Edited by Cihat Atar

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Cutting-Edge Topics and Approaches in Education and Applied Linguistics

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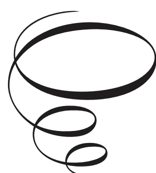

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Cutting-Edge Topics and Approaches in Education and Applied Linguistics

Edited by Cihat Atar

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List of Abbreviations

CLI:	Cross-linguistic influence
GEP:	Graduate Employability Program
HCI:	Human Computer Interaction
HLI:	Higher Learning Institutions
KDK:	Korean Digital Kitchen
Ln:	Language regardless of chronological order
MLQ:	Multifactor Leadership Questionnaire
RomVLT:	Romanian Vocabulary Test
VLT:	Vocabulary test
VS:	Vocabulary size

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INTRODUCTION

Some of the chapters in this book have emerged from the ICPESS conference held in Sarajevo in May 2017, which invited Turkish Ministry of National Education undersecretary representatives, the head of board of regents Turkiye Maarif Vakfi (Turkish Education Foundation) Prof. Dr. Birol Akgün and also representatives from Bosnia-Herzegovina Ministry of National Education. The conference brought together valuable studies from the fields of Applied Linguistics and Education. The quality of the studies combined with the cutting-edge methodologies used in some of those studies has provoked us to edit a book in which studies that either 1) have a very recent and up-to-date topic 2) and/or utilize the most recent methodologies/approaches in their fields are included. Consequently, in addition to the selection of the quality presentations in the ICPESS conference, some other researchers whose studies are valid and innovative in their fields were invited to contribute to this book. So, this book set out to form a collection of studies which present the cutting-edge topics and/or approaches and methodologies in the fields of Education and Applied Linguistics. Regarding the focus of this book, it will provide chapters with various topics, methodologies and approaches. This means that this book offers the readers a variety of topics and methodologies, which in turn makes this book a handbook for readers who would like to learn about some of the recent issues in Education and Applied Linguistics. In this sense, the readers of this book will be able to read and learn about different topics, approaches and methodologies that have prevailed in their fields recently.

This book addresses to two main themes: cutting-edge topics and/or approaches/methodologies in Education and Applied Linguistics. In the recent decades, especially as a result of globalization, learning another language and educating people with appropriate skills that addresses to the requirements of the modern world have become significant issues. Today, around 2 billion people learn and use English to some extent and this number is expected to rise. In the same vein, rapid technological advancements in the recent decades have made it mandatory to adjust education systems with the requirements of this era. Currently, in the fields of Education and Applied Linguistics various new approaches are being applied. However, edited books solely focusing on the cutting-edge

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topics, approaches and methodologies in Applied Linguistics and Education are not common. Rather, most of the books tend to focus on a certain topic (i.e. vocabulary acquisition, internationalization of education) and present studies focusing on a single theme. This is of course fair and valid considering their focus. However, this book aspires to contribute to the field in another way: This edited book will provide the readers with the chance to read, analyse and apply the recent topics, approaches and methodologies in Education and Applied linguistics in various sub-fields. In this sense, we believe that this book will be a reference book for students, practitioners and researchers who would like to learn about the various recent developments in the fields concerning the focus of this book.

The main objective of this book is to explore and unpack the cutting-edge topics and approaches involved in the fields of Education and Applied Linguistics and to develop an awareness regarding the trends in research into learning and teaching practices in general, with regard to different paradigms, methodologies and epistemologies. The collection consists of this introduction, 9 chapters and a conclusion. While the first five chapters in this collection focus on the issues related to Education, the second part focuses on Applied Linguistics via four chapters. The common theme of this book, cutting-edge topics and methodologies, however, runs throughout the book.

In the first group of studies on Education, the first chapter explicates the consequences of the recent regulation in Turkey regarding school principals in public schools. This chapter aims to find out if there are any differences between the principals assigned after the regulation compared to the principals that worked before the regulation. The second chapter focuses on an interesting phenomenon: academic honesty in a higher education setting. This chapter studies the topic via phenomenology which provides qualitative and in-depth findings from the study data. The next chapter reviews the graduate employability programs in Malaysia which is a developing country. Developing countries tend to be successful at achieving the massification of higher education, but ensuring employability is quite tough. Considering this problem, this chapter analyses the experience in Malaysia, which offers valuable implications for other developing countries. Chapter four focuses on media literacy which has recently gained a rapid popularity in the field. Media literacy is an indispensable skill in our current era and this chapter goes one step further and offers some suggestions regarding the integration of media literacy and critical thinking which is another significant skill. The final chapter shares the concern regarding critical thinking with chapter four, but this chapter

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specifically focuses on democratic attitudes of prospective teachers through the relational screening model. The chapter studies prospective teachers from various departments and it offers insights into how democratic attitudes can be achieved using a critical pedagogy approach.

The second group of studies are from Applied Linguistics field. Chapter six introduces a recent development in second language teaching field: a Real-world learning environment, a digital kitchen, created through the integration of technology into language learning environments. The digital kitchen project is an outcome of Computer-Assisted Language Learning and Human Computer Interaction combined with task based learning. Chapter seven goes beyond the traditional studies focusing on vocabulary size measurements that usually focus on a second language. This chapter skilfully demonstrates the complex nature of the role of vocabulary in language learning and it suggests a holistic framework for investigating vocabulary size in multiple languages. The next chapter starts with the comparison of incidental and intentional vocabulary learning/teaching practices in language classrooms. Through a review into these approaches, a complementary account is presented and some suggestions for practitioners and researchers in the field are made. The final chapter focuses on a theme which is omnipresent in the field: the use of games in second/foreign language classrooms. The chapter contributes to the literature by framing various issues that need to be considered while using games in classrooms and in this sense, it has the potential to be of use for practitioners.

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SECTION I:

STUDIES IN EDUCATION

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CHAPTER ONE

SCHOOL PRINCIPALS' LEADERSHIP STYLES FROM TEACHERS' PERSPECTIVES[1]

SÜLEYMAN AKKAŞ
AND FERDANE DENKCI AKKAŞ

Introduction

Administration and leadership are the two concepts which have been a focus of interest since the first days of humankind and which were initially considered as a kind of art, but now have been accepted as a field of scientific study (Aydın, 2007; Memduhoğlu, 2013; Yukl, 1989). In the historical development of societies from the hunter-gatherers to agricultural ones and then to the industrial and today the information societies, it can be clearly seen that the concept of administration has undergone contemporaneous changes (Barutçu & Akatay, 2000; Fişek, 2005; Memduhoğlu, 2013; Özer & Beycioğlu, 2013). That is, there has been a transformation from the concept administration towards leadership since these two terms are considered as two distinct concepts and in today's world various organizations seek for leaders rather than administrators claiming that leadership expresses the recent changes, developments and demands within the field more appropriately (Beycioğlu, 2009; Bolden, 2004; Bolden, 2005; Cemaloğlu, 2013).

When the related literature is reviewed, it is seen that there is not a compromised definition for leadership, but there are rather some common prominent qualities of leaders mentioned by the scholars in the field (Acar, 2002; Beycioğlu, 2009; Bolden, 2004; Karip, 1998; Kort, 2008; Paksoy, 1993; Storey, 2004; Şişman, 2014). Therefore, it would not be wrong to define leadership as a process or the ability to influence the followers to motivate and lead them towards specific targets of the organization

[1] This paper is a revised version of a study presented at the 7th International Congress of Education Supervision in Izmir in 2015.

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(Northouse, 2007, p. 3). Today, leadership is related with having a vision which requires the leader to see the big picture and to cope with the constant changes of his/her time (Bertocci, 2009). When considered from this perspective, it is obvious that leadership has a key role in the triumph of the individual, the organization as well as the nation (Bolden, 2004; Lord & Brown, 2004; Paksoy, 1993).

Full-Range Leadership Theory which is an expansion of Bass' Transformational Leadership Theory (Antonakis, Avolio & Sivasubramaniam, 2003) is one of the prevalent theories within the literature concerning the situational leadership theories and Littlewood (1992) is the first scholar who introduced this popular theory to the educational organizations (Baloğlu, Karadağ & Gavuz, 2009). According to the situational leadership theories, it is accepted that a leadership style which works perfectly at a time may fail in a different context or situation. Therefore, it is aimed to study the influential leadership styles for specific situations and suggested that leaders should analyse the context first to determine and adopt the appropriate style for that specific situation (Bakan & Büyükbeşe, 2010; Bertocci, 2009; Beycioğlu, 2009; Bolden, 2004; Goodson, McGee & Cashman, 1989; Horner, 1997; Yukl, 1989).

Full-Range Leadership Theory suggests that there are basically three leadership styles which can be utilized accordingly depending on the requirements of the context: transformational leadership, transactional leadership and laissez faire leadership (Antonakis, Avolio & Sivasubramaniam, 2003; Oğuz, 2011):

- ***Transformational leadership:*** Transformational leaders mainly focus on the future, creativity, innovation and change (Bakan & Büyükbeşe, 2010). They have the charisma to set a vision and mission for the organization, and gain the respect and trust of their followers. They tend to use a symbolic language to highlight intelligence, rationalism and problem-solving skills which the followers are expected to own. They consider each follower individually and guide them effectively. They get their power from their followers. Therefore, they can lead the followers for a collaborative and continuous change within the organization (Bass & Avolio, 1993; Çelik, 1998; Karip, 1998; Tura, 2012).
- ***Transactional leadership:*** Transactional leaders focus on the performance of the followers in exchange for rewards which are generally money or status. They primarily aim to maintain the organization and its functions with its existing conditions (Arslan & Uslu, 2014; Aydın, Sarıer & Uysal, 2013). Therefore, they

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determine the responsibilities of the followers, provide them with a plan and check their progress to reward and punish. They get their power from the authority and rely on it to make the followers work for the achievement of the organization (Lowe, Kroeck & Sivasubramaniam, 1996; Oğuz, 2011; Şahin, 2004; Tura, 2012).

- ***Laissez faire leadership:*** Leaders with a laissez faire style tend to avoid any administrational responsibility and power; therefore, such leaders are said to be passive and so appropriate for the employees who seek for autonomy in accordance with the organizational objectives. They prefer leaving all the power and authority to their inferiors which may also lead to anarchy among the followers. As a result, they evade making decisions and grasping the nettle, and generally cannot be reached in a time of crisis (Baloğlu, Karadağ & Gavuz, 2009; Can & Özer, 2011; Erol & Köroğlu, 2013; Kılıç, Keklik & Yıldız, 2014; Tengilimoğlu, 2005; Tura, 2012).

The Ministry of National Education has been revolutionizing the education system in Turkey over the last ten years. The ballyhooed educational reform is the Primary Education Law enacted in 2012 with the aim of increasing compulsory education from 8 to 12 years which is divided into three equal periods and therefore colloquially called as "*4+4+4 education system*" (Cerit, Akgün, Yıldız & Soysal, 2014; Güven, 2012; Memişoğlu & İsmetoğlu, 2013).

Following this radical change, a new regulation about the assignment of school administrators was issued by the Ministry in June 2014. According to the 6th article of this regulation, candidate administrators are to meet some requirements to apply for the position. The ones who meet those requirements are accepted for an interview and the 20th article of the regulation determines the criteria concerning the content of the interview:

- knowledge of legal regulations concerning government agencies and educational institutions (50%)
- ability to think analytically and analyse (10%)
- ability to represent and level of competence (10%)
- ability to reason and to comprehend (10%)
- communication skills, self-confidence and persuasion (10%)
- general knowledge (10%).

The ones who can get 70 and over are considered to be successful and assigned as administrators in schools if required. The same regulation also

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forbids any administrator from working in the same position for more than 8 years.

Due to the new criteria required for school administrators determined by this regulation, almost all school principals and vice-principals were discharged from their positions on the grounds that they did not meet the expected requirements in 2014. Shortly, new administrators were put on which got reaction and resulted in controversial circumstances about their managerial competence. It is a well-known fact that the leadership styles adopted by educational administrators are crucial for schools as the main educational organizations since the research points out the direct relation between the traits and behaviours of the leaders and schools' accomplishment, students' achievements and staff's job satisfaction (Karadağ, Başaran & Korkmaz, 2009). Educational administrators are expected to become school leaders who influence and motivate school members to work for a better education. Bearing all these in mind, it is thought that this study would provide comprehensible results by comparing the former and the current school principals in terms of their leadership styles to see if the new criteria have made any difference.

Method

This study aims to determine the leadership styles of both the former and the current school principals employed at the primary and middle schools in Buca, İzmir from the teachers' perspective as well as to reveal any significant difference in terms of some variables.

Research Questions

This study aims to seek the answers to the following research questions:

1. What leadership styles do the former and current school principals have by teachers' views?
2. Is there a statistically significant difference between the leadership styles of the former and current school principals by teachers' views?
3. Do the teachers' views concerning the leadership styles of their former and current school principals vary significantly in terms of their gender, school type, field or experience?

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Research Design

This is a study with a descriptive survey model and the data were collected with quantitative data collection techniques. Descriptive survey research aims to reveal a large group of people's opinions, perceptions or beliefs about an issue; therefore, it is more suitable for exploratory or explanatory purposes and it enables the researcher to describe a large population, which would be impossible to do directly (Cohen, Manion & Morrison, 2005; Lodico, Spaulding & Voegtle, 2006; Rubin & Babbie, 2011).

Sampling

The data were collected from 240 teachers employed at primary and middle schools where the school principals were changed after the implementation of the new regulation in Buca, Izmir during 2014-2015 academic year.

Table 1-1. Sample of the study

Variables		N
Gender	*Female*	160
	Male	80
School type	*Primary school*	147
	Middle school	93
Field	*Primary school teacher*	138
	Social sciences	54
	Science and maths	30
Experience	*0-5 years*	17
	6-10 years	47
	11-15 years	61
	16-20 years	69
	21-25 years	17
	26+ years	19
Total		240

As can be seen in Table 1-1, 160 of the participants were female and 80 of them were males. 147 of them worked at a primary school while 93 of them worked at a middle school in Buca, İzmir. 138 of the teachers

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worked as a primary school teacher whereas 54 of them taught a course from social sciences and 30 taught a course from science and maths. It is also understood that the sample includes teachers with distinct experience background, but the majority had 11-20 years of teaching experience.

Data Collection Instrument

The data were collected from the participant teachers via *Multifactor Leadership Questionnaire* (MLQ) developed by Bernard and Bass (1985) and adapted to Turkish by Akdoğan (2002). The Cronbach Alfa Coefficient is .89 for the whole scale. The MLQ is a five-point Likert scale which consists of 36 items and three factors each of which represents a leadership style: transformational leadership (19 items), transactional leadership (12 items) and laissez faire leadership (5 items). The Cronbach Alfa Coefficient values for the factors were calculated as respectively .94, .72 and .70. The participants were asked to express the frequency of the behaviours presented by each item in the scale as follows: 1= Never, 2= Rarely, 3=Sometimes, 4= Usually and 5= Always both for their former and current school principals.

Data Analysis

The data were analysed via SPSS 17 software. First, the assumption of normality was checked for the following statistical procedures since their validity depended on this. Therefore, Kolmogorov-Smirnov test was conducted to assess the normality of the data and the results are given in Table 1-2.

Table 1-2. The Results for Kolmogorov-Smirnov Test

Values		**MLQ**
N		240
Normal Parameters	x	3.19
	sd	.529
Kolmogorov-Smirnov Z		.098
p		.000*

* p>.05

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As can be understood from Table 1-2, the data significantly deviate from a normal distribution (p=.00) and so nonparametric tests are warranted in the analysis since having normal data which is an underlying assumption in parametric testing cannot be achieved (Gupta, 1999, p. 49; Hinton, 2004, p. 210; Hinton, Brownlow, McMurray & Cozens, 2004, p. 98). As a result, Mann Whitney U Test, Kruskal Willis Test and Wilcoxon Signed Rank Test were conducted to analyse the data and the test results were considered statistically significant at the level of p<.05.

Findings

The findings of the study are presented in this section in accordance with the research questions. The first research question was stated as "*What leadership styles do the former and current school principals have by teachers' views?"*. The means of MLQ scores both for the former and the current school principals are shown in Table 1-3.

Table 1-3. Means for the MLQ

Factors	Former Principal		Current Principal	
	x	sd	x	sd
Transformational Leadership	3.46	.84	3.18	.99
Transactional Leadership	3.08	.57	3.09	.71
Laissez Faire Leadership	2.38	.86	2.56	.94

According to Table 1-3, the mean score (x) of former principals is 3.46 for transformational leadership, 3.08 for transactional leadership and 2.38 for laissez faire leadership. Also, it is seen that the mean score (x) of current principals is 3.18 for transformational leadership, 3.09 for transactional leadership and 2.56 for laissez faire leadership. These findings indicate that the teachers perceive both the former and current principals as transformational leaders more than transactional or laissez faire ones. Moreover, it is seen that both groups of the principals are almost equally viewed as transactional leaders by the teachers.

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The second research question was expressed as "*Is there a statistically significant difference between the leadership styles of the former and current school principals by teachers' views?"*. The results for Wilcoxon Signed Rank Test which was conducted to determine any significant difference between the leadership styles of both administrative groups are given in Table 1-4.

As can be seen in Table 1-4, the teachers' views concerning their former and current principals' leadership styles differ significantly in terms of transformational leadership (p=.007) in favour of the former principals and in terms of the laisses faire leadership (p=.019) in favour of the current principals whereas no significant difference is observed in terms of transactional leadership style (p=467). That is, the former school principals are perceived as more transformational leaders while the current ones are viewed as more laissez faire leaders and this difference is statistically significant at the level of $p<.05$.

The third and last research question was formulated as "*Do the teachers' views concerning the leadership styles of their former and current school principals vary significantly in terms of their gender, school type, field or experience?"*. The results for Mann Whitney-U Test which was conducted to reveal if there is a significant difference in the teachers' views in terms of their gender are shown in Table 1-5.

Table 1-5 shows that there is no statistically significant difference between the views of the female and male teachers concerning their former and current principals' leadership styles. The results for Mann Whitney-U Test which was conducted to reveal if there is a significant difference in the teachers' views in terms of the school type they were employed at are shown in Table 1-6.

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Table 1-4. Wilcoxon Signed Rank Test Results

Variables		Groups	N	Mean Rank	Sum of Ranks	z	p
Transformational Leadership	*Current Principals-Former Principals*	Negative Ranks	115	116.90	13443.50	-2.684	.007*
		Positive Ranks	95	91.70	8711.50		
		Ties	30				
		Total	240				
Transactional Leadership	*Current Principals-Former Principals*	Negative Ranks	93	105.83	9842.00	-.727	.467
		Positive Ranks	11	99.71	11068.00		
		Ties	36				
		Total	240				
Laissez Faire Leadership	*Current Principals-Former Principals*	Negative Ranks	72	92.51	6660.50	-2.346	.019*
		Positive Ranks	110	90.84	9992.50		
		Ties	58				
		Total	240				

* p<.05

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Table 1-5. Mann Whitney-U Test Results

	Variable	**Gender**	N	Mean of Ranks	Sum of Ranks	U	z	p
Former Principals	*Transformational Leadership*	Female	160	116.63	18660.50			
		Male	80	128.24	10259.50	5780.500	-1.222	.222
		Total	240					
	Transactional Leadership	Female	160	122.89	19663.00			
		Male	80	115.71	9257.00	6017.000	-.756	.449
		Total	240					
	Laissez Faire Leadership	Female	160	122.80	19648.00			
		Male	80	115.90	9272.00	6032.000	-.728	.467
		Total	240					
Current Principals	*Transformational Leadership*	Female	160	121.71	19474.00			
		Male	80	118.08	9446.00	6206.000	-.383	.702
		Total	240					
	Transactional Leadership	Female	160	122.12	19539.00			
		Male	80	117.26	9381.00	6141.000	-.511	.609
		Total	240					
	Laissez Faire Leadership	Female	160	123.38	19740.00			
		Male	80	114.75	9180.00	5940.000	-.910	.363
		Total	240					

* $p<.05$

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Table 1-6. Mann Whitney-U Test Results

	Variable	School Type	N	Mean of Ranks	Sum of Ranks	U	z	p
Former Principals	*Transformational Leadership*	Primary S.	147	116.73	17160.00			
		Middle S.	93	126.45	11760.00	6282.00	-1.057	.291
		Total	240					
	Transactional Leadership	Primary S.	147	111.47	16385.50			
		Middle S.	93	134.78	12534.50	5707.50	-2.538	.011*
		Total	240					
	Laissez Faire Leadership	Primary S.	147	119.28	17533.50			
		Middle S.	93	122.44	11386.50	6655.50	-.344	.731
		Total	240					
Current Principals	*Transformational Leadership*	Primary S.	147	136.00	19992.00			
		Middle S.	93	96.00	8928.00	4557.00	-4.350	.000*
		Total	240					
	Transactional Leadership	Primary S.	147	109.58	16108.50			
		Middle S.	93	137.76	12811.50	5230.50	-3.066	.002*
		Total	240					
	Laissez Faire Leadership	Primary S.	147	103.64	15235.50			
		Middle S.	93	147.15	13684.50	4357.50	-4.742	.000*
		Total	240					

* $p<.05$

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As can be understood from Table 1-6, the teachers' views about their former principals' transactional leadership style differ significantly in terms of the school type in favour of the ones who are employed at the middle schools (p=.011). That is, the principals of the middle schools are believed to have a more transactional leadership style by the teachers. When it comes to the current principals, Table 1-6 shows that there is a significant difference in the teachers' views concerning all three leadership styles in terms of the school type. The teachers employed at primary schools think that their principals have a more transformational leadership style (p=.00) whereas the ones employed at the middle schools perceive their principals rather transactional (p=.002) or laissez faire leaders (p=.00).

The results for Kruskal Wallis-H Test which was conducted to reveal if there is a significant difference in the teachers' views concerning their principals' leadership styles in terms of their educational field are shown in Table 1-7.

Table 1-7 shows that the teachers' views concerning their current principals' leadership styles differ significantly for two factors in terms of their educational field: transactional leadership (p=.031) and laissez faire leadership (p=.013). Mann Whitney-U Test was implemented as a post hoc analysis to reveal the groups which cause this significant difference and it is seen that the teachers instructing social sciences perceive their currents principals more transactional leaders than the primary school teachers whereas according to science and maths teachers, when compared to the primary school teachers, their principals are more laissez faire leaders. It is understood from the findings in Table 1-7 that there is no significant difference in the teachers' views concerning their former principals.

Finally, the results for Kruskal Wallis-H Test which was conducted to reveal if there is a significant difference in the teachers' views concerning their principals' leadership styles in terms of their teaching experience are shown in Table 1-8.

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Table 1-7. Kruskal Wallis-H Test Results

Variables		Groups	N	Mean of Ranks	X^2	df	p
Former Principals	*Transformational Leadership*	Primary education	138	108.03	1.078	2	.583
		Social sciences	54	117.77			
		Science and Maths	30	116.18			
		Total	222				
	Transactional Leadership	Primary education	138	103.71	5.849	2	.054
		Social sciences	54	120.69			
		Science and Maths	30	130.77			
		Total	222				
	Laissez Faire Leadership	Primary education	138	109.85	.250	2	.883
		Social sciences	54	114.66			
		Science and Maths	30	113.42			
		Total	222				
Current Principals	*Transformational Leadership*	Primary education	138	117.36	3.957	2	.138
		Social sciences	54	106.87			
		Science and Maths	30	92.87			
		Total	222				
	Transactional Leadership	Primary education	138	103.62	6.962	2	.031*
		Social sciences	54	130.76			
		Science and Maths	30	113.07			
		Total	222				

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Laissez Faire Leadership	Primary education	138	101.69	8.669	2	.013*
	Social sciences	54	125.81			
	Science and Maths	30	130.85			
	Total					

* p<.05

Table 1-8. Kruskal Wallis-H Test Results

Variables	**Groups**	N	**Former Principals** Mean of Ranks	X^2	df	p	**Current Principals** Mean of Ranks	X^2	df	p
Transformational Leadership	0-5 years	17	119.97	1.090	5	.955	93.03	7.094	5	.214
	6-10 years	47	115.70				110.49			
	11-15 years	61	128.20				121.18			
	16-20 years	69	118.38				120.95			
	21-25 years	17	117.54				141.56			
	26+ years	19	120.03				136.11			
	Total	240								
Transactional Leadership	0-5 years	17	109.76	7.897	5	.162	117.91	10.478	5	.063
	6-10 years	47	128.78				142.10			
	11-15 years	61	135.98				129.57			
	16-20 years	69	114.99				110.18			
	21-25 years	17	96.80				97.81			
	26+ years	19	113.63				109.97			
	Total	240								

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	0-5 years	17	120.09				128.53			
	6-10 years	47	124.39				133.53			
Laissez Faire	11-15 years	61	123.35				119.89			
Leadership	16-20 years	69	116.54	3.899	5	.564	119.18	9.186	5	.102
	21-25 years	17	103.06				86.89			
	26+ years	19	141.26				135.58			
	Total	240								

* $p<.05$

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As it is seen in Table 1-8, the teachers' views concerning neither their former nor current principals' leadership styles differ significantly in terms of their teaching experience. That is, the length of time the teachers spent in teaching is not a determining factor in how they perceive their principals as a leader.

Results, discussion and conclusion

In this section, the results of the study are briefly summarized and discussed in the light of the related literature. First, the participant teachers employed at the primary and middle schools in İzmir, Buca perceive their school principals moderately as transformational leaders and transactional leaders and very rarely as laissez faire leaders. When the related literature in Turkey is reviewed, it is seen that this finding is consistent with the results of the many studies previously conducted which indicate that most of the school principals within the Turkish national education system tend to display transformational and transactional leadership styles whereas laissez faire leadership is clearly rare (Bektaş, Çoğaltay & Sökmen, 2014; Can & Özer, 2011; Karadağ, Başaran & Korkmaz, 2009). Turkish National Education System is administrated with a centralizing approach which obliges school administrators to apply the educational programs and to act according to the regulations determined by the central administration. That is, they do not have the legal power or autonomy to act independently which may prevent them from adopting a different leadership style or from leading their institutions towards major changes since they are supposed to maintain the existing system properly. Because of these, it is not surprising to find out that the school principals tend to have a rather transactional leadership style (Balcı, 2000; Bozan, 2002; Yılmaz & Altınkurt, 2011). On the other hand, it is also seen that the teachers perceive their former school principals rather transformational leaders whereas they think their current principals exhibit a more transactional style. This could be due to the fact that the current principals might be using their time to get to know about their new institution, the staff, the student profile, the climate and culture of the new school. As a result, they may not be willing to interfere with the system unless a critical issue arises. Also, they need to create a different culture in the organization to adopt a transformational style and this is usually something that can be achieved in the long run (Bass & Avolio, 1993).

Secondly, the results indicate that the teachers' views do not vary in terms of their gender or teaching experience. The leadership literature in education has revealed different findings about leadership styles, gender

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and experience. There are some studies which have found meaningful relationship between teachers' perceptions of their administrators' leadership styles and their gender and experience (Aydoğdu, 2008; Cemaloğlu, 2007; Karadağ, Başaran & Korkmaz, 2009; Oğuz, 2011; Tura, 2012). However, some other studies suggest that there is no statistically significant difference in terms of these variables (Şirin & Yetim, 2009; Taş & Çetiner, 2011). Therefore, the studies in the second group have comparable results with the findings of this paper which shows that the way the administrators' leadership styles are perceived is not influenced by the teachers' gender or teaching experience.

On the other hand, the findings show that the type of the school where the teachers are employed is a factor influencing their perceptions concerning their school principals' leadership styles. Accordingly, the teachers from middle schools perceive their former school principals as more transactional leaders and the ones from primary schools think that their current principals have a more transformational leadership style. It is known that the recent changes in the national education system in Turkey have substantially influenced primary schools (Özden, Kılıç & Aksu, 2014; Sağır, 2015). Especially, with the launch of the 4+4+4 education system, some changes in the fundamental elements of primary education such as the curriculum and school starting age were introduced. The principals who are responsible for managing these changes approved by the central administration might have created such an impression on the teachers and, so they might have been perceived as more transformational leaders (Oğuz, 2011).

Finally, it is understood that the social sciences teachers tend to perceive their principals as more transactional leaders and the science and math teachers regard the principals as more laissez faire leaders. When the related literature is reviewed in terms of teachers' educational fields, it is seen that there is inconsistency (Cemaloğlu, 2013; Oğuz, 2011; Tura, 2012). That is, these studies have revealed that the subject taught by the teacher does not influence his/her perception of the school principal's leadership style. However, this paper discloses a tendency for social sciences teachers towards transactional leadership and science and math teachers towards laissez faire leadership in their perceptions of the school principals.

In conclusion, it can be predicted that the current school principals might exhibit the same leadership styles and features as the former ones after they spend enough time to learn more about their school since the mean scores for both principals are very close; that is, the difference is very small. Therefore, the new regulation does not seem to have made a

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difference in terms of choosing better educational leaders who will lead and transform schools into more effective teaching and learning environments. This could be due to the educational context and system, and its limitations rather than the process of choosing the competent administrators for schools. That is, even if competent educational leaders are appointed as school principals, they may not achieve the desired transformation in schools since they lack the legal power and autonomy. As a result, it can be recommended that the authorities should allocate time and effort for the required legal arrangements and consider either appointing people who have a training in the field or training the administrative staff accordingly to increase their competency.

The findings of this study are limited with the schools of a specific district in Izmir, so other studies that will be conducted with larger samples from different cities in Turkey may reveal more reliable and valid results. Also, this is a quantitative study with a survey model, so additional research with a qualitative design will help to analyse the issue deeply and reveal the reasons behind the teachers’ perceptions.

