the figure shows, the TR (represented by the circle) and the LM (the square) are not in contact. It entails that the relation profiled by *above* suggests an absolute separation between the TR and the LM (Lindstromberg, 2010). Specifically, *above* involves verticality. It indicates a spatial location of a TR and a LM with respect to the vertical axis; the TR is located along the vertical axis in relation to the LM in a ‘higher-than position’ (Langacker, 2008; Tyler & Evans, 2003). The image-schema shown in Figure 3.1 is drawn by Langacker (2008) in a different form like this:

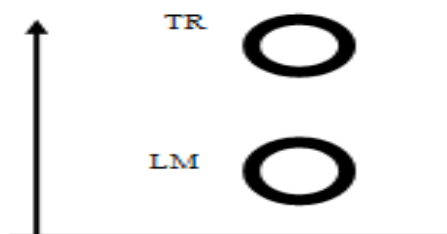


Figure 3.2: Langacker’s Schematic Representation of *above* (adapted from Langacker, 2008, p. 71)

Figure 3.2 profiles the same relationship shown in Figure 3.1. Langacker visualizes the sense of *above* by adding the vertical axis which is essential since it is related to its primary spatial sense. He depicts the spatial location of the TR and the LM by two circles with respect to the vertical axis shown by the arrow. According to Langacker (2006), the use of *above* involves putting “primary focus on the vertically higher participant” (p. 73). A typical example is found in ‘The lamp is *above* the table’.

The schematic diagrams shown above constitute just a form of representation. They neither summon a mental image nor a picture of how the world looks like, but they are schemas that illustrate the spatial configuration of the TR and LM prompted regularly by *above*. Apart from this, the graphic depictions do not contain any information about which kind of objects the TR and the LM are. If the TR and LM are specified, as in a simple expression (or a scene) ‘the lamp *above* the table’, the pictorial representation looks like the schema in Figure 3.3:

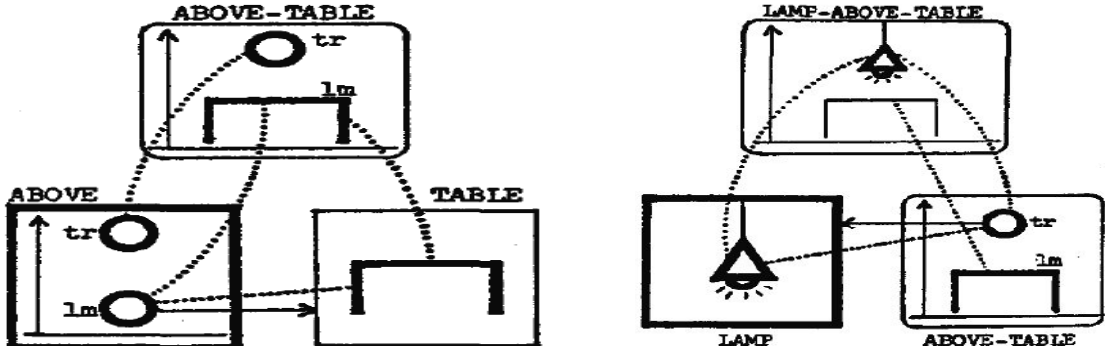


Figure 3.3: Schematic Representation of *above* with *Table* and *Lamp* (Langacker, 2006, p. 54-56)

In Figure 3.3, the dotted lines denote the correspondences between the TR and LM. The first schema on the left portrays the relation between unspecified TR with a specified LM, which is

the table, while the schema on the right specifies this TR as *the lamp*, which is sketched *above the table* and becomes the primary focus in the scene with respect to *the table*.

The image-schema of *above* shown in Figure 3.1 allows us to understand the semantic network of their extended senses. In another spatial sense, *above* denotes a dynamic state where it retains the meaning that ‘the TR is higher than the LM’, but, in this case, this meaning is transformed to the endpoint of a path (Lindstromberg, 2010). Figure 3.4 depicts the dynamic sense of *above*:

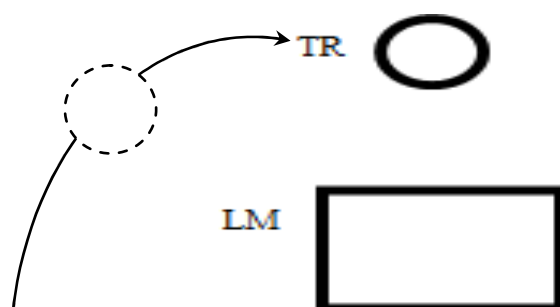


Figure 3.4: Schematic Representation of the Dynamic Sense of *above* (adapted from Lindstromberg, 2010, p. 111)

In Figure 3.4, the arrow (which adds a dynamic aspect to the schema) reflects the orientation or the path of the TR (the circle) to a point that is higher than and not in contact with the LM. This sense is found when *above* is combined with verbs of motion, as in ‘I raised my arms *above* my head’ (Kimber, 2006, p. 9).

The preposition *above* has developed other four distinct meanings. The underlying image-schema of the spatial sense of *above* serves as the source to comprehend why its various meanings are related. According to Boers (1996), in the case of *above*, only about 5% of the instances are dynamic, whereas 60% are figurative. Since it locates the TR (almost directly) higher than the LM, the schema of *above* denotes the relation of ‘separation’. The notion of ‘separation’ and ‘physical highness’ expressed by *above* are extended to refer to

non-spatial senses via metaphorical and metonymical extension links (Lindstromberg, 2010).

Consider the examples below:

Example 23: Please see the instructions *above*.

Example 24: Today's temperature will be *above* zero.

Example 25: We are educators *above* the rank of mere instructors.

Example 26: They are *above* slander, I know that.

(Kimber, 2006, p. 9; Yates, 1999, p. 8)

In these sentences, *above* represents non-physical entities or concepts. So, the TRs cannot be understood as being located physically in relation to the LMs. In (23), (24), (25) and (26), the spatial sense of *above* is extended to mean '*earlier*', '*more than*', '*superior than*' and '*higher than*' (or *separated*), and all of them are not arbitrary.

Above can be used metonymically to indicate '*location in written texts*'. According to Boers (1996, p. 108), the beginning of a text is at the top of the page, whereas the end is typically below, which allows for the point being referred to and the one being talked about to be located on different pages. In formal writing, *above* is the conventional means of locating a certain piece of information (TR) *earlier* in a text. In (23) *above* means that 'The instructions are stated *earlier*'. That is, 'the instructions', which are the known piece of information, are used as a reference point or as 'anaphoric reference' to indicate the location of a point mentioned earlier. Examples such as (23) include: 'The work referred to *above*' and 'The courses described *above*'. In this sense, *above* is not literal anymore since it is employed in the domain of written discourse; it refers to something written earlier in articles, books or documents (Yates, 1999, p. 8).

The '*more than sense*' has an experiential basis, and it is motivated by the UP IS MORE metaphor. The latter was introduced by Lakoff and Johnson in 1980 (Lindstromberg,

2010). Lakoff and Johnson (1980) claim that this sense has become associated with *above* because people tend to understand (or conceive) abstract quantities in terms of verticality. Here, verticality is the source domain and the quantity is the target domain. They observe that in our everyday experience, there is a correlation between quantity and vertical elevation; an increase in vertical elevation is often correlated with an increase in amount. For instance, when liquid is poured into a glass, the height and the quantity of that fluid increases at the same time. It follows that when the height of something rises up, its quantity or amount increases more. In English, because it is a preposition which suggests upness (being vertically high), *above* is employed to express the systematic metaphor UP IS MORE (Lindstromberg, 2010). Accordingly, the interpretation in (24) involves a reading in which ‘Today’s temperature will be *more than zero*’; there is an increase in the scale of the temperature given the fact that thermometers, which are typically manufactured as vertical scales, comprise of mercury that rises up when the temperature increases (Tyler & Evans, 2003). The real-life correlation between ‘verticality’ and ‘quantity’ justifies why English speakers say ‘The sales tax is *above 20%*’ and ‘He raised his voice *above* the other’. In many contexts, the TR takes a value in relation to the LM or the LM is a value on some kind of scale or measuring standard (Boers, 1996, p. 105). For instance, in the case of temperature, the value is related to degrees.

The use of *above* in (25) is an instantiation of the conceptual metaphor HIGH STATUS IS UP. Social hierarchies are conceived through this metaphor (Boers, 1996). In our spatio-physical world, if an entity is located vertical to the other, the former is in some way superior, and this relationship is metaphorically extended to the social domain where high status is correlated with physical and social power. Thus, an outcome of being vertically high is being superior in some way (Tyler & Evans, 2003). In English, *above* is used to mean ‘*superior than*’ in order to refer to individuals’ status within a hierarchical organization such as a company or a social system; it indicates that higher status, ranks, classes or levels in

social hierarchies or organizations are up or superior in some way (Tyler & Evans, 2003). In the relation designated by (25), the sentence means that the TR, *educators*, are in some way superior to the LM, *instructors*, in terms of authority, seniority or salary, etc. The same sense of *above* in (25) is found in ‘The keepers carry out their orders, but *above* them are the secretary and the director’ (Boers, 1996, p. 106).

By referring to certain relevant characteristics of the central schema of *above*, it becomes possible to understand the meaning extension in (26), wherein this preposition means ‘*higher than*’. The latter is motivated by the notions of separation and distance denoted by *above*. English speakers conceive of people’s good characters, actions and status in terms of the separation relation profiled by *above*. Separation entails (at least some) distance. If an object is close, it can be touched without difficulty, while if it is high and at distance, it is then unreachable or inaccessible. Speakers conceive of something that is high and exalted as being good. If people’s characters and actions are good, they are conceived as being detached from negative actions or “too high to come in contact with” and commit some type of behaviour (Yates, 1999; Lindstromberg, 2010). This may suggest that the LM cannot touch or be in contact with the TR (Boers, 1996). In (26), *above* means that the TR, *they*, are conceived as being detached from the LM, *slander*. That is, they are “so high” and the LM has no access to or effect on the TR. Another example include: ‘Everyone should be *above* falsehood’ (Kimber, 2006, p. 9).

3.2.2.2 Across

The preposition *across* assumes an image-schema that represents motion (or direction) along a path from point A to B. It refers to a TR that moves ‘*from one side to the other side of*’ a LM (Bruckfield, 2012; Ruiz de Mendoza Ibáñez, 2008; Yates, 1999). Typically, *across* requires movement in relation to a planar LM, implying a horizontal axis (Lieber, 2004; Tyler

& Evans, 2003). Lindstromberg (2010, p. 123) states that although the movement of the TR is from one side of the LM to the side directly opposite, *across* is “neutral about whether a path extends beyond the sides of the LM”. The main possibilities for applying *across* in English are depicted in Figure 3.5:

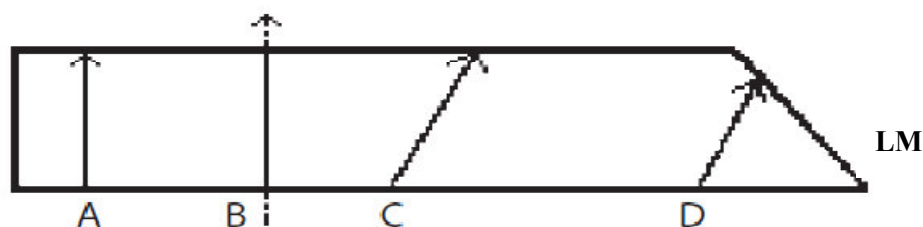


Figure 3.5: Diagrammatic Representation of *across* (adapted from Lindstromberg, 2010, p. 123)

Figure 3.5 shows that the arrows represent the movement and the directions of the TR. The arrows A and B are typical depiction of the movement of the TR. The arrow C is another possibility of the TR’s path, and D just shows motion across a corner of the LM. The TR of *across*, according to Langacker (1999), moves successively “occupying each of the points along a spatial path leading over a static LM” (cited in Shindo, 2009, p. 77). The diagram demonstrates the use of such preposition when it is combined with motion verbs and portrays the path of motion, by and large, in a two dimensional space (Bruckfield, 2012). The central sense of *across* can be found in sentences like ‘They drove *across* the bridge’ and ‘The ant walked *across* the paper’ (Adamson, 2009, p. 178).

In another sense of *across*, it indicates static relations to mean ‘*on the other side of*’. The static sense of *across* is derived by means of an image-schema transformation. According to Lakoff (1987), image-schemas are subject to transformations by speakers. They can be manipulated in the mind of speakers to widen the applicability of the basic schema (see Chapter Two, Sub-section 2.4.2 Image-Schemas, Image-schema Transformations and

Polysemy, p. 76-78). The conceptualization of spatial scenes changes, whereas their content is preserved to a certain degree. Lakoff (1987, p. 440) introduces many possible transformations and among them is the end-point focus transformation. According to him, it is common for prepositions “that have an image schema with a path to also have the corresponding image-schema with a focus on the end point of the path”. He gives the following examples:

Example 27: Harriet walked *across* the street. (path)

Example 28: Harriet lives *across* the street. (end of path)

In (28), *across* means that the TR is located *on the other side of the LM* (the street) with respect to the speaker’s position. The same sense is expressed in ‘There’s a mailbox *across* the street’ (Langacker, 1987, p. 217). The graphic representation of this sense can be represented in Figure 3.6:

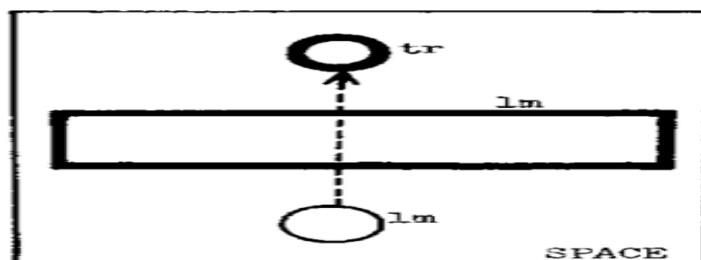



Figure 3.6: The Static Sense of *across* (Langacker, 1987, p. 218)

The diagram in Figure 3.6 indicates that the TR of *across*, *the mailbox* (the thick and small circle) is on the opposite side of the planar and stationary LM, *the street* (the rectangular). In the static schema of *across*, Langacker (1987) considers the location of the speaker (the thin circle) as a second LM because the speaker denotes the TR’s location (*the mailbox*) with respect to his/her position; the position of *the mailbox* becomes known because the location of the speaker acts as a point of reference. The broken arrow designates an imaginary or a mentally scanned path. That is, in the primary sense of *across*, the TR changes its location

continually, whereas in this sense, the speaker scans a hypothetical path; the speaker mentally follows the path from one side of the LM to the other side, but the end point of this imaginary path where the TR is situated is in focus. Hence, the dynamic schema of *across* turns into a static schema.

The third sense of *across* is similar in meaning to *all over*. *Across* suggests that a TR moves from one point to another in different directions. *Across* gets an idiomatic sense to mean that something spreads north and south as well as east and west, i.e. in many or every part of a large area, a region or a place, for example, ‘Voters *across* the nation will elect a new president’ and ‘My company has more than 100 offices *across* the U.S.’.

The non-spatial senses of *across* have not been discussed very much by researchers, but they frequently mention its use with two phrasal verbs. It can denote ‘*encounter by chance*’ when combined with *come*. Lindstromberg (2010) proclaims that when we move from one side to the other side of a route, we encounter someone else coming from one side or another like this: . Experiencing such meeting may have led to the original image behind *come across*, as in ‘I *came across* a question in a forum that triggered my interest’ (Lindstromberg, 2010, p. 126). *Across* is employed with *get* to speak about the process of communication. It is an extension from the basic sense of *across* that refers to ‘an entity that moves from position A to the opposite position B’. Given the sentence ‘He knows how to *get* his ideas *across* to his pupils’, ideas do not follow a physical path. Instead, the teacher can make his pupils understand them easily. The assumption behind the meaning of *get across* is that speakers first have something in mind to communicate. They express their thoughts through words and send them to hearers who take the ideas out of words (Trim, 2007). If ideas (points or messages) are accessible, they are understandable. If a given idea reaches people, they can handle it and form a picture of what it is like in their mind. We say ‘we *get* ideas *across* to persons’ as if ideas (points or messages) could move from where they were to

where people could deal with them. Accordingly, the meaning ‘*make somebody understand*’ is linked to the primary sense of ‘moving from A to B’ (Driven, 2001; cited in Ruiz de Mendoza Ibáñez, 2008, p. 123-124; Trim, 2007, p. 11).

3.2.2.3 *In*

The image-schema underlying the preposition *in* is the CONTAINER schema. *In* is used with bounded objects or regions in space. It has to do with bounded LMs that have boundaries, interior and exterior. It refers to situations where a TR is enclosed by a LM on all sides (Lindstromberg, 2010). Figure 3.7 shows the central meaning of *in*:



Figure 3.7: Image-Schemas for *in* (adapted from Murphy, 2010, p. 75)

Both the schemas (a), (b) in Figure 3.7 could serve as the basic schema for *in*. They depict the concept of containment expressed by *in* when referring to location. The schema (a) is more typical because we tend to think canonically of bounded LMs as three-dimensional objects, like *rooms* and *boxes* (Tyler & Evans, 2003). When it comes to *in*, the TR is the circle which is enclosed by or interior to the LM (the square). For example, in the sentence, ‘I forgot my umbrella *in* the car’, *the umbrella* is conceptualized as being contained by the LM, *the car*.

In principle, being contained by something, i.e. being enclosed by a bounded LM, can take different variations. The notion of containment presumes boundaries and can involve ‘*total enclosure*’, ‘*inclusion*’ or ‘*partial enclosure*’ (Downing & Locke, 2006; Radden &

Dirven, 2007). If the TR is completely surrounded by the LM, as in the schemas (a) and (b), then the spatial meaning of *in* describes a ‘total enclosure’ of the TR by the LM, for instance, ‘The wallet was *in* my bag’. Since all the senses vary from this schema, it is considered the basic one (Murphy, 2010). The spatial meaning of *in* implies ‘locative inclusion’. The TR is found within the limits of an area; the TR is in the interior space determined by the boundaries of the LM (Navarro, 1998; cited in Silvestre Lopez, 2009, p. 54). A typical example include: ‘He lives *in* a city *in* Algeria’. In this case, *in* is used with LMs which indicate areas that are conceptualized as having limits or boundaries, such as *land, country, field, city, park, ground, continent*, etc. These are non-canonical bounded LMs because they are not three dimensional (Tyler & Evans, 2003). ‘Partial enclosure’ has to do with those spatial relations wherein only a small portion of the TR is enclosed by the LM (Tyler & Evans, 2003). Consider the schemas in Figure 3.8 below:

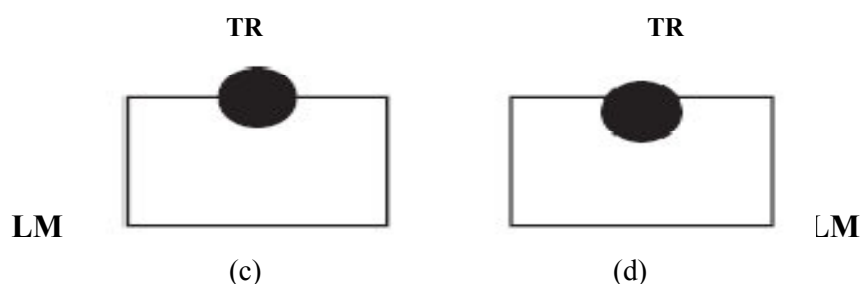


Figure 3.8: Schematic Depiction of Partial Enclosure Expressed by *in* (adapted from Lindstromberg, 2010, p. 72)

In the schemas (c) and (d), the TR is not totally inside the LM, but just part of it is *in*; half of the TR is *in* (schema c) or mostly *in* (schema d), and half is exterior to the LM (Lindstromberg, 2010). Even though the TR is not 100% enclosed by the LM (or the boundaries defined by the LM are not complete), the notion of containment and the elements, interior, exterior and boundary are still involved (Murphy, 2010; Tyler & Evans, 2003). In other words, the LM defines an interior space in which the TR is located even if the boundary

is not fully closed; “there may have an in-access to and potential out-access from that interior region” (Navarro, 1998; cited in Silvestre Lopez, 2009, p. 54). These schemas correspond to sentences, such as ‘The cigarette is *in* his mouth’ (Radden & Dirven, 2007, p. 312-313) and ‘Look at the girl *in* the blue hat’.

The schema of *in* is shifted to describe ‘*motion into a container*’. The relation between the TR and the LM expressed by *in* can refer to the TR’s movement within the bounds of the LM, or the TR moves along a path from the exterior to the interior of a bounded LM (Navarro, 1998; cited in Silvestre Lopez, 2009, p. 54). This sense occurs with verbs of motion, such as *put, place, fall, throw, dip, plant* and others. The dynamic sense of *in* is needed in a context like ‘*Dip* the pastry brush *in* cold water’ and ‘I threw the letter *in* the wastebasket’ (Kimber, 2005, p. 85). The role of these motion verbs is to specify the manner of the movement, while the preposition *in* shows where the TR is going (cf. Talmy, 1987). The schema of dynamic *in* can be shown as follows:

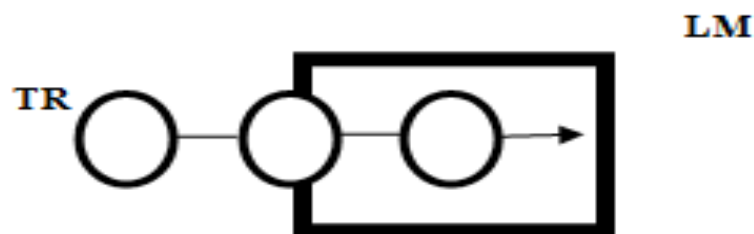


Figure 3.9: The Dynamic Sense of *in* (adapted from Lindstromberg, 2010, p. 29)

The schema in Figure 3.9 represents a TR which moves into or enters a LM. The dynamic image-schema for *in* consists of a path and a container. The source of the path is outside the container, and the end point or the goal of the motion is inside it, i.e., the direction of the movement ends in the interior of the LM. Lindstromberg (2010) states that even if the context expresses clearly that a dynamic process precedes the movement, this sense of *in* maintains

the focus on the final stage, which involves enclosure. In the sentence ‘We got *in* the car’, the final result of the process done by the TR, *we*, is inside *the car*, which is the point in focus.

Figuratively, the semantics of *in* is so diverse. The following examples illustrate some of its non-spatial senses:

Example 29: Try to interpret the picture *in* words.

Example 30: The baby appears to be *in* pain.

Example 31: They put the chairs *in* a circle.

Example 32: Some friends work *in* sales.

Example 33: When I got back to my car, someone had blocked me *in*.

The non-spatial senses of *in* are motivated by the image-schema of containment. In (29), the preposition *in* basically indicates the notion of ‘*containment*’. Metaphorically, *in* is employed to express the metaphors LINGUISTIC EXPRESSIONS ARE CONTAINERS FOR MEANINGS (Lakoff & Johnson, 1980), and SEGMENTS OF LANGUAGE ARE CONTAINERS (Lindstromberg, 2010). That is, English speakers conceptualize language or segments of language as if they were containers. These metaphors entail that words, phrases and sentences are containers for different contents, meanings and ideas. Thus, we can say ‘*in* words’, ‘*in* sentences’, ‘*in* writing’ and ‘*in* block letters’, etc. It is also used to talk about the content of books, magazines, press, letters and e-mails, for example, ‘I received this notice *in* the e-mail’ (Kimber, 2006, p. 89).

The example (30) denotes another common metaphorical meaning of *in* wherein speakers of English talk about ‘*states, circumstances and moods*’ as if they were containers that one can be inside of or outside of. The state sense of *in* is needed for a sentence like ‘The baby appears to be *in* pain’ (Kimber, 2006, p. 89), or ‘They are always getting *in* trouble’ (Lindstromberg, 2010).

In (31), the preposition *in* does not indicate that students put their chairs *in* a circle, but because *in* involves bounded LMs, the sentence means that they formed a shape that has boundaries. The preposition *in*, hence, designates the way things are arranged to delimit ‘different forms of shapes’, as in ‘The pieces of wood were arranged *in* a square’ (Tyler & Evans, 2003).

In (32), the spatial sense of *in* is extended to the domain of human activities. According to Tyler & Evans (2003), there is a correlation between a particular activity and the bounded LM in which the activity occurs. This correlation has led to the emergence of ‘the concept of activity’ which has become associated with *in* via the metonymy ‘location stands for activity’. *In*, then, is used to indicate that a person involves in a particular kind of job, as in ‘She appears *in* movies and plays’, ‘She taught art *in* junior high school’ and ‘He works *in* marketing’.

Concerning the last example (33), *in* expresses the notion of ‘blockage’. If a TR is contained by a LM, the boundaries of the LM, sometimes, limit and constraint the movement of the TR, then the former serves to *block* the TR inside it. In this case, the preposition *in* no longer conveys the concept of enclosure, but it is used metaphorically to say that something/somebody is blocked within the confines of the LM. In the last example, the relation between the TR and the LM is non-spatial because the speaker’s car is blocked or obstructed from moving in some way (Tyler & Evans, 2003). Another example of this sense include: ‘They locked the child *in* the bathroom’.

3.2.2.4 On

The basic image-schema of static *on* denotes support and contact. A TR is located higher than a LM and touches it. Unlike *above*, the TR and the LM bear a relationship of contact. This contact is between the TR’s resting side and the LM’s outer part (Navarro, 1998;

cited in Silvestre Lopez, 2009, p. 55). The TR uses the LM for support so that it does not fall (Lindstromberg, 2010). The spatial sense of *on* is found in ‘The laptop is *on* the desk’. The image-schema of the central meaning of *on* can be represented in Figure 3.10:



Figure 3.10: Image-Schema for *on* (adapted from Lindstromberg, 2010, p. 51)

In this schema, the circle represents *the laptop*. The latter is *on* (supported and in contact with) the upper surface of the desk which is represented by the line. The line represents the LM of the *on*-relation because what is in focus is its contact with the resting part of the TR. Generally, *on* indicates surfaces, or rather, it has to do with the upper horizontal surfaces of objects or the ground, like in ‘The snake lay *on* the ground’ and ‘The topping *on* your pizza smells unusual’ (Kimber, 2006, p. 125-126).

Due to perceptual shifts of perspective, some of the other spatial relations of *on* are conceived in different ways where the basic schema is transformed into a rotated one. In other words, *on* designates support in the vertical axis: ‘[The] picture [is] *on* the wall’ (schema 1) (Coventry & Garrod, 2004, p. 53), ‘The security light is *on* the out-/inside of the house’ (schema 2), ‘The bug is *on* the ceiling’ and ‘The chewing gum is *on* the bottom of the table’ (schema 3) (Lindstromberg, 2010, p. 52). The senses are depicted respectively in the following schemas:

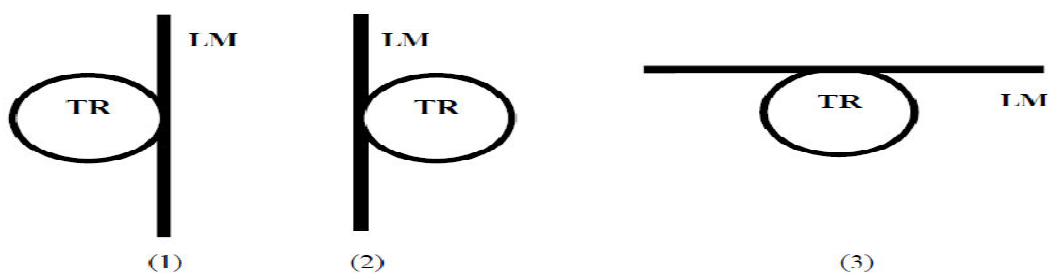


Figure 3.11: Rotated Schemas for *on* (adapted from Lindstromberg, 2010, p. 14)

Figure 3.11 shows that the relationship of support and contact still exists in the rotated schemas (1), (2) and when the LM is bottom surface as in the third schema. In other words, in the above examples, although the resting sides of the TRs are different, their relative position or their relationship and arrangement with the LMs involve support and contact.

The third spatial sense of *on* implies movement ending in support and contact. Dynamically, the preposition *on* can be found in contexts with verbs of motion, like *put*, *throw*, *bounce*, *pounce*, *step*, *thread*, *pour* and *lay*, as in ‘The children jumped *on* the bed’ and ‘She poured water *on* the plant’ (Yates, 1999). Note that *on* occurs in a variety of expressions which suggest forceful contact of a downward movement of a TR into a position of contact with a LM, for instance, ‘The cat pounce *on* the mouse’, or it can also designate a movement from above, which can come from any angle, as in ‘beat/pound/knock/tap *on* the floor/wall/ceiling’ and ‘hit/strike/pat/stroke/rub/touch somebody *on* the head/back’. The schematic depiction of this sense can be represented in Figure 3.12:

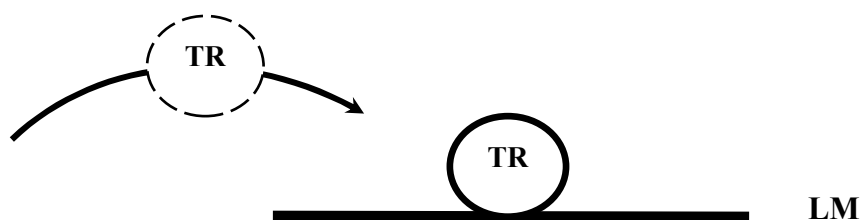


Figure 3.12: The Dynamic Schema for *on*

Figure 3.12 indicates that the TR is moved or moves along a path towards the upper part of the LM. The motion of the TR designated by *on* entails that the end point of the TR is in contact with the upper surface of the LM that supports it.

Metaphorically, the domains of negative feelings and topics are among the domains that are conceptualized in terms of the *on*-relation. *On* is employed to talk about ‘*the burden metaphor*’ and ‘*metaphorical contact*’ or ‘*topics*’. When it comes to *on*, if the LM supports the TR, then the TR is considered as a burden from the perspective of the LM. The TR is conceptualized as an entity that has control over the LM, or it holds functional control of the situation (Navarro, 1998; cited in Silvestre Lopez, 2009; Navarro, 2006). Figuratively, *on* is extended to speak about unwelcome events and negative feelings as if they were burdens. “[The events and feelings] are likened to physical burdens borne by the LM. From one’s own point of view, an unwelcome [TR] is *on* oneself [...], like in “It’s not fair *on* us”, “Shame *on* you” and “I wouldn’t wish such a misfortune *on* anyone” (Lindstromberg, 2010, p. 61). The second metaphorical sense of *on* refers to topic LMs. Since in its basic schema it entails contact of a TR with LM, *on* suggests that a talk is related to the subject directly. That is, what we are talking/writing about makes direct ‘contact’ with the subject or the topic (Lindstromberg, 2010), like in ‘The teacher has tested us *on* irregular verbs’, meaning, ‘the test was *on* regular verbs only’. If the talk does not address the subject/topic, we say ‘it’s *off* the subject/topic’ (Lindstromberg, *ibid.*).

3.2.2.5 Out

Spatially, *out* is the opposite of *in*. It suggests non-containment. Its basic sense indicates a spatial relation in which a TR moves (or is moved) away from a container or a bounded LM (Bruckfield, 2012), for instance, ‘Every time we walked *out of* the room, the cat follows us’ (adapted from Kimber, 2006, p. 157). Figure 3.13 shows the central sense of *out*:

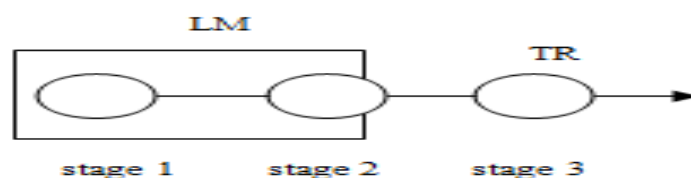


Figure 3.13: Schematic Representation of the *out* Image-Schema (Ungerer & Schmid, 2006, p. 169)

Figure 3.13 illustrates that the TR, *we*, move away from being included in the LM, *the room*. This is depicted in the graphic representation by the three locations of the TR termed stage 1, stage 2 and stage 3. In the first stage, the TR is within the LM. This stage, in isolation, portrays the basic schema of *in*. The difference between *in* and *out* is shown by the second and the third stages wherein the TR moves away from being inside the LM to come to be located outside; the TR is exterior to the LM. It moves away to a place where both are totally separated. The use of *out* with *of* is necessary if the LM is specified like *a room, kitchen* and *a house* (Lindstromberg, 2010). According to Tyler and Evans (2003), *out* can be used with covert LM as in ‘He took the cat *out* (from the kitchen or any bounded LMs), or an overt LM (i.e. specified) like in ‘He took the cat *out of* the box.’

Another variation of the kinetic sense of *out* is the static sense. The preposition *out* indicates a spatial relation of a TR that is exterior to a LM without implying motion. The pictorial representation looks like Figure 3.14:

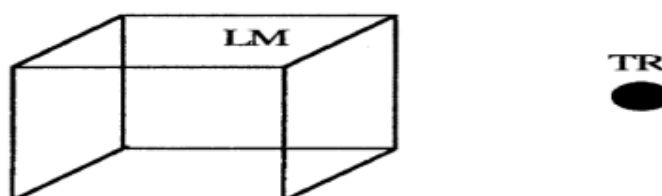


Figure 3.14: The Static Sense of *out* (Peña Cervel, 1998-99, p. 266)

Figure 3.14 shows that the TR is not contained by (or not within) the bounds of the LM. Typical examples include: ‘He was *out* when his mother came home’ and ‘The cat is *out of* the box.’

Among the various non-spatial meanings of *out*, there are four distinct metaphorical senses. The spatial sense of *out* which involves departure from enclosure is extended metaphorically to speak about consumable entities. It is often employed to talk about consumable substances when they are not available, i.e., it can be used to indicate that a given TR is no’ *longer in supply or available*. For instance, the use of *out (of)* in ‘I can’t make a cake because I am *out of* eggs’, means that there is *no more* of them (Yates, 1999, p. 100). Tyler and Evans (2003) claim that in everyday life, consumable entities (TR) are put in containers, and when they are no longer in the containers, this means that they are not available, or there is no more of the TR.

In addition, *out* designates a relation in which a TR is ‘*distributed*’. It can be used in a sentence like ‘The teacher told me to hand these papers *out*’ (Yates, 1999, p. 100). In its spatial sense, *out* involves a TR that goes away from a LM so that both of them are completely separated. In our everyday experiences, we tend to separate a TR (an entity) from a bounded LM in order to distribute it. Hence, *out* has developed a metaphorical sense to indicate ‘*distribution*’ (Tyler and Evans, 2003). It follows that the ‘teacher took the papers from her bag in order *to distribute* them to her students’.

The third sense of *out* is used to denote the meaning of ‘*exclusion*’, for example, ‘They told us to keep *out of* their yard’ (Yates, 1999, p. 103). It refers to actions where there are processes of choosing, rejecting as well as separating (Johnson, 1987). In the example, the TR, *they*, were intentionally not allowed to be accessed to the interior environment. Tyler and Evans (2003) assume that, in many cases, bounded LMs prevent physical access to their

interior region by means of their boundaries, so if the TR is outside, it is excluded from the interior location. Thus, *out* has developed ‘*the exclusion sense*’.

The fourth sense of *out* is the ‘*appearance sense*’. It is commonly employed to say that a given TR comes into view, as in ‘The sun is *out*’. If the sun is *out*, then it is visible. In the spatial sense of *out*, if the TR is not contained by the LM, then it is visible and can be seen. This common scene has led to the development of a sense associated with *out* in order to indicate that something is *visible*. In this sense, *out (of)* presupposes a view point of a speaker that is exterior to the LM and not in its interior (Tyler & Evans, 2003; Lindstromberg, 2010).

3.2.2.6 Over

The preposition *over* provides a clear example of the phenomenon of polysemy in prepositions. It is a highly polysemous word which makes it the most cited example in many prepositional analyses. According to Lakoff (1987), the study of *over* by Brugman (1981) covered nearly one hundred kinds of uses. Due to the high number of senses, in this section, we will present the basic ones and not all the senses. *Over* has three spatial senses which are termed the *above-across* sense, the *above* sense and the *covering* sense. The central sense of *over* is the *above-across* sense (Lakoff, 1987; Riemer, 2010). The latter is represented in the following image-schema:

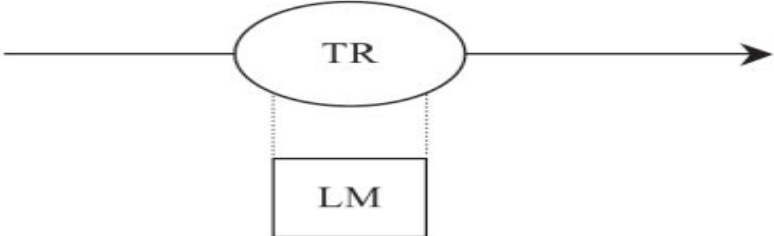


Figure 3.15: The *above-across* Sense of *over* (Lakoff, 1987, p. 419)

The *above-across* sense in Figure 3.15 is predominantly used to express motion. It refers to the dynamic sense of *over* to indicate that a TR (the circle) moves along a path which is represented by an arrow. The TR moves across the boundaries of the LM which are depicted by the dotted lines. The central sense of *over* is called by Lakoff (1987) ‘the *above-across* sense’ because it combines elements of *above* and *across*, while Kreitzer (1997) calls it *over2* (Tyler & Evans, 2003; cited in Nerlich, Todd, Herman, & Clarke, p. 117). The TR of *over* is above (higher than) and has no contact with the LM, and its path extends from beyond one side of the LM to the other (Lakoff, 1987; Lindstromberg, 2010). This sense of *over* can be found in a context like ‘The bullet passed *over* our head’ (Riemer, 2010, p. 244). The TR, *the bullet*, moves above and from one position on one side of the LM, *the head*, so that it comes to be on its other side. As Figure 3.15 shows, the *above-across* sense designates horizontal paths, but, very often, there exist situations where *the path arches up* because of gravity, for example, ‘An apple has been tossed *over* a box’ (Lindstromberg, 2010, p.112). The schema in Figure 3.16 illustrates this situation:



Figure 3.16: The *above-across* Sense of *over*: An Arching Path (adapted from Lindstromberg, 2010, p. 112)

The image-schema of *over* may vary to some special cases. According to Lakoff (1987), it can be specialized to include a range of sub-senses. These are instances which are related to the dynamic schema of *over*. They contain further information related to the nature of the LM and the type of its relationship with the TR, i.e., it specifies the nature of the LM, and whether or not there is contact between the TR and the LM (Lakoff, 1987; Riemer, 2010).

Concerning the nature of the LM, the *above-across* sense of *over* can designate information about the shape of the LM because it can be viewed in different geometric shapes: the LM can be an extended area, as in ‘The bird flew *over* the yard’ (schema 1), or it can have a vertical form (schema 2), like in ‘the bird flew *over* the wall’. Both are shown schematically in Figure 3.17:

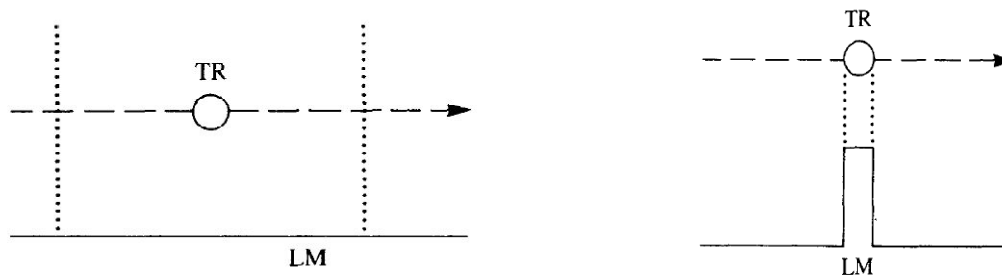


Figure 3.17: Two Different Kinds of Landmark Specifications of Dynamic *over* (Lakoff, 1990, p. 421)

Figure 3.17 specifies certain elements of the central schema of *over*, but it does not diverge from its general configuration. The underlying idea behind the *above-across* sense is still involved in that both schemas just depict the same spatial relation by referring to different spatial scenes. In other words, the path of the TRs is above the LMs which go all the way across them from one side to the other side. In the case of *the yard*, the LM is visualized as a line because it indicates an extended area, while *the wall* is depicted in a vertical form because it extends upward. The arrow in Figure 3.17 represents the path of the TR, and the dotted lines refer to the extreme boundaries of the LM (Lakoff, 1987).

Although the *above-across* sense designates no contact between the TR and the LM, another instance of this sense involves contact between the TR and the LM. Lakoff (1987) states that *over* can also be employed to indicate a scene where a TR moves across a vertical and extended LM like a *hill*, and the motion needs contact. Consider the use of *over* in ‘Sam

walked *over* the hill’ which can be schematically shown in Figure 3.18:

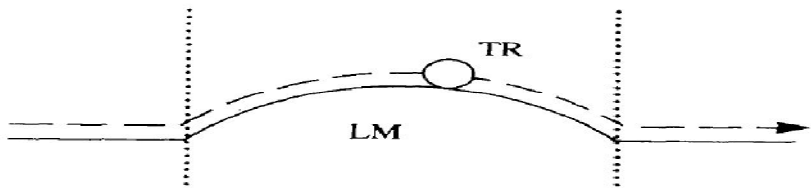


Figure 3.18: Schematic Representation of ‘Sam walked *over* the hill’ (Lakoff, 1987, p.422)

In Figure 3.18, the TR (*Sam*) moves (indicated by the dotted arrow) from one side of the LM to the other side, and it is in contact with the *hill*. In ‘Sam walked *over* the hill,’ the verb represents the contact specification, and the word *hill* is vertical and extended. In fact, this schema and all the above elaborated schemas result from the information added by the verb and the LM. In another situation, we can say ‘Sam climbed *over* the wall’. Kreitzer (1997) claims that the LM, in this sense, tends to be an obstacle or may need more efforts to get to its other side (cited in Lindstromberg, 2010, p.113).

Additionally, the dynamic schema of *over* undergoes an image-schema transformation to designate the end point of a path. Here, the path schema is transformed into the end point schema that gives rise to the ‘*on the other side of*’ sense found in a context like ‘Sam lives *over* the hill’ (Lakoff, 1987, p. 457). This sentence can be illustrated as follows:

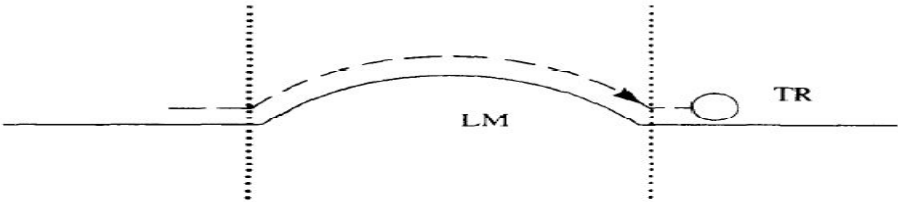


Figure 3.19: Schematic Representation of ‘Sam lives *over* the hill’ (Lakoff, 1987, p. 440)

Figure 3.19 shows that the focus is on the location of *Sam* in relation to the *hill*; *Sam* lives at the end of *the hill*. *Sam* is on the end point of an understood path that goes *over* the *hill* (Lakoff, 1987). Put it differently, there is an indication to an imagined path (Riemer, 2010). Thus, *over* can be used to refer to two different kinds of relations with the same TR and LM: ‘*Sam* walked *over* the hill’ (path) and ‘*Sam* lives *over* the hill’ (end of path) (Lakoff, 1987, p. 457; Riemer, 2010, p. 245).

By means of another image-schema transformation, the central image-schema of *over* is shifted into a configuration in which the TR is higher than the LM, developing the static sense of *over* which is called the *above sense*. It can be depicted by the schema shown in Figure 3.20:

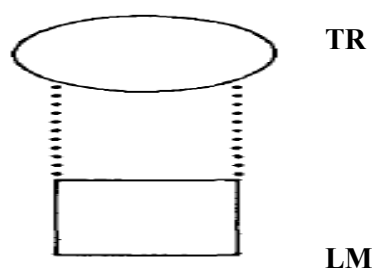


Figure 3.20: The *above Sense* of *over* (Lakoff, 1987, p. 425)

Figure 3.20 indicates that the *above sense* of *over* is identical to the central sense. It is related to the first schema because the TR is above the LM. Nonetheless, it differs from the *above-across* sense in that it does not express a path, i.e. the *across* sense is missing, but the meaning is similar to that of *above* (Lakoff, 1987). In this respect, the preposition *above* can be used to describe such a spatial relation. For instance, we can say ‘There is a full moon *above/over* the mountain’. The *above* sense of *over* does not involve contact between the TR and the LM. If there is contact between them, then the TR is *on* the LM. The *above* sense is called by Kreitzer (1997) *over*₁ because he considers it as the central sense. However, Lakoff (1987) argues that the *above* sense is not present in all the uses of *over* since it requires no

contact, while there are cases where there is contact between the TR and the LM, like in ‘Sam walked *over* the hill.’ Accordingly, the core meaning of *over* is the *above-across* sense.

The third spatial sense of *over* is the *covering* sense. It refers to a TR that extends across the edges of a LM. It indicates that the TR covers the LM. In most cases, the TR is construed as being vertically superior to and in contact (the contact is neural) with the LM (Lakoff, 1987). The scene is coded by the sentence: ‘The blanket is *over* the bed’ (Riemer, 2010, p. 245). Figure 3.21 below represents the schema of the *covering* sense of *over*:

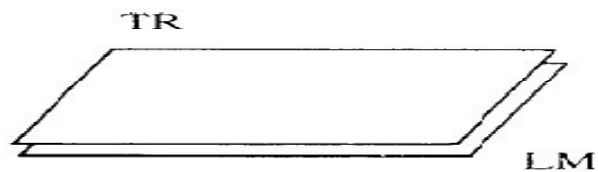


Figure 3.21: The Covering Sense of *over* (Lakoff, 1987, p. 427)

The diagram in Figure 3.21 illustrates that the LM is covered by the TR because the latter is not smaller than the LM. The *covering* sense of *over* requires the TR in focus to be broader or larger than the LM. The *covering* sense is named by Kreitzer (1997) *over3* or *occluding over*. Notwithstanding, *over*, in this sense, differs from *on*. If the blanket is *over* the bed, then it is covered, while if we use *on* instead of *over*, we just refer to the position of the blanket, which might still be folded up (cf. Kreitzer 1997; cited in Lindstromberg, 2010, p. 113).

Non-spatially, *over* is employed very often metaphorically. The senses worth discussing are presented in the following examples:

Example 34: She decided to do the pie *over* because the first one was burnt. (again)

Example 35: She is not yet *over* the loss of her mother. (recovered)

Example 36: Is the news *over* yet? (completed)

Example 37: *Over* 40% of voters disapprove. (more than)

Example 38: The bathtub *overflowed*. (exceeded)

Example 39: I prefer the red colour *over* the blue. (preference)

Example 40: The king ruled *over* a great empire. (controlled)

One of the most frequent uses of *over* is to indicate '*repetition*'. Lakoff (1987) states that the sense in (34) can be understood on the basis of the *above-across* sense of *over*. The concept of path underlying *over* is metaphorically extended to talk about actions or activities such that "the path is metaphorically understood as the course of the activity and the LM as an earlier completed performance of the activity" (p. 435). That is to say, when the end of an activity or an action is reached, the process can be repeated once more, and the course of the activity done by the TR will be repeated in the same way. In (34), after the action of preparing the pie completed, it burnt, so the course of this earlier completed activity was repeated again.

Over is also employed to talk about '*difficulties, illnesses, problems and experiences*' (like divorce) which are conceived of as if they were physical obstacles that one can rise above and so traverse (Lindstromberg, 2010). The sense of *over* in (35) conveys the idea that the loss of the TR's mother is conceived of as if it were an obstacle that the TR is intended to recover from, i.e. as if it were a vertical extended LM like a *hill* on the path of life which is understood metaphorically as a journey.

In 'Is the news *over* yet?' *Over* indicates '*completion*'. According to Lakoff (1987), performing activities with a prescribed structure is metaphorically understood "as traveling along a prescribed path [...]. When one gets to the end, the activity is *over*" (p.440). In (36), *over* refers to a process, but it focuses on the end of the process. What is important in this sense is that the completion of the action is the key of the sense, rather than its destination. Generally, *over* is used to designate the end of *games, plays, news and political campaigns*, which can be characterized at their end as being *over*.

Similar to *above*, *over* can convey upness and also participates in expressing the metaphor UP is MORE to express ‘*the more than sense*’ (Lindstromberg, 2010). The basic idea behind this sense is that if the amount of something increases or is high, its height or level often rises and so there is more of it (Tyler & Evans, 2003). The use of *over* in (37) involves a reading in which the number of voters is up, and it increases more.

The meaning of *over* in (38) is the ‘*excess sense*’. It represents the case where *over* is employed as a prefix to mean that something exceeds the norm. When the level of water increases to a level at which it spreads “left and right, it may follow, or seem to follow, an arcing up-down path similar to the path of the *above-across* sense” (Lindstromberg, 2010). According to Tyler and Evans (2003), too much of something or greater height of quantity results in going beyond the normal or exceeding what is normal, like in *overtired*, *overdevelop*, *overreact*, *over-anxious*, *overdo* (p. 99).

Concerning the ‘*preference sense of over*’ in (39), Lindstromberg (2010) claims that since *over* suggests upness, this metaphorical sense denotes the idea that if we have to choose one thing among many, we “might mentally place the thing [we] like most on top of the things [we] like less” (p. 120).

