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## Contents

The Occupational Expectations of Undergraduate Students in the Conservatory Piano Majors <i>Deniz Beste ÇEVİK KILIÇ, Talia Özlem BALTACILAR BAYOĞLU &amp; Ebru GÜNER CANBEY</i>	1
Toward Better Goal Clarity in Instruction: How Focus On Content, Social Exchange and Active Learning Supports Teachers in Improving Dialogic Teaching Practices <i>Martina Alles, Tina Seidel &amp; Alexander Gröschner</i>	11
Evaluation of the Effects of Conflict Resolution, Peace Education and Peer Mediation: A Meta-Analysis Study <i>Fulya Turk</i>	25
The Effectiveness of Using Online Blogging for Students' Individual and Group Writing <i>Hashem A. Alsamadani</i>	44
Learner Views about Cooperative Learning in Social Learning Networks <i>Serkan Cankaya &amp; Eyup Yunkul</i>	52
Effect of Video-Cases on the Acquisition of Situated Knowledge of Teachers <i>Walter M. Geerts, Henderien W. Steenbeek &amp; Paul L. C. van Geert</i>	64
What Makes a Change Unsuccessful through the Eyes of Teachers <i>Sabiha Odabasi Cimer</i>	81
The Relationship between Affective and Social Isolation among Undergraduate Students <i>Ahmad M. Alghraibeh &amp; Noof M. Bni Juieed</i>	89
Classroom Teacher Candidates' Metaphoric Perceptions Regarding the Concepts of Reading and Writing: A Comparative Analysis <i>Emine Gül ÖZENÇ &amp; Mehmet ÖZENÇ</i>	100
An Investigation of Pre-Service Primary School Teachers' Attitudes towards Digital Technology and Digital Citizenship Levels in Terms of Some Variables <i>Serdar Çiftci &amp; Soner Aladağ</i>	111
Direct Problem-Based Learning (DPBL): A Framework for Integrating Direct Instruction and Problem-Based Learning Approach <i>Sri Winarno, Kalaiarasi Sonai Muthu &amp; Lew Sook Ling</i>	119
Effectiveness of a Selective Advising Program in Reducing the Degree of Compulsive Buying Behavior among Umm Al-Qura Female Students <i>Sawzan S. Basyouni</i>	127
'Professionalism' in Second and Foreign Language Teaching: A Qualitative Research Synthesis <i>Anchalee Jansem</i>	141
Improving Junior High School Students' Spatial Reasoning Ability Through Model Eliciting Activities with Cabri 3D <i>Hartatiana, Darhim &amp; Elah Nurlaelah</i>	148
Religious Education in Public Schools in Western Europe <i>Mercedes Llorent-Vaquero</i>	155

## Contents

The Effectiveness of Neurological Impress Method on Reading Fluency of Students with Learning Disabilities in Amman, Jordan <i>Ayed H. Ziadat &amp; Mohammad Soud A. AL-Awan</i>	165
<i>Kalosara</i> Revitalization as an Ethno-Pedagogical Media in the Development of Character of Junior High School Students <i>Anwar, I Ketut Suardika, Mursidin T., Abdul Rauf Suleiman &amp; Muhammad Syukur</i>	172
Reviewer Acknowledgements	184



# The Occupational Expectations of Undergraduate Students in the Conservatory Piano Majors

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## Abstract

An expectation is the belief that a certain action will lead to a given outcome. It is noteworthy to reveal individuals' expectations from their future occupations. The quality and success of education are undoubtedly related to meeting their occupational expectations in the future. In this regard, it is of critical importance to investigate the occupational expectations of undergraduate students in the conservatory piano majors. Therefore, this study aims to reveal the occupational expectations of these students. Semi-structured interviews were conducted with seven students in the study. Based on the results, some suggestions were made for eliminating the elements negatively affecting the occupational expectations of undergraduate students in the conservatory piano majors at least in the education process.

**Keywords:** conservatory piano majors, undergraduate students, expectation

## 1. Introduction

'Expectation' expresses the things that are thought and hoped. An individual's foresight regarding an issue shapes his or her expectation. Victor H. Vroom defines the expectations as "the temporary belief about the likelihood that a particular action will result in a particular outcome (p. 17)." According to a different definition, expectation involves thoughts about success or performance in a particular field in the future based on previous experiences and examples in a similar field (Rotter, 1954). The studies on expectations focus on the variables creating expectations. The effect of independent variables such as previous experiences and an individual's attitude on expectations has been investigated (Feather, 1966). In a study conducted on the expectations regarding the occupational life in the future, previous successes and/or failures were determined to affect occupational expectations (Greenhouse, Seidel, & Marinis, 1983). However, there are also studies highlighting the influence of occupational perceptions of individuals (Bourjaily, 1984) and their university experiences (Dalal & Singh, 1986) on their expectations. Therefore, university experiences affect not only the occupational expectations but also future expectations. Factors such as successes/failures and the quality of educational environment can lead to changes in their occupational expectations in the early years of the individuals' university education. Biddle et al. (1990) reported in their study that university experience may lead to a change in the perspectives of individuals regarding their lives in the future.

The occupational success of individuals is closely related to their physical characteristics as well as their willful preference for an occupation. The fundamentals regarding occupational acceptance and performing the occupation professionally (occupational awareness) are created in their student years and continue throughout their career. Therefore, it is significant for individuals to start their business life with sufficient occupational awareness to be successful in their business life (Özsoy, 1996). Moreover, the students' rate of success increases as their occupational expectations are met. The results of a study supported this thought (Goodenow & Grady, 1993). Conversely, when the occupational expectations are not met, there are negative consequences such as dissatisfaction and hopelessness (Fine, 1986). Therefore, it is an undeniable fact that meeting students' occupational expectations has had a great role on their future business life (Umbach & Porter, 2002).