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CHAPTER TWO

"HONOUR CODE" AS PART OF A TEACHER PREPARATION PROGRAM CLASS CURRICULUM: A PHENOMENOLOGICAL STUDY

ÖMER AVCI

Introduction

Having students acquire prosocial behaviours is one of the fundamental objectives of education. Even in the Basic Law of National Education (Milli Eğitim Bakanlığı, 2017) the aim of education is explicitly stated as ''… to educate people to adopt the national, moral, humane, spiritual and cultural values of Turkish people.''. Education's socialization function is abated by unwanted, antisocial behaviour and attitudes, which have become the subject of academic investigation all over the world for decades. The investigations devoted to academic (dis)honesty in Turkey are not as intense and profound as in many other developed countries (Eraslan, 2011). However, the growing number of studies is both encouraging in terms of highlighting the problem of academic dishonesty and alarming, as it is the indication of its proliferation. The antisocial behaviours (i.e. academic dishonesty) is so prevailing that the majority of college students have engaged in some kind of academic antisocial behaviours in their academic lives (Hensley, Kirkpatrick & Burgoon, 2013; Jensen, Arnett, Feldman & Cauffman, 2002; Küçüktepe & Küçüktepe, 2014; Vandehey, Diekhoff & LaBeff, 2007). The limited number of investigations conducted in Turkey predominantly focused on the academic antisocial behaviours of the college of education students (Akdağ & Güneş, 2002; Eraslan, 2011; Küçüktepe & Küçüktepe, 2014; Seven & Engin, 2008; Özgüngör, 2008), while some researchers investigated academic dishonesty among students of medical school (Semerci, 2004) and school of divinity (Dam, 2013).

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Academic dishonesty, misconduct, antisocial behaviours, or cheating are the most commonly used words to address the unwanted behaviours of students in academic settings. Whatever the word is used, such behaviours have severe consequences not only at individual, but also institutional level. The quality of education is deteriorated (Hensley, Kirkpatrick & Burgoon, 2013) as the purposes of assessment and evaluation are invalidated, causing the educational objectives not to be met (Semerci, 2004). While the financial and material loss due to dishonesty in corporate world, property and casualty industry, retail industry, and intellectual property is colossal and could be traced down with numbers (Mazar & Ariely, 2006), the damage caused by antisocial behaviours in education has not been concretely documented, nor could it be an easy task to execute.

The research regarding academic (dis)honesty usually includes the college students' attitudes toward cheating (Akdağ & Güneş, 2002; Dam; 2013; Özgüngör, 2008; Semerci, 2004; Vandehey, Diekhoff & LaBeff, 2007), characteristics of students who engage in antisocial behaviours (Hensley, Kirkpatrick & Burgoon, 2013; Jensen, Arnett, Feldman & Cauffman, 2002; Özgüngör, 2008), and factors influencing academic misconduct (McCabe, Butterfield & Trevino, 2006; McCabe, Trevino & Butterfield, 1999; McCabe, Trevino & Butterfield, 2002; Murdock & Anderman, 2006; Özgüngör, 2008; Vandehey, Diekhoff & LaBeff, 2007). Factors influencing students' academic misconduct could be categorized in two: internal and external. Internal factors include characteristics of students (e.g. gender, attitudes and beliefs about cheating, courses perceived to be unimportant, performance orientation, lack of appropriate study and learning skills and strategies) (Seven & Engin, 2008; Eraslan, 2011; Özgüngör, 2008) as opposed to external factors pertaining to academic environment (e.g. rote memorization based evaluation, cheaters who get away with their misconducts, and instructors' mistreatment or inadequacy) (Eraslan, 2011; Hensley, Kirkpatrick & Burgoon, 2013; McCabe, Butterfield & Trevino, 2006; Semerci, 2004; Seven & Engin, 2008).

Aside from determining factors influencing dishonest behaviours of students, researchers strive to make recommendations about how to curb student academic misconducts. Disciplinary or punitive deterrents are reported to be perceived as the most hindering compared to social factors such as disapproval of peers, and guilt (Vandehey, Diekhoff & LaBeff, 2007). Not all researchers agree with the punitive and deterrent measures to dissuade students from engaging in dishonesty. Despite Vandehey, Diekhoff and LaBeff's (2007) discord with honour codes, McCabe, Butterfield and Trevino (2006) assert that students would adopt more

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prosocial behaviours in a culture that encourages integrity. Such a culture involves and usually promoted by creating honour codes. In fact, honour codes are claimed to be one of the most influential means to curb academic misconduct (McCabe, Trevino & Butterfield, 1999). In addition, the deterrence approach focusing on identifying and apprehending dishonest individuals has not been proven to work (Mazar & Ariely, 2006). Increasing the likelihood of being caught and disciplinary precautions might sound reasonable enough to discourage students from academic misconduct. In the same line of thought, which is more of a materialistic view, then, morality in itself has nothing to do with prosocial behaviour. The punishment approach, as part of the behaviourist paradigm, might bear some fruits in terms of discouraging misconduct; however, the intended goal, which is for the students to engage in prosocial behaviours all the time, would not be reached in the absence of such punishment. In other words, the lack of punishment, or conditioned stimulus, would cause extinction. It would also contradict the whole notion of education, which is to make learning relatively permanent. The continuous effort to hinder dishonesty in various industries and businesses has not fulfilled its intention (Mazar & Ariely, 2006), which should not mean to be completely abandoned. As Fukuyama (2002) puts it, we should not abolish laws penalizing criminals just because they do not seem to deter individuals enough from committing crimes. It is important to keep in mind that individuals do not merely conditionally behave. Namely, approaching (dis)honesty as a concept of reward-seeking and punishment-avoiding demeanour would mean denying our human and moral agency. For a sustainable integrity, deterrence is not the only way.

As mentioned above, the academic dishonesty literature in Turkey seems to be so new and perfunctory that the majority of the studies are descriptive in nature and the urgency of academic misconduct has not reverberated through rigorous research. The perceptions of students regarding honesty and cheating would require more than survey designs. Discovering the underlying mechanisms of (im)morality could point us in the right direction of instilling integrity. Thus, it is the purpose of this paper to present the research that I have conducted on the perceptions, thoughts, and feelings of teacher preparation certificate program students about the honour code I have used as part of the classes I had with them. Honour code is not a common practice in academic settings in Turkey. In fact, the students who were asked to follow the honour code expressed their astonishment and how they had never experienced such praxis.

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Background

As of 2016, there are 112 state and 65 private universities, totalling 183, in which 6.627.505 students are enrolled in Turkey (Council of Higher Education, 2017). The number of college of education is 92 and there are currently over 250.000 students receiving education to become teachers. There are two tracks of becoming a teacher in Turkey: entering a program in a college of education at the undergraduate level, or after graduating from a 4-year college (or at senior year) applying for a certificate program known as the pedagogical formation education certificate program, which is run by department of educational sciences of college of education at universities. Typically, a student has to take ten classes as well as a teaching practicum over two semesters. The students with whom I conducted this study, were taking Introduction to Educational Sciences, Classroom Management, Educational Psychology, Principles and Methods of Teaching, Assessment and Evaluation in Education, School Counselling, Individualized Teaching, Instructional Technologies and Material Designing, Special Teaching Methods, and Teaching Practicum classes in Fall 2016 and Spring 2017. The participants of the study were all attendees of pedagogical formation education certificate program at a state university and were taking my Introduction to Educational Sciences and Educational Psychology classes.

In my Introduction to Educational Sciences and Educational Psychology classes in Fall 2016 and Educational Psychology class in Spring 2017, I noticed the anxiety of the students, many of who were non-traditional adult students, due to the upcoming exams for the classes they were taking for pedagogical formation education certificate program. After discussing how take-home exam could also be used as opposed to proctored exams, which are almost the only existing way of assessment of learning at higher education in Turkey, I decided to give midterm as take-home and informed the students about my decision. I also explained what an unproctored exam would entail and how I was going to email the exam questions along with an honour code instruction. Before sending the email, I asked for the opinions of my colleagues at the college of education regarding the honour code statement. After I received positive feedback, I decided to email the following honour code statement to the students:

Honour word

> The midterm exam of Introduction to Educational Sciences/Educational Psychology classes, which are part of the pedagogical formation education certificate program offered by the college of education at … University,

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> was given as a take-home exam. As soon as I receive the exam questions and read the questions or hear from others, the exam starts. After the exam starts, I promise over my honour and the whole high values that I believe in that I am not going to use any resources (e.g. book, class notes, presentations, or another person) and I am going to take the exam just like in normal, proctored exams, only relying on my own knowledge and I will not engage in any forms of conducts that would benefit me with an unjust grade and I will return it to the instructor just as I am asked.

This statement was in the body of the email message, which also instructed the students that the exam questions were attached to the email.

Method

Type of inquiry

Phenomenology is one of the major traditions of qualitative research (Creswell, 2007), which is defined as "a situated activity that locates the observer in the world" (Denzin & Lincoln, 2005, p. 3). Emerging from the thoughts of the past century's philosopher and mathematician Edmund Husserl (1859-1938), phenomenology focuses on the experiences of humans and the world as they perceive and conceive (Moerer-Urdahl and Creswell, 2004). In other words, experiences of individuals on a particular phenomenon and trying to ''grasp the very nature of the thing'' (van Manen, 1990, p. 177) are the essence of the purpose of phenomenology. There are various forms of phenomenology that researchers follow in their studies, three of which are transcendental, existential and hermeneutic (Creswell, 2007; Moerer-Urdahl & Creswell, 2004; Philips-Pula, Strunk & Pickler, 2011). The fundamental difference among these phenomenological approaches lies in the methodological procedures they follow (Moerer-Urdahl & Creswell, 2004). While transcendental phenomenology concentrates on the essence of the lived experiences of participants about a phenomenon, the existential phenomenology concentrates on what hold the very nature of the reality being experienced together (Philips-Pula, Strunk & Pickler, 2011). As it is probably true for all qualitative inquiry traditions, the basic philosophical views underlying phenomenology involves refraining from predetermined judgments and considering the consciousness of human beings, namely, reality as being both subject and object of consciousness (Creswell, 2007; Stewart & Mickunas, 1990).

Since the purpose of this study is to discover what the teacher preparation program students (i.e. the participants) think and feel about the take-home midterm and how this affects their learning, Moustakas's

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(1994) transcendental phenomenology was chosen as the participants' lived experiences of the phenomenon (i.e., the take-home midterm exam) and how they made sense of that particular experience was the centre of this inquiry.

Procedure

When I decided to administer take-home exam and introduce the honour code, I had not intended to conduct a study on it. I was trying to ensure student learning in a more pedagogically sound way. After the midterm and asking students opinions about their experience, I decided it would be worth studying. Thus, after applying for and receiving the approval of the institutional review board of the university, I announced my intention of conducting a study to my students in the class. Since unproctored take-home exam was especially a novice experience, discovering and describing the thoughts and feelings of the participants could be achieved through in-depth interviews. Thus, I sent students emails asking for volunteers for interviews. The volunteers either responded via email messages or personally explained their interest in being a participant in the study. All the interviews were scheduled to be held after the semester ended to ensure participants' trust.

The scheduled interviews were held in my office at the university. I informed the participants that they were free to answer or withhold any of their views or cancel or leave the interviews any time they wanted. I also asked them whether they would approve being audio-taped. After the consent of the participants, all the interviews were audio-taped. After the interviews were over, I reminded the participants not to hesitate to contact me if they wanted to add anything. One of the participants contacted me via email regarding a question I asked her during our interview a few days after our initial meeting. In her email, she explained what she thought of the question and wanted to further explain her views. On average, the interviews lasted thirty minutes. All the interviews were transcribed verbatim.

Participants of the study

Ten students of pedagogical formation education certificate program contacted me to participate in the research. Nine of the participants were female and one was a male. Two of the female participants were seniors and the rest were graduates of various state and private universities majoring in psychology (four participants), history (one participant),

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Turkish language and literature (three participants), sociology (one participant), and biology (one participant). I interviewed eight participants in Fall of 2016 and two participants in Spring of 2017. The age of the participants ranged from 21 to late 40s. In order to protect the identities of the participants, pseudonyms were used.

Table 2-1. Study Participants

Pseudonyms	Gender	Age	Major
Nazli	Female	24	Psychology
Ayşe	Female	35	Turkish Language and Literature
Zeliha	Female	30	Psychology
Gül	Female	29	Psychology
Fatoş	Female	45	Sociology
Remziye	Female	49	Psychology
Murat	Male	28	Biology
Halime	Female	44	History
Gaye	Female	21	Turkish Language and Literature
Sümeyye	Female	21	Turkish Language and Literature

Data analysis

I followed Moustakas's (1994) transcendental phenomenology analysis procedure, which, first, requires the researcher to strip of his/her prejudgments regarding the phenomenon under investigation. This is to enable to approach and perceive the phenomenon with a novice eye, without contaminating it with the preconceived notions and experiences (Moustakas, 1994) and this is not an easy task to achieve (Creswell, 2007). This step is called *epoche*, or bracketing the researcher's own experience or perception of the phenomenon.

Epoche

Before I decided to investigate the students' perceptions of the honour code and take-home exam, I had asked my colleagues' views about such an exam. One of my colleagues' reaction was particularly memorable. She told me that I was too naïve to expect the students to be honest and not to cheat. This would give the students a great deal of opportunity to cheat.

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Before the interview stage, I had it in my mind. However, the purpose of my investigation was not to prove my colleague wrong or right. I truly wanted to explore what the students experienced and what they made sense of that particular experience. During the interviews, even though I asked if the participants had abode by the honour code, I was not judgmental. That is why the participants genuinely shared their thoughts about the experience. This was ostensible as some of the participants admitted not completely abiding by the honour code.

Significant statements

After bracketing the preconceived notions regarding the phenomenon, the researcher identified significant statements that were taken verbatim from the transcripts. This would provide a background of the experiences and perceptions of the participants (Moustakas, 1994) regarding the take-home exam and the honour code. The statements below do not follow any order, nor are they in any way categorized. The experiences and how the participants perceive the honour code and the take-home exam could be deduced from the 21 statements below.

- The method of this exam was different and it's, both for personal and social perspectives, important to me.
- I kept my promise. It was not about you. It could be some other person that I do not like. I would still keep my promise.
- When we look at it, we see it everywhere and most of the problems are because of this. Whether it is in politics, or in business, whenever people face a dilemma containing his/her personal interest, he/she chooses whatever would serve his/her interest.
- If I cheated, I would feel the burden of it. For example, if I become a teacher and ask similar things from my students, I would feel bad about it. Because I had not kept my promise.
- When I first learned about the take-home midterm and the honour code, I was shocked. I was mad, and I reacted. How could my honour be made the subject of such a thing?... I thought ''If honour were seen so simple, then I would definitely cheat.'' …
- When I saw the questions, I said ''he [I, as the instructor] does not deserve it''.
- It is really good to be confessing all these. As if it was reconciliation.
- This was my first exam for 32 years. I have not had formal education. This was the first of its kind… I felt some pressure.

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- If you have promised, then you should keep it. Once you give your promise, there is not turning back.
- I cannot cheat, due to religious reasons… Maybe we, as a society, do not understand religion right. Religion is not just about prayers. Religion is about good manners.
- Cheating is violating others' rights.
- I was really surprised that you trusted a group of people that you do not know that well. You have not known us that long.
- If I am treated honourably, how can I cheat? I am treated like I am a teacher. How could I deceive? How could I cheat?...The statement read ''over your values you have belief in''. This is big, I thought. Then my husband told me ''as if you believed''. It does not matter what I believe in. … Honour is very important. Promising over your honour is so big.
- I think it was not fair for the people who did not use technology, who did not use WhatsApp, because they did not cheat. Because others cheated.
- Maybe you thought this was more teaching. I think people may not be showing their actual learning under exam stress. … Since I got back to Turkey, I have been confused about promise thing. When I got the exam, whomever I talked to said to me ''don't be stupid. Everybody is going to cheat. If you do not, you are going to lose.''
- I really feel bad, because I did not keep my promise. … I had seen the WhatsApp messages and the questions, then I checked my notes and then took your exam. When I told my friends that I was going to confess, they said ''do not ever say that you did not keep your promise. It would affect him.''
- You are doing something very special. You are promising and this is over your values. This involves your attributes, your beliefs. You might say ''oh, this is so easy, this is a take-home, I can get 100''. Then you realize when you read those statements and you freeze.
- I think the country needs this, because we are not a people who abides by ethics. …You feel so trusted and you do not want to betray that trust.
- One of the advantages of this exam was that I could take it any time I want. I get up early in the morning and my mind is more open in the morning. So, at the time of the exam, I had studied the night before and when I got up early, my memory was fresh and I did the exam better.
- If this exam was in class, I would have cheated. Why? Because I am not promising anything there. My only goal is to get a passing

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grade. …I have never thought that I am promising to be honest at any exam. There is this mentality ‘‘Everybody takes the exam questions and everybody cheats’’. But this was a special exam. This was sent to my personal email address and made a deep connection.

- This exam emphasized learning and integrity.

Themes

Reading through the transcripts and the field notes that I have taken during the interview sessions, five major themes emerged: elevated self-worth, less anxiety due to lack of time pressure, stress due to the felt burden of trust, responsibility, and promoted learning. These clusters of meaning reveal the experiences and how the participants perceive honour code and the take-home exam.

Table 2-2. Themes and Evidence

Themes	**Evidence in Participants' Statements**
Elevated self-worth	‘’This was huge. A huge trust on us. The only time I felt that our teacher trusted us. This was something. Really something.’’
	‘’ You are treating me as a teacher. How could I deceive? How could I cheat?...The statement read ‘over your values you have belief in’. This is big, I thought.… Honour is very important. Promising over your honour is so big.’’
Less anxiety due to lack of time pressure	‘’On the week of the exam, I was sick. Thus, I was worried about the exam that I would not perform well. This way, I was home and had the chance to do the exam whenever I wanted.’’

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	''One of the best part of it was that I could manage my time better. You know, I am a working mother and managing my time is so important. This way, I was able to manage my time.''
Stress due to the felt burden of trust	''You are doing something very special. You are promising and this is over your values. This involves your attributes, your beliefs. You might say 'oh, this is so easy, this is a take-home, I can get 100'. Then you realize when you read those statements and you freeze. '' ''I was really surprised you trusted us. This was not an easy class and it is important. Yet, you trusted us. Before I received the question, I stressed out. As if I was going to steal something.''
Responsibility	''I had to abide by the honour code. When I become a teacher, how would I ask my students to fulfill their duties, if I do not do so now? How can I preach what I myself do not follow?''
	''Before coming here, I told people that I am going to tell the professor that I did not keep my promise. They told me 'no matter how honest you act, the professor is going to see you as a cheater.' And I told them 'I did not keep my promise and in the end this is my responsibility. To be honest, I thought that this was not right according to my conscience. I did not keep my promise, you could evaluate it like that.''

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Promoted Learning	''One of the advantages of this exam was that I could take it any time I want. I get up early in the morning and my mind is more open in the morning. So, at the time of the exam, I studied the night before and when I got up early, my memory was fresh and I did the exam better.'' ''… when I become a teacher, when my students ask me about a formula, I could answer by heart. However, this is different. More philosophical, it has politics in it. Requires more and deeper thinking and the fact that there was no time restriction, I was able to think deeper.''

Honour Code: Elevated self-worth. Even though there are contrasting views about self-worth and achievement (Baumeister, Campbell, Krueger, & Vohs, 2003; Marsh & O'Mara, 2008; Swann, Chang-Schneider, & McClarty, 2007), it is not my intention to argue for or against the correlational relationship between self-worth and educational attainment, nor would I discuss different terms used to refer to similar concepts as self-worth. However, self-esteem is reported to be one of the basic needs of human beings (Maslow, 1943). From a mere philosophical perspective, one of the major functions and purposes of education is to help students become complete, which includes not only cognitive but also psychological aspects.

Baumeister et al.'s (2005) concern regarding the individuals' inflated view of themselves is understandable. However, considering the cultural context of this study, I would argue against educators' unrealistic and inflating behaviours toward their students. On the contrary, Turkish students usually experience too humbling of a treatment in higher education settings. This was especially evident in Gül's statement when she stated ''This was huge. A huge trust on us. The only time I felt that our teacher trusted us. This was something. Really something.'' Faculty's treatment of students is usually negative and, consequently, students' self-worth could be affected negatively. In their study, Demirtaş and Çoban (2014) found that university students predominantly use negative metaphors of faculty, indicating mistreatment they receive. Thus, honour code could especially be used in Turkish higher education settings in order to help students build self-worth.

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Honour Code: Less anxiety due to lack of time pressure. Anxiety, especially due to a test, could be debilitating. According to Huberty (2009), severe test anxiety could lead to underachievement and hinder students' optimal academic performance. Tuncer and Doğan (2015) recommend minimizing the role of anxiety in learning settings in order for optimal academic performance. Regular exams tend to cause excessive stress and anxiety, which, in return, negatively affects performance. Especially non-traditional students, whose existence in higher education is growing, would benefit from the removed time constraints (Bell, 2003). The fact that non-traditional students have family responsibilities that traditional students do not usually have would mean they could experience the pressure of exam more severely leading to academic underachievement. Study participant Ayşe is a working mother of two and the take-home exam gave her the flexibility of time management. She stated ''…One of the best part of it was that I could manage my time better. You know, I am a working mother and managing my time is so important. This way, I was able to manage my time.''

Honour code: Stress due to the felt burden of trust. Stress and cognition are studied extensively and there are differing conclusions regarding the effects of stress on cognition (Joels, Pu, Wiegert, Oitzl, & Krugers, 2006). Anxiety and stress could function as facilitating or debilitating (Joels, Pu, Wiegert, Oitzl, & Krugers, 2006). The stress that is remarked here is not about the impairing one, though. The participants stated how they perceived the honour code. The stress was due to being trusted and the fear of betraying this trust. Here is Remziye's view ''I was really surprised you trusted us. This was not an easy class and it is important. Yet, you trusted us. Before I received the question, I stressed out. As if I was going to steal something.'' Honour code has made the participants be more attentive to the situation, which included my expectation as the instructor and the trust that honour code and take-home exam has created.

Honour code: Responsibility. According to McCabe, Butterfield and Trevino (2006), the underlying notion honour codes aims to instil in students is the integrity. This could be achieved if education could help students be more responsible individuals. Hwang (1995) asserts that American students' lack of responsibility is one of the causes of their academic failure. Students' owning the responsibilities for the outcomes of their actions is one of the predictors of academic achievement (Anderson, Halberstadt, & Aitken, 2013). Honour code seems to help participants

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realize their responsibility and the outcomes of their actions at large. This is especially evident in Murat's, a biology major, statement ''I had to abide by the honour code. When I become a teacher, how would I ask my students to fulfil their duties, if I do not do so now? How can I preach what I myself do not follow?'' When Murat talked about his experience of the honour code and the take-home exam, he mentioned the moment he received the email message and the exam. He was at work and mentioned this to one of his co-workers, who discouraged him from abiding by the honour code since it was not religiously binding. He expressed his astonishment about how someone religious could abuse religious teachings to gain personal benefits.

Honour code: Promoted Learning. Among many other purposes, one of the most important tasks of education is to help students think (Kuhn, 2005). Regardless of age or development level, higher order thinking is one of the fundamental goals of education (Adey, 1999; Miri, David, & Uri, 2007; Zohar & Dori, 2003). Honour code and take-home exam primarily functioned to promote higher order thinking and learning was an outcome that was experienced by the participants. Gaye was able to take advantage of the lack of time constraint of take-home exam and answered early in the morning. Even though this might suggest that she was employing a memory strategy, still it helped her learning. For Murat, on the other hand, it was beyond rote learning: ''Because when I become a teacher, when my students ask me about a formula, I could answer by heart. However, this is different. More philosophical, it has politics in it. Requires more and deeper thinking and the fact that there was no time restriction, I was able to think deeper.''

Textual and structural descriptions

The pedagogical formation education certificate program students were the participants of the study. Their experience with and making sense of the honour code attached take-home exam reveals that take-home exam with honour code helped with their self-worth, which usually is not prioritized by most faculty at higher education institutions. The honour coded take-home exam elevated their self-worth through trust and, thus, making them feel important. ''…the only time I felt important…'' was a significant indication of the experience of the participants. The reduced test anxiety is another meaning unit. The lack of time constraint was the major factor in the lessened anxiety, especially for non-traditional students. Trust was at the core of the participants' experience such that

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they felt the burden of betraying that trust, which also led to the awareness of their responsibility, which is integrity. The flexibility of the take-home exam format has promoted participants' learning not only at memory level, but also at higher order thinking.

Participants' home environments primarily composed the context for their experience. While some mentioned how they managed time in their homes, others talked about sharing the experience with their spouses. In addition to home environments, work place and co-workers also contributed to some of the participants' meaning making. Virtual environment (i.e., sharing information through WhatsApp) was also worth mentioning as some of the participants talked about seeing their classmates' messages regarding the honour code and take-home exam.

The essence of the experience

The honour code as a pedagogical practice has positive implications for higher education. The existing power relationship at the core of the interaction between faculty and student demands a more careful approach. As evidenced by the participants' statements, honour code functioned as a promoter of the student self-worth as well as learning. Integrity has revealed itself in the form of responsibility, which is also ingrained in the experience of the burden of trust. The honour code and take-home exam have been perceived to be the indication of trust from the instructor, which in return has become a reminder of their responsibility: maintaining integrity. In addition, the lack of time pressure has lessened the test anxiety, which has also enhanced learning.

Limitations and implications for future research

Despite the overall conclusion in favour of honour codes in this study, it is also clear that it has limitations. First, honour code was not institutionalized and only used in my classes, which is an indication of a lack of honour code culture at the university. In order for honour code to work as intended, it should be embraced by all stakeholders and should become part of the culture of the university. Second, the learning level of the students in the particular classes has not been evaluated through different ways. Future research could focus on testing the learning differences between proctored exams and honour coded exams. In addition, the moral decision-making processes of students should also be

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investigated in order to better understand the underlying mechanisms of (dis)honesty.

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CHAPTER THREE

GRADUATE EMPLOYABILITY PROGRAMMES IN MALAYSIAN HIGHER LEARNING INSTITUTIONS

SHUKRAN ABDUL RAHMAN

Introduction

Higher Education sector has been expected to produce knowledgeable and competent graduates, and Higher Learning Institutions are expected to be significant players of workforce development institutions. The presence of competent workforce is crucial for the advancement of a country's social growth and economic prosperity. This paper addresses an intervention introduced by Higher Education authority in Malaysia to address the emerging unemployment issues in the country. A number of Graduate Employability Programmes (GEP) have been organised by Higher Learning Institutions (HLI) with the aim of enhancing the level of employability among their graduates. GEP is an important effort that involves efforts of the Government and private sectors to enhance the quality of HLI graduates. The effort is driven, among other factors, by the expectation of employers who prefer graduates who have high level of readiness to be in the workforce. The Ministry of Higher Education has organised, or funded, a number of GEPs. The purpose of this paper to present the background concept of GEP, and the framework of GEP.

One of the functions of Higher Learning Institutions (HLIs) is to provide knowledge to students, equip them with relevant skills, and develop their abilities. Being higher learning institutions, universities, university college, colleges and polytechnics are tasked to carry the role of preparing students for employment after graduation. They are expected to develop students' mastery in certain subjects, creative and critical thinking skills, job-related interpersonal skills, and other competencies.

In the era of industrialisation, education is associated with the process to equip individuals with work competencies. Parents send their children

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to colleges or universities in order to be equipped with work-related competencies so that once completing studies they will be employed. Besides, receiving pressures from parents, HLIs face immense expectation by the world of work which expect HLIs to produce readily available workforce for the job market. They expect HLI graduates to be ready for the job they apply for; and be able to bring high profit to the organization they join. Taken together, the HE policy makers and authority have made it a prime agenda for HLIs to design strategies which can fully prepare students for employment so that graduates would be employed upon graduation. HLIs graduates are expected to acquire work-related competencies when they are at the universities or before they apply for a job.

This paper discusses the background concept of Graduate Employability Programme (GEP), and the framework of GEP in Malaysia. It is expected that the paper could document relevant information on employability programmes in the Malaysian settings; and lead to informed decision when identifying the mechanism to develop graduates' competencies.

Issues in graduate employment

As far as the HLI graduates' competencies are concerned, many employers are of the view that graduates do not have the right specification hence do not meet the requirement set by employers. It has been reported that quite a high number of graduates face difficulties in securing employment after completing studies, a phenomenon attributed to their low level of employability (Shukran & Yew Lie, 2015). Many employers have raised their concern and registered their dissatisfaction with the job readiness among local graduates. Yusof and Jamaluddin (2015), among other researchers, stated that graduates do not have the required enabling competencies attributed to them while having the attitudes which are not desired by organization they apply for. This means having the attributes, skills, abilities which are different from the required competencies set; showing weak ability to ''think outside the box''; having difficulties to work with others in a team; having less ability to work independently; having difficulties to solve work-related problems; having ineffective communication skills; having lack of creativity; and having inadequate English language skills.

Morshidi, Heng, Munir, Shukran, Seri Rahayu, and Jasvir (2012) found that employers are not happy with HLI graduates due to their low self-confidence, poor soft-skills, weak English language proficiency, and low positive work attitudes. Koo, Pang and Fadhil (2008) highlighted another

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set of weaknesses found among many graduates, namely linguistic proficiency, communicative literacy, culture awareness, content literacy, sustainable citizenship, attitudes and mindset, vocational literacy and critical literacy. Besides, positive attitudes and mindsets are attributes which are highly sought after by employers.