Finally, *over* in (40) indicates ‘*control*’. If a TR is *over* a LM, i.e. located vertical to the LM, then it can exert energy, influence or control upon the latter. This relationship is metaphorically extended to the social domain to say that if a person is in a higher status, he can control or rule the one in the lower position. Here derives *the control* sense of *over*. In the last example, “the king is metaphorically located vertical to the country as if he covers it, and has influence on it” (Morimoto & Loewen, 2007, p. 352).

3.2.2.7 *Through*

The basic meaning of *through* designates a path, along which a TR moves into and then out to the other side of a bounded LM, like in ‘A pigeon flew in *through* the open window’ (Lindstromberg, 2010, p. 35). The pictorial representation is shown in Figure 3.22:



Figure 3.22: Schematic Depiction of *through*

The schema in Figure 3.22 shows that the TR (the circle) passes from one side to the other of the LM. The arrow represents the movement of the TR that traverses the bounded LM by means of an entrance point and an exit point (Tyler and Evans, 2003). By means of an image-schema transformation, the path schema turns into the end point focus schema. *Through* can also indicate that a given TR is located *on the other side of* a bounded LM, for example, ‘my office is *through* that door’ (Tyler & Evans, 2003).

The view of *through* we have just presented allows us to understand the range of contexts in which it is used metaphorically. Since the LM provides the means whereby the motion is achieved, *through* often conveys the meaning of the expression *by means of*, as in ‘We heard the news *through* friends’. It should be noted that the latter sense is different from the use of *through* when it means *because of* to show the cause of a given situation. This sense is expressed in English by the sentence: ‘*Through* smoking, he has lost his leg’. Finally, since the spatial scene portrayed by *through* describes motion of ‘being out after having entered’, it commonly refers to the notion of being ‘*out of or finished with*’ an experience, a task or relationship, like in ‘I’m *through* with this forum’ (Lindstromberg, 2010, p. 128).

Overall, the semantic analysis of *above*, *across*, *in*, *on*, *out*, *over* and *through* reveals that while the English prepositions *over* and *above* regularly indicate spatial meanings in which the TR is located along the vertical axis in relation to the LM, and the dimensions of the latter have no particular bearing on the relationship mediated by them, the prepositions *across*, *on*, *in*, *out* and *through* seem to have no reference to any axis. However, *in*, *out* and *through* appear to be sensitive to certain dimensions of the LM, especially the ones that give rise to the notion of boundedness (Tyler & Evans, 2003). Noticeably, the majority of the non-spatial senses of these prepositions are metaphorical except for ‘*the activity sense*’ expressed by *in* and ‘*location in written texts sense*’ conveyed by *above* are metonymical.

Conclusion

One of the most important characteristics of many languages is the presence of prepositions. Venturing into the realm of prepositions allows us to bring about the conclusion that they are grammatically and semantically rich. Their grammar is inextricably bound up with semantics. Out of all words, prepositions have preoccupied linguistic theory extensively, especially with respect to their semantics. What is expressed by these words is formed by our everyday experiences with the physical world and the cultural environment. Among the bulk of English prepositions, the meanings associated with *above*, *across*, *in*, *on*, *out*, *over* and *through* present a clear case of the phenomenon of polysemy and how image-schemas underpin language, in general and English, in particular. Thus, the behaviour of prepositions merges the theory of polysemy, of grammar and image-schema in a way that demonstrates their meaningfulness as well as the fact that they are not completely delexical words.

Chapter Four: Applying Image-Schema to Instructing Polysemous Prepositions

Introduction

4.1 The Sample

4.2 Instruction

4.3 The Test

4.3.1 Description of the Test

4.3.2 Analysis and Interpretation of the Results of the Test

4.3.2.1 The Pre-Test

4.3.2.2 The Post-Test

4.3.3 Overall Analysis

Conclusion

Introduction

The question of how to teach prepositions with more than one meaning is not a new one, but it has long been characterized by being marginal because it has repeatedly been overlooked by teachers in the classroom. Students thereby miss a large part of knowledge that is so pervasive in English. Considering their frequency, learning these words is very important. Yet, realizing their various meanings is a time-consuming and not an easy task for both teachers and students. While the semantic representations of polysemous prepositions under the lens of image-schemas have been useful theoretically, the issue as to whether it can improve their learning in EFL classrooms needs to be looked into empirically. The suggestion is that instruction which is based on image-schemas would offer the basis for a more meaningful, coherent and learnable presentation of the seemingly arbitrary aspect of prepositions with multiple meanings.

The present study is an attempt to test the effectiveness of ISBI on the learning of the target prepositions *above, across, in, on, out, over* and *through*, through conducting effects-of-instruction experiment. The experiment was broken down into three stages, a pre-test, treatment and a post-test. It was conducted over a period of four weeks for two sessions per week. Both the instruction and the tests took place during regular classroom hours. Our concern is to see if there is any differential effect of ISBI on the students' achievement as compared to those with whom the traditional method is applied.

4.1 The Sample

The subjects of this study were selected randomly from Second Year LMD students studying English as a FL at the Department of Letters and English, at the University "Frères Mentouri", Constantine 1, during the academic year 2013-2014. At first, the overall sample

was made up of 120 students out of a population of 671 students. Nonetheless, some of them were excluded due to absences; only the students who took the pre-test and the post-test were included. Accordingly, the final pool of the students who participated in this study consisted of 80 subjects. They were divided into two groups of forty students; one was assigned as the Experimental Group, and the other as the Control Group.

The reason behind choosing to work especially with Second Year students stems from the fact that the two groups were comparable in terms of their background knowledge and prior learning experiences. The educational background was the same for almost all the subjects since all of them followed at least an English course on prepositions in their first year. This helped us know their familiarity with English prepositions. In other words, the extent to which they acquired prepositional knowledge; what they were taught and how much they learnt about the variety of English prepositions. Equally important, in second year, all the students are exposed to the same course wherein the prepositions under investigation are taught in detail, the matter which allowed us to conduct our study in regular classroom hours.

4.2 Instruction

Instruction was conducted over a period of three weeks for two sessions a week and each session lasted *90 minutes*. The Control Group was taught in the usual way. The teacher used definitions we may find in dictionaries and illustrative examples to explain the meanings of the prepositions under investigation by eschewing the description of the relation between the senses. This type of instruction is founded mainly on the technique of memorization and repetition. The Experimental Group received ISBI instruction. Its purpose was to depict the meanings via image-schemas, to raise the students' awareness of the different spatial and non-spatial senses of each preposition as well as the link between them. In addition, it emphasized

the importance of deep understanding or processing of meanings over the mere recall of information or rote learning.

The teaching of the target prepositions took six sessions. Each session was divided into three phases: pre-instructional phase, instructional phase and post-instructional phase. The pre-instructional phase aims at preparing the students for learning and at motivating them to start the class with interest and desire to learn about polysemous prepositions. In this phase, what the students already know or not know about the semantics of prepositions can be determined. It also aims at informing the students about the learning objectives. For example, in the pre-instructional phase of the first session, the students were asked some questions that purposed at arousing their curiosity in order to set the context for the new instruction. They were asked about their background knowledge concerning prepositions in general (see Appendix II). The students' attention was directed by the teacher so that they themselves ask questions about the reasons behind the polysemantic nature of prepositions.

The instructional phase is the most important part of the treatment since it focuses on presenting the semantics of the target prepositions. The instructional period was meant to explain the different senses of the seven prepositions and the motivation behind them so as to make the students aware of the situations wherein they are used interchangeably and where they are not. The students were engaged in the learning process by reflecting on the schemas of the target prepositions and by giving their own examples. At the beginning, the students were introduced to some basic notions related to prepositions with more than one meaning. They were provided with a brief description of what a polysemous preposition is, along with presenting the concept of the central meaning which represents a spatial relation between a TR and LM element. According to Lindstromberg (2010), the term TR can also be called the

subject of the preposition, so, during the instruction, the term TR was replaced by the ‘subject’ (S) of the preposition. Additionally, the students were explained the concepts of spatial and non-spatial senses of prepositions, and the fact that they are related and organized around a central image-schema. The students, in this phase, had to realize that prepositions are used non-spatially because they had to engage in metaphorical and metonymical thinking. Then, the meanings of *above*, *across*, *in*, *on*, *out*, *over* and *through* were presented and illustrated through examples (as they appear in Chapter Three, Sub-section 3.2.2 Semantic Analysis of *above*, *across*, *in*, *on*, *out*, *over* and *through*, p. 103-131). The following table summarizes the number of sessions and the order of presenting them:

Sessions	Session One	Session Two	Sessions Three and Four	Session Five	Session Six
Prepositions	-Basic notions -On	-Above -Across -Exercise 1	-Over -Exercise 2	-In -Out	-Through -Exercise 3 -Correction of the homework

Table 4.1: The Distribution of the Treatment Sessions

The students were taught the semantic differences of the prepositions *on*, *above*, *across* and *over* for four sessions, followed by *in*, *out* and *through* for two sessions. The rationale for this order was based on the assumption that *above*, *on* and *over* are semantically related words, whereas *in* is semantically related to *out* and *through*. In the first session, the presentation of basic notions is followed by the introduction of the meanings of *on*. Presumably, the locative sense of the preposition *on* had commonly been taught to the students (they had learned it before university and in their first year), so the instruction started with *on* and then *above*. This would facilitate the understanding of their polysemy and the

semantic differences between them. Because the preposition *over* combines the meanings of *above* and *across*, the students had to know their senses so that the presentation of *over* became easier given that it is highly polysemous. On the same view, the prepositions *in*, *out* and *through* have to do with bounded landmarks, and the basic meaning of *through* combines *in* and *out*. In terms of instruction, the students were taught the polysemy of *in*, followed by *out* and ended up with *through* (see Appendix II, Teaching Materials for the Experimental Group).

Following the instruction of each preposition, the post-instructional phase is the last step which determines the students' mastery of the information provided to them. It measures whether the students succeed in meeting the learning objectives and in achieving the targeted learning outcomes. In the post-instructional phase, the focus was on revising and summarizing the basic points covered in the lessons or on arranging the students to work in pairs to answer some exercises in order to give them more room to discuss and engage in deep processing of the meanings presented (see Appendix II). The type of activities used is 'fill in the blanks' because they helped us cover the variety of senses associated with each preposition. As homework, the students were required to produce their own sentences to help them use the various meanings in their own words as well as contexts (some examples are presented in Appendix II). They were also asked to summarize the senses in their own diagrams. Upon completion, the students were asked to provide their answers, followed by the researcher-teacher's reaction to their responses through commenting on their correctness.

4.3 The Test

In order to get a grip on the students' achievement in both the Experimental Group and the Control Group, two parts of the test were developed. Both of them measured the

subjects' familiarity with the target prepositions in their diverse senses and in areas where they pose certain difficulty.

4.3.1 Description of the Test

The test employed is made up of **Part One** and **Part Two**. **Part One** focuses on the prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through* as polysemous words. It is a distractor test items. It aims at testing the students' current or deep knowledge concerning these seven prepositions. It is meant to assess their awareness of their different senses; whether they are able to identify the correct meaning depending on the contexts wherein they are used. This multiple-choice test is selected as the assessment tool because of the polysemous nature of the prepositions under study. Its use allows us to cover all their senses, to structure easily the problem to be addressed, and it enables us to identify where the students at large struggle with these prepositions. The students are not asked to write although focusing on their spontaneous use of polysemous prepositions is very important, but, writing does not guarantee that they will use the seven prepositions with their different meanings, especially the ones selected for the study. This may affect negatively the results of the study since the subjects would deviate from the actual aim of the test, in that many unnecessary data would be added to the collected data. Besides, their attention might not be paid exclusively to prepositions but to other aspects, including sentence structure, tenses and articles, etc. Hence, instead of having free writing, multiple-choice test items seem practical to assess their receptive knowledge and thinking.

Part One consists of 49 sentences, with 21 sentences targeting the spatial senses and 28 sentences which include the non-spatial senses. The organization of the sentences does not follow any order; that is, the spatial senses do not come before the non-spatial ones or vice versa. They are scrambled in a way that the senses of the same preposition should not follow

each other irrespective of their nature. The frequency of the spatial and the non-spatial senses of each preposition is summarized in the following table:

Prepositions	Spatial Senses	Non-Spatial Senses	Total
Above	02	04	06
Across	02	03	05
In	04	05	09
On	03	02	05
Out	02	04	06
Over	06	07	13
Through	02	03	05
Total	21	28	49

Table 4.2: The Number of Senses Included in Part One

The target Prepositions vary in the number of senses due to the fact that they do not exhibit the same polysemy. Some of them, like *in* and *over* seem to have higher senses than the others. They display it in varying degrees depending on how many spatial senses each preposition has and how widely they are discussed in the literature. Research into image-schemas and polysemous prepositions is still in its infancy, so the highly discussed prepositions have higher numbers chosen for the study than the least discussed ones. The selection of these senses is based on the following criteria: (a) the difference in the concreteness of their spatial meanings, (b) their varying semantic richness and ideas across a range of context types, (c) their differing grammatical functions and frequency of occurrence, and (d) the senses they possess can be grasped by second year students. It took about 45 minutes for both the Control Group and the Experimental Group to complete **Part One**.

Part Two is a fill in the blank format of a text. The purpose of **Part Two** is to measure the students' productive skills. It mainly tests their ability to identify the nuances

among *above, across, in, on, out, over* and *through*; whether the students are able to handle easily the spatial (static or dynamic) and the non-spatial relations as well as the correct preposition that expresses that relation. It also aims to see whether the students are able to call up and recognize the appropriate sense from the repertoire of senses they know when they are forced (through a context) to select only one. This provides us with an opportunity to encourage the students to think critically about their knowledge as far as the use of the target prepositions is concerned. To reach these objectives, focus is put on the students' familiarity with those situations where the target prepositions seem to mean the same thing. In other words, we measure the students' control of the use of the target prepositions when combined with verbs and noun phrases which represent cases wherein they overlap.

Part Two is a story summarized in a short paragraph adapted from a book entitled, *the Great Prepositions Mystery*, written by Lin Lougheed in 1981 (see Appendix I: **Part Two**). The students are required to fill in the blanks with *above, across, in, on, out, over* and *through* without providing them with any choices. They have to determine the appropriate relation and the missing preposition that fits the blank in order to complete correctly the story. The students in the Experimental Group and the Control Group are required to read the paragraph and use the contextual clues to produce the correct answer. Out of the many cases wherein the target prepositions do overlap, only 21 cases have been selected. So, the paragraph has 21 filler items. It contains blank spaces for inserting each of the seven prepositions spatially and non-spatially. The frequency of occurrence of each preposition is three. That is, since the relationship expressed by the seven prepositions can be spatial and non-spatial, every preposition is missing twice as a preposition expressing a spatial sense (either location or path) and once as a non-spatial sense. The total number of blanks ranges from 14 blanks indicating spatial senses, while the remaining 7 blanks denote non-spatial senses. By way of illustration, the blanks number (5), (7) and (10) represent the senses of *on*: [...] It was a house

which rose like a tower **(5) on (spatial sense: location)** the hill. [...]. That night, [...] there was a lot of pressure **(7) on (metaphorical sense)** me. The plane rolled to a stop and landed **(10) on (spatial sense: motion)** the area near the convent [...]. It took about 45 minutes for both the Control Group and the Experimental Group to complete **Part Two**.

4.3.2 Analysis and Interpretation of the Results of the Test

The analysis of the results is based on scoring the students' answers. The students' answers in the Experimental Group and the Control Group have been classified into three categories: 'correct answers', 'wrong answers' and 'no answers'. The results obtained by both the Experimental Group and the Control Group have been analyzed in terms of the percentages of the correct answers, wrong answers and no answers of *above, across, in, on, out, over* and *through* in **Part One** (multiple-choice items) and **Part Two** (fill in the blanks).

4.3.2.1 The Pre-Test

The central aim of the pre-test is to determine the extent to which the students are aware of the different senses of the seven prepositions under investigation and whether they can differentiate between them in their diverse senses (**Part One**) as well as in cases where they seem to mean the same thing (**Part Two**).

–The Control Group

–**Part One**: Tick the correct meaning of the expression including the prepositions *above, across, in, on, out, over* and *through* in the following sentences

- **Sentence No. 1**

1. ‘The cow munched grass in the field.’

- a) The cow was within the bounds of the field [The Correct answer]
- b) The cow ate grass around the field
- c) The cow chewed grass into the field

Options	No.	%
Right (a)	07	17.50
Wrong (b)	14	35
Wrong (c)	16	40
No Answer	03	07.50
Total	40	100

Table 4.3: The Awareness of the ‘Inclusion Sense’: The Control Group/the Pre-Test

It can be seen from Table 4.3 that the wrong option (c) makes up the majority of the students’ answers. It accounts for 40% of the total, followed by the wrong option (b) with just over a third (35%). Next, a small minority of the students’ answers are correct at 17.50%. It should be noted that 07.50% represents an insignificant amount of the students’ answers; it represents the number of the students who could not differentiate between the three options. The results in Table 4.3 reveal that the students in the Control Group were not aware of the ‘*inclusion sense of in*’.

- **Sentence No. 2**

2. ‘I like coffee over milk in breakfast.’

- a) I like coffee mixed with milk in breakfast
- b) I like both coffee and milk in breakfast
- c) I like coffee better than milk in breakfast [The Correct Answer]

Options	No.	%
Right	16	40
Wrong (a)	19	47.50
Wrong (b)	05	12.50
No Answer	00	00
Total	40	100

Table 4.4: The Awareness of the ‘Preference Sense’: The Control Group/the Pre-Test

Table 4.4 illustrates that 40% of the students selected the correct answer, but around half the students opted for the wrong option (a) and less than a fifth (12.50%) for (b). It is clear that the students were not familiar with the ‘*preference sense of over*’. The selection of their answers was based on their own cultural background or understanding of the context rather than on their knowledge of the polysemy of *over*.

- **Sentence No. 3**

3. ‘There is a heat across the country’

- a) On the other side of the country
- b) Throughout the country **[The Correct Answer]**
- c) Inside and outside the country

Options	No.	%
Right	18	45
Wrong (a)	09	22.50
Wrong (c)	07	17.50
No Answers	06	15
Total	40	100

Table 4.5: The Awareness of the ‘all over Sense’: The Control Group/the Pre-Test

We can see from Table 4.5 that the proportion of the metaphorical use of *across* to indicate *throughout* (or *all over*) accounts for 45% of the total. More than 20 per cent of the students confused it with *on the other side of*, and just under a fifth, at 17.50%, selected the wrong answer (c). A small number of the students (15%) were not able to identify the answer. It seems that the students were not knowledgeable about the use of *across* to indicate ‘*all over*’.

- **Sentence No. 4**

4. ‘Yesterday, they were giving leaflets out in front of the underground station.’

- a) Delivering leaflets outside in front of the underground station
- b) Distributing leaflets in front of the underground station [**The Correct Answer**]
- c) Proposing leaflets in front of the underground station

Options	No.	%
Right	10	25
Wrong (a)	17	42.50
Wrong (c)	06	15
No Answer	07	17.50
Total	40	100

Table 4.6: The Awareness of the ‘Distribution Sense’: The Control Group/the Pre-Test

According to Table 4.6, the first wrong option (a) accounts for 42.50% of the total number of the students’ answers. The preposition *out* in this sentence expresses the abstract concept of *distribution* and does not show a spatial relation between the ‘trajector’ and ‘landmark’. The students in the Control Group just linked the preposition *out* with its synonym *outside* without paying attention to the conceptual meaning conveyed by the option (a) (delivering leaflets). The students were not sensitive to the fact that *out* can be used non-spatially (or metaphorically) to express a meaning other than *outside*. This could be understood from the

very low percentage of the correct answer that makes up only a quarter (25%) of the total and also the proportion of the category ‘no answer’ which is around a fifth (17.50%).

- **Sentence No. 5**

5. ‘The strike is over and our membership has not voted.’

- a) The strike is no longer in progress [**The Correct Answer**]
- b) The strike is repeated again
- c) The strike is postponed

Options	No.	%
Right	34	85
Wrong (b)	00	00
Wrong (c)	05	12.50
No Answer	01	02.50
Total	40	100

**Table 4.7: The Awareness of the ‘Completion Sense of over’: The Control Group/
the Pre-Test**

Of the data shown in Table 4.7, a very large number of the students could identify the correct answer at 85 per cent. This means that the students were acquainted with *the completion sense of over*. They could understand that this sentence does indicate that ‘the strike is repeated again’ because no one selected the ‘repetition sense’ (wrong option ‘b’).

- **Sentence No. 6**

6. ‘I am reading a book on dogs in which the writer describes how these animals could be dangerous’

- a) I am reading a book which addresses dogs [**The Correct Answer**]
- b) I am reading a book concerning dogs
- c) I am reading a book around dogs

Options	No.	%
Right	02	05
Wrong (b)	29	72.50
Wrong (c)	08	20
No Answer	01	02.50
Total	40	100

Table 4.8: The Awareness of ‘Metaphorical Contact’: The Control Group/the Pre-Test

With regards to Table 4.8, a very small number of the students (05%) could identify the correct answer, while a significant majority of them (72.50%) selected the wrong sense *concerning*, which is synonymous with *about*. The second thing to notice is that although a small number of the students (20 per cent) chose the wrong option (c) or *around*, this is an indicator of a gap in the students’ conceptual knowledge regarding the metaphorical sense of *on* when used with topic landmarks. In English, there exist three prepositions that are used to indicate *topics* which are introduced in options (a), (b) and (c) respectively. The students appear not to have enough background knowledge about the differences that exist between *concerning*, *around* and *on*. According to Lindstromberg (2010), the preposition *on* suggests that the book addresses the subject especially directly, *around* expresses the idea that the book does not address the topic directly (i.e. not in a focused way), while *concerning* is neutral.

- **Sentence No. 7**

7. ‘There is a sign over the door.’

- a) Beside the door
- b) On the door
- c) Above the door [**The Correct Answer**]

Options	No.	%
Right	04	10
Wrong (a)	10	25
Wrong (b)	26	65
No Answer	00	00
Total	40	100

Table 4.9: The Awareness of the ‘above-Sense of over’: The Control Group/the Pre-Test

We can see from Table 4.9 that the number of the students who were aware of the correct answer represents a very small proportion at 10% of the total, whereas nearly two thirds of the students (65%) opted for the wrong option (b). This shows that the students were unfamiliar with the difference between *on* and *over*. They did not know that the *static sense of over* is, in many cases, interchangeable with *above* and not *on*.

- **Sentence No. 8**

8. ‘Ann is through with the book’

- a) She is in the process of reading the book
- b) She has finished reading the book [**The Correct Answer**]
- c) She is carrying the book

Options	No.	%
Right	04	10
Wrong (a)	23	57.50
Wrong (c)	13	32.50
No Answer	00	00
Total	40	100

Table 4.10: The Awareness of the ‘Completion Sense of through’: The Control Group/the Pre-Test

According to Table 4.10, just over half the students thought that *through (with)* means that ‘the process has not finished yet’. Approximately a third of the students (32.50%) chose the wrong option (c) which is completely unrelated to *through*. Given the low number of the students who answered correctly (10%), it seems that *the completion sense* associated with *through* constituted a problem to the students to identify it.

- **Sentence No. 9**

9. ‘In the navy, a captain is above a commander.’

- a) He is higher than a commander [**The Correct Answer**]
- b) He is stronger than a commander
- c) He is more advanced than a commander

Options	No.	%
Right	18	45
Wrong (b)	03	07.50
Wrong (c)	18	45
No Answer	01	02.50
Total	40	100

Table 4.11: The Awareness of the ‘Superior Sense’: The Control Group/the Pre-Test

Table 4.11 shows that both the options (a) and (c) have the same percentages. Both accounted for 45% of the total. Of the data gathered, we could say that the students in the Control Group doubted about the sense that is associated with *above*, i.e. whether it is ‘higher than’ or ‘more advanced’. This indicates that they were not aware of the *superior sense* associated with *above*.

- **Sentence No. 10**

10. ‘The heavy rain caused the river to flow over its bank.’

- a) To flow above its bank
- b) To flow across its bank
- c) To exceed its bank [**The Correct Answer**]

Options	No.	%
Right	21	52.50
Wrong (a)	05	12.50
Wrong (b)	12	30
No Answer	02	05
Total	40	100

Table 4.12: The Awareness of the ‘Excess Sense’: The Control Group/the Pre-Test

According to Table 4.12, 52.50% of the students selected the right answer. Less than a third (30%) and around a tenth (12.50%) of them selected *across* and *above*, respectively. The rather low number of the students who recognized the correct answer shows that they lacked a clear understanding of the *excess sense* expressed by *over*.

- **Sentence No. 11**

11. ‘The young girl tried to get across to her friend that the topic was not good’

- a) She described to her that the topic was not good
- b) She made her understand that the topic was not good [**The Correct Answer**]
- c) She gave her reasons that her topic was not good

Options	No.	%
Right	12	30
Wrong (a)	05	12.50
Wrong (c)	19	47.50
No Answer	04	10
Total	40	100

Table 4.13: The Awareness of ‘Get across’: The Control Group/the Pre-Test

Of the data shown in the Table 4.13, around half the students (47.50%) thought that the meaning of *get across* is ‘to give reasons’. Approximately a third of the students (30%) chose the correct option (b). This very low percentage shows that the students were not aware of the metaphorical sense of *across* when combined with the verb *get*. Their selection was highly based on their own understanding of the context rather relying on their background knowledge concerning the senses of *across*.

- **Sentence No. 12**

12- ‘The light bulb is in the socket.’

- a) The light bulb is totally inside the socket
- b) The light bulb is within the socket
- c) The light bulb is partially enclosed by the socket [**The Correct Answer**]

Options	No.	%
Right	01	02.50
Wrong (a)	27	67.50
wrong (b)	10	25
No Answer	02	05
Total	40	100

Table 4.14: The Awareness of ‘Partial Enclosure’: The Control Group/the Pre-Test

According to Table 4.14, only one student could identify that the ‘light bulb is partially enclosed by the socket’, whereas a very large number of the students (67.50%) selected *inside*. We can say that these students, most probably, were aware that *in* means *inside*, so they thought that the first option is the correct one because both are synonymous. However, it appears that they had no idea about the fact that the concept of *containment* can take different variations and that the preposition *in* does not have only one sense.

- **Sentence No. 13**

13. ‘She played over the same piano piece to demonstrate her talent.’

- a) She played excellently
- b) She played again [**The Correct Answer**]
- c) She played better

Options	No.	%
Right	26	65
Wrong (a)	08	20
Wrong (c)	06	15
No Answer	00	00
Total	40	100

Table 4.15: The Awareness of the ‘*Repetition Sense*’: The Control Group/the Pre-Test

Table 4.15 reveals that the majority of the students (65%) could recognize the *repetition sense* conveyed by *over*. The number of the students who answered correctly is higher than those who chose the wrong ones. The Control Group’s background knowledge of this sense could be considered to be at the moderate level.

- **Sentence No. 14**

14. A: ‘Are the scissors in the drawer?’

B: ‘No, they’re re out on the counter.’

- a) They’re exterior to the drawer [**The Correct Answer**]
- b) They’re no longer in the drawer
- c) They’re outside the counter

Options	No.	%
Right	11	27.50
Wrong (b)	05	12.50
Wrong (c)	22	55
No Answer	02	05
Total	40	100

**Table 4.16: The Awareness of the ‘*Static Sense of out*’: The Control Group/
the Pre-Test**

The percentages of the students’ answers exhibited in Table 4.16 show clearly that the wrong option (c) accounts for slightly above 50%. The students’ lack of knowledge regarding the conceptual meaning underlying *out* might be the reason behind their erroneous selection. They most probably thought that the meaning of *out* could be referred to by the preposition *outside* only. In addition, they linked the meaning of *out* with its synonyms *outside* without paying attention to the landmark in focus in this conversation; the bounded landmark is *the drawer* and not the *counter*.

- **Sentence No. 15**

15. ‘The shops were repaired through the help of a disaster relief fund.’

- a) They were repaired by means of the help of a disaster relief fund [**The Correct Answer**]
- b) They were repaired because of the help of a disaster relief fund **Answer]**
- c) They were repaired during the help of a disaster relief fund

Options	No.	%
Right	12	30
Wrong (b)	16	40
Wrong (c)	10	25
No Answer	02	05
Total	40	100

Table 4.17: The Awareness of the ‘Means Sense’: The Control Group/the Pre-Test

We can see from Table 4.17 that the wrong option (b) makes up two fifths of the total. The students appear not to be conscious of the metaphorical sense of *through* when it means *by means of*. They seem also to be unfamiliar with the difference between the senses *because of* and *by means of* due to their lack of knowledge of the metaphorical meanings associated with *through*.

- **Sentence No. 16**

16. ‘He drove across the parking lot although it was not allowed.’

- a) He drove into the parking lot
- b) He drove in the parking lot
- c) He drove from one side to the other side of the parking lot [**The Correct Answer**]

Options	No.	%
Right	25	62.50
Wrong (a)	10	25
Wrong (b)	04	10
No Answer	01	02.50
Total	40	100

**Table 4.18: The Awareness of the ‘Basic Sense of across’: The Control Group/
the Pre-Test**

According to Table 4.18, the largest number of the students, precisely, 62.50% appear to be aware of the basic spatial sense of *across*. They could identify its basic sense, and they were able to recognize that *in* and *into* have no relation with *across*; it entails motion from *one side to the other side of* a planar landmark.

- **Sentence No. 17**

17. ‘Paul prefers sleeping in bed with his head on pillow’

- a) Above the pillow
- b) Supported by the pillow [**The Correct Answer**]
- c) Placed at the top of the pillow

Options	No.	%
Right	19	47.50
Wrong (a)	12	30
Wrong (c)	08	20
No Answer	01	02.50
Total	40	100

Table 4.19: The Awareness of the ‘Basic Sense of on’: The Control Group/the Pre-Test

Of the data gathered in Table 4.19 about the basic spatial sense of *on*, we can see that 47.50% of the students answered correctly, whereas 30% of them opted for *above* and 20% chose *at the top of*. The results indicate that the students in the Control Group might not be aware of the conceptual meaning associated with *on*, i.e. they were not conscious of the concepts ‘*support*’ and ‘*contact*’ suggested by *on*.

- **Sentence No. 18**

18. ‘The hummingbird flies over the flower’

- a) Upward and forward across the flower [**The Correct Answer**]
- b) Higher and touching the flower
- c) Across the flower

Options	No.	%
Right	14	35
Wrong (b)	20	50
Wrong (c)	05	12.50
No Answer	01	02.50
Total	40	100

Table 4.20: The Awareness of the ‘*Dynamic Sense of over*’: The Control Group/

the Pre-Test

According to Table 4.20, the students were not familiar with the basic sense of *over* when it refers to *a straight path*. Half the students chose the second option which has the same conceptual meaning of *on*. The Control Group did not know the conceptual meaning associated with *over* because they probably thought that *on* and *over* are synonymous, but they were not familiar with the fact that they are in many respects different.

- **Sentence No.19**

19. ‘The information in this booklet is out of date.’

- a) The information that this booklet mentions is out of date
- b) The information that this booklet contains is out of date [**The Correct Answer**]
- c) The information that this booklet states is out of date

Options	No.	%
Right	26	65
Wrong (a)	08	20
Wrong (c)	05	12.50
No Answer	01	02.50
Total	40	100

Table 4.21: The Awareness of ‘Metaphorical Containment’: The Control Group/

the Pre-Test

Table 4.21 shows that the notion of *containment* expressed by *in* was known to a large number of the students (65%). It could be said that their background knowledge concerning the *containment sense* when used metaphorically was at the moderate level.

- **Sentence No. 20**

20. ‘The actions of public officials must be above suspicion’.

- a) They must be very good to be suspected [**The Correct Answer**]
- b) They must be very obvious to be suspected
- c) They must be under suspicion

Options	No.	%
Right	19	47.50
Wrong (b)	13	32.50
Wrong (c)	06	15
No Answer	02	05
Total	40	100

Table 4.22: The Awareness of the ‘Separation Sense’: The Control Group/the Pre-Test

Table 4.22 reveals that almost half the students identified the metaphorical sense of *above* when it means that ‘somebody is too good to commit the stated negative action’. A glance at the percentages of the wrong options (b) and (c) indicates that the majority of the students in the Control Group were not familiar with this metaphorical sense of *above*, and they might have answered on the basis of their understanding of the context.

- **Sentence No. 21**

21. ‘It has been said that dark colors in cotton fabric keep out the sun’s harmful ultraviolet rays’.

- a) Protect us from the sun's harmful ultraviolet rays
- b) Prevent the sun’s harmful ultraviolet rays from entering [**The Correct Answer**]
- c) Reflect the sun’s harmful ultraviolet rays

Options	No.	%
Right	12	30
Wrong (a)	20	50
Wrong (c)	07	17.50
No Answer	01	02.50
Total	40	100

Table 4.23: The Awareness of the ‘Exclusion Sense’: The Control Group/the Pre-Test

Table 4.23 shows that the wrong option (a) makes up 50% of the total. The *exclusion sense of out* was unknown for a large number of the students. The selection of the senses was based on how they understood the expression wherein *out* is used rather than on their background knowledge concerning the metaphorical senses that the preposition *out* can denote.

- **Sentence No. 22**

22. ‘They put rocks over a cave entrance’.

- a) Near the cave
- b) Higher than the cave
- c) To cover the cave [**The Correct Answer**]

Options	No.	%
Right	20	50
Wrong (a)	12	30
Wrong (b)	07	17.50
No Answer	01	02.50
Total	40	100

Table 4.24: The Awareness of the ‘Covering Sense’: The Control Group/the Pre-Test

Of the data presented in Table 4.24, half the students could identify that the meaning of *over* in this sentence is ‘to cover the cave’. Exactly, 30% of them chose *near* which has no relation with *over*, and it is not synonymous with it. The remaining 17.50% of the wrong answers represents those students who could not notice that this meaning contradicts the actual meaning of the sentence; the wrong option (b) represents the conceptual meaning of the preposition *above* which suggests upness, and the *rocks* cannot be put higher than *the cave* simply because they will fall down. The percentages of the students’ answers confirm that they had not enough background knowledge about the *covering sense of over*. It could be deduced from the results that the students’ awareness concerning this sense was at the rather low level.

- **Sentence No. 23**

23. ‘We saw a couple of duty crew through a window.’

- a) On the other side of the window [**The Correct Answer**]
- b) By the window
- c) From the window

Options	No.	%
Right	05	12.50
Wrong (b)	08	20
Wrong (c)	26	65
No Answer	01	02.50
Total	40	100

**Table 4.25: The Awareness of the ‘Static Sense of through’: The Control Group/
the Pre-Test**

Table 4.25 shows that the right answer represents only one-eighth of the total of the answers. The greatest number of the students (65%) selected ‘from the window’ even though the prepositions *from* and *through* are not used interchangeably in English. The students most probably answered on the basis of how they imagined the scene expressed by the sentence because they were not aware that *through* can be used statically to mean ‘*on the other side of*’.

- **Sentence No.24**

24. ‘Father is in bad temper, he has just thrown mother out of window’.

- a) Because of my father’s bad state, he has thrown my mother [**The Correct Answer**]
- b) Because my father is inside bad temper, he has thrown my mother
- c) Because of my father’s bad situation, he has thrown my mother

Options	No.	%
Right	19	47.50
Wrong (b)	07	17.50
Wrong (c)	10	25
No Answer	04	10
Total	40	100

Table 4.26: The Awareness of the ‘State Sense’: The Control Group/the Pre-Test

According to Table 4.26, the selection of the correct answer is in excess of 40%. Around half the students could recognize that *in* does not mean *inside* or refers to ‘a bad situation’. However, Table 4.26 clearly shows that the students’ awareness and knowledge of *the state sense of in* was at the very low level.

- **Sentence No. 25**

25. ‘She placed the tablecloth on the table.’

- a) She placed the tablecloth to cover the table
- b) She placed the tablecloth onto the table [**The Correct Answer**]
- c) She placed the tablecloth above the table

Options	No.	%
Right	05	12.50
Wrong (a)	14	35
Wrong (c)	20	50
No Answer	01	02.50
Total	40	100

**Table 4.27: The Awareness of the ‘Dynamic Sense of on’: The Control Group/
the Pre-Test**

Table 4.27 exhibits that the dynamic sense of *on* constituted a problem to the students since 50% selected the preposition *above*. It seems that they were not sensitive to this sense because they thought that *on* is synonymous with *above*. Interestingly, less than a third of them chose the wrong option (b) which refers to *the covering sense of over*. It could be said that the students did not have enough knowledge regarding *the dynamic sense of on*.

- **Sentence No. 26**

26. ‘Sam lives over the hill.’

- a) Near the hill
- b) Behind the hill
- c) On the other side of the hill [**The Correct Answer**]

Options	No.	%
Right	14	35
Wrong (a)	11	27.50
Wrong (b)	14	35
No Answer	01	02.50
Total	40	100

Table 4.28: The Awareness of the ‘Static Sense of over’: The Control Group/the Pre-Test

Of the data gathered in Table 4.28, we can see that the correct answer (c) and the wrong answer (b) represent the same number of the students. The fact that just over a third of the students could recognize that *over* means ‘*on the other side of*’ indicates that they were not familiar with this sense.

- **Sentence No. 27**

27. ‘There was a spider’s nest in the mountain cave’

- a) The spider’s nest was enclosed by the mountain cave [**The Correct Answer**]
- b) The spider’s nest covered the mountain cave
- c) The spider’s nest was all over the mountain cave

Options	No.	%
Right	06	15
Wrong (b)	17	42.50
Wrong (c)	15	37.50
No Answer	02	05
Total	40	100

Table 4.29: The Awareness of the ‘Basic Sense of *in*’: The Control Group/the Pre-Test

Table 4.29 shows that the second option makes up 42.50% of the total. The students in the Control Group could not identify the conceptual meaning expressed by *in*. They most probably knew that *in* means *inside*, but they were not conscious of the concept of ‘total enclosure’ associated with it. So, instead of relying on their background knowledge, they selected the answers on the basis of how they understood the context.

- **Sentence No. 28**

28. ‘He suffered a serious bruise above his left eye.’

- a) His bruise was on his left eye
- b) His bruise was higher than his left eye [**The Correct Answer**]
- c) His bruise was on top of his left eye

Options	No.	%
Right	17	42.50
Wrong (a)	10	25
Wrong (c)	10	25
No Answer	03	07.50
Total	40	100

**Table 4.30: The Awareness of the ‘Basic Sense of above’: The Control Group/
the Pre-Test**

According to Table 4.30, less than 50% of the students were able to identify that *above* means *higher than*. Two quarters of the students’ answers are equally shared between the wrong options (a) and (c) which refer to *on* and its synonym *on top of*. The results reveal that they were not aware of the basic meaning of *above* and how it differs from *on*.

- **Sentence No. 29**

29. ‘The accused murderer’s wife was able to remain loyal through her conviction of his innocence.’

- a) She was able to remain loyal via her conviction
- b) She was able to remain loyal because of her conviction [**The Correct Answer**]
- c) She was able to remain loyal by way of her conviction

Options	No.	%
Right	10	25
Wrong (a)	15	37.50
Wrong (c)	12	30
No Answer	03	07.50
Total	40	100

Table 4.31: The Awareness of the ‘Cause Sense’: The Control Group/the Pre-Test

Table 4.31 reveals that only a small number of the students were familiar with the meaning of *through* when used metaphorically to indicate *because of*. Just over a third of them (37.50%) selected *via* and 30% *by way of*. As a matter of fact, both the options (a) and (c) have the same meaning, but the students were confused about what to select. It follows that the students in the Control Group were neither aware of the difference between *by way of* and *because of* nor the *cause sense* associated with *through*.

- **Sentence No. 30**

30. ‘I am over my cold’.

- a) I have recovered from my cold [**The Correct Answer**]
- b) I am still suffering from my cold
- c) I am cold

Options	No.	%
Right	14	35
Wrong (b)	18	45
Wrong (c)	05	12.50
No Answer	03	07.50
Total	40	100

**Table 4.32: The Awareness of the Sense ‘Recovered from’: The Control Group/
the Pre-Test**

Table 4.32 shows that the wrong option (b) accounts for 45% of the total. Of the data presented, it is clear that the students were not conscious of this metaphorical sense of *over* because they selected the opposite sense rather than the correct one; *over* means that ‘the speaker has recovered from cold’ not ‘s/he still suffers from cold’.

- **Sentence No. 31**

31. ‘A: Have we got any milk left?’

‘B: No, we’re (all) out!’

- a) We’re all outside
- b) We no longer have milk [**The Correct Answer**]
- c) We have not bought milk

Options	No.	%
Right	23	57.50
Wrong (a)	05	12.50
Wrong (c)	10	25
No Answer	02	05
Total	40	100

Table 4.33: The Awareness of the ‘No More Sense’: The Control Group/the Pre-Test

Of the data shown in Table 4.33, the number of the students who were able to identify the correct sense of *out* when used metaphorically to mean *no more available* is in excess of 50%. We can also see that this percentage represents a slight majority of the total. It means that the students’ awareness was at the rather low level.

- **Sentence No. 32**

32. ‘The fruit is allowed to mature on the tree.’

- a) Above the tree
- b) Over the tree
- c) In contact and supported by the tree [**The Correct Answer**]

Options	No.	%
Right	23	57.50
Wrong (a)	07	17.50
Wrong (b)	07	17.50
No Answer	03	07.50
Total	40	100

**Table 4.34: The Awareness of the ‘Rotated Schema of on’: The Control Group/
the Pre-Test**

According to Table 4.34, the right option accounts for 57.50% of the total. The wrong options (a) and (b) have the same percentages. This means that the students were not able to determine whether the right sense is *on*, *over* or *above*. They were not aware that the preposition *on* can indicate the relationship of *contact* and *support* in scenes that are rotated. It could be said that since the students lacked enough background knowledge about the conceptual meaning underlying *on*, they were also unaware of the rotated schemas which are based on the concepts of *support and contact* expressed in the third option.

- **Sentence No. 33**

33. ‘While I was in the garden, a snake crawled out in front of me.’

- a) Moved outside the garden in front of me
- b) Appeared in front of me [**The Correct Answer**]
- c) Moved quickly across the ground in front of me

Options	No.	%
Right	17	42.50
Wrong (a)	09	22.50
Wrong (c)	11	27.50
No Answer	03	07.50
Total	40	100

Table 4.35: The Awareness of the ‘Appearance Sense’: The Control Group/the Pre-Test

Table 4.35 reveals that the correct option makes up 42.50% of the total. The percentages show major differences in the number of the students’ answers. They seem not to be aware of the *appearance sense* of out.

- **Sentence No. 34**

34. ‘They are in the manufacture of expensive baby clothes.’

- a) They are inside the manufacture of expensive baby clothes
- b) They work for a company that manufactures expensive baby clothes [**The Correct**
- c) They are in the process of manufacturing expensive baby clothes **Answer]**

Options	No.	%
Right	17	42.50
Wrong (a)	15	37.50
Wrong (c)	04	10
No Answer	04	10
Total	40	100

Table 4.36: The Awareness of the ‘Activity Sense’: The Control Group/the Pre-Test

Table 4.36 exhibits that the correct answer represents 42.50% of the total number of the students’ answers. The students’ awareness of the *activity sense* expressed by *in* seems to be

at the very low level because the percentages reveal that they did not have enough background knowledge concerning this sense.

- **Sentence No. 35**

35. ‘The children jumped over the puddles on their way to school.’

- a) They jumped in the puddle
- b) They jumped above and across the puddle [**The Correct Answer**]
- c) They jumped in and then out of the puddle

Options	No.	%
Right	17	42.50
Wrong (a)	10	25
Wrong (c)	08	20
No Answer	05	12.50
Total	40	100

Table 4.37: The Awareness of the ‘above-across Sense’: The Control Group/the Pre-Test

According to Table 4.37, the right answer accounts for slightly above 40%. The students seem to lack a clear understanding of the type of motion the preposition *over* can indicate. In addition, the results show that they answered on the basis of how they imagined and understood the scene expressed in this sentence; 25% thought that ‘the children jumped in the puddle’, while 20% understood that ‘the children jumped in and then out of the puddle’.

- **Sentence No. 36**

36. ‘On the trail, we came across some hikers from Australia.’

- a) We found hikers by chance [**The Correct Answer**]
- b) We came nearer to some hikers
- c) We met some hikers as planned

Options	No.	%
Right	17	42.50
Wrong (b)	10	25
Wrong (c)	08	20
No Answer	05	12.50
Total	40	100

Table 4.38: The Awareness of ‘Come across’: The Control Group/the Pre-Test

Table 4.38 reveals that 42.50% of the students could identify the correct answer. A quarter of them chose *nearer* which has no relation with *come across* and 20% selected the opposite sense of *come across*. On the basis of the results, it could be said that the students were not aware of the meaning of *across* when used with *come*, and their familiarity was at the very low level.

- **Sentence No. 37**

37. ‘He hangs a mirror above the chimney.’

- a) On the chimney
- b) Near the chimney
- c) Over the chimney [**The Correct Answer**]

Options	No.	%
Right	13	32.50
Wrong (a)	13	32.50
Wrong (b)	10	25
No Answer	04	10
Total	40	100

**Table 4.39: The Awareness of the ‘Dynamic Sense of above’: The Control Group/
the Pre-Test**

Table 4.39 shows that the percentages of the right answer and the wrong option (a) are the same (32.50%). The students were not only unaware of *dynamic sense of above*, but also they considered *above*, *on* and *over* as three prepositions with the same dynamic senses. The percentages of their answers reflect their limited understanding and knowledge concerning the meanings associated with these prepositions.

- **Sentence No. 38**

38. ‘The manager opened the door and stepped in.’

- a) The manager raised his foot
- b) The manager moved to the inside [**The Correct Answer**]
- c) The manager opened the door and stood in the way

Options	No.	%
Right	17	42.50
Wrong (a)	04	10
Wrong (c)	14	35
No Answer	05	12.50
Total	40	100

**Table 4.40: The Awareness of the ‘Dynamic Sense of in’: The Control Group/
the Pre-Test**

Table 4.40 exhibits that 42.50% of the students were able to select the right answer. The students appear not to have a clear idea about the *dynamic sense of in*. They most probably doubted about which option to choose because they were more familiar with the meaning of *in* as *inside*.

- **Sentence No. 39**

39. ‘We decided to go for a walk over the hill.’

- a) To go to the hill
- b) To walk around the hill
- c) To walk from one side to the other of the hill [**The Correct Answer**]

Options	No.	%
Right	06	15
Wrong (a)	12	30
Wrong (b)	18	45
No Answer	04	10
Total	40	100

**Table 4.41: The Awareness of ‘Contact Indicated by over’: The Control Group/
the Pre-Test**

Table 4.41 shows that the wrong option (b) makes up 45% of the total. The students’ familiarity with this sense was at the very low level because just a small minority (15%) could identify the right conceptual meaning of *over* when the trajector is in contact with the landmark.

- **Sentence No. 40**

40. ‘The company’s profits are above the ones in the previous year.’

- a) They are better than the ones in the previous year
- b) They are over the ones in the previous year [**The Correct Answer**]
- c) They exceed the ones in the previous year

Options	No.	%
Right	10	25
Wrong (a)	24	60
Wrong (c)	02	05
No Answer	04	10
Total	40	100

Table 4.42: The Awareness of the ‘More than Sense’: The Control Group/the Pre-Test

Table 4.42 indicates that a great proportion of the students’ answers (60%) represent the wrong option (a). The students thought that *above* means *better than* because they appear not to be aware of the *more than sense* associated with it and the fact that, in this case, *above* and *over* are synonymous. They could not differentiate between the meanings expressed by *above* and *over* because they probably thought that they are synonymous spatially and different metaphorically.

- **Sentence No. 41**

41. ‘The child was screaming when she drew him out of the club’s swimming pool.’

- a) Away from the inside of the swimming pool [**The Correct Answer**]
- b) From the outside of the club’s swimming pool
- c) Into the swimming pool

Options	No.	%
Right	16	40
Wrong (b)	16	40
Wrong (c)	04	10
No Answer	04	10
Total	40	100

Table 4.43: The Awareness of the ‘Basic Sense of out’: The Control Group/the Pre-Test

Table 4.42 reveals that the students' awareness of the basic sense of *out* was at the very low level. Only 40% could identify the right answer, and the same number of the students (40%) selected the wrong option (b). They probably knew that *out* means *outside*, but they had a very limited knowledge about the conceptual meaning it expresses in dynamic situations, which involves moving from the *inside* to the *outside*.

- **Sentence No. 42**

42. 'Oxygen must be held in a sealed container.'

- a) Oxygen must be pressed there
- b) Oxygen must be enclosed there
- c) Oxygen must be blocked there [**The Correct Answer**]

Options	No.	%
Right	15	37.50
Wrong (a)	13	32.50
Wrong (b)	09	22.50
No Answer	03	07.50
Total	40	100

Table 4.44: The Awareness of the 'Blockage Sense': The Control Group/the Pre-Test

Table 4.44 shows that the students seem to be unaware of *the blockage sense of in* because only a small number of them (37.50%) identified the correct answer. The students were not able to recognize this metaphorical sense because their selection was based on their own understanding of the context rather than on their background knowledge of the use of *in* metaphorically. They also could not distinguish between the spatial use of *in* to indicate *enclosure* and its metaphorical use which involves the notion of *blockage*.