A conservatory is defined as “a higher education institution that raises artists in music and performing arts” (YOK, 2006, p. 16). Conservatories are among the leading institutions regarding directing the art education of the country and shaping the culture. In this regard, music education is of critical importance in conservatories and aims to raise qualified artists. Equipping fundamental skills are among the priority targets in music education. Piano courses are indisputably essential in supporting and developing these fundamental skills. Therefore, occupational piano education that is the foundation of music education in our country starts in primary and secondary education in the conservatories of universities and continues to the graduate level. Thus, the conservatory piano major aims to raise respected musicians who can play as soloists, chamber musicians or orchestra members in national and international artistic activities. Moreover, graduates from the conservatory piano majors can teach piano, correpitition and auxiliary piano courses in conservatories. They can work on the piano staff of the State, Municipality, Foundation or private symphony orchestras or as a correpititor in the State Opera and Ballet. Thus, the conservatory piano majors students tend to make their occupational preferences in primary or secondary education unlike other disciplines because students work in this long-term education following their early occupation preference. Savickas (1991) reported skills and interest among the factors affecting individual’s occupational preferences.

The goals of students and the aims that they wish to realize undoubtedly lead to various expectations from their institutions. Expectations guide students are planning how to meet their needs and realize their aims. Therefore, this study aims to reveal the perspectives of conservatory piano majors undergraduate students regarding their occupational expectations. There have been no previous studies about the occupational expectations of students in the conservatory piano majors. Thus, this study with the aim of revealing students’ perspectives regarding their occupational expectations will contribute to the existing studies.

## **2. Methodology**

### *2.1 Model of the Study*

This study aims to reveal conservatory piano majors undergraduate students’ perspectives regarding their occupational expectations. The study used semi-structured interviews based on a qualitative research approach. Qualitative studies are defined by Yin (2003) as investigating a current phenomenon under realistic conditions with a detailed and holistic approach. Merriam (2013) describes it as investigating a limited study while Cresswell (2013) defines it as a design type in which a study can be both a product or object. Qualitative studies put forth in-depth analysis regarding an individual, group, case or problem (Frankel & Wallen, 1996). Therefore, this study used a qualitative research method to obtain in-depth data regarding students’ perspectives.

### *2.2 Participants*

Seven undergraduate students from the piano majors of a Conservatory in the West side of Turkey constituted the participants and they were selected through a purposeful sampling technique, which enables the profound investigation of cases that were designated in the research process (Patton, 1997). In this method, the selected sample can represent the research universe by determining the criteria that are significant for the selection (Tavşancıl & Aslan, 2001).

### *2.3 Instrument*

A semi-structured interview form developed by the researchers was used in the study. In the semi-structured interview technique, there are some particular questions in the form; however, research can pose new questions in case of need (Yüksel, Mil, & Bilim, 2007). This technique yields advantages such as the ease of analysis and the chance of self-expression for an interviewer (Büyüköztürk, Kılıç-Çakmak, Akgün, Karadeniz, & Demirel, 2016).

This interview technique allows interviewees to express their ideas in a more detailed and in-depth way compared with other data collection techniques and enables researchers to see the investigated issue through the interviewees’ perspectives (Yıldırım & Şimşek, 2008). The researchers reviewed the related literature in the development of the semi-structured interview form. To ensure the content validity of the interview form, the opinions of the experts in the field were solicited. The experts were asked to evaluate the questions in the form and ensure that they covered the intended issues and were clear and understandable. The interview questions were reviewed based on the experts’ opinions and a pilot study was conducted with the final form. There are four questions in the final form.

Each participant got together for the interview at the date and time determined by the piano instructor and the interviews were conducted at the place where each participant found it appropriate. At the beginning of the interview, general information about the process was reminded to participants. Each interview lasted for

approximately 30 minutes. Real names were not used in the study. Male students were coded as Male 1, Male 2 and so forth, and female students were coded as Female 1, Female 2 and so forth.

In the study, the participants were asked the following questions:

- What are the reasons for your preference of conservatory piano majors? Please explain.
- What were your expectations from piano majors from the first year you started your education to this period? Which of these expectations has been met and/or not met?
- Could you mention your career goals after your graduation?
- What are the reasons for your preference of this career?

The interviews were conducted by asking each participant the questions and recording their answers with a recorder. A recorder was used to ensure the objectivity in line with Maxwell's descriptive validity criterion (As cited in Şad, 2011, p. 137). To ensure this validity, the credibility that is the representation criterion of the reality in results and the transferability that is the criterion of external validity were used. To increase the credibility of the outcome, the excerpts from the perspectives of the participants about the open-ended questions and these excerpts were attempted to be made from the examples of objective perspectives that reflect the general tendencies in the answer given, rather than the perspectives that would bias the study. The transferability was ensured by presenting the implementation of the study (collecting the data, the characteristics of the participants and data analysis) in a detailed and clear way. This contributed to the transferability of the study (Şencan, 2005). Besides, the reliability was increased by digitizing the qualitative data. McMillian (2002) explains that the most important measure used in the evaluation of the qualitative study is the reliability and validity of data analysis (As cited in Büyükoztürk et al., 2016). According to LeCompte and Goetz (1982), validity is related to the accuracy of results. There are external validity concerns about the instrument yielding similar results when used in similar groups and internal validity concerns about the researcher measuring the intended parameters through the instrument or method. Moreover, reliability is related to the repeatability of research results. External reliability ensures that a research yields similar results in similar environments while internal reliability ensures that other researchers can obtain the same results by using the same data (As cited in Yıldırım & Şimşek, 2008).

#### 2.4 Data Analysis

Descriptive analysis was used to analyze