Ministry of Higher Education has identified six major issues pertaining to graduate employment, including, (Ministry of Higher Education, 2012a, p. 4) the fact that industry prefers ready-made instead of fundamentals; and that graduates not obtaining the right choice of courses. This scenario has driven employers to suggest that work competencies be embedded in university curriculum, or through special employability programmes (Shukran & Munir, 2011). This has received positive response from the Ministry of Higher Education which had designed certain interventions which would provide avenues for HLI graduates to enhance or develop their competencies before joining any work organization.

Background concept of employability

The increasingly changing characteristics in the workplace have caused significant changes on workforce specification, necessitating individuals aspiring for certain job to equip themselves with relevant workplace competencies. As such, students enrolling at HLIs should be equipped with important core skills before joining the workforce. Considering the need for certain set of job competencies, there has been continuous discourse on graduate attributes and their development. Such discourse has been addressed as the concept of graduate employability, whose definition covers a number of important dimensions. In order to understand the framework of GEP, it is essential that the term employability be understood first. The term has been used to indicate an individual's key competencies. Some scholars refer it as key qualifications, while some would simply equate it as employment status (Shukran & Yew Lie, 2015).

From the review of other related literature (see Table 3-1), it is found that the salient work-related attributes or competencies could be categorised into various set of competencies. The information gathered is in line with the definition of employability which components encompass four set of competencies that a graduate acquires or develops while attending higher education process, namely knowledge (K), skills (S), abilities (A), and other desirable characteristics (O), such that have been mapped in Table 3-1 (Shukran & Munir, 2011).

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Table 3-1: Salient Components of Employability: Knowledge (K), Skills (S), Abilities (A), and Other Characteristics (O)

Source	The concept of employability has been referred to a number of salient work-related attributes or competencies, which include	K	S	A	O
Tan and Arnold (2012)	Communication skills, Logical, analytical and problem-solving skills Flexibility and adaptability, Personality, confidence, and integrity, Innovation and creativity, Team spirit		✓		✓
Rahman and Munir (2011).	Mastery of skills (core skills, key skills, common skills, essential skills, employability skill, generic skills, basic skills, necessary skills, workplace know-how, critical enabling skills, transferable skills), trans-disciplinary goals, and process independent qualification		✓		
McQuaid and Lindsay (2005)	Basic Social Skills: Transferable skills (literacy, numeracy, problem-solving, communication, adaptability, team-working skills), motivation and confidence.		✓		✓
Nugroho, Nizam and Putu (2012)	Job obtaining knowledge, and labour market information. Attending to interview skills and curriculum vitae writing; higher-level of analysis, critique and synthesis skills; interactive competencies such as team approach and communication skills; skills to learn and re-learn while on the job; team work skills, analytical and problem-solving skills Job obtaining abilities; ability to reflect on their learning and experience; and intellectual capacity Personal characteristics (self-organization, time management, risk taking); interest in continuous learning	✓	✓	✓	✓

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Zalizan and Norzaini (2007)	Core skills may be viewed in relation to "competencies, attributes, capabilities, elements and learning outcomes". Subject content competency, communication skills, numeracy, ICT skills, learning how to learn skills, working with others and problem-solving skills		✓		
Valenzuela and Mendoz (2012)	Computer or IT knowledge; Specific programming languages and applications; Mathematical knowledge Career management skills; Technical skills (skills related to the core components of computer science and information technology); Job search skills; Problem solving; Creative and critical thinking Skills; Analytical skills; Teamwork (Working and collaborating with others); General Information Technology Skills; Communication skills; Managerial skills (Planning and coordinating people and tasks) Abilities to be aware of one's own abilities and limitations; adaptability or ability to adjust to new working environment as well as to different job requirements); Proficiency in English language; Proficiency in Bahasa Malaysia; Working in a team.	✓	✓	✓	
Hillage and Pollard (1999)	Outcomes of education process which include his/her ability to gain initial employment, maintain employment, move between jobs and roles within the same organization, meet new job requirements, or obtain new employment. It is an individual's employment status, level of work competencies			✓	
Hillage and Pollard (1999)	Basic skills; Work-specific skills Ability to gain initial employment; ability to maintain employment and engage in "transitions" between jobs and roles within the same organization; ability to obtain new employment Essential personal attributes (e.g. family background)		✓	✓	✓

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Godfrey (1986)	Ability is both an employment status and individuals' competencies. It is the readiness to be employed among individuals who have completed studies, are currently available for work, have job-related competencies and make arrangements to start a job.			✓	✓

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The above table summarises the components of employability as described by some researchers. The definitions suggest that the concept of employability is not about an individual's status of being employed or the immediacy to get employment after graduation or retain a job (Saterfield & McLarty, 1995), but the level of competencies they possess; the congruence or match between their competencies and the demands in the world outside HLIs. Going beyond personal attributes and status, there are also definitions of employability which highlight the effort to equip individuals with work-related competencies so that they are ready to be in the workforce (Brown, 2006; Zalizan & Norzaini, 2007). Employability is associated with a process that enables students to acquire knowledge, personal and professional skills; and to encourage them to develop the attitudes that will support their future development and employment.

The framework of graduate employability programmes in Malaysia

The notion that industry prefers ready-made graduates indicates that HLIs are the main workforce development centre. Based on the two premises, there have been various initiatives introduced and implemented by various institutions, agencies and organizations in developing graduate employability. This section discusses the effort by various parties in developing graduate employability which are categorized into four types of interventions, addressed as the Graduate Employability Programme (GEP).

Table 3-2. Employability Programme in Malaysia

Employability Programme in Malaysia			
Individual Development	**Institutional Effort**	**University-Community Synergy**	**National Level**
Industrial Training	Recruitment of professionals as adjunct/visiting academics/co-curricular trainers	Appointment of professionals to sit in Board of Studies for academic programmes	Outcome-based Education
Learning and Teaching	Training of Instructors	On Career Development Programme by campus recruiter	Establishment of Industrial Link Division in the Ministry of Higher Education/ HLIs

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Assessment of Soft-Skills	Industrial Attachment for academics	Career Talk by Industries	The Employability Blueprint
Employability programme during enrolment through co-curricular activities	Establishment of Career Development unit/department	Collaboration with industries for student industrial-training and academics	Employability Development Programmes (SLIM)
Post-graduation employability programmes	Establishment of professional development centre to train instructors on OBE-related instructional methods		Education 4.0
	Establishment of Co-Curricular Development Division at HLIs		
	Establishment of Career Services Centre at HLIs		

Individual development

Malaysian industries emphasise that all graduates must have acquired hard skills and soft skills throughout their HE enrolment. The former refers to job-related skills such as literacy skills, research skills, computer skills which are critical for them to accomplish tasks, duties, and responsibilities assigned to them. The latter refers to workplace skills that are essential for them to get along well with other people when they join an organization. Employers will employ graduates with good teamwork skills, presentation skills, decision making skills, communication skills and others which enable them to relate well with others in accomplishing their job (MoHE, 2012a, p. 10). These individual attributes have been spelled out in the Graduate Employability Blueprint, launched in 2012. The Blueprint recommends various efforts at individual levels to be implemented at HLIs in order to develop the full potential of graduates; or enhance their:

a. Academic attributes (good academic performance). Students are required to be involved in discipline-related co-curricular activities,

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and encouraged to apply what they learn into related settings.

b. Personality management attributes. Students should be exposed to activities which develop their sense of responsibility, positive attitudes, critical awareness, strong leadership skills and adaptability to perform tasks, accomplish jobs, and carry out responsibilities.
c. Exploration attributes. Students should be exposed to activities that nurture their critical and creative thinking skills, and imaginative or innovative capabilities.
d. Connectivity attributes. Students should be involved in activities which develop team-working and communication skills. They should be exposed to technological instruments that enrich their knowledge and enhance individual performance.

The strategies adopted by HLI in implementing the intervention include:

i. Industrial Training. Industrial training has been introduced as a credited-course in most HLIs, aimed to equip students with work-related competencies while enrolling in an academic programme. It is expected that they would be able to acquire relevant work skills, and in turn enable them to fare well in the organization they later join. Students are required to spend about 12 weeks in placement organization of their choice.
ii. Learning and Teaching. Besides focusing on knowledge in lecture or class, learning of soft-skills are also embedded into curriculum. Learning and teaching at HLIs are designed to be in line with the outcome-based education curriculum. Soft skills are embedded extensively in instructional approaches so that students are exposed to work-related content throughout their study period.
iii. Employability Programme during enrolment through co-curricular activities. Co-curricular activities are significantly effective avenue for students to acquire work-related competencies. It involves students who are attached at employing government or non-governmental organizations, practicum/internship and being placed with employers.
iv. Post-graduation employability programmes. Students who completed studies at HLIs can apply to join various GEPs whose duration is between two to six months. The programmes emphasize the importance of training which aims to improve the ability of graduates in obtaining employment in high end industries. It is

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expected that participating organizations consider offering employment to the participants whom they train in the GEP. In this programme, participants are placed in participating organizations through which they acquire work-related knowledge, and job-related interpersonal and professional skills. The exposure to work environment enhances their opportunities to learn about the world of work, get themselves orientated about a job and establish good relationship with the organisation's staff who might eventually form positive attitudes towards the student and in turn consider him/her to be employed at the organization.

Institutional effort

This involves the efforts to develop competencies of academics or student development officers. Given their essential tasks in moulding students' competencies, institutions have Professional Development Trainings for academics. These trainings have been conducted in order to train academics in designing teaching and learning processes so that they embed or involve employability development among students. Among the strategies in this intervention include:

i. Recruitment of professionals as adjunct/visiting academics/co-curricular trainers. HLIs should recruit academics who have the right knowledge, and developed relevant job skills, and acquired workplace correct attitudes. They should also engage professionals from industries to offer part-time teaching or supervise HLI student projects. They should also be appointed to become visiting academics who from time to time provide recommendations or feedback to university curriculum structure.
ii. Industrial Attachment for academics. This intervention involves the placement of academics in industrial setting, aimed at exposing them to actual job place, encouraging them to apply the learnt and formulated theories. They too would be of assistance to the placement organization, and at the same time, to their students.
iii. Establishment of Career Development unit/department. Most HLIs in Malaysia offer career-related services to their students, including career development, career-test, career exposure and career-recruitment. The centre assists HLIs to get students informed of their suitable career; and prepares students with high employability skills so that they are ready to join the world of work.

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iv. Establishment of professional development centre to train instructors in workshops and courses related to teaching and learning so that their instructional approaches would incorporate the development of employability such as the OBE-related instructional methods.

v. Establishment of Co-Curricular Development Division at HLIs. In HLIs, there is a dedicated office of student affairs which coordinates students' activities. This seems to be a common practice among many Malaysian universities through which students learn much of the soft-skills which would be beneficial to them in work life later on.

University-community synergy

The low employment rate among graduates has led to criticisms by the world of work that HLIs are not competent in developing workforce. Arguably if all that employers need from HLIs are highly employable graduates, then the former has to collaborate with the latter in workforce development. HLIs should not be left alone in developing graduate employability, necessitating for various interventions to establish good synergy between HLIs and industries. The strategic intervention involves smart relationship between HLI and HE stakeholders especially the employing organizations who expect HLIs to produce readily competent workforce. Among the strategies in this intervention are:

1. Appointment of professionals as member of Board of Studies. Professionals, managers or employers have been engaged by HLIs to work with HLIs in designing or reviewing HLI academic programmes. They are expected to provide work-related content in university curriculum. Specifically, they are engaged to work hand in hand with HLIs to identify issues with regard to workforce desired attributes as well as providing the solutions. They could also inform HLIs of the relevant knowledge needed by the industries; or training at industries which could be provided by academics.
2. Collaboration with industries for student industrial-training and academics. As outlined in the Malaysian National Graduate Employability Blueprint 2012-2017, community and industry are important sectors which should be engaged in the efforts to nurture graduate employability. The engagement is conducted in the following forms:

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i. Industrial attachment and Apprenticeship Programmes. Industries provide training opportunities for job-seeking graduates, and help develop producing skilled graduates and competitive workforce (Ramachandran, 2008).
ii. Career Development Programme by campus recruiter. HLIs engage industrial leaders and professionals to become guest speakers or visiting scholars. They can conduct career talk to academics and students.
iii. Bridging education and employability through out-of-class or extra-curricular activities, internships, practicums and service learning. This enhances graduate employability.

National level

The government of Malaysia has strategic agenda in making its higher education system a main provider for competent workforce for the country. In line with this direction, there are a number of interventions introduced by the Government.

i. The Malaysia Education Blueprint 2015-2025 (Higher Education) has outlined a number of initiatives to enhance students' employability prospects. The Employability Blueprint outlines a number of main strategies of the Eleventh Malaysia Plan which would support the achievement of 80 percent of graduates securing employment within six months after graduation. The initiatives involve the design and provision of holistic academic curricula. The Government has allocated a huge amount of budget to bring about positive impacts to graduates and employers.
ii. Outcome-based Education. There is a need for a balance between transferable skills and subject skills in the design of all academic programmes offered at universities. The academic programmes should be designed based on input from industries. The curriculum should consist of content and activities which would allow students to acquire the aspired outcomes.
iii. Establishment of Industrial Link Division in the Ministry of Higher Education/ HLIs. The community engagement agenda in Malaysia also lead to the establishment of the industry and community network division in most universities. The functions of such a division are to connect HLIs with relevant agencies/communities outside HLIs. One of the aims is to allow the exchange of opportunities and resources. Students and academics would be

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allowed to acquire competencies from the industries and communities.

iv. Development of Knowledge Transfer Programme by Ministry of Higher Education. The project provides avenue for the exchange of tangible and intangible expertise, including the training of students in industries.

v. Education 4.0. Higher Education is a sector which cannot escape itself from the rapidly growing digital disruptions in the Fourth Industrial Revolution. The disruption has driven HLIs to create innovation in preparing their students to face the IR4.0 with relevant competencies and responsibility.

Conclusion

The Graduate Employability agenda has been one of the main foci of HLIs in Malaysia. It has received an increasing concern among education providers (e.g. HLIs), parents, university students, graduates, and employers who expect graduates to be immediately accepted in the world of work. Though many still hold to the view that HLIs should not be held responsible for graduates' employability, many others argue that HLIs should not be alienated from the efforts to develop workforce, given the resources they possess and knowledge they generate. Nevertheless, the roles to develop workforce should not be left alone to HLIs. The Government of Malaysia has put in place a coordinated effort to develop a synergistic approach in developing graduate employability. The strategies have, to some extent, managed to increase the level of employability among graduates, and in turn reduced the unemployment rate among them. The initiatives, however, should not only focus on graduate factors, but other related variables too, such as economic factors. Besides, employability development programmes in other countries should be studied too so as to learn the best practices in employability development.

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CHAPTER FOUR

THE RELATIONSHIP BETWEEN MEDIA LITERACY AND CRITICAL THINKING: A THEORETICAL AND EMPIRICAL REVIEW

CAHIT ERDEM

Introduction

We are now living in a world in which traditional print texts and images are side by side with new information forms (Luke, 2012). These new forms are mostly accessed via new media platforms in addition to mass media. Therefore, the new era requires individuals to possess some new skills. Considering that students of this new century, the digital natives (Prensky, 2001), perform their activities, communication and information management through new communication and information technologies (Şahin, 2009), identifying the skills required to use these technologies and managing their development are of high importance (Livingstone, 2003). This case unearths the significance of media literacy which is defined as the ability to access, analyse, evaluate and communicate media in a variety of forms (Aufderheide, 1993). People have become info-obese as they are bombarded with information in the form of text, audio, image or video through media. The central role of media in individuals' lives makes media literacy a mandatory skill to possess.

In compliance with media literacy, another crucial skill that the new century requires is critical thinking and it is a core element of media literacy. The main aim of media literacy is to provide critical autonomy (Aufderheide, 1993). Individuals need to approach media with a critical perspective since media may have aims such as gaining commercial benefits or political power and manipulating society (Karaman & Karataş, 2009). Therefore, media literacy field has created techniques as to critical analysis of media and questioning media structure and operations (Thoman & Jolls, 2005). One of the main institutions of the society to help individuals gain these skills is school. These two skills are tried to be

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integrated to school curricula to have students prepare for life. Whether the necessary relation between these skills is formed in the curricula is a matter of question. For a better integration, this relation needs to be formed clearly on both theoretical and empirical levels.

This chapter firstly aims to put forth the relationship between media literacy and critical thinking on theoretical basis. This part includes body of knowledge on media literacy, critical thinking and the relationship between the two based on theoretical studies in the literature. In addition, empirical studies focusing on this relationship will also be reviewed. In the end, it is aimed to unearth the relationship between media literacy and critical thinking on theoretical and empirical levels.

Media literacy

As of 2015, there are more than three billion active internet users; more than two billion social media accounts and one billion 685 million people access these accounts via mobile devices (Digital, Social and Mobile in 2015). These statistics show just a glimpse of the media-intense life around the world. Besides, these figures are in an increasing trend. More and more people are surrounded by media every passing day and mobile media devices have placed media in the centre of individuals' lives. People now live in a digital balloon as a result of the intense use of digital technology (Pérez Tornero & Varris, 2010). Moreover, individuals mostly interact with media on second and third levels. Namely, people interact with different media tools simultaneously. One may listen to radio and check the time on the television while reading a newspaper (Masterman, 2005). Continuous flow of notifications of social media accounts on mobile phones are now added to this high level of interaction. This case indicates the significance of media literacy. It is not an earth chance to keep away from media since media culture is now people's culture (Hobbs & Moore, 2013). Therefore, people should be media literate in order to use the media and media tools consciously and take advantage of the opportunities that media offers for individual and social life.

Before defining media literacy, the concept of literacy should be discussed. Literacy is a hard term to define. It is not limited to the acts of reading and writing. Literacy can be accepted as interpretation of symbolic texts on any media as history shows that literacy involves comprehensive meanings (Livingstone, 2003). According to Kellner and Share (2005), literacy, which has changed and evolved due to social and cultural changes and interests of elites, includes acquiring knowledge and skills in order to read, interpret and create a specific type of texts and works. In parallel

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with this, Street (2003) defines literacy as ways of thinking and reading-writing in cultural contexts.

A reason why it is hard to define literacy is the fact that the meaning attributed to literacy changes according to the time and society. First, how a society conceives literacy, literacy skills and qualities of a literate individual is up to the state of that country (Ivanovic, 2014). Second, literacy has changed and evolved throughout history. In the past, literacy was about phonological awareness and decoding print materials (Lundgren, 2013). Today, literacy includes digital, electronic and visual expressions (Gentry & McAdams, 2013). The reason for this extension is that ways of communication have increased and media is all around people (İnal, 2009). Literacy in the new century includes fair social participation, social attachment and mastering new digital media (Kimmons, 2014). Besides, literacy also refers to being knowledgeable in a specific field (Som & Kurt, 2012).

Information and communication technologies, beside other factors, have not only changed the meaning attributed to literacy but also have led to emergence of new types of literacies. The New London Group argues that multi-literacies are needed for two reasons (Mills, 2010): first, new technologies and co-use of these technologies require new literacy pedagogy; second, literacy pedagogy needs to change in ways to meet the cultural and linguistic variety which is an output of the interdependent economy. Whatever the cause is, multi-literacies are now accepted and they include rhetoric, print literacy, visual literacy, information literacy, media literacy, critical literacy, computer literacy, news literacy, digital literacy, gaming literacy, internet literacy, social media literacy, multimedia literacy and so on (Alvermann & Hagood, 2000; Bawden, 2001; Caperton, 2010; Hobbs & Moore, 2013; Hofstetter, 2002; Lankshear & McLaren, 1993).

The significant role of media in people's life has featured media literacy and it has a profound conceptual basis as a result of international practices in formal education institutions (Hobbs & Frost, 2003). The advances in information and communication technologies in the last years have attracted scholars in the media literacy field (Potter, 2010). According to the widely-accepted definition, media literacy is the ability to access, analyse, evaluate and communicate messages in a variety of forms (Aufderheide, 1993) though media literacy is defined in many ways. Scheibe and Rogow (2008) define it as the ability to access communication in different forms, and analyse, evaluate and create these forms. Similarly, Silver (2009) defines it as the ability to access media in different contexts, critically understand and evaluate media contents and

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create new contents. No matter how it is defined, media literacy includes using media tools and platforms effectively based on four main skills, which are access, analyse, evaluate and communicate (Potter, 2009). Livingstone (2003) highlights the significance of defining media literacy independent of media tools at use; however, she suggests that ''content creation'' should replace the skill of ''communicate''. In addition, Center for Media Literacy (2017), a significant institution about media literacy, defines the term media literacy as: "the ability to communicate competently in all media forms as well as to access, understand, analyse, evaluate and participate with powerful images, words and sounds that make up our contemporary mass media culture." This definition brings forth another skill: participate. Erişti and Erdem (2017) adopt an eclectic view and posit that the skills of ''communicate'' is a meta-concept and involves the skill of participate since it includes content creation and sharing this with other people and thus participating in social life. These media literacy skills are briefly explained below.

Access is the entry level media literacy skill, but it is prerequisite for the other skills. It is about reaching information through media tools and understanding the meaning of those contents (Jolls, 2008). In order to locate and use media tools, one needs to have a certain level of knowledge as to media tools such as mobile phones, tablets, televisions, computers and so on (Bilici, 2014). As factors such as having physical access to media tools, permission to use them and knowledge to use the software affect the level of access (Livingstone, 2003), sustainability of the use of media tools is quite important (Erişti & Erdem, 2017). One needs to know which media tool to use to reach a content and also how to use that specific media tool effectively. As Pérez Tornero, Celot and Varis (2007) put it, access comprises of physical access to media and the ability to use media tools effectively.

Once an individual has accessed media content, s/he needs to analyse that critically. Critical autonomy in the interaction with media is the main goal of media literacy (Aufderheide, 1993). As Silver's (2009) definition of media literacy highlights, analysing media content critically is the most essential skill of media literacy. In the analysis process, parts of media contents are examined critically. To this end, Center for Media Literacy proposes five questions to address media contents. These questions include (Thoman & Jolls, 2005):

1. "Who created this message?
2. What creative techniques are used to attract my attention?
3. How might different people understand this message differently from me?

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4. What lifestyles, values and points of view are represented in; or omitted from, this message?
5. Why is this message being sent?"

These questions can be asked to analyse authorship, format, audience, content and purpose of media contents; however, asking these questions without background knowledge and awareness of media literacy would prove inefficient. In order to comprehend and analyse media and media contents, a sufficient grasp of the background, structure and functioning of media and media industry is required (Taşkıran, 2007).

The next skill which completes ''analyse'' is ''evaluate'', defined as a skill to make judgements about the quality or the value of media content (Erişti & Erdem, 2017). The evaluation process includes comparison of media content with a standard or value measure (Pérez Tornero, Celot & Varis, 2007). Actually, the results of the analysis process are compared with ethical, moral, scientific or democratic principles (Jolls, 2008). Considering the nature of the messages in the media, the contents need to be evaluated whether they are real, valid or objective. New media allows everyone to create and share contents and there are also media conglomerates aiming to manipulate society. Therefore, a critical evaluation of media contents is mandatory and individuals need training to be able to perform this evaluation.

The last media literacy skill is ''communicate'' which includes creating new media messages and sharing them via media tools (Schmidt, 2013). Yet, as explained above, communicate is not limited to content creation and sharing. It also includes ''participation''. This skill is also called ''act'' (Hobbs, 2010) and involves using media tools to solve problems in social circles and being an active citizen (Erişti & Erdem, 2017). New media platforms such as social networks and new media tools such as smart phones and tablets allow people to share their opinions and problems in the society and make millions of people aware of that. These tools and platforms give everyone the chance to become media creators rather than media consumers. Therefore, it is not possible to separate competencies regarding content creation, sharing and participation.

Media literacy aims to help individuals gain these skills to empower them in the media-intense world. Media literacy enables individuals to control the effects of media (Potter, 2010). According to National Association for Media Literacy Education (2017), the aim of media literacy education is "to help individuals of all ages develop habits of inquiry and skills of expression that they need to be critical thinkers, effective communicators and active citizens in today's world". The aim and approaches of media literacy and media literacy education have

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evolved throughout history from protectionist approach to critical and empowerment approaches. Inoculation approach, protectionist approach, empowerment approach, critical approach, resolution approach, media arts education approach, media literacy movement approach (Federov, 2015; Hobbs, 2011; İnal, 2009; Kellner & Share, 2007; Sholle & Denski, 1995) are among media literacy approaches. As critical thinking is the focus of this study, critical approach to media literacy is explained below, which will give a glimpse of the relationship between media literacy and critical thinking.

Critical media literacy has come into prominence in the recent years since protectionist approaches to media literacy do not allow questioning dominant ideologies and representation practices in media texts (Binark & Gencel Bek, 2010). Critical media literacy requires individuals to analyse media critically while protectionist approaches aimed to create passive citizens protected from the effects of media (İnal, 2009). Critical studies of media have evolved into critical media literacy in parallel with film and psychoanalytic theory, cultural studies, socio-linguistics, post structural feminist pedagogy (Alvermann & Hagood, 2000) and aimed to empower audience by making use of awareness education and critical pedagogy (Semali, 2003). According to Torres and Mercado (2006, p. 260), critical media literacy includes three dimensions:

> "(1) develop a critical understanding of how corporate for-profit media work, driven by their political and economic vested interests; (2) search for and support alternative, non-profit media; and (3) characterize the role of teachers in helping students and their parents to become media-literate users and supporters of alternative media".

Kellner and Share (2007) argue that critical media literacy rests on protectionist approach, media arts approach and media literacy movement; however, it focuses on criticism of ideology and analysis of representation of dimensions such as gender, race, class and sexuality by extending text analysis to include social context, control and enjoyment and featuring alternative media creation. They add that critical media literacy includes developing the skills of analysis of media codes and conventions, skills of criticizing stereotypes, dominant values and ideologies, and competencies of interpreting multi meanings and messages constructed by media texts.

As it is clearly seen in critical media literacy, critical thinking skill is highly related to media literacy. In the above paragraphs, basics of media literacy is explained. Before analysing the relationship between the two concepts, it is fruitful to provide some information on critical thinking, as well.

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Critical thinking

Modern technological society requires individuals to evaluate and change their positions in fast changing and complex situations and individuals in an information society must be equipped with critical thinking skills (Feuerstein, 1999). The information society which rests on information and communication technologies needs autonomous individuals who try to understand the information s/he has encountered by questioning that, who can make decisions freely and independently and who can assess issues from different perspectives (Ocak, Eğmir & Ocak, 2016). In order to practice these actions, one needs critical thinking skills. For that reason, critical thinking movement developed during 1980s with the rationale that schools should stop requiring memorization of empirical data and future generations should be equipped with critical thinking skills (Feuerstein, 1999). Critical thinking is an important skill with respect to analysing obtained information effectively, particularly for the current era in which information flow is fast, information source is vast and accessing information is easy (Paul & Elder, 2006).

There are various definitions of critical thinking. Cüceloğlu (2003, p. 216-217) defines critical thinking as "an active organized cognitive process which aims to help us understand ourselves and events around us by being aware of our self-thinking processes, taking others' opinions into consideration and applying what we have learnt". Paul and Elder (2006, p. 4) define critical thinking as "the art of analysing and evaluating thinking with a view to improving it". According to Halpern (2014, p. 8.), "it is used to describe thinking that is purposeful, reasoned, and goal directed—the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions, when the thinker is using skills that are thoughtful and effective for the particular context and type of thinking task". The definitions include being aware of self-thinking process, evaluating thinking, purposeful and well-reasoned thinking, making rational decisions and in essence an effort to be a conscious, organized and rational thinker.

According to Paul and Elder (2006), there are eight elements of critical thinking, which are purpose, question at issue, information, interpretation and inference, concepts, assumptions, implications and consequences, and point of view. They also provide questions to ask for each element of critical thinking in the reasoning process, in which critical thinkers must apply some intellectual standards to element of reasoning. These standards include clarity, accuracy, relevance, logicalness, breadth, precision, significance, completeness, fairness, and depth.

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According to Ennis (2011, p. 2-4), critical thinkers have the ability to:

1. “focus on a question,
2. analyze arguments,
3. ask and answer clarification and/or challenge questions,
4. judge the credibility of a source,
5. observe and judge observation reports,
6. deduce and judge deduction,
7. make material inferences,
8. make and judge value judgements,
9. define terms and judge definitions using appropriate criteria,
10. attribute unstated assumptions,
11. consider and reason from premises, reasons, assumptions, positions and other propositions with which they disagree or about which they are in doubt, without letting the disagreement or doubt interfere with their thinking,
12. integrate the dispositions and other abilities in making and defending a decision
13. proceed in an orderly manner appropriate to the situation,
14. be sensitive to the feelings, level of knowledge, and degree of sophistication of others,
15. employ appropriate rhetorical strategies in discussion and presentation (oral and written), including employing and reacting to fallacy labels in an appropriate manner”.

Edward Glaser listed thinking skills which are basic to critical thinking as follows (Fisher, 2002, p. 7):

1. “to recognize problems,
2. to find workable means for meeting those problems,
3. to gather and marshal pertinent information,
4. to recognize unstated assumptions and values,
5. to comprehend and use language with accuracy, clarity and discrimination,
6. to interpret data,
7. to appraise evidence and evaluate statements,
8. to recognize the existence of logical relationships between propositions,
9. to draw warranted conclusions and generalizations,
10. to put to test the generalizations and conclusions at which one arrives,
11. to reconstruct one’s patterns of beliefs on the basis of wider experience,
12. to render accurate judgements about specific things and qualities in everyday life”.