- **Sentence No. 43**

43. ‘There are several huts across the river.’

- a) On the other side of the river [**The Correct Answer**]
- b) Near the river
- c) Beyond the river

Options	No.	%
Right	14	35
Wrong (b)	09	22.50
Wrong (c)	13	32.50
No Answer	04	10
Total	40	100

**Table 4.45: The Awareness of the ‘Static Sense of across’: The Control Group/
the Pre-Test**

According to Table 4.45, the right answer makes up 35% of the total. The students’ familiarity with this sense is very low since they were not able to notice the difference between the senses provided to them. Besides they did not know that *near* and *beyond* have no relation with *across*.

- **Sentence No.44**

44. ‘There is no one over him in the department.’

- a) No one rules him in the department [**The Correct Answer**]
- b) There is no one but him in the department
- c) He has the highest rank in the department

Options	No.	%
Right	17	42.50
Wrong (b)	11	27.50
Wrong (c)	07	17.50
No Answer	05	12.50
Total	40	100

Table 4.46: The Awareness of the ‘Control Sense’: The Control Group/the Pre-Test

Table 4.46 reveals that 42.50% of the students were familiar with *the control sense of over*. The results indicate that the students appear to lack a clear understanding of this sense, and their awareness was at the low level.

- **Sentence 4.45**

45. ‘She drove through the garage at sixty kilometers an hour.’

- a) She drove into the garage
- b) She drove into and then exited the garage [**The Correct Answer**]
- c) She drove closer to the garage

Options	No.	%
Right	11	27.50
Wrong (a)	09	22.50
Wrong (c)	16	40
No Answer	04	10
Total	40	100

**Table 4.47: The Awareness of the ‘Basic Sense of through’: The Control Group/
the Pre-Test**

Table 4.47 shows that a small minority of the students opted for the correct conceptual meaning of *through*. Exactly 40% of them confused it with the word *closer* and 22.50% with *into*. The students seem not to be conscious that the underlying concept of *through* involves *entering and then exiting from the garage*.

- **Sentence No. 46**

46. ‘Interviews will be held at the above address on 2 December.’

- a) At the following address
- b) Outside the earlier address
- c) At the preceding address [**The Correct Answer**]

Options	No.	%
Right	13	32.50
Wrong (a)	17	42.50
Wrong (b)	05	12.50
No Answer	05	12.50
Total	40	100

Table 4.48: The Awareness of the ‘Earlier Sense’: The Control Group/the Pre-Test

We can see from Table 4.48 that the students were unaware of this metaphorical sense of *above*. The first wrong option represents 42.50% of the total. It means that they had a limited knowledge regarding *the earlier than sense of above*.

- **Sentence 4.47**

47. ‘When the police were running after, he was doing over a hundred miles.’

- a) He was doing again a hundred miles
- b) He was doing more than a hundred miles [**The Correct Answer**]
- c) He ended up doing a hundred miles

Options	No.	%
Right	22	55
Wrong (a)	06	15
Wrong (c)	07	17.50
No Answer	05	12.50
Total	40	100

Table 4.49: The Awareness of the ‘More Sense’: The Control Group/the Pre-Test

Table 4.49 reveals that slightly over half the students were able to identify the right answer.

We could say that the students showed a rather low level of awareness of the *more than sense* expressed by *over*.

- **Sentence No. 48**

48. ‘If fire breaks out, get in single file before leaving.’

- a) Form a line before leaving [**The Correct Answer**]
- b) Get into a single file before leaving
- c) Get inside a single file before leaving

Options	No.	%
Right	11	27.50
Wrong (b)	16	40
Wrong (c)	09	22.50
No Answer	04	10
Total	40	100

**Table 4.50: The Awareness of the ‘Use of in to Indicate Shapes’: The Control Group/
the Pre-Test**

Table 4.50 shows that 40% of the students opted for the wrong option (b) because they thought that *in* is used dynamically here with the verb *to get*. So, they linked the preposition *into* with *in* because they indicate motion, but they did not pay attention to the fact that the context is metaphorical; they thought that it is spatial. Hence, the students' awareness of this sense was at the very low level. They seem to lack a clear knowledge and understanding of the differences between the spatial and non-spatial senses of *in*.

- **Sentence No. 49**

49. 'They put the blame on her because she told the secret to everyone.'

- a) The blame made her be in trouble because she told the secret
- b) The blame was a burden because she told the secret [**The Correct Answer**]
- c) The blame was a responsibility because she told the secret

Options	No.	%
Right	08	20
Wrong (a)	11	27.50
Wrong (c)	17	42.50
No Answer	04	10
Total	40	100

Table 4.51: The Awareness of the 'Burden Metaphor': The Control Group/the Pre-Test

According to Table 4.51, a fifth of the students' answers are correct. We can see that the students in the Control Group understood the meaning of *on* mistakenly; they thought that it refers to *responsibility* rather than *burden*. It is clear from Table 4.51 that their selection of the answers was based on how they understood the sentence and not on their familiarity with this sense.

– **Part Two:** Fill in the following blanks with *above, across, in, on, out, over and through*

- **Blank No. 1**

“One day, while I was in my office, a sergeant came (1)..... and told me that the police chief wanted to see me”. [The Correct Answer: *in*]

Prepositions	No.	%
In*	22	55
On	12	30
Through	01	02.50
Over	01	02.50
Out	01	02.50
Across	02	05
No Answer	01	02.50
Total	40	100

*The Correct Answer

Table 4.52: The Control Group’s Use of the ‘Dynamic Sense of *in*’ in the Pre-Test

Of the data shown in Table 4.52, we can see that 55% of the students could recognize that the first blank stands for a spatial relation, and it has to do with the *dynamic sense of in*. However, less than a third of them confused it with *on* and an insignificant minority with *through* (02.50%), *over* (02.50 %), *out* (02.50%) and *across* (05%). The students probably used *on, through, over, out* and *across* because all of them can be used with the verb *come* although each of which expresses a meaning that differs from the one conveyed by *in*, but because the students showed a low level of awareness of the polysemy of these prepositions in **Part One**, they could not notice the nuances that exist between them.

- **Blank No.2**

“[...] I stood in front of his desk while he began to get (2) to me the story of the Smith family [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	05	12.50
On	07	17.50
Over	08	20
Through	05	12.50
Out	08	20
Above	01	02.50
No Answer	06	15
Total	40	100

Table 4.53: The Control Group’s Use of *Get across* in the Pre-Test

Table 4.53 reveals that a minority of the students (12.50%) were able to recognize that the verb *get* in this blank is used with *across* and it refers to a metaphorical relation. We can see that the students were not aware of the differences between *get across*, *get on*, *get over*, *get out* and *get through*. The number of the students who used *on* (17.50%), *over* (20%), *through* (12.50%), *out* (20%) could mean that they might have encountered the use of these prepositions with the verb *get*, but they were not able to decide on the right meaning. Interestingly, the number of the students who did not provide any answers makes up 15% of the total. In other words, the non-spatial use of *across* constituted a problem to them because they could not distinguish it from these prepositions.

- **Blank No. 3**

“[...] my chief was really convinced that Mr. Smith was (3).....cruelty to kill his wives [...]”. [The Correct Answer: *above*]

Prepositions	No.	%
*Above	06	15
In	12	30
Out	05	12.50
Across	01	02.50
On	02	05
Over	05	12.50
No Answer	09	22.50
Total	40	100

Table 4.54: The Control Group’s Use of the ‘Separation Sense of above’ in the Pre-Test

Table 4.54 shows that the students gave five wrong answers. The number of the students who used *in* at 30% is the highest one comparing it to the other percentages of *out* (12.50%), *across* (02.50%), *on* (05%) and *over* (12.50%). The use of *in*, *on*, *out*, *across* and *over* is wrong because *in* can be used metaphorically ‘to talk about emotions or states’, *on* is employed ‘to talk about negative feelings or unwelcome states’, *over* refers metaphorically ‘to difficulties and problems’, and the use of *across* is meaningless because it refers to other different metaphorical meanings than the latter. If we compare these metaphorical senses to the underlying sense of *above*, we find that this preposition is used to talk about ‘negative actions or behaviours’, i.e., *above* is employed metaphorically to say that ‘somebody is *too good to commit the stated negative action* (in this case, *cruelty*). Accordingly, the results mean that the students were not familiar with the differences that exist between the

metaphorical senses that these prepositions convey (or their target domains). Noticeably, the number of the students who did not answer (22.50%) is higher than the students who answered correctly. It follows that the nuances between *above*, *in*, *across*, *out*, *on* and *over* posed a real difficulty to the students.

- **Blank No. 04**

“[...]. The Smith house [...] was situated (4).....a broad expanse of a lawn [...]”. [The Correct Answer: *across*]

Prepositins	No.	%
*Across	22	55
Out	02	05
Over	02	05
Above	02	05
In	12	30
No Answer	00	00
Total	40	100

Table 4.55: The Control Group’s Use of the ‘Static Sense of across’ in the Pre-Test

Table 4.54 reveals that the use of *across* to mean *on the other side of* makes up 55% of the total. The students could identify that the relation is spatial, but 05% of them confused it with *out*, 05% with *over*, 05% with *above* and 30% with *in*. The use of *above* is completely wrong, and this confirms the students’ lack of knowledge of this preposition (see p. 163). Concerning *out*, *in* and *over*, it could be said the students in the Control Group were not familiar with the differences between a bounded landmark, a vertical and extended landmark, as well as a planar landmark, i.e., *the lawn* is an extended area, and the *house* is not *inside* it because the

use of *in* involves *enclosure*. The preposition *out* has do with *non-containment*, while *over* (generally when there is contact) refers to a vertical and extended landmark.

- **Blank No. 5**

“It was a house which rose like a tower (5) the hill”. [The Correct Answer: *on*]

Prepositions	No.	%
*On	11	27.50
In	02	05
Across	02	05
Above	12	30
No Answer	13	32.50
Total	40	100

Table 4.56: The Control Group’ Use of the ‘Static Sense of *on*’ in the Pre-Test

According to Table 4.56, the number of the students who did not answer makes up 32.50% of the total. Exactly 30% of them confused *on* with *above*, 5% with *across* and 5% with *in*. The students in the Control Group then were not familiar with the distinction between the static senses of these prepositions and the kind of the spatial relations they indicate.

- **Blank No. 6**

“[...] Mr. Smith suggested staying the evening in his house. I was led away (6)..... a dark hall to my room [...]”. [The Correct Answer: *through*]

Prepositions	No.	%
*Through	10	25
Over	08	20
Across	02	05
Out	02	05
Above	01	02.50
On	02	05
In	12	30
No Answer	03	07.50
Total	40	100

Table 4.57: The Control Group’s Use of the ‘Dynamic Sense of through’ in the Pre-Test

Table 4.57 reveals that a quarter of the students understood that the relation is spatial, and it means *through*. We can also see that the use of *in* and *over* makes up 30% and 20% of the total, respectively. The students in the Control Group seem not to be familiar with the nuances between *through* and *over* as well as *through* and *in*.

- **Blank No. 7**

“[...] That night, I did not sleep well because there was a lot of pressure (7) me [...].”

[The Correct Answer: *on*]

Prepositions	No.	%
*On	22	55
In	01	02.50
Out	01	02.50
Across	02	05
Above	02	05
Over	09	22.50
No Answer	03	07.50
Total	40	100

Table 4.58: The Control Group’s Use of the ‘Burden Metaphor’ in the Pre-Test

Table 4.58 indicates that almost over half the students could identify that the seventh blank stands for *on*. However, 22.50% of them confused it with *over*. This reveals that the students in the Control Group were not familiar with the type of the target domains that *on* and *over* denote; they could not identify that *pressure* is an unwelcome state.

- **Blank No.8**

“[...] a small plane hovering (8) the house [...]” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	14	35
On	02	05
Across	04	10
In	06	15
Out	07	17.50
Through	07	17.50
No Answer	00	00
Total	40	100

Table 4.59: The Control Group’s Use of the ‘Dynamic Sense of over’ in the Pre-Test

Table 4.59 shows that 35% of the students could identify the correct answer. Nonetheless, this could be considered as a very low percentage because the results indicate that the students filled in this blank with prepositions which do not fit its meaning. Specifically, they failed to distinguish between *over* and *through* as well as *over* and *out*. In other words, they were unaware of the nuances between the type of motion each preposition indicates; *over* denotes a *path*, in this case, that requires *no contact*, whereas *through* and *out* refer to different types of motion that *over* does denote.

- **Blank No.9**

“It was very close to the earth (9)..... the airstrip.” [The Correct Answer: *above*]

Prepositions	No.	%
*Above	10	25
On	08	20
Through	02	05
Across	02	05
In	01	02.50
Out	02	05
No Answer	12	30
Total	40	100

Table 4.60: The Spatial Use of *above* by the Control Group in the Pre-Test

Table 4.60 shows that the number of the students who did not provide any answers accounts for 30% of the total. The results reveal that the students were not familiar with the basic sense of *above*. Their ability to use the preposition *above* to express a spatial relation was at the very low level. Exactly 20% of the students failed to differentiate between the senses of *above* and *on*.

- **Blank No. 10**

“The plane rolled to a stop and landed (10)the area near the convent.”[**The Correct Answer: *on***]

Prepositions	No.	%
*On	05	12.50
Above	13	32.50
Through	02	05
Across	04	10
In	07	17.50
Out	02	05
No Answer	07	17.50
Total	40	100

Table 4.61: The Control Group’s Use of the ‘*Dynamic Sense of on*’ in the Pre-Test

Of the data gathered in Table 4.61, only a small minority of the students (12.50%) could answer correctly. Slightly above a third of them confused between *on* and *above* when *on* is used dynamically. We can also see that 17.50% of the students failed to give an answer because they probably could neither identify the right sense nor the corresponding preposition that expresses it. Additionally, the fact that the students confused *on* with *in* (17.50%), *across* (10%), *through* (5%) and *out* (5%) reveals that they probably answered on the basis of how they imagined the scene.

- **Blank No. 11**

“[...], a woman got (11)..... dressed in a long black dress [...].” [**The Correct Answer: *out***]

Prepositions	No.	%
*Out	20	50
Over	01	02.50
Through	03	07.50
In	02	05
On	08	20
No Answer	06	15
Total	40	100

Table 4.62: The Control Group’s Use of the ‘Dynamic Sense of out’ in the Pre-Test

We can see from Table 4.62 that the right answer accounts for 50% of the total. The remaining 50% of the students seem not to be aware of the differences between the dynamic use of *out*, *over*, *through*, *in* and, especially, *on*, which represents 20% of their answers. Although *on* is not semantically related to *out*, the students used it because they possibly understood the context wrongly; they thought that ‘the woman got *on* the plane’. This means that because they had a limited knowledge concerning the polysemy of these prepositions, the students tried to answer on the basis of their own perspectives.

- **Blank No. 12**

“[...] I decided to pay a visit to the convent. (12) the convent, the curtains [...].” [The

Correct Answer: *in*]

Prepositions	No.	%
*In	23	57.50
On	04	10
Above	01	02.50
Through	05	12.50
Over	03	07.50
No Answer	04	10
Total	40	100

Table 4.63: The Control Group’s Use of the ‘Static Sense of *in*’ in the Pre-Test

Table 4.63 shows that just over half the students understood that the spatial scene corresponds to the spatial sense of *in*. However, the preposition *in* was mainly confused with *through*. Around a tenth of them failed to notice that *through* involves ‘going in and then out of a bounded landmark’ and *in* in this blank indicates a static relation. The students appear to lack a clear understanding of the difference between *through* and *in* because both of them are semantically related.

- **Blank No. 13**

“[...] the curtains were (13).....the window [...]” [The Correct Answer: *over*]

Prepositins	No.	%
*Over	04	10
Above	07	17.50
In	02	05
Across	09	22.50
Out	05	12.50
On	07	17.50
Through	03	07.50
No Answer	03	07.50
Total	40	100

Table 4.64: The Control Group’s Use of the ‘Covering Sense of over’ in the Pre-Test

Table 4.64 shows that 7 students used *above* instead of *over*, and also 7 students used *on* instead of *over*. The results reveal that they did not know the difference between them. The use of the other prepositions *in*, *out*, *through* and *across* shows that the students were not familiar with *the covering sense of over*, so they just filled in the blank.

- **Blank No. 14**

“[...] there was parsley spread (14)..... on the table [...]” [The Correct Answer: *out*]

Prepositions	No.	%
*Out	14	35
Over	02	05
Above	04	10
Through	06	15
No Answer	07	17.50
Total	40	100

Table 4.65: The Control Group’s Use of the ‘Distribution Sense of out’ in the Pre-Test

According to Table 4.65, the students seem to encounter difficulties in using *out* metaphorically. The percentage of no answers makes up 17.50% of the total. The use of *above* and *through* could mean that the students thought that the blank stands for a spatial relation due to the word *table*. We can also see that an insignificant number of the students (5%) confused the *distribution sense of out* with *over* because they did not know the difference between *out* and *over* when used metaphorically with the verb *to spread*.

- **Blank No. 15**

“[...] two pictures hanging on the wall which were placed (15).....the same table.” [The Correct Answer: *above*]

Prepositions	No.	%
*Above	03	07.50
On	22	55
In	10	25
Across	01	02.50
No Answer	04	10
Total	40	100

Table 4.66: The Control Group’s Use of the ‘Dynamic Sense of above’ in the Pre-Test

It is clear from Table 4.66 that 55% of the students failed to distinguish between *above* and *on*. This further confirms the fact that the students were not familiar with the nuances that exist between *above* and *on* when both of them indicate a dynamic relation.

- **Blank No. 16**

“[...] a group of women sitting around a small table (16).....thoughtful calm [...]” [The Correct Answer: *in*]

Prepositions	No.	%
*In	19	47.50
On	03	07.50
Above	02	05
through	02	05
Across	04	10
Out	01	02.50
Over	06	15
No Answer	03	07.50
Total	40	100

Table 4.67: The Control Group’s Use of the ‘State Sense of in’ in the Pre-Test

Table 4.67 indicates that the correct answer accounts for 47.50% of the total. The students appear to be unfamiliar with the difference between the target domains of the metaphorical senses of *in*, *over*, *on*, *above* and *out*. The students exhibited a low level of awareness concerning the nuances between their senses.

- **Blank No. 17**

“ [...]. I stood (17).....in the garden thinking [...]”. [The Correct Answer: *out*]

Prepositions	No.	%
*Out	19	47.50
Over	03	07.50
On	02	05
Above	02	05
Across	04	10
through	01	02.50
No Answer	03	07.50
Total	40	100

Table 4.68: The Control Group’s Use of the ‘Static Sense of out’ in the Pre-Test

Table 4.68 shows that the use of *out* constituted a problem to the students in the Control Group. Only 47.50% of them were able to recognize the right preposition and the right sense. It appears from Table 4.68 that the students had not a clear idea about the difference between the static sense of *out* and *across*.

- **Blank No. 18**

“[...] when the quiet hour was (18), someone might come and talk to me [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	19	47.50
Above	03	07.50
Across	02	05
On	02	05
In	04	10
No Answer	01	02.50
Total	40	100

Table 4.69: The Control Group’s Use of the ‘Completion Sense of over’ in the Pre-Test

Table 4.69 illustrates that the correct answer makes up 47.50% of the total. The students’ answers of this blank exhibited a low level of awareness of the difference between *over*, *above*, *across*, *on* and *in*. They most probably thought that the blank stands for a spatial relation and not a metaphorical one.

- **Blank No. 19**

“Unexpectedly, I saw the woman with the straw hat walking (19)..... the garden and going towards Mr. Smith’s house [...].” [The Correct Answer: *across*]

Prepositions	No.	%
*Across	06	15
On	04	10
Through	03	07.50
Over	03	07.50
In	19	47.50
Out	02	05
no answer	03	07.50
Total	40	100

Table 4.70: The Control Group’s Use of the ‘Dynamic Sense of over’ in the Pre-Test

It is clear from Table 4.70 that only 15% of the students were able to determine the right sense of this blank, while the use of *in* instead of *across* accounts for 47.50% of the total. This shows that the students did not know the nuances between *in* and *across* when they indicate motion.

- **Blank No. 20**

“She [...] continued moving quickly (20).....the trees [...]” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	13	32.50
Above	01	02.50
Over	09	22.50
Across	08	20
In	04	10
On	03	07.50
No Answer	02	05
Total	40	100

Table 4.71: The Control Group’s Use of *through* Spatially in the Pre-Test

According to Table 4.71, 32.50% of the students could realize that blank No. 20 stands for *through*, 22.50% of them confused *through* with *over*, 20% were not familiar with the nuances between *across* and *through*, and 10% did not know the difference between *through* and *in*. The results illustrate that the students had a limited knowledge of how these prepositions differ from each other.

- **Blank No. 21**

“ [...]. I received a letter from that woman [...]. (21).....this letter, I discovered that the deaths of his wives were accidental.” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	13	32.50
In	01	02.50
Over	09	22.50
Above	08	20
Out	04	10
No Answer	03	07.50
Total	40	100

Table 4.72: The Control Group’s Use of the ‘Means Sense’ in the Pre-Test

Table 4.72 indicates that the correct use of *through* accounts for 32.50% of the total. We can also see that the use of *over* accounts for 22.50% of the total. It seems that the students were not only familiar with the nuances between *over* and *through* spatially but also metaphorically. Of the data presented, because the students were not familiar with the *means sense* expressed by *through* (see p. 152-153), they just answered on the basis of how they conceived the context instead of relying on their background knowledge.

–The Experimental Group

–Part One: Tick the correct meaning of the expression including the prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through* in the following sentences

- **Sentence No. 1**

1. ‘The cow munched grass in the field.’

- a) The cow was within the bounds of the field **[The Correct Answer]**
- b) The cow ate grass around the field
- c) The cow chewed grass into the field

Options	No.	%
Right	14	35
Wrong (b)	10	25
Wrong (c)	15	37.50
No Answer	01	02.50
Total	40	100

**Table 4.73: The Awareness of the ‘Inclusion Sense’: The Experimental Group/
the Pre-Test**

Table 4.73 shows that the wrong option (c) accounts for 37.50% of the total, followed by the right answer at 35%. The students selected *into* because they were not familiar with *the inclusion sense* underlying *in*. They selected their answers on the basis of the meaning of the verb *to munch* and their familiarity with the fact that *in* and *into* are, in many cases synonyms, but they did not pay attention that the relation in this sentence is static and not dynamic. It follows that the students in the Experimental Group seem to lack a clear understanding of the static sense of *in* when indicating *inclusion*.

- **Sentence No. 2**

2. 'I like coffee over milk in breakfast. '

- a) I like coffee mixed with milk in breakfast
- b) I like both coffee and milk in breakfast
- c) I like coffee better than milk in breakfast [**The Correct Answer**]

Options	No.	%
Right	18	45
Wrong (a)	18	45
Wrong (b)	04	10
No Answer	00	00
Total	40	100

**Table 4.74: The Awareness of the 'Preference Sense': The Experimental Group/
the Pre-Test**

Table 4.74 indicates that above two fifths of the students selected the right answer and the wrong option (a). The results show that the students were not familiar with *the preference sense of over*. They just chose the answers on the basis of how they understood the context.

- **Sentence No. 3**

3. 'There is a heat across the country'

- a) On the other side of the country
- b) Throughout the country [**The Correct Answer**]
- c) Inside and outside the country

Options	No.	%
Right	24	60
Wrong (a)	11	27.50
Wrong (c)	05	12.50
No Answers	00	00
Total	40	100

**Table 4.75: The Awareness of the ‘All over Sense’: The Experimental Group/
the Pre-Test**

Of the data shown in Table 4.75, three fifths (60%) of the students identified that the correct meaning of *across* in this sentence is *all over (or throughout)*. It is clear from Table 4.75 that the students in the Experimental Group were familiar with this idiomatic sense of *across* because they exhibited a moderate level of awareness of this sense.

- **Sentence No. 4**

4. ‘Yesterday, they were giving leaflets out in front of the underground station.’

- a) Delivering leaflets outside in the front of the underground station
- b) Distributing leaflets in front of the underground station [**The Correct Answer**]
- c) Proposing leaflets in front of the underground station

Options	No.	%
Right	13	32.50
Wrong (a)	22	55
Wrong (c)	03	07.50
No Answer	02	05
Total	40	100

**Table 4.76: The Awareness of the ‘Distribution Sense’: The Experimental Group/
the Pre-Test**

Table 4.76 illustrates that nearly a third of the students chose the right answer, while over half the students opted for the wrong option (a). They selected the first option, ‘Delivering leaflets outside in front of the underground station’, because it contains the word *outside*. They probably did not recognize that *out* is used non-spatially because they were unaware of *the distribution sense of out*. In other words, they were aware that *out* means *outside* but insensitive that *out* has additional meanings other than *outside*.

- **Sentence No. 5**

5. ‘The strike is over and our membership has not voted.’

- a) The strike is no longer in progress [**The Correct Answer**]
- b) The strike is repeated again
- c) The strike is postponed

Options	No.	%
Right	33	82.50
Wrong (b)	03	07.50
Wrong (c)	03	07.50
No Answer	01	02.50
Total	40	100

Table 4.77: The Awareness of the ‘Completion Sense of over’: The Experimental Group/ the Pre-Test

Table 4.77 exhibits that 82.50% of the students in the Experimental Group showed a high level of awareness which is characterized by the proper selection of *the completion sense of over*.

- **Sentence No. 6**

6. ‘I am reading a book on dogs in which the writer describes how these animals could be dangerous’

- a) I am reading a book which addresses dogs [**The Correct Answer**]
- b) I am reading a book concerning dogs
- c) I am reading a book around dogs

Options	No.	%
Right	01	02.50
Wrong (b)	29	65
Wrong (c)	08	32.50
No Answer	00	00
Total	40	100

Table 4.78: The Awareness of ‘Metaphorical Contact’: The Experimental/the Pre-Test

According to Table 4.78, only one student identified that the meaning of *on* in this sentence is ‘addressing dogs’, while nearly two thirds of them selected *concerning*, which is synonymous with *about*. It could be said that the students in the Experimental Group exhibited a very low level of awareness, evidencing little understanding and background knowledge of the metaphorical sense of *on* when indicating *a topic* as well as of the details relevant to the difference between the meanings of *on*, *concerning* and *around* (the difference between these prepositions is mentioned on p. 146).

- **Sentence No. 7**

7. ‘There is a sign over the door.’

- a) Beside the door
- b) On the door
- c) Above the door [**The Correct Answer**]

Options	No.	%
Right	11	27.50
Wrong (a)	08	20
Wrong (b)	21	52.50
No Answer	00	00
Total	40	100

**Table 4.79: The Awareness of the ‘above-Sense of over’: The Experimental Group/
the Pre-Test**

Table 4.79 indicates that the wrong option (b), ‘on the door’, accounts for 52.50% of the total. The results show that the students’ knowledge was inadequate; they thought that *over* means *on* because they were not familiar with *the above sense of over*.

- **Sentence No. 8**

8. ‘Ann is through with the book’

- a) She is in the process of reading the book
- b) She has finished reading the book [**The Correct Answer**]
- c) She is carrying the book

Options	No.	%
Right	01	02.50
Wrong (a)	31	77.50
Wrong (c)	08	20
No Answer	00	00
Total	40	100

**Table 4.80: The Awareness of the ‘Completion Sense of through’: The Experimental
Group/the Pre-Test**

Table 4.80 illustrates that just over three quarters of the students opted for the wrong option (a) which represents the opposite of the correct sense of *through* in this sentence. It seems that the students in the Experimental Group were not familiar with *the completion sense of through*. In fact, they exhibited a very level of awareness of this sense.

- **Sentence No. 9**

9. ‘In the navy, a captain is above a commander.’

- a) He is higher than a commander [**The Correct Answer**]
- b) He is stronger than a commander
- c) He is more advanced than a commander

Options	No.	%
Right	31	77.50
Wrong (b)	01	02.50
Wrong (c)	08	20
No Answer	00	00
Total	40	100

Table 4.81: The Awareness of the ‘Superior Sense’: The Experimental Group/

the Pre-Test

According to Table 4.81, a significant majority of the students (77.50%) could identify the correct answer. We could say that the students in the Experimental Group appear to be aware of *the superior sense* associated with *above*.

- **Sentence No. 10**

10. ‘The heavy rain caused the river to flow over its bank.’

- a) To flow above its bank
- b) To flow across its bank
- c) To exceed its bank [**The Correct Answer**]

Options	No.	%
Right	23	57.50
Wrong (a)	05	12.50
Wrong (b)	11	27.50
No Answer	01	02.50
Total	40	100

Table 4.82: The Awareness of the ‘Excess Sense’: The Experimental Group/the Pre-Test

It is clear from Table 4.82 that more than half the students selected the right answer. Less than a third of them (27.50%) chose *across*. The students in the Experimental Group exhibited a rather low level of awareness because they could not realize that when the *river* increases to a level at which it spreads left and right, it may seem to follow an arcing up-down path similar to the path of the *above-across sense* and not *across* (see Chapter Three, p. 130).

- **Sentence No. 11**

11. ‘The young girl tried to get across to her friend that the topic was not good’

- a) She described to her that the topic was not good
- b) She made her understand that the topic was not good [**The Correct Answer**]
- c) She gave her reasons that her topic was not good

Options	No.	%
Right	20	50
Wrong (a)	02	05
Wrong (c)	17	42.50
No Answer	01	02.50
Total	40	100

Table 4.83: The Awareness of ‘Get across’: The Experimental Group/the Pre-Test

Of the data shown in the Table 4.83, half the students could identify that the meaning of *get across* is ‘to give reasons’. The remaining 50% (05% “a” + 42.50% “c” + 02.50% “no answer”) of the students seem to be unaware of the metaphorical sense of *across* when employed with the verb *to get*. So, the selection of the answers was perhaps based on how they understood the context because they had limited information concerning this sense.

- **Sentence No. 12**

12- ‘The light bulb is in the socket.’

- a) The light bulb is totally inside the socket
- b) The light bulb is within the socket
- c) The light bulb is partially enclosed by the socket [**The Correct Answer**]

Options	No.	%
Right	04	10
Wrong (a)	19	47.50
wrong (b)	17	42.50
No Answer	00	00
Total	40	100

Table 4.84: The Awareness of ‘Partial Enclosure’: The Experimental Group/ the Pre-Test

Table 4.84 shows that the selection of the answers by the students was almost equally distributed between 47.50% and 42.50% which indicate *total enclosure*. It could be deduced from the results that they were not familiar with the *partial enclosure sense* associated with *in* since the majority of them opted for *inside* because it appears to be the sense that they were acquainted with. In addition, the students may not know that *inside* and *in* are not perfectly synonymous, especially in cases wherein the trajector is *partially enclosed* by the landmark.

- **Sentence No. 13**

13. ‘She played over the same piano piece to demonstrate her talent.’

- a) She played excellently
- b) She played again [**The Correct Answer**]
- c) She played better

Options	No.	%
Right	24	60
Wrong (a)	09	22.50
Wrong (c)	05	12.50
No Answer	02	05
Total	40	100

Table 4.85: The Awareness of the ‘*Repetition Sense*’: The Experimental Group/

the Pre-Test

Table 4.85 reveals that three fifths of the students (60%) could recognize the *repetition sense* expressed by *over*. Their familiarity with this sense could be traced back to the fact that it is a commonly used sense. Hence, the students in the Experimental Group showed a moderate level of awareness of this sense.

- **Sentence No. 14**

14. A: ‘Are the scissors in the drawer?’

B: ‘No, they’re out on the counter.’

- a) They’re exterior to the drawer [**The Correct Answer**]
- b) They’re no longer in the drawer
- c) They’re outside the counter

Options	No.	%
Right	08	20
Wrong (b)	06	15
Wrong (c)	24	60
No Answer	02	05
Total	40	100

**Table 4.86: The Awareness of the ‘Static Sense of out’: The Experimental Group/
the Pre-Test**

Table 4.86 shows clearly that the wrong option (c) makes up 60% of the total. The very low percentage of the correct answer (20%) could mean that the students may not know the conceptual meaning underlying *out*. It seems that they were familiar with the word *outside* and not *exterior*. In addition, they were not able to realize that the landmark of *out* is *the drawer* and not the *counter*.

- **Sentence No. 15**

15. ‘The shops were repaired through the help of a disaster relief fund.’

- a) They were repaired by means of the help of a disaster relief fund [**The Correct**
- b) They were repaired because of the help of a disaster relief fund **Answer]**
- c) They were repaired during the help of a disaster relief fund

Options	No.	%
Right	11	27.50
Wrong (b)	13	32.50
Wrong (c)	15	37.50
No Answer	01	02.50
Total	40	100

**Table 4.87: The Awareness of the ‘by Means of Sense’: The Experimental Group/
the Pre-Test**

Table 4.87 clearly illustrates that the sense ‘*by means of*’ associated with *through* was not well-known to the students. Only 27.50% answered correctly, 37.50% chose *because of* which is another sense of *through* and 32.50% of them selected *during*, which is completely different from *through*. Since the students in the Experimental Group showed a very low level of awareness of this sense, they need to know how to determine the meaning of *through* when it indicates *by means of* rather than *because of*.

- **Sentence No. 16**

16. ‘He drove across the parking lot although it was not allowed.’

- a) He drove into the parking lot
- b) He drove in the parking lot
- c) He drove from one side to the other side of the parking lot [**The Correct Answer**]

Options	No.	%
Right	26	65
Wrong (a)	08	20
Wrong (b)	06	15
No Answer	00	00
Total	40	100

Table 4.88: The Awareness of the ‘Basic Sense of across’: The Experimental Group/ the Pre-Test

It is clear from Table 4.88 that a large number of the students (65%) were able to recognize the correct meaning of *across*. Their familiarity with the basic sense of *across* reflects their moderate awareness of the conceptual meaning underlying it, which is mentioned in the last option (c).

- **Sentence No. 17**

17. ‘Paul prefers sleeping in bed with his head on pillow’

- a) Above the pillow
- b) Supported by the pillow [**The Correct Answer**]
- c) Placed at the top of the pillow

Options	No.	%
Right	10	25
Wrong (a)	23	57.50
Wrong (c)	07	17.50
No Answer	00	00
Total	40	100

**Table 4.89: The Awareness of the ‘Basic Sense of on’: The Experimental Group/
the Pre-Test**

Table 4.89 shows that 57.50% of the students selected *above*. Only a quarter of them knew that the basic sense of *on* has to do with *support* and *contact*. It follows that the students in the Experimental Group were neither familiar with the conceptual meaning that refers to *on* nor they were aware of the fact that *above* differs from *on* because it involves *no contact*.

- **Sentence No. 18**

18. ‘The hummingbird flies over the flower’.

- a) Upward and forward across the flower [**The Correct Answer**]
- b) Higher and touching the flower
- c) Across the flower

Options	No.	%
Right	09	22.50
Wrong (b)	25	62.50
Wrong (c)	06	15
No Answer	00	00
Total	40	100

**Table 4.90: The Awareness of the ‘*Dynamic Sense of over*’: The Experimental Group/
the Pre-Test**

It is noticeable from Table 4.90 that the students were not aware of the basic sense of *over*. A large number of them (62.50%) chose the second option which refers to the conceptual meaning of *on*. Their limited knowledge of the *above-across sense* of *over* inhibited them from recognizing that *over* in this sentence implies *no contact* between the trajector and the landmark.

- **Sentence No.19**

19. ‘The information in this booklet is out of date.’

- a) The information that this booklet mentions is out of date
- b) The information that this booklet contains is out of date [**The Correct Answer**]
- c) The information that this booklet states is out of date

Options	No.	%
Right	18	45
Wrong (a)	12	30
Wrong (c)	09	22.50
No Answer	01	02.50
Total	40	100

**Table 4.91: The Awareness of ‘*Metaphorical Containment*’: The Experimental Group/
the Pre-Test**

According to Table 4.91, the correct answer accounts for 45% of the total. This means that the students showed a low level of awareness of the notion of *containment* expressed by *in* metaphorically. They most probably answered on the basis of their understanding of the expression wherein *in* is mentioned, and, perhaps, the students were not familiar with the fact that *in* suggests *containment*.

- **Sentence No. 20**

20. ‘The actions of public officials must be above suspicion’.

- a) They must be very good to be suspected [**The Correct Answer**]
- b) They must be very obvious to be suspected
- c) They must be under suspicion

Options	No.	%
Right	19	47.50
Wrong (b)	09	22.50
Wrong (c)	12	30
No Answer	00	00
Total	40	100

**Table 4.92: The Awareness of the ‘*Separation Sense*’: The Experimental Group/
the Pre-Test**

According to Table 4.92, it can be seen that the right option (a) makes up the majority of the students’ answers. It accounts for 47.50% of the total, followed by the wrong option (c) with approximately a third (35%). Next, just over a fifth of the students’ answers represent the wrong option (b). The results reveal that the students were not aware of the *separation sense of above*. Because they lacked sufficient knowledge about this sense, they relied on their own familiarity with the word *suspicion*, which is related to a negative situation in order to provide their answers.

- **Sentence No. 21**

21. ‘It has been said that dark colors in cotton fabric keep out the sun’s harmful ultraviolet rays’.

- a) Protect us from the sun's harmful ultraviolet rays
- b) Prevent the sun’s harmful ultraviolet rays from entering [**The Correct Answer**]
- c) Reflect the sun’s harmful ultraviolet rays

Options	No.	%
Right	18	45
Wrong (a)	14	35
Wrong (c)	08	20
No Answer	00	00
Total	40	100

**Table 4.93: The Awareness of the ‘Exclusion Sense’: The Experimental Group/
the Pre-Test**

Table 4.93 shows that the right answer accounts for just 45% of the total. The students in the Experimental Group exhibited a low level of awareness of *the exclusion sense of out*. Their selection of the senses was based on their own understanding of the context rather than on their background knowledge of the senses of *out*; they were not familiar that *out* can suggest that the trajector is ‘excluded from the interior of the landmark’.

- **Sentence No. 22**

22. ‘They put rocks over a cave entrance’.

- a) Near the cave
- b) Higher than the cave
- c) To cover the cave [**The Correct Answer**]

Options	No.	%
Right	26	65
Wrong (a)	08	20
Wrong (b)	06	15
No Answer	00	00
Total	40	100

**Table 4.94: The Awareness of the ‘Covering Sense’: The Experimental Group/
the Pre-Test**

Table 4.94 reveals that the majority of the students (65%) identified the *covering sense* expressed by *over*. It seems that the students’ awareness of this sense was at the moderate level. They were able to identify that the option (a) has no relation with *over*, and the option (b) is meaningless.

- **Sentence No. 23**

23. ‘We saw a couple of duty crew through a window.’

- a) On the other side of the window [**The Correct Answer**]
- b) By the window
- c) From the window

Options	No.	%
Right	03	07.50
Wrong (b)	08	20
Wrong (c)	29	72.50
No Answer	00	00
Total	40	100

**Table 4.95: The Awareness of the ‘Static Sense of through’: The Experimental Group/
the Pre-Test**

Table 4.95 indicates that the greatest number of the students (72.50%) thought that *through* and *from* can be used interchangeably. The students exhibited a severe lack of awareness of the static sense of *through*. They perhaps answered on the basis of how they understood the sentence without having prior knowledge of the *static sense of through*. In other words, the students' lack of awareness of the static sense of *through*, probably, made them focus more on the position of the speakers and where they did the act of seeing (i.e. *from the window*) rather than on the position of the *crew* in relation to the *window*.

- **Sentence No.24**

24. 'Father is in bad temper, he has just thrown mother out of window'.

- a) Because of my father's bad state, he has thrown my mother [**The Correct Answer**]
- b) Because my father is inside bad temper, he has thrown my mother
- c) Because of my father's bad situation, he has thrown my mother

Options	No.	%
Right	13	32.50
Wrong (b)	11	27.50
Wrong (c)	16	40
No Answer	00	00
Total	40	100

Table 4.96: The Awareness of the 'State Sense': The Experimental Group/the Pre-Test

Table 4.96 shows that the option (c) accounts for 40% of the total. The students in the Experimental Group seem not to be familiar with the *state sense of in*. The majority of them relied on how they conceived the context and the meanings of the other words included in the sentence.

- **Sentence No. 25**

25. ‘She placed the tablecloth on the table.’

- a) She placed the tablecloth to cover the table
- b) She placed the tablecloth onto the table [**The Correct Answer**]
- c) She placed the tablecloth above the table

Options	No.	%
Right	07	17.50
Wrong (a)	20	50
Wrong (c)	13	32.50
No Answer	00	00
Total	40	100

Table 4.97: The Awareness of the ‘Dynamic Sense of on’: The Experimental Group/

the Pre-Test

According to Table 4.97, the dynamic sense of *on* was problematic for the students because half of them selected the preposition *above* which is totally meaningless in this context. This reflects their lack of knowledge of the *dynamic* meaning of *on*; the preposition *on* differs from *above* and *over* dynamically because it can denote a conceptual meaning that is similar to *onto*. Additionally, the fact that only 7 students could answer correctly could possibly indicate that they were not aware of the meaning of *onto*, and they selected *above*, probably, because it is commonly encountered by them more than *onto*.

- **Sentence No. 26**

26. ‘Sam lives over the hill.’

- a) Near the hill
- b) Behind the hill
- c) On the other side of the hill [**The Correct Answer**]

Options	No.	%
Right	14	35
Wrong (a)	10	25
Wrong (b)	15	37.50
No Answer	01	02.50
Total	40	100

**Table 4.98: The Awareness of the ‘Static Sense of over’: The Experimental Group/
the Pre-Test**

Table 4.98 shows that the percentages of the students’ answers are either above 30% (37.50% “b” + 35% “c”) or below 30% (25% “a”). This reflects the students’ low level of awareness of *over* when indicating the *end point focus of a path*.

- **Sentence No. 27**

27. ‘There was a spider’s nest in the mountain cave’

- a) The spider’s nest was enclosed by the mountain cave [**The Correct Answer**]
- b) The spider’s nest covered the mountain cave
- c) The spider’s nest was all over the mountain cave

Options	No.	%
Right	14	35
Wrong (b)	13	32.50
Wrong (c)	11	27.50
No Answer	02	05
Total	40	100

**Table 4.99: The Awareness of the ‘Basic Sense of in’: The Experimental Group/
the Pre-Test**

According to Table 4.99, the correct answer accounts for 35% of the total. The majority of the students could not identify the conceptual meaning expressed by *in*. Most of them may know that *in* means *inside*, but it appears that they were not acquainted with the notion of *enclosure* denoted by *in*. So, they just selected the answers relying on their own understanding of the sentence.

- **Sentence No. 28**

28. ‘He suffered a serious bruise above his left eye.’

- a) His bruise was on his left eye
- b) His bruise was higher than his left eye [**The Correct Answer**]
- c) His bruise was on top of his left eye

Options	No.	%
Right	13	32.50
Wrong (a)	11	27.50
Wrong (c)	16	40
No Answer	00	00
Total	40	100

Table 4.100: The Awareness of the ‘Basic Sense of above’: The Experimental Group/ the Pre-Test

It is clear from Table 4.100 that two fifths of the students selected the wrong option (c) *on top of his eyes*, while less than a third of them were able to identify the right answer *higher than*, and just over a quarter of them opted for *on his eyes*. The basic sense of *above* seems to be unknown to the students, and they seem to have a limited knowledge concerning the difference between the conceptual meanings of *above*, *on top of* and *on*. The preposition *on* differs from *above* and, in specific cases, it can mean *on top of*. Although both *above* and *on top of* have to do with ‘verticality’, *on top of* is different from *above* in terms of the type of the

landmark it refers to; it has to do with high landmarks, and the latter are in contact with the trajectors, whereas *above* suggests that the trajector is higher than the landmark (cf. Lindstromberg, 2010, p. 56).

- **Sentence No. 29**

29. ‘The accused murderer’s wife was able to remain loyal through her conviction of his innocence.’

- a) She was able to remain loyal via her conviction
- b) She was able to remain loyal because of her conviction [**The Correct Answer**]
- c) She was able to remain loyal by way of her conviction

Options	No.	%
Right	07	17.50
Wrong (a)	20	50
Wrong (c)	12	30
No Answer	01	02.50
Total	40	100

Table 4.101: The Awareness of the ‘Cause Sense’: The Experimental Group/the Pre-Test

Table 4.101 reveals that 50% of the students chose *via* and 30% *by way of*. As with the *by means of sense* associated with *through* (sentence No. 15, p. 206), the students’ answers also show that they were neither aware of the difference between *via*, *by way of* and *because of* nor the *cause sense* associated with *through*.

- **Sentence No. 30**

30. ‘I am over my cold’.

- a) I have recovered from my cold [**The Correct Answer**]
- b) I am still suffering from my cold
- c) I am cold

Options	No.	%
Right	22	55
Wrong (b)	15	37.50
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

**Table 4.102: The Awareness of the Sense ‘Recovered from’: The Experimental Group/
the Pre-Test**

Table 4.102 illustrates that 55% of the students identified that the correct meaning is *recovered from*. The percentages of the students’ answers indicate that they exhibited a rather low level of awareness of this sense.

- **Sentence No. 31**

31. ‘A: Have we got any milk left?’

‘B: No, we’re (all) out!’

- a) We’re all outside
- b) We no longer have milk [**The Correct Answer**]
- c) We have not bought milk

Options	No.	%
Right	16	40
Wrong (a)	05	12.50
Wrong (c)	19	47.50
No Answer	00	00
Total	40	100

**Table 4.103: The Awareness of the ‘No More Sense’: The Experimental Group/
the Pre-Test**

We can see from Table 4.103 that almost half the students chose the wrong option (c). The fact that just a small minority of the students (12.50%) opted for the wrong option (a), ‘we’re all out’, reveals that they could recognize that *out* is not used spatially, yet they could not determine its metaphorical sense because they appear to lack knowledge about the *no more sense of out*. On the basis of the results, they probably relied more on their own understanding of the expression wherein *out* is used rather than on their background knowledge.

- **Sentence No. 32**

32. ‘The fruit is allowed to mature on the tree.’

- a) Above the tree
- b) Over the tree
- c) In contact and supported by the tree [**The Correct Answer**]

Options	No.	%
Right	24	60
Wrong (a)	09	22.50
Wrong (b)	07	17.50
No Answer	00	00
Total	40	100

**Table 4.104: The Awareness of the ‘Rotated Schema of on’: The Experimental Group/
the Pre-Test**

According to Table 4.104, a large number of the students (60%) answered correctly. Exactly 22.50% of them selected *above* and a small minority (17.50%) *over*. The students’ familiarity with this sense was at the moderate level.

- **Sentence No. 33**

33. ‘While I was in the garden, a snake crawled out in front of me.’

- a) Moved outside the garden in front of me
- b) Appeared in front of me **[The Correct Answer]**
- c) Moved quickly across the ground in front of me

Options	No.	%
Right	25	62.50
Wrong (a)	03	07.50
Wrong (c)	11	27.50
No Answer	01	02.50
Total	40	100

**Table 4.105: The Awareness of the ‘Appearance Sense’: The Experimental Group/
the Pre-Test**

Table 4.105 shows that the correct option accounts for 62.50% of the total, followed by the wrong option (c) at 27.50%, and an insignificant number of the students (07.50%) opted for the wrong option (a). It could be said that the students in the Experimental Group showed a moderate level of awareness of the ‘*appearance sense of out*’.

- **Sentence No. 34**

34. ‘They are in the manufacture of expensive baby clothes.’

- a) They are inside the manufacture of expensive baby clothes
- b) They work for a company that manufactures expensive baby clothes **[The Correct Answer]**
- c) They are in the process of manufacturing expensive baby clothes

Options	No.	%
Right	09	22.50
Wrong (a)	24	60
Wrong (c)	07	17.50
No Answer	00	00
Total	40	100

**Table 4.106: The Awareness of the ‘Activity Sense’: The Experimental Group/
the Pre-Test**

According to Table 4.106, 22.50% of the students answered correctly, whereas a large number of them (60%) thought that the meaning of *in* is *inside*. The percentages of the students’ answers reveal that they were not familiar with the fact that *in* can stand metonymically for *the activity* wherein the trajector (or somebody) works. They lacked enough background knowledge concerning this sense.

- **Sentence No. 35**

35. ‘The children jumped over the puddles on their way to school.’

- a) They jumped in the puddle
- b) They jumped above and across the puddle [**The Correct Answer**]
- c) They jumped in and then out of the puddle

Options	No.	%
Right	22	55
Wrong (a)	05	12.50
Wrong (c)	12	30
No Answer	01	02.50
Total	40	100

**Table 4.107: The Awareness of the ‘above-across Sense’: The Experimental Group/
the Pre-Test**

Table 4.107 indicates that the correct answer makes up fifty five per cent of the total, and the wrong option (c) accounts for 30% of the total, while a small number of the students (12.50%) opted for the wrong option (a). It seems that the students exhibited a rather low level of awareness of the *curving path* that the preposition *over* denotes. They possibly answered on basis of how they understood or imagined the scene indicated by *over* and the verb *to jump*.

- **Sentence No. 36**

36. ‘On the trail, we came across some hikers from Australia.’

- a) We found hikers by chance [**The Correct Answer**]
- b) We came nearer to some hikers
- c) We met some hikers as planned

Options	No.	%
Right	18	45
Wrong (b)	12	30
Wrong (c)	10	25
No Answer	00	00
Total	40	100

Table 4.108: The Awareness of ‘Come across’: The Experimental Group/the Pre-Test

Table 4.108 shows that 45% of the students were able to recognize that (a) is the correct answer. The percentages of the wrong answers (30% “b” + 25% “c”) reveal that the students provided their answers on the basis of their own understanding of *come across* in relation to the words used in the sentence. In other words, they were not aware of the meaning of *across* when it is combined with *come*. Hence, their familiarity was at the very low level.

- **Sentence No. 37**

37. ‘He hangs a mirror above the chimney.’

- a) On the chimney
- b) Near the chimney
- c) Over the chimney [**The Correct Answer**]

Options	No.	%
Right	18	45
Wrong (a)	15	37.50
Wrong (b)	06	15
No Answer	01	02.50
Total	40	100

Table 4.109: The Awareness of the ‘*Dynamic Sense of above*’: The Experimental

Group/the Pre-Test

Table 4.109 exhibits that the students were not familiar with the *dynamic sense of above*. Exactly 45% selected the right answer, while 37.50% chose the wrong option (a). The percentages of the students’ answers indicate their limited understanding and knowledge of the meanings associated with these prepositions. This means that their awareness was at the very low level.

- **Sentence No. 38**

38. ‘The manager opened the door and stepped in.’

- a) The manager raised his foot
- b) The manager moved to the inside [**The Correct Answer**]
- c) The manager opened the door and stood in the way

Options	No.	%
Right	28	70
Wrong (a)	01	02.50
Wrong (c)	11	27.50
No Answer	00	00
Total	40	100

**Table 4.110: The Awareness of the ‘*Dynamic Sense of in*’: The Experimental Group/
the Pre- Test**

Table 4.110 shows that a significant number of the students (70%) were able to select the right answer, and the meaning of the verb *to step* did not confuse them. The results indicate that the majority of the students were aware of the *dynamic sense of in*, and their familiarity with it was at the rather high level.

- **Sentence No. 39**

39. ‘We decided to go for a walk over the hill.’

- a) To go to the hill
- b) To walk around the hill
- c) To walk from one side to the other of the hill [**The Correct Answer**]

Options	No.	%
Right	11	27.50
Wrong (a)	09	22.50
Wrong (b)	20	50
No Answer	00	00
Total	40	100

**Table 4.111: The Awareness of ‘*Contact Indicated by over*’: The Experimental
Group/the Pre-Test**

Of the data gathered in Table 4.111, we can see that the wrong option (b) accounts for 50% of the total, whereas the right answer represents 27.50% of the total. The percentages of the students' answers could mean that their awareness of this sense was at the rather low level. They thought that *over* and *around* are synonymous because they did not know that the conceptual meaning of *over* is *to walk from one side to the other side*.

- **Sentence No. 40**

40. 'The company's profits are above the ones in the previous year.'

- a) They are better than the ones in the previous year
- b) They are over the ones in the previous year [**The Correct Answer**]
- c) They exceed the ones in the previous year

Options	No.	%
Right	04	10
Wrong (a)	31	77.50
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.112: The Awareness of the 'More than Sense': The Experimental Group/
the Pre-Test**

Table 4.112 illustrates that a great proportion of the students' answers (77.50%) account for the wrong option (a). The very low percentage of the correct answer (10%) shows that the students relied more on their own understanding of the sentence. The majority of them did not pay attention to the main idea of this sentence which focuses on the quantity of the profits and not on comparing the results. It follows that the students were not knowledgeable about the *more than sense* associated with *above*.

- **Sentence No. 41**

41. ‘The child was screaming when she drew him out of the club’s swimming pool.’

- a) Away from the inside of the swimming pool [**The Correct Answer**]
- b) From the outside of the club’s swimming pool
- c) Into the swimming pool

Options	No.	%
Right	22	55
Wrong (b)	14	35
Wrong (c)	03	07.50
No Answer	01	02.50
Total	40	100

**Table 4.113: The Awareness of the ‘Basic Sense of out’: The Experimental Group/
the Pre-Test**

Table 4.113 reveals that 55% of the students could identify the right answer, 35% opted for the wrong option (b), and a very small number (07.50%) chose the wrong option (c). These percentages show that the students exhibited a rather low level of awareness of the basic sense of *out*. They probably knew that *out* means *outside*, but because of their limited knowledge, they were not conscious of the conceptual meaning of *out*, which denotes *a movement from the inside to the outside*.

- **Sentence No. 42**

42. ‘Oxygen must be held in a sealed container.’

- a) Oxygen must be pressed there
- b) Oxygen must be enclosed there
- c) Oxygen must be blocked there [**The Correct Answer**]

Options	No.	%
Right	13	32.50
Wrong (a)	12	30
Wrong (b)	15	37.50
No Answer	00	00
Total	40	100

**Table 4.114: The Awareness of the ‘Blockage Sense’: The Experimental Group/
the Pre-Test**

Table 4.114 shows that the percentages of the three options are either over a third or less than a third. The wrong option (b) accounts for 37.50% of the total, then the right option at 32.50%, followed by the wrong option (a) at 30%. The *blockage sense of in* appears to be problematic for the students. They were probably confused because they could not distinguish between the spatial use of *in* which indicates *enclosure*, and its metaphorical use which involves the notion of *blockage*. Accordingly, the students were not aware of the *blockage sense*, so they answered on the basis of their own understanding of the sentence rather than on their background knowledge of this sense.

- **Sentence No. 43**

43. ‘There are several huts across the river.’

- a) On the other side of the river [**The Correct Answer**]
- b) Near the river
- c) Beyond the river

Options	No.	%
Right	15	37.50
Wrong (b)	13	32.50
Wrong (c)	12	30
No Answer	00	00
Total	40	100

**Table 4.115: The Awareness of the ‘Static Sense of across’: The Experimental Group/
the Pre-Test**

Of the data presented in Table 4.115, the right answer makes up 37.50% of the total. Next, the wrong option (b) accounts for 32.50% and then (c) at 30%. The latter percentages illustrate that the students were not conscious that the conceptual meaning of the static use of *across* is *on the other side of*. Therefore, their familiarity with the *static sense of across* is considered to be at the very low level.

- **Sentence No.44**

44. ‘There is no one over him in the department.’

- a) No one rules him in the department [**The Correct Answer**]
- b) There is no one but him in the department
- c) He has the highest rank in the department

Options	No.	%
Right	09	22.50
Wrong (b)	04	10
Wrong (c)	27	67.50
No Answer	00	00
Total	40	100

**Table 4.116: The Awareness of the ‘Control Sense’: The Experimental Group/
the Pre-Test**

Table 4.116 indicates that the majority of the students (67.50%) chose the wrong option (c) which refers indirectly to *above*. It means that the students lacked a clear understanding of the control sense of *over*; they were not aware of this sense and of the fact that *above* has not developed a *control sense* even though it denotes upness like *over*. Because of their limited knowledge, the students selected their answers on the basis of how they comprehended the sentence.

- **Sentence 4.45**

45. ‘She drove through the garage at sixty kilometers an hour.’

- a) She drove into the garage
- b) She drove into and then exited the garage [**The Correct Answer**]
- c) She drove closer to the garage

Options	No.	%
Right	10	25
Wrong (a)	17	42.50
Wrong (c)	13	32.50
No Answer	00	00
Total	40	100

Table 4.117: The Awareness of the ‘Basic Sense of through’: The Experimental Group/ the Pre-Test

Table 4.117 reveals that only a quarter of the students have information about the meaning of *through*. Almost half of them (42.50%) chose *into* which represents only part of the basic meaning of *through*. It seems that the students exhibited a very low level of awareness of the basic sense of *through*; they did not know that the conceptual meaning of *through* indicates *moving into the garage and then going out of this bounded landmark*.

- **Sentence No. 46**

46. ‘Interviews will be held at the above address on 2 December.’

- a) At the following address
- b) Outside the earlier address
- c) At the preceding address [**The Correct Answer**]

Options	No.	%
Right	11	27.50
Wrong (a)	20	50
Wrong (b)	09	22.50
No Answer	00	00
Total	40	100

**Table 4.118: The Awareness of the ‘Earlier Sense’: The Experimental Group/
the Pre-Test**

It can be seen from Table 4.118 that half the students selected the wrong option, ‘at the following address’, but just over a quarter of them opted for the right answer. The students in the Experimental Group showed a very low level of awareness of the *earlier than sense* associated with *above* when expressing *location in texts*. They lacked a clear knowledge of the fact that *above* indicates metaphorical *location at a higher than position*.

- **Sentence 4.47**

47. ‘When the police were running after, he was doing over a hundred miles.’

- a) He was doing again a hundred miles
- b) He was doing more than a hundred miles [**The Correct Answer**]
- c) He ended up doing a hundred miles

Options	No.	%
Right	28	70
Wrong (a)	06	15
Wrong (c)	06	15
No Answer	00	00
Total	40	100

Table 4.119: The Awareness of the ‘More Sense’: The Experimental Group/the Pre-Test

Table 4.119 shows that a significant majority of the students (70%) were able to identify the right answer. Only a small minority (15%) chose the options (a) and (c), respectively. It could be deduced from the results that the students exhibited a rather high level of awareness of the *more than sense* associated with *over*.

- **Sentence No. 48**

48. ‘If fire breaks out, get in single file before leaving.’

a) Form a line before leaving [**The Correct Answer**]

b) Get into a single file before leaving

c) Get inside a single file before leaving

Options	No.	%
Right	06	15
Wrong (b)	11	27.50
Wrong (c)	23	57.50
No Answer	00	00
Total	40	100

Table 4.120: The Awareness of the ‘Use of in to Indicate Shapes’: The Experimental Group/ the Pre-Test

Table 4.120 indicates that the wrong option (c) makes up 57.50% of the total, whereas the correct answer accounts for 15% of the total. The students had a limited knowledge about the difference between the senses of *in*. They did not pay attention that *in* is used metaphorically and not spatially to mean *inside*. It could be said that the students' awareness of the metaphorical use of *in* to indicate *shapes* was at the rather low level.

- **Sentence No. 49**

49. 'They put the blame on her because she told the secret to everyone.'

- a) The blame made her be in trouble because she told the secret
- b) The blame was a burden because she told the secret [**The Correct Answer**]
- c) The blame was a responsibility because she told the secret

Options	No.	%
Right	08	20
Wrong (a)	11	27.50
Wrong (c)	21	52.50
No Answer	00	00
Total	40	100

**Table 4.121: The Awareness of the 'Burden Metaphor': The Experimental Group/
the Pre-Test**

According to Table 4.121, the wrong answer (c) accounts for 52.50% of the total, the option (a) makes up 27.50% and the right answer represents only 20% of the total. It appears that the students selected the answers without knowing that *on* is used to talk about *burdens*. Accordingly, their selection was highly based on how they conceived the meaning of the sentence because their awareness of the *burden metaphor* was at the very low level.

-Part Two

- **Blank No. 1**

“One day, while I was in my office, a sergeant came (1)..... and told me that the police chief wanted to see me”. [The Correct Answer: *in*]

Prepositions	No.	%
*In	23	57.50
On	07	17.50
Over	01	02.50
Across	02	05
Out	06	15
Through	01	02.50
Total	40	100

* **The Correct Answer**

Table 4.122: The Experimental Group’s Use of the ‘Dynamic Sense of *in*’ in the Pre-Test

Table 4.122 reveals that over half the students (57.50%) could recognize that the first blank stands for a spatial relation. They could select the correct preposition and the correct sense. However, 17.50% of them confused it with *on*, 02.50% with *over*, 05% with *across*, 15% with *out* and 02.50% with *through*. These students were not able to determine the right sense and the right preposition because they did not know the difference between the use of *in* and these prepositions when combined with the verb *to come*.

- **Blank No.2**

“[...] I stood in front of his desk while he began to get (2)..... to me the story of the Smith family [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	05	12.50
Out	05	12.50
In	10	25
Over	02	05
Above	02	05
On	14	35
Through	02	05
Total	40	100

Table 4.123: The Experimental Group’s Use of ‘Get across’ in the Pre-Test

Table 4.123 shows that a tiny minority of the students (12.50%) were able to identify that the correct answer is *across*, whereas 35% of them failed to differentiate it from *on*, 25% from *in*, 05% from *over*, 05% from *above* and 05% from *through*. The use of *above* is completely wrong and also confirms the students’ lack of knowledge of its metaphorical senses. The students in the Experimental Group showed a severe lack of awareness of the nuances between *get across*, *get out*, *get in*, *get over*, *get on* and *get through*.

- **Blank No. 3**

“[...] my chief was really convinced that Mr. Smith was (3).....cruelty to kill his wives [...]”. [The Correct Answer: *above*]

Prepositions	No.	%
*Above	01	02.50
Through	01	02.50
On	02	05
Across	02	05
In	10	25
Over	12	30
Out	11	27.50
Total	40	100

Table 4.124: The Experimental Group’s Use of the ‘*Separation Sense of above*’ in the Pre Test

Table 4.124 illustrates that only 1 student could recognize the *separation sense of above*. We can also see that *over* makes up 30% of the total, and *in* accounts for 25% of the total, followed by *out* at 27.50%. The use of *through* at 02.50% and *across* at 05% could mean that these students seem to lack a clear knowledge about the senses of these prepositions. The use of *in*, *on*, *over* and *out* reveals that they did not differentiate between the target domains of the metaphorical senses they denote; *above* means to be ‘*too good or separated from negative actions*’, *over* has to do with ‘*difficulties as well as problems*’, *on* with ‘*unwelcome states*’, and *out* and *in* with *emotions* as well as *states*.

- **Blank No. 04**

“[...]. The Smith house [...] was situated (4).....a broad expanse of a lawn [...]”. [The Correct Answer: *across*]

Prepositins	No.	%
*Across	14	35
Out	02	05
In	18	45
Above	06	15
Total	40	100

Table 4.125: The Experimental Group’s Use of the ‘Static Sense of across’

in the Pre-Test

Table 4.125 shows that the use of *across* accounts for 35% of the total. The students in the Experimental Group gave three wrong answers. The use of *in* at 45%, *out* at 05% and *above* at 15% indicates that they were unable to determine the correct preposition because they may not know that *across* has to do with planar landmarks, and it differs from these prepositions in terms of the type of the landmarks they refer to.

- **Blank No. 5**

“It was a house which rose like a tower (5) the hill”. [The Correct Answer: *on*]

Prepositions	No.	%
*On	20	50
Through	02	05
In	05	12.50
Above	13	32.50
Total	40	100

Table 4.126: The Experimental Group Use of the ‘Static Sense of on’ in the Pre-Test

According to Table 4.126, 50% of the students recognized that the blank stands for a spatial relation and it refers to *on*. The remaining 50% of them provided totally wrong answers

(*above* at 32.50%, *through* at 05% and *in* at 12.50%) because of their limited knowledge of the senses of these prepositions. Even though the use of *above* is wrong, this reveals the students' low level of awareness of the nuances that exist between *on* and *above*, especially when it comes to spatial relationships.

- **Blank No. 6**

“[...] Mr. Smith suggested staying the evening in his house. I was led away (6)..... a dark hall to my room [...]”. **[The Correct Answer: *through*]**

Prepositions	No.	%
*Through	05	12.50
Over	05	12.50
Above	10	25
Across	02	05
Out	02	05
On	14	35
In	02	05
Total	40	100

Table 4.127: The Experimental Group's Use of the 'Dynamic Sense of *through*' in the Pre-Test

Of the data exhibited in Table 4.127, only 12.50% of the students were able to identify that the answer is the preposition *through*, and 12.50% of them confused it with *over*. It seems that they may not know the difference between *through* and *over* when they denote dynamic relations. Similarly, we can see that the percentages of *across* (05%), *out* (05%) and *in* (05%) are small, but they are indicators of the students' limited knowledge about the difference between the types of motion each preposition denotes. Although *on* and *above* are not related

to *through*, they make up 35% and 25% of the total because, most probably, the students conceived the context from their own perspectives. It is clear from Table 4.127 that the students' ability to use *through* dynamically was at the very low level.

- **Blank No. 7**

“[...] That night, I did not sleep well because there was a lot of pressure (7) me [...].”

[The Correct Answer: *on*]

Prepositions	No.	%
*On	12	30
Out	02	05
In	05	12.50
Above	13	32.50
Over	08	20
Total	40	100

Table 4.128: The Experimental Group's Use of the 'Burden Metaphor' in the Pre-Test

Table 4.128 reveals that *on* represents 30% of the total. Slightly over a third of the students (32.50%) confused *on* with *above*, and precisely a fifth of them failed to distinguish it from *over*. The results bring to light the fact that the students were not familiar with the nuances between *on*, *above* and *over* when they refer to non-spatial situations.

- **Blank No.8**

“[...] a small plane hovering (8) the house [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	19	47.50
Across	01	02.50
In	07	17.50
Through	01	02.50
On	04	10
Out	08	20
Total	40	100

Table 4.129: The Experimental Group’s Use of the ‘*Dynamic Sense of over*’ in the Pre-Test

According to Table 4.129, 47.50% of the students were able to use the *dynamic sense of over*. Noticeably, the use of *in* at 17.50% could mean that the students got used to using it with the word *house*, but they did not realize that the meaning conveyed is odd. The use of *out* at 20% reveals that they conceived the context from their own perspectives. It seems that the students were not aware of the differences between the landmarks each preposition can be used with.

- **Blank No.9**

“It was very close to the earth (9)..... the airstrip.” [The Correct Answer: *above*]

Prepositions	No.	%
*Above	07	17.50
Out	03	07.50
Across	05	12.50
Through	09	22.50
In	06	15
On	06	15
No Answer	04	10
Total	40	100

Table 4.130: The Spatial Use of *above* by the Experimental Group in the Pre-Test

Table 4.130 reveals that the students' ability to use *above* spatially was at the very low level. Just 17.50% of them answered correctly, and a large number of them did not distinguish between *above* and *out* at 07.50%, *across* at 12.50%, *through* at 22.50%, *in* at 15% and *on* at 15%. Some of the latter are related semantically to *above* like *on*, while the meanings of *through*, *out*, *in* and *across* are not related to *above*. The students may not know the difference between the kinds of landmarks these prepositions refer to.

- **Blank No. 10**

“The plane rolled to a stop and landed (10)the area near the convent.”[**The Correct Answer: *on***]

Prepositions	No.	%
*On	19	47.50
Out	01	02.50
Above	07	17.50
Across	01	02.50
Over	04	10
In	08	20
Total	40	100

Table 4.131: The Experimental Group's Use of the 'Dynamic Sense of *on*' in the Pre-Test

It appears from Table 4.131 that the *dynamic sense of on* accounts for 47.50% of the total. Twenty percent of the students failed to differentiate between *on* and *in*, 17.50% of them did not know that *on* is not similar to *above*, and 10% confused *on* with *over*. The results reveal the students' severe lack of awareness of the difference between the dynamic senses of *on*, *in*, *above* and *over*.

- **Blank No. 11**

“[...], a woman got (11) dressed in a long black dress [...].” [The Correct Answer: *out*]

Prepositions	No.	%
*Out	22	55
Over	03	07.50
On	06	15
In	08	20
No Answer	01	02.50
Total	40	100

**Table 4.132: The Experimental Group’s Use of the ‘Dynamic Sense of out’
in the Pre-Test**

Table 4.132 reveals that 55% of the students identified the *dynamic sense of out*. Exactly 20% of them confused *out* with *in* and 15% with *on*. Although *on* is not semantically related to *out*, the students used it because they most probably understood the context wrongly; they thought that ‘the woman got on the plane’. In addition, they appear to confuse between *out* and *in* when both refer to dynamic situations.

- **Blank No. 12**

“[...] I decided to pay a visit to the convent. (12) the convent, the curtains [...].” [The Correct Answer: *in*]

Prepositions	No.	%
*In	21	52.50
Over	03	07.50
On	03	07.50
Through	09	22.50
Above	02	05
Across	01	02.50
No Answer	01	02.50
Total	40	100

Table 4.133: The Experimental Group’s Use of the ‘Static Sense of *in*’ in the Pre-Test

Table 4.133 shows that the preposition *in* was mainly confused with *through* at 22.50%. The results mean that the students lack a clear understanding of the difference between *through* and *in* in static relations because both of them are semantically related.

- **Blank No. 13**

“[...] the curtains were (13).....the window [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	03	07.50
Across	06	15
Out	05	12.50
Above	13	32.50
In	04	10
Through	01	02.50
On	08	20
Total	40	100

Table 4.134: The Experimental Group’s Use of the ‘Covering Sense of *over*’ in the Pre-Test

We can see from Table 4.134 that an insignificant minority (07.50%) of the students identified the right answer, while 32.50% confused *over* with *above*, 20% failed to identify the difference between *on* and *over*, and 15% confused *over* with *across*. Hence, the results show that the students were not aware of the difference between *over*, *on* and *above* when indicating a static relation. In other words, they showed a very low of awareness of the nuances between these prepositions.

- **Blank No. 14**

“[...] there was parsley spread (14)..... on the table [...]” [The Correct Answer: *out*]

Prepositions	No.	%
*Out	13	32.50
In	01	02.50
Across	02	05
On	01	02.50
Through	04	10
Above	05	12.50
Over	11	27.50
No Answer	03	07.50
Total	40	100

Table 4.135: The Experimental Group’s Use of the ‘Distribution Sense of out’ in the Pre-Test

According to Table 4.135, the correct answer makes up 32.50% of the total. The students seem to encounter difficulties in using *out* metaphorically. They confused *out* with *over* because they thought that both of them can be employed with the verb *to spread*. Yet, they did not realize that *over* refers to the *covering sense* if the trajector is larger than the landmark and *out* indicates *distribution* of the trajector in all directions.

- **Blank No. 15**

“[...] two pictures hanging on the wall which were placed (15).....the same table [The

Correct Answer: *above*]

Prepositions	No.	%
*Above	09	22.50
On	21	52.50
In	08	20
No Answer	02	05
Total	40	100

Table 4.136: The Experimental Group’s Use of the ‘*Dynamic Sense of above*’

in the Pre-Test

It is clear from Table 4.136 that over half the students (52.50%) failed to distinguish between *above* and *on* in dynamic relations. This further confirms the fact that they were not familiar with the nuances that exist between *above* and *on*. The use of *in* at 20% could be explained by the influence of the students’ mother tongue on their understanding.

- **Blank No. 16**

“[...] a group of women sitting around a small table (16).....thoughtful calm [...]” [The

Correct Answer: *in*]

Prepositions	No.	%
*In	23	57.50
Through	01	02.50
Over	04	10
Across	03	07.50
On	05	12.50
No Answer	04	10
Total	40	100

Table 4.137: The Experimental Group’s Use of the ‘State Sense of in’ in the Pre-Test

Table 4.137 indicates that 57.50% of the students used correctly *in*. They appear to be unfamiliar with the difference between the target domains of the metaphorical senses of *in* and *on*, in that the latter refers to specific kind of *unwelcome states* such as *burdens*, while the former indicates *states or emotions* in general. It follows that the students exhibited a low level of awareness of the nuances between these two prepositions when used metaphorically.

- **Blank No. 17**

“ [...]. I stood (17).....in the garden thinking [...]”. [The Correct Answer: *out*]

Prepositions	No.	%
*Out	29	72.50
Over	01	02.50
Across	04	10
On	02	05
Above	03	07.50
No Answer	01	02.50
Total	40	100

Table 4.138: The Experimental Group’s Use of the ‘Static Sense of out’ in the Pre-Test

Table 4.138 reveals that a significant number of the students (72.50%) were able to use *out* appropriately. The remaining 27.50% gave wrong prepositions because they were not aware of difference between *over*, *on*, *above* and *across*, so, they just provided answers on the basis of their own understanding. Thus, The static sense of *out* seems to be unproblematic for the students.

- **Blank No. 18**

“[...] when quiet hour was (18), someone might come and talk to me [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	32	80
In	01	02.50
On	03	07.50
Across	03	07.50
No Answer	01	02.50
Total	40	100

Table 4.139: The Experimental Group’s Use of the ‘Completion Sense of over’ in the Pre-Test

Table 4.139 illustrates that a very large majority of the students (80%) succeeded in identifying that the correct answer is the *completion sense of over*. Their ability to use *over* metaphorically was at the very high level since the majority of them were able to distinguish it from the other senses.

- **Blank No. 19**

“Unexpectedly, I saw the woman with the straw hat walking (19)..... the garden and going towards Mr. Smith’s house [...].” [The Correct Answer: *across*]

Prepositions	No.	%
*Across	16	40
Over	01	02.50
Through	06	15
Out	01	02.50
In	16	40
Total	40	100

**Table 4.140: The Experimental Group’s Use of the ‘Dynamic Sense of across’
in the Pre-Test**

Table 4.140 illustrates that 40% of the students were able to determine the right sense of the blank, and 40% used *in* instead of *across*. This shows that the students did not know the nuances between *in* and *across* when they indicate motion.

- **Blank No. 20**

“She [...] continued moving quickly (20).....the trees [...].” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	27	67.50
Over	03	07.50
On	01	02.50
Above	02	05
Across	07	17.50
Total	40	100

Table 4.141: The Experimental Group’s Use of *through* Spatially in the Pre-Test

According to Table 4.141, 67.50% of the students could realize that this blank stands for *through*. As indicated in Table 141, only 17.50% of them could not distinguish between *through* and *across*, and 07.50% of them confused between *over* and *through*. The results show that the students had a limited knowledge of how these prepositions differ from each other.

- **Blank No. 21**

“I received a letter from that woman [...]. (21).....this letter, I discovered that the deaths of his wives were accidental.” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	17	42.50
In	16	40
Above	01	02.50
On	03	07.50
Over	02	05
No Answer	01	02.50
Total	40	100

Table 4.142: The Experimental Group’s Use of the ‘Means Sense’ in the Pre-Test

Table 4.142 exhibits that the correct use of *through* accounts for 42.50% of the total. We can see also that the use of *in* makes up 40% of the total. This shows that the students were not familiar with the nuances between the use of *in* when it denotes *metaphorical containment* and *through* when it indicates *by means of*.

4.3.2.1 The Post-Test

The central aim of the post-test is to measure the students' comprehension and use of the target prepositions, *above, across, in, on, out, over* and *through*, after they have gained knowledge from the instructional period.

–The Control Group

– Part One

- **Sentence No. 1**

1. 'The cow munched grass in the field.'

- a) The cow was within the bounds of the field **[The Correct answer]**
- b) The cow ate grass around the field
- c) The cow chewed grass into the field

Options	No.	%
Right	11	27.50
Wrong (b)	07	17.50
Wrong (c)	21	52.50
No Answer	01	02.50
Total	40	100

Table 4.143: The Awareness of the 'Inclusion Sense': The Control Group/the Post-Test

It can be seen from Table 4.143 that the wrong option (c) accounts for the majority of the students' answers. Over half the students (52.50%) thought that *in the bounds* means *into the bounds* instead of *within the bounds*. It could be said that the students' awareness in the Control Group remained at the very low level.

- **Sentence No. 2**

2. ‘I like coffee over milk in breakfast.’

- a) I like coffee mixed with milk in breakfast
- b) I like both coffee and milk in breakfast
- c) I like coffee better than milk in breakfast [**The Correct Answer**]

Options	No.	%
Right	17	42.50
Wrong (a)	21	52.50
Wrong (b)	02	05
No Answer	00	00
Total	40	100

Table 4.144: The Awareness of the ‘Preference Sense’: The Control Group/the Post-Test

Table 4.144 shows that over half the students (52.50%) selected the wrong option (a). This means that they were still not familiar with *the preference sense of over*. The selection of their answers was based on their own cultural background or understanding of the context rather than on their knowledge of the polysemy of *over*.

- **Sentence No. 3**

3. ‘There is a heat across the country’

- a) On the other side of the country
- b) Throughout the country [**The Correct Answer**]
- c) Inside and outside the country

Options	No.	%
Right	14	35
Wrong (a)	23	57.50
Wrong (c)	02	05
No Answers	01	02.50
Total	40	100

Table 4.145: The Awareness of the ‘*all over Sense*’: The Control Group/the Post-Test

Table 4.145 reveals that the number of students who answered correctly accounts for 35% of the total. More than 50 per cent of them, however, chose the wrong option (a). It seems that the students’ awareness remained stable because their answers show that they had a problem in their familiarity with the *all over sense* associated with *across*.

- **Sentence No. 4**

4. ‘Yesterday, they were giving leaflets out in front of the underground station.’

- a) Delivering leaflets outside in front of the underground station
- b) Distributing leaflets in front of the underground station [**The Correct Answer**]
- c) Proposing leaflets in front of the underground station

Options	No.	%
Right	11	27.50
Wrong (a)	19	47.50
Wrong (c)	05	12.50
No Answer	05	12.50
Total	40	100

**Table 4.146: The Awareness of the ‘*Distribution Sense*’: The Control Group/
the Post-Test**

Table 4.146 illustrates that only a small number of the students (27.50%) selected the right answer. The students in the Control Group kept linking the preposition *out* with its synonym *outside* without paying attention to the conceptual meaning of the sentence. They relied on their understanding of the context rather than on the knowledge they gained from the instruction.

- **Sentence No. 5**

5. ‘The strike is over and our membership has not voted.’

- a) The strike is no longer in progress [**The Correct Answer**]
- b) The strike is repeated again
- c) The strike is postponed

Options	No.	%
Right	29	72.50
Wrong (b)	02	05
Wrong (c)	08	20
No Answer	01	02.50
Total	40	100

**Table 4.147: The Awareness of the ‘Completion Sense of over’: The Control Group/
the Post-Test**

Table 4.147 reveals that 72.50% of the students could identify the correct answer. The results indicate that the students in the Control Group showed a rather high level of awareness and comprehension of the *completion sense of over*.

- **Sentence No. 6**

6. ‘I am reading a book on dogs in which the writer describes how these animals could be dangerous’

- a) I am reading a book which addresses dogs [**The Correct Answer**]
- b) I am reading a book concerning dogs
- c) I am reading a book around dogs

Options	No.	%
Right	04	10
Wrong (b)	28	70
Wrong (c)	07	17.50
No Answer	01	02.50
Total	40	100

**Table 4.148: The Awareness of ‘Metaphorical Contact’: The Control Group/
the Post-Test**

Table 4.148 shows that a small minority of the students (10%) could select the correct answer, while a significant majority of them (70%) selected the wrong sense ‘*concerning*’ and 17.50% *around*. The students’ awareness remained at the very low level because they encountered difficulties in differentiating between *around*, *on* and *concerning*.

- **Sentence No. 7**

7. ‘There is a sign over the door.’

- a) Beside the door
- b) On the door
- c) Above the door [**The Correct Answer**]

Options	No.	%
Right	06	15
Wrong (a)	08	20
Wrong (b)	26	65
No Answer	00	00
Total	40	100

**Table 4.149: The Awareness of the ‘above-Sense of over’: The Control Group/
the Post-Test**

With regard to Table 4.149, the majority of the students (65%) chose the wrong option (b). The students’ low level of awareness did not change since they could not realize that the *static sense of over* is, in many cases, interchangeable with *above* and not *on*.

- **Sentence No. 8**

8. ‘Ann is through with the book.’

- a) She is in the process of reading the book
- b) She has finished reading the book [**The Correct Answer**]
- c) She is carrying the book

Options	No.	%
Right	08	20
Wrong (a)	20	50
Wrong (c)	11	27.50
No Answer	01	02.50
Total	40	100

**Table 4.150: The Awareness of the ‘Completion Sense of through’: The Control Group/
the Post-Test**

We can see from Table 4.150 that a few number of the students (20%) selected the correct answer, while 50% of them opted for the wrong option (a). *The completion sense* associated with *through* constituted a problem to the students to identify it.

- **Sentence No. 9**

9. ‘In the navy, a captain is above a commander.’

- a) He is higher than a commander [**The Correct Answer**]
- b) He is stronger than a commander
- c) He is more advanced than a commander

Options	No.	%
Right	26	65
Wrong (b)	01	02.50
Wrong (c)	13	32.50
No Answer	00	00
Total	40	100

Table 4.151: The Awareness of the ‘Superior Sense’: The Control Group/the Post-Test

Table 4.151 shows a noticeable increase in the students’ background knowledge after the instruction. A large number of the students (65%) identified that the meaning of *above* is metaphorical.

- **Sentence No. 10**

10. ‘The heavy rain caused the river to flow over its bank.’

- a) To flow above its bank
- b) To flow across its bank
- c) To exceed its bank [**The Correct Answer**]

Options	No.	%
Right	13	32.50
Wrong (a)	14	35
Wrong (b)	11	27.50
No Answer	02	05
Total	40	100

Table 4.152: The Awareness of the ‘Excess Sense’: The Control Group/the Post-Test

According to Table 4.152, 35% of the students could not differentiate between *above* and *over*, and 17.50% between *over* and *across*. The results show that the instruction confused more the students because their awareness of the *excess sense of over* decreased to the very low level.

- **Sentence No. 11**

11. ‘The young girl tried to get across to her friend that the topic was not good’

- a) She described to her that the topic was not good
- b) She made her understand that the topic was not good [**The Correct Answer**]
- c) She gave her reasons that her topic was not good

Options	No.	%
Right	15	37.50
Wrong (a)	08	20
Wrong (c)	16	40
No Answer	01	02.50
Total	40	100

Table 4.153: The Awareness of ‘Get across’: The Control Group/the Post-Test

Table 4.153 reveals that 40% of the students chose the wrong option (c) because they did not understand appropriately the metaphorical sense of *across* when combined with *get*. Their selection of the option (c) was probably caused by their reliance on their own understanding of the context rather than on their background knowledge of the meaning of *get across*. Their awareness of this sense remained at the very low level.

- **Sentence No. 12**

12. ‘The light bulb is in the socket.’

- a) The light bulb is totally inside the socket
- b) The light bulb is within the socket
- c) The light bulb is partially enclosed by the socket [**The Correct Answer**]

Options	No.	%
Right	05	12.50
Wrong (a)	26	65
wrong (b)	09	22.50
No Answer	00	00
Total	40	100

Table 4.154: The Awareness of ‘Partial Enclosure’: The Control Group/the Post-Test

According to Table 4.154, only five students were able to provide the correct answer. We can say that there is no increase in the students’ background knowledge because a large number of them (65%) selected *inside*. They failed to differentiate between *partial enclosure* and *total enclosure* expressed by *in*, so their awareness of this sense was at the very low level.

- **Sentence No. 13**

13. ‘She played over the same piano piece to demonstrate her talent.’

- a) She played excellently
- b) She played again [**The Correct Answer**]
- c) She played better

Options	No.	%
Right	31	77.50
Wrong (a)	06	15
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

Table 4.155: The Awareness of the ‘*Repetition Sense*’: The Control Group/the Post-Test

Table 4.155 shows that 77.50% of the students were able to recognize the *repetition sense of over*. Their background knowledge improved in the post-test because they showed a rather high level of awareness of this sense.

- **Sentence No. 14**

14. *A*: ‘Are the scissors in the drawer?’

B: ‘No, they’re re out on the counter.’

- a) They’re exterior to the drawer [**The Correct Answer**]
- b) They’re no longer in the drawer
- c) They’re outside the counter

Options	No.	%
Right	13	32.50
Wrong (b)	08	20
Wrong (c)	16	40
No Answer	03	07.50
Total	40	100

**Table 4.156: The Awareness of the ‘*Static Sense of out*’: The Control Group/
the Post-Test**

Table 4.156 indicates that that the wrong option (c) accounts for 40% of the total. The students’ background knowledge did not change very much. Despite the fact that they were taught the meanings of *out*, in the post-test, they were not able to notice that the bounded landmark is *the drawer* and not the *counter*.

- **Sentence No. 15**

15. ‘The shops were repaired through the help of a disaster relief fund.’

- a) They were repaired by means of the help of a disaster relief fund [**The Correct**
- b) They were repaired because of the help of a disaster relief fund **Answer]**
- c) They were repaired during the help of a disaster relief fund

Options	No.	%
Right	10	25
Wrong (b)	17	42.50
Wrong (c)	11	27.50
No Answer	02	05
Total	40	100

**Table 4.157: The Awareness of the ‘*by Means of Sense*’: The Control Group/
the Post Test**

We can see from Table 4.157 that the wrong option (b) makes up 42.50% of the total. The students' background knowledge was at the same level when it comes to realizing the metaphorical sense of *through* 'by means of'. It seems that the students did not understand the difference between the senses *because of* and *by means of* associated with *through*.

- **Sentence No. 16**

16. 'He drove across the parking lot although it was not allowed.'

- a) He drove into the parking lot
- b) He drove in the parking lot
- c) He drove from one side to the other side of the parking lot [**The Correct Answer**]

Options	No.	%
Right	23	57.50
Wrong (a)	08	20
Wrong (b)	09	22.50
No Answer	00	00
Total	40	100

**Table 4.158: The Awareness of the 'Basic Sense of across': The Control Group/
the Post-Test**

According to Table 4.158, 57.50% of the students recognized the correct sense of *across*. We could say that there is no change in the students' background knowledge of the basic spatial sense of *across*. In fact, their awareness decreased in the post-test to the rather low level.

- **Sentence No. 17**

17. ‘Paul prefers sleeping in bed with his head on pillow’

- a) Above the pillow
- b) Supported by the pillow [**The Correct Answer**]
- c) Placed at the top of the pillow

Options	No.	%
Right	21	52.50
Wrong (a)	09	22.50
Wrong (c)	10	25
No Answer	00	00
Total	40	100

**Table 4.159: The Awareness of the ‘Basic Sense of on’: The Control Group/
the Post-Test**

Of the data gathered in Table 4.159, we can see that 52.50% of the students answered correctly, whereas 22.50% of them opted for *above* and 20% chose *at the top of*. The results indicate that the students showed a rather low level of awareness of the *basic sense of on* after the instruction. They could not realize that ‘*supported by*’ denotes the underlying conceptual meaning of *on* which suggests *support* and *contact*. It appears that they answered on the basis of how they imagined the context.

- **Sentence No. 18**

18. ‘The hummingbird flies over the flower’

- a) Upward and forward across the flower [**The Correct Answer**]
- b) Higher and touching the flower
- c) Across the flower

Options	No.	%
Right	12	30
Wrong (b)	19	47.50
Wrong (c)	09	22.50
No Answer	00	00
Total	40	100

**Table 4.160: The Awareness of the ‘*Dynamic Sense of over*’: The Control Group/
the Post-Test**

Table 4.160 shows that the students in the Control Group did not understand the basic sense of *over* when it refers to *a straight path*. Less than a third of them answered correctly, while 47.50% of them chose the second option which has the same conceptual meaning of *on*. The students’ familiarity with the conceptual meaning associated with *over* remained at the very low level.

- **Sentence No.19**

19. ‘The information in this booklet is out of date.’

- a) The information that this booklet mentions is out of date
- b) The information that this booklet contains is out of date [**The Correct Answer**]
- c) The information that this booklet states is out of date

Options	No.	%
Right	21	52.50
Wrong (a)	09	22.50
Wrong (c)	09	22.50
No Answer	01	02.50
Total	40	100

**Table 4.161: The Awareness of ‘*Metaphorical Containment*’: The Control Group/
the Post-Test**

According to Table 4.161, the right answer accounts for 52.50% of the total. The students in the Control Group could not comprehend appropriately the notion of *metaphorical containment*. Their selection of the answers was influenced by their own understanding of the sentence. The percentages of their answers indicate that they exhibited a rather low level of awareness of this sense in the post-test.

- **Sentence No. 20**

20. ‘The actions of public officials must be above suspicion’.

- a) They must be very good to be suspected [**The Correct Answer**]
- b) They must be very obvious to be suspected
- c) They must be under suspicion

Options	No.	%
Right	15	37.50
Wrong (b)	12	30
Wrong (c)	11	27.50
No Answer	02	05
Total	40	100

Table 4.162: The Awareness of the ‘Separation Sense’: The Control Group/the Post-Test

Table 4.162 reveals over a third of the students chose the right answer, but 62.50% of them (30% “b” + 27.50% “c”) kept relying on their own understanding of the sentence because they could not identify the underlying metaphorical sense suggested by *above*. The students then showed a very low level of awareness.

- **Sentence No. 21**

21. ‘It has been said that dark colors in cotton fabric keep out the sun’s harmful ultraviolet rays’.

- a) Protect us from the sun's harmful ultraviolet rays
- b) Prevent the sun’s harmful ultraviolet rays from entering [**The Correct Answer**]
- c) Reflect the sun’s harmful ultraviolet rays

Options	No.	%
Right	12	30
Wrong (a)	15	37.50
Wrong (c)	11	27.50
No Answer	02	05
Total	40	100

Table 4.163: The Awareness of the ‘Exclusion Sense’: The Control Group/the Post-Test

Table 4.163 illustrates that the students in the Control Group could not succeed in identifying the meaning of *out* because the wrong option (a) makes up 37.50 of the total. The selection of the senses was based on how they understood the expression wherein *out* is used rather than on their background knowledge concerning the metaphorical senses that *out* denotes. Hence, the students’ familiarity with this sense was at the very low level, and it did not improve in the post-test.

- **Sentence No. 22**

22. ‘They put rocks over a cave entrance’.

- a) Near the cave
- b) Higher than the cave
- c) To cover the cave [**The Correct Answer**]

Options	No.	%
Right	08	20
Wrong (a)	15	37.50
Wrong (b)	15	37.50
No Answer	02	05
Total	40	100

Table 4.164: The Awareness of the ‘Covering Sense’: The Control Group/the Post-Test

Of the data presented in Table 4.164, the students familiarity with the *covering sense* expressed by *over* decreased to 20%. More than half the students opted for the wrong options (a) and (b). They were not able to notice that *near* and *over* are not synonymous, and the second option has a meaning which does not fit the context.

- **Sentence No. 23**

23. ‘We saw a couple of duty crew through a window.’

- a) On the other side of the window [**The Correct Answer**]
- b) By the window
- c) From the window

Options	No.	%
Right	04	10
Wrong (b)	11	27.50
Wrong (c)	24	60
No Answer	01	02.50
Total	40	100

**Table 4.165: The Awareness of the ‘Static Sense of through’: The Control Group/
the Post-Test**

Table 4.165 shows that the right answer represents only 10% of the total. The greatest number of the students (60%) selected '*from the window*', probably because they answered on the basis of how they imagined the scene expressed by the sentence. The knowledge they gained from the instruction did not help them identify the correct sense expressed by *through*.

- **Sentence No.24**

24. 'Father is in bad temper, he has just thrown mother out of window'.

- a) Because of my father's bad state, he has thrown my mother [**The Correct Answer**]
- b) Because my father is inside bad temper, he has thrown my mother
- c) Because of my father's bad situation, he has thrown my mother

Options	No.	%
Right	14	35
Wrong (b)	12	30
Wrong (c)	12	30
No Answer	02	05
Total	40	100

Table 4.166: The Awareness of the '*State Sense*': The Control Group/the Post-Test

According to Table 4.166, the percentages of the students' answers are approximately the same; 35% selected the correct answer, 30% chose the wrong option (b) and 30% (c). The results clearly illustrate that they did not know what to choose because they could not determine the target domain (i.e. states) that *in* refers to. The students' awareness and knowledge of *the state sense of in* was at the very low level in the post-test.

- **Sentence No. 25**

25. ‘She placed the tablecloth on the table.’

- a) She placed the tablecloth to cover the table
- b) She placed the tablecloth onto the table [**The Correct Answer**]
- c) She placed the tablecloth above the table

Options	No.	%
Right	04	10
Wrong (a)	21	52.50
Wrong (c)	14	35
No Answer	01	02.50
Total	40	100

**Table 4.167: The Awareness of the ‘Dynamic Sense of on’: The Control Group/
the Post-Test**

Table 4.167 exhibits that the dynamic sense of *on* constituted a problem to the students. A small minority (10%) could identify that *on* is synonymous in this case with *onto*, whereas over half the students (52.50%) selected the preposition *above*. It seems that their background knowledge did not improve after the instruction they received. It could be said that the students showed a severe low level of awareness.

- **Sentence No. 26**

26. ‘Sam lives over the hill.’

- a) Near the hill
- b) Behind the hill
- c) On the other side of the hill [**The Correct Answer**]

Options	No.	%
Right	17	42.50
Wrong (a)	12	30
Wrong (b)	10	25
No Answer	01	02.50
Total	40	100

**Table 4.168: The Awareness of the ‘*Static Sense of over*’: The Control Group/
the Post-Test**

Of the data gathered in Table 4.168, we can see that the correct answer makes up 42.50% of the total. Although the students received instruction on the static use of *over*, their awareness was at the very low level.

- **Sentence No. 27**

27. ‘There was a spider’s nest in the mountain cave.’

- a) The spider’s nest was enclosed by the mountain cave [**The Correct Answer**]
- b) The spider’s nest covered the mountain cave
- c) The spider’s nest was all over the mountain cave

Options	No.	%
Right	07	17.50
Wrong (b)	19	47.50
Wrong (c)	11	27.50
No Answer	03	07.50
Total	40	100

Table 4.169: The Awareness of the ‘*Basic Sense of in*’: The Control Group/the Post-Test

Table 4.169 shows that the second option (b) accounts for 47.50% of the total. The fact that only 7 students could identify the conceptual meaning expressed by *in* reveals that their awareness did not increase very much, and in order to provide their answers, they probably relied on their own understanding of the context. This means that the students' awareness of the basic sense of *in* was at the very low level in the post-test.

- **Sentence No. 28**

28. 'He suffered a serious bruise above his left eye.'

- a) His bruise was on his left eye
- b) His bruise was higher than his left eye [**The Correct Answer**]
- c) His bruise was on top of his left eye

Options	No.	%
Right	14	35
Wrong (a)	11	27.50
Wrong (c)	12	30
No Answer	03	07.50
Total	40	100

**Table 4.170: The Awareness of the 'Basic Sense of above': The Control Group/
the Post-Test**

According to Table 4.170, over a third of the students (35%) were able to identify that *above* means *higher than* and just less than a third of them chose, *on top of*. The percentages of their answers indicate that their awareness of the basic sense of *above* did not improve, and it was at the low level.

- **Sentence No. 29**

29. ‘The accused murderer’s wife was able to remain loyal through her conviction of his innocence.’

- a) She was able to remain loyal via her conviction
- b) She was able to remain loyal because of her conviction [**The Correct Answer**]
- c) She was able to remain loyal by way of her conviction

Options	No.	%
Right	17	42.50
Wrong (a)	12	30
Wrong (c)	10	25
No Answer	01	02.50
Total	40	100

Table 4.171: The Awareness of the ‘Cause Sense’: The Control Group/the Post-Test

Table 4.171 reveals that almost half the students (42.50%) understood that the correct sense of *through* is *because of*. However, they did not show a high level of awareness of this sense because their answers show that they were unable to differentiate between the *means* and the *cause* senses of *through*.

- **Sentence No. 30**

30. ‘I am over my cold’.

- a) I have recovered from my cold [**The Correct Answer**]
- b) I am still suffering from my cold
- c) I am cold

Options	No.	%
Right	19	47.50
Wrong (b)	18	45
Wrong (c)	01	02.50
No Answer	02	05
Total	40	100

**Table 4.172: The Awareness of the Sense ‘Recovered from’: The Control Group/
the Post-Test**

Table 4.172 shows that the wrong option (b) accounts for 45% of the total. It is clear that the students’ comprehension did not reach a level that enabled them to recognize the correct sense of *over* when it refers to *obstacles*. The traditional method did not raise the students’ awareness of this sense because they could not determine the correct meaning of the sentence.

- **Sentence No. 31**

31. ‘A: Have we got any milk left?’

‘B: No, we’re (all) out!’

- a) We’re all outside
- b) We no longer have milk [**The Correct Answer**]
- c) We have not bought milk

Options	No.	%
Right	26	65
Wrong (a)	06	15
Wrong (c)	06	15
No Answer	02	05
Total	40	100

Table 4.173: The Awareness of the ‘No More Sense’: The Control Group/the Post-Test

Of the data presented in Table 4.173, the number of the students who identified the correct sense of *out* when used metaphorically to mean ‘*no more*’ is in excess of 60%. It follows that the students’ background knowledge increased to the rather moderate level.

- **Sentence No. 32**

32. ‘The fruit is allowed to mature on the tree.’

- a) Above the tree
- b) Over the tree
- c) In contact and supported by the tree [**The Correct Answer**]

Options	No.	%
Right	20	50
Wrong (a)	06	15
Wrong (b)	12	30
No Answer	02	05
Total	40	100

**Table 4.174: The Awareness of the ‘Rotated Schema of on’: The Control Group/
the Post-Test**

According to Table 4.174, the right option makes up 50% of the total. Less than a third of the students (30%) selected *over* and a small minority (15%) chose *above*. The students’ knowledge and level of awareness of this sense did not raise to the extent that they could identify it easily. They still lack the adequate knowledge of the rotated sense of *on*.

- **Sentence No. 33**

33. ‘While I was in the garden, a snake crawled out in front of me.’

- a) Moved outside the garden in front of me
- b) Appeared in front of me [**The Correct Answer**]
- c) Moved quickly across the ground in front of me

Options	No.	%
Right	17	47.50
Wrong (a)	09	22.50
Wrong (c)	11	22.50
No Answer	03	07.50
Total	40	100

**Table 4.175: The Awareness of the ‘Appearance Sense’: The Control Group/
the Post-Test**

Table 4.175 illustrates that 42.50% of the students answered correctly. Although the percentages of the students’ answers show major differences in their realization of this sense, it is clear that their awareness after the instruction was at the low level.

- **Sentence No. 34**

34. ‘They are in the manufacture of expensive baby clothes.’