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Fisher (2001, p. 8) argues that though there are many thinking skills fundamental to critical thinking, some of the basics include identifying the elements in a reasoned case, identifying and evaluating assumptions, clarifying and interpreting expressions and ideas, judging the acceptability of claims, evaluating arguments of different kinds, analysing, evaluating and producing explanations, analysing, evaluating and making decisions, drawing inferences, and producing arguments. Eğmir and Ocak (2016, p. 339-340) reviewed the literature and carried out a needs analysis and put forth the following subskills of critical thinking skill:

1. “Finding out the problem in a given situation,
    - Noticing the problem in a given situation
    - Defining the problem in a given situation clearly
    - Determining the information needed to solve the problem in a given situation
2. Distinguishing the statements that make subjective or objective,
3. Analyzing the arguments,
    - Knowing the properties of claim, subject and argument
    - Distinguishing argument from other statements
    - Knowing the basic components of argument
    - Distinguishing definite and indefinite conclusions
    - Distinguishing related and unrelated information and reasons
    - Determining stated and unstated assumptions
4. Asking goal-oriented questions,
5. Evaluating arguments,
    - Examining strength of an argument
    - Examining acceptability of premises
    - Examining the consistency between premises.
    - Examining the conformity between premise and conclusion
    - Noticing unstated but important components
    - Taking into account different perspectives,
6. Determining reliability of a source”.

Acquisition of these thinking skills is needed to empower individuals to gain critical autonomy. A critical thinker can raise vital questions and problems, gathers and assesses relevant information, comes to well-reasoned conclusions and solutions, thinks open-mindedly, and communicates effectively with others (Paul & Elder, 2006, p. 4). According to Halpern (2014, p. 19), a critical thinker will:

- “recognize semantic slanting and guilt by association,
- seek out contradictory evidence,

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- use the metacognitive knowledge that allows novices to monitor their own performance and to decide when additional help is needed,
- make risk: benefit assessments,
- generate a reasoned method for selecting between several possible courses of actions,
- give reasons for choices as well as varying the style and amount of detail in explanations depending on who is receiving the information,
- recall relevant information when it is needed,
- use skills for learning new techniques efficiently and relate new knowledge to information that was previously learned,
- use numerical information including the ability to think probabilistically and express thoughts numerically,
- understand basic research principles,
- demonstrate an advanced ability to read and write complex prose,
- present a coherent and persuasive argument on a controversial, contemporary topic,
- use matrices and other diagrams for communication,
- synthesize information from a variety of sources,
- determine credibility and use this information in formulating and communicating decisions".

Critical thinking is an important thinking skill which is also highlighted by the Partnership for 21st Century Learning as a must as well as life and career skills, key subjects and 21st century themes and information, media and technology skills. Definitions of this skill and characteristics of a critical thinker are listed above, which can be outlined as the abilities to use various idea creation techniques, creating ideas and elaborating, refining, analysing and evaluating one's own ideas (Partnership for 21st Century Learning, 2009, p. 3). Media literacy is an effective strategy to enhance critical thinking and critical thinking is a must for media literacy practices. The following part sets forth this reciprocal relationship.

The relationship between media literacy and critical thinking: theoretical review

Media presents realities about everything in our lives. It is such a central cultural power in society that people can neither realize the effect of media in their life nor can they even feel its existence (Baran, 2014). Media has the potential to greatly influence public opinion; therefore, media literacy is needed to create an educated and democratic population (Ferguson, 1999 as cited in Steinbrink & Cook, 2003). Media literacy is a democratic instrument to empower individuals to make independent

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choices by providing a critical awareness of the media content as it allows individuals to recognize how the mass media is used to discourage debate, conceal information, and mislead the public (Silverblatt et al. 2014).

Students need to realize how they are unwittingly part of media's manipulation process (Steinbrink & Cook, 2003). According to Potter (2004), as they have limited time and attention, media consumers do not perform enough effort to evaluate media messages. They rather automatically process the media messages that they encounter. A less media-trained person cannot apply the tools and techniques of media analysis and might miss things that a media-literate person would notice (Dubey-Jhaveri & Cheung, 2016). Critical thinking education aimed at developing media literacy offers a solution to this problematic issue. The integration of media literacy and critical thinking enables consideration of the varied contexts, genres, and communicative modes relevant to the deconstruction and re-evaluation of media texts (Wade, 2014, p. 3). Media literacy is a critical thinking skill that is applied to the source of the information received through media (Silverblatt et al. 2014).

"To minimize the impact of this brainwashing effect of the media, critical thinking skills are crucial because people with these skills would be in a better position to understand the information they receive from the media, assess its quality and challenge its assumptions (Facione, 2013 as cited in Dubey-Jhaveri & Cheung, 2016). Besides, integration of critical thinking in media literacy instruction may be helpful for students since it shows them that they can practice their critical thinking skills in their daily lives and even use them to help others (Wade, 2014, p. 4). This case unearths the significance of critical thinking skills in media literacy education. In this information and media age, critical thinking skills are necessary to help youth navigate a complex and fast-changing information environment and to prepare them for the workplace and community" (Scull & Kupersmidt, 2012).

For individuals to be autonomous and rational media audiences, critical knowledge and the analytical tools are required, which is achieved via media literacy education (Tufte & Enghel, 2009). This education empowers and features the critical understanding of the media in addition to other media literacy skills (Unesco, 2009) as media literacy aims to develop individuals' critical autonomy (Masterman, 2005). Media literacy education highlights critical thinking and evaluating the messages, by means of which individuals have the opportunity to critically consider media content, and recognize the differences between a truth vs. a fallacy and consider the delivered messages and the constructs of each medium (De Abreu, 2010). The main direction of media literacy programs focuses

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on critical study and practical production (Feuerstein, 1999, p. 45) as it is seen clearly in the definition of media literacy by National Association for Media Literacy Education.

Critical thinking enables conscious use of media. The skills of thinking critically about media are essential survival skills in a technological and consumer society (Worsnop, 2004). These skills include particularly media deconstruction and analysis. Media literacy highlights the deconstruction of realities presented in the media and the examination ownership and control mechanism of media (Steinbrink & Cook, 2003). In addition, media analysis helps individuals develop specific critical thinking skills such as finding evidence, observing accurately without bias, detecting bias, prejudice and poor logic, and making inferences and drawing conclusions (Kellough, 2003 as cited in Steinbrink & Cook, 2003).

The pedagogical practices encouraged in media literacy education are closely aligned with the practices recommended for developing critical thinking skills; for instance, breaking down media messages in order to understand their underlying persuasive elements (Scull & Kupersmidt, 2012). In essence, media literacy is the application of critical thinking to the messages of print and electronic media (Mkandawire & Walubita, 2015, p. 154). The reciprocal relationship between media literacy and critical thinking is represented in Figure 4-1, which shows that the development of media literacy skills helps students read, interpret and produce more responsible and analytical decisions towards media messages, while stimulating cognitive processes (Leon, 2016, p. 106).

Media literacy instruction needs to include critical thinking. In the plethora of new media tools and platforms, critical consumption and production of the media has gained more significance for democratic participation, civic engagement and expression of socio-political concerns; therefore, educators and policy-makers should focus on effective ways of implementing media literacy in educational institutions (Dubey-Jhaveri & Cheung, 2016). In this context, educational institutions are responsible for helping individuals to acquire media literacy and critical thinking skills (Aybek, 2016). Critical thinking is often an educational objective for policy makers in the education field and media literacy can be used to achieve this objective (Arke & Primack, 2009).

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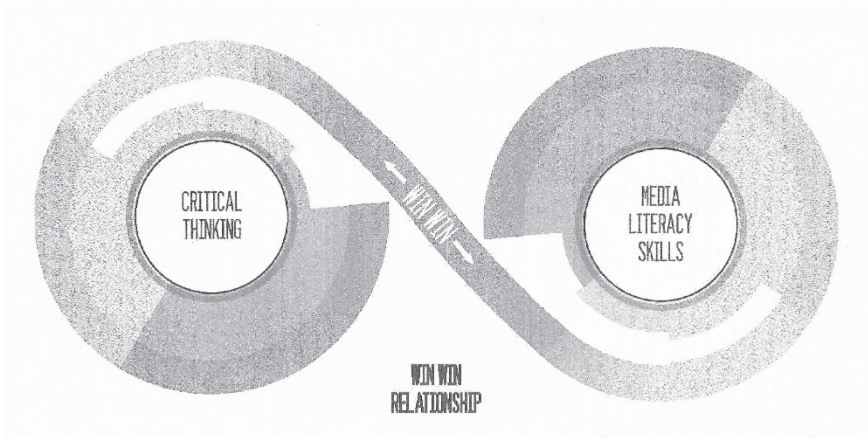
Figure 4-1. The reciprocal relationship between media literacy and critical thinking (Leon, 2016, p. 107)



Critical thinking and media literacy instruction should be integrated within the curriculum and throughout students' education (Wade, 2014). Feuerstein (1999) asserts that there are two approaches to teaching critical thinking: teaching critical thinking directly (skills approach) and immersing critical thinking within teaching of content-knowledge of curriculum subjects (infusion approach). He adds that media literacy programs are based on infusion approach. Other researchers like Renaud and Murray (2008) and Hatcher (2010) also affirm these two tacks, either a stand-alone approach or an integrated approach (Wade, 2014). Skills like critical thinking can and should be taught in every subject (Steinbrink and Cook, 2003). Media literacy education is one of the best ways to teach critical thinking skills. Media literacy promotes the critical thinking skills that enable people to make independent choices with regard to 1) which media programming to select and 2) how to interpret the information they receive through media (Silverblatt et al. 2014).

The integration of critical thinking and media literacy instruction has other practical benefits, as well. For instance, by encouraging children to apply critical thinking skills towards violence in media, media literacy instruction in schools may help prevent the potential negative effects of media violence (Scharrer, 2009). Children are affected by violence in media and they create images associated to verbal or physical violence (Yörük, Koçyiğit & Turan, 2015). According to Scharrer (2009, p. 12), an

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effective way to prevent this is to encourage children to think critically about violence and conflict as they are presented in media as well as enacted in “real life” face-to-face conflict situations. Furthermore, other risky and unhealthy behaviours that youth are exposed to in media include substance use (Scull & Kupersmidt, 2012). Media literacy education to discern the substance and intention of messages relating to drugs, tobacco, and alcohol helps cultivate a media-literate youth who understands the manipulative component of such material and rejects it (Levitt & Denniston, 2014).

The critical thinking skills provided in media literacy education are also required in business environment. Premier business schools have already redesigned their curricula to feature critical thinking (Silverblatt et al. 2014). Moreover, advertisements also need consideration. Without critical thinking skills, the messages in ads can influence the ways that people think about the world and themselves (Silverblatt et al. 2014). A critical media literacy education would lessen the effects of ads, which are created by spending a lot of money and research to affect people in many ways.

A media literacy program that highlights critical thinking needs to focus on specific tasks to foster critical thinking. For instance, class readings or lectures that provide knowledge of media genres, production contexts, and case studies would be helpful as students have a set of facts, concepts, and theories that they can draw on as they practice critical interpretation, analysis, evaluation, and explanation this way, as a result of which students can make their own inferences, develop their own arguments, and participate in the academic conversations (Wade, 2014). Moreover, Harshman (2017) suggests that the “6 C’s”—capitalism, citizenship, colonialism, conflict, and conscientious consumerism—provide a framework for global issues and media consumption. Sperry (2006) believes that if a teacher wishes to help his students to become educated, reflective and informed seekers of truth, s/he must help them to think deeply and critically about the messages they receive through the media. According to Sperry (2006), teachers’ charge should be to train their students to think critically about all media messages, especially the messages they receive in the six and a half hours of media consumption that occurs outside of classrooms every day.

Scheibe and Rogow (2008) offers 12 basic ways to integrate media literacy and critical thinking into any curriculum (For detailed suggestions, see Scheibe and Rogow, 2008):

1. “practice general observation, critical thinking, analysis, perspective-taking, and communication skills,

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2. stimulate interest in a new topic,
3. identify how students' prior ideas about a topic have been influenced by media messages,
4. use media as a standard pedagogical tool,
5. identify sources for erroneous beliefs about a topic,
6. develop an awareness of issues of credibility and perspective,
7. compare the ways different media present information about a topic,
8. analyze the effect that specific media have had on a particular issue or topic across different cultures and/or historically,
9. build and practice specific curricular skills,
10. facilitate use of a range of media formats to express students' opinions and illustrate their understanding of the world,
11. use media as an assessment tool,
12. connect students to the community and work toward positive change".

The relationship between media literacy and critical thinking: empirical review

Although the relationship between media literacy and critical thinking is evident and highlighted by many scholars as explained above, there are few empirical research studies aiming to put forth this relationship (Arke, 2005; Aybek & Demir, 2013; Kurt & Kürüm, 2010; Nalçacı, Meral & Şahin, 2016). One reason for lack of the empirical research may be related to the difficulty in measuring media literacy. Although there are a number of scales or inventories to measure critical thinking, instruments to measure media literacy is limited (Arke & Primack, 2009; Erişti & Erdem, 2017; Karaman & Karataş, 2009; Literat, 2014).

One of the earliest studies on the empirical relationship between the two concepts is the study by Feuerstein (1999). In this study, Feuerstein (1999) examined the support provided by a media literacy program in the development of critical thinking of students aged 10-12 years in Israel. Feuerstein used content of media literacy materials and measured the impact of the course on critical thinking through pre- and post-tests (language and media tests). It was found out in the study that students' experience with media literacy instruction helped them show greater gains in media analysis and critical thinking skills. There was a great difference between the test and control groups, which indicated the cumulative effect of the media literacy program.

Arke (2005) examined the relationship between college students' media literacy and critical thinking levels. To measure media literacy, a new media literacy scale was developed by the researcher. California Critical Thinking Skills Test was used to measure critical thinking skills.

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The analysis of the results indicates that there is a statistically significant correlation between the scores on each measure (r (34) = 0.322, $p < 0.05$). However, as Arke (2005) reported, the results did not provide significant correlations between students' self-reported level of media literacy education or media consumption and their critical thinking scores. Arke (2005) argues his study is a starting point for quantitative measurement of media literacy.

Scharrer (2009) implemented a media literacy and violence prevention program to 89 sixth graders in order to foster critical thinking, facilitate media literacy and encourage nonviolent conflict resolution. Pre- and post-test questionnaires were used to measure students' attitudes and thinking about the topic of conflict and violence in the media. In the analysis, no support could be claimed for the prediction that students wouldn't think of violence as acceptable after the implementation of the program; however, students became more likely to choose a non-aggressive approach to two of the three conflict scenarios.

Radeloff and Bergman (2009) redesigned a women's studies course to integrate critical thinking skills through media literacy activities. Websites, maps, a graphic novel, documentaries and featured films were used. Students' knowledge of course concepts and critical thinking skills were measured via midterms and they were asked to apply their skills and knowledge base through various activities. Radeloff and Bergman (2009) argue that the students critically viewed films and other media, reflected, performed active research, and presented their findings and this way gained a better understanding of the diverse issues impacting women globally and they had the tools to better understand these complex issues.

Ankaralıgil (2009) examined sixth and seventh graders' critical thinking levels with respect to media literacy course, habits of using mass communication tools and other variables. Critical thinking levels of 725 students were measured through a critical thinking dispositions scale developed by the researcher. In the analysis of t test results, it was found out that the scores of students who attended media literacy course is significantly higher than students who did not [t(675)=12,604 p<,01]. In addition, there was not a significant difference for the variables of availability of television in students' room. It was also identified that the less students watch television and use computer, the higher their scores are on critical thinking scale and students who watch television to obtain information have higher scores than ones who watch television for other reasons such as spending free time or entertainment. Besides, students who have computer at home and who have internet connection have higher scores, too.

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Sperry (2012) reports a project in which they developed lessons and units that integrate critical thinking and media literacy into the secondary science curriculum. The teachers in the project concluded that media decoding processes are efficient and engaging methods for integrating critical thinking and media literacy while providing students with science information. Sperry (2012, p. 57) lists five strategies for integrating media literacy and critical thinking:

1. “analyze scientific fact versus fiction in the media,
2. conduct lab experiments on claims found in the media,
3. evaluate conflicting views on controversial topics,
4. analyze the sources of information in your classroom,
5. produce media based on research, analysis and evaluation”.

Aybek and Demir (2013) studied high school students’ media and television literacy levels and their critical thinking dispositions. California Critical Thinking Disposition Inventory (Facione, Facione & Giancarlo, 1998, adapted to Turkish by Kökdemir, 2003) was conducted to measure critical thinking dispositions and Scale of Media and Television Literacy Levels (Korkmaz & Yeşil, 2011) was conducted to measure media literacy. The results revealed a low level positive correlation between students’ critical thinking scores and media literacy scores ($r (402) = 0,16$; $p<0,01$).

Yiğit (2015) studied primary school teachers’ media and television literacy levels and their critical thinking dispositions. California Critical Thinking Disposition Inventory (adapted to Turkish by Kökdemir, 2003) was conducted to measure critical thinking dispositions and Scale of Media and Television Literacy Levels (Korkmaz & Yeşil, 2011) was conducted to measure media literacy. The results revealed that teachers’ scores of media literacy and critical thinking are medium level and there is a low level positive correlation between students’ overall critical thinking scores and media literacy scores ($r (159) = 0,162$; $p<0,05$).

Nalçacı et al. (2016) examined the correlation between media literacy and critical thinking levels of preservice teachers at the department of social studies. California Critical Thinking Disposition Inventory (Facione, Facione & Giancarlo, 1998, adapted to Turkish by Kökdemir, 2003) was conducted to measure critical thinking dispositions and Media Literacy Level Determination Scale (Karaman & Karataş, 2009) was conducted to measure media literacy. The analysis results revealed that there was a statistically significant correlation between students’ media literacy and critical thinking levels ($r(284) = 0.07$, $p > .01$).

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Aybek (2016) studied prospective teachers' media and television literacy levels and their critical thinking dispositions. California Critical Thinking Disposition Inventory (adapted by Kökdemir, 2003) was conducted to measure critical thinking dispositions and Scale of Media and Television Literacy Levels (Korkmaz and Yeşil, 2011) was conducted to measure media literacy. The results revealed a medium level positive correlation between students' overall critical thinking scores and media literacy scores ($r(166) = 0{,}317$; $p<.01$).

Leon (2016) aimed to characterize ninth graders' comprehension of media messages when engaged in EFL media literacy activities. Strategies of questioning and discussing were used to promote critical thinking skills of students. The results of this qualitative study revealed that the use of these two strategies helps students begin to use their critical thinking skills to analyse media messages and to express their points of views. Leon (2016, p. 5) highlights that media necessitates critical thinking education in the same way that higher order critical thinking requires the implementation of a set of activities which challenge students' mental processes.

Karaman (2016) examined the correlation between media literacy and critical thinking levels of prospective teachers at different departments. California Critical Thinking Disposition Inventory (Facione, Facione & Giancarlo, 1998, adapted to Turkish by Kökdemir, 2003) was conducted to measure critical thinking dispositions and Media Literacy Level Determination Scale (Karaman & Karataş, 2009) was conducted to measure media literacy. The analysis results revealed that prospective teachers had a medium level of media literacy, but a low level of critical thinking. There is a low level positive correlation between students' overall critical thinking scores and media literacy scores ($r\ (547) = 0.247$; $p<.01$).

Erdem and Erişti (2017) examined the correlation between media literacy and critical thinking levels of prospective teachers. UF/EMI Critical Thinking Disposition Instrument (Adapted by Ertaş-Kılıç & Şen, 2014) was conducted to measure critical thinking dispositions and Media Literacy Skills Scale (Erişti & Erdem, 2017) was conducted to measure media literacy. The analysis results revealed that prospective teachers had a medium level of media literacy and critical thinking. There is a medium level positive correlation between students' overall critical thinking scores and media literacy skills scores ($r\ (517) = 0.432$; $p<.01$).

Though empirical research on the relationship between media literacy and critical thinking is limited, the cited studies above confirm the significant relationship between the two concepts as suggested in theoretical studies. Most of the quantitative studies identify the positive

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correlation and qualitative studies also report how these two important skills are related and how they mutually contribute to each other. For integration of media literacy and critical thinking in school curricula, more studies are needed. Further studies should search for this relationship and in which ways they can be integrated in instruction should be discussed. Future studies may also dwell on teacher training on media literacy and critical thinking in both pre-service and in-service periods for providing students with better learning opportunities.

Conclusion

This chapter aimed to put forth the relationship between media literacy and critical thinking. To this end, a body of knowledge on media literacy and critical thinking is provided. After the explanatory information, the relationship between these two concepts is formed based on a theoretical review. This review puts forth the reciprocal relationship between media literacy and critical thinking. Besides, how these two concepts can be integrated in schools and what aims they can be used for are explained. Following the theoretical review, a review of empirical studies in the literature is also provided. The empirical studies prove the correlation between media literacy and critical thinking even though some of the studies revealed a low-level correlation. For a better understanding of this relationship, more research is needed, particularly mixed-type studies that put forth both qualitative and quantitative data. All in all, both the theoretical and empirical review suggest that media literacy and critical thinking are inherently related and they should be integrated across the curriculum for cultivating a critical youth taking advantage of the media-driven era rather than being negatively affected by it.

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CHAPTER FIVE

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN CRITICAL PEDAGOGY APPROACHES AND DEMOCRATIC ATTITUDES OF PROSPECTIVE TEACHERS

GAMZE KAPLAN, ESMA NUR KARAMEŞE
AND NURAN BAŞOĞLU

Introduction

Critical pedagogy has its roots in Marxist tradition and can be described in the most general sense as a discussion and interpretation of the problems within the education systems. Critical pedagogy, which can be evaluated as an alternative to traditional education, considers the school as a fundamental part of the social and political structure of the society (İnal, 2010; McLaren, 2011). As understood from the definition, critical pedagogy, introduced as the new sociology of education (McFarland, 1999), is concerned with what education is, for whom governments make educational reforms, and why these reforms are generated (Giroux, 2007, 2009).

Critical point of view in education is often associated with the concepts of liberation, enlightenment and empowerment (Tutak, Bondy & Adams, 2011). In Pedagogy of the Oppressed, Freire (2013) advocates a policy of liberation and argues that there is no such thing as an "objective educational process". According to Freire (2013), education is a political concept and is used to maintain or oppose the authority. In other words, education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which individuals deal critically and creatively with reality and recognize how to participate in the transformation of their world (Freire,

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2013). In sum, critical pedagogy, which derives its origins from the view of social and educational justice and equality, regards an individual as a part of community development. The purpose of using critical pedagogy is to remove the hierarchical gap between students and teachers (Yıldırım, 2010).

Critical pedagogy focuses on four main topics:

1. Critical pedagogy deals with the curriculum, the educational policies, the schooling rate, social justice and the potential of the individual.
2. According to critical pedagogy, education is a deeply influential approach to country policy.
3. In critical pedagogy, it is very important to reduce social problems. Thus, it becomes possible to achieve a real democratic society.
4. Critical pedagogy deals with groups or individuals who have problems, especially in social life, such as discrimination and poverty (İnal, 2010; Kincheloe, 2004).

Critical pedagogy discusses the relationships and problems between institutions and education systems in terms of philosophical, sociological, ideological and political aspects, and aims to remove the problems that have an impact on the education system such as inequality, economy, democratization, discrimination and corruption (Glenn, 2002; McLaren, 1993, 1998; Yıldırım, 2010). Accordingly, it emphasizes that schools should be structured as institutions responsible for eliminating all kinds of discrimination such as exploitation, racism, sexism, and promoting social justice for all groups in a society (Yılmaz & Altınkurt, 2011).

Being critical does not have the same meaning with being negative. Educators with a critical perspective are loyal to democratic principles such as equality and justice. They try to expose students to critical perspectives that enable them to examine social justice around the world. The objective of critical pedagogy is not just transmission of knowledge to students. One of the aims of critical pedagogues is to enable students to become active members of a democratic society. For this reason, it argues that the purpose of education is to provide social transformation necessary for a democratic society (Bercaw & Stooksberry, 2004). Schools should encourage students to develop capability in critical thinking as they learn to generate and evaluate knowledge (McLaren, 2007). Students, particularly in higher education, should be encouraged to gain critical thinking skills and sense of social responsibility rather than merely providing them with a general education (Giroux, 2009).

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The concept of democracy, which is emphasized on the basis of critical pedagogy, is a form of government based on human rights and freedoms, in which the majority form the policy, the minority has right to participate and to criticize (Gömleksiz, 1988). When democracy is evaluated in terms of the individual, it means that the individual has the right to legal remedies and obtains a right and freedoms in a society without being under any threat (Tuncel & Balcı, 2015).

In order to develop democracy, individuals need to internalize democracy and reflect it in their lives. At the present time, it is very important to grow up as individuals who respect different views, and to develop positive ideas about democratic engagement and human rights and freedoms (Kwak, 2007). Democracy, which can be considered as one of the values passed down from generation to generation, has an important place in education system. For this reason, teacher's perception and attitude of democracy, one of the most important parts of the education system, become important in educating the future democratic citizens (Tuncel & Balcı, 2015).

Democratic attitudes are learned tendencies that lead the individual to show certain behaviours towards certain people, objects and situations in accordance with democratic principles (Gömleksiz, 1994). Democratic education aims to educate individuals who adopt democratic attitudes and behaviours, who are independent, productive, respectful, able to make their own decisions and who can build good relations (Karasar, 1979). The survival and sustainability of democracy in educational institutions occur when relations among school administration, teachers, students, parents and the environment are carried out in accordance with human rights and freedoms (Bilgen, 1994; Demirbolat, 1999; Gözütok, 1995). Schools, which are one of the important steps in learning and which include models of social rules, are ideal environments for teaching and adopting the concept of democracy. Another important factor that develops democratic attitudes and behaviours in individuals is family. However, parents are inadequate to the development of these attitudes and behaviours, thus schools and teachers have great responsibility (Üstün & Yılmaz, 2008).

When the concepts of critical pedagogy and democratic attitude are considered in the field of teacher training, it is understood that teachers should support concepts such as equality, democracy, justice, social sensitivity and freedom in the classroom environment. In order to achieve this goal, the teacher needs to know the democratic values and transform these values into behaviour (Büyükkaragöz & Kesici, 1996; Demirbolat, 1999). The reason is that beliefs, attitudes and behaviours of teachers who are direct models in the classroom environment also affect the attitudes

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and behaviours of the students and they become a decisive factor on student behaviour after learning-teaching process (Çankaya & Seçkin, 2004). Thus, they will be able to both guide students and also make instructional practices about the concepts mentioned in their classes. Accordingly, in this study, the aim is to determine the relationship between critical pedagogical approaches and democratic attitudes of the prospective teachers who studies in various departments of the faculty of education.

Method

In this study conducted to determine the relationship between democratic attitudes and critical pedagogical approaches of prospective teachers, the relational screening model was used. The relational screening model is a research model aiming to determine the presence and/or level of change between two or more variables and to specify the relationships between the variables (Karasar, 2004).

The study was carried out with the senior prospective teachers in Ereğli Faculty of Education. A total of 320 prospective teachers studying at the departments of Turkish Language Teaching (n = 38), Special Education (n = 56), Classroom Teaching (n = 37), Social Sciences (n = 21), Science (n = 35), Mathematics (n = 23), Preschool Teaching (n = 71) and Psychological Counselling and Guidance (n = 39) participated in the study.

Data collection tools

Democratic Attitude Scale: The validity and reliability analysis of the scale, which is used to determine the teachers' democratic attitudes, was conducted by Gözütok (1995). There are 50 items on the scale, 32 of which are positive and 18 are negative. Scale score ranges between 0-50 and the high score on the scale shows that the democratic attitude of the individual is high. Items of the scale are answered in the form of "I agree" and "I do not agree". It was given 1 for the "I agree" and 0 for the "I do not agree". Negative items of the scale were coded in the opposite direction of positive items.

Critical Pedagogical Principles Scale: The scale was developed by Yılmaz (2009). The 31-item scale is a five-point Likert scale and consists of the following options: "I absolutely agree", "I agree", "neutral", "I do not agree" and "I absolutely do not agree". The scale consists of 3 sub-

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dimensions as "Education System, School Functions and Liberalizing School".

Data collected were analysed by Mann Whitney-U and Kruskal Wallis H tests using SPSS program.

Findings and discussion

The Pearson correlation coefficient was used to determine whether there was a relationship between democratic attitudes and critical pedagogical approaches of the prospective teachers. When the results were examined, it was found that there was a significant relationship between school function and liberalizing school sub-dimensions, while there was no significant relationship between democratic attitude and education system sub-dimension.

Table 5-1. The Relationship between Critical Pedagogy Approaches and Democratic Attitudes

		Education System	School Functions	Liberalizing School
Democratic Attitude	PearsonCor.	-,021	,460**	,137*
	Sig. (2-tailed)	,714	,000	,014
	N	320	320	320

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

The Kruskal-Wallis test was conducted to determine the dimensions from which the differentiation originated and to determine the significance of the differences between the groups' mean. When the results were examined, it was understood that prospective teachers’ democratic attitudes and critical pedagogy approaches differed according to the departments they studied. In order to understand better the difference according to the departments, bilateral combinations were created from the departments and compared with the Mann-Whitney U test.

Table 5-2. Difference between Democratic Attitudes of Prospective Science Teachers and the Other Departments

Departments	N	M	p
Science Teaching	35	34,91	,000
Preschool Teaching	71	62,66	

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Science Teaching	35	29,23	
Special Education	56	56,48	,000
Science Teaching	35	22,47	
Psychological Counselling and Guidance	39	50,99	,000
Science Teaching	35	27,00	
Classroom Teaching	37	45,49	,000
Science Teaching	35	21,61	
Social Sciences Teaching	21	39,98	,000
Science Teaching	35	26,33	
Turkish Language Teaching	38	46,83	,000

The results showed that democratic attitudes of prospective teachers studying in the department of Science Teaching was lower in favour of the other departments. The prospective teachers at the departments of Psychological Counselling and Guidance, Special Education, Pre-School Teaching and Turkish Language Teaching had a higher democratic attitude. The following table shows the significant differences between these departments:

Table 5-3. Difference between Democratic Attitudes of Other Departments

Departments	**N**	**M**	**p**
Mathematics Teaching	23	30,96	
Special Education	56	43,71	,024
Mathematics Teaching	23	21,76	
Psychological Counselling and Guidance	39	37,24	,001
Pre-school Teaching	71	50,57	
Psychological Counselling and Guidance	39	64,47	,028
Psychological Counselling and Guidance	39	43,99	
Classroom Teaching	37	32,72	,026
Psychological Counselling and Guidance	39	45,26	
Turkish Language Teaching	38	32,58	,013

($p<.05$).

It was found that there were statistically significant differences when the opinions of the prospective teachers about the sub-dimensions of the

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critical pedagogical principles were examined according to their departments. As a result of the analyses to determine which groups caused differences, it was determined that the opinions of the prospective Turkish Language teachers in the dimension of "Education System" showed a statistically significant difference in favour of Science, Pre-School, Special Education and Social Sciences Teaching.

Table 5-4. Comparison of Sub-dimension of Education System

Departments	N	M	p
Science Teaching	35	43,04	,019
Turkish Language Teaching	38	31,43	
Pre-school Teaching	71	59,46	,044
Turkish Language Teaching	38	46,66	
Special Education	56	53,80	,006
Turkish Language Teaching	38	38,21	
Social Science Teaching	21	36,40	,033
Turkish Language Teaching	38	26,46	

($p<.05$)

In the dimension of "School Functions", it was determined that the opinions of the prospective Science teachers showed a statistically significant difference in favour of prospective Pre-School, Special Education, Psychological Counselling and Guidance and Turkish Language teachers.

Table 5-5. Differences between Prospective Science Teachers and the Other Departments in the Sub-Dimensions of School Functions

Departments	N	M	p
Science Teaching	35	56,97	,001
Pre-school Teaching	71	51,79	
Science Teaching	35	33,13	,000
Special Education	56	54,04	
Science Teaching	35	24,93	,000
Psychological Counselling and Guidance	39	48,78	

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Science Teaching	35	28,81	,002
Turkish Language Teaching	38	44,54	

(p<.05).

It was determined that the opinions of prospective Psychological Counselling and Guidance teachers opposed to prospective Mathematics, Pre-School, Classroom and Social Studies teachers; the opinions of prospective Pre-School, Special Education and Turkish Language teachers opposed to prospective Classroom and Social Studies teachers (p<.05).

Table 5-6. Differences between Departments in the School Functions Sub-Dimension

Departments	**N**	**m**	**p**
Mathematics Teaching	23	23,59	,008
Psychological Counselling and Guidance	39	36,17	
Pre-school Teaching	71	50,98	,044
Psychological Counselling and Guidance	39	63,73	
Pre-school Teaching	71	59,11	,034
Classroom Teaching	37	44,65	
Pre-school Teaching	71	50,80	,004
Social Science Teaching	21	31,95	
Special Education	56	53,33	,005
Classroom Teaching	37	37,42	
Special Education	56	44,82	,002
Social Science Teaching	21	23,48	
Psychological Counselling and Guidance	39	47,18	,000
Classroom Teaching	37	29,35	
Psychological Counselling and Guidance	39	37,15	,000
Social Science Teaching	21	18,14	
Classroom Teaching	37	32,50	,031
Turkish Language Teaching	38	43,36	

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Social Science Teaching	21	21,57	,005
Turkish Language Teaching	38	34,66	

(p<.05).

In the dimension of "Liberalizing School", it was determined that the opinions of prospective Special Education teachers opposed to the other prospective teachers. When the opinions of the prospective Pre-School teachers were examined, it was determined that there was a significant difference in favour of the prospective Classroom teachers and Science teachers.

Table 5-7. Differences between Departments in the Sub-dimension of Liberalizing School

Departments	N	M	p
Science Teaching	35	44,04	,025
Special Education	56	58,16	
Mathematics Teaching	23	27,07	,001
Special Education	56	45,31	
Pre-school Teaching	71	56,18	,006
Special Education	56	73,92	
Special Education	56	53,04	,031
Psychological Counselling and Guidance	37	40,76	
Special Education	56	57,24	,000
Classroom Teaching	37	31,50	
Special Education	56	44,82	,000
Social Science Teaching	21	23,48	
Special Education	56	53,28	,012
Turkish Language Teaching	38	38,99	
Pre-school Teaching	71	59,32	,025
Classroom Teaching	37	45,24	
Science Teaching	35	44,04	,025
Pre-school Teaching	71	58,16	

(p<.05).

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As a result of the literature review, no study on the views of Special Education Teachers on the critical pedagogical principles was reached. In the studies conducted with the other departments, it was found that, in general, the students at the departments of English, Turkish Language and Literature, and Geography had more positive views than the prospective Mathematics teachers (Aslan & Kozikoğlu, 2015; Sarıgöz & Özkara, 2015); also, the prospective History and Philosophy teachers had more positive views than the prospective Biology and Physics teachers (Yılmaz & Akkurt; 2011). On the other hand, some research results showed that the departments are not a decisive factor on the views of the critical pedagogical principles. (Şahin, Demir & Arcagök, 2016; Terzi et al., 2015).

Conclusions and recommendations

While positive sciences are based on positivist paradigm, social sciences are based on post-positivist paradigm. As a consequence of this situation, there is a tendency to look for a single truth and objective reality in positive sciences. In social sciences, a subject-centred, pluralistic approach is adopted (Yıldırım & Şimşek, 2011). Critical pedagogy, which advocates the liberalization of the individual and an understanding of individualized education, is more consistent with the post-positivist paradigm. Based on this result, it can be said that prospective teachers who have graduated from the programs, having the social science qualifications, have a more liberal educational understanding than those who graduated from the positive sciences.

It was found that there was no significant difference between democratic attitudes and critical pedagogy approaches of prospective teachers, studying in eight different departments, according to gender and age variables. This result is consistent with the results from previous studies (Aslan & Kozikoğlu, 2015; Biçer, Er & Özel, 2013; Karabulut & Ulucan, 2012; Rakıcıoğlu, 2005; Sarıgöz & Özkara, 2015; Terzi, 2005; Tümkaya, 2012; Yılmaz & Altınkurt, 2011). Accordingly, it can be said that gender and age are not determining factors in the studies on democratic attitude and critical pedagogy approach.

In the sub-dimension of liberalizing school, the students of the department of Special Education differ significantly from all the other departments because of the following reasons:

- the concentration of courses in which students with special needs can participate in educational activities with their peers equally,

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- emphasizing education rights for all persons with disabilities with these courses;
- being aware of the fact that the students with disabilities are not as free as the peers in the schools,
- being aware of the inadequacy of the educational environment to prepare students with special needs for living independently in society.

According to the analysis and forecast results, the following suggestions are offered:

1. In this study, it was aimed to make a general evaluation among teaching programs. In further studies, teaching programs can be evaluated on the basis of department.
2. The sources of the differences among departments can be determined by supporting the findings with qualitative data.
3. Teachers should discover elements of their own ideology to be critical educators. They must critically analyse the curriculum, the texts, the materials, and their verbal and nonverbal transactions in the classroom (Graziano, 2008). In order to raise their awareness on critical pedagogy approach, the teacher training programs should be reorganized.
4. Curriculum-based arrangements can be made in areas closer to the positivist paradigm in teacher training programs. Courses can be added to programs to support critical pedagogy approaches and democratic attitudes of prospective teachers.
5. It is also suggested that pre-service and in-service trainings should be provided to prospective teachers in terms of democratic attitudes and critical pedagogy approaches as a necessity of values education which is prominent in education systems.

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SECTION II:

STUDIES IN APPLIED LINGUISTICS

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CHAPTER SIX

THE LATEST DEVELOPMENT OF A REAL-WORLD LEARNING ENVIRONMENT: DIGITAL KITCHEN

JAEUK PARK

Background: Technology-Enhanced learning environment

Globalisation in the 21st century continues to progress at a rapid pace and influence every single aspect of people's lives around the world. In particular, the constant advancement of modern technology has contributed to the development of pedagogy in the field of Computer-Assisted Language Learning (CALL) and Human Computer Interaction (HCI). A wide variety of learning technologies have emerged and provided the infrastructures to enable foreign language and culture learners to interact and communicate with one another, employing integrated forms of multimodal learning tools such as text, image, and video from a distance (Levy, 2007). This development has continued to the point where an increasingly large number of features are now combined in more sophisticated manners, shaping and changing our way of life.

HCI researchers have recently investigated the design and use of computer technology, putting more emphasis on the interfaces between users and computers (Hewett et al., 2004). Researchers in this field both observe the ways in which humans interact with computers, and design technologies that allow humans to interact with computers in novel ways. One of the new forms of HCI technology is a ‘‘real-world’’ digital environment called Digital Kitchen. The Digital Kitchen is a real-world environment where students can learn foreign language, culture and cuisine at the same time through cooking tasks. Given that the majority of studies have used online and virtual environments, the digital kitchen is a hugely significant improvement.

In order for applied linguists to be able to draw on this innovative development and adapt it to their own contexts using state-of-the-art

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technology, they may need an understanding of the development of technology-embedded learning environment. This chapter, therefore, aims to report on how the normal space of a kitchen has been gradually integrated with computer technology and developed as a learning environment and, additionally, report through interview data how students find their learning activity in this environment.

From normal

Domestic kitchen spaces are important sites of everyday life. Kitchens are places of social interaction, where family memories reside, communication happens, culinary traditions are created, and emotions are shared. The kitchen is also a physical and functional space where people work, cook and clean. It has advanced over time through the adoption and integration of a range of technologies, appliances, and devices into a digital kitchen.

Within the social sciences and the discipline of food studies, research literature on domestic kitchen and cooking has shed light on health and nutrition in the face of commercial and convenience food systems (Fernandez-Armesto, 2001; Jaffe & Gertler, 2006) and families' perspectives, practices, and experiences of home cooking (Dean & Gwen, 2012; Kaufmann, 2010; Short, 2006). This shows that kitchens and cooking activities as an important part of our daily lives have gradually received attention from social researchers. However, as rapid advancements in ubiquitous computing and smart devices have allowed for domestic digital and intelligent appliances, HCI researchers over the last decade have gradually transformed a normal kitchen into a smart one which has features of smart facilities and assistive appliances in place.

In the Assistive Kitchen research, a service robot was developed to operate autonomously in a sensor-equipped kitchen both to assist people in their household chores through physical action and to monitor health at the same time, using cognitive technical systems (Beetz et al., 2008; Rusu et al., 2008). Similarly, in the Intelligent Kitchen project, a human activity recognition system was used to predict the next action based on previously observed human behaviours (Nakauchi et al., 2005; Nakauchi et al., 2009). The system contained an LCD touch panel, which displayed a recipe with pictures, and a mobile robot which spoke and gestured the next movement. The Ambient Kitchen designed a space to help people with dementia (Olivier et al., 2009). It combined data projectors, cameras, RIFD tags and readers, and under-floor pressure sensing to establish a supportive real-world environment for food preparation and cooking. Another cooking supporter, MimiCook, was designed to minimize the mistakes people may

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make when cooking the meal (Ayaka et al., 2013; Chia-Hsun Jackie et al., 2006). Participants found the system very user-friendly. In studies of Cooking Navi, Cook and Cook's Collage, and Living Cookbook, visible technology has played a role in helping people not only to make foods, but also to become more engaged into social interactions (Lucia et al., 2007; Reiko et al., 2005; Tran et al., 2005).

Adopting these smart devices, a couple of studies attempted to improve the technology to make what users do in the space much more dynamic (Chi et al., 2007; Grimes & Harper, 2008; Paay et al., 2013). Chi et al.'s study was aimed at promoting health cooking by enhancing meal preparation and cooking process in a smart kitchen, whilst Grimes and Harper's work was designed to create technologies for positive food-human interaction in our daily life. Finally, Paay et al.'s (2013) research has investigated a social behaviour of cooking motivated by the way family members interact with each other in a communal cooking area. Attempting to uncover the meaning and practices of cooking in which the kitchens are viewed as sites where meaning is produced, as well as meals (Bell & Kaye, 2002), de Runa et al. (2010) has created a prototype, taking the kitchen as a place where friends and family members are able to receive mentoring support via the social interaction of cooking. However, the designs of technologies for the kitchen have usually been motivated by a desire to improve the efficiency of the task and thus address the problems in cooking in a kitchen, rather than support or complement language teaching and learning. It is only recently that this previously communal area for social interaction has started to come to the fore as a pedagogical platform for language learning. The next section reports on how the space of the kitchen could start to be used as a learning space.

To digital

The design of the digital kitchen was motivated by taking people in the early stages of dementia through multi-tasks in daily life, such as making a cup of tea or coffee (Wherton & Monk, 2008). In the study, researchers found out that it was important for people with dementia to develop a sense of autonomy when preparing meals in the kitchen, thus encouraging advances in pervasive computing technology for use in the kitchen. This led to the further development of technology that incorporated a fully integrated set of sensors and displays in the Ambient Kitchen to help people with dementia (Olivier et al., 2009). The Ambient Kitchen, as originally developed at Newcastle University, employed state-of-the-art digital technology, namely activity recognition and sensor technology, and

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was designed to provide people engaged in a kitchen activity with situated supports in the form of written and audio prompting.

This study has allowed computer experts (Patrick Olivier and team) and applied linguists (Paul Seedhouse and team) to make a greater contribution to the kitchen project by putting the prototype to use as a design tool, and hence push the boundaries of knowledge in the field. The development has recently been extended to the realm of language teaching and learning; Phase I of the French Digital Kitchen Project (Seedhouse et al., 2013). This study has attempted to integrate the digital technology and pedagogical design into a situated language learning environment where language and culture can be learned simultaneously, showing that the kitchen space has helped learning. The French Digital Kitchen was made by collaboration between researchers from different disciplines: applied linguists working on the integration of digital technology called the digital Table top with a task-based approach to language learning (Seedhouse & Almutairi, 2009) and computer scientists working on the establishment of previous kitchens. The French project took the principles of Task-Based Language Teaching (TBLT) out of the classroom and into the real-world environment to investigate how the situated environment helps language learning. It was quite a unique and original study in that the kitchen space was pedagogically used in relation to foreign language learning. Thus, the domain of the kitchen has begun to play a role as a learning environment for a wider audience. It subsequently led to Phase II of a Europe wide consortium.

The project team constructed a purpose-built kitchen that communicates and interacts with users in a European language, and gives them step-by-step cooking instructions via a Graphic User Interface. The European Digital Kitchen, an EU-funded language learning project, was developed initially by HCI technologists and applied linguists at Newcastle University. The project is called LanCook, which stands for ‘‘Learning languages, cultures, and cuisines in digital interactive kitchens’’. LanCook is a transnational collaboration which engages with major issues such as how to increase foreign language proficiency, and the contribution of language skills and motivation in the European Union, with a purpose of developing language learning materials for European languages and cuisines. This collaboration involves five different partners drawn from a range of language learning and teaching experts throughout Europe. Starting in December 2011, LanCook involved the development of task-based language learning materials for learners using a technology-enhanced digital kitchen to cook dishes linked to 7 different European languages and cultures: English, Italian, Finnish, German, Spanish,

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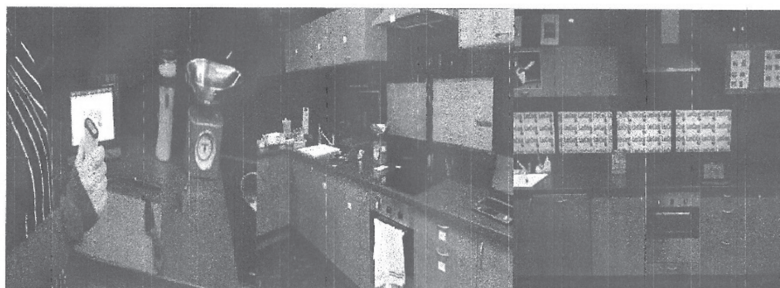
Catalan and French. The aim of producing learning materials is manifold: diversifying a series of activities to develop further materials; trialling the developed materials with a wide range of target learners; exploring the results of these trials; and ensuring that these materials are available to learners and teachers across Europe. To this end, all partners involved are creating and advancing the new materials with a wide range of users at CEFR levels A to C, including adult, higher education and vocational students as well as migrants and overseas students (Seedhouse et al., 2014). This study was significant because the results validated the fact that the kitchen in combination with technology can function as a place where foreign languages can be taught. The team showed that the kitchen developed a range of language skills (listening, speaking, reading and writing) in a holistic way; for example, English vocabulary was learned to a significant degree. The project had also theoretically established a strong basis for learning by employing a micro-analytic approach.

Nevertheless, the two phases have been limited from a theoretical point of view in that the languages used for LanCook were limited to those with the same orthography (Latin form) as research subjects' mother languages were European-based ones. This makes it desirable to explore if the digital kitchen is working for learners whose native language, culture and cuisine have different orthography from the target language, Korean. This consideration led to the next development of Phase II-α: The Korean Digital Kitchen as shown in Figure 6-1.

Figure 6-1. The Korean Digital Kitchen



The Korean Digital Kitchen (KDK) thus follows the trends of language learning and teaching methods and approaches, incorporating principles for second language learning from a range of fields, namely Computer-Assisted Language Learning (CALL), Human-Computer Interaction (HCI), Task-Based Learning and Teaching (TBLT) and anthropology. The

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KDK is an innovative development in language teaching and learning as it involves cutting-edge features in an interactive, effective, methodologically sound and sustainable framework (Olivier et al., 2009; Preston et al., 2015; Seedhouse et al., 2013; Seedhouse et al., 2014; Seedhouse, 2017). By building on existing design, implementation and evaluation of the digital kitchen, the KDK expands and develops these to create a new model.

How the Digital Kitchen assists learning

The participants were 48 adult learners from 20 different countries, living in Newcastle. Their ages ranged from 19-49 years and they were at beginner level of Korean. Semi-structured interviews were employed to elicit richer understanding of their learning activities, enabling me to obtain a richer description and understanding of social activity of learning (DeCuir-Gunby et al., 2011). The interview followed the two cooking sessions, and two participants in pairs were interviewed. In order to analyse this data, thematic analysis was used as it is a flexible analytic tool providing detailed account of data (Braun & Clarke, 2006).

By using interview data, the author was able to find how motivating a digitalized kitchen is and how its technological affordances such as self-organizability can enhance students' foreign language and culture learning. Much to the surprise, learners commented on a wide range of specific reasons for their preferences for the KDK as below:

> It's like I said just now experiencing it, I mean hands-on, using the chopstick compared to getting information from the video in the classroom, so the digital kitchen is totally different experience. (Kha)

> It's like learning how to ride a bicycle. You need a bicycle to learn how to ride. That's why you need actual chopsticks to use. (Ram)

> How can you learn how to use chopstick when you don't have chopstick in your hand? You can just look at from the picture, the direction how to put your fingers. I don't even know what that is. I use chopsticks at home. I use it the right way. But if you ask me how I put my fingers, I don't know. It's just naturally comes to me. So, it would be better to have objects in your hands. Not just flat pictures. (Lin)

> I think learning in digital kitchen is more experimental and helped me remember words or cultural more quick. (Lyi)

> Because I did it with my hands, I can easily recall, I can connect some image to connect to than the abstract one there, you're focused too

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imagining things. You might not get imagination right. So, I definitely prefer the kitchen. (Maa)

When you are actually doing something, you do build up some kind of memory. (Roi)

I think it has to do with the fact that it's hands-on experience. So, what you are learning the word, you're making the motions of it, so you can make association between the object you are using, the gestures you are using and the actual words, whereas in the classroom, it's photos. It's kind of like you really have to make an effort to commit what's in the photo to memory like ok so on in this photo we have this Korean word. (Mat).

Factors included hands-on experience, multi-sensory, Human-Computer interactions, affective motivation, products, autonomy, and cultural comparisons. This showed that an overwhelming number of comments valued experiential learning in a digital kitchen. The hands-on experience with actual objects made a big difference, contributing to changing their learning from abstract to real. Looking at photos allowed learners to benefit from two dimensions for learning (Mohsen, 2016; Paivio & Desrochers, 1981), whereas using real objects enabled them to take advantage of one extra dimension of touch, which helped connect vocabularies and cultural knowledges with their memories (Nation, 2001; Nattinger, 1988). Linguistic and cultural knowledge were captured better when they carried out a real-world activity of cooking – learning by doing (Doughty & Long, 2003). That is, the real-world task brought abstract concepts to life and made them easier to comprehend. This experiential learning even boosted learners' motivation and desire to gain more knowledge as in the Figure 6-2 below. ''Learning by doing'' occurred in the kitchen.

In particular, what could deepen their knowledge further was the involvement of their ''five senses'' – sight, smell, sound, touch, and taste. These senses were seen as a mediator for learners to link their experiences to their learning. Comments in bold indicate what they could use and the ones in underline how they evaluate them. On the whole, knowledge acquired in a digital kitchen was perceived as a platform for multi-sensory experiential learning (Trubek & Belliveau, 2009) as shown:

It also gives us the **taste** and also we can **feel** and **touch** because I really feel the yubu is a little bit oily and also chill, which is aspect *we cannot experience or we cannot tell from the pictures*. (Coc)

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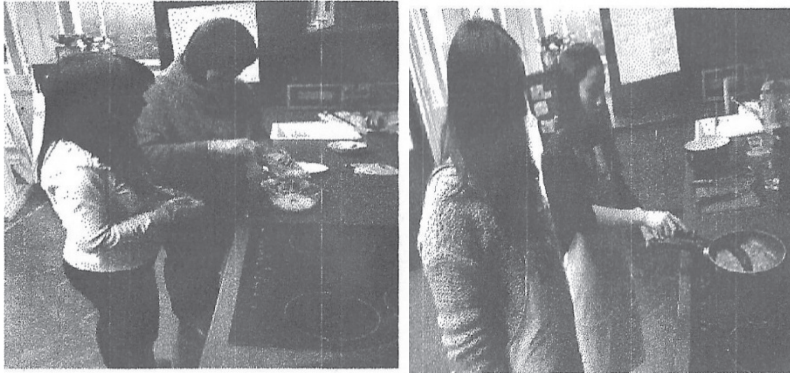
> We can use our **all senses** in the kitchen, *making us more remember* […] That is why so many people want to travel to feel the culture. (Jen)

> You can use **all your senses** from your eyes, smell and you can taste it with your mouth and your tongue, so it's more a *wholesome experience* rather than just visual thing. (Kha)

Figure 6-2. Actual cooking experiences



Students also reported another important distinction: interactions between their colleagues and the computer in the digital kitchen:

> Actually we communicate with each other about the words I know and the words she's got. So the way we exchange information in kitchen was quite kind of free environment. (Coc)

> I had the interaction with the computer […] it's very automatic and intelligent. (Jun)

> I can speak freely because after touching it, the voice before touching it the voice told me with a word and I touched it and oh it rang 'ding!' And then I know it was correct and I can pronounce it to follow the voice (Jia)

> It probably made the lesson more interactive to because when students I mean learning cooking, they have they also need to interact talk in English. So, it doesn't like interest students learn vocabulary or learn some cooking you know. Students have real interaction, more communication. (Jub)

> Well, it's more interactive and fun and we can touch there like many stuff there. (Mut)

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I had a control of the digital kitchen. (San)

If we cook in the system that provide help like in the digital kitchen and we have partner, so I have two sources to get help one from my partner and one from the system. (Sue)

The fact that learners had active interactions with another learner and the computer in a situation with no teacher indicated that the kitchen setting left room for them to be able to learn both linguistic and non-linguistic skills in an autonomous way – "supporting autonomous learning processes" (Seedhouse et al., 2014, p. 12). A student description made this evident:

I can learn by myself. Nobody rushes me, nobody waits for me, so I can have my own pace on what I am doing, and then once I finish, I finish one step, I can press the tick one and go on. So I think it's more comfortable. (Sum).

Last but not least, since the kitchen offered real objects with which to cook the Korean dishes, they could actually produce the food themselves and really enjoy it – what Ellis (2003) refers to as end products:

There was going to be a product at the end while learning. (Mar)

And the additional bonus was food at the end. (Mat).

These extra features seemed to explain why learners felt more motivated in their learning (Bax, 2003), according to comments:

I found the experience we had in the kitchen more and more interesting and more kind of more real and more motivating. (Muq)

I think that's what makes it more interesting and motivating. (Kha).

With regard to the cultural aspect, learners showed their ideas on similarities and differences between their own cultures and the target culture as would be expected as commented:

I think generally in Asia, the culture is quite similar to each other. How to use chopsticks and spoons. These are similar in the cooking. (Viv)

⌜Khalik: compared to using spoon or forks. Yeah that is the difference

Nur: yeah I think the utensil

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Khalik: because it is in our culture, it's more to using our hands」.

As they encounter a different way of life, they apply their knowledge to other cultures in the learning situation. In other words, they were developing their overall abilities of personal competence in terms of cultural knowledge (Stevick, 1986).

Thus, the KDK was a learning environment in which students carried out a real-world task with a clear goal in a real-world environment, which allowed for a multi-sensory hands-on experience with physical objects, human-computer interaction, autonomous learning, end products, cultural comparison, and consequently increased motivation. It was evident that all these factors transformed the way learners behaved.

Conclusions

This interdisciplinary novelty allows users to learn foreign languages as well as foreign culture in a real-world environment by performing the real-world activity of cooking. By interacting with the state-of-the-art computer system, users obtain linguistic and non-linguistic knowledge both by themselves and collaboratively. Importantly, learners find the activity itself enjoyable and pleasurable as they actually make the dish, which can be evaluated and eaten at the end. In other words, the innovation is a multi-modal, multi-sensory, and multi-learning (in the sense that language, culture and cuisine can be learned) experience.

Since the present study reflects on and sees the potentials of the pedagogical development of a normal kitchen using TBLT and CALL, it raises the possibility of pedagogical applicability for other real-world environments such as local community centres to be broadened and widened. This is surely one rich vein of research to continue in the future. This unique integration of technological and pedagogical properties has the potential to be a vehicle not only to disseminate a pervasive learning environment, but also to advance our understanding of pragmatic aspects of SLA.

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Wagner. The digital kitchen has also begun to be used as a multimodal learning environment, due to an applied linguist's innovative idea: Paul Seedhouse.

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CHAPTER SEVEN

MEASURING VOCABULARY SIZE IN MULTIPLE LANGUAGES

CSABA Z SZABO

Introduction

Learning and using multiple languages can be regarded today as the norm rather than the exception (e.g. Aronin & Singleton, 2012; Herdina and Jessner, 2002). Research conducted in the areas of bilingualism, second language acquisition (SLA), and multilingualism therefore challenge the role of the native-speaker or additive monolinguals (e.g. Cenoz & Gorter, 2011, Szubko-Sitarek, 2015). These studies corroborate that, due to their multilingual competence, speakers of multiple languages should be considered different from the traditionally defined second language (L2) learner (Cenoz, 2003; Gorter & Cenoz, 2016). The reasons for this derive from a myriad of sources meriting careful consideration.

Multilingual speakers differ considerably based on their prior language learning experience (e.g. Cenoz, 2003; De Angelis, 2007). De Groot and Kejzer (2000) state that the experience of learning a foreign language may facilitate the acquisition of subsequent languages, which can be a third language (L3) or any other non-native target language regardless of chronological order (Ln). This is largely due to the fact that speakers of at least two languages, when learning an additional language, may rely on their efficient learning strategies, cumulative learning experience, and prior linguistic knowledge. These can be classified as learner-related characteristics that may vary considerably from learner to learner.

Additionally, learners' background languages may share a number of linguistic similarities on several levels: lexical, morphological, phonological, syntactic and so on. Such similarities, or typological proximity, have been shown to influence not just the acquisition of a target language but to facilitate word retrieval or recognition, enhance processability or production,

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and reduce the burdens of learnability of novel target linguistic features (e.g. De Angelis, 2007; Otwinowska, 2016). As this chapter highlights, such compelling interconnections between certain languages, or cross-linguistic similarities, do not merely pertain to language-related factors.

On the cognitive level, several studies have posited that languages are not stored as separate, individual entities, but language competence is being seen as a holistic concept of an intertwined system where languages interact with one another at multiple levels (e.g. Daryai-Hansen et al, 2014; Falk & Bardel, 2010; Herdina & Jessner, 2002). This further supports the above assertion that "a multilingual is neither the sum of three or more monolinguals, nor a bilingual with an additional language" (De Angelis & Selinker, 2001, p. 44). Ample evidence suggests that bilinguals' and multilinguals' language learning trajectory, language processing, and use are considerably different from monolinguals learning an Ln (Cenoz, 2003; Jessner, 2008; Szubko-Sitarek, 2015).