- a) They are inside the manufacture of expensive baby clothes
- b) They work for a company that manufactures expensive baby clothes [**The Correct**
- c) They are in the process of manufacturing expensive baby clothes **Answer]**

Options	No.	%
Right	17	42.50
Wrong (a)	14	35
Wrong (c)	07	17.50
No Answer	02	05
Total	40	100

Table 4.176: The Awareness of the ‘Activity Sense’: The Control Group/the Post-Test

Table 4.176 exhibits that the correct answer represents 42.50% of the total. The *activity sense* expressed by *in* was not understood properly by the students since it seems that they relied on their own understanding of the words used with *in* in order to answer. Hence, the knowledge gained from the instruction did not help them improve their awareness of the *activity sense* associated with *in*.

- **Sentence No. 35**

35. ‘The children jumped over the puddles on their way to school.’

- a) They jumped in the puddle
- b) They jumped above and across the puddle [**The Correct Answer**]
- c) They jumped in and then out of the puddle

Options	No.	%
Right	19	47.50
Wrong (a)	11	27.50
Wrong (c)	07	17.50
No Answer	03	07.50
Total	40	100

**Table 4.177: The Awareness of the ‘above-across Sense’: The Control Group/
the Post-Test**

According to Table 4.177, almost half the students (45.50%) recognized the *above-across* meaning of *over* when indicating *a curving path*, while 27.50% chose *in the puddle* and 17.50% selected *in and then out of the puddle*. These results show again that the students’ awareness remained stable and that there is only a slight increase in their knowledge about *the curving path* indicated by *over*.

- **Sentence No. 36**

36. ‘On the trail, we came across some hikers from Australia.’

- a) We found hikers by chance [**The Correct Answer**]
- b) We came nearer to some hikers
- c) We met some hikers as planned

Options	No.	%
Right	17	42.50
Wrong (b)	12	30
Wrong (c)	08	20
No Answer	03	07.50
Total	40	100

Table 4.178: The Awareness of ‘Come across’: The Control Group/the Post-Test

Table 4.178 exhibits that 42.50% of the students could identify the correct answer. The students’ awareness of *come across* did not change because the majority of them may have selected their answers without taking into consideration the information they had learned during the instruction.

- **Sentence No. 37**

37. ‘He hangs a mirror above the chimney.’

- a) On the chimney
- b) Near the chimney
- c) Over the chimney [**The Correct Answer**]

Options	No.	%
Right	17	42.50
Wrong (a)	13	32.50
Wrong (b)	08	20
No Answer	02	05
Total	40	100

**Table 4.179: The Awareness of the ‘Dynamic Sense of above’: The Control Group/
the Post-Test**

Table 4.179 indicates that the correct answer makes up 42.50% of the total. The students’ knowledge of the *dynamic sense of above* did not improve, simply because they could not determine the difference between *above* and *on*.

- **Sentence No. 38**

38. ‘The manager opened the door and stepped in.’

- a) The manager raised his foot
- b) The manager moved to the inside [**The Correct Answer**]
- c) The manager opened the door and stood in the way

Options	No.	%
Right	25	62.50
Wrong (a)	05	12.50
Wrong (c)	08	20
No Answer	02	05
Total	40	100

**Table 4.180: The Awareness of the ‘Dynamic Sense of in’: The Control Group/
the Post-Test**

Table 4.180 shows that a large number of the students (62.50%) were able to select the right answer. In the post-test, the students did not rely very much on their own understanding of the context because their awareness increased, and the majority of them comprehended that the use of *in* with dynamic verbs involves motion from the *outside* to the *inside*.

- **Sentence No. 39**

39. ‘We decided to go for a walk over the hill.’

- a) To go to the hill
- b) To walk around the hill
- c) To walk from one side to the other of the hill [**The Correct Answer**]

Options	No.	%
Right	09	22.50
Wrong (a)	11	27.50
Wrong (b)	17	42.50
No Answer	03	07.50
Total	40	100

Table 4.181: The Awareness of ‘Contact Indicated by over’: The Control Group/the Post-Test

Table 4.181 reveals that the wrong option (b) makes up 42.50% of the total. The students’ awareness did not change, and it remained at the very low level.

- **Sentence No. 40**

40. ‘The company’s profits are above the ones in the previous year.’

- a) They are better than the ones in the previous year
- b) They are over the ones in the previous year [**The Correct Answer**]
- c) They exceed the ones in the previous year

Options	No.	%
Right	14	35
Wrong (a)	20	50
Wrong (c)	04	10
No Answer	02	05
Total	40	100

Table 4.182: The Awareness of the ‘More than Sense’: The Control Group/the Post-Test

It is clearly indicated in Table 4.182 that 50% of the students did not understand that *above* participates in expressing the metaphor UP IS MORE, and it does not denote results. The students’ showed a very low level of awareness of this sense after the instruction.

- **Sentence No. 41**

41. ‘The child was screaming when she drew him out of the club’s swimming pool.’

- a) Away from the inside of the swimming pool [**The Correct Answer**]
- b) From the outside of the club’s swimming pool
- c) Into the swimming pool

Options	No.	%
Right	17	42.50
Wrong (b)	15	37.50
Wrong (c)	05	12.50
No Answer	03	07.50
Total	40	100

**Table 4.183: The Awareness of the ‘Basic Sense of out’: The Control Group/
the Post-Test**

Table 4.183 reveals that the students' awareness of the basic sense of *out* was at the very low level in the post-test. Precisely 42.50% of the students could identify the right answer, but their limited knowledge concerning the basic sense of *out* did not increase because they just linked the meaning of *out* with *outside* without paying attention to the type of motion it indicates; *out* expresses dynamic situations which involve motion *from the inside to the outside*.

- **Sentence No. 42**

42. 'Oxygen must be held in a sealed container.'

- a) Oxygen must be pressed there
- b) Oxygen must be enclosed there
- c) Oxygen must be blocked there [**The Correct Answer**]

Options	No.	%
Right	18	45
Wrong (a)	15	37.50
Wrong (b)	04	10
No Answer	03	07.50
Total	40	100

Table 4.184: The Awareness of the 'Blockage Sense': The Control Group/the Post-Test

According to Table 4.184, the correct option makes up 45% of the total, followed by the wrong option (c) at 37.50. In the post-test, the students' awareness of the *blockage sense of in* was at the very low level. They could not understand the difference between the spatial use of *in* to indicate *enclosure* and its metaphorical use which involves the notion of *blockage*.

- **Sentence No. 43**

43. ‘There are several huts across the river.’

- a) On the other side of the river [**The Correct Answer**]
- b) Near the river
- c) Beyond the river

Options	No.	%
Right	15	37.50
Wrong (b)	06	15
Wrong (c)	15	37.50
No Answer	04	10
Total	40	100

Table 4.185: The Awareness of the ‘*Static Sense of across*’: The Control Group/

the Post-Test

Of data presented in Table 4.185, the right answer accounts for 37.50% of the total. The students’ familiarity with this sense after the instruction could be considered very low since they were not able to notice the difference between the senses provided to them. Besides, they did not know that *near* and *beyond* have no relation with the static sense of *across*.

- **Sentence No.44**

44. ‘There is no one over him in the department.’

- a) No one rules him in the department [**The Correct Answer**]
- b) There is no one but him in the department
- c) He has the highest rank in the department

Options	No.	%
Right	08	20
Wrong (b)	06	15
Wrong (c)	21	52.50
No Answer	05	12.50
Total	40	100

Table 4.186: The Awareness of the ‘Control Sense’: The Control Group/the Post-Test

Table 4.186 reveals that slightly over half the students chose the wrong option(c), while the right answer accounts for 20% only. We could say that the students’ comprehension of the *control sense* associated with *over* in the post-test was very low because they relied more on how they understood the sentence.

- **Sentence 4.45**

45. ‘She drove through the garage at sixty kilometers an hour.’

- a) She drove into the garage
- b) She drove into and then exited the garage [**The Correct Answer**]
- c) She drove closer to the garage

Options	No.	%
Right	16	40
Wrong (a)	07	17.50
Wrong (c)	11	27.50
No Answer	06	15
Total	40	100

**Table 4.187: The Awareness of the ‘Basic Sense of through’: The Control Group/
the Post-Test**

Table 4.187 indicates that the students' comprehension of the basic sense of *through* increased to 40%, but they still encounter difficulties in identifying the conceptual meaning that refers to *through*. In other words, the traditional method could not help them understand the basic meaning of *through*.

- **Sentence No. 46**

46. 'Interviews will be held at the above address on 2 December.'

- a) At the following address
- b) Outside the earlier address
- c) At the preceding address [**The Correct Answer**]

Options	No.	%
Right	10	25
Wrong (a)	17	42.50
Wrong (b)	05	12.50
No Answer	08	20
Total	40	100

Table 4.188: The Awareness of the 'Earlier Sense': The Control Group/the Post-Test

We can see from Table 4.188 that the selection of the wrong option (a) represents 42.50% of the total, while the correct answer accounts for 25% only. The students' awareness of the *earlier sense* of *above* did not change very much. It could be said that the students' comprehension of this sense remained at the low level.

- **Sentence 4.47**

47. 'When the police were running after, he was doing over a hundred miles.'

- a) He was doing again a hundred miles
- b) He was doing more than a hundred miles [**The Correct Answer**]
- c) He ended up doing a hundred miles

Options	No.	%
Right	28	70
Wrong (a)	06	15
Wrong (c)	06	15
No Answer	00	00
Total	40	100

Table 4.189: The Awareness of the ‘More Sense’: The Control Group/the Post-Test

Table 4.189 shows that the majority of the students (70%) were able to realize that *over* means *more than*. The results also show that the students’ background knowledge changed because they exhibited a rather high level of awareness of this sense.

- **Sentence No. 48**

48. ‘If fire breaks out, get in single file before leaving.’

- a) Form a line before leaving [**The Correct Answer**]
- b) Get into a single file before leaving
- c) Get inside a single file before leaving

Options	No.	%
Right	07	17.50
Wrong (b)	13	32.50
Wrong (c)	13	32.50
No Answer	07	17.50
Total	40	100

**Table 4.190: The Awareness of the ‘Use of in to Indicate Shapes’: The Control Group/
the Post-Test**

Table 4.190 illustrates that the correct option makes up 17.50% of the total. It appears that the Control Group’s awareness of this sense did not increase, but it remained at the very low level in the post-test.

- **Sentence No. 49**

49. ‘They put the blame on her because she told the secret to everyone.’

- a) The blame made her be in trouble because she told the secret
- b) The blame was a burden because she told the secret [**The Correct Answer**]
- c) The blame was a responsibility because she told the secret

Options	No.	%
Right	05	12.50
Wrong (a)	19	47.50
Wrong (c)	09	22.50
No Answer	07	17.50
Total	40	100

Table 4.191: The Awareness of the ‘Burden Metaphor’: The Control Group/ the Post-Test

According to Table 4.191, the wrong answer (a) accounts for 47.50% of the total. Out of 40 students, only 5 in the Control Group were able to identify the *burden sense* of *on*. This indicates that the students showed a very low level of awareness of this sense, and they probably selected their answers on the basis of their own understanding of the context.

-Part Two

- **Blank No. 1**

“One day, while I was in my office, a sergeant came (1)..... and told me that the police chief wanted to see me”. [The Correct Answer: *in*]

Prepositions	No.	%
*In	28	70
On	08	20
Over	04	10
Total	40	100

***The Correct Answer**

Table 4.192: The Control Group’s Use of the ‘Dynamic Sense of *in*’ in the Post-Test

Table 4.192 shows that the majority of the students (70%) could recognize the *dynamic use of in*. Only a small number of them confused it with *on* (20%) and *over* (10%). The students’ use of the *dynamic sense of in* went up to the rather high level in the post-test.

- **Blank No.2**

“[...] I stood in front of his desk while he began to get (2)..... to me the story of the Smith family [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	06	15
Over	05	12.50
Out	17	42.50
In	02	05
On	08	20
Through	02	05
Total	40	100

Table 4.193: The Control Group’s Use of *Get across* in the Post-Test

According to Table 4.193, a small minority of the students (15%) could understand that the second blank stands for *across*. Exactly 42.50% of them used *out* instead of *across* because they understood that the relation expressed in blank 2 is spatial. On the whole, the students still encounter difficulties in differentiating between *get across*, *get over*, *get in*, *get on* and *get through*.

- **Blank No. 3**

“[...] my chief was really convinced that Mr. Smith was (3).....cruelty to kill his wives [...]”. [The Correct Answer: *above*]

Prepositions	No.	%
*Above	08	20
In	09	22.50
Across	04	10
Out	07	17.50
Over	05	12.50
Through	01	02.50
On	05	12.50
No Answer	01	02.50
Total	40	100

Table 4.194: The Control Group’s Use of the ‘*Separation Sense of above*’ in the Post-Test

Table 4.194 indicates that the number of the students who used *in* at 22.50% is the highest one comparing it to the other percentages of *out* (17.50%), *across* (10%), *on* (12.50%), *over* (12.50%) and *through* (02.50%). The results reveal that the students did not understand the differences between the target domains of the metaphorical senses of these prepositions. Accordingly, the students’ knowledge of the nuances between *above*, *in*, *across*, *out*, *on* and *over* did not improve in the pos-test, and it was at the very low level.

- **Blank No. 04**

“[...]. The Smith house [...] was situated (4).....a broad expanse of a lawn [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	18	45
Above	02	05
In	13	32.50
Over	03	07.50
No Answer	04	10
Total	40	100

Table 4.195: The Control Group’s Use of the ‘Static Sense of across’ in the Post-Test

Table 4.195 reveals that the correct answer accounts for 45% of the total, followed by *in* at 32.50%. These students could identify that the relation is spatial, but they could not differentiate between the types of landmarks each preposition refers to. The knowledge they received from the instruction did not enable them to realize that *across* is used with planar landmarks.

- **Blank No. 5**

“It was a house which rose like a tower (5) the hill”. [The Correct Answer: *on*]

Prepositions	No.	%
*On	27	67.50
Through	01	02.50
In	03	07.50
Across	04	10
Out	01	02.50
Above	04	10
Total	40	100

Table 4.196: The Control Group’s Use of the ‘Static Sense of on’ in the Post-Test

According to Table 4.196, 67.50% of the students were able to identify the static sense of *on* and understood the type of the spatial relationship between *the house* and *the hill*. Only a small minority of them (10%) confused it with *across* and 10% with *above*, probably, because these students did not know the difference between the types of landmarks both prepositions denote. Hence, the students' awareness of *the static use of on* improved in the post-test.

- **Blank No. 6**

“[...] Mr. Smith suggested staying the evening in his house. I was led away (6)..... a dark hall to my room [...]”. [The Correct Answer: *through*]

Prepositions	No.	%
*Through	13	32.50
Above	02	05
In	06	15
Over	06	15
Across	09	22.50
On	02	05
No Answer	02	05
Total	40	100

Table 4.197: The Control Group's Use of the 'Dynamic Sense of through' in the Post-Test

Table 4.197 illustrates that less than a third of the students (32.50%) used *through* correctly, while 22.50% used *across*, 15% *in* and 15% *over*. The results reflect the fact that the students' background knowledge did not change when it comes to identifying the nuances between *through*, *in*, *across*, *over* in dynamic situations. They did not comprehend that these prepositions are semantically related, but they denote different types of motion.

- **Blank No. 7**

“[...]. That night, I did not sleep well because there was a lot of pressure (7) me [...].”

[The Correct Answer: *on*]

Prepositions	No.	%
*On	30	75
Above	02	05
Out	01	02.50
Over	07	17.50
Total	40	100

Table 4.198: The Control Group’s Use of the ‘Burden Metaphor’ in the Post-Test

Table 4.198 shows that the Control Group’s use of the *burden metaphor* indicated by *on* increased in the pos-test to 75%. The students could identify that *pressure* is an *unwelcome state*. Note that the number of the wrong answers decreased in the post-test because the students’ awareness increased.

- **Blank No.8**

“[...]. I heard the sound of a small plane hovering (8) the house [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	23	57.50
In	04	10
Out	11	27.50
Across	02	05
Total	40	100

Table 4.199: The Control Group’s Use of the ‘Dynamic Sense of over’ in the Post-Test

Table 4.199 reveals that 57.50% of the students used *over*, while 27.50% used *out*. The students failed to distinguish between *over* and *out* because they understood the context wrongly. It seems that they did not comprehend the kind of motion each preposition indicates; *over* denotes a *path*, in this case, that requires *no contact*, but *out* indicates *contact*.

- **Blank No.9**

“It was very close to the earth (9)..... the airstrip.” [The Correct Answer: *above*]

Prepositions	No.	%
*Above	09	22.50
On	04	10
Out	02	05
Across	08	20
Through	05	12.50
In	10	25
No Answer	02	05
Total	40	100

Table 4.200: The Spatial Use of *above* by the Control Group in the Post-Test

According to Table 4.200, 22.50% of the students used *above*, whereas the majority of them (77.50%) confused it with different prepositions that are completely wrong. In the post-test, the students’ background knowledge did not change, and they showed a very low level of awareness of this sense of *above*.

- **Blank No. 10**

“The plane rolled to a stop and landed (10)the area near the convent.”[The Correct Answer: *on*]

Prepositions	No.	%
*On	13	32.50
Out	05	12.50
Above	02	05
Through	04	10
In	07	17.50
Over	02	05
No Answer	07	17.50
Total	40	100

Table 4.201: The Control Group’s Use of the ‘Dynamic Sense of on’ in the Post-Test

Of the data gathered in Table 4.201, 32.50% of the students could answer correctly. The students failed to distinguish between *in* and *on* although they refer to different types of motion. They seem to lack a clear understanding and enough knowledge concerning the difference between *in* and *on* dynamically.

- **Blank No. 11**

“[...], a woman got (11)..... dressed in a long black dress [...].” [The Correct Answer: *out*]

Prepositions	No.	%
*Out	20	50
Over	01	02.50
Through	03	07.50
in	02	05
On	08	20
No Answer	06	15
Total	40	100

Table 4.202: The Control Group’s Use of the ‘Dynamic Sense of out’ in the Post-Test

We can see from Table 4.202 that half the students were able to use *out*, while the other half confused it with *over* (02.50%), *through* (07.50%), *in* (05%), *on* (20%) or they did not answer (15%). Although *on* is not semantically related to *out*, 20% of the students used it because they possibly understood the context wrongly. It could be said that their background knowledge remained stable and limited.

- **Blank No. 12**

“[...] I decided to pay a visit to the convent. (12) the convent, the curtains were [...].”

[The Correct Answer: *in*]

Prepositions	No.	%
*In	23	57.50
On	04	10
Above	01	02.50
Through	05	12.50
Over	03	07.50
No Answer	04	10
Total	40	100

Table 4.203: The Control Group’s Use of the ‘Static Sense of *in*’ in the Post-Test

Table 4.203 shows that just over half the students understood that the spatial scene corresponds to the spatial sense of *in*. Around a tenth of them failed to notice that *through* involves *going in and then out of a bounded landmark*, and *in*, in this blank, indicates a static relation. The results mean that there is no change in the students’ background knowledge as far as the difference between *in* and *through* is concerned.

- **Blank No. 13**

“[...] the curtains were (13).....the window [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	04	10
Above	07	17.50
In	02	05
Across	09	22.50
Out	05	12.50
On	07	17.50
Through	03	07.50
No Answer	03	07.50
Total	40	100

Table 4.204: The Control Group’s Use of the ‘Covering Sense of over’ in the Post-Test

Table 4.204 reveals that 7 students used *above* instead of *over* and also 7 students used *on* instead of *over*. The students’ awareness of the difference between *over*, *on* and *above* remained at the very low level. Noticeably, 22.50% of them used *across* because they most probably understood the context from their own perspectives. The fact that *across* was used by the students shows that the Control Group failed also to distinguish between *over* and *across*.

- **Blank No. 14**

“[...] there was parsley spread (14)..... on the table [...].” [The Correct Answer: *out*].

Prepositions	No.	%
*Out	16	40
Across	03	07.50
Over	09	22.50
Above	04	10
On	01	02.50
Through	05	12.50
No Answer	02	05
Total	40	100

Table 4.205: The Control Group’s Use of the ‘*Distribution Sense of out*’ in the Post-Test

According to Table 4.205, 40% of the students used *out* correctly, and 22.50% used *over* wrongly. The students’ background remained the same; they did not comprehend the difference between *out* and *over* when both are used metaphorically with the verb *to spread*.

- **Blank No. 15**

“[...] two pictures hanging on the wall which were placed (15).....the same table.” [The

Correct Answer: *above*]

Prepositions	No.	%
*Above	05	12.50
Across	02	05
In	14	35
On	16	40
No Answer	03	07.50
Total	40	100

Table 4.206: The Control Group’s Use of the ‘*Dynamic Sense of above*’ in the Post-Test

Table 4.206 shows that only 12.50% of the students used *above*, while 40% used *on*. It appears that the students' background knowledge did not increase concerning the nuances between *on* and *above* when both of them refer to dynamic situations.

- **Blank No. 16**

“[...] a group of women sitting around a small table (16).....thoughtful calm [...].” [The Correct Answer: *in*]

Prepositions	No.	%
*In	23	57.50
Over	02	05
Through	02	05
Across	02	05
Out	01	02.50
Above	02	05
On	06	15
No Answer	02	05
Total	40	100

Table 4.207: The Control Group's Use of the 'State Sense of *in*' in the Post-Test

Table 4.207 indicates that the correct answer accounts for 57.50% of the total and *on* accounts for 15% of the total. The students' background knowledge did not improve because they confused between the target domains of the metaphorical senses of *in* and *on*. It could be said that the students exhibited a low level of awareness concerning the nuances between their senses.

- **Blank No. 17**

“ [...]. I stood (17).....in the garden thinking [...]”. [The Correct Answer: *out*]

Prepositions	No.	%
*Out	27	67.50
Through	04	10
Across	05	12.50
Above	01	02.50
On	02	05
No Answer	01	02.50
Total	40	100

Table 4.208: The Control Group’s Use of the ‘Static Sense of out’ in the Post-Test

It is clear from Table 4.208, the use of *out* did not constitute a problem to the students in the Control Group. Exactly 67.50% used *out* and only 12.50% used *across*. It seems that the students understood the difference between the static senses of *out* and *across*.

- **Blank No. 18**

“[...] when the quiet hour was (18), someone might come and talk to me [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	31	77.50
Across	01	02.50
On	01	02.50
In	04	10
No Answer	03	07.50
Total	40	100

Table 4.209: The Control Group’s Use of the ‘Completion Sense of over’ in the Post-Test

According to Table 4.209, a very large number of the students (77.50%) answered correctly. The students' comprehension and use of *the completion sense of over* increased to the rather high level.

- **Blank No. 19**

“Unexpectedly, I saw the woman with the straw hat walking (19)..... the garden and going towards Mr. Smith’s house [...]” [The Correct Answer: *across*]

Prepositions	No.	%
*Across	08	20
Out	02	05
Through	03	07.50
Over	03	07.50
In	19	47.50
Above	02	05
On	03	07.50
No Answer	00	00
Total	40	100

Table 4.210: The Control Group’s Use of the ‘Dynamic Sense of over’ in the Post-Test

According to Table 4.210, only 20% of the students used *across*, while 47.50% confused it with *in*. The students' comprehension of the difference between *across* and *in* did not improve, but it remained at the very low level.

- **Blank No. 20**

“She [...] continued moving quickly (20).....the trees [...]” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	20	50
Above	01	02.50
In	04	10
On	02	05
Out	01	02.50
Over	02	05
Across	08	20
No Answer	02	05
Total	40	100

Table 4.211: The Control Group’s Use of *through* Spatially in the Post-Test

Table 4.211 shows that 50% of the students used *through* correctly. The results could mean that there is a slight increase in the students’ background knowledge about the difference between *through* and *in*. In addition, in the post-test, 20% of them confused the use of *across* with *through* because they could not understand the difference between them.

- **Blank No. 21**

“ [...]. I received a letter from that woman [...]. (21).....this letter, I discovered that the deaths of his wives were accidental.” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	11	27.50
In	26	65
Over	01	02.50
On	02	05
Total	40	100

Table 4.212: The Control Group’s Use of the ‘Means Sense’ in the Post-Test

Table 4.212 reveals that the correct use of *through* accounts for 27.50% of the total. We can see that the use of *in* makes up 65% of the total. The students perhaps did not understand the difference between the use of *in* to indicate metaphorical *containment*, and the use of *through* to express *by means of*. Their background knowledge, then, could be considered to be at the very low level.

–The Experimental Group

–Part One

- **Sentence No. 1**

1. ‘The cow munched grass in the field.’

- a) The cow was within the bounds of the field [**The Correct Answer**]
- b) The cow ate grass around the field
- c) The cow chewed grass into the field

Options	No.	%
Right	25	62.50
Wrong (b)	03	07.50
Wrong (c)	12	30
No Answer	00	00
Total	40	100

Table 4.213: The Awareness of the ‘Inclusion Sense’: The Experimental Group/

the Post-Test

Table 4.213 reveals that a large number of the students (62.50%) could identify the *inclusion sense of in*. We can see that there is a noticeable increase in the students’ familiarity with this

sense after the instruction because they could realize that *in* can be used spatially to refer to bounded landmarks in order to express the notion of *inclusion*.

- **Sentence No. 2**

2. ‘I like coffee over milk in breakfast.’

- a) I like coffee mixed with milk in breakfast
- b) I like both coffee and milk in breakfast
- c) I like coffee better than milk in breakfast [The **Correct Answer**]

Options	No.	%
Right	36	90
Wrong (a)	04	10
Wrong (b)	00	00
No Answer	00	00
Total	40	100

**Table 4.214: The Awareness of the ‘Preference Sense’: The Experimental Group/
the Post-Test**

Table 4.214 indicates that almost all the students answered correctly. In the pos-test, they showed a very high level of awareness of the *preference sense of over*.

- **Sentence No. 3**

3. ‘There is a heat across the country’

- a) On the other side of the country
- b) Throughout the country [The **Correct Answer**]
- c) Inside and outside the country

Options	No.	%
Right	18	45
Wrong (a)	17	42.50
Wrong (c)	05	12.50
No Answers	00	00
Total	40	100

**Table 4.215: The Awareness of the ‘All over Sense’: The Experimental Group/
the Post-Test**

Of the data shown in Table 4.215, 45% of the students identified that the correct meaning of *across* in this sentence is *all over (or throughout)*, while 42.50% confused it with its static sense. The Experimental Group exhibited a very low level of awareness of the difference between the *all over* sense and *on the other side of* sense of *across*.

- **Sentence No. 4**

4. ‘Yesterday, they were giving leaflets out in front of the underground station.’

- a) Delivering leaflets outside in front of the underground station
- b) Distributing leaflets in front of the underground station [**The Correct Answer**]
- c) Proposing leaflets in front of the underground station

Options	No.	%
Right	31	77.50
Wrong (a)	07	17.50
Wrong (c)	02	05
No Answer	00	00
Total	40	100

**Table 4.216: The Awareness of the ‘Distribution Sense’: The Experimental Group/
the Post-Test**

Table 4.216 illustrates that just over three quarters of the students answered correctly. The results indicate that their background knowledge went up because they showed a rather high level of awareness of the *distribution sense of out*.

- **Sentence No. 5**

5. ‘The strike is over and our membership has not voted.’

- a) The strike is no longer in progress [**The Correct Answer**]
- b) The strike is repeated again
- c) The strike is postponed

Options	No.	%
Right	28	70
Wrong (b)	08	20
Wrong (c)	04	10
No Answer	00	00
Total	40	100

Table 4.217: The Awareness of the ‘Completion Sense of over’: The Experimental Group/the Post-Test

According to Table 4.217, we can see that the correct answer accounts for 70% of the total. Although the students’ awareness of the *completion sense of over* was at the rather high level, their comprehension slightly changed because of the *repetition sense* provided in the wrong option (b).

- **Sentence No. 6**

6. ‘I am reading a book on dogs in which the writer describes how these animals could be dangerous’

- a) I am reading a book which addresses dogs [**The Correct Answer**]
- b) I am reading a book concerning dogs
- c) I am reading a book around dogs

Options	No.	%
Right	01	02.50
Wrong (b)	27	67.50
Wrong (c)	12	30
No Answer	00	00
Total	40	100

Table 4.218: The Awareness of ‘Metaphorical Contact’: The Experimental /the Post-Test

Table 4.218 shows that only one student identified that the meaning of *on* is the option (a), ‘*addressing dogs*’, while a large proportion (67.50%) selected *concerning*, which is synonymous with *about*. It could be said that the students in the Experimental Group exhibited a very low level of awareness of this sense in the post-test. Their background knowledge remained at the same level.

- **Sentence No. 7**

7. ‘There is a sign over the door.’

- a) Beside the door
- b) On the door
- c) Above the door [**The Correct Answer**]

Options	No.	%
Right	32	80
Wrong (a)	05	12.50
Wrong (b)	03	07.50
No Answer	00	00
Total	40	100

**Table 4.219: The Awareness of the ‘*above-Sense of over*’: The Experimental Group/
the Post -Test**

Table 4.219 reveals that a very large number of the students (80%) understood that *over* and *above* can be used interchangeably in this sentence. The students’ comprehension increased, and their background knowledge concerning the *static sense* of *above* was at the very high level.

- **Sentence No. 8**

8. ‘Ann is through with the book’

- a) She is in the process of reading the book
- b) She has finished reading the book [**The Correct Answer**]
- c) She is carrying the book

Options	No.	%
Right	29	72.50
Wrong (a)	09	22.50
Wrong (c)	02	05
No Answer	00	00
Total	40	100

**Table 4.220: The Awareness of the ‘*Completion Sense of through*’: The Experimental
Group/the Post-Test**

Table 4.220 illustrates that the majority of the students (72.50%) chose the correct answer. It could be said that their awareness of the *completion sense of through* went up to the rather high level.

- **Sentence No. 9**

9. 'In the navy, a captain is above a commander.'

- a) He is higher than a commander [**The Correct Answer**]
- b) He is stronger than a commander
- c) He is more advanced than a commander

Options	No.	%
Right	35	87.50
Wrong (b)	00	00
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.221: The Awareness of the 'Superior Sense': The Experimental Group/
the Post-Test**

According to Table 4.221, the majority of the students (87.50%) could realize *the superior sense* associated with *above* when it is used metaphorically. After the instruction, the students' comprehension increased to the very high level.

- **Sentence No. 10**

10. 'The heavy rain caused the river to flow over its bank.'

- a) To flow above its bank
- b) To flow across its bank
- c) To exceed its bank [**The Correct Answer**]

Options	No.	%
Right	32	80
Wrong (a)	06	15
Wrong (b)	02	05
No Answer	00	00
Total	40	100

**Table 4.222: The Awareness of the ‘*Excess Sense*’: The Experimental Group/
the Post-Test**

It is clear from Table 4.222 that the *excess sense of over* is no longer a difficult sense. Exactly 80% of the students answered correctly, and this leads us to say that their background knowledge was at the very high level.

- **Sentence No. 11**

11. ‘The young girl tried to get across to her friend that the topic was not good’

- a) She described to her that the topic was not good
- b) She made her understand that the topic was not good [**The Correct Answer**]
- c) She gave her reasons that her topic was not good

Options	No.	%
Right	29	72.50
Wrong (a)	07	17.50
Wrong (c)	04	10
No Answer	00	00
Total	40	100

Table 4.223: The Awareness of ‘*Get across*’: The Experimental Group/the Post-Test

According to Table 4.223, the right answer accounts for 72.50% of the total. It seems that the instruction affected positively the students' comprehension; they understood that the combination of *across* with the verb *get* does not mean 'to give reasons' nor 'to describe'.

- **Sentence No. 12**

12- 'The light bulb is in the socket.'

- a) The light bulb is totally inside the socket
- b) The light bulb is within the socket
- c) The light bulb is partially enclosed by the socket [**The Correct Answer**]

Options	No.	%
Right	18	45
Wrong (a)	18	45
wrong (b)	03	07.50
No Answer	01	02.50
Total	40	100

**Table 4.224: The Awareness of 'Partial Enclosure': The Experimental Group/
the Post-Test**

Table 4.224 shows that the right option and the wrong option (a) have the same percentages at 45% of the total. The students, probably, confused between the conceptual meanings 'partial enclosure' and 'total enclosure' expressed by *in* in this sentence.

- **Sentence No. 13**

13. 'She played over the same piano piece to demonstrate her talent.'

- a) She played excellently
- b) She played again [**The Correct Answer**]
- c) She played better

Options	No.	%
Right	37	92.50
Wrong (a)	00	00
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

**Table 4.225: The Awareness of the ‘*Repetition Sense*’: The Experimental Group/
the Post-Test**

Table 4.225 reveals that almost all the students (92.50%) were able to identify the *repetition sense* conveyed by *over*. It means that their background knowledge was at the very high level.

- **Sentence No. 14**

14. *A*: ‘Are the scissors in the drawer?’

B: ‘No, they’re re out on the counter.’

- a) They’re exterior to the drawer [**The Correct Answer**]
- b) They’re no longer in the drawer
- c) They’re outside the counter

Options	No.	%
Right	18	45
Wrong (b)	12	30
Wrong (c)	10	25
No Answer	00	00
Total	40	100

**Table 4.226: The Awareness of the ‘*Static Sense of out*’: The Experimental Group/
the Post-Test**

According to Table 4.226, the right answer makes up 45% of the total. The students could not understand clearly the options provided to them. They did not notice that the landmark in this sentence is *the drawer* and not *the counter*. The latter shows the place of the *scissors* after they have been taken *out of the drawer*. So, it could be said that the students' comprehension slightly improved.

- **Sentence No. 15**

15. 'The shops were repaired through the help of a disaster relief fund.'

- a) They were repaired by means of the help of a disaster relief fund [**The Correct answer**]
- b) They were repaired because of the help of a disaster relief fund
- c) They were repaired during the help of a disaster relief fund

Options	No.	%
Right	19	47.50
Wrong (b)	17	42.50
Wrong (c)	04	10
No Answer	00	00
Total	40	100

**Table 4.227: The Awareness of the 'by Means of Sense': The Experimental Group/
the Post-Test**

Table 4.227 clearly shows that the correct answer makes up 47.50% of the total. It appears that the students could not differentiate between the 'by means of' sense and 'because of' sense associated with *through*.

- **Sentence No. 16**

16. ‘He drove across the parking lot although it was not allowed.’

- a) He drove into the parking lot
- b) He drove in the parking lot
- c) He drove from one side to the other side of the parking lot [**The Correct Answer**]

Options	No.	%
Right	36	90
Wrong (a)	04	10
Wrong (b)	00	00
No Answer	00	00
Total	40	100

**Table 4.228: The Awareness of the ‘Basic Sense of across’: The Experimental Group/
the Post-Test**

According to Table 4.228, a very large number of the students (90%) answered correctly. The students understood the basic sense of *across*, and their comprehension was at the very high level. They realized that *across* means *to move from side to the other side of a planar landmark*.

- **Sentence No. 17**

17. ‘Paul prefers sleeping in bed with his head on pillow’

- a) Above the pillow
- b) Supported by the pillow [**The Correct Answer**]
- c) Placed at the top of the pillow

Options	No.	%
Right	37	92.50
Wrong (a)	01	02.50
Wrong (c)	02	05
No Answer	00	00
Total	40	100

**Table 4.229: The Awareness of the ‘Basic Sense of on’: The Experimental Group/
the Post-Test**

Table 4.229 reveals that 92.50% of the students understood that the basic meaning of *on* indicates the notion of *support*. The Experimental Group showed a very high level of awareness of the basic sense of *on* in the post-test.

- **Sentence No. 18**

18. ‘The hummingbird flies over the flower’.

- a) Upward and forward across the flower [**The Correct Answer**]
- b) Higher and touching the flower
- c) Across the flower

Options	No.	%
Right	16	40
Wrong (b)	22	55
Wrong (c)	01	02.50
No Answer	01	02.50
Total	40	100

**Table 4.230: The Awareness of the ‘Dynamic Sense of over’: The Experimental Group/
the Post-Test**

According to Table 4.230, the students in the Experimental Group could not identify the correct answer. Only 40% chose the option (a), while over 50% chose the second option. The results indicate that these students might have understood that the second option refers to the *above-across* sense of *over* when it expresses *contact* between the trajector and the landmark, but they did not notice that the verb used is *to fly*, which refers to a scene wherein the trajector and the landmark are not in contact.

- **Sentence No.19**

19. ‘The information in this booklet is out of date.’

- a) The information that this booklet mentions is out of date
- b) The information that this booklet contains is out of date [**The Correct Answer**]
- c) The information that this booklet states is out of date

Options	No.	%
Right	32	80
Wrong (a)	06	15
Wrong (c)	02	05
No Answer	00	00
Total	40	100

**Table 4.231: The Awareness of ‘Metaphorical Containment’: The Experimental Group/
the Post-Test**

Of the data gathered in Table 4.231, a very large number of the students (80%) answered correctly and understood that the ‘*the booklet is a container*’. The Experimental Group, then, showed a very high level of awareness of this sense of *in*.

- **Sentence No. 20**

20. ‘The actions of public officials must be above suspicion’.

- a) They must be very good to be suspected [**The Correct Answer**]
- b) They must be very obvious to be suspected
- c) They must be under suspicion

Options	No.	%
Right	32	80
Wrong (b)	03	07.50
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.232: The Awareness of the ‘*Separation Sense*’: The Experimental Group/
the Post-Test**

Table 4.132 indicates that 80% of the students identified the metaphorical sense expressed by *above* in this sentence. So, their familiarity with this sense increased to the very high level.

- **Sentence No. 21**

21. ‘It has been said that dark colors in cotton fabric keep out the sun’s harmful ultraviolet rays’.

- a) Protect us from the sun's harmful ultraviolet rays
- b) Prevent the sun’s harmful ultraviolet rays from entering [**The Correct Answer**]
- c) Reflect the sun’s harmful ultraviolet rays

Options	No.	%
Right	25	62.50
Wrong (a)	10	25
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.233: The Awareness of the ‘*Exclusion Sense*’: The Experimental Group/
the Post-Test**

According to Table 4.233, 62.50% of the students became aware of the *exclusion sense of out* and their awareness increased to the moderate level.

- **Sentence No. 22**

22. ‘They put rocks over a cave entrance’.

- a) Near the cave
- b) Higher than the cave
- c) To cover the cave [**The Correct Answer**]

Options	No.	%
Right	32	80
Wrong (a)	00	00
Wrong (b)	07	17.50
No Answer	01	02.50
Total	40	100

**Table 4.234: The Awareness of the ‘*Covering Sense*’: The Experimental Group/
the Post-Test**

Table 4.234 reveals that the right answer represents 80% of the total. The majority of the students identified the *covering* sense expressed by *over* because their awareness of this sense, after the instruction, went up to the very high level.

- **Sentence No. 23**

23. ‘We saw a couple of duty crew through a window.’

- a) On the other side of the window [**The Correct Answer**]
- b) By the window
- c) From the window

Options	No.	%
Right	11	27.50
Wrong (b)	14	35
Wrong (c)	15	37.50
No Answer	00	00
Total	40	100

Table 4.235: The Awareness of the ‘Static Sense of through’: The Experimental

Group/ the Post-Test

Table 4.235 shows that only 27.50% of the students answered correctly. It seems that the *static sense of through* was not easy for the students to perceive. They perhaps did not pay attention that *through* focuses on the position of the *crew* in relation to the *window* and not where the act of seeing took place.

- **Sentence No.24**

24. ‘Father is in bad temper, he has just thrown mother out of window’.

- a) Because of my father’s bad state, he has thrown my mother [**The Correct Answer**]
- b) Because my father is inside bad temper, he has thrown my mother
- c) Because of my father’s bad situation, he has thrown my mother

Options	No.	%
Right	24	60
Wrong (b)	07	17.50
Wrong (c)	09	22.50
No Answer	00	00
Total	40	100

Table 4.236: The Awareness of the ‘State Sense’: The Experimental Group/the Post-Test

According to Table 4.236, the correct option (c) makes up 60% of the total. The students could identify that when *in* is used metaphorically, it does not mean *inside*, and it refers, in this case, to *states*. On the basis of the results, the Experimental Group exhibited a moderate level of awareness.

- **Sentence No. 25**

25. ‘She placed the tablecloth on the table.’

- a) She placed the tablecloth to cover the table
- b) She placed the tablecloth onto the table [**The Correct Answer**]
- c) She placed the tablecloth above the table

Options	No.	%
Right	31	77.50
Wrong (a)	08	20
Wrong (c)	01	02.50
No Answer	00	00
Total	40	100

**Table 4.237: The Awareness of the ‘Dynamic Sense of on’: The Experimental Group/
the Post-Test**

Table 4.237 exhibits that the *dynamic sense of on* was not problematic for the students. The percentage of the correct answer (77.50%) indicates that the students' background knowledge improved and they understood the difference between 'to cover a table' and 'to put something onto the table'.

- **Sentence No. 26**

26. 'Sam lives over the hill.'

- a) Near the hill
- b) Behind the hill
- c) On the other side of the hill [**The Correct Answer**]

Options	No.	%
Right	37	92.50
Wrong (a)	02	05
Wrong (b)	01	02.50
No Answer	00	00
Total	40	100

**Table 4.238: The Awareness of the 'Static Sense of over': The Experimental Group/
the Post-Test**

Of the data presented in Table 4.238, we can see that 92.50% of the students became aware of the *end point focus sense of over*. The students' background Knowledge increased in the post-test to the very high level.

- **Sentence No. 27**

27. 'There was a spider's nest in the mountain cave'

- a) The spider's nest was enclosed by the mountain cave [**The Correct Answer**]
- b) The spider's nest covered the mountain cave
- c) The spider's nest was all over the mountain cave

Options	No.	%
Right	36	90
Wrong (b)	01	02.50
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

**Table 4.239: The Awareness of the ‘Basic Sense of in’: The Experimental Group/
the Post -Test**

Table 4.239 illustrates that the correct answer accounts for 90% of the total. Almost all the students could understand that *in* involves *enclosure*.

- **Sentence No. 28**

28. ‘He suffered a serious bruise above his left eye.’

- a) His bruise was on his left eye
- b) His bruise was higher than his left eye [**The Correct Answer**]
- c) His bruise was on top of his left eye

Options	No.	%
Right	31	77.50
Wrong (a)	04	10
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.240: The Awareness of the ‘Basic Sense of above’: The Experimental Group/
the Post-Test**

Table 4.240 reveals that the correct option (c) makes up 77.50% of the total. The students' awareness increased to the rather high level. It seems that there was a change in their realization of the basic sense of *above*.

- **Sentence No. 29**

29. 'The accused murderer's wife was able to remain loyal through her conviction of his innocence.'

- a) She was able to remain loyal via her conviction
- b) She was able to remain loyal because of her conviction [**The Correct Answer**]
- c) She was able to remain loyal by way of her conviction

Options	No.	%
Right	15	37.50
Wrong (a)	22	55
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

**Table 4.241: The Awareness of the 'Cause Sense': The Experimental Group/
the Post-Test**

Table 4.241 shows that over a third of the students (37.50%) could recognize that the correct sense is *because of*, but this could be considered a low percentage because they received instruction on the polysemy of *through*. The students could not distinguish between *because of*, *by way of* and *via*.

- **Sentence No. 30**

30. 'I am over my cold'.

- a) I have recovered from my cold [**The Correct Answer**]
- b) I am still suffering from my cold
- c) I am cold

Options	No.	%
Right	32	80
Wrong (b)	07	17.50
Wrong (c)	01	02.50
No Answer	00	00
Total	40	100

**Table 4.242: The Awareness of the Sense ‘Recovered from’: The Experimental Group/
the Post-Test**

Table 4.242 indicates that 80% represents a very high number of the students who answered correctly. The students’ awareness of this sense increased to the very high level.

- **Sentence No. 31**

31. ‘A: Have we got any milk left?’

‘B: No, we’re (all) out!’

- a) We’re all outside
- b) We no longer have milk [**The Correct Answer**]
- c) We have not bought milk

Options	No.	%
Right	30	75
Wrong (a)	02	05
Wrong (c)	08	20
No Answer	00	00
Total	40	100

**Table 4.243: The Awareness of the ‘No More Sense’: The Experimental Group/
the Post-Test**

We can see from Table 4.243 that 75% of the students selected the right option (b). It appears that the awareness of the students of this sense also changed in that they did not rely on their own wrong understanding of the context, but on their background knowledge of *out* and what it means in this sentence.

- **Sentence No. 32**

32. ‘The fruit is allowed to mature on the tree.’

- a) Above the tree
- b) Over the tree
- c) In contact and supported by the tree [**The Correct Answer**]

Options	No.	%
Right	38	95
Wrong (a)	01	02.50
Wrong (b)	01	02.50
No Answer	00	00
Total	40	100

Table 4.244: The Awareness of the ‘Rotated Schema of on’: The Experimental Group/ the Post-Test

According to Table 4.244, almost all the students (95%) answered correctly. The Experimental Group’s familiarity with the rotated schema underlying *on* improved to the very high level. It could be said that they could understand that *on* can suggest *support* and *contact* along the horizontal axis and the vertical one.

- **Sentence No. 33**

33. ‘While I was in the garden, a snake crawled out in front of me.’

- a) Moved outside the garden in front of me
- b) Appeared in front of me **[The Correct Answer]**
- c) Moved quickly across the ground in front of me

Options	No.	%
Right	28	70
Wrong (a)	06	15
Wrong (c)	06	15
No Answer	00	00
Total	40	100

**Table 4.245: The Awareness of the ‘Appearance Sense’: The Experimental Group/
the Post-Test**

Table 4.245 shows that a significant majority of the students (70%) became knowledgeable about the *appearance sense* expressed by *out*. The students’ awareness of this sense increased to the rather high level.

- **Sentence No. 34**

34. ‘They are in the manufacture of expensive baby clothes.’

- a) They are inside the manufacture of expensive baby clothes
- b) They work for a company that manufactures expensive baby clothes **[The Correct Answer]**
- c) They are in the process of manufacturing expensive baby clothes **Answer]**

Options	No.	%
Right	25	62.50
Wrong (a)	10	25
Wrong (c)	05	12.50
No Answer	00	00
Total	40	100

**Table 4.246: The Awareness of the ‘Activity Sense’: The Experimental Group/
the Post-Test**

Table 4.246 exhibits that the majority of the students (62.50%) could identify *the activity sense of in*. It could be said that the students understood the difference between the use of *in* statically to mean *inside*, and its metonymical use to indicate *an activity*. Hence, in the post-test, they showed a moderate level of awareness of the *activity sense*.

- **Sentence No. 35**

35. ‘The children jumped over the puddles on their way to school.’

- a) They jumped in the puddle
- b) They jumped above and across the puddle [**The Correct Answer**]
- c) They jumped in and then out of the puddle

Options	No.	%
Right	38	95
Wrong (a)	00	00
Wrong (c)	02	05
No Answer	00	00
Total	40	100

**Table 4.247: The Awareness of the ‘above-across Sense’: The Experimental Group/
the Post-Test**

Of the data presented in Table 4.247, the correct answer makes up 95% of the total. The *curving path expressed by over* was not problematic for the students in the post-test. They understood that the *dynamic sense* of *over* combines the senses of *above* and *across*. The results indicate that they showed a very high level of awareness of this sense.

- **Sentence No. 36**

36. ‘On the trail, we came across some hikers from Australia.’

- a) We found hikers by chance [**The Correct Answer**]
- b) We came nearer to some hikers
- c) We met some hikers as planned

Options	No.	%
Right	35	87.50
Wrong (b)	02	05
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

Table 4.248: The Awareness of ‘Come across’: The Experimental Group/the Post-Test

According to Table 4.248, 87.50% of the students were able to recognize that (a) is the correct answer. It means that their comprehension after the instruction changed to the very high level.

- **Sentence No. 37**

37. ‘He hangs a mirror above the chimney.’

- a) On the chimney
- b) Near the chimney
- c) Over the chimney [**The Correct Answer**]

Options	No.	%
Right	36	90
Wrong (a)	01	02.50
Wrong (b)	03	07.50
No Answer	00	00
Total	40	100

Table 4.249: The Awareness of the ‘*Dynamic Sense of above*’: The Experimental

Group/the Post-Test

Table 4.249 shows that the students’ familiarity with the *dynamic sense* of *above* improved in the post-test. Almost all of them (90%) recognized that *near* and *on* are the wrong options and the option (c) is the correct conceptual meaning which is close to *above*.

- **Sentence No. 38**

38. ‘The manager opened the door and stepped in.’

- a) The manager raised his foot
- b) The manager moved to the inside [**The Correct Answer**]
- c) The manager opened the door and stood in the way

Options	No.	%
Right	32	80
Wrong (a)	02	05
Wrong (c)	06	15
No Answer	00	00
Total	40	100

Table 4.250: The Awareness of the ‘*Dynamic Sense of in*’: The Experimental Group/

the Post-Test

Table 4.250 reveals that a very large majority of the students (80%) were able to select the right answer. The results indicate that their familiarity with the *dynamic sense of in* increased to the very high level.

- **Sentence No. 39**

39. ‘We decided to go for a walk over the hill.’

- a) To go to the hill
- b) To walk around the hill
- c) To walk from one side to the other of the hill [**The Correct Answer**]

Options	No.	%
Right	30	75
Wrong (a)	02	05
Wrong (b)	07	17.50
No Answer	01	02.50
Total	40	100

Table 4.251: The Awareness of ‘Contact Indicated by over: The Experimental Group/the Post-Test

Table 4.251 shows that the correct option (c) accounts for 75% of the total. The students’ familiarity with this sense could be considered to be at the rather high level. They were able to identify that *over* and *around* are not synonymous because they became aware that *over* means ‘*moving from one side to the other side.*’

- **Sentence No. 40**

40. ‘The company’s profits are above the ones in the previous year.’

- a) They are better than the ones in the previous year
- b) They are over the ones in the previous year [**The Correct Answer**]
- c) They exceed the ones in the previous year

Options	No.	%
Right	06	15
Wrong (a)	27	67.50
Wrong (c)	07	17.50
No Answer	00	00
Total	40	100

**Table 4.252: The Awareness of the ‘More than Sense’: The Experimental Group/
the Post-Test**

It is clearly shown in Table 4.252 that a large number of the students (67.50%) selected the wrong option (a). The students could not notice that the correct meaning of this sentence is based to a high extent on the preposition *above*.

- **Sentence No. 41**

41. ‘The child was screaming when she drew him out of the club’s swimming pool.’

- a) Away from the inside of the swimming pool [**The Correct Answer**]
- b) From the outside of the club’s swimming pool
- c) Into the swimming pool

Options	No.	%
Right	27	67.50
Wrong (b)	13	32.50
Wrong (c)	00	00
No Answer	00	00
Total	40	100

**Table 4.253: The Awareness of the ‘Basic Sense of out’: The Experimental Group/
the Post-Test**

Table 4.253 reveals that 67.50% of the students could identify the right answer. It could be said that the students, after the instruction, became aware of the conceptual meaning associated with *out* and their awareness was at the moderate level.

- **Sentence No. 42**

42. ‘Oxygen must be held in a sealed container.’

- a) Oxygen must be pressed there
- b) Oxygen must be enclosed there
- c) Oxygen must be blocked there [**The Correct Answer**]

Options	No.	%
Right	20	50
Wrong (a)	02	05
Wrong (b)	17	42.50
No Answer	01	02.50
Total	40	100

**Table 4.254: The Awareness of the ‘Blockage Sense’: The Experimental Group/
the Post -Test**

Table 4.254 indicates that half the students opted for the correct answer, while the remaining 50% doubted about the correct sense expressed by *in*. Even though the students’ awareness of the *blockage sense of in* slightly changed, it remained at the rather low level.

- **Sentence No. 43**

43. ‘There are several huts across the river.’

- a) On the other side of the river [**The Correct Answer**]
- b) Near the river
- c) Beyond the river

Options	No.	%
Right	38	95
Wrong (b)	01	02.50
Wrong (c)	01	02.50
No Answer	00	00
Total	40	100

**Table 4.255: The Awareness of the ‘*Static Sense of across*’: The Experimental Group/
the Post-Test**

Of the data presented in Table 4.255, the right answer makes up 95% of the total. The students’ comprehension of the *static sense of across* improved to the very high level.

- **Sentence No.44**

44. ‘There is no one over him in the department.’

- a) No one rules him in the department [**The Correct Answer**]
- b) There is no one but him in the department
- c) He has the highest rank in the department

Options	No.	%
Right	20	50
Wrong (b)	00	00
Wrong (c)	20	50
No Answer	00	00
Total	40	100

**Table 4.256: The Awareness of the ‘*Control Sense*’: The Experimental Group/
the Post-Test**

Table 4.256 indicates that the right answer accounts for 50% of the total. The remaining half the students chose the wrong option (c) because they seem not to have a clear understanding of the *control sense* associated with *over*.

- **Sentence 4.45**

45. ‘She drove through the garage at sixty kilometers an hour.’

- a) She drove into the garage
- b) She drove into and then exited the garage [**The Correct Answer**]
- c) She drove closer to the garage

Options	No.	%
Right	31	77.50
Wrong (a)	07	17.50
Wrong (c)	02	05
No Answer	00	00
Total	40	100

Table 4.257: The Awareness of the ‘Basic Sense of through’: The Experimental Group/ the Post-Test

Table 4.257 reveals that 77.50% of the students identified the meaning of *through*. The students’ awareness increased, and it was at the rather high level after the instruction because they could distinguish between *into* and *through*.

- **Sentence No. 46**

46. ‘Interviews will be held at the above address on 2 December.’

- a) At the following address
- b) Outside the earlier address
- c) At the preceding address [**The Correct Answer**]

Options	No.	%
Right	27	67.50
Wrong (a)	10	25
Wrong (b)	02	05
No Answer	01	02.50
Total	40	100

Table 4.258: The Awareness of the ‘Earlier Sense’: The Experimental Group/

the Post-Test

It can be seen from Table 4.258 that the right option makes up 67.50% of the total. Only a quarter of the students confused this sense with the wrong option (a). The students showed a moderate level of awareness of this sense.

- **Sentence 4.47**

47. ‘When the police were running after, he was doing over a hundred miles.’

- a) He was doing again a hundred miles
- b) He was doing more than a hundred miles [**The Correct Answer**]
- c) He ended up doing a hundred miles

Options	No.	%
Right	35	87.50
Wrong (a)	02	05
Wrong (c)	03	07.50
No Answer	00	00
Total	40	100

Table 4.259: The Awareness of the ‘More Sense of over’: The Experimental Group/

the Post-Test

Table 4.259 shows that a large majority of the students (87.50%) were able to identify the right answer. Only a small minority (05%) chose the option (a) and 07.50% selected (c). It could be deduced from the results that the students' awareness of the *more than sense of over* was very high after the instruction.

- **Sentence No. 48**

48. 'If fire breaks out, get in single file before leaving.'

- a) Form a line before leaving [**The Correct Answer**]
- b) Get into a single file before leaving
- c) Get inside a single file before leaving

Options	No.	%
Right	16	40
Wrong (b)	13	32.50
Wrong (c)	11	27.50
No Answer	00	00
Total	40	100

Table 4.260: The Awareness of the 'Use of in to Indicate Shapes': The Experimental Group/the Post-Test

Table 4.260 indicates that 40% of the students answered correctly. Although their awareness improved in the post-test, it remained at the low level.

- **Sentence No. 49**

49. 'They put the blame on her because she told the secret to everyone.'

- a) The blame made her be in trouble because she told the secret
- b) The blame was a burden because she told the secret [**The Correct Answer**]
- c) The blame was a responsibility because she told the secret

Options	No.	%
Right	30	75
Wrong (a)	04	10
Wrong (c)	06	15
No Answer	00	00
Total	40	100

**Table 4.261: The Awareness of the ‘Burden Metaphor’: The Experimental Group/
the Post -Test**

According to Table 4.261, the correct answer accounts for 75% of the total. It seems that the students became aware of the *burden metaphor* expressed by *on*, and their awareness of this sense increased to the rather high level.

– Part Two

- **Blank No. 1**

“One day, while I was in my office, a sergeant came (1)..... and told me that the police chief wanted to see me”. [The Correct Answer: *in*]

Prepositions	No.	%
*In	32	80
Across	06	15
On	01	02.50
Out	01	02.50
Total	40	100

***The Correct Answer**

**Table 4.262: The Experimental Group’s Use of the ‘Dynamic Sense of in’
in the Post-Test**

Of the data gathered in Table 4.262, we can see that a very large majority of the students (80%) could select the correct preposition and the correct sense. The students' awareness of the use of *in* dynamically increased to the very high level.

- **Blank No.2**

“[...] I stood in front of his desk while he began to get (2)..... to me the story of the Smith family [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	27	67.50
On	05	12.50
Out	04	10
Over	02	05
In	01	02.50
Above	01	02.50
Total	40	100

Table 4.263: The Experimental Group's Use of 'Get across' in the Post-Test

Table 4.263 reveals that 67.50% of the students were able to use *across*. The other proposed answers have no relation with *across*, and they indicate that the students did not read well this sentence.

- **Blank No. 3**

“[...] my chief was really convinced that Mr. Smith was (3).....cruelty to kill his wives [...]”. [The Correct Answer: *above*]

Prepositions	No.	%
*Above	25	62.50
In	01	02.50
Through	01	02.50
Out	05	12.50
Over	08	20
Total	40	100

**Table 4.264: The Experimental Group’s Use of the ‘Separation Sense of above’
in the Post-Test**

Table 4.264 shows that a large number of the students (62.50%) answered correctly, while only 20% could not distinguish between the target domains of *over* and *above* when used metaphorically. This means that the students in the Experimental Group exhibited a moderate level of awareness.

- **Blank No. 04**

“[...]. The Smith house [...] was situated (4).....a broad expanse of a lawn [...]”. [The Correct Answer: *across*]

Prepositions	No.	%
*Across	23	57.50
Through	01	02.50
Over	04	10
On	09	22.50
In	12	30
Total	40	100

**Table 4.265: The Experimental Group’s Use of the ‘Static Sense of across’ in
the Post-Test**

Table 4.265 illustrates that the use of *across* accounts for 57.50% of the total. The students confused this sense with the senses of *through*, *over* and *in*. It appears that there is a slight increase in the students' background knowledge about the difference between the types of landmarks these prepositions refer to.

- **Blank No. 5**

“It was a house which rose like a tower (5) the hill”. [The Correct Answer: *on*]

Prepositions	No.	%
*On	36	90
Above	01	02.50
Across	01	02.50
In	01	02.50
Through	01	02.50
Total	40	100

Table 4.266: The Experimental Group's Use of the 'Static Sense of *on*' in the Post-Test

According to Table 4.266, almost all the students (90%) recognized that the blank stands for *on*. The students' awareness of the use of *on* statically increased to the very high level.

- **Blank No. 6**

“[...] Mr. Smith suggested staying the evening in his house. I was led away (6)..... a dark hall to my room [...]”. [The Correct Answer: *through*]

Prepositions	No.	%
*Through	25	62.50
Over	01	02.50
Across	05	12.50
Out	02	05
On	01	02.50
In	06	15
Total	40	100

Table 4.267: The Experimental Group’s Use of the ‘*Dynamic Sense of through*’

in the Post-Test

According to Table 4.267, 62.50% of the students could identify the right preposition and the right sense. We could say that the students’ awareness of the *dynamic sense of through* increased to the moderate level.

- **Blank No. 7**

“[...]. That night, I did not sleep well because there was a lot of pressure (7) me [...].”

[The Correct Answer: *on*]

Prepositions	No.	%
*On	14	35
Above	01	02.50
Across	04	10
Over	09	22.50
In	12	30
Total	40	100

Table 4.268: The Experimental Group’s Use of the ‘*Burden Metaphor*’ in the Post-Test

Table 4.268 reveals that *on* represents 35% and *in* accounts for 30% of the total. It appears that the students could not understand the difference between the target domains these prepositions denote when they are used metaphorically. In the post-test, the Experimental Group showed a very low level of awareness of the use of *on* when it indicates a *metaphorical burden*.

- **Blank No.8**

“[...] a small plane hovering (8) the house [...].” [The Correct Answer: *over*]

Prepositions	No.	%
*Over	35	87.50
On	01	02.50
In	02	05
Out of	02	05
Total	40	100

Table 4.269: The Experimental Group’s Use of the ‘Dynamic Sense of over’ in the Post-Test

Table 4.269 indicates that 87.50% of the students were able to identify the *above-across sense* of *over*. The Experimental Group exhibited a high level of awareness of using the *dynamic sense of over*.

- **Blank No.9**

“It was very close to the earth (9)..... the airstrip.” [The Correct Answer: *above*]

Prepositions	No.	%
*Above	23	57.50
In	04	10
On	02	05
through	09	22.50
Across	02	05
Total	40	100

Table 4.270: The Spatial Use of *above* by the Experimental Group in the Post-Test

According to Table 4.270, just over half the students identified the correct answer, while 22.50% of them confused it with *through*. It seems that the students did not understand the difference between the use of *above* and *through* spatially despite the fact that they are not semantically related. On the basis of the results, their awareness was at the rather low level.

- **Blank No. 10**

“The plane rolled to a stop and landed (10)the area near the convent.”[**The Correct Answer: *on***]

Prepositions	No.	%
*On	26	65
Out	03	07.50
Across	04	10
Over	04	10
In	02	05
Above	01	02.50
Total	40	100

Table 4.271: The Experimental Group’s Use of the ‘*Dynamic Sense of on*’ in the Post-Test

Table 4.271 indicates that only a minority of the students (10%) confused *on* with *over* and 02.50% with *above*. The students' background knowledge of the nuances between *on*, *above* and *over* when these three prepositions are used dynamically increased to the moderate level.

- **Blank No. 11**

“[...] a woman got (11) dressed in a long black dress [...]” [The Correct Answer: *out*]

Prepositions	No.	%
*Out	27	67.50
In	02	05
Across	03	07.50
Over	04	10
On	03	07.50
Through	01	02.50
Total	40	100

Table 4.272: The Experimental Group's Use of the 'Dynamic Sense of out' in the Post-Test

We can see from Table 4.272 that the majority of the students (67.50%) were able to use the right preposition. The use of ISBI improved the awareness of the students in the Experimental to the moderate level.

- **Blank No. 12**

“[...] I decided to pay a visit to the convent. (12) the convent, the curtains were [...]”

[The Correct Answer: *in*]

Prepositions	No.	%
*In	27	67.50
Through	05	12.50
On	04	10
Over	02	05
Above	02	05
Total	40	100

Table 4.273: The Experimental Group’s Use of the ‘Static Sense of in’ in the Post-Test

Table 4.273 exhibits that 65.50% of the students understood that the spatial scene corresponds to the spatial sense of *in*. The other wrong prepositions were just used by the students because they could not realize that the blank stands for a static relation. The Experimental Group’s use of the *Static Sense of in* in the post-test was at the moderate level.

- **Blank No. 13**

“[...] the curtains were (13).....the window [...]” [The Correct Answer: *over*].

Prepositions	No.	%
*Over	21	52.50
Above	06	15
On	13	32.50
Total	40	100

Table 4.274: The Experimental Group’s Use of the ‘Covering Sense of over’ in the Post-Test

We can see from Table 4.274 that 52.50% of the students answered correctly, whereas a small minority (15%) used *above* and 32.50% confused *over* with *on*. Although the students' awareness increased in the post-test, it remained at the rather low level.

- **Blank No. 14**

“[...] there was parsley spread (14)..... on the table [...]” [The Correct Answer: *out*].

Prepositions	No.	%
*Out	27	67.50
In	02	05
Above	03	07.50
Across	04	10
Over	03	07.50
No Answer	01	02.50
Total	40	100

Table 4.275: The Experimental Group's Use of the 'Distribution Sense of out'

in the Post-Test

According to Table 4.275, a large number of the students (67.50%) could use *out* metaphorically correctly. The students who used *in*, *above*, *across* and *over* could indicate that they did not read carefully the sentence. We could say that the students' use of *out* metaphorically was at the moderate level.

- **Blank No. 15**

“[...] two pictures hanging on the wall which were placed (15).....the same table [The Correct Answer: *above*]

Prepositions	No.	%
*Above	29	72.50
On	09	22.50
Across	01	02.50
In	01	02.50
Total	40	100

**Table 4.276: The Experimental Group’s Use of the ‘Dynamic Sense of above’
in the Post-Test**

Table 4.276 shows that the highest number of the students (72.50%) succeeded in identifying that the blank stands for the preposition *above* and not *on*. Only 9 students used *on* instead of *above* and the use of *across* as well as *in* is meaningless. The students’ ability to use *above* dynamically improved to the rather high level.

- **Blank No. 16**

“[...] a group of women sitting around a small table (16).....thoughtful calm [...].” [The Correct Answer: *in*]

Prepositions	No.	%
*In	34	85
Through	02	05
Out	02	05
Over	02	05
Total	40	100

Table 4.277: The Experimental Group’s Use of the ‘State Sense of in’ in the Post-Test

According to Table 4.277, the right answer makes up 85% of the total. The students' ability to use the *state sense of in* increased, and it could be considered to be at the very high level.

- **Blank No. 17**

“ [...] I stood (17) in the garden thinking [...]”. [The Correct Answer: *out*]

Prepositions	No.	%
*Out	30	75
In	01	02.50
Over	01	02.50
Above	01	02.50
On	01	02.50
Across	06	15
Total	40	100

Table 4.278: The Experimental Group's Use of the 'Static Sense of out' in the Post-Test

Table 4.278 reveals that three quarter of the students (75%) were able to use *out* correctly. The students' use of *out* increased to the rather high level since they could understand the context, and they could realize the difference between *in* and *out*.

- **Blank No. 18**

“ [...] when quiet hour was (18), someone might come and talk to me [...]”. [The Correct Answer: *over*]

Prepositions	No.	%
*Over	35	87.50
On	01	02.50
In	02	05
Above	02	05
Total	40	100

**Table 4.279: The Experimental Group’s Use of the ‘Completion Sense of over’
in the Post-Test**

Of the data gathered in Table 4.279, we can see clearly that majority of the students (87.50%) understood that this blank stands for *over*. After the instruction, the students’ ability to use *the completion sense of over* improved, and it was at the very high level since a large number of them were able to distinguish it from the other senses.

- **Blank No. 19**

“Unexpectedly, I saw the woman with the straw hat walking (19)..... the garden and going towards Mr. Smith’s house [...]” [The Correct Answer: *across*]

Prepositions	No.	%
*Across	31	77.50
Over	01	02.50
Through	01	02.50
Out	01	02.50
On	02	05
In	04	10
Total	40	100

**Table 4.280: The Experimental Group’s Use of the ‘Dynamic Sense of across’
in the Post-Test**

Table 4.280 shows that 77.50% of the students used *across* correctly. The students' awareness and ability changed and increased in the post-test to the rather high level.

- **Blank No. 20**

“She [...] continued moving quickly (20).....the trees [...]” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	27	67.50
In	02	05
Over	01	02.50
Across	10	25
Total	40	100

Table 4.281: The Experimental Group's Use of *through* Spatially in the Post-Test

Table 4.281 reveals that a large proportion of the students (67.50%) realized that this blank stands for *through*. The students' ability to use *through* spatially was at the moderate level in the post-test.

- **Blank No. 21**

“ [...]. I received a letter from that woman [...]. (21).....this letter, I discovered that the deaths of his wives were accidental.” [The Correct Answer: *through*]

Prepositions	No.	%
*Through	17	42.50
In	16	40
Above	01	02.50
On	03	07.50
Over	02	05
No Answer	01	02.50
Total	40	100

Table 4.282: The Experimental Group’s Use of the ‘Means Sense’ in the Post-Test

Table 4.282 indicates that the correct use of *through* accounts for 42.50% of the total. Just under 42% of the students confused it with *in*, and the remaining 17.50% of them confused *through* with *above*, *on* and *over* or they did not answer. It could be said that the students’ use of the ‘means sense’ remained at the low level because they could not determine the underlying meaning of this blank.

4.3.3 Overall Analysis

Comparing the scores of the Control Group and the Experimental Group reveals that there is no a significant and remarkable difference between the students’ performances in the pre-test. Concerning **Part One**, the average score of the correct answers in the Control Group is 38.31%, and it is slightly higher than the one in the Experimental Group which is 35.82%. The results show that the majority of the students in both groups were unfamiliar with the polysemy of the target prepositions, including the spatial and the non-spatial senses. Particularly, they were weak on the awareness of their metaphorical senses. The pre-test also illustrates that a large number of the students lacked the basic knowledge about the conceptual

meanings associated with them. They were familiar with the synonyms of these prepositions, yet they reflected their unfamiliarity with the fact that pairs of prepositions are not perfectly synonymous, especially, when they are used metaphorically. The use of *out* in sentence No. 04 (p. 144 & p. 199) is a case in point. The students did not stop thinking about its meaning as *outside* even if it was meaningless in the context in which it was used. Besides, both groups relied very much on their own understanding of the different contexts provided in order to select the right answer because they were unaware or unable to determine the correct sense. Since the students had limited knowledge about the meanings of the prepositions under investigation, on the whole, they either exhibited a low level of awareness or they did not provide any answers.

Regarding **Part Two**, the average score of the correct answers indicates that there is not much difference between the students' outcomes in the Control Group and the Experimental Group. The Experimental Group's average score is 41.04%, and it is higher than that of the Control Group which is 37.14%. Both groups were not able to identify most of the blanks and hence the difference between the target prepositions. For instance, *on* was confused with *above* and *over* in dynamic, static as well as non-spatial situations and vice versa. The reason for this is that these prepositions are close in meaning to each other even though they are distinct. The preposition *over* was also confused with *across* and *through* since they denote path too. Moreover, the use of *in*, *on*, *out* and *through* was problematic for the students because they could not identify the nuances that exist between the meanings they convey. The data obtained from analyzing **Part Two** reveal that the selection of a specific sense that seems to mean the same thing like another one was difficult for the students due to the fact that they were unfamiliar with the polysemy of the target prepositions. Both the Control Group and the Experimental Group at large struggled with having the ability to think

critically about the senses of the target prepositions. In effect, in **Part Two** of the pre-test, they filled in the blanks with many wrong answers (or prepositions).

As far as the post-test is concerned, the average score of the correct answers, concerning **Part One**, in the Control Group is 37.10% and in the Experimental Group is 68.61%. It is clear that there is no remarkable difference in the average score of the students' performances in the Control group; there is a very slight decrease in the Control Group's average score. In contrast, in the Experimental Group, we notice an increase in the average score of the correct answers from the pre-test to the post-test. This change is significant (68.61% > 35.82%). Thus, ISBI has improved the outcomes of the students. Overall, when we compare the average scores of the post-tests of both the Control Group (37.10%) and the Experimental Group (68.61%), we can see that there is a difference, and the effects of the treatment are significant. We can conclude on the basis of the results that the application of ISBI to teach polysemous prepositions has better effects than the traditional method.

Concerning **Part Two**, the Control Group's average score of the correct answers is 40% and that of the Experimental Group is 66.09%. The Control Group's scores indicate that there is a very small improvement from the pre-test (37.14%) to the post-test (40%). However, the scores of the Experimental Group improve from the pre-test to the post-test; the average score in the pre-test is 41.04% and in the post-test is 66.09%. Hence, the post-test scores of the Experimental Group are significantly higher than those of the Control Group. This means that ISBI has proven again that it has an effect on the students' performances when it comes to identifying the nuances that exist between the target prepositions.

The findings of this study suggest that ISBI can improve the learning of *above*, *across*, *in*, *on*, *out*, *over* and *through* by making the students aware of their distinct senses and the nuances between them. In the pre-test, the results indicate that the use of these polysemous

prepositions constituted a problem for the subjects of the study who were unconscious of many of their meanings as well as the areas where they cannot be used interchangeably. Nevertheless, in the post-test, the Experimental Group's previous knowledge was modified and consolidated in their minds. When the students' awareness improved, their productive skills improved too. We have noticed that, in the post-test, the students' awareness of the different senses of the target prepositions enabled them to develop the ability to think critically about their senses and to select the appropriate sense out of the senses they knew.

While the traditional instruction affected to some extent the students' performances, ISBI was more effective on the students' outcomes concerning the use of the target prepositions. The meaningfulness of the information; that is, representing the senses via image-schemas and building into the students' minds the knowledge of the motivation behind the senses, along with the notion of the central meaning helped them to remember and use them better than the students who were just given the definitions we might find in dictionaries. It also enabled them to engage in deep processing of the target prepositions through giving them an opportunity to process the various senses in different contexts. The study gives reason to believe that the students who received instruction based on image-schemas could manage to fill the lexical gaps they had before the instruction.

Tyler and Evans (2004) argue that the representation of meanings as gestalt-like conceptualizations of situations or scenes which are systematically connected in graphic representations rather than a series of separate dictionary-type definitions in a list can provide visual rubrics that can be useful presentational tools for teachers and useful aids for learners (cited in Tyler, Mueller & Ho, 2010a). Our experiment is related to the one conducted by Morimoto & Loewen in 2007. They observed that ISBI was effective because it was easier for learners to understand how different senses, including those in the metaphorical domains, are semantically related because of the image-schemas which depicted the spatial relationship

between the two entities. Besides, the use of image-schemas does not represent the meanings in a piecemeal fashion. Therefore, the hypothesis that applying ISBI in the classroom as an alternative instruction to the traditional one promotes better achievements and better results is proved.

Conclusion

The results of the experiment show that, in most cases, the Experimental Group outperformed the Control Group in the test. The awareness building of the senses of *above*, *across*, *in*, *on*, *out*, *over* and *through* via ISBI consolidated their understanding and thinking abilities (i.e. their receptive skills and productive skills). The use of examples and definitions to teach polysemous prepositions did not help the students very much, so mediating the verbal explanation by the use of image-schemas and allowing them to process the information through examples affected positively their achievement. It should be noted that the experiment was conducted only on the spatial and non-spatial senses. It did not focus on the temporal senses of the target prepositions. The instruction required the students to engage in a new way of thinking, this is why, the selected senses were direct and widely agreed upon by researchers.

Chapter Five: Students' Attitudes towards Using Image-Schema-Based Instruction

Introduction

5.1 Description of the Students' Questionnaire

5.2 Analysis and Interpretation of the Results of the Students' Questionnaire

5.21 The Control Group

5.2.2 The Experimental Group

5.3 Overall Analysis

Conclusion

Introduction

Students' attitudes towards the type of instruction employed by teachers can enhance and add value to the process of language learning. Students' attitudes are two sides of the same coin. On the one hand, they serve to provide reactions that are based on their own opinions and beliefs about the extent to which the instruction has helped them, bearing in mind the possible effects it has on their knowledge of the subject matter. On the other hand, they can assist teachers to establish guidelines for future applications which, in turn, aid students to boost their achievement. It follows that the effects of applying ISBI cannot be seen only in the mirror of the students' development but also in their attitudes.

Presumably, if the subjects of the study (at the Department of Letters and English, University "Frères Mentouri", Constantine 1) held positive attitudes towards ISBI, then they could help determine the role it can play in the process of learning prepositions with multiple meanings and whether its use is crucial to nurture the growth as well as the development of their knowledge.

5.1 Description of the Students' Questionnaire

To determine the views of Second Year LMD students (at the Department of Letters and English, University "Frères Mentouri", Constantine 1) with regard to ISBI instruction, we devised a Students' Questionnaire which was administered to the Control Group and the Experimental Group after the treatment. The questionnaire consists of 16 questions divided into three sections (see Appendix III). The latter include close-ended questions and open-ended ones which aim at soliciting the students' own answers, by explaining their choice or suggesting alternatives in order to gain a deeper understanding of their attitudes.

Section One, Learning Polysemous Prepositions (Question (Q) 1- Q3), is purposed at getting the students' opinions about the category of preposition in general concerning its

difficulty in comparison to the other parts of speech (Q1) and the reasons behind this difficulty (Q2). In addition, the students are asked whether they encounter problems in using polysemous prepositions permanently, occasionally, or their use is not problematic at all (Q3). Then, light is cast on the type of prepositions which they find challenging (Q4). The first section also focuses on their attitudes towards learning polysemous prepositions and whether their learning is a burden (Q5- Q6). It further enquires into the ways the students have always followed to learn them (Q7).

In **Section Two, Polysemous Prepositions and Image-Schemas (Q8 - Q15)**, the objective is to get information about whether the students have always been taught polysemous prepositions (Q8), how they have been instructed by their teachers (Q9) and the method they prefer to be applied by their teachers when learning them (Q10). In line with this aim, they are asked whether the use of image-schemas facilitates the learning of polysemous prepositions (Q11). If the answer is “No”, light is thrown on the reasons why they think image-schemas should not be used to teach polysemous prepositions (Q12). The last two questions in this section have to do with the students’ attitudes towards the extent to which ISBI can help them (Q13) as well as the influence of teachers’ competence on its use when teaching polysemous prepositions (Q14). They are required to answer “Yes” or “No” and to justify their answers (Q15).

The final section, **Section Three: Further Suggestions**, is a space which invites the students to write additional comments or suggestions (Q16); it is an opportunity to give more weight to their perspectives, allowing them to expand their thoughts and elaborate their opinions or views in whatever way seems appropriate.

5.2 Analysis and Interpretation of the Results of the Students' Questionnaire

5.2.1 The Control Group

Section One: Learning Polysemous Prepositions

The aim of this section is to analyse the students' attitudes towards prepositions with multiple meanings.

1. Which of these word classes do you find difficult?

a. Nouns.....

b. Articles.....

c. Adjectives.....

d. Verbs.....

e. Adverbs.....

f. Prepositions.....

g. Conjunctions.....

Options	No.	%
a	00	00
b	00	00
c	00	00
d	01	02.50
e	02	05
f	16	40
g	00	00
bf	04	10
df	03	07.50
ef	02	05
fg	09	22.50
bdf	01	02.50
dfg	01	02.50
efg	01	02.50
Total	40	100

Table 5.1: The Control Group's Attitudes towards the Difficult Parts of Speech

Table 5.1 indicates that prepositions account for 40% of the total. Of the various grammatical parts of speech, prepositions seem to be the most difficult for the students in the Control Group in comparison to nouns, articles, adjectives, verbs, adverbs and conjunctions. Although these parts of speech have certain variations, exceptions as well as difficulties related to them, especially when it comes to verbs, prepositions are the hardest ones, and they should be taken seriously in the process of learning English as a FL.

2. What makes prepositions difficult to learn?

- a. They are numerous.....
- b. They have many meanings.....
- c. The rules that determine the choice between them are unclear.....
- d. The teacher's instruction.....
- e. Other: Please, specify

Options	No.	%
a	03	07.50
b	20	50
c	08	20
d	00	00
e	00	00
ab	01	02.50
bc	07	17.50
abc	01	02.50
Total	40	100

Table 5.2: Reasons behind the Difficulty of Prepositions: The Control Group

According to Table 5.2, 20 students in the Control Group said that the many meanings associated with prepositions are the source of their complicatedness. Eight students responded that the rules of using prepositions are not clear enough, whereas 7 students said that the plurality of their meanings and the rules of using them are both the reasons behind their difficulty. According to the remaining 5 students, 3 of them thought that the large number of prepositions makes their learning not easy, and 2 students (1 “ab”+ 1 “abc”) said that their numerous number, meanings and their vague rules cause their difficulty. The results confirm that the polysemantic nature of prepositions is an obstacle that the students need to get over.

3. Have you ever encountered difficulties in using polysemous prepositions?

a. All the time.....

b. Sometimes.....

c. Not at all.....

Options	No.	%
a	08	20
b	29	72.50
c	03	07.50
Total	40	100

Table 5.3: How Often the Use of Prepositions is Difficult: The Control Group

Table 5.3 reveals that a large number of the students (72.50%) encounter difficulties in using prepositions from time to time, while 20% of them always have problems using them, and according to a very few number of them (07.50%), the use of polysemous prepositions does not constitute a problem at all. This means that there are certain cases wherein prepositions pose difficulty for the students.

4. What type of prepositions do you find difficult to use?

a. Time.....

b. Spatial (place and movement).....

c. Metaphorical.....

d. All of them.....

Options	No.	%
a	00	00
b	04	10
c	18	45
d	12	30
ab	01	02.50
ac	01	02.50
bc	04	10
Total	40	100

Table 5.4: The Difficult Senses of Prepositions: The Control Group

Table 5.4 shows that 45% of the students responded that metaphorical prepositions are not easy to be used, followed by the option “all of them” at 30%. A small number of them (10%) thought that spatial prepositions are problematic, and also 10% considered both spatial and metaphorical senses as the most difficult ones.

5. Is learning polysemous prepositions a burden?

Yes.....

No.....

Options	No.	%
Yes	35	87.50
No	03	07.50
No Answer	02	05.00
Total	40	100

Table 5.5: The Control Group’s Views on Polysemous Prepositions

According to Table 5.5, a large majority of the students (87.50%) in the Control Group responded that learning polysemous prepositions is a burden, while 07.50% did not consider them as words which require many efforts to be learned or used.

6. Please, explain why.

Out of 40 students, 28 students explained the reasons behind their views on polysemous prepositions. Among the 3 students who answered “No”, only 1 student said that learning polysemous preposition is indeed a little complicated, but it is not a burden to learn them. On the contrary, students can feel better if they learn them and practise using them. The remaining 27 students considered the learning of prepositions as a burden because:

a–The nature of their meanings is difficult, and they seem to mean the same thing:

- It is difficult to know or determine all the various meanings and to understand them because, in many cases, they are unclear. (07 students).
- There are no rules that specify their use. (01 student).
- They have different meanings, especially, when they are combined with nouns. (01 student).
- There is a large number of polysemous prepositions which exhibit similar meanings. (01 student).

b–They create ambiguity and uncertainty:

- When learning polysemous prepositions, the students understand something and the meanings found in many contexts are completely different from what they have learned. (01 student).

- These prepositions change their meanings depending on the contexts wherein they are used, and because of this, the students cannot choose the right sense, or they doubt whether the meaning they use is correct or not. (06 students).
- Because it is difficult to distinguish between their meanings, they make the contexts ambiguous. (02 students).

c - They need many efforts to be learnt and used:

- It is really hard to guess their meanings each time you encounter them, and they need to be practised many times. (03 students).
- The students have to think a lot about them, and this makes them feel lost, confused and wonder about their right use. (05 students).

7. How do you learn polysemous prepositions?

- a. Via rote memory.....
- b. Via sentences.....
- c. Via dictionaries.....
- d. Via teachers' instruction.....
- e. Never read about them.....
- f. Other: Please, specify:

Options	No.	%
a	03	07.50
b	08	20
c	04	10
d	04	10
e	04	10
f	00	00
ab	02	05
ad	01	02.50
bc	02	05
bd	03	07.50
cd	01	02.50
abc	02	05
abd	01	02.50
bcd	02	05
abcd	01	02.50
abcdf	01	02.50
No answer	01	02.50
Total	40	100

Table 5.6: Ways of Learning Polysemous Prepositions: The Control Group

Table 5.6 reveals that 20% of the respondents learn polysemous prepositions via sentences, 10% via dictionaries and 10% via teachers' instruction. We can also see that 10% of them never read about prepositions with multiple meanings and quite the opposite, 37.50% (05% "ab" + 02.50% "ad" + 05% "bc" + 7.50% "bd" + 02.50 "cd" + 05% "abc" + 02.50% "abd"+ 05% "bcd"+ 02.50% "abcd") represents those students which follow more than one way to learn polysemous prepositions. The only student who opted for "adcdef" said that in addition to learning the meanings of prepositions via rote memory, sentences, teachers' instruction and dictionaries, writing conversations with native speakers helps this student realize the meaning

potential of these words. It seems that the students follow different ways when learning polysemous prepositions, but, generally, they learn them through indirect learning, i.e., via sentences, which is an aspect of rote memorization because it does not have or depend on clearly articulated definitions of these words.

Section Two: Polysemous Prepositions and Image-Schemas

8. Have you always received instruction on polysemous prepositions?

Yes.....

No.....

Options	No.	%
Yes	22	87.50
No	15	07.50
No Answer	03	05
Total	40	100

Table 5.7: The Control Group’s Responses to the Instruction of Polysemous Prepositions

Table 5.7 shows that a significant proportion of the students (87.50%) have always received instruction on polysemous prepositions. Since the majority of them have been taught polysemous prepositions, they can compare between the types of instruction they have received and ISBI.

9. When instructing polysemous prepositions, the teacher explains the meaning through:

a. A list of verbs and nouns that collocate with

b. Using synonyms.....

c. Dictionary-type definitions and examples.....

d. Other: Please, specify:

Options	No.	%
a	15	37.50
b	08	20
c	05	12.50
d	00	00
ab	03	07.50
ac	05	12.50
ad	01	02.50
bd	01	02.50
abd	01	02.50
No Answer	01	02.50
Total	40	100

Table 5.8: The Types of instruction the Control Group has received

Table 5.8 reveals that the use of “a list of verbs and nouns that collocate with prepositions” makes up 37.50% of the total. The use of synonyms accounts for 20% of the total, while the remaining 40% (12.50% “c” + 07.50% “ab”+ 12.50% “ac”+ 02.50% “ad”+ 02.50% “bd” + 2.50% “abd”) indicates that the students have been instructed polysemous prepositions eclectically. Despite the different responses of the students, it appears that they have been taught by the traditional method that is based on the technique of repetition and memorization.

10. How would you prefer to be taught polysemous prepositions?

a. Memorizing a list of meanings.....

b. Using a dictionary definition and examples.....

c. Using image-schemas (or diagrams) illustrated by examples.....

d. Using synonyms and examples.....

e. Other: Please, specify:

Options	No.	%
a	04	10
b	04	10
c	11	27.50
d	14	35
e	00	00
ad	01	02.50
bd	03	07.50
cd	02	05
acd	01	02.50
Total	40	100

Table 5.9: The Control Group’s Attitudes towards the Different Types of Instruction

Table 5.9 shows that “using synonyms and examples” accounts for 35% of the total. Although the Control Group was not taught by ISBI, 27.50% of them selected it. Only 10% of the students chose “memorizing a list of meanings” and 10% opted for “using dictionaries”, and a small minority (07.50%) of them preferred the definitions of the “dictionary and synonyms”. Most of the students in the Control Group prefer the use of synonyms and examples more than the other methods.

11. Do you think that using image-schemas (diagrams) could facilitate the learning of polysemous prepositions?

Yes.....

No.....

Options	No.	%
Yes	34	85
No	06	15
Total	40	100

Table 5.10: The Control Group’s Attitudes towards Using Image-Schemas

Table 5.10 reveals that the majority of the students (85%) opted for “Yes”, while 15% of them answered “No” probably because they prefer the application of another method. The results show that the students in the Control Group held positive attitudes towards the effects of applying image-schemas, and they considered it as a way that could facilitate the learning of polysemous prepositions.

12. If, “No”, please, explain why.

Among the 06 students who answered “No” to the previous question, 02 students justified their answers by saying that it is better to use the definitions of dictionaries and examples to learn polysemous prepositions. According to them, they prefer to memorize their senses because the problem lies in the nature of prepositions which cannot be understood.

13. To what extent does image-schema-based instruction (i.e. using diagrams) help you?

Out of 40 students, 29 stated that ISBI could help them to:

a– Understand the senses and the difference between prepositions:

- ISBI could help the students understand better the meanings because looking at the schema makes them imagine the real life image. In addition, the image-schemas or diagrams could help them understand the meanings better than explaining them verbally or just writing them in examples and texts. (10 students).

- It could make their learning more explicit because it enables the students to get an idea about the meanings of prepositions. (2 students).
- The image-schemas or the visual diagrams could help the students differentiate between the senses because they can depict the different meanings by using specific contexts. (3 students).

b- To memorize the senses and remember them better:

- ISBI could help greatly the students as it does not only explain the meanings but illustrates them, and the visual aspect stays in the mind as well as acts like a reminder. (1 student).
- It could help the students memorize the meanings, put them correctly in sentences and differentiate between prepositions and their functions better than a text or using sentences (5 students).
- The diagrams could help the students remember them well, imagine them, recall them and revise them easily. (5 students).

c- To get over the difficulties and develop their knowledge:

- It could be a very useful solution for the difficulties the students face in learning polysemous prepositions. (2 students).
- Image-schemas could clarify the learning of prepositions and develop the students' knowledge to a great extent. (1 student).

14. Does teachers' competence have an influence on the use of image-schema-based instruction and on making students aware of the different senses of prepositions?

Yes.....

No.....

Options	No.	%
Yes	33	82.50
No	06	15
No Answer	01	02.50
Total	40	100

Table 5.11: The Control Group’s Views on the Role of Teachers’ Competence

As indicated by Table 5.11, a large number of the students in the Control Group (82.50%) agreed upon the fact that teachers do play a significant role when applying ISBI to teach polysemous prepositions.

15. Please, explain why.

The six students who answered “No” did not justify their answers. However, out of the 33 students who answered “Yes”, 13 of them opted for “Yes” and did not explain why, and 20 students opted for “Yes” and justified their answers by saying that:

- Teachers can simplify the meanings of prepositions through using image-schemas and making them aware of them in a way that is compatible with their level. (8 students).
- Teachers can help them understand the meanings by using the same preposition in different examples that indicate distinct meanings. (4 students).
- If teachers are competent, they will give the students exercises that help them foster their understanding. (1 student).
- Teachers’ competence enables the students to understand the correct use of prepositions and to manipulate the meanings easily. (2 students).
- They can guide the students by showing them some ways on how to remember the meanings of prepositions. (5 students).

Section Three: Further Suggestions

16. Please, add any further comment or suggestion.

Eighteen students added further suggestions and comments about:

a- Polysemous prepositions:

- Polysemous prepositions are not that hard if teachers use the right way to explain them and make them easily to be understood. (2 students).
- The lesson of prepositions is really a difficult one, and it is very important that teachers change their ways of explaining their meanings and try to find easy ways to help the students understand them. (2 students).

b- The role of practice and teachers when learning polysemous prepositions:

- If teachers give the students many examples and many exercises (like fill in gaps format exercises that are in the form of a text), prepositions can be easily learned. (11 students).

c- The use of ISBI:

- When teachers use image-schemas, they could help the students very much. (1 student).
- The students prefer most of the time to rely on visual diagrams to understand the meanings of prepositions, so they hope that their teachers take this suggestion into consideration. (1 student).
- Using image-schemas could be a useful solution to realize the meanings of prepositions, but it is not used by all teachers. (1 student).

5.2.2 The Experimental Group

Section One: Learning Polysemous Prepositions

1.1 Which of these word classes do you find difficult?

a. Nouns.....

b. Articles.....

c. Adjectives.....

d. Verbs.....

e. Adverbs.....

f. Prepositions.....

g. Conjunctions.....

Options	No.	%
a	00	00
b	00	00
c	00	00
d	01	02.50
e	00	00
f	09	22.50
g	02	05
bf	02	05
ce	02	05
df	04	10
dg	04	10
ef	01	02.50
eg	01	02.50
fg	03	07.50
bdf	02	05
bdg	01	02.50
bfg	02	05
deg	01	02.50
dfg	01	02.50
bcef	01	02.50
bcfg	01	02.50
bdef	01	02.50
befg	01	02.50
Total	40	100

Table 5.12: The Experimental Group’s Attitudes towards the Difficult Parts of Speech

Table 5.12 shows that 22.50% of the students in the Experimental Group considered prepositions as the most difficult part of speech comparing its percentage to the other options. We can also see that among the 28 students who opted for more than one option, 19 students selected prepositions, ‘option (f)’, in their choices.

2. What makes prepositions difficult to learn?

a. They are numerous.....

b. They have many meanings.....

c. The rules that determine the choice between them are unclear.....

d. The teacher's instruction.....

e. Other: Please, specify

Options	No.	%
a	01	02.50
b	27	67.50
c	03	07.50
d	00	00
e	00	00
ab	05	12.50
ac	01	02.50
bc	02	05
abc	01	02.50
Total	40	100

Table 5.13: Reasons behind the Difficulty of Prepositions: The Experimental Group

Table 5.13 illustrates that a large proportion of the students (67.50%) said that prepositions are difficult because they are characterized by a high degree of polysemy. Next, 12.50% of them stated that the many meanings of prepositions and their large number are the two main reasons behind their difficulty when learning them.

3. Have you ever encountered difficulties in using polysemous prepositions?

a. All the time.....

b. Sometimes.....

c. Not at all.....

Options	No.	%
a	08	20
b	31	77.50
c	01	02.50
Total	40	100

Table 5.14: How Often the Use of Prepositions is Difficult: The Experimental Group

Table 5.14 reveals that a significant majority of the students (77.50%) responded that the use of prepositions is difficult occasionally, whereas 20% of them said that their use is always not easy. This shows that prepositions, albeit they are the most difficult ones according to the students, they are not all the time tricky words; there exist certain cases wherein the students can figure out the correct use, and there are other specific cases that make their use particularly difficult.

4. What type of prepositions do you find difficult to use?

a. Time.....

b. Spatial (place and movement).....

c. Metaphorical.....

d. All of them.....

Options	No.	%
a	02	05
b	06	15
c	23	57.50
d	03	07.50
ab	01	02.50
ac	01	02.50
bc	04	10
Total	40	100

Table 5.15: The Difficult Senses of Prepositions: The Experimental Group

Table 5.15 exhibits that over than half the students (57.50%) selected ‘metaphorical prepositions’ as the most difficult ones. Then, 15% selected the spatial prepositions and 10% both of them, while a very small number of the respondents (07.50%) considered that all the types of prepositions are complicated.

5. Is learning polysemous prepositions a burden?

Yes.....

No.....

Options	No.	%
Yes	26	65
No	14	35
Total	40	100

Table 5.16: The Experimental Group’s Views on Polysemous Prepositions

Table 5.16 indicates that the option “Yes” accounts for 65% of the total, whereas 35% of the students held opposite attitudes.

6. Please, explain why.

Among the 26 students who opted for “Yes”, 25 students explained that learning polysemous prepositions is a burden because:

a- The nature of their meanings leads to misunderstanding:

- Their meanings are complex and difficult to be understood. (3 students).
- They have many meanings and these meanings change depending on the context. (2 students).
- They have many meanings and the students have to understand the difference between them. (1 student).
- The students find their senses difficult because the majority of these senses are metaphorical and idiomatic. (1 student).
- Because they have various meanings and almost the same functions, the students get confused about what they know and what they encounter in many contexts, and this leads to misunderstanding. (6 students).

b- They are difficult to be used appropriately:

- It is not an easy task to know how to use them correctly in the right context. (4 students).
- The students cannot use the appropriate sense because they cannot distinguish between them easily. (3 students).
- It is not easy for the students to understand the intended meaning expressed by the context, so they cannot determine which sense they should use. (1 student).

c- They require time and a monumental amount of mental exertion or efforts to be learned and used:

- The students need to learn them all along with their meanings, and this does not motivate them because they cannot learn all the senses. (2 students).
- They require a lot of thinking because each time the students need to analyse the contexts wherein they are used in order to find the right meaning, especially, when it comes to prepositions that have similar meanings. This ongoing process annoys them and makes them confused. (2 students).

Among the 16 students who opted for “No”, 14 students stated that learning polysemous prepositions is not a burden because:

- If the students work hard, they can enrich their vocabulary and know the difference between them. (5 students).
- Although they are difficult, they can be understood if the students practise using them in writing and in everyday conversations. (5 students).
- The basic meanings can be learned and understood through reading or listening to native speakers. Besides, the nouns that are used with them make the task even simpler. (4 students).

7. How do you learn polysemous prepositions?

- a. Via rote memory.....
- b. Via sentences.....
- c. Via dictionaries.....
- d. Via teachers’ instruction.....
- e. Never read about them.....
- f. Other: Please, specify:

Options	No.	%
a	01	02.50
b	04	10
c	00	00
d	19	47.50
e	01	02.50
f	01	02.50
ad	01	02.50
ab	01	02.50
bd	06	15
cd	02	05
abd	01	02.50
acd	01	02.50
bcd	02	05
Total	40	100

Table 5.17: Ways of Learning Polysemous Prepositions: The Experimental Group

We can see from Table 5.17 that 47.50% of students in the Experimental Group learn polysemous prepositions via teachers' instruction. Concerning the remaining 14 students who selected more than one option (01 "ad" + 01 "ab"+ 06 "bd" + 02 "cd" + 01 "abd" + 01 "acd" + 02 "bcd"), it seems that they may have resorted to rote memory, learning from sentences and to using dictionaries after teachers' instruction.

Section Two: Polysemous Prepositions and Image-Schemas

The aim of this section is to shed light on the relation between polysemous prepositions and the effect of ISBI on learning them.

8. Have you always received instruction on polysemous prepositions?

Yes.....

No.....

Options	No.	%
Yes	37	92.50
No	02	05
No Answer	01	02.50
Total	40	100

Table 5.18: The Experimental Group’s Responses to the Instruction of Polysemous Prepositions

Table 5.18 shows that almost all the students (92.50%) have always been instructed polysemous prepositions. That is, the polysemantic nature of prepositions is an aspect that has been regularly addressed by their teachers.

9. When instructing polysemous prepositions, the teacher explains the meaning through

a. A list of verbs and nouns that collocate with.....

b. Using synonyms.....

c. Dictionary-type definitions and examples.....

d. Other: Please, specify:

Options	No.	%
a	08	20
b	07	17.50
c	09	22.50
ab	02	05
ac	01	02.50
bc	03	07.50
abc	01	02.50
Total	40	100

Table 5.19: The Types of instruction the Experimental Group has received

According to Table 5.19, 22.50 % of the students have been taught the meanings of prepositions through dictionary definitions and examples, 20% through a list of nouns and verbs, 17.50% through using synonyms, and 17.50% (“ab” 05% + “ac” 02.50% “bc” 07.50% + “abc” 02.50%) of them have been taught by different ways that combine the three proposed options; their teachers most probably used a list of verbs and nouns and then synonyms or dictionary definitions to illustrate more the senses. It follows that the students have been instructed polysemous prepositions by the traditional method, in particular, by using definitions and examples, which is the dominant one.

10. How would you prefer to be taught polysemous prepositions?

a. Memorizing a list of meanings.....

b. Using a dictionary definition and examples.....

c. Using image-schemas (or diagrams) illustrated by examples.....

d. Using synonyms and examples.....

e. Other: Please, specify:

Options	No.	%
a	01	02.50
b	02	05
c	35	87.50
d	02	05
e	00	00
Total	40	100

Table 5.20: Attitudes towards the Different Types of Instruction: The Experimental Group

Table 5.20 reveals that a very large majority of the students (87.50%) stated that they preferred to be taught the meanings of prepositions by ISBI. This means that the students in the Experimental Group held positive attitudes towards the use of ISBI.

11. Do you think that using image-schemas (diagrams) could facilitate the learning of polysemous prepositions?

Yes.....

No.....

Options	No.	%
Yes	40	100
No	00	00
Total	40	100

Table 5.21: The Experimental Group's Attitudes towards Using Image-Schemas

According to Table 5.21, all the students in the Experimental Group considered the application of image-schemas as a facilitative way that is helpful when learning polysemous prepositions. This also confirms that the students held positive attitudes towards ISBI.

12. If, “No”, please, explain why.

Nobody gave any explanations because no one answered “No”.

13. To what extent does image-schema-based instruction (i.e. using diagrams) help you?

Forty students reported that ISBI is effective because:

a- It facilitates the understanding of the distinct senses associated with prepositions:

- It helps very much the students to comprehend the different meanings of prepositions because image-schemas depict them in a way that is similar to how things are related to each other in reality. (5 students).
- It helps the students know the different relationships expressed by prepositions, whether they are dynamic, static or non-spatial and understand the different types of trajectors as well as landmarks (i.e. nouns) that can be used with them. (3 students).
- The use of image-schemas helps the students understand the spatial meanings of prepositions and facilitates somehow the non-spatial meanings. (1 student).

b- ISBI helps the students think critically about the senses:

- It helps the students learn and use the meanings as well as distinguish between them. For example, it enables the students to comprehend how *above* is distinct from *on* because it introduces key words that direct their attention to the differences between them. (5 students).

- It is a useful method in that it can increase the students' level as well as help them use the senses appropriately. (6 students).
- It helps the students because it is simpler than words. (2 students).

c- The visual aspect of the schemas enables the students to memorize and acquire them better than learning them by rote memory:

- The schema shows the meanings in a precise way, and it enables the students to picture or imagine various situations in their minds. (11 students).
- It helps the students very much because if they want to remember the meanings, they just remember the schemas which can be drawn easily. (3 students).

d- It is a summative representation of meanings:

- It helps the students summarize the senses and identify the characteristics of each preposition. (3 student).
- It is a way to learn polysemous prepositions quickly and without any difficulties since it helps the students organize and facilitate their revision. (1 student).

14. Does teachers' competence have an influence on the use of image-schemas and on making students aware of the different senses of prepositions?

Yes.....

No.....

Options	No.	%
Yes	40	100
No	00	00
Total	40	100

Table 5.22: The Experimental Group’s Views on the Role of Teachers’ Competence

Of the data shown in Table 5.22, all the students in the Experimental Group (100%) agreed that the role of teachers is significant when applying ISBI.

15. Please, explain why.

All the students reported that teachers’ competence plays an important role because:

-If teachers are competent enough, they could deliver the message to the students easily, and the lesson of prepositions will be understood without problems. (3 students).

-Teachers have the ability to apply effective ways to teach prepositions like using simple image-schemas and facilitating the examples in a way that copes with their level so as to improve it. (14 students).

- They will use many exercises. (1 student).

-Teachers can know the situations they focus on in order to help the students understand the nuances between the senses of prepositions. (9 students).

-They can help the students use prepositions appropriately and not randomly. (5 students).

-They explain the different elements of the diagrams and how to get the meanings of prepositions from them. (1 student).

- If teachers are competent, they can simplify the way of explaining the senses and make the students keep them in their minds, especially when they repeat the information and revise it with the whole class. This will have a positive effect on them because they will remember the senses. (4 students).

-They can motivate the students and encourage them to think about the senses of prepositions. (1 student).

-They can show the students the exceptions that are related to prepositions and help them not be confused. (2 students).

Section Three: Further Suggestions

16. Please, add any further comment or suggestion.

Out of 40 students, 17 students did not add any further suggestions, and 23 students provided the following comments and suggestions:

- **Comments**

- Polysemous prepositions are really a problem, but through practice, the students could get over it. (2 students).
- Polysemous prepositions are difficult to learn and use because they have more than one meaning, but ISBI facilitates the difficulties. (1 student).
- Polysemous prepositions are important, and teachers need to focus more them. (1 student).
- The use of image-schemas is a useful way to be used by the students when learning polysemous prepositions because it helps them better than using synonyms, examples and lists. (3 students).
- Through ISBI, the students can learn new pieces of information that will never be forgotten. (1 student).

- The use of ISBI is better than using lists and examples to teach prepositions because the students always find difficulties to understand them, but ISBI helps them improve their level (2 students).
 - ISBI has a big influence on the students' awareness concerning the meanings of prepositions in that it makes them know them and distinguish between them (2 students).
 - ISBI is better than the traditional method because it can enable the students to know many meanings, and the contexts in which they can be used. (3 students).
- However, only 1 student said that in certain cases, ISBI can confuse the students when it comes to using prepositions.

- **Suggestions**

- The best way to use ISBI is to test the students before the instruction and then after it. The use of tests can reflect the students' level, i.e., whether their level has improved or not (1 student).
- Teachers can help the students more if they give them more exercises and printed papers on the meanings of prepositions because this will help them more (1 student).
- The use of image-schemas can be more helpful if teachers accompany their explanations with videos to show concretely the use of prepositions, especially the spatial ones (1 student).
- The students like their teachers to apply ISBI to teach the meanings of prepositions. (3 students).
- The students need to work hard and read about polysemous prepositions as well as use them in examples in order to improve their levels (1 student).

5.3 Overall Analysis

The analysis of the responses of the Control Group and the Experimental Group reveals that the students' attitudes towards ISBI match up with our expectations, and both of them have approximately the same opinions. The first section indicates significant information regarding the students' attitudes towards prepositions. Both groups considered them, when compared to the other parts of speech, as the most troublesome words in English. The view point of both groups further unveils that 50% of the students in the Control Group and 67.50% in the Experimental Group agreed upon the fact that the source of their difficulty lies in the many meanings they have, which sometimes stand in the way and cause some problems related to how they can be used properly.

Among the types of senses prepositions have, the use of the metaphorical senses constitute a real problem for the students. Both the Control Group and Experimental Group responded that when learning English, the temporal and the spatial uses are not challenging as much as their non-spatial use. We could say that the non-spatial senses are not easy because they are not addressed appropriately in the classroom, or the students are seldom exposed to them when learning prepositions. So, if the students want to use them, they encounter difficulties because they are not familiar with them, and their realization is done unconsciously.

Accordingly, the meanings associated with prepositions, especially the non-spatial ones, simply multiply their learning burden. According to the majority of the students (87.50% in the Control Group and 65% in the Experimental Group), polysemous prepositions are a source of great confusion and worry. That is, the metaphorical senses are not only the reason that makes them difficult to be learned and used, but polysemous prepositions have certain characteristics with respect to their multiple meanings. Both the students in the Control and the Experimental Group stated that they are difficult to master due to the nature

of their semantics which is not clearly articulated, let alone the distinction between the senses is not all the time easy to be grasped. This affects negatively the students' realization of the senses because they give rise to semantic ambiguity which, in many cases, cannot be resolved by the nouns used with them. Consequently, the students get confused, misunderstand them and face problems in using them properly.

Furthermore, the students' responses bring to light the fact that the many meanings associated with prepositions are hard because they require time and efforts to be learned and used. The answers that the students gave to Q6 (The Control Group, p. 360-361, and the Experimental Group, p. 375-376) could indicate that when the students cannot understand why prepositions are polysemous and cannot find a clear description of their senses, they inevitably lose their need to work hard because adhering to the PLE (see Chapter One, p. 32), no matter how much they are interested in learning these words, they will always expend the least amount of efforts; the reason why the students considered them a burden and seemed not in favor of thinking deeply about them since it contradicts with the human nature which is governed by a tendency to behave in a way that requires the least amount of efforts. In the face of such problems, on the whole, 20% of the students in the Control Group resort to rote memorization and learn the meanings unconsciously from sentences, while 47.50% of the students in the Experimental Group rely on their teachers to provide them with explicit instruction on their senses.

The analysis of the results obtained from Section Two reveals that the students in the Control Group and the Experimental Group have always received instruction on polysemous prepositions through the application of the traditional method which can take different variations; the Control Group has been taught by using lists of nouns and verbs that can be used with prepositions, whereas the Experimental Group has been instructed by using dictionary definitions and examples. When comparing between the traditional method and

ISBI, 87.50% of the students in the Experimental Group reported that they preferred the use of image-schemas and examples. Their answers indicate that they held positive attitudes towards the application of ISBI. Unlike the Experimental Group, 35% of the students in the Control Group said that they preferred to be taught the meanings of prepositions by synonyms and examples. Their responses lend themselves to the implication that they held positive attitudes towards the use of the traditional method. Even though the students in the Control Group preferred the use of synonyms and examples, they were not against the application of ISBI. Taken together, both groups generally had positive attitudes towards the instruction they received.

With regards to the students' attitudes towards ISBI, the great majority of the students in the Control Group (85%) and all the 40 students in the Experimental (100%) considered the use of image-schemas as a facilitative way to learn polysemous prepositions. It helps them understand the distinct senses associated with prepositions and the difference between prepositions that are semantically related. In addition, it helps the students memorize the senses, remember them easily and use them properly better than rote memorization because it makes them imagine the different situations they refer to, think in terms of mental images as well as raises their awareness of the reasons behind finding the same preposition in many contexts. Particularly, the students in the Experimental Group did not consider the deep processing of their meanings as a burden after the instruction because ISBI helps them summarize the senses and expend the least amount of efforts.

The students' responses further indicate that the role of teachers' competence when using ISBI is valuable since it has also an important impact on their learning. If teachers know about the polysemy of prepositions and have a solid grammatical knowledge, their teaching will be more effective. The teachers' role is very significant because they will simplify the information in a way that can be grasped easily by the students.

The analysis of the last section, on the whole, confirms further the students' opinions about polysemous prepositions, the traditional method and ISBI. The students' suggestions and comments show that although polysemous prepositions are difficult, it is very important to learn them. Moreover, ISBI is a helpful way to learn polysemous prepositions better than the traditional method because it presents the information in an unforgettable way. Hence, the students suggested applying it in the classroom and proposed using more exercises, examples and videos in order to foster their understanding.

On the basis of the examination of the data collected from the Students' Questionnaire, our second hypothesis has also been confirmed: the students in both groups were convinced of the importance of presenting the meanings of polysemous prepositions through ISBI since it can clarify why a single preposition is used in many contexts.

Conclusion

One of the positive outcomes of learning is that the students have positive attitudes towards the subject taught to them. Analyzing the Students' Questionnaire shows that ISBI has had a positive impact on the students' attitudes towards applying it in the classroom to teach polysemous prepositions. ISBI is very helpful because it does not rely on the technique of rote memorization but presents the relation between the senses. Even though the Control Group was not taught by ISBI, they said that its use would be very useful if accompanied with ample examples and exercises. Thus, ISBI can enrich the students' background knowledge about the meanings of prepositions.

Chapter Six: Pedagogical Implications

Introduction

6.1 Importance of Revisiting what to Teach

6.2 Teaching Polysemous Prepositions through Image-Schema-Based Instruction

Conclusion

Introduction

The results obtained from analyzing the students' outcomes in the experiment and their attitudes in the questionnaire have important implications for teachers, as they inform different ways to help them understand polysemous prepositions and be able to use them in a variety of contexts. The present chapter deals with the question of how polysemous prepositions should be introduced in EFL classrooms and why it is essential for students to learn them as well as know how to use them; the importance of revisiting what to teach and how to teach students the use of prepositions with multiple meanings through ISBI.

6.1 Importance of Revisiting what to Teach

This study has shown that it is important for teachers to change the way prepositions are taught. The traditional methods used by teachers to teach prepositions die hard. Despite the great progress that has been made in language research concerning these words, the majority of them still cling to old fashioned methods and to some extent perpetuate the ways they themselves learnt the meanings associated with prepositions. Throughout this study, there has been a great focus on some principles which have direct impact on the design and development of materials for teaching prepositions. Hence, it may not be out of place to restate them and to discuss briefly how the meanings of prepositions can be taught effectively in the classroom.

In the light of intensive modern research on the meanings of prepositions, especially in CL, it is important for teachers to revisit what to teach and present the new conceptions about them. One of the most important reasons why teachers need to revisit what to teach is the necessity of learning the meanings associated with prepositions. Polysemous prepositions are crucial to everyday functioning, not just in language but in thought and action. Students consult their spatial memories constantly if they want to find their ways across the street,

explain route directions, look for lost glasses, try to refer to a piece of information in a text and so on. The importance of knowing the different senses of prepositions becomes apparent when students express these actions incorrectly in English. In other words, the meanings of prepositions are interesting because students always face problems in using them. Thus, teachers have to take them into consideration in any designing or planning.

There are various aspects that need to be taken into consideration regarding prepositions. Knowledge of prepositions is essential, and it can be thought of in a variety of ways: does knowing a preposition mean that students can define it, use it in different contexts correctly, realize its wrong use, or be able to know the connotations, the verbs and the nouns that can be used with it or know its multiple meanings. ‘What is a preposition?’ is a question with multiple answers depending on whether teachers adopt a very narrow or a broad definition. In fact, what it means to know a preposition is a complicated issue, but it is not possible to be dealt with in EFL classrooms. One would come to the conclusion that, generally, teaching what a preposition is does not include its grammar, but also its polysemy, indicating that a preposition rarely has one sense.

The meanings expressed by prepositions are many, and they need to be carefully addressed. The prepositions that teachers select and the ways they employ to teach them help develop the students’ repertoire and enrich their knowledge. Given the fact that these words are numerous, teachers cannot teach them all with all their meanings, richness and complexity. At the same time, ignoring their meanings will add nothing to their learning but create more difficulties. On the one hand, teaching only one meaning has been proved to be insufficient. Learning one spatial meaning (for each preposition) does not help students use the prepositions they have learned in a variety of contexts. Besides, the general picture they get is that prepositions are monosymous rather than polysemous words. Furthermore, they will get more confused because in the process of learning English, they will inevitably notice

that the same preposition can be used in different situations to convey other meanings that seem to be distinct. After all, polysemy is not an exception, but rather it is a healthy phenomenon of languages. On the other hand, if teachers address the multiplicity of meanings of prepositions in a piecemeal fashion without describing the reasons why they have many senses, they may help them know some of the meanings, yet they will just create more questions about them. So, the role of teachers is to help their students build up an understanding of the fact that prepositions have distinct but related meanings. To put it differently, learning a polysemous preposition is not a matter of introducing a set of unrelated meanings.

Teachers' efforts should not be directed at informing their students about the senses, but at enabling them to use them. The student's mastery of using prepositions is ultimately measured by how well they can use them, not by how much they know about them. In this respect, the first task of teachers is to motivate them to learn and to arouse their curiosity about the whys and the wherefores of the polysemantic nature of prepositions, and they need also to consider when as well as how to expose them to the various meanings they express without overwhelming them. One way to do this is to make their students aware of the behaviour of polysemous prepositions. On this view, much of the arbitrariness and irregularity traditionally ascribed to English prepositions need to be reconsidered. The traditional instruction involves explaining explicitly or implicitly the definitions of prepositions; students are often asked to look them up in a dictionary, or they are provided with dictionary-like definitions which can be found in books about grammar, and then they write them down on a paper along with two or three examples that illustrate each preposition. Instead of doing this, current thinking emphasizes establishing interest in their grammar and semantics so that students get motivated to learn them. This can be fulfilled by providing rich exposure to the semantics of polysemous prepositions and by showing clearly how the meanings are related.

In terms of instruction, Yopp, Yopp and Bishop (2009) present a number of principles of some researchers that can guide teachers to teach the meanings of words. They list them as follows:

- Instruction should not provide only definitions about words, but it must include a variety of examples by focusing on the complexity of words' meanings.
- Instruction should expose the students to words' meanings by providing them opportunities to use and practise them.
- Instruction should encourage the students to think about the relationships among words' meanings.

If these principles are applied to the process of teaching polysemous prepositions, there are certain points that should be taken into consideration by teachers. Presenting the semantics of prepositions in English as a FL classroom requires a decision on the number of prepositions students need to know, the type and the number of meanings they should know in order to perform well at any given proficiency level. When it comes to the number of prepositions, different researchers provide us with different numbers; however, not surprisingly, students need to acquire the basic prepositions, especially the simple ones. The number of senses is high and differs from one author to another. It is important not to confuse students by teaching too many senses at one time. For each preposition that teachers include in the lesson, it is enough for them to teach at least three meanings; they need to decide on the widely discussed spatial and non-spatial senses. In the case of the highly polysemous prepositions, like *over* which has more than 10 meanings, the introduction of their senses need to be kept to a minimum in order to reduce and lighten the learning burden of their complex semantics.

The teachers' presentation of the semantics of polysemous prepositions should also take into account the level of the students. At the university level, the necessary information

(about grammar) that students need to know are built during the first two years of the students' curriculum. In their first year, they study prepositions as a lesson which includes a variety of prepositions and examples. In their second year, they learn about the different types of senses expressed by the selected prepositions and their combinations with verbs.

If teachers teach the polysemantic nature of prepositions, the first year and the second year lessons need to be modified. One suggestion is that in their first year, students can be taught a group of prepositions with their senses, and in their second year, teachers can introduce another group of these words along with their senses. By doing this, the students' awareness will be raised about the variety of prepositions that exist in English and enrich their knowledge. It is important before the presentation of the semantics of prepositions that teachers explain to their students that these words do not have only one meaning. They should draw their attention to the fact that they are polysemous, and that the selected senses are the commonly used ones. It is very significant to make them clear about why the same preposition is used in many contexts because if they understand this, teachers will ensure that their students will be motivated to know more about the other senses.

The semantics of prepositions can be more efficient if the selected prepositions are semantically related. In this study, *above*, *across*, *over* and *on*, *in*, *out* and *through* are typical examples. In addition to these, teachers may ask students, on the basis of what they do in the classroom, to look for the antonyms of these prepositions as homework.

6.2 Teaching Polysemous Prepositions through Image-Schema-Based Instruction

The basic idea behind ISBI is to teach polysemous prepositions by making students aware both of the word's central (or core or prototypical) sense and how the particular additional senses extend from this central sense. It should be noted that meaning extensions from the central sense can be spatial, but in most cases, it is figurative.

ISBI has been found to be of benefit in the classroom. Teachers first prepare their students for the use of image-schemas. It is necessary for them to know about the meaning of the term polysemy along with the fact that prepositions have a basic spatial sense which provides the basis for the additional senses to extend systematically. One of the options for teachers is to provide them with a definition of the core spatial sense for each target preposition. Prior to providing the definition of the basic sense, teachers may need to keep in mind that some students do not like the terms which are proposed by cognitive linguists. Thus, they may adapt a certain kind of information such as the one related to the terms ‘trajector’ and ‘landmark’. They may modify these technical terms into other terms proposed by researchers that can be easily digested by their students so that they do not feel that the materials are too demanding for them. For instance, Lindstromberg (2010) uses the term ‘subject’ instead of ‘trajector’ that sounds more technical. The term ‘landmark’ can be replaced by the expression ‘complement or object of the preposition’.

When applying ISBI, the presentation of the core sense is accompanied with its image-schema and ample example sentences containing the target preposition(s). The image-schema can be adapted by teachers in a way that is learner-friendly. The following figure displays some of the easiest schemas of some prepositions that can be used in the classroom.

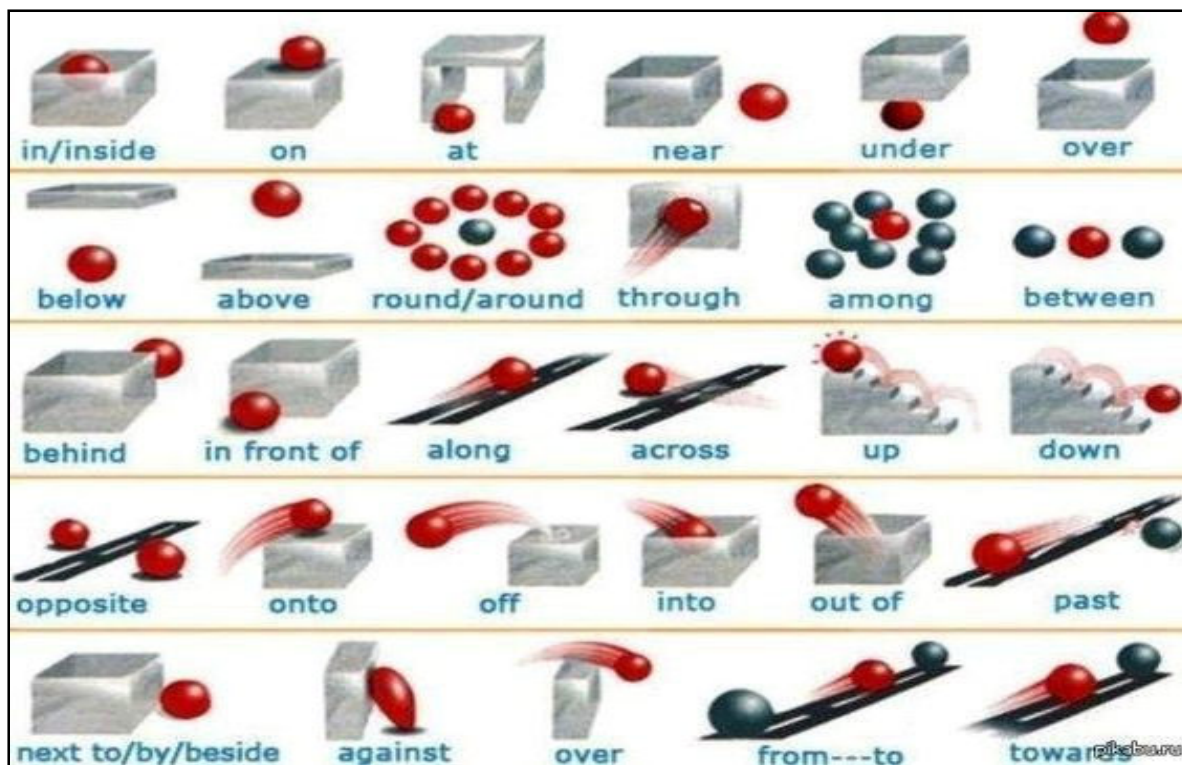


Figure 6.1: Schematic Representation of the Core Senses of Some Prepositions

(taken from www.tes.com)

Teachers can consolidate their explanation by showing some pictures that flesh out the spatial senses of the prepositions shown in the schematic diagrams. The use of pictures or even videos makes the learning more meaningful. Besides, they draw the students' attention to their embodied experiences.

Concerning the extended meanings, they can either be pointed out to students or they can be explained. In their first year, the spatial and the non-spatial meanings are explained to the students, whereas in second year, the meanings that can be pointed out are the extended spatial senses, whereas the ones that need to be explained are the non-spatial ones. In second year, it is very helpful that teachers let their students hypothesize on their own about the semantic motivation of the senses of the target prepositions, in particular, the extended spatial senses. By way of illustration, they may be asked to draw the dynamic senses which extend

from the static senses or vice versa. Following Morimoto and Loewen (2007), teachers may ask their students to work in groups in order to discuss the extended spatial meanings and to draw the corresponding image-schemas. After completing the task, the teacher would invite the whole class to discuss the meanings by comparing the image-schemas drawn by each group. This collaborative task is not only interesting for them, but it engages them in deep processing of the meanings of prepositions, helps them remember them easily and makes their learning meaningful.

Because English is a FL in Algeria, it seems that discussing the figurative senses is not an easy task for the students. So, the teachers need to explain them instead of letting their students deduce them. Finally, it is very important for the teachers to assess their students' understanding. They can ask them to use the meanings they have learned in their own sentences, and then, they discuss them together. Given the advantages of distributed learning, it is helpful to teach polysemous prepositions over one lesson. It is preferable that the teachers make a connection between the lessons so as to create a meaningful learning environment.

Conclusion

The variety of ideas expressed by prepositions makes it an obligation for teachers to deal with more than one sense to enhance and make the students' language flexible. The use of ISBI has been proved to have a positive impact on the students' outcomes. It does not only change the way of the students' thinking but also engages them in the learning process. The pedagogical application of this type of instruction appears to play a role in developing the learning of prepositions with multiple meanings for the better.

General Conclusion

Prepositions are notoriously difficult for learners of English as a foreign language to use appropriately because of the many meanings they have and the way they are dealt with by teachers. On the One hand, their semantics seems to mean the same thing in many contexts although they are different from each other. On the other hand, the teachers' instruction relies on the traditional method that is based on presenting the senses without explaining the relation between them. The present study sets out to investigate the effectiveness of image-schema-based instruction on learning/acquiring prepositions with multiple meanings. Our major concern in this study is to lessen the burden of acquiring polysemous prepositions by raising the students' awareness of their different senses and make them realize the differences between them. This study focuses on seven prepositions *above*, *across*, *in*, *on*, *out*, *over* and *through* as a case in point. The thesis describes the notion of polysemy in linguistics in detail in the first chapter and the concept of image-schema which is discussed in the second chapter. In the third chapter, it supplies an analysis of the seven prepositions under investigation, and it shows how polysemy and image-schemas are tightly related to prepositions with multiple meanings. Then, it presents an analysis of the semantics of the target prepositions.

The research is based on two hypotheses. The first hypothesis is about the effects of applying image-schema-based instruction in the classroom. If image-schema-based instruction is used in the classroom, it can better the learning of the target prepositions. The analysis of the results reveals that the students' outcomes before the instruction were not satisfactory in that they were unable to identify neither the correct meanings of the target prepositions nor the nuances between them. The majority of them exhibited a low level of awareness of the fact that prepositions have spatial and non-spatial senses. The findings of the pre-test of the experiment show that the students did not know that *above*, *on* and *over* are different prepositions, and the paths suggested by *across*, *over* and *through* are different in terms of

their image-schemas. The preposition *in* was sometimes confused with *on* and other times with *out* and *through*. The metaphorical senses were more difficult to be recognized by the students, especially if they were totally different from their culture. Moreover, the students were found to be aware of only one meaning, while some of the extended meanings were learnt unconsciously. In contrast, the results of the post-test indicate that there was an increase in the students' awareness and use of the target prepositions. This means that image-schema-based instruction improved the students' outcomes and understanding of the target prepositions. It follows that our first hypothesis, which is about the usefulness of applying image-schema-based instruction, is confirmed.

The second hypothesis has to do with the students' attitudes towards image-schema-based instruction. The data of the Students' Questionnaire reveal that most of the students held positive opinions about the effects of image-schema-based instruction because it enabled them to remember the spatial senses and facilitated the understanding of the non-spatial senses. The majority of the students responded that ISBI was better than the traditional method because it can enable them to learn many meanings, know the relationships as well as the differences between them, memorize them easily and revise them in a short period of time. Their positive attitudes clearly show that the second hypothesis is also confirmed.

The study suggests that the notorious difficulty associated with prepositions should not be perennial, and teachers should tackle the problems caused by their polysemantic nature. Resorting to only examples or rote memorization is not always the best strategy to learn as many meanings as possible. In addition, the representation of meanings associated with prepositions in a piecemeal fashion, rather than as a whole, can confuse the students because each time they encounter varying uses of them. Besides, they will forget the majority of information since their explanation is exclusively based on lists without explaining the systematic relation between the senses. To ease the learning of polysemous prepositions, the

application of image-schema-based instruction is very effective. It does not only combine between verbal and pictorial illustrations, but it can also present many situations through the image-schemas that summarize the senses. If it is often said that a picture is worth a thousand words, it has also been said that an image-schema is worth a dozen pictures. In conclusion, image-schema-based instruction has the potential to set a very promising evaluation of the traditional instruction employed in teaching prepositions with multiple meanings.

REFERENCES

- Aarts, B., Chalker, S., & Weiner, E. (2014). *The oxford dictionary of English grammar* (2nd ed.). Oxford, England: Oxford University Press.
- Adamson, H. D. (2009). *Interlanguage variation in theoretical and pedagogical perspective*. New York, NY: Routledge.
- Aitchison, J. (2004). The rhinoceros's problem: The need to categorize. In C. Kay, & J. J. Smith (Eds.), *Categorization in the history of English* (pp. 1 -17). Amsterdam, The Netherlands: Benjamins.
- Aitchison, J. (2008). Lifting the veil: Uncovering language origin. In P. V. Sterkenburg (Ed.), *Unity and diversity of languages* (pp. 17-27). Amsterdam, The Netherlands: Benjamins.
- Aitchison, J. (2012). *Words in the mind: An introduction to the mental lexicon* (4th ed.). Oxford, England: Wiley-Blackwell.
- Aitchison, J. (2013). *Language change: Progress or decay?* (4th ed.). Cambridge, United Kingdom: Cambridge University Press.
- Aitchison, J., & Lewis, D. M. (2003). Polysemy and bleaching. In B. Nerlich, Z. Todd, V. Herman, & D.D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 253- 265). Berlin, Germany: Mouton de Gruyter.
- Akmajian, A., Demer, R. A., Farmer, A. K., & Harnish, R. M. (2001). *Linguistics: An introduction to language and communication* (5th ed.). Cambridge, MA: MIT Press.

- Allan, K. (2009). *Concise encyclopedia of semantics*. Oxford, England: Elsevier.
- Allerton, D. J. (2008). "Over the hills far away "or "far away over the hills". In D. Kurzon, & S. Adler, (Eds.), *Adpositions: Pragmatic, semantic and syntactic perspectives* (pp. 37-65). Amsterdam, The Netherlands: Benjamins.
- Allsop, Jake. (1983). *Cassell's students English grammar*. Hungary: Cassell LTd.
- Almela, M., & Sanchez, A. (2007). *Words as "lexical units" in learning/teaching vocabulary*. *International Journal of English Studies*, 7(2), 21-40.
- Bach, P. (2012). The embodiment of linguistic meaning: Key findings from psychology and neuroscience. In A. C. Schalley (Ed.), *Practical theories and empirical practice: A linguistic perspective* (pp. 35-53). Amsterdam, The Netherlands: Benjamins.
- Baldwin, T. (2006). Distributional similarity and preposition semantics. In P. Saint-Dizier (Ed.), *Syntax and semantics of prepositions* (pp. 197-210). Dordrecht, The Netherlands: Springer.
- Barcelona, A. (2005). Metaphor. In P. Strazny (Ed.), *Encyclopedia of linguistics* (Vol.2, pp. 677-678). New York, NY: Fitzroy Dearborn.
- Barcelona, A. (2011). Reviewing the properties and prototype structure of metonymy. In R. Benczes, A. Barcelona, & F. J. Ruiz de Mendoza Ibáñez (Eds.), *Defining metonymy in cognitive linguistics: Towards a consensus view* (pp. 7-57). Amsterdam, The Netherlands: Benjamins.

- Barcelona, A., & Valenzuela, J. (2011). An overview of cognitive linguistics. In M. Brdar, S. Th. Gries, & M. Ž. Fuchs (Eds.), *Cognitive linguistics: Convergence and expansion* (pp. 17- 44). Amsterdam, The Netherlands: Benjamins.
- Barsalou, L. W., & Billman, D. (1989). Systematicity and semantic ambiguity. In D. S. Gorfein (Ed.), *Resolving semantic ambiguity* (pp. 146 – 203). New York, NY: Springer.
- Bauer, L., Lieber, R., & Plag, I. (2013). *The oxford reference guide to English morphology*. Oxford, United Kingdom: Oxford University Press.
- Beavers, J., & Sells, P. (2013). Construction and supporting a linguistic analysis. In R. J. Podesva, & D. Sharma (Eds.), *Research methods in linguistics* (pp. 397-421). Cambridge, United Kingdom: Cambridge University Press.
- Bennett, C. D. (1975). *Spatial and temporal uses of English prepositions: An essay in stratificational semantics*. London, England: Longman Group.
- Birch, B. M. (2007). *English L2 readings: Getting to the bottom* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Blank, A. (2003). Polysemy in the lexicon and in discourse. In B. Nerlich, Z. Todd, V. Herman, & D. D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 267-293). Berlin, Germany: Mouton de Gruyter.
- Boers, F. (1996). *Spatial prepositions and metaphor: A cognitive semantic journey along the UP-DOWN and FRONT-BACK dimensions*. Tübingen, Germany: Gunter Narr.

- Boers, F., Lindstromberg, S. (2008). How cognitive linguistic can further vocabulary teaching. In F. Boers, S. Lindstromberg (Eds.), *Cognitive linguistic approaches to teaching vocabulary and phraseology* (pp. 1-61). Berlin, Germany: Mouton de Gruyter.
- Braisby, N., & Gellatly, A. (Eds.). (2012). *Cognitive psychology* (2nd ed.). Oxford, England: Oxford University Press.
- Brenda, M. (2014). *The Cognitive perspective on the polysemy of the English preposition over*. Newcastle upon Tyne, England: Cambridge Scholars.
- Brinton, L. J., & Brinton, D. M. (2010). *The linguistic structure of modern English*. Amsterdam, The Netherlands: Benjamins.
- Bruckfield, A. (2012). *Prepositions: The ultimate book - mastering English prepositions* (Rev. ed.). Oak Publishers.
- Bybee, J. (2015). *Language change*. Cambridge, United Kingdom: Cambridge University Press.
- Cadierno, T., & Lund, K. (2004). Cognitive linguistics and second language acquisition: Motion events in a typological framework. In B. VanPatten, J. Williams, S. Rott, & M. Overstreet (Eds.), *Form-meaning connections in second language acquisition* (pp. 147-162). Mahwah, NJ: Lawrence Erlbaum.
- Case, D. O. (2005). Principle of least effort. In K. E. Fisher, S. Erdelez, & L. Mckechnie (Eds.), *Theories of information behavior* (pp. 289- 292). Medford, NJ: *Information Today (ASIST Monograph Series)*.

- Chaffee, J. (2015). *Thinking critically* (11th ed.). Stamford, CT: Cengage Learning.
- Cienki, A. (1997). Some properties and groupings of image-schemas. In M. H. Verspoor, K. D. Lee, & E. Sweetser (Eds.), *Lexical and syntactical constructions and the construction of meaning* (pp. 3-15). Amsterdam, The Netherlands: Benjamins.
- Cienki, A. (2005). Image-schemas and gestures. In B. Hampe, & J. E. Grady (Eds.), *From perception to meaning: Image schemas in cognitive linguistics* (pp. 421-441). Berlin, Germany: Mouton de Gruyter.
- Clausner, T. C. (2005). Image-schema paradoxes: Implications for cognitive semantics. In B. Hampe, & J. E. Grady (Eds.), *From perception to meaning: Image-schemas in cognitive linguistics* (pp. 93-110). Berlin, Germany: Mouton de Gruyter.
- Clausner, T. C., & Croft, W. (1999). Domains and image-schemas. *Cognitive linguistics*, 10(1), 1-31.
- Cosme, C., Guiquin, G. (2008). Free and bound prepositions is contrastive perspective: The case of with and avec. In S. Granger, F. Meunier (Eds.), *Phraseology: An Interdisciplinary perspective* (pp. 259-274). Amsterdam, The Netherlands: Benjamins.
- Coventry, K. R., & Garrod, S. C. (2004). *Saying, seeing and acting. The psychological semantics of spatial prepositions: Essays in cognitive psychology series*. New York, NY: Psychology Press.
- Cowper, E. A. (1992). *A Concise introduction to syntactic theory: The government-binding approach*. Chicago, IL : The University of Chicago Press.

- Croft, W., & Cruse, D. A. (2004). *Cognitive linguistics*. Cambridge, United Kingdom: Cambridge University Press.
- Crossley, S., Salsbury, T., & McNamara, D. (2010). The development of polysemy and frequency use in English second language speakers. *Language Learning*, 60, 573-605. doi: 10.1111/j.1467-9922.2010.00568.x
- Csábi, S. (2004). A cognitive linguistic view of polysemy in English and its implications for teaching. In M. Achard, & S. Niemeier (Eds.), *Cognitive linguistics, second language acquisition, and foreign language teaching* (pp. 233-256). Berlin, Germany: Mouton de Gruyter.
- Cuyckens, H., & Zawada, B. (2001). Introduction. In H. Cuyckens, & B. Zawada (Eds.), *Polysemy in cognitive linguistics: Selected papers from the fifth international conference* (pp. ix-xxvii). Amsterdam, the Netherlands: Benjamins.
- Dancygier, B., & Sweetser, E. (2014). *Figurative language*. Cambridge, United Kingdom: Cambridge University Press.
- Dannenberg, H. P. (2008). *Coincidence and counterfactuality: Plotting time and space in narrative fiction*. Lincoln, NE: University of Nebraska Press.
- Denham, K., & Lobeck, A. (2013). *Linguistics for everyone: An introduction* (2nd ed.). Boston, MA: Wadsworth.
- Denning, K., Kessler, B., & Leben, W.R. (2007). *English vocabulary elements* (2nd ed.). New York, NY: Oxford University Press.

- Dewell, R. B. (1997). Construal transformations: Internal and external viewpoints in interpreting containment. In M. H. Verspoor, K. D. Lee, & E. Sweetser (Eds.), *Lexical and syntactical constructions and the construction of meaning* (pp. 17-32). Amsterdam, The Netherlands: Benjamins.
- Díez Velasco, O. I. (2001-2). Metaphor, metonymy, and image-schemas: An analysis of conceptual interaction patterns. *Journal of English Studies*, 3, 47-63.
- Dooly, M. (2006). *Semantics and pragmatics of English: Teaching English as a foreign language*. Bellaterra, Spain: Servei de Publicacions (UAB).
- Downing, A. (2015). *English grammar: A university course* (3rd ed.). London, England: Routledge.
- Downing, A., & Locke, P. (2006). *English grammar: A university course* (2nd ed.). London, England: Routledge.
- Endley, M. J. (2010). *Linguistic perspectives on English grammar: A guide for EFL teachers*. Charlotte, NC: Information Age.
- Enfield, N. J. (2015). *The utility of meaning: What words mean and why*. Oxford, United Kingdom: Oxford University Press.
- Evans, V. (2004). *The structure of time: Language, meaning and temporal cognition*. Amsterdam, The Netherlands: Benjamins.
- Evans, V. (2007). *A glossary of cognitive linguistics*. Edinburgh, United Kingdom: Edinburgh University Press.

- Evans, V. (2012). Cognitive linguistics. *Wiley Interdisciplinary Reviews: Cognitive Science*, 3(2), 129–141. doi:10.1002/wcs.1163
- Evans, V. (2015). *The crucible of language: How language and mind create meaning*. Cambridge, United Kingdom: Cambridge University Press.
- Evans, V., & Green, M. (2006). *Cognitive linguistics: An introduction*. Mahwah, NJ: Lawrence Erlbaum.
- Evans, V., & Tyler, A. (2005). Applying cognitive linguistics to pedagogical grammar: The English prepositions of verticality. *Revista Brasileira de Linguística Aplicada*, 5(2), 11-42.
- Falkum, I. L. (2007). Generativity, relevance and the problem of polysemy. *UCL Papers in Linguistics* 19, 205- 234
- Falkum, I.L. (2009). A Pragmatic Solution to the Polysemy Paradox. *UCL Papers in Linguistics*, 21, 27–54.
- Falkum, I. L. (2015). The *how* and of polysemy: A pragmatic account. *Lingua*, 157, 83-99.
- Finegan, E. (2015). *Language: Its structure and use* (7th ed.). Stamford, CT: Cengage Learning.
- Filipec, J. (1994). Lexicology and lexicography: Development and state of the research. In P. A. Luelsdorff (Ed.), *The prague school of structural and functional linguistics: A short introduction* (pp. 163-183). Amsterdam, The Netherlands: Benjamins.
- Fox Tree, J. E., & Meijer, P. J. A. (2000). Untrained speakers' use of prosody in syntactic disambiguation and listeners' interpretations. *Psychological Research*, 63, 1–13.

- Gärdenfors, P. (2007). Cognitive semantics and image schemas with embodied forces. In J. M. Krois, M. Rosengren, A. Steidele, & D. Westerkamp (Eds.), *Embodiment and cognition in culture* (pp. 57-76). Amsterdam, The Netherlands: Benjamins.
- Gärdenfors, P. (2014). *The geometry of meaning: Semantics based on conceptual spaces*. Cambridge, MA: MIT Press.
- Gazdar, G., Klein, E., Pullum, G., & Sag, I. (1985). *Generalized phrase structure grammar*. Cambridge, MA : MIT Press.
- Geeraerts, D. (2006). Introduction: A rough guide to cognitive linguistics. In D. Geeraerts (Ed.), *Cognitive linguistics: Basic readings* (pp. 1-28). Berlin, Germany: Mouton de Gruyter.
- Geeraerts, D. (2016). Sense Individuation. In N. Reimer (Ed), *The routledge handbook of semantics* (pp. 233- 247). Oxon, United Kingdom: Routledge.
- Gibbs, R. W., Jr. (1994). *The poetics of mind: Figurative thought, language, and understanding*. Cambridge, England: Cambridge University Press.
- Gibbs, R. W., Jr. (2002). Embodied standing and the psychological semantics of stand. In J. Newman (Ed.), *The linguistics of sitting, standing and lying* (pp. 387-400). Amsterdam, The Netherlands: Benjamins.
- Gibbs, R. W., Jr. (2005). Embodiment in metaphorical imagination. In D. Pecher, & R. A. Zwaan (Eds.), *Grounding cognition: The role of perception and action in memory, language, and thinking* (pp. 65-92). Cambridge, England: Cambridge University Press.

- Gibbs, R. W., Jr. (2005). *Embodiment and cognitive science*. Cambridge, England: Cambridge University Press.
- Gibbs, R. W., Jr. (2005). The psychological status of image-schemas. In B. Hampe, & J. E. Grady (Eds), *From perception to meaning: Image schemas in cognitive linguistics* (pp. 113-135). Berlin, Germany: Mouton de Gruyter.
- Gibbs, R. W., Jr., & Matlock, T. (2001). Psycholinguistic perspective on polysemy. In H. Cuyckens, & B. Zawada (Eds.), *Polysemy in cognitive linguistics: Selected papers from the fifth international conference* (pp. 213-240). Amsterdam, the Netherlands: Benjamins.
- Gibbs, R. W., Jr., & Colston, H. L. (2006). The psychological reality of image-schemas and their transformations. In D. Geeraerts, (Ed.), *Cognitive linguistics: Basic readings* (pp. 239-268). Berlin, Germany: Mouton de Gruyter.
- Goddard, C. (2011). *Semantic analysis: A practical introduction* (2nd ed.). Oxford, United Kingdom: Oxford University Press.
- Goswami, U. (1998). *Cognition in children*. Hove, UK: Psychology Press.
- Halford, B. K. (1996). *Talk units: The structure of spoken Canadian English*. Tübingen, Germany: Gunter Narr.
- Hampe, B. (2002). *Superlative verbs: A corpus-based study of semantic redundancy in English verb-particle constructions*. Tübingen, Germany: Gunter Narr.
- Hancock, I. & Todd, L. (2005). *International English usage*. Beckenham, England: Croom Helm.

- Harris, R., & Taylor, T. J. (1997). *Landmarks in linguistic thought 1: The western tradition from Socrates to Saussure* (2nd ed.). London, England: Routledge.
- Herbst, T. (2010). *English linguistics: A coursebook for students of English*. Berlin, Germany: Mouton de Gruyter.
- Hirst, G. (1987). *Semantic interpretation and the resolution of ambiguity*. Cambridge, England: Cambridge University Press.
- Hintikka, J., & Sandu, G. (1994). Metaphor and other kinds of non-literal meaning. In J. Hintikka (Ed.), *Aspects of metaphor* (pp. 151-187). Dordrecht, The Netherlands: Kluwer Academic.
- Höche, S. (2009). *Cognate object constructions in English: A cognitive-linguistic account*. Tübingen, Germany: Gunter Narr.
- Horn, L. R. (2008). Pragmatic and the lexicon. In P. V. Sterkenburg (Ed.), *Unity and diversity of languages* (pp. 29-41). Amsterdam, The Netherlands: Benjamins.
- Hopper, P. J., & Traugott, E. C. (2003). *Grammaticalization* (2nd ed.). Cambridge, United Kingdom: Cambridge University Press.
- Huddleston, R. (1984). *Introduction to the grammar of English*. Cambridge, England: Cambridge University Press.
- Huddleston, R. (1988). *English grammar: An outline*. Cambridge, United Kingdom: Cambridge University Press.
- Hurford, J. R. (1994). *Grammar: A student's guide*. Cambridge, United Kingdom: Cambridge University Press.

Hurford, J. R., Heasley, B., & Smith, M. B. (2007). *Semantics: A course book* (2nd ed.).

Cambridge, United Kingdom: Cambridge University Press.

Jackson, H. (2013). *Words and their meanings*. London, England: Routledge.

Jackson, H., & Zé Amvela, E. (2004). *Words, meaning and vocabulary: An introduction to modern English lexicography*. London, England: Continuum.

Johnson, M. (Ed.). (1981). *Philosophical perspectives on metaphor*. Minneapolis, MN: University of Minnesota Press.

Johnson, M. (1987). *The body in the mind: The bodily basis of meaning, imagination, and reason*. Chicago, IL: University of Chicago Press.

Kersten, S. (2010). *The mental lexicon and vocabulary learning: Implications for the foreign language classroom*. Tübingen, Germany: Narr.

Kimber, G. (2006). *Perfect prepositions: A real life guide to using English prepositions*. New York, NY: I Universe.

Kisno. (2012). *Semantics: A view to logic of language*. Jakarta-Batam, the Republic of Indonesia: Halaman Moeka & LLC Publishing.

Klepousniotou, E. (2002). The processing of lexical ambiguity: Homonymy and polysemy in the mental lexicon. *Brain and Language*, 81, 205-223. doi: 10.1006/brln.2001.2518

Klepousniotou, E., Titone, D., & Romero, C. (2008). Making sense of word senses: The comprehension of polysemy depends on sense overlap. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 34(6), 1534-1543.

- Knowles, M., & Moon, R. (2006). *Introducing metaphor*. London, England: Routledge.
- koskela, A., & Murphy, M. L. (2010). Polysemy and homonymy. In A. Barber, & R. J. Stainton (Eds.), *Concise encyclopedia of philosophy of language and linguistics* (pp. 577-582). Oxford, United Kingdom: Elsevier.
- Kovács, E. (2009). Polysemy in traditional vs. cognitive approaches. *Eger Journal of English Studies*, (xi), 3–19.
- Kövecses, Z. (2005). *Metaphor in culture: Universality and variation*. Cambridge, United Kingdom: Cambridge University Press.
- Kövecses, Z. (2006). *Language, mind and, culture: A practical introduction*. Oxford, England: Oxford University Press.
- Kövecses, Z. (2010). *Metaphor: A practical introduction* (2nd ed.). Oxford, England: Oxford University Press.
- Kövecses, Z. (2015). *Where metaphors come from: Reconsidering context in metaphor*. Oxford, England: Oxford University Press.
- Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind*. Chicago, IL: University of Chicago Press.
- Lakoff, G. (1988). Cognitive semantics. In U. Eco, M. Santambrogio, & P. Violi (Eds.), *Meaning and mental representations* (pp. 119-154). Bloomington, IN: Indiana University Press.
- Lakoff, G. (1993). The cotemporary theory of metaphor. In A. Ortony (Ed.), *Metaphor and thought* (2nd ed., pp. 202-251). Cambridge, England: Cambridge University Press.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago, IL : University of Chicago Press.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York, NY: Basic Books.

Langacker, R. W. (1987). *Foundations of cognitive grammar: Theoretical prerequisites* (Vol. 1). Stanford, CA: Stanford University Press.

Langacker, R. W. (2006). Concept, image, and symbol: The cognitive basis of grammar. In D. Geeraerts (Ed.), *Cognitive linguistics: Basic readings* (pp. 29-67). Berlin, Germany: Mouton de Gruyter.

Langacker, R. W. (2008). *Cognitive grammar: A basic introduction*. Oxford, England: Oxford University Press.

Langacker, R. W. (2013). *Essentials of cognitive grammar*. Oxford, England: Oxford University Press.

Lewandowska-Tomaszczyk, B. L. (2010). Polysemy, prototypes, and radial categories. In D. Geeraerts, & H. Cuyckens (Eds.), *The oxford handbook of cognitive linguistics* (pp. 139-169). Oxford, England: Oxford University Press.

Lieber, R. (2004). *Morphology and lexical semantics*. Cambridge, United Kingdom: Cambridge University Press.

Liebert, W. A., Redeker, G., & Waugh, L. R. (Eds.). (1997). *Discourse and perspective in cognitive linguistics*. Amsterdam, The Netherlands: Benjamins.

Lindner, M. (2005). *English language and composition*. Franklin Lakes, NJ: Career Press.

Lindstromberg, S. (2010). *English prepositions explained*. Amsterdam, The Netherlands:

Benjamins.

Lipka, L. (2002). *English lexicology: Lexical structure, word semantics & word-formation*.

Tübingen, Germany: Gunter Narr Verlag.

Littlemore, J. (2015). *Metonymy: Hidden shortcuts in language, thought and communication*.

Cambridge, United Kingdom: Cambridge University Press.

Löbner, S. (2013). *Understanding Semantics* (2nd ed.). New York, NY: Routledge.

Liu, D. (2014). *Describing and explaining grammar and vocabulary in ELT: Key theories and*

effective practices. New York, NY: Routledge.

Lyons, J. (1977). *Semantics* (Vol. 2). Cambridge, United Kingdom: Cambridge University

Press.

Lyons, J. (1995). *Linguistic semantics: An introduction*. Cambridge, United Kingdom:

Cambridge University Press.

Maalej, Z. & Yu, N. (Eds.). (2011). *Embodiment via body parts: Studies from various*

languages and cultures. Amsterdam, The Netherlands: Benjamins.