Based on the above linguistic and cognitive, as well as learner-related or social factors derived from empirical studies conducted with multilingual speakers, it seems timely and fairly uncontroversial to suggest that linguistic or cognitive models exploring the intricacies of language knowledge from an idealized native-speaker or monolingual learner perspective are hence proving to be inadequate. Similarly, methodologies focusing solely on L2 learners' language development or certain features of their existing knowledge might hinder the understanding of other latent key components or emergent linguistic properties that can influence an interconnected linguistic system (e.g. Cenoz, 2003; Jessner, 2008; 2013; Szubko-Sitarek, 2015). Consequently, the aim of this chapter is to propose a unified methodological framework that takes a conciliatory view combining formal linguistic, cognitive, and social or contextual properties of language.

The necessity for a comprehensive framework that enables the investigation of multilingual informants at a finer level of granularity and abstraction is two-fold. First, as it is argued that cross-linguistic influences (CLI) are most observable at the lexical level (De Angelis, 2007), it becomes evident that a unified methodological framework that allows exploring different characteristics of multilinguals' mental lexicon would enable researchers to seek generalisability. Conversely, by being able to compare studies tapping into a number of well-controlled factors, findings can lead to more specificity. Employing comparable methodologies that account for all three factors (linguistic, cognitive, and social) would also be revealing for classroom practices, release the potential of replicability, and more importantly, open up the possibility of cross-cultural

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comparisons of real probabilistic contingencies in a more nuanced, theoretically informed, and reliable way.

Second, despite the myriad of multilingual communities, the size of the multilingual mental lexicon (or lexica) and the interaction between typologically related and more distant languages are surprisingly understudied, elusive, and intractable linguistic realities at present (Szabo, 2016; Szubko-Sitarek, 2015). Meara (1994; 2009) conceptualizes the mental lexicon as a three-dimensional model. He proposes that the mental lexicon comprises three constituents: size (the number of words learners know); organization (how words are structured and linked in terms of associations); and accessibility (how fast or fluently learners can access these words). This chapter is predominantly concerned with size.

While several valid and reliable tools have been advocated and employed to measure L2 learners' and native-speakers' vocabulary size (VS) in English (see Meara & Miralpeix, 2016; Milton, 2009; Nation, 2013; Read, 2000; Schmitt, 2010 for an overview), when it comes to cross-cultural comparisons or controlling the interference from background languages, these tests become less meaningful. Then, it is the responsibility of the researcher to take necessary steps to minimize the effect of transfer from learners' L1 or subsequent languages when testing English lexical knowledge. Although it is hoped that researchers engaged in vocabulary explorations consider carefully the societal, contextual, and linguistic aspects in their research, some of these are often left implicit and unaddressed.

Accordingly, there seems to be clear value in establishing a methodological framework that brings some degree of certitude to studies investigating the size(s) of multilinguals' mental lexicon. The aim here is neither to falsify extant methodologies nor to propose an out-of-the-box methodological framework. Instead, we aim to introduce a skeleton of concepts, ideas, and approaches that merit consideration in vocabulary research, especially in multilingual contexts. In turn, these should lead to mutually comparable results, academic rigour across a range of studies, and a better understanding of happenstance and probabilistic constituents of the mental lexicon.

The following section provides an outline of the proposed methodological framework by highlighting certain variables that operate and interact within the mental lexicon and have been empirically substantiated as influential when measuring VS. As a way of instantiation, this is ensued by an empirical study based on the proposed methodological framework. Finally, the framework is evaluated in terms of benefits,

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shortcomings, and limitations and these are discussed with suggestions for future directions of lexical studies.

Towards a holistic framework for investigating vocabulary size in multiple languages

The extant research on lexical knowledge and testing are far reaching and cover a number of pertinent questions. However, a parsimonious account that relies on the intricacies of multilinguality is still missing. Broadly speaking, lexical studies seek to answer the following questions: How many words do learners know and how can we measure this in a valid way? What is the relationship between VS and language proficiency or educational attainment? At what rate do learners acquire new words? At least two other rarely asked questions follow from this: Taking into account learners' background languages and the lexical similarities between certain languages, which words might learners already know and how can we support them in capitalizing on this knowledge? And, how can we control CLI in testing?

If interference from background languages is accounted for in lexical studies, this usually entails lexical transfer from the L1 (e.g. Schmitt, 2010), other known languages are rarely considered (see Szabo, 2016 for an exception). In the past, L1 transfer had a negative connotation, however, as Schmitt notes, "it was eventually realized that L1 influence can aid, as well as hinder, L2 learning" (2010, p. 72). With regard to the lexicon, some studies suggest that in the early stages of acquisition, L2 words, in terms of both form and meaning, are directly connected to L1 words (or concepts), and therefore the L1 can influence word recognition, retrieval, and the speed at which these are done (e.g. Kroll & Stewart, 1994).

The situation, however, can become more complex in multilinguality. According to Gabrys-Barker (2005), who adapted the *Revised Hierarchical Model* to L3, items in the multilingual memory are interconnected by lexical and conceptual links. Both types of links can exist within the same language or across languages. To explain the addition of new items to memory, Hall proposes the *Parasitic Model* (e.g. Hall, 2002; Hall & Ecke, 2003; Hall et al., 2009). This postulates that where similarities allow, new words integrate with the existing network "with the least possible redundancy and as rapidly as possible" (Szubko-Sitarek, 2015, p. 82). Thus, formal and semantic similarities between lexical items have an influence on how they integrate into the lexicon. Traditionally, words that share both formal and semantic similarities across two languages are

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called cognates (e.g. De Bot, 2004; Helms-Park & Dronjic, 2016; Schmitt, 1997). From a language acquisition perspective, cognates can also include loanwords/borrowings and internationalisms, regardless of etymological origin as learners are not necessarily aware of these (Jarvis, 2009; Otwinowska, 2016).

In Hall's view then, the meaning of a new word would become parasitically attached to the language (L1 or L2) that has an already known cognate in that language. Therefore, it becomes amenable to theorisation that some L3 words would have an initial form-meaning link with the L1 yet others would be connected to Ln, depending on cognate status and language dominance.

It emerges from the above that measuring learners' lexicon in English is more complex than previously thought. Cognates in various lines of enquiry have been shown to have a large effect on SLA and teaching (e.g. Carlo et al., 2004; Dijkstra et al., 2010). This is most commonly referred to as the cognate facilitation effect, which indicates that such lexis can aid language learning, comprehension, and can be used effectively in teaching. Jessner (1999) and Carlo et al. (2004) propose that already known languages should be used in EFL classrooms so that students can draw meaningful comparisons.

Congruent with this are the findings in different areas of psycholinguistics. Employing different experimental paradigms, these suggest that cognates are recognised faster than non-cognates in both visual (e.g. Lemhöfer et al., 2008) and auditory modalities (Marian & Spivey, 2003). Concurrently, similar cognate facilitatory effects have been found in word production (e.g. Kroll & Stewart, 1994); learners using different scripts (e.g. Kim & Davis, 2003) and the effect is considered to be stronger if the stimulus words are cognates in more than two languages (Lemhöfer, et al., 2004). According to Dijkstra et al. (2010) words are stored in an integrated fashion and due to lexical similarities such words can be activated in parallel in different languages. Furthermore, they affirm that the degree of form-similarity and frequency of cognates are influential determiners of this effect. Consequently, cognates can inform on how words are stored and retrieved from the mental lexicon and as such, how they influence lexical knowledge at different dimensions (see e.g. Milton & Fitzpatrick, 2014). While frequency of word occurrence is often regarded as the sole contributor to VS, it also becomes important to explore the effect of cognates.

Although cognates are most regularly investigated between languages that are etymologically related, studies indicate that VS can be influenced even by more distant languages. Stubbe (2014) examined the extent to

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which Japanese loanwords might interfere with English vocabulary tests. Using a yes/no and passive recall tests, he found that a greater number of loanwords were answered on both tests and more accurately so than non-cognates. This converges with Laufer and McLean's study with Hebrew and Japanese learners (2016). They also suggest that the advantage of cognates is most prominent in the case of lower level learners. Similarly, Elgort (2013) also found in the Russian context that cognates elicit more answers and this can provide an advantage to lower level learners. Helms-Park et al. (2009) examined the cognate facilitation effect by comparing Romanian and Vietnamese undergraduates of English in Canada. Romanian learners achieved significantly higher scores on cognates, while on non-cognates the two groups showed no difference. Interestingly, the Romanian group matched English native-speaker students on cognate items, which is a further argument for properly controlling cognates in lexical assessments.

It follows that CLI can affect test validity and bring unexpected results even in L1s that are not too close to English. Evidently, cognates in Romance and Germanic languages, which are lexically more similar to English, may place testing validity at a greater risk. Many (e.g. Milton, 2009; Nation, 1983; Schmitt, 2010) posited that the vocabulary knowledge of speakers of languages originating from Latin may be overestimated due to the high number of cognates. However, to our knowledge no previous studies have systematically addressed the nature and extent of this overestimation in a multilingual context (i.e. beyond the influence of L1). One exception is Szabo (forthcoming), which found that the overestimation for Romance language speakers (Romanian L2) could be as high as 50%, but the proportion and distribution of cognates also varies according to frequency. This emphasizes that controlling the frequency of cognates has clear value. Previous studies concluded that in order to control for such overestimation, the number of cognates in the test should follow the proportion of cognates in ‘‘real language'' (e.g. Elgort, 2013; Eyckmans, 2004; Meara, Lightbown, & Halter, 1994). This raises the question of how we can reliably quantify the effects of cognates based on their proportion in real language. This brings us to some linguistic aspects that are worth considering when measuring the lexicon of multilinguals.

Generally, from a cross-linguistic perspective, words can be placed into three broad categories: cognates, false cognates, and non-cognates. Cognates include orthographically/phonologically identical (e.g. *sport*; identical cognate in EN, RO, and HU among many) and partial cognates that share a core meaning across two languages (e.g. *calculate* or *invite*-EN; *calcula* or *invita*-RO). Often the semantic degree of congruence is

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context dependent, i.e. some words do not have all the meanings in another language. For example, Romanian, Spanish, German, and even Hungarian students recognize with ease the word *bank* (RO: *bancă*; SP: *banco*; GE: *die Bank*; HU: *bank*) on a lexical decision task or even attach the most common meaning to it (*financial establishment*). However, in a reading comprehension or productive task in which it is used with the meaning of *land alongside a river*, learners might have difficulties, unless they are familiar with this particular meaning in English already. In such instances, when there is no semantic overlap, cognates become deceptive cognates, or interlingual homographs/homophones (De Bot, 2004). For instance, *avertisment*, *confecționare* (RO) and *advertencia*, *confeccionar* (SP) closely resemble the English words *advertisement* and *confectionary*, but in fact, they mean *warning/sanction* and *fabricate*. These words, can represent deceptive items for learners, which can result in miscomprehension or production errors. This potential deceptive nature of cognates caused many language educators in the past to focus on false friends and completely mistrust cognates, and researchers to explore the negative effects of cognates (Granger, 1993). Others see this preoccupation with false friends as “stultifying and negative”, and promote the idea of deploying cognates as a positive source for retention (Pons-Ridler, 1984, p. 89).

VS tests have attempted to quantify lexical knowledge based on frequency of word occurrence or encounters. That is, the more frequently a word is used in a language, the more relative value they bear for learners. Similarly, the more often learners encounter a word, the more likely they will learn it (for a more in-depth discussion of frequency see e.g. Milton, 2009; Nation, 2013; Schmitt, 2010). However, to account for the effect of cognates, we also have to be able to quantify these in a systematic and principled way (see Szabo, forthcoming).

The English language is certainly a special case among languages, thus increasing the number of probabilistic contingencies. Albeit English is mainly categorized as a Germanic language, 75% of its lexicon derives from other languages (Winford, 2003), such as Latin (17%) and French (45%) (Van Gelderen, 2006). This means that the 10,000 most common English words are largely of Romance origin, creating a strong lexical connection between English and other Latinate languages, such as Italian, French, Romanian, and Spanish (Otwinowska, 2016; Szabo, forthcoming). In terms of number of cognates in English, several figures have been suggested. Meara (1993) estimates the number of English-Spanish cognates as 3,000 and the number of French-English identical cognates as 6,500 and non-identical as much as 17,000. The special status of English in the Germanic and Romance families has been confirmed by Schepens et

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al. (2012). They utilised computational tools developed in artificial intelligence and looked at orthographic similarity distributions of cognates across six languages. Their conclusions indicate that English shares the most cognates with French (9,286), followed by Dutch (8,609), Spanish (7,837), and then German (7,750). Additionally, English is the language that shares the most cognates with all other languages.

In relation to the proportion of cognates and false cognates between Spanish and English, Morán-Molina (2010) points out that the General Service List consists of 32% of cognates, whereas the Academic Word List comprises 71% of cognates in comparison to only 7% of false cognates. Overall, he argues that there are over 20,000 real cognates compared to only 200+ false cognates. Hammer and Monod (1976) approximate the ratio of English-French cognates to deceptive cognates as 11,000 to 950, and intimate that on the one hand, studying cognates could largely reduce the memory effort required to master vocabulary. On the other hand, using false cognates incorrectly is not the most enduring type of error when it comes to language acquisition. Most recently, Szabo (forthcoming) looked at Romanian, Spanish, and Hungarian cognates in English. He extrapolated that while these two Romance languages share approximately 50% of cognates in the most frequent 10,000 words of English, false cognates only reach 3%. However, as mentioned previously, cognateness can be better described on a continuum and is largely context dependent. Nevertheless, these figures point to the importance of systematically accounting for cognates in vocabulary tests.

Finally, the third factor that should be taken into account when measuring VS in multiple languages are learner-related factors. As the study presented in this chapter highlights, these factors can be revealing in understanding the multilingual mental lexicon. Moreover, from a methodological point of view, learner-related data are not too time consuming to gather and the results complement well the above two factors (linguistic and cognitive). To exemplify some of these learner-related factors, learners' predisposition towards background languages, age of acquisition of the L2 and Ln, the ability and extent to which they can actually recognise cognates, learners' perception of cognates, and maybe self-rated confidence and proficiency in the known languages can be mentioned. For instance, Szabo (2016) found that learners who started learning their L2 and L3 earlier not just scored better on vocabulary tests, but also felt more confident and proficient in that language. Surprisingly, the results also suggested that despite the (psycho)typological similarity between English and Romanian, learners relied more on their Hungarian L1 when searching for words in English. Learners also reported that

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their lack of Romanian knowledge might impede drawing a comparison between the two languages on a lexical level.

Table 7-1. Methodological Framework

Methodological Framework for Measuring Vocabulary Size in Multiple Languages		
Linguistic factors	**Cognitive factors**	**Social factors**
• Typological distance between BLs • Proportion and distribution of cognates between BLs and TL • Frequency of cognates in the BLs and the TL • Type and number of cognates: Cognates, false cognates, loanwords, internationalisms, higher order words or field specific words of art/medicine/business etc. • The number of BL cognates are shared in (bilateral or multilateral cognates?) • Other wordlikeness factors that can influence lexical recognition, recall, processing, or learnability • Latinate vs non-alphabetic scripts • (dis)similarities and	• Proficiency in the BLs and TL • Relationship between lexical knowledge and accessibility: do learners with a large L1/L2 vocabulary know more TL words? • Predictive value of cognate knowledge in BLs for lexical/cognate knowledge in the TL • The extent to which cognates are recognized, recalled across the BL and TL (i.e. if a cognate is known in the BL is it also recognized as a translation equivalent in the TL; cognate recognition skills) • Processing of cognates in the BLs and TL • Potential impact if typologically closer language is not an L1 on the extent to	• The relationship between vocabulary size/accessibility, and language dominance or recency of use • The effect of memory, IQ, age, self-perceived proficiency and confidence in BLs and TL • Predisposition towards the L2 or TL • Socio-cultural, educational, economic context of learning/using the BLs and TL • Learners' perceived (psychotypological) distance between their languages • Learners' perception of the effect/use of cognates • Learners' language learning strategies – i.e. to what extent they draw on interlinguistic similarities

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regularities of affixes between typologically close languages • Orthographical and phonological similarities between BLs and TL • Semantic differences between cognates: do they refer to the same concept and in the case of polysemous words how many of the referents do they share • Morphological, syntactic, pragmatic or other congruencies between languages that can influence lexical knowledge and development	which learners can recognize, recall, process or learn easier cognates (i.e. proficiency in the L2/Ln might be important) • The extent to which treatments/instruction facilitates cognate recognition, recall, processing, or learnability • Accessibility of cognates (are they accessed faster across languages, are bi- or multilateral cognates processed differently?) • Dimensions of lexical knowledge: are cognates/word parts/affixes known to the same extent across BLs and TL?	• Learners' cognate recognition/learning strategies – i.e. have they previously had awareness of such similarities, is it automatic, is instruction helpful depending on age, proficiency, needs etc. • Difference between monolinguals, bilinguals, and multilinguals in terms of vocabulary size and development • Individual/cross-cultural variations in all of the above

Taken together, the aforementioned suggests that there are some influential linguistic, cognitive, and learner-related factors that merit careful consideration when exploring the size of multilinguals' lexicon. Controlling for the synergy between these factors is considered to address the drawbacks of previously deployed monostratal methodologies and paint a comprehensive picture of the nature, pervasiveness, and interconnectedness of vocabulary sizes. Table 7-1 attempts to summarize these and other factors that might be included in a methodological framework. To reemphasize, the aim here is not to provide an exhaustive selection of all possible factors. Teachers and researchers should be able to adopt and adapt these, depending on their learners and language constellations examined. Finally, the mutual influence of such factors in practice might enable researchers to develop more nuanced and theoretically more valid assessment tools.

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An empirical study

The overall aim of the study was to investigate the link between Romanian (L2) and English (L3) lexical knowledge in the case of Hungarian native-speakers living in Romania. The selection of potentially influential variables was made a priori based on the above-presented methodological framework.

Evidently, no study can account for all aspects of each factor represented in Table 7-1. However, it seems important that some of these factors impacting on the multilingual lexicon are addressed in order to aim for greater transparency, methodological rigour, and reproducibility. The controlled factors will depend on available corpora or lexical test in the languages under study, the degree of similarity between the languages, context, and formulated research questions. Vocabulary knowledge, as defined by Nation (2013), can be conceptualized as a tripartite model of *form, meaning,* and *use.* Each of these may be further broken down into the receptive and productive dimensions and, within each of these, further subcategories can be defined. For example, *use* can refer to collocations, associations, stylistic variations etc. Although multilinguality can arguably influence each aspect of Nation's word knowledge taxonomy and the proposed methodological framework can facilitate the exploration of any singular (e.g. form recognition) or combinatorial (e.g. form-meaning recall and collocational use) dimensions of vocabulary knowledge, the empirical study chosen here as an example focuses only on receptive form-meaning recognition. The following section provides an overview of the factors selected and the reasons for opting for these.

The foundation of this study was that despite the wide body of research pointing to an undeniable facilitatory effect of cognates, research that systematically investigates a specific L2's influence on English as an L3 in terms of VS is still missing. Cognates can have an effect on not just learning, processing, and using a foreign language, but on vocabulary testing as well (see Szabo, 2016). It also transpires that although there is a clear link between age of acquisition, proficiency, and inter alia, (psycho)typological distance between learners' background language and the acquisition of an L2, studies that compare VS in two languages, thus investigating the relationship between the two, are rare.

Linguistic factors

Researching VS in multiple languages and the relationship between these are complicated by the scarcity of valid non-English lexical tests

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which are based on frequency information. To compare L2 and L3 lexical knowledge on different levels, such tools are considered a prerequisite. The Romanian vocabulary test (RomVLT) used in this research sampled items from the Romanian Word List (Szabo, 2015). The criteria are based on the Vocabulary Levels Test (VLT) developed by Nation (1983), which is a form-meaning multiple matching diagnostic test that samples items from the 2k, 3k, 5k, 10k most frequent words of English and the University Word List.

Since neither the word lists that the VLT is based on nor the VLT accounts for the proportion and distribution of Romance cognates, the strategy used here was to follow the number of cognates in each frequency band given by Nation's random sampling method. Additionally, part of speech was controlled across all bands. More recently, Szabo (forthcoming) conducted a more in-depth investigation of the proportion and distribution of cognates. This suggests that while overall the proportion of cognates on the VLT (48 out of 90 items) is approximately accurate, according to the individual frequency bands both the original test and the RomVLT should be revisited.

Considering the other factors in Table 7-1, the type of cognates should also be taken into account. As we know, quotidian English and Romance languages share a number of words derived from Latin and French. These are not just higher order or abstract words from arts and science, but form an essential part of general English (e.g. *long – lung, part – parte, course – curs, local – local, system – sistem, second – secund, group – grup*). Additionally, Romance languages share a number of loanwords and internationalisms from English. However, for reason mentioned above and due to their similarity in meaning, these have been categorised as cognates too.

The multilinguals under focus here share Hungarian, Romanian and English. Other potential languages that they might have been exposed to are German and French. As Hungarian shares only a minimal amount of cognates with both English and Romanian, it was considered that this will provide a more finely grained comparison between lexical knowledge in these two languages. Furthermore, as the primary aim here was to establish the relationship between a Romance L2 and English L3, i.e. more dominant languages, other languages were not tested. Future studies examining the multilingual lexicon might be able to uncover other intricacies by testing beyond these languages (e.g. Szabo, 2016 looked at VS and accessibility in the L1, L2. and L3).

Finally, although the current study is limited to written receptive form-meaning mapping knowledge in Romanian and English, future studies,

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based on the proposed framework could realistically examine any dimensions of lexical knowledge in any language modalities.

Cognitive factors

The interest here fell on the relationship between Romanian L2 and English L3 lexica, depending on cognate knowledge and receptive lexical knowledge. This relies on Cumming's Interdependence Hypothesis, which suggests that language competence in one language predefines language knowledge in subsequent languages (e.g. 1979). In other words, a large vocabulary in the L1 or L2 should also indicate the potential of attaining a large vocabulary in the Ln. Since many cognates are shared in the two languages, it was also of interest whether learners recognize even more cognates following an explicit instruction on cognates. As Table 7-1 outlines, depending on the area of interest a number of variables can potentially be explored. For example, language teachers in multilingual settings might be interested in the extent to which students see cognates as translation equivalents based on context or whether they use them more frequently than other words with the same meaning. Another potential area of investigation could be whether cognate-induced texts facilitate reading speed or comprehension.

Social Factors

Controlling for social factors is less traditional in vocabulary studies than in other areas, such as psycholinguistics or sociocultural studies. However, in multilingual settings, as explained previously, some socio-cultural characteristics might prove to be revealing for a detailed analysis of the mental lexicon. Some of these factors are outlined in Table 7-1. The present study opted for a short questionnaire to gather some learner-related data that could be of interest. These included: age of acquisition of L2 and L3, learners' proficiency and confidence levels in these languages, learners' strategy of searching for L3 words, their perceived distance between the L2 and L3 (i.e. cognate awareness).

Research questions

- RQ1: What is the effect of explicit instruction on English-Romanian cognates?

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• RQ2: What is the relationship between overall lexical knowledge and cognate recognition in the L2 and L3?

Participants

The participants (N = 44) of the study were Hungarian native-speaker Romania nationals studying English at a university in Romania. The number of participants is divided unevenly between the study and control groups (n = 26 and 18, respectively). Two participants were not Romanian speakers and another two did not reach 16 on the Romanian tests. They all belonged to the Study group and their data have been excluded from subsequent analyses involving the test results.

Methods

Participants in the study group initially received a handout with structural information on Romanian-English cognates (i.e. examples of identical and orthographically similar cognates with regular and irregular affix correspondences) and this was then discussed. Subsequently, all participants filled out the pen and paper versions of the VLT and RomVLT (for a more detailed discussion of these tests and the reliability and validity of the results see Szabo, 2015), which was followed by the questionnaire.

Results and findings

Table 7-2. Descriptive statistics based on the experimental groups

Group		*N*	*M*	*SD*	*Min*	*Max*
VLT	Study	22	60.59	17.26	22	87
	Control	18	58.00	16.32	29	89
RomVLT	Study	22	52.86	23.08	16	87
	Control	18	62.50	18.63	34	90

The scores reported in Table 7-2 show that the Study group performed slightly better than the Control group and with similar consistency on the VLT. In Romanian, the effect appears to be reversed. For the assumptions of normal distribution and homogeneity of variance between the groups are tenable, an independent-samples *t-test* was employed to investigate the difference. This confirmed that the difference between the means is non-significant in both languages. In spite of these results, to assure

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consistency, the cognate scores were investigated severally. As the instruction was on cognate relationships, these are the most probable to indicate an effect.

Table 7-3. Cognate results on different frequency levels on the VLT

Group		*N*	Cog Total	Cog 2k	Cog 3k	Cog 5k	UWL	Cog 10k
Study	*M*	22	35.64	8.82	9.00	3.50	11.45	2.86
	SD		8.35	1.44	1.88	1.41	2.89	1.83
Control	*M*	18	35.83	8.78	9.06	3.44	11.61	2.94
	SD		7.06	1.06	1.16	1.20	3.03	1.80

Table 7-3 also confirms that the treatment had no effects on the Study group's performance. Despite the Study group's slightly lower means for cognate recognition in Romanian (Table 7-4), a *t-test* indicated that the difference is not significant.

Table 7-4. Cognate results on different frequency levels on the RomVLT

Group		*N*	Cog Total	Rom2k	Rom3k	Rom5k	Rom6k	Rom10k
Study	*M*	22	28.23	8.36	5.86	3.45	8.32	2.23
	SD		11.98	1.56	2.95	1.22	5.45	1.95
Control	*M*	18	32.44	8.72	7.28	4.00	9.78	2.67
	SD		9.69	1.23	2.22	0.84	5.16	2.33

To conclude with the first research question, the results suggest that the explicit instruction on cognates had no effect on either the total or cognate scores. Furthermore, this also indicates that the two groups are similar in terms of lexical knowledge and consequently they can be treated as the same population.

RQ2 is addressed in three different stages. Stage one explores the overall results in a within-subject analysis. Stage two explores CLI and test-item performance in a by-item analysis. In particular, it investigates the cognate facilitation effect on lexical testing. The final stage addresses the effect of lexical proficiency on the scores, taking into account cognateness and word frequency.

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Table 7-5. Descriptive statistics for the VLT and RomVLT

Test		*N*	Total	2k	3k	5k	6k/UWL	10k
VLT	*M*	40	59.43	15.18	15.20	10.93	11.93	6.20
	SD		16.68	2.73	3.39	4.51	3.17	4.61
RomVLT	*M*	40	57.20	15.30	12.95	12.28	9.30	7.35
	SD		21.49	2.99	4.56	4.19	5.63	6.07

As can be noticed in Table 7-5, the difference between scores in the two languages is minimal with slightly higher and more consistent scores in English. This is somewhat unexpected, as Romanian should be participants' L2, both chronologically and in terms of proficiency, since they live in Romania. A paired-samples *t-test* indicated that the difference between the two scores is not significant.

First, correlations are drawn to explore the relationship between the two scores. These indicate that there is a significant correlation between the two tests as Pearson's $r = .79$ ($p < .001$, two-tailed in all cases) for the total scores. The individual frequency bands also show strong correlations: for the 2k levels $r = .64$; 3k levels $r = .63$; 5k levels $r = .64$; 6k and UWL level $r = .82$, and the 10k levels $r = .72$.

Next, the scores have been separated according to cognate status. The correlations between English and Romanian cognate and non-cognate scores are $r = .87$ and .65 respectively. This indicates that in comparison, cognate scores show a more robust linear relationship in the two languages than non-cognate scores. Moreover, the correlations show that cognate knowledge in the case of English is a better indicator of overall Romanian knowledge ($r = .84$) than non-cognate knowledge ($r = .72$). Romanian cognate knowledge is also a better predictor of English vocabulary knowledge ($r = .83$) than non-cognate knowledge ($r = .72$). Consequently, it seems cognate knowledge in one language is a very strong predictor of not just cognate knowledge in the other, but overall lexical knowledge in both the L2 and L3.

Following this, regression analyses were carried out to gain more insights into the relationship between the L2 and L3. First, the interest fell on whether overall lexical knowledge in Romanian is a significant predictor of lexical knowledge in English. This led to a significant model: $F(1, 38) = 62.71$, $p < .001$, $R^2_{adj} = .61$, which explains that the RomVLT scores account for 61% of the variance. Next, the Romanian scores were separated by cognateness to explore whether either of them or the interaction between the two results in a better model. Although this model was significant, the interaction between L2 cognate and non-cognate

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scores was not significant, therefore, it was removed from the model. The final model thus became: $F(2, 37) = 47.4$, $p < .001$, $R^2_{adj} = .70$. The fixed effects, however, indicate that only the L2 cognate scores are significant predictors of the model $b = 1.98$, $t(37) = 5.09$, $p < .001$, the variable for non-cognates is just above the accepted significance level $b = -.80$, $t(37) = -1.99$, $p = .054$.