Mahon, J. E. (1999). Getting your sources right: What Aristotle didn't say. In G. Low, & L.

Cameron (Eds.), *Researching and applying metaphor* (pp. 69-80). Cambridge,

England: Cambridge University Press.

- Maienborn, C., Heusinger, K. V., & Portner, P. (Eds.). (2011). *Semantics: An international handbook of natural language meaning* (Vol. 1). Berlin, Germany: Mouton de Gruyter.
- Mandler, J. (1992). How to build a baby: II. Conceptual primitives. *Psychological Review*, 99(4), 587-604.
- Mandler, J. (2004). *The foundations of mind: Origins of conceptual thought*. Oxford, England: Oxford University Press.
- Mandler, J. (2006). Actions organize the infant's world. In K. Hirsh—Pasek, & R. M. Golinkoff (Eds.), *Action meets word: How children learn verbs* (pp. 111-133). Oxford, England: Oxford University Press.
- Mandler, J. M., & Pagán Cánovas, C. (2014). *On defining image-schemas*. *Language and Cognition*, 6(4), 1-23. doi:10.1017/langcog.2014.14
- Matthews, P. H. (2014). *The concise oxford dictionary of linguistics* (3rd ed.). Oxford, England: Oxford University Press.
- McArthur, T. (2005). *Concise oxford companion to the English language*. Oxford, United Kingdom: Oxford University Press.
- McGregor, W. B. (2009). *Linguistics: An introduction*. London, England: Continuum.
- Metaphor. (n.d.). *In Oxford advanced learner's dictionary* (9th ed.). Retrieved from <http://www.oxfordlearnersdictionaries.com/definition/english/metaphor?q=metaphor>.

Meyer, P. G. (2005). *Synchronic English linguistics: An introduction* (3rd ed.).

Tübingen, Germany: Gunter Narr.

Moerdijk, F. (2003). The codification of semantic information. In P. V. Sterkenburg (Ed), *A*

practical guide to lexicography (pp. 273- 297). Amsterdam, The Netherlands:

Benjamins.

Morimoto, S., & Loewen, S. (2007). A comparison of the effects of image-schema-based

instruction and translation-based instruction on the acquisition of L2 polysemous

words. *Language Teaching Research*, 11, 347–372.

Move. (n.d.). In *Cambridge learner's dictionary*. Retrieved from

<http://dictionary.cambridge.org/dictionary/english/move?fallbackFrom=british-grammar>.

Move. (n.d.). In *Collins-Cobuild dictionary of English*. Retrieved from

<http://www.collinsdictionary.com/dictionary/english/move>.

Move. (n.d.). In *Longman dictionary of contemporary English*. Retrieved from

http://www.ldoceonline.com/dictionary/move_1.

Move. (n.d.). In *Oxford advanced learner's dictionary (9th ed.)*. Retrieved from

http://www.oxfordlearnersdictionaries.com/definition/english/move_1?q=move.

Murphy, G.L. (2002). *The big book of concepts*. Cambridge, MA: MIT Press.

Murphy, M. L. (2010). *Lexical meaning*. Cambridge, United Kingdom: Cambridge University

Press.

Murphy, M. L., & Koskela, A. (2010). *Key terms in semantics*. London, England: Continuum.

- Navarro, I. (2006). On the meaning of three English prepositions. In I. Navarro, & N. Alberola (Eds.), *In-roads of language: Essays in English studies* (pp. 167-179).
Castello: Universitat Jaume I.
- Nerlich, B. (2003). Polysemy: Past and present. In B. Nerlich, Z. Todd, V. Herman, & D.D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 49-76). Berlin, Germany: Mouton de Gruyter.
- Nerlich, B., & Clarke, D. D. (2003). Polysemy and flexibility: introduction and overview. In B. Nerlich, Z. Todd, V. Herman, & D.D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 3-30). Berlin, Germany: Mouton de Gruyter.
- Nevalainen, T. (1999). Early modern English lexis and semantics. In R. Lass (Ed.), *The cambridge history of the English language* (Vol. 3, pp. 332-458). Cambridge, United Kingdom: Cambridge University Press.
- Nose. (n.d.). In *Oxford advanced learner's dictionary* (9th ed.). Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/nose_1?q=nose.
- Nuessel, F. (2010). Figurative language: Semiotics. In A. Barber, & R. J. Stainton (Eds.), *Concise encyclopedia of philosophy of language and linguistics* (pp. 230-242).
Oxford, United Kingdom: Elsevier.
- Oakley, T. (2007). Image-schemas. In D. Geeraets, & H. Cuyckens (Eds.), *The oxford handbook of cognitive linguistics* (pp. 214-235). Oxford, United Kingdom: Oxford University Press.
- Ortony, A. (1993). Metaphor, language, and thought. In A. Ortony (Ed.), *Metaphor and thought* (2nd ed., pp. 1-16). Cambridge, England: Cambridge University Press.

- Palmer, F. R. (1981). *Semantics* (2nd ed.). Cambridge, United Kingdom: Cambridge University Press.
- Palmer, G. B. (1996). *Toward a theory of cultural linguistics*. Austin, TX : University of Texas Press.
- Payne, T. E. (2006). *Exploring language structure: A student's guide*. Cambridge, England: Cambridge University Press.
- Payne, T. E. (2011). *Understanding English grammar: A linguistic introduction*. Cambridge, United Kingdom: Cambridge University Press.
- Peña Cervel, M. S., & Ruiz de Mendoza Ibáñez, F. J. (2009). The metonymic and metaphoric grounding of two image-schema transformations. In K. U. Panther, L. L. Thornburg, & A. Barcelona (Eds.), *Metonymy and metaphor in grammar* (pp. 339-361). Amsterdam, The Netherlands: Benjamins.
- Peña Cervel, M. (1998-99). The Prepositions in and out and the relevance of the trajectory-landmark distinction, *Resla*, 261-271.
- Piquer Píriz, A. M. (2008). Reasoning figuratively in early EFL: Some implications for the development of vocabulary. In F. Boers, & S. Lindstromberg (Eds.), *Cognitive approaches to teaching vocabulary and phraseology* (pp. 219-240). Berlin, Germany: Mouton de Gruyter.
- Priss, U. (2002). Associative and formal concepts. In U. Priss, D. Corbett, & G. Angelova (Eds.), *Conceptual Structures: Integration and Interfaces (ICCS 2002), Proceedings of the 10th International Conference, Lecture Notes in Artificial Intelligence* (Vol. 2393, pp. 354-366). Berlin, Germany: Springer-Verlag.

- Radden, G., & Dirven, R. (2007). *Cognitive English grammar* (Vol. 2). Amsterdam, The Netherlands: Benjamins.
- Radden, G., Köpcke, K. M., Berg, T., & Siemund, P. (2007). Introduction: The construction of meaning in language. In G. Radden, K. M. Köpcke, T. Berg, & P. Siemund (Eds.), *Aspects of meaning construction* (pp. 1-15). Amsterdam, The Netherlands: Benjamins.
- Radden, G., & kövecses, Z. (1999). Towards a theory of metonymy. In K. U. Panther & G. Radden (Eds.), *Metonymy in language and thought* (pp. 17-59). Amsterdam, The Netherlands: Benjamins.
- Radford, A. (1997). *Syntactic theory and the structure of English: A minimalist approach*. Cambridge, United Kingdom: Cambridge University Press.
- Radford, A. (2004). *Minimalist syntax: Exploring the structure of English*. Cambridge, United Kingdom: Cambridge University Press.
- Rainer, F. (2014). Polysemy in derivation. In R. Lieber & P. Stekauer (Ed.), *The oxford handbook derivational morphology* (pp. 338-353). Oxford, UK: Oxford University Press.
- Rauh, G. (1993). On the grammar of lexical and non-lexical prepositions in English. In C. Zelinsky-Wibbelt (Ed.), *The semantics of prepositions* (pp. 99-150). New York, NY: Mouton de Gruyter.
- Ravin, Y., & Leacock, C. (2000). Polysemy: An overview. In Y. Ravin & C. Leacock (Eds.), *Polysemy: Theoretical and computational approaches* (pp. 1-29). Oxford, UK: Oxford University Press.

- Regier, T. (1996). *The human semantic potential: Spatial language and constrained connectionism*. Cambridge, MA: MIT Press.
- Rice, S. (2003). Growth of a lexical network: Nine English prepositions in acquisition. In H. Cuyckens, R. Dirven, J. R. Taylor (Eds.), *Cognitive approaches to lexical semantics* (pp. 243-280). Berlin, Germany: Mouton de Gruyter.
- Ritchie, G. D., Russell, G. J., Black, A. W., & S. G. (1992). *Computational morphology: Practical mechanisms for the English lexicon*. Cambridge, MA: MIT Press.
- Ricoeur, P. (2004). *The role of metaphor: The creation of meaning in language*. London, England: Routledge.
- Riemer, N. (2010). *Introducing semantics*. Cambridge, UK: Cambridge University Press.
- Roslim, N. (2014). Prepositions and ESL learners: The Malaysian scenario. *International Journal of Applied Linguistics and English Literature*, 3, 187-194.
- Ruiz De Mendoza Ibáñez, F. J. (2008). Cross-linguistic analysis, second language teaching and cognitive semantics: The case of Spanish diminutives and reflexive constructions. In S. De Knop, T., & De. Rycker (Eds.), *Cognitive approaches to pedagogical grammar: A volume in honour of René Dirven* (PP. 121-153). Berlin, Germany: Mouton de Gruyter.
- Saeed, J. I. (2009). *Semantics* (3rd ed.). Malden, MA: Wiley- Blackwell.
- Saint-Dizier, P. (Ed.). (2006). *Syntax and semantics of prepositions*. Dordrecht, The Netherlands: Springer.
- Semonsky, C. M. S., & Spielberger, M. A. (2004). *Early language learning: A model for success*. Greenwich, CT: Information Age Publishing.

Shindo, M. (2009). *Semantic extension, subjectification, and verbalization*. Lanham, MD:

University Press of America.

Silvestre Lopez, A. J. (2009). Topology, force-dynamics, and function in the semantics of *In* and *On* as the prepositional component of English prepositional verbs. In J

Valenzuela, A. Rojo, & C. Soriano (Eds.), *Trends in cognitive linguistics: Theoretical and applied models* (pp. 49-64). Frankfurt: Peter Lang.

Small, S. L., Cottrel, G. W., & Tanenhaus, M. K. (1988). Preface. In S. L. Small, G. W.

Cottrel, & M. K. Tanenhaus, (Eds.), *Lexical ambiguity resolutions: Perspectives from psycholinguistics, neuropsychology and artificial intelligence* (pp. 3-10). San Mateo,

CA: Morgan Kaufmann.

Snowman, J., McCown, R., & Biehler, R. (2012). *Psychology applied to teaching* (13th ed.).

Belmont, CA: Wadsworth Cengage Learning.

Soares da Silva, A. (2003). Image-schemas and category coherence: the case of the

Portuguese verb deixar. In H. Cuyckens, R. Dirven & J. Taylor (Eds.), *Cognitive Approaches to Lexical Semantics* (pp. 281- 322). Berlin, Germany: Mouton de

Gruyter.

Stevenson, A. (Ed.). (2010). *Oxford dictionary of English* (3rd ed.). Oxford, England: Oxford

University Press.

Sullivan, N. M. (2015). *Essential grammar for today's writers, students, and teachers*.

New York, NY: Routledge.

Tallerman, M. (2015). *Understanding syntax* (4th ed.). London, England: Routledge.

- Talmy, L. (1978). Definiteness and referentiality. In: Greenberg, Joseph (Ed.), *Universals of Human Language* (Vol. 4: Syntax, pp. 291-330). Stanford, CA: Stanford University Press.
- Talmy, L. (2000). *Towards a cognitive semantics: Concept structuring systems* (Vol. 1). Cambridge, MA: MIT Press.
- Taylor, J. R. (1993). Prepositions: Patterns of polymsemization and strategies of disambiguation. In C. Zelinsky-Wibbelt (Ed.), *The semantics of prepositions: From mental processing to natural language processing* (pp. 151-175). Berlin, Germany: Mouton de Gruyter.
- Taylor, J. R. (2003). *Linguistic categorization* (3rd ed.). Oxford, United Kingdom: Oxford University Press.
- Taylor, J. R., Cuykens, H., & Dirven, R. (2003). Introduction: New directions in cognitive lexical semantic research. In H. Cuyken, R. Dirven, & J. R. Taylor (Eds.), *Cognitive approaches to lexical semantics* (pp. 1-28). Berlin, Germany: Mouton de Gruyter.
- Thang, N. T. (2009). Language and embodiment. *VNU Journal of Science, Foreign Languages*, 25, 250-256.
- Thatcher, D. (2014). *Saving our prepositions: A guide for the perplexed*. Victoria, BC: Friesen Press.
- Thorne, S. (2012). *Mastering practical grammar*. Basingstoke, England: Palgrave Macmillan.
- Trim, R. (2007). *Metaphor networks: The comparative evolution of figurative language*. Basingstoke, UK: Palgrave Macmillan.

- Tuggy, D. (2006). Ambiguity, polysemy, and vagueness. In D. Geeraerts (Ed.), *Cognitive linguistics: Basic readings* (pp. 167- 184). Berlin, Germany: Mouton de Gruyter.
- Tuner, M. (1991). *Reading minds: The study of English in the age of cognitive science*. Princeton, NJ: Princeton University Press.
- Tuner, M. (1996). *The literary mind: The origins of thought and language*. Oxford, England: Oxford University Press.
- Tyler, A. (2008). Applied cognitive linguistics: Putting linguistic back into second language teaching. In *33rd International LAUD Symposium Cognitive Approaches to Second/Foreign Language Processing: Theory and Pedagogy, Series A*, LAUD Linguistic Agency, (pp. 904-927). Essen: LAUD Linguistic Agency.
- Tyler, A. (2012). *Cognitive linguistics and second language learning: Theoretical basics and experimental evidence*. New York, NY: Routledge.
- Tyler, A., & Evans, V. (2003). Reconsidering prepositional polysemy networks: The case of over. In B. Nerlich, Z. Todd, V. Herman, & D.D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 95- 159). Berlin, Germany: Mouton de Gruyter.
- Tyler, A., & Evans, V. (2004). Applying cognitive linguistics to pedagogical grammar: The case of over. In M. Achard, & S. Niemeier (Eds.), *Cognitive linguistics, second language acquisition, and foreign language teaching* (257-280). Berlin, Germany: Mouton de Gruyter.
- Tyler, A., Mueller, C., & Ho, V. (2010a). Applying cognitive linguistics to learning the Semantics of English to, for and at: An Experimental Investigation. *Vigo International Journal of Applied Linguistics*, 8, 181- 206.

- Tyler, A. E., Takada, M., Kim, Y., & Marinova, D. (Eds.). (2005). *Language in use: Cognitive and discourse perspectives on language and language learning*. Washington, DC: Georgetown University Press.
- Tylor, J. (2003). Polysemy's paradoxes. *Journal of Language Sciences*, 25, 637-655.
- Ungerer, F. & Schmid, H. J. (1996). *An Introduction to cognitive linguistics*. London, England: Pearson Longman.
- Vadasy, P. F., & Nelson, J. R. (2012). *Vocabulary instruction for struggling students*. New York, NY: The Guilford Press.
- Vespoor, M., & Lowie, W. (2003). making sense of polysemous words. *Language Learning*, 53, 547-586.
- Vespoor, M., & Tyler, A. (2009). Cognitive linguistics and second language learning. In W. C. Ritchie, T. K. Bhatia (Eds.), *The new handbook of second language acquisition* (2nd ed., pp. 159-177). Bingley, United Kingdom: Emerald.
- Way, E. C. (1991). *Knowledge representation and metaphor*. Dordrecht, The Netherlands: Kluwer Academic.
- Wechsler, S. (2015). *Word meaning and syntax: Approaches to the interface*. Oxford, England: Oxford University Press.
- Westwood, P. (2004). *Learning and learning difficulties: Approaches to teaching and assessment*. London, England: David Fulton.
- Yates, J. (1999). *The ins and the outs of prepositions: A guide book for ESL students*. Hauppauge, NY: Barron's Educational Series.

- Young, D. J. (1984). *Introducing English grammar*. London, England: Routledge.
- Yopp, H.K., Yopp, R. H., & Bishop, A. (2009). *Vocabulary instruction for academic success*.
Corinne Burton.
- Yu, N. (1998). *The contemporary theory of metaphor: A perspective from Chinese*.
Amsterdam, The Netherlands: Benjamins.
- Yu, N. (2015). Embodiment, culture, and language. In F. Sharifian (Ed), *The routledge handbook of language and culture* (pp. 227-239). London, England: Routledge.
- Yule, G. (2014). *The study of language* (5th ed.). Cambridge, United Kingdom: Cambridge University Press.
- Zhu, H., & Malt, B .C. (2014). Cross-linguistic evidence for cognitive foundations of polysemy. In P. Bello, M. Guarini, M. McShane, & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 934-939). Austin, TX: Cognitive Science Society.

APPENDICES

APPENDIX I: The Test

APPENDIX II: Teaching Materials for the Experimental Group

APPENDIX III: The Students' Questionnaire

APPENDIX I

The Test

Part One: Tick the correct meaning of the expression including the prepositions *above, across, in, on, out, over* and *through* in the following sentences

1. 'The cow munched grass in the field.'

- a) The cow was within the bounds of the field
- b) The cow ate grass around the field
- c) The cow chewed grass into the field

2. 'I like coffee over milk in breakfast.'

- a) I like coffee mixed with milk in breakfast
- b) I like both coffee and milk in breakfast
- c) I like coffee better than milk in breakfast

3. 'There is a heat across the country'

- a) On the other side of the country
- b) Throughout the country
- c) Inside and outside the country

4. 'Yesterday, they were giving leaflets out in front of the underground station.'

- a) Delivering leaflets outside in front of the underground station
- b) Distributing leaflets in front of the underground station
- c) Proposing leaflets in front of the underground station

5. 'The strike is over and our membership has not voted.'

- a) The strike is no longer in progress
- b) The strike is repeated again
- c) The strike is postponed

6. 'I am reading a book on dogs in which the writer describes how these animals could be dangerous'

- a) I am reading a book which addresses dogs
- b) I am reading a book concerning dogs
- c) I am reading a book around dogs

7. 'There is a sign over the door.'

- a) Beside the door
- b) On the door
- c) Above the door

8. 'Ann is through with the book'

- a) She is in the process of reading the book
- b) She has finished reading the book
- c) She is carrying the book

9. 'In the navy, a captain is above a commander.'

- a) He is higher than a commander
- b) He is stronger than a commander
- c) He is more advanced than a commander

10. 'The heavy rain caused the river to flow over its bank.'

- a) To flow above its bank
- b) To flow across its bank
- c) To exceed its bank

11. 'The young girl tried to get across to her friend that the topic was not good'

- a) She described to her that the topic was not good
- b) She made her understand that the topic was not good
- c) She gave her reasons that her topic was not good

12. 'The light bulb is in the socket.'

- a) The light bulb is totally inside the socket
- b) The light bulb is within the socket
- c) The light bulb is partially enclosed by the socket

13. 'She played over the same piano piece to demonstrate her talent.'

- a) She played excellently
- b) She played again
- c) She played better

14. A: 'Are the scissors in the drawer?'

B: 'No, they re out on the counter.'

- a) They're exterior to the drawer
- b) They're no longer in the drawer
- c) They're outside the counter

15. 'The shops were repaired through the help of a disaster relief fund.'
- They were repaired by means of the help of a disaster relief fund
 - They were repaired because of the help of a disaster relief fund
 - They were repaired during the help of a disaster relief fund
16. 'He drove across the parking lot although it was not allowed.'
- He drove into the parking lot
 - He drove in the parking lot
 - He drove from one side to the other side of the parking lot
17. 'Paul prefers sleeping in bed with his head on pillow'
- Above the pillow
 - Supported by the pillow
 - Placed at the top of the pillow
18. 'The hummingbird flies over the flower'
- Upward and forward across the flower
 - Higher and touching the flower
 - Across the flower
19. 'The information in this booklet is out of date.'
- The information that this booklet mentions is out of date
 - The information that this booklet contains is out of date
 - The information that this booklet states is out of date
20. 'The actions of public officials must be above suspicion.'
- They must be very good to be suspected
 - They must be very obvious to be suspected
 - They must be under suspicion
21. 'It has been said that dark colors in cotton fabric keep out the sun's harmful ultraviolet rays.'
- Protect us from the sun's harmful ultraviolet rays
 - Prevent the sun's harmful ultraviolet rays from entering
 - Reflect the sun's harmful ultraviolet rays
22. 'They put rocks over a cave entrance.'
- Near the cave
 - Higher than the cave
 - To cover the cave
23. 'We saw a couple of duty crew through a window.'
- On the other side of the window

- b) By the window
- c) From the window

24. 'Father is in bad temper, he has just thrown mother out of window'

- a) Because of my father's bad state, he has thrown my mother
- b) Because my father is inside bad temper, he has thrown my mother
- c) Because of my father's bad situation, he has thrown my mother

25. 'She placed the tablecloth on the table.'

- a) She placed the tablecloth to cover the table
- b) She placed the tablecloth onto the table
- c) She placed the tablecloth above the table

26. 'Sam lives over the hill.'

- a) Near the hill
- b) Behind the hill
- c) On the other side of the hill

27. 'There was a spider's nest in the mountain cave'

- a) The spider's nest was enclosed by the mountain cave
- b) The spider's nest covered the mountain cave
- c) The spider's nest was all over the mountain cave

28. 'He suffered a serious bruise above his left eye.'

- a) His bruise was on his left eye
- b) His bruise was higher than his left eye
- c) His bruise was on top of his left eye

29. 'The accused murderer's wife was able to remain loyal through her conviction of his innocence.'

- a) She was able to remain loyal via her conviction
- b) She was able to remain loyal because of her conviction
- c) She was able to remain loyal by way of her conviction

30. 'I am over my cold.'

- a) I have recovered from my cold
- b) I am still suffering from my cold
- c) I am cold

31. 'A: Have we got any milk left?'

'B: No, we 're (all) out!'

- a) We're all outside

- b) We no longer have milk
c) We have not bought milk
32. 'The fruit is allowed to mature on the tree.'
- a) Above the tree
b) Over the tree
c) In contact and supported by the tree
33. 'While I was in the garden, a snake crawled out in front of me.'
- a) Moved outside the garden in front of me
b) Appeared in front of me
c) Moved quickly across the ground in front of me
34. 'They are in the manufacture of expensive baby clothes.'
- a) They are inside the manufacture of expensive baby clothes
b) They work for a company that manufactures expensive baby clothes
c) They are in the process of manufacturing expensive baby clothes
35. 'The children jumped over the puddles on their way to school.'
- a) They jumped in the puddle
b) They jumped above and across the puddle
c) They jumped in and then out of the puddle
36. 'On the trail, we came across some hikers from Australia.'
- a) We found hikers by chance
b) We came nearer to some hikers
c) We met some hikers as planned
37. 'He hangs a mirror above the chimney.'
- a) On the chimney
b) Near the chimney
c) Over the chimney
38. 'The manager opened the door and stepped in.'
- a) The manager raised his foot
b) The manager moved to the inside
c) The manager opened the door and stood in the way
39. 'We decided to go for a walk over the hill.'
- a) To go to the hill
b) To walk around the hill
c) To walk from one side to the other of the hill
40. 'The company's profits are above the ones in the previous year.'
- a) They are better than the ones in the previous year
b) They are over the ones in the previous year

- c) They exceed the ones in the previous year
41. 'The child was screaming when she drew him out of the club's swimming pool.'
- a) Away from the inside of the swimming pool
 - b) From the outside of the club's swimming pool
 - c) Into the swimming pool
42. 'Oxygen must be held in a sealed container.'
- a) Oxygen must be pressed there
 - b) Oxygen must be enclosed there
 - c) Oxygen must be blocked there
43. 'There are several huts across the river.'
- a) On the other side of the river
 - b) Near the river
 - c) Beyond the river
44. 'There is no one over him in the department.'
- a) No one rules him in the department
 - b) There is no one but him in the department
 - c) He has the highest rank in the department
45. 'She drove through the garage at sixty kilometers an hour.'
- a) She drove into the garage
 - b) She drove into and then exited the garage
 - c) She drove closer to the garage
46. 'Interviews will be held at the above address on 2 December.'
- a) At the following address
 - b) Outside the earlier address
 - c) At the preceding address
47. 'When the police were running after, he was doing over a hundred miles.'
- a) He was doing again a hundred miles
 - b) He was doing more than a hundred miles
 - c) He ended up doing a hundred miles
48. 'If fire breaks out, get in single file before leaving.'
- a) Form a line before leaving
 - b) Get into a single file before leaving
 - c) Get inside a single file before leaving
49. 'They put the blame on her because she told the secret to everyone.'
- a) The blame made her be in trouble because she told the secret
 - b) The blame was a burden because she told the secret
 - c) The blame was a responsibility because she told the secret

Part Two: Fill in the following blanks with *above, across, in, on, out, over and through*

Off to Arizona

When I finished college and went to the police academy, I was offered a job in Arizona in order to investigate the case of the Smith family. One day, while I was in my office, a sergeant came (1).....and told me that the police chief wanted to see me. I stood in front of his desk while he began to get (2).....to me the story of the Smith family. Mr. Smith married three rich wives. All his wives died, and he inherited their money. Although my chief was really convinced that Mr. Smith was (3).....cruelty to kill his wives, he wanted me to go to his house to investigate the death of his last wife. The Smith house was thirty miles outside of the town. It was situated (4).....a broad expanse of a lawn. It was a house which rose like a tower (5)..... the hill. Since it was night when I got there, Mr. Smith suggested staying the evening in his house. I was led away (6)..... a dark hall to my room without having properly accepted this unexpected invitation. That night, I did not sleep well because there was a lot of pressure (7)..... me. I was deeply thinking about the Smith family mystery when, suddenly, I heard the sound of a small plane hovering (8)..... the house. It was very close to the earth (9)..... the airstrip. The plane rolled to a stop and landed (10)..... the area near the convent. To my surprise, a woman got (11)..... dressed in a long black dress with a straw hat. So, I decided to pay a visit to the convent. (12).....the convent, the curtains were (13)..... the window, and there was parsley spread (14).....on the table as well as two pictures hanging on the wall which were placed (15).....the same table. There were also a group of women sitting around a small table (16).....thoughtful calm. I wanted to talk to them, but one of them said that this was the quiet hour. And she left the room. I stood (17).....in the garden thinking that when quiet hour was (18)....., someone might come and talk to me. Unexpectedly, I saw the woman with the straw hat walking (19)..... the garden and going towards Mr. Smith's house. I followed her and I tried to ask her about the Smith family, but she did not respond and continued moving quickly (20).....the trees till she disappeared. The next day, I left the house and I went back to my office. In the afternoon, I received a letter from that woman explaining how Mr. Smith's wives died. (21).....this letter, I discovered that the deaths of his wives were accidental in a manner of speaking.

APPENDIX II

Teaching Materials for the Experimental Group

Session One

1. The Pre-Instructional Phase (about 5 minutes)

Firstly, ask the students some questions that motivate their ‘need to know’ and tackle their background knowledge: How many parts of speech are there in English? What is the role of prepositions, and how they differ from the other parts of speech? Can we use the same preposition in one context or in a variety of contexts, etc.?

2. The Instructional Phase

2.1 Introduction of Basic Notions

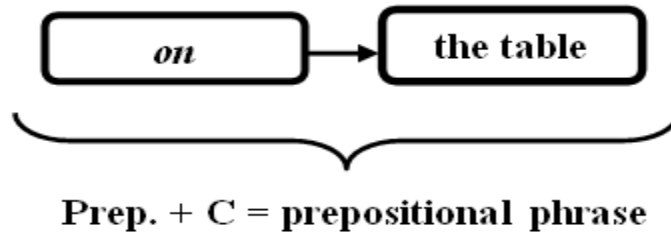
- **Definition of a Preposition:** a word that shows the relationship between words, people and events. It can show a relationship of time, place and movement. As the name implies, a ‘pre/position’ is a word that is commonly placed before a noun phrase or a pronoun.

Example 1: She went *to* the post office. (preposition+ noun phrase)

Example 2: Why are you looking *at* me? (preposition+ pronoun)

- **Definition of a prepositional phrase:** is composed of a preposition (Prep.) and a prepositional complement (C).

Example 3: The keys are *on* the table.



- Definition of a preposition on the basis of the claims of CL.
- Definition of the terms ‘subject’ (S) (i.e. trajector) and ‘landmark’ (LM) of prepositions

Example 4: The book is on the desk.
 S LM

Example 5: He went *to* the post office.
 S LM

Example 6: Paul is *in* trouble.
 S LM

Example 7: I will come *in* five minutes.
 S LM

- The characteristics of a preposition with multiple meanings and the different types of its senses.

2.2 The Polysemy of *on*

- **The Basic Image-Schema:** ‘Support and contact’  

Example 1: The pen is *on* the table.

- **Rotated Schemas**

Example 2: The mirror is *on* the wall.

Example 3: The doorknob is *on* the door.

Example 4: The chewing gum is *on* the bottom of the table.

- **The Dynamic Sense:** ‘Movement ending in support’

Example 5: Put the book *on* the desk.

- **Non-Spatial Senses:**

- **The Burden Metaphor:**

Example 6: It's not fair *on* us, shame *on* you.

- **Topics LMs:**

Example 7: I have read an article *on* mathematics.

3. The Post-Instructional Phase: Summary of the main points.

Session Two

1. The Pre-Instructional Phase (about 5 minutes)

Revision of basic notions and the polysemy of *on*

2. The Instructional Phase

2.1 The Polysemy of *above*

- **The Basic Image-Schema:** *'The TR is higher than the LM'*



Example 1: The picture is *above* the desk.

- **Comparison between the schemas of *on* and *above***
- **The Dynamic Sense:** *'The end point of a path is higher than the LM'*

Example 2: Let us hang a picture *above* the sofa.

- **The Non-spatial Senses and the Relationship between them**

Example 3: Please, follow the instructions *above*. (*earlier than*)

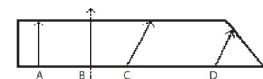
Example 4: Her blood pressure is *above* mine. (*at a higher level*)

Example 5: His salary is *above* mine. (*more than*)

Example 6: He is *above* lying. (*too good to do something*)

2.2 The Polysemy of *across*

- **The Basic Sense:** *'Moving from one side to the other side'*



Example 1: It took him one week to walk *across* the desert. (path)

- **The Static Sense:** *'On the other side of'*

Example 2: My house is *across* the road. (end of path)

- **All over Sense:**

Example 3: People *across* the world use the internet.

- **Non-Spatial Senses (metaphorical senses):** *all over/come across / get across*

Example 4: I *came across* a letter you wrote to me when we were children.

Example 5: She cannot *get across* her message to people.

3. The Post-Instructional Phase

Exercise 1: Fill in the following blanks with *above*, *across* and *on*

- | | |
|---|---|
| 1. He puts the clock.... mantel. | 10. He gave a lecture...Chemistry. |
| 2. The child posted the picture....the door near the doorknob. | 11. He may be poor, but he is ... stealing |
| 3. I would not wish such a misfortune ...you. | 12. The children in her class are all... average. |
| 4. Only novels with three hundred pages and ... were allowed. | 13. The girl ran... the yard. |
| 5. I came... this old picture of you when I was looking for some documents. | 14. The problems cited... have led to a number of suggestions for reform. |
| 6. The cat is...mat. | 15. My assistant's office is ... the corridor from mine. |
| 7. A dark cloud was ... the house. | 16. It is critical that you learn how to get your point... to whom you talk to. |
| 8. There is a fly... the ceiling | 17. The brick fell... his head. |
| 9. The group became popular... the UK in a matter of time. | |

- **Recapitulation:** Summary of the main points.

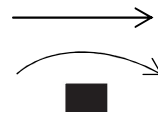
Sessions Three and Four

1. The Pre-Instructional Phase

Draw the diagrams of *above*, *across*, *on* and ask the students about the prepositions they refer to and then compare them with the schemas that depict the spatial senses of *over*.

2. The Instructional Phase

-The Polysemy of *over*



- **The Basic Image-Schema:** ‘The *above-across* sense’

Example 1: He threw the ball *over* the box.

- **Extended Senses:** (Spatial senses)

Example 2: They walked *over* the bridge. (*contact between the TR and LM*)

Example 3: She lives *over* the hill. (*on the other side of*)

Example 4: The picture is *above/ over* the mantel. (*the above sense*)

Example 5: He puts the cloth *over* the food. (*the covering sense*)

- **Comparison between *over*, *across*, *above* and *on* by taking into account all the spatial senses.**

- **Metaphorical Senses:**

Example 6: Say it *over* loudly. (*again*)

Example 7: The game is *over*. (*finished*)

Example 8: There were *over* a thousand people at the meeting. (*more than*)

Example 9: They may choose him *over* me in the promotion. (*preference*)

Example 10: He got *over* the death of his child. (*recovered*)

Example 11: Do not *overuse* conjunctions in your writing. (*excess*)

Example 12: They watch *over* us day and night. (*exercising power or authority/ Dominating*)

3. The Post-Instructional Phase

Exercise 2: Fill in the following blanks with *above, across, on* and *over*

1. The moon is peering... the lake.
2. A mask... his face indicated his intentions
3. He sat... the chair and ate his dinner.
4. An allergy is a disorder in which the body ... reacts to harmless substances which in normal circumstances should not produce any reaction at all.
5. The director presides... the meeting.
6. None of the prizes was.... one million.
7. The beautiful blue glass vase falls... the floor and breaks into a hundred pieces.
8. Harry has not gotten... his divorce.
9. He picked a job in a small town... all the opportunities.
10. He lifted his flag.... head.
11. The young soldier walked... the grass.
12. The rabbit hopped...the fence.
13. The old town lies... the street.
14. The car moves... the bump in the road.
15. The ball rolled to a stop... the wall.
16. He read the novel..., but he could not get the main idea.
17. They put a transparent plastic sheet... the painted ceiling during repair.
18. The political damage may be limited if the fighting is ... quickly.

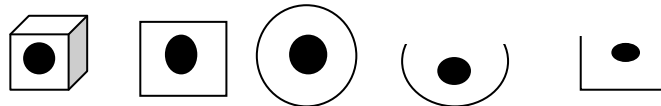
- **Recapitulation:** Summary of the main points.

Session Five

1. The Pre-Instructional Phase

Ask the students to draw the image-schema of a TR that is *in* a LM. Draw them on the board and then discuss the notion of containment.

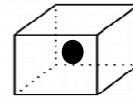
The Students' Schemas:



2. The Instructional Phase

2.1 The Polysemy of *in*

- **The Basic Schema:** *The CONTAINMENT schema*



Example 1: The present is *in* the closet. (*total enclosure*)

Example 2: The flower is *in* the vase. (*partial enclosure*)

Example 3: She lives *in* Algeria. (*inclusion*)

- **The Dynamic Sense**

Example 4: He dipped his finger *in* the glass of water.

- **Comparison between *on* and *in*.**

- **Non-Spatial Senses**

Example 5: Can you write your words *in* a circle. (*metaphorical containment*)


Example 6: Paul is *in* trouble. (*state*)

Example 7: The gentlemen got a fish-bone blocked *in* his throat. (*the blockage sense*)

Example 8: They put the chairs *in* a circle. (*shape*)

Example 9: He is *in* the governor's office. (*metonymy: his activity*)

2.2 The Polysemy of *out*

- **The Basic Schema:** *non-containment* 

Example 1: The cat is *out of* the box.

- **The Static Sense**

Example 2: The workers are *out*.

- **Comparison between *out* and *in* by taking into account the aspects of the static and dynamic senses.**

- **Metaphorical Senses:**

Example 3: The report left *out* very interesting ideas. (*exclusion*)

Example 4: The sun is *out*. (*visibility*)

Example 5: The players gave *out* the cards quickly. (*distribution*)

Example 6: He was *out of* fresh fruits and vegetables. (*no more*)

3. The Post-Instructional Phase: Summary of the main points

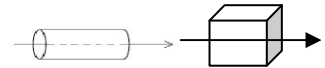
Session Six

1. The Pre-Instructional Phase

Revision of the polysemy of *in* and *out*

-The Polysemy of *Through*

- **The Basic Image-Schema:** 'Moving in and then out of a LM'



Example 1: We went *through* the tunnel.

- **The Static Sense**

Example 2: I saw the dog *through* the door.

- **Comparison between *in*, *out* and *through*.**
- **Comparison between *through*, *across* and *over*.**

- **Metaphorical Senses**

Example 3: I am *through with* you. (finished with)

Example 4: I got my book *through* an online website. (by means of)

- **Comparison between 'the means sense' and 'the cause sense' expressed by *through*.**

3. The Post-Instructional Phase

Exercise 3: Fill in the following blanks with *in*, *out* and *through*

1. The tiny oasis flourished desert.
2. When you write a check, you have to write the amount...words.
3. The chef dishes... food.
4. There are many chocolate bars... box

5. Computer technology has evolved... research.
6. Who is this person ...picture?
7. The homeless shelter locks... anyone who isn't there by 9 pm.

8. The web site helps you... the entire process of buying stocks.

9. He sat down...the armchair and read a novel.

10. He hurried... the back entrance to avoid the crowd.

11. She spoke more...disappointment than...anger.

12. The passport office is... that doorway.

13. In the northern territories, you can get snowed...for months.

14. Put the books...the bag.

15. I am...all these fad diets.

16. He is... stocks and shares.

17. Lee needed some cash, so he walked to the bank machine, and it was ... cash.

18. She moved... the crowd quickly.

19. The moon usually comes...at night and it seems to glow brightly because of the dark sky behind it.

20. My sister spent a long time looking for her keys, but they were... in plain view.

Homework

The Students' Use of *above*, *across*, *in*, *on*, *out*, *over* and *through*: Some Examples

* Sentences with "on":

- The soldier was carrying his injured mate on his back. (movement)
- I took my pen to write a poem on the paper.
- The ministers had a meeting on constitution.
- They put the blame on me when they had a bad mark in the project.

* Sentences with "above":

- The cloth was hanged above the dirty ground.
- He put the clock above the bed.
- Philanthropists are above cheating.
- Commander is above lieutenant in army.
- Today is very hot, I think the temperature is above 28°C.

* Across:

- I walked across the beach.
- People across Algeria elected president A. Bouteflika.
- While I was waiting at the cafeteria I came across my teacher as a guest.
- This speaker knows how to get across with the audience.
- My house is located across that river.

* "Over":

- The athletes were jumping over the hurdles.
- My horse stable is over that hill.
- He is so tall that the lamp was over his head.
- After the accident, the victim's body w/ blood was over his clothes.

If you keep doing this mistake over and over, I will punish you.

The old man took an over dose and he died.

The year is over and the holiday is at the gate.

The summer ran over than 6 hrs. (or)

I like tea over coffee.

He had very tough orders over me.

Good gracious! I have got over my problems.

"In"

The gift was in a huge package.
I am getting in the theatre right now.
The man in the picture looked so sad.
I am not in a good frame to talk to you.
I was blocked in the crowded place.
I am in economics and accountancy.
We put the tables in a circle for playing a game.
You have to look out the box in order to be creative.

Through:

- Blood moves through our vessels and veins.
- Your way into the great future starts through this work.
- He has been fired from his job through his being leading the company's rivals.
- His suffrance with cancer is through, he died!
- The hostage was kept through that broken gate.

Out

- I am out of ideas.
- The postman gave out all the letters.
- The teacher ^{threw} the student out of the class.
- When the sky was clear at the night, you could see that the stars came out.

A Sample of the Students' Summary of the Senses

Prepositions with spatial meaning

ON	ABOVE	ACROSS	OVER	IN	OUT	THROUGH
<p>1. Contact + Support:</p> <p>• The pen is <u>on</u> the table.</p> <p>2. Other Case:</p> <p>• the picture is <u>on</u> the wall.</p> <p>3. Movement:</p> <p>put the book <u>on</u> the table.</p>	<p>1. At a higher place or position than Sb/sth:</p> <p>• The bull is <u>above</u> the cabinet.</p> <p>2. Movement:</p> <p>Put the book <u>on</u> the shelf <u>above</u>.</p> <p>3. Other Case:</p> <p>• the bird passes <u>above</u> the house.</p>	<p>1. To move from one side to the other side of LM:</p> <p>• The boy jumps <u>across</u> the river.</p> <p>2. On the other side of sth:</p> <p>• Look! My house is <u>across</u> the road.</p>	<p>1. a path:</p> <p>• the boy jumps <u>over</u> the wall.</p> <p>2. A horizontal path:</p> <p>the bullet passes <u>over</u> the sand.</p> <p>3. To cross a LM that is higher:</p> <p>the boy walks <u>over</u> the bridge.</p> <p>4. the above table:</p> <p>• the picture is <u>over</u> the table.</p>	<p>1. enclosure:</p> <p>• the ball is <u>in</u> the box.</p> <p>2. Partial enclosure:</p> <p>• the flower is <u>in</u> the vase.</p> <p>3. Movement:</p> <p>• the car moves <u>in</u> the garage.</p>	<p>1. S is exterior to a LM:</p> <p>• the boy is <u>out</u> of the house.</p> <p>2. Movement:</p> <p>• the car moves <u>out</u> of the garage.</p>	<p>S moves in the bounded LM and out of the other side of LM:</p> <p>• the car moves <u>through</u> the tunnel.</p>

"Non-spatial 'Metaphorical meanings'"

On

- boundaries
- Topic

Above

- Separation
- Analogy level
- More than
- Position in a hierarchy

Across

- Access
- com. across
- get across

Over

- repetition state
- excess state
- completion state
- preference
- control state
- More than sense
- obstacle

In

- containment
- shape sense
- state sense
- blockage sense
- activity sense

Out

- no more sense
- exclusion sense
- availability sense
- pre-emption sense

Through

- completion sense
- on the other side
- By means of
- by means of

① **"On"**

the place →

② **Above**

movement →

③ **Across**

on the other side →

movement (road) →

④ **in**

partially →

movement into →

⑤ **out**

movement →

place →

⑥ **"through"**

movement →

APPENDIX III

The Students' Questionnaire

This questionnaire is part of a research study. It aims at finding out the effects of using image-schemas (diagrams) on learning/acquiring polysemous prepositions, your attitudes and the extent to which this method can help you.

Please, tick (✓) the appropriate answer for each item or make statements where necessary.

May I thank you in advance for your collaboration

BOUCHENEK Hasna Lamis

Department of Letters and English

Faculty of Letters and Languages

University, "Frères Mentouri", Constantine 1

Section One: Learning Polysemous Prepositions

1. Which of these word classes do you find difficult?

a. Nouns.....

b. Articles.....

c. Adjectives.....

d. Verbs.....

e. Adverbs.....

f. Prepositions.....

g. Conjunctions.....

2. What makes prepositions difficult to learn?

a. They are numerous.....

b. They have many meanings.....

c. The rules that determine the choice between them are unclear.....

d. The teacher's instruction.....

e. Other: Please, specify:

.....

3. Have you ever encountered difficulties in using polysemous prepositions?

a. All the time.....

b. Sometimes.....

c. Not at all.....

4. What type of prepositions do you find difficult to use?

a. Time.....

b. Spatial (place and movement).....

c. Metaphorical.....

d. All of them.....

5. Is learning polysemous prepositions a burden?

Yes.....

No.....

6. Please, explain why.

.....

7. How do you learn polysemous prepositions?

a. Via rote memory.....

b. Via sentences.....

c. Via dictionaries.....

d. Via teachers' instruction.....

e. Never read about them.....

f. Other: Please, Specify:

.....

Section Two: Polysemous Prepositions and Image-Schemas

8. Have you always received instruction on polysemous prepositions?

Yes.....

No.....

9. When instructing polysemous prepositions, the teacher explains the meaning through:

a. A list of verbs and nouns that collocate with.....

b. Using synonyms.....

c. Dictionary-type definitions and examples.....

d. Other: Please, specify:

.....

10. How would you prefer to be taught polysemous prepositions?

a. Memorizing a list of meanings.....

b. Using a dictionary definition and examples.....

c. Using image-schemas (or diagrams) illustrated by examples.....

d. Using synonyms and examples.....

e. Other: Please, specify:

.....

11. Do you think that using image-schemas (diagrams) could facilitate the learning of polysemous prepositions?

Yes.....

No.....

12. If, “No”, please, explain why.

.....

13. To what extent does image-schema-based instruction help you?

.....

.....

14. Does teachers’ competence have an influence on the use of image-schemas and on making students aware of the different senses of prepositions?

Yes.....

No.....

15. Please, explain why.

.....

Section Three: Further Suggestions

16. Please, add any further comment or suggestion.

.....

.....

.....

.....

المخلص

حروف الجر متعددة الأوجه في اللغة الانجليزية، والتي تعبر عن معان مختلفة، تمثل تحديا حقيقيا للطلاب والمعلمين على حد سواء. من الناحية التربوية، المعاني العديدة لهذه الكلمات لطالما عولجت بطريقة مجزأة أو نوعا ما تعسفية إلى حد كبير، أو أنها لم تحظ بالاهتمام الواجب الذي تستحقه. الأمر الذي يجعل تعلمها أكثر تعقيدا لأن المتعلمين يستمرون في مواجهة الصعوبة مع دلالاتها. في حين ، فإن استخدام طريقة جديدة لتعليم حروف الجر متعددة الأوجه، مثل تطبيق مخططات الصورة تبدو واعدة جدا. و عليه فإن هذه الدراسة تسعى إلى تقديم خصائص الدلالات من حروف الجر متعددة الأوجه ودراسة فعالية التعليم المبني على مخطط الصورة، من أجل تعلم الدلالات من حروف الجر الإنجليزية التالية: *above, across, in, on, out, over, through* والتي اخترناها كمثال للدراسة. كما تم التحقق في رغبات الطلبة في فائدة هذا الشكل من التعليم، من خلال استبيان للطلاب. تم اختيار ثمانين طالبا، عشوائيا ممن يدرسون اللغة الإنجليزية كلغة أجنبية في جامعة "الإخوة منتوري" بقسنطينة. تم تقسيمهم إلى مجموعة مراقبة ومجموعة تجريبية. وتبين المقارنة بين نتائج الاختبار القبلي والاختبار البعدي أن المجموعة التي تلقت تعليما استنادا إلى مخططات الصور شهدت تغيرا جذريا في فهمها لدلالات حروف الجر المستهدفة. كما يكشف تحليل استبيان الطلاب أن الطلاب يحملون مواقف إيجابية تجاه استخدام التعليم القائم على المخطط. على أساس نتائج استبيان الطلاب والتجربة، يمكن استنتاج أن التعليم القائم على مخطط صورة يلعب دورا هاما في تحسين تعلم حروف الجر متعددة الأوجه، ويمكن أن تكون بمثابة أداة حيوية في تعليمهم. و منه فإن هذه الدراسة تدل على أهمية التعامل مع حروف الجر متعددة الأوجه وكيفية إعادة النظر في الطريقة التي يتم تدريسها، من خلال تطبيق التدريس المعتمد على مخططات الصور التي من شأنه جلب نفس جديد لتعلم حروف الجر.

الكلمات المفتاحية: حروف الجر متعددة المعاني، التعليم المبني على مخطط الصورة، علم الدلالة، تعدد المعاني.

Résumé

Les prépositions polysémiques, qui expriment diverses significations, représentent un véritable défi pour les étudiants et les enseignants. Les nombreuses significations de ces mots ont toujours été traitées pédagogiquement de manière fragmentaire et aussi largement arbitraires, ou ils n'ont pas reçu l'attention appropriée qu'ils méritent. Cela rend leur apprentissage plus compliqué parce que les apprenants continuent à avoir des difficultés avec leur sémantique. Cependant, l'utilisation d'une nouvelle façon d'enseigner des prépositions polysémiques telles que l'application de schémas d'images semble être très prometteuse. Cette étude vise à présenter les caractéristiques de la sémantique des prépositions polysémiques et à examiner l'efficacité de l'enseignement basé sur le schéma-image sur l'apprentissage de la sémantique des ces prépositions anglaises: *above, across, in, on, out, over et through* choisies comme exemple. Elle étudie également les attitudes des étudiants à l'égard de l'utilité de cette forme d'enseignement par l'administration d'un questionnaire pour eux. Quarante-deux étudiants de l'anglais comme langue étrangère à l'Université "Frères Mentouri", Constantine ont été choisis au hasard. Ils ont été divisés en un groupe témoin et un groupe expérimental. La comparaison des résultats du pré-test et du post-test montre que le groupe qui a reçu l'enseignement basé sur des schémas-image a connu un changement dramatique dans la compréhension de la sémantique des prépositions cibles. L'analyse du questionnaire des étudiants révèle également que les étudiants ont des attitudes positives à l'égard de l'utilisation de l'enseignement par schéma-image. Sur la base des résultats du questionnaire des étudiants et de l'expérience, on peut déduire que l'enseignement basé sur le schéma d'image joue un rôle important dans l'amélioration de l'apprentissage des prépositions polysémiques et peut servir d'outil essentiel pour les enseigner. Cette étude fournit des preuves de l'importance de traiter les prépositions polysémiques et la façon dont elles sont enseignées en appliquant de

l'enseignement basé sur un schéma-image peut apporter un nouveau souffle à leur apprentissage.

Mots-clés: prépositions polysémiques, instruction basée sur des schémas d'images, sémantique, polysémie.