Additionally, due to the high correlation between L2 cognate and non-cognate scores, this model violates the assumption of multicollinearity as the Variance Inflation Factor (henceforth VIF) for the predictors is above 5 and the tolerance value is below .2. Therefore, due to multicollinearity and the non-significant effect of non-cognates on the model if used in conjunction with cognate scores, this variable has been removed from the model, which led to $F(2, 38) = 84.27$, $p < .001$, $R^2_{adj} =.68$, where the predictor is $b = 1.25$, $t(38) = 9.18$, $p < .001$. Subsequently, if this model, which uses only L2 cognate scores and explains 68% of variance, is compared to the overall Romanian test scores, which explain 61%, it can be argued that L2 overall knowledge and L2 cognate knowledge both predict L3 scores, albeit cognate scores alone explain more variation, and therefore, result in a better fit for the model. Importantly, the same tendency can be observed if the Romanian scores are used as a dependent variable.

Next, the effect of cognates on lexical tests is explored. Table 7-6 below summarizes the proportion of correct answers to cognate and non-cognate items. This figure is also called the *item facility index*, which helps interpreting the difficulty of an item.

Table 7-6. Descriptive statistics for cognate and non-cognate items

Test	**Cognate Status**	***N***	**Mean IF %**	**IF range**		
				Min	***Max***	***SD***
	Cognate	48	74.43	10	100	25.05
VLT	NC	42	56.43	12.5	100	26.56
	Total	**90**	**66.03**	10	100	27.16
	Cognate	48	62.76	20	100	22.04
RomVLT	NC	42	64.46	17.5	100	21.63
	Total	**90**	**63.56**	17.5	100	21.74

The scores demonstrate that in English, to 48 cognate items, the percentage of correct answers is over 74%, whereas to non-cognate items it is 56%. Conversely, in Romanian the scores are not only closer to each other but slightly more non-cognates were answered correctly. As the

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variables violate the assumption of normal distributions, the non-parametrical Wilcoxon rank-sum test was applied. In the case of the VLT, the difference is statistically significant ($W = 1410$, $p < .001$). However, it is non-significant for the RomVLT.

Generally, it can be argued that since some cognates in English are of lower frequency than the same word in Romanian, this might have provided a possible source of CLI that participants could capitalize on in English, but not in Romanian. Additionally, the difference between the academic words and cognates on the Romanian test, might have given students an advantage. This again can be regarded as evidence for the importance of accounting for test-takers language background and other social factors as well as the number and type of potential cognates when it comes to lexical tests.

It should be mentioned that no ceiling effects were present with any of the testees in English, ability estimates (total score divided by number of items) ranged from *min*. = .24 to *max*. = .99 with $M = .66$ and $SD = .19$. On the Romanian test, there was one student with a perfect score (1 = 90 items) and the least able student's ability estimate was .18 with $M = .64$ and $SD = .24$.

Initially, the English items that reached a ceiling effect are inspected. There were six such items in total: two from the 2k level*: total, victory;* three from 3k: *angel, darling, illustrate;* and one from UWL: *anonymous.* This reveals that except for the item *darling,* all of the items that elicited a perfect score are cognates. Although there are no items that elicited a floor effect, it is worth analysing items with an item facility index of less than .25, as these are considered to be too difficult for students, meaning that they do not discriminate well amongst their abilities. In total, there were eight of these items, two from the UWL: *indigenous* and *frustrate,* and six from the 10k band: *dabble, acquiesce, crease, skid, dregs,* and *casualty*. Surprisingly, the two items from the UWL are both cognates. The potential reason for students' miss on these items is due to ambiguous distractors as the analysis reveals. For example, in the case of *indigenous,* the definition was *native,* however, one of the distractors was *maternal.* This is more likely to be known by students, as *native-language* is translated as *limbă maternă,* which carries a strong semantic link between *native* and *maternal* for speakers of both languages.

The six items with very low hit rate from the 10k level are all non-cognates and as a general observation, it can be inferred that these are non-response items rather than incorrect responses. While marking the tests, it could be observed that many students did not even attempt guessing these lexemes as in many cases the items on the 10k level were left simply

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blank. The reason for this is that on the one hand, the majority of items on this level are non-cognates. On the other hand, these are low-frequency items that are expected to be known only by students with a relatively large vocabulary, which is a good sign of validity.

In the case of the Romanian test, three items resulted in a ceiling effect, all from the 2k band, and all of them cognates: *asistent, repeta,* and *stabili (assistant, repeat,* and *establish).* Items that proved to be the most difficult with an item facility index below .30 are all from the 10k band: *domol (slow), latent (latent),* and *exigibil (exigible).* Despite two of these items being cognates, due to their low-frequency, they were known by fewer than 30% of participants.

Finally, the relationship between proficiency and cognate recognition is addressed. As mentioned previously, some studies suggest that low proficiency students might be able to capitalize more on cognates as these items might be more common in their background languages. Yet others indicate that due to limited metalinguistic awareness or cumulative language learning experience, they might not be that perceptive to inter-linguistically congruent items as more proficient learners. In an attempt to investigate this, the scores have been split into high and low scoring students using the median split.

Table 7-7. Cognate results on the VLT by proficiency

Group		*N*	Total	Cognate Total	Cog 2k	Cog 3k	Cog 5k	UWL	Cog 10k
High	*M*	20	73.60	42.15	9.60	10	4.50	13.85	4.20
	SD		7.75	3.13	0.75	0	0.69	1.69	1.20
Low	*M*	20	45.25	29.30	8.00	8.05	2.45	9.20	1.60
	SD		9.39	4.99	1.17	1.76	0.89	1.79	1.27
Total	*M*	40	59.42	35.73	8.80	9.03	3.48	11.53	2.90
	SD		16.68	7.70	1.26	1.58	1.30	2.92	1.79

The test is capable of distinguishing between high and low performers as indicated by the total mean scores. A two-sample *t-test* confirmed ($t(2, 38) = 10.42$, $p < .001$) that the difference between the two groups is significant with a large effect size $R^2 = .86$. The means and standard deviations suggest that the High group recognized more cognates than the Low group and their scores also show more consistency. As the Low group's distribution violates the normality assumption, the Wilcoxon rank sum test was employed. This indicates that lexically more apt students

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recognize significantly more cognates than the Low group ($W = 397.5$, $p < .001$, $R^2 = .84$).

In the next step, a mixed model was fitted to the data to further explore the relationship between proficiency and cognate recognition. This was a by-item analysis. Compared to the null model, introducing a random intercept for items ($X^2(1) = 12.21$, $p < .001$) and a random slope for proficiency significantly improved the model ($X^2(2) = 28.76$, $p < .001$). These two models confirm that scores vary across items and proficiency, which is explained by the significant change in the maximum likelihood ratios. In the next step, the cognate status ($X^2(1) = 5.41$, $p < .05$) and proficiency ($X^2(1) = 113.29$, $p < .001$) are added as fixed effects, including the interaction between the two. The two fixed effects, without the interaction, resulted in a significant improvement in the model. Together with the interaction, the model still improved and this provided the final model, $X^2(1) = 6.04$, $p = .01$. The model explains 31% of the variance and there is no indication of multicollinearity. The main effects of proficiency ($b = -12.93$, $t(88) = -2.68$, $p < .001$) and cognate status ($b = -26.77$, $t(88) = -9.56$, $p < .001$) indicate that if all other variables are ignored, the low proficiency group is significantly different from the high proficiency group, and as the negative *b* value suggests, the Low group attained lower scores. Similarly, compared to cognates, non-cognate scores are negatively associated, indicating that cognate scores are predicted to be higher than non-cognate scores. However, since the interaction between proficiency and cognateness is significant ($b = -2.65$, $t(38) = -2.22$, $p = .03$), the main effects should be disregarded. The following plot facilitates the interpretation of the interaction.

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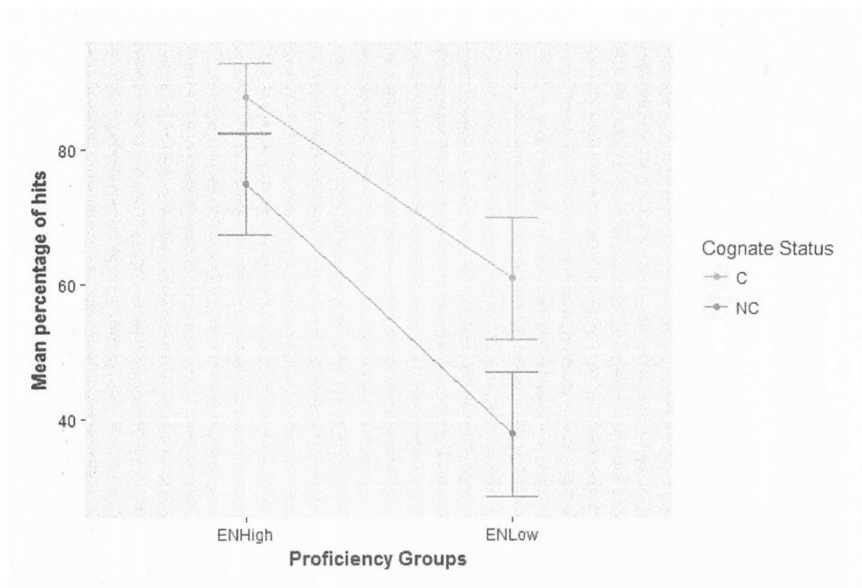

The significant interaction suggests that cognates facilitate more hits in the case of both proficiency groups. However, in the case of the lower proficiency group, the gap between cognates and non-cognates becomes more accentuated. Specifically, this means that the facilitative effect of cognates is larger in the case of the low-proficiency group.

Although it can be reported that similarly to the VLT, the RomVLT is also capable of distinguishing low and high performing students with a large magnitude, the cognate status of words does not affect the model. This clearly indicates that the tests differ qualitatively and including academic words in the VLT provides a cognate advantage to students of lower proficiency, whereas the same tendency is not observable in Romanian.

Finally, the test results and the questionnaire are triangulated to account for learner-related factors. The Spearman rho negative rank correlations between the age when they started learning Romanian and their confidence level in both situations are significant at *rho* = -.53 and -.66 respectively ($p < .001$; $N = 44$). This indicates that the younger students started learning Romanian, the more confident and proficient they feel in using it. A significant correlation of *rho* = -.49 was also found between the age participants started learning Romanian and their proficiency, based on the RomVLT results. There was also a negative

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association between the age of onset of learning English and their scores obtained on the VLT: *rho* = -.39, $p < .01$.

Overall, the self-reported proficiency and confidence ratings complement well the test scores. Furthermore, the results reveal that 91% of students ‘‘think of suitable words in Hungarian and translate them’’ rather than using their L2 as a source. This reveals that as students learn English ‘‘through’’ the L1, the L2-L3 link is not conscientious and only 56% percent consider that their Romanian knowledge helps in learning English. This points in the direction that students might not find their L2 that beneficial or have a predisposition towards it. Based on the answers to the open-ended question regarding the cognate instruction, it can be extrapolated that students consider such cognate-awareness trainings useful. However, some admitted that their limited L2 might be an impediment.

Discussion

The data analyses above indicate that the employed three-factor methodological framework for exploring the mental lexicon of multilinguals’ can be revealing and more informative than merely interpreting test scores. It seems the framework can easily accommodate an experimental paradigm and considering linguistic factors on the lexical level at the design stage allow a more nuanced interpretation of cognitive factors that can affect the multilingual lexicon.

In sum, it emerges that cognate recognition at the form-meaning written recognition level for highly proficient learners of English might be intuitive or automatic as the instruction on cognates did not yield an effect. This confirms Molnar’s (2010) and Szabo (2016) results who found similar effects and might be in line with the postulations by Hall et al. (2009). Consequently, it can be assumed that at the acquisition stage new words are added to the mental lexicon either on the lexical or conceptual level through attaching them to similar forms in any of the background languages. Thus, learners become familiar with such similarities at the learning stage and further instruction might not be needed. However, there is also reasonable evidence to speculate that this result pertains to the combined effects of language proficiency and age. Studies by García (1991), Proctor and Mo (2009), Jessner (1999) and Otwinowska (2016) iterate that less advanced or younger learners require training so as to maximize their chances of capitalizing on cognates or alternative inter-lingual congruencies. Future studies under the proposed methodological framework could benefit from counterbalancing items across tests to examine the extent to which cognates are recognized in both languages

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and perhaps also in different modalities (i.e. aural recognition or production) with different age and proficiency groups.

The data reveal that there is a strong, sizable relationship between the L2 and L3. This fully confirms the findings in Szabo (2016). It emerges that VSs in the two languages are interdependent as indicated by the strong correlations between overall and cognate scores. This is entrenched in Cummins' Developmental Interdependence Hypothesis (e.g. 1979), which can be extended to the relationship between the L2 and further languages (see Cenoz, 2003), and postulates that skills can be transferred from the L1 or L2 to the L3. The hypothesis here was premised on the fact that since students develop their receptive vocabulary in Romanian earlier, during the acquisition of English they can rely on such competencies and linguistic resources. In turn, this facilitates L3 acquisition and reduces the learning burden of unknown English words either because these share similarities with Romanian or due to the large number of highly frequent Romance cognates, the cognitive effort required to learn non-cognates is also reduced. Molnar (2008) postulates some tentative evidence towards this as Romanian monolinguals in her study outperformed both Hungarian-Romanian bilinguals and Hungarian monolinguals in English lexical knowledge. However, bilinguals, due to their Romanian knowledge, outperformed Hungarian monolinguals.

Broadly speaking, the three different perspectives in the analysis (within-subject, by-item, and proficiency-based) enabled us to explore a number of factors proposed in the methodological framework. The most important finding perhaps is related to the fact that VS is not just frequency dependent, but the cognate status of items also influences vocabulary test results and score interpretation (see Szabo, forthcoming for a more in-depth discussion of these). One limitation of the present study is that the frequency of cognate items in Romanian and the effect of this variable have not been accounted for. Laufer and McLean (2016) found that the frequency of loanwords in the L1 was a better explanatory variable of their results. This reiterates the suggestions in Table 7-1 that the frequency of congruent items should be controlled, if possible, in not just the target language but the L1 or other interlanguages as well. It also transpires that depending on the cultural context, some items might become problematic due to interferences from the L2.

While based on the above issues, the exploration of multilinguals' lexica might seem like an onerous task, this study serves as an example that by gathering learner-related information, the interpretation of the quantitative results can become more meaningful. For instance, the fact that students' scores were slightly higher in English than in Romanian and

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they also feel more confident and proficient in their L3 lends some validity to the test results. Another emergent issue based on the questionnaire result is that both in this study and Szabo (2016) learners find their L1-L3 link stronger and suggest that they are less likely to rely on the L2 lexical knowledge. Despite the non-significant effect of the experimental treatment and the facilitative effect of cognates, the fact that not all cognates have been recognized to the same extent across students should be further investigated in future studies.

Conclusion

This chapter introduced a unified methodological framework for the systematic investigation of the size of the lexicon, which as we have seen, can become more complex if multilinguality is taken into account. The controlled linguistic, cognitive, and learner-related factors based on the study presented turned out to be more revealing than measuring vocabulary knowledge in the target language alone. A corollary reasoning that follows from this is that the combinatorial potential of Nation's word knowledge taxonomy (see Milton & Fiztpatrick, 2014; Nation, 2013) and the Methodological Framework for Measuring Vocabulary Size in Multiple Languages opens up the possibility of tackling so far elusive questions and pose novel questions regarding multilinguals' vocabulary knowledge. On a theoretical level, this broad framework might enable researchers to confirm, refine, and redefine previous models of the mental lexicon. On a more pragmatic level, it could enable language teachers to gain a more substantive understanding of how students can capitalize on their known languages; researchers, on the other hand, could be enabled to develop cross-culturally sensitive, valid, and more easily interpretable lexical assessment tools.

The multitude of different multilingual contexts, the degrees of (psycho)typological distance between certain languages, and the limitations due to participant characteristics make the findings presented here reminiscent of pertinent issues deserving problematization rather than definitive answers. Nevertheless, considering the broad spectrum of inferences that the similarities between the background languages and the target language can provide, the methodological framework presented herein ought to be useful for teachers and researchers working in multilingual settings. We hope that this methodological framework, by integrating cross-perspective (linguistic, cognitive, and social) considerations and enabling researchers to be more transparent about key decisions and

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assumptions, will support future studies in measuring vocabulary knowledge.

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CHAPTER EIGHT

INCIDENTAL LEARNING OR INTENTIONAL LEARNING: A COMPROMISING AND COMPLEMENTARY ACCOUNT[1]

CIHAT ATAR

Introduction

That learning vocabulary is the fundamental part of second language learning is acknowledged not only by professionals like teachers and researchers, but also by lay people ranging from students to adults learning a second language (Groot, 2006). However, the problem with vocabulary learning and teaching is that no one is sure about how to achieve it in a successful way as there are many variables and approaches. More importantly, the effects of these variables and approaches are not supported by a sufficient number of studies (Schmitt, 2008).

It was only after the 1990s that an influx of research started in vocabulary learning. Researchers studying vocabulary learning centred their claims on two main issues: incidental learning and intentional learning. During the 1980s, intentional teaching of vocabulary was highly devalued as it evoked the conventional methods such as grammar translation and audio-lingual method. Especially via the communicative approaches, incidental learning was overwhelmingly favoured compared to intentional learning from 1980s to the beginning of 2000 (Huckin & Coady, 1999). This trend has changed in some countries, but it is still mostly valid in English as a foreign language contexts such as Turkey which adds to the problems already existing in the teaching of English. However, the problem with incidental learning is that how it works is not known clearly

[1] This paper is the full text of the oral presentation at International Conference on Quality in Higher Education in Sakarya, Turkey in 2017.

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and questions such as “how big a vocabulary is needed for successful extensive reading?”, “is intentional learning also useful?”, “can incidental learning yield in-depth knowledge about words? ”, “is guessing a useful method for learning words and how many repetitions are required for the retention of a word?” and “if this is achievable by incidental learning? ” are raised among researchers (Huckin & Coady, 1999; Schmitt, 2010). Consequently, in the recent decades researchers such as Hill and Laufer (2003), Nation (2001), Read (2004) and Schmitt (2008) have argued that although incidental learning is essential in vocabulary learning, it is not sufficient alone and it has to be supported by intentional learning. This suggests that incidental and intentional learning are in a complementary relation and they have their own weaknesses and strengths. Moreover, it is shown by empirical studies that incidental learning plus intentional learning yields much better results (Mondria, 2003). Therefore, in vocabulary learning the wisest way is to use them appropriately and in harmony in different conditions to gain the utmost benefit (Nation, 2001).

In this chapter, the aim is to review two important issues (incidental and intentional learning) in vocabulary learning in English as a second language contexts. Vocabulary is a fundamental part of second language learning. However, there are many variables (e.g. vocabulary size and engagement) and approaches in vocabulary learning, and the effects of these variables and approaches are not supported by sufficient research. Moreover, there is not a consensus regarding the advantages and disadvantages of incidental and intentional vocabulary learning in second language learning contexts. Accordingly, a literature review (of around 50 articles, books and book chapters) has been done using Content Analysis and the emerging themes from the review will provide the findings regarding these two perspectives.

As for the organization of this chapter, this review chapter first investigates what incidental and intentional learning are. Then, the concerns and criticisms about incidental learning are explained and in the discussion part, how incidental learning supported by intentional vocabulary learning can make vocabulary learning more efficient will be explained on the grounds of research findings. In addition, the weaknesses and strengths of both learning approaches are discussed and how they are essential for successful vocabulary learning together is demonstrated. Finally, the result that incidental learning accompanied by intentional learning works better is emphasized and a general evaluation of the topic is made.

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Incidental learning

In parallel with the shift from conventional methods to communicative methods, the vocabulary teaching/learning approaches have also evolved from intentional learning to incidental learning. The main merit of incidental learning is that it occurs naturally and implicitly via reading or listening. This is supported by Krashen (1989) who suggests that as long as learners are exposed to natural input, they will just acquire vocabulary along with grammar. So, what is the exact definition of incidental learning and what are the mechanisms in which it works? When the definitions by Huckin and Coady (1999), Read (2004) and Schmitt (2008) are reviewed, it is observed that all of them mention the fact that the learning should be natural and a by-product of other activities such as reading and listening without any intentional teaching. Then, incidental learning can be defined as the acquisition of vocabulary as a by-product of other language activities without paying explicit attention or getting any intentional teaching. The important point in incidental learning is that words are not explained explicitly and learning takes place naturally and implicitly. Krashen (1980) claims that this is the best way of learning vocabulary as this is the very situation in first language acquisition. While learning their mother tongue, children are rarely given explicit instruction about vocabulary. They acquire it by listening to the conversations around them. In addition, they boost their lexicon by reading after the school age and in accordance with his Input Hypothesis, Krashen (1985) puts forward the idea that incidental vocabulary acquisition takes place via exposure to input. In other words, extensive reading in classrooms serves as the comprehensible input and students naturally acquire words thanks to this exposure (Krashen, 2004). However, some other studies such as Ellis (1994), Raptis (1997) and Schmitt (2008) argue that vocabulary learning is not that smooth and that there are some considerations regarding incidental learning which will be discussed in the concerns about incidental learning part below.

As for the ways how incidental learning ensures the learning of words, input-rich extensive reading is seen as the essential way of acquiring vocabulary incidentally (Brown, Waring, & Donkaewbua, 2008; Horst, 2005; Krashen, 2004; Pigada & Schmitt, 2006). Thanks to extensive reading, learners are provided with exposure to vocabulary input and as they keep reading, they acquire the vocabulary items implicitly. As a result, words subconsciously get into the mental lexicon and as the process is implicit, they are expected to be stored and retrieved naturally (Hill & Laufer, 2003). The second and last important mechanism of incidental

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learning is inferring/guessing from the context. As all reading texts have some kinds of textual and lexical structure, learners can infer the meaning of words either by textual clues such as organization of the text and cause-effect relations or by lexical clues such as register and the surrounding vocabulary. In inferencing, learners learn and understand words just as a baby learns his/her first language: just by understanding words in relation to contextual clues (Krashen, 1985). So, incidental learning is claimed to be natural and effective. However, as can be seen from the mechanisms discussed above, incidental learning has very strong claims, but it has an abstract structure and explanatory power which will be addressed to in the following paragraphs.

Intentional vocabulary learning and some concerns regarding incidental learning

Intentional learning, as the name suggests, is showing a will to learn vocabulary and using explicit strategies for learning (Fraser, 1999; Rott, 1999). Intentional learning draws on the effects of explicit explanation, paying attention, engagement and intentional repetition (Schmitt, 2008). Especially in the recent decades, many eminent researchers such as Ellis (2006), Nation (2001) and Skehan and Foster (2000) have stated that incidental learning alone is not sufficient and they have underlined the need for the combination of these two learning approaches to achieve a better vocabulary acquisition. The following are some of the challenges about the sufficiency of incidental learning alone:

Vocabulary size

Incidental learning assumes that reading texts in extensive reading will provide the comprehensible input to learners (Krashen, 2004). As students keep reading more and more, they are expected to acquire many of the words they encounter in the reading texts naturally. However, a huge core vocabulary is needed first to do extensive reading successfully. Read (2000) questions if there is a minimum amount of word knowledge before the production of a second language is possible. In some ensuing studies, for example, Nation (2001) suggests that most of the research done in this field show that at least 95% of the vocabulary in a text must be familiar to the reader in order for him/her to understand that text easily. Similarly, Read (2004) concludes that learners need to know 95% of the words in a text to read and understand it effectively. Some researchers went even

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further and suggested that 98% must be set as the goal (Hu and Nation, 2000).

Thanks to the recent developments in corpus studies, researchers such as Coxhead (2000) and Adolphs and Schmitt (2003) have made some attempts to unearth the core vocabulary of English to see how many individual words are needed to use the language effectively. In their analysis of the British National Corpus, Adolphs and Schmitt (2003) found that a 3000-words family level (which makes 6000-7000 individual words) is required to cover the 95% level which is suggested as the optimum percentage. Similarly, McCarthy (1999) states that the most frequent 2000 words make up 84% percent, but at least 6000-8000 words are needed for 95% coverage. Accordingly, looking at the huge number of words suggested for the coverage of 95%, it seems that incidental learning alone cannot achieve this, as research shows that vocabulary learning is quite slow in incidental learning. For instance, Hill and Laufer (2003) estimates that in order to acquire 2000 words with incidental learning, approximately 420 novels must be read. Thus, in addition to incidental learning, explicit learning must be supplied to students to have them acquire the necessary vocabulary, which will give them the capacity to read independently and thus to benefit from incidental learning more efficiently.

Depth of knowledge

Language learning is an incremental process and the development of lexicon goes from basic meaning to extended meaning and from single words to collocations and chunks (Schmitt, 2008). Although incidental learning has beneficial effects on vocabulary learning, initial form-meaning link cannot be easily formed by incidental learning. Rather, incidental learning is successful at improving the partial knowledge about already learnt words and adding new dimensions to them (Nation, 2001). Furthermore, guessing strategies of incidental learning are not available in the initial stages of language learning as a great deal of vocabulary is needed to understand the gist of a text and without understanding the core meaning of it, it is difficult to guess the meanings of unknown words from the context. Therefore, students should acquire the basic vocabulary first to be able to guess and make use of incidental learning effectively.

One more problem with guessing is that although it may help understanding a text, it cannot give in-depth knowledge about unknown words. For example, by incidental learning and guessing, learners can learn about properties such different forms of a word, but it does not work

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when it comes to secondary and idiomatic meanings of a word or the grammatical features of it. Consequently, incidental learning must be supplemented by intentional and explicit teaching regarding various features of words.

One final point to discuss here is that the depth and size of vocabulary are sometimes difficult to contextualise (Schmitt, 2014). In his extensive literature review on depth and size of vocabulary, Schmitt (2014) concludes that there is a need for more word knowledge components in addition to the contextual knowledge such as register constraints and collocations. Consequently, acquiring and developing sufficient vocabulary take a long time, which can be achieved via explicit and focused efforts.

Attention

Although Krashen (2004) claims that extensive reading leads to vocabulary learning without any intentional effort by the learner, some studies report contradictory results in terms of attention. For example, Nation and Coady (1988) suggest that paying attention to unknown words increases the likelihood of the retention of these words tremendously. As they (Nation & Coady, 1988, p. 101) put it:

> “The very redundancy or richness of information in a given context which enables a reader to guess an unknown word successfully could also predict that that same reader is less likely to learn the word because he or she was able to comprehend the text without knowing the word.”

So, merely reading a text is not necessarily enough for vocabulary learning as learners cannot do extensive reading successfully when there are many unknown words in a text. As a result, if an unknown word is not essential to the overall meaning of a text, it is simply ignored. This means that unless a word is paid attention to, it is very unlikely to be noticed and thus learned. Moreover, in his study, Joe (1995) found that when extensive reading is supplemented by activities which require students’ attention, retrieval and generation of unknown words, this leads to better incidental learning compared to only extensive reading. Then, it can be argued here that attention and noticing should be included in vocabulary learning and teaching practices in accordance with the research findings.

Engagement

Another factor causing disputes over incidental learning is engagement. Similar to the problems in attention, the same criticism that extensive

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reading is not enough for successful vocabulary learning is valid here as well. For example, Huckin and Coady (1999) claim that if extensive reading is supported by activities which require the learner to be engaged in the unknown words, this will be much more successful. In another study, Sonbul and Schmitt (2010) found that direct teaching of vocabulary after reading was very useful and it facilitated learning the deepest meanings of words. Similarly, Hulstijn and Laufer (2001) found that after extensive reading, writing a composition using the newly-learned words significantly increased acquisition of vocabulary. They also found that students who were asked to fill the gaps in a vocabulary test were much better than those who just had glosses and did extensive reading. Accordingly, it can be concluded here that the more a learner struggles and spends time with a word, the more s/he is likely to acquire that word (Laufer & Rozovski-Roitblat, 2011).

Repetition

Many researchers suggest different numbers of repetition for successful vocabulary acquisition. For instance, Rott (1999) argues that six exposures to an unknown word enhance vocabulary retention dramatically. On the other hand, Webb (2007) concludes that 10 encounters with a word ensure a significant rise in vocabulary retention. In another study Pigada and Schmitt (2006) suggest that the number of repetition needed for successful acquisition may vary, but there should be at least 10 repetitions to accomplish the full learning of a word. These studies show that quite many repetitions are needed for the successful retention of a word. However, with extensive reading, it is quite difficult to reach these numbers. As Waring and Takaki (2003) states, with graded readers only a small number of words can be acquired although this incidental learning is very efficient in enriching partially learned words. Consequently, it can be concluded from the review regarding repetition that extensive reading may lead to acquisition of words, but enough repetition cannot be guaranteed by it. Consequently, it is reasonable to employ explicit forms of repetition to increase the retention of new words which is supported by several studies.

Discussion

Having defined the two types of vocabulary learning and having looked at their strengths and weaknesses, now this part will have a closer look at the issues mentioned in the previous sections. As mentioned in the previous section, Krashen's (1985) claim that extensive reading is natural

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and thus long-lasting is valid as naturally-learnt words are stored and retrieved with more ease. He is also right in claiming that explicit teaching gives rise to learning rather than acquisition and learners may have difficulty in using these words naturally. However, Krashen's claim that L2 vocabulary acquisition can occur naturally just like L1 as long as learners are provided with rich input is problematic. The reason is there are studies in the literature that show that an L2 learner already has another language in his/her mind (Cook, 2009). Considering this argument, it is very unlikely that an adult who has mastered his/her mother tongue can learn another language like a monolingual learner. In other words, when a person already has another language in his/her mind, this will interfere with the learning of an L2 as his/her brain is already shaped by the first language. This means that the learning of an L2 is not comparable to the learning of a first language. For instance, a baby learning his/her mother tongue cannot make use of translation, but translation from the mother tongue as a skill may be quite useful for an L2 learner and this helps the formation of initial form-meaning link. In addition, as an L2 learner already has concepts in his/her mind, what translation does is to just link the mental concepts in one's mind to the words in the L2. So, it can be argued here that assuming that L2 words are learned just like the mother tongue is not valid as L2 learners' brain is already shaped by the first language.

As for the first concern mentioned about incidental learning, the vocabulary size, the results of the studies analysed in the previous section suggest that at least 3000 word families (nearly 6000-7000 individual words) are required for understanding texts easily. Understanding texts is a must in Krashen's (1989) incidental vocabulary learning claim. The reason is if learners cannot understand a text, there is no way that they can learn vocabulary incidentally. Thus, a huge vocabulary of at least 6000 individual words is fundamental. However, looking at the vocabulary size of English learners who are mainly taught through incidental methods (Table 8-1), it is seen that even the mastery of 2000 words, which makes up only 84% of the vocabulary needed for doing extensive reading, takes hundreds of hours of instruction. In other words, by incidental learning it is very difficult to reach the optimal vocabulary threshold.

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Table 8-1. Vocabulary Size (modified from Laufer, 2000, p. 48)

Country	Vocabulary size	Hours of instruction
Oman EFL University	2000	1350
Indonesia EFL University	1220	900
France High School	1000	400
Germany Age 15, high school	1200	400

Consequently, it can be concluded here that post reading activities such as giving different forms of words or cloze tests are needed after extensive reading and they are proved to be useful by many studies. For example, Sonbul and Schmitt (2010) found that direct teaching of vocabulary is useful. In the same vein, Zimmerman (1997) found that interactive vocabulary activities help word retention and Webb (2007) demonstrated the positive effect of explicit repetition after extensive reading. In my own teaching experience in Turkey, I observed that students who had a poor vocabulary had problems in almost any area from grammar to reading and from listening to writing. For instance, while reading a text, lack of vocabulary would cause them to miss the general points of the text and they would not be able to capture the main idea. Consequently, they would not be able to follow the structure of the text let alone understand the text in detail. This would negatively affect their language learning motivation. Moreover, they were very poor in guessing strategies. Even when the meaning of an unknown word is understandable from its context, as they could not understand the general structure of the text, they would not be able to guess it effectively. One last point that is worth discussing regarding vocabulary size is that as Huckin and Coady (1997) stated in their book, using frequency lists are very wise to use in intentional teaching. The reason is they can provide students with the most frequent words all of which are frequently encountered in every reading text. To sum up, the review of the studies show that a big vocabulary size is essential for incidental learning and help from intentional learning is needed to achieve this.

The depth of vocabulary is another issue worth discussing. Schmitt (2008) and Nation (2001) demonstrate that incidental learning leads to natural and context-based learning, which makes the learned words very meaningful. On the other hand, they also claim that word properties such as different word forms, different meaning relations and issues of pronunciation cannot be learned by incidental learning, but explicit learning is very effective in these fields. This means that in order to

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increase learners' depth of vocabulary, implicit learning should be boosted with intentional learning. In this way, both the depth and size of learners' vocabulary can be increased efficiently.

Considering the discussion above, it can still be concluded that students must read as much as possible although the pick-up rate is very low in extensive reading. This is because, although intentional reading is proven to be very useful, using too much explicit teaching will hamper the automaticity of learners. However, intentional learning/teaching of vocabulary is very significant as well. For instance, teaching different forms of a word may be very useful, because, as claimed by Dell (1986), (in his Spreading Activation Model) related words are much more easily stored and retrieved in our brain. In addition, teaching suffixes such as -ion, -ment, -ive and so on can considerably contribute to the learning of vocabulary as these suffixes are generative and learners can guess meanings of many unknown words ending with these suffixes. This means that explicit teaching of different forms of a word also enhances vocabulary learning.

As for the concerns about attention in incidental learning, Krashen (1985) makes a very strong claim in his Input Hypothesis and argues that natural incidental learning only takes place when learners focus on the meaning, not on form or individual words. However, Ellis (1994) and Schmitt (2008) demonstrated by several studies that paying some attention to individual words have a big impact on vocabulary acquisition and retention. This is most probably a valid argument, because attention is seen as the initiator of curiosity and it gives way to learning effectively (Skehan and Foster, 2000). Moreover, Nation (2001, p. 63) claims that attention has close links to ''noticing'' in psycholinguistic research. To explain, noticing is seen as the first step in learning as it initiates curiosity about something and it creates a purpose to learn about something. Studies undertaken by researchers such as Nation and Coady (1988), Joe (1995) and Leow (1999) showed that when activities requiring intentional attention were used after extensive reading, vocabulary learning was very effective. In real life when learners pay attention to unknown words and keep lists of them, this usually has a useful consequence. As a learner myself, I really made use of unknown word lists and gathering unknown words in a list, and repeating them from time to time helped me to learn and maintain many fundamental vocabulary items. There can, of course, be great variation from learner to learner, but there is evidence in the literature that proves the efficacy of making word lists. For instance, Shillaw (1995) empirically demonstrated that choosing words and making a list helps vocabulary acquisition.

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The next thing worth mentioning is the engagement issue. As Schmitt and Schmitt (1995) argued in The Depth of Processing Hypothesis, mental activities requiring more elaborate thought and processing help acquisition of a word. This is related to the general cognitive ability of human beings, because the more humans work on something the better they learn it. So, activities in teaching materials must be engaging for the students and problem-solving tasks will be useful for not only attracting learners' attention, but also for engaging them in elaborate activities. The book Reading Explorer 3 (Douglas, 2010), for instance, (which we commonly used in Turkey in our classes) is a successful book in this regard and this case can be used to demonstrate the point here. First of all, this book provides long enough texts by which students can do extensive reading and the readings are almost always appropriate to the level of students. In addition to this incidental learning, the book provides all the possible unknown words in bold which perfectly serves to attract students' attention. I remember from my classes that whenever students saw a word in bold, they quickly paid attention to it and tried to learn its meaning, because they knew that it was an important word. Finally, this book was also very good at engaging activities and it provided different forms of the words, problem solving activities which required the use of newly-learnt vocabulary items and rewrite activities in which students are expected to use new words in different contexts.

The final issue in this section is repetition. As research shows, the number of repetition needed for full learning is not certain. This is probably because there are many factors such as the unknown word's salience, its recognisability, its morphology, individual learner's ability and the richness of context clues (Huckin & Coady, 1999). However, despite the variability, it is clear that many repetitions are necessary. The important point here is that repetition should be in a consistent way. As Russell (1979) (as cited in Schmitt, 2007, p. 832) suggests, the first and second repetition should come shortly after the exposure. Then, in 24 hours there should be another repetition. In a week, another repetition is needed and then, another repetition is necessary in one month. Finally, there should be another repetition 6 months later. This kind of a strict time line probably does not conform to the reality of L2 classrooms, but still Russell's claim is consistent with the research, because he also suggests that there should be at least 6 repetitions and some of these repetitions should come shortly after the first exposure. Although there may be significant variance regarding the number of repetitions as suggested here, these studies show the importance of post reading activities as these activities significantly increase vocabulary learning by supplying the

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short-term repetitions which is a significant implication for teachers. The review regarding repetition suggests that having supplied the short-term repetitions by post reading activities, teachers may also utilise intentional repetition a week later and a month later via exams, vocabulary quizzes and some interactive activities to reinforce vocabulary learning. Accordingly, course books should be structured regarding these findings in the literature in order to increase students' word retrieval and retention rates. To sum up the discussion part, the argument of this paper may be concluded by Sökmen's (1997, p. 239) quotation: "The pendulum has swung from direct teaching of vocabulary . . . to incidental . . . and now, laudably, back to the middle: implicit and direct learning".

Conclusion

As discussed throughout this chapter, both incidental and intentional learning have their own merits. While incidental learning leads to vocabulary acquisition to some extent, which is natural and in context, the pick-up rate is usually low. Moreover, incidental learning requires a significant vocabulary size, paying attention to the text and being engaged in order to function effectively. Intentional reading, on the other hand, helps the learning of unknown words successfully, but explicit instruction may hinder learners from using these words in a natural way and it may affect automatic retrieval of the newly-learned words. As argued by the researchers such as Hill and Laufer (2003), Nation (2001), Sonbul and Schmitt (2010) and Schmitt (2008), incidental and intentional learning are not only in a complementary relation, but also, when used together, they yield much higher rates of vocabulary learning. Consequently, especially in reading classes, both incidental reading and post reading activities should be incorporated efficiently for successful vocabulary learning and it may be suggested in this chapter that the reading materials should be prepared considering the benefits of the both learning approaches. In the future, experimental studies that test the effectiveness of incidental and intentional alone compared to the use of both may be undertaken taking the issues discussed in this paper into consideration.

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CHAPTER NINE

USE AND IMPORTANCE OF GAMES IN FOREIGN LANGUAGE TEACHING

CEYDA YALÇIN

Introduction

The aim of this chapter is to explain the use and importance of games on the development of language skills in foreign language teaching. In the constructivist modern education system, the student is an active participant in the learning process. The student contributes to the lesson by thinking and solving problems. The modern education system, which aims to achieve the development of four basic skills in foreign language teaching as much as possible equally, takes the student in the centre of education. For this reason, it puts the games into the teaching process. The reason is the game is accepted as an activity and technique that facilitates learning, increases persistence, contributes to creating a comfortable atmosphere by increasing classroom interaction, enhances the motivation levels of students and makes their own ideas easier to express. This paper investigates first what game and language learning game are. Then, characteristics of language learning games and games in foreign language teaching will be explained. Besides, the roles of teachers and students in teaching with games will be discussed and types of language learning games and criteria for the selection of games will be explained. Finally, the lack of use of games in foreign language teaching in Turkey and the lack of studies on this field will be emphasized and a general assessment of the chapter will be made.

The term "*game",* which is in recent years frequently used in the field of education, is widely used also in the field of foreign language teaching. Although the game has a long history in education, it still exists as a current and popular topic. However, the use of games in lessons, which requires considerable effort and time in terms of preliminary preparation

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and implementation, can be difficult for many teachers. But in this century, when foreign language learning has an important place and everything is constantly renewed, teachers should make their lessons more attractive in terms of techniques, methods and tools to increase the quality of their lessons. At this point, the use of games in lessons has an important place. Therefore, the use of games in language teaching is chosen as the topic of this chapter.

Learning a foreign language is known as a difficult process. Because, it requires great efforts to use, understand and develop the written and oral form of foreign languages. However, it is possible to make this difficult action easier and more accessible by keeping the interest and attention of the students alive and ensuring its continuity (Kupeckova, 2010). It is very important to use games in classes to save language lessons from monotony, to include all of the learners in a lesson, and to ensure that they take responsibility. In this way, it is possible to diversify the learning environment.

Indeed, games play a reinforcing role in improving speaking, writing, reading and listening skills (Kupeckova, 2010). When students are playing games, they forget that they are in class and tend to also behave naturally as in real life (Wang, 2010). Students use the target language unaware when they are playing and focus only on the game. During games, students try to use only the language and to achieve success without worrying about learning (as cited in Sanchez, Morfin & Campos, 2007, p. 50-51).

Learning can be more realistic and lasting when students participate actively in lessons. At this point, games offer a realistic learning environment by actively guiding the students to the lesson. This chapter intends to demonstrate how games change the teaching process and to discuss the reasons for using games in foreign language teaching. The purpose is to give suggestions on developing and using games in foreign language teaching.

What is game and language learning game?

Games have been described many times over and continue to be defined. It is difficult to make a general definition of the game. This section will attempt to explain the various definitions of the term *"game"*.

Games are activities that encourage thinking, interaction, learning and problem-solving strategies (Talak-Kiryk, 2010). Rixon (1986) defines game as a "closed activity" that ends naturally when some goal or outcome has been achieved. There are players who compete or cooperate to achieve this result, and there are rules that restrict or determine how players will

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work towards their goals. Ellis (1973) defines game as a process of researching, learning, discovering, controlling, establishing and experiencing relationships between learners. Allery (2004) notes that a game can be defined as a competition activity that is played in certain rules and procedures. According to Griffiths and Clyne (1995), game is an enjoyable activity and proves the ability, strength or chance of the players with a set of rules. Salen and Zimmerman (2003) describe game as a system that is defined by rules and results in a quantifiable outcome.

On the other hand, the historian Johan Huizinga, who was concerned with the play from the anthropological point of view in his work, found the limitation of the concept of the game not easy. According to Huizinga, game is a voluntary activity which has an aim with imperative rules, includes sense of joy and tension, and carried out within a certain time and place. Huizinga explains game also as an activity that is accompanied by the consciousness of being "different" than the "ordinary life" (Huizinga, 1995).

Looking at these definitions, it is observed that the term game has a wide range. Because, game can be in every area of life. For this reason, this term will be explained in the context of game in foreign language teaching. According to Hadfield (1999a), games should be considered an integral part of the language curriculum and a game has an aim, rules, and an element of fun.

Rixon (1986) defines language learning games as "[…] games in which language provide either the major content or else the means by which the game is played" (p. 62). Game is an activity in which language skills and information are discovered, tested, applied and reinforced. (Kilp, 2003). Game is an activity that reflects the characteristics of language, mind, social and motor development (as cited in Pehlivan, 2014, p. 18). For Danesi (1989), language games are problem-solving activities that include interaction between students. In addition, Waldman et al. (1989) have pointed out that language games have certain goals and are task-oriented activities. Thus, it ensures better outcomes for language usage. Cortez (1974) qualifies a language game as:

> "an activity designed to stimulate and to sustain interest while affording the learner practice in listening and/or speaking for purposes of language acquisition. Such an activity is not necessarily competitive but attempts primarily to associate the language-learning process with enjoyment for the pupil." (p. 204).

The Longman Dictionary of Language Teaching and Applied Linguistics defines a game in language teaching as "an organized activity

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that usually has the following properties: a) a particular task or objective, b) a set of rules, c) competition between players, and d) communication between players by spoken or written language." (Richards, Platt & Weber, 1985, p. 153).

As can be seen from the definitions discussed above, the role of games in teaching is important. Games are both enjoyable activities, as well as a learning technique that include many pedagogical features. From the definitions, it is also observed that a common feature of language learning games is the rules and games can provide intense and meaningful practice of language. There are many other benefits of games in foreign language teaching which will be discussed in the following paragraphs.

Characteristics of language learning games

Games have many features such as strategy development, alternative and flexible thinking and skill development. Some of these properties are listed as follows:

1. The use of games in teaching and learning encourages the holistic development of a person and the emergence of diverse abilities (Döring, 1997).
2. Games can include all the basic language skills such as listening, speaking, reading and writing, and the same game usually involves many skills (Lee, 1995).
3. Games increase the interest of the learner. Games may make a lesson interesting that students do not find interesting. Maintaining interest can mean maintaining effort (Thiagarajan, 1999; Wright, Betteridge & Buckby, 2005). As a result, learning a language requires a long-term effort.
4. Games contribute to meaningful communication: While students try to understand how to play the game and to communicate about the game, a meaningful communication occurs: before, during and after the game (Wright, Betteridge & Buckby, 2005).
5. This meaningful communication ensures the basis of a clear input (Krashen, 1985), for instance; what the students understand when they listen and read, interaction to improve understanding, (Long, 1991) and understandable output, writing and speaking, so that others can understand (Swain, 1993).
6. The emotions that are awakened during games add variety into the sometimes dry, serious process of language teaching (Bransford, Brown & Cocking, 2000; Ersoz, 2000; Lee, 1995).

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7. The variety and intensity of the games can reduce the fear (Richard-Amato, 1988) and facilitate the participation of students (Uberman, 1998), especially when they are played in small groups.
8. Games are student-centred. They give the students control over their own destiny. Games ensure a constructivist classroom environment (Talak-Kiryky, 2010).
9. Many games can be played in small groups and this offers the students the opportunity to develop their skills in dealing with others, such as the ability to be polite and the ability to ask for help (Jacobs & Kline Liu, 1996). Other advantages of games that are played in groups are:
   a. Team works during the game can encourage cooperation and develop team spirit (Ersoz, 2000).
   b. Many games may include a competition, but this does not always apply (Orlick, 2006).
10. Since many games can be played outside the lesson, they offer students the opportunity to use the language outside the classroom (Ellis, 2005).
11. Games can connect to a variety of intelligences (Gardner, 1999), e.g.:
    a. Games that are played with others include interpersonal intelligence.
    b. Games with drawing combine with visual/spatial intelligence.
    c. Games have often a practical element such as cards, spinners or pieces associated with physical/kinaesthetic intelligence.
12. Games make creativity, independence and higher-level thinking possible. The questions asked by the classroom teacher to the students have in general only one answer. But games allow for various answers (Talak-Kiryky, 2010).

Games in foreign language teaching

Games in foreign language teaching can be accepted as an important language learning activity. It provides a thrilling environment in the classroom. The student accepts that the game must be played according to certain rules. This establishes a link between the classroom and the student's own environment (Prasad, 2003; Tosta, 2001).

Adopting widespread and meaningful use of games in language learning will ensure that games are kept in the centre of the learning-teaching process, rather than filling in gaps or spending time (Wright, Betteridge & Buckby, 1984). It is stated that students can make real and

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flexible communication with games that bring real life to classroom environment (Ersöz, 2000; Sari, 2011).

There are some situations that are expected to occur at students with game in foreign language teaching. Uchida (2003) lists them as follows:

1. Students should learn new words as they play games.
2. During the game, students should be able to think in English.
3. Games should provide and promote mutual interaction between students.
4. When students are playing, they must show good behaviour towards each other and the teacher.

Games are not an alternative to work in class, but an effective educational tool that helps students on the way to becoming competent language users. The game manufacturer Parker Brothers express: “Playing games is fun, and […] many games instruct and uplift while entertaining” (Palmer, 1983, p. 5).

Learning foreign languages requires a lot of hard work; it is obvious that teachers should constantly motivate students to keep their interest and level of achievement high. Games have competition. Competition is shown as a logical reason for using target language. Lee (1979) clarifies that competition in games also spurs students’ motivation as “[…] the essence of many games lies in outstripping, in friendly fashion, someone else’s performance, or in bettering one’s own [performance], as in the world of sport” (p. 1). At the same time, competitive games attract the attention of students. Students must pay attention to what their opponents say. In order to find errors made by their opponents and accordingly to take the lead in a game, students have to show increased attention (Greiner, 2010). As can be seen from the benefits of games discussed above, the use of games in foreign language teaching has many advantages.

The teacher’s role in games

The role of the teacher in the classroom and how to organize the games is very important. To routinize games in the classrooms, the teachers must be open-minded toward games, but also must believe in the effectiveness of playful learning (Schiffler, 1982). Games contribute to the change of class dynamics for the student and decentralize the teacher’s role. The role of the teacher is reduced to the game description and rules, and to watching the game (Friehs, 2016).

Eloide Kilp lists the roles of a teacher who wants to integrate games into the curriculum as follows (Kilp, 2003):

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- The teacher is an organizer and an educational manager. He organizes the demand of games, analyses their cost-benefit-ratio and ensures the game runs properly. For this, the teacher should first evaluate the suitability of the game to the students and make necessary explanations for the understanding of the game.
- The teacher is an authoritative figure, a referee. While playing a game, students expect someone to direct them with the right instructions.
- The teacher acts as transmitter of information. The teacher informs the students about the content, structure and benefits of a particular game.
- The teacher is a mediator and negotiator. He manages group processes and group dynamics and mediates between students. In order to ensure a successful conclusion of the game, a teacher has to sometimes intervene as a mediator.
- The teacher has also role as a facilitator of learning. The teacher must prepare the appropriate learning materials and environments. The teacher should provide opportunities to the students that enable to interact with one another and to develop their understanding and language skills.
- The teacher should act as a language consultant at the same time. When students need information about vocabulary or sentence structures during play, they can consult to their teacher for effective communication. The teacher should give clues to the students and encourage them to communicate rather than provide new linguistic input they will not use. As Rixon states it, “The aim should always be to show students that they can manage in more situations than they think they can” (Rixon, 1981, p. 64).
- The teacher is also an observer, monitor and corrector during the game: Monitoring the progress of the game and analysing potential problems that may arise. The teacher provides quick and immediate error correction or provides a feedback where the problems that occur are discussed and solved once the game is over.
- The teacher has also a role as an assessor and mentor. The teacher should advise the students and help them solve their problems. Especially in competitive games, there may be disagreements between players that they cannot solve. In such cases the teacher has to prevent the conflict. When doing this, however, as Rixon says, “[…] much more effective to try to guide the group towards its own solution than to impose an immediate decision of your own

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[…] [by requiring] a player to justify his move to you before you give your casting vote" (Rixon, 1981, p. 67).

- The teacher acts as a coach. He observes, supervises and counsels learning processes. The teacher helps students become independent learners and ultimately enable them to assume their own responsibilities.
- The teacher also has a role as a trainer. S/he gives the students practice and training in specific abilities and skills.
- The teacher is a motivator and explains to the students the advantages of the use of games in the learning process and the benefits acquired during the game.
- The teacher is also an evaluator. He evaluates the learning process, makes a cost-benefit analysis and suggests that the learning process improves.

When all these roles of the teacher are evaluated, it can be said that the teacher usually has an auxiliary and supportive role. In fact, teachers have many important roles in language teaching with games, but they do not have to constantly direct everything. Because students should be more active in the lessons and in the learning process. On the other hand, the teacher should provide a relaxing atmosphere in the classroom, but s/he also should be effective in retaining the level of respect in the classroom. In other words, the teacher needs to create a balance in the classroom environment.

The student's role in games

In the game-based classroom the student is not a passive recipient, on the contrary the student acts as an active agent and s/he is a personally engaged participant in learning process. Games develop students' learning skills and help them learn content through personal engagement. Thus, it involves "Learning how to learn". This is especially important in an age of technological and social change (Greiner, 2010).

A learner-centred classroom is very beneficial. Students benefit from four learning principles that enhance student motivation and facilitate students learning: *active involvement, social integration, self-reflection and personal validation* (Cuseo, 2010). Learning becomes permanent when students actively participate in the lessons. Besides, interaction and cooperation between students improve learning. McKeachie (1986) explains the importance of the role of students in the game-based classroom as: "If we want students to become more effective in

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meaningful learning and thinking, they need to spend more time in active, meaningful learning and thinking – not just sitting passively receiving information" (p. 77).

Types of language learning games

Classifying games into categories can be difficult. They can be categorized by the materials needed (card games, board games, dice games), the topic covered (family relationships, objects in the house, prepositions), the sort of activity (ordering, ranking, asking for information, disagreeing), the main principle (question and answer games, discussion games, guessing games) or by the main language point used (reading, writing, listening, speaking, grammar, vocabulary, culture) (Greiner, 2010). In their book *Games for Language Teaching*, Wright et al. (1979) classify games into categories like "True/False Games," "Question and Answer Games," and "Picture Games." Carrier (1980) combines games in rather uncertain categories like "Language Points" or "Fillers" in his book *Take 5: Games and Activities for the Language Learner*. Greenall (1984) classifies the games in his book *Language Games and Activities* according to their topics. Dauvillier and Lévy-Hillerich (2004) categorize games in their book *Spiele im Deutschunterricht* according to the types of language skills. The classification of games according to language skills, for instance, "games for listening", "speaking" and "games for vocabulary" is also problematic because a game usually does not practice only one single skill, but also requires a combination of skills.

According to Rixon (1981), the two types of games are valid and precious: linguistic games and communicative games. The reason is, learning a foreign language requires both linguistic correctness and communicative effectiveness. The aim of linguistic games is to develop the student's correct language knowledge. Students must either show that they can passively understand the language structure or actively provide correct language forms. The correctness of vocabulary words, grammatical forms and pronunciation is more important. On the other hand, the purpose of communication games is to develop communication skills of students. Correct language is important, but successful exchange of information and ideas is more important. In other words, content is more valuable than form.

Hadfield (1999b) emphasizes two ways of classifying language games. First, she classifies language games into two types: linguistic games and communicative games. Second, Hadfield classifies language games into more categories: Sorting, ordering or arranging games, information gap

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games, guessing games, search games, matching games, labelling games, exchanging games, board games and role play games. According to Lee (1979), games can be classified into ten categories: structure games, vocabulary games, spelling, pronunciation games, number games, listen-and-do games, games and writing, miming and role play, and discussion games. On the other hand, Löffler classify games in three categories: learning games, performing games and interaction games. Löffler distinguishes games in the following way (Löffler, 1979):

Learning Games:	**Performing Games:**	**Interaction games:**
Writing-	Sketch	Cooperation game
Guess-	Play Reading	Simulation games
Reading-	Scene	Free rolls play
Listening-	Drama	
Speaking-	Dialogue	
Association-		
Vocabulary games		

When this part is briefly summarized, it seems that it is possible to classify the games of foreign language teaching in many ways. Games can be classified according to topics, language skills, materials, the sort of activity, the main principle and so on. Briefly, the type of game may vary depending on the purpose of the lesson. But it seems that the most logical game classification way, as Rixon (1981) and Hadfield (1999b) emphasize, is to categorize games according to accuracy of language and successful and fluent communication. Because as known, the main aim of foreign language teaching is to enable learners to use the target language continuously and correctly. So, language learning games should serve this purpose as well.

Criteria for the selection of games

Teachers need to pay careful attention when selecting games. Because, each game may not be suitable for every student or for every subject. Some criteria to be considered in the selection of games are as follows:

1. Goal Setting: What is the purpose of the game and which skills help developing a game? (Grammar, vocabulary, knowledge of the country, practicing listening comprehension and speaking skills, social competence). The teacher has to make the goal of the game clear and s/he must above all know what s/he wants to achieve.

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2. Language Level and Age of the Students: Is the game appropriate for the level of the participants, for their age and their maturity? Is the game easy to understand and to perform? (Schweckendiek, 2001). The student's age should also be taken into account. Because a game can be used differently: Sometimes the teacher plays with 8-year-old children and in other games s/he works with 15-year-old pupils. Besides, language level of students is also important. The more language knowledge students have, the more games can be used in foreign language teaching (Myšáková, 2012).

3. Time Management: How much time is needed for the learning game? (Schweckendiek, 2001). It is important to set the time when using games in the class. Because it takes time to explain how to play the game and explain the rules. For this reason, time setting is important to manage rules and language problems.

Conclusion

As discussed throughout this paper, it is observed that games should be used as a teaching method in foreign language teaching. Because, games can be very valuable tools in language teaching when they are used correctly. Learning a language is not an easy work. Games increase motivation of students and encourage them to be much more active in the learning process. Games also create an enjoyable and relaxing atmosphere that makes learning easier. The use of games in lessons, on the other hand, creates a student-centred classroom environment and this provides students to take on more responsibility. Moreover, games encourage social interaction between students. Learning becomes more permanent for students, because they learn by doing in lessons. Thus, meaningful language practice and a meaningful learning are provided.

Language learning games help students to realize the main goal of language learning by using a foreign language spontaneously. Students are expected to naturally use their target language during the game. Games provide real life situations and help students to acquire new language skills in a meaningful way. Besides, the use of games improves diversity in the classroom environment. Playing games in classrooms provides students not only a fun environment, but also it increases their learning. For this reason, more games should be used in foreign language teaching. But, it seems that language teachers in Turkey do not use games sufficiently in the lessons. Yolageldili and Arikan (2011) show in their research that Turkish EFL teachers believe the effectiveness of using games in grammar

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teaching, but they do not use games as often as expected in their classrooms. Most of the teachers who participated in this research point out that this is because of the crowded classrooms and the intensive curriculum. However, with the right planning, a teacher can overcome this difficulty. Language teachers must use more games in the lessons and should create a relaxing learning atmosphere in the classrooms. Consequently, teachers should integrate games into curriculums in addition to developing new games appropriate to the topics. Because in response to the rapidly developing conditions of the age, it is necessary to try new ways in foreign language teaching.

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CONCLUSION

This edited book has set out to form a collection of chapters which focus on the methodologies, approaches and topics that are the focus of the current studies in Education and Applied Linguistics. The nine chapters in this book have provided the readers with a chance to read about current topics and research methods by which they have an understanding of the various topics and/or the applications of different methodologies.

The five chapters on Education have introduced issues such as the leadership styles of school principals, democratic attitudes and critical pedagogy approaches of prospective teachers, honour code and academic honesty, media literacy and its link with critical thinking skills, and graduate employability programs in Malaysia which has potential implications for various developing countries such as Turkey. The four chapters on Applied Linguistics have introduced issues regarding the integration of technology into second/foreign language teaching via a digital kitchen, measuring vocabulary size in multiple languages (e.g. L3) unlike traditional ones that usually focus on L2, the reciprocal influence between incidental learning and intentional learning, and the use of games in language classrooms.

To conclude, this book has provided the readers with 9 chapters from various fields focusing on different topics and methodologies. The topics digital kitchen, media literacy and employability programs in higher education institutions are currently popular topics in the relevant fields. In the same vein, phenomenological studies, the investigation of multiple languages with regard to vocabulary size and the role of incidental and intentional learning in English language teaching classrooms in the post communicative language teaching era are also relevant to the current studies in Education and Applied Linguistics. By presenting these studies in a collection, I believe that this book will be a useful source for practitioners, graduate students and researchers who would like to read about some of the recent issues in Education and Applied Linguistics. However, this collection has presented only 9 studies in the fields of Education and Applied Linguistics which have many subfields and branches. In this sense, comprising of only 9 chapters, this book is a representation of only a limited part of these fields. Accordingly, in the future collections or books, focusing on more issues in order to represent most of the significant issues in these fields will be highly appreciated.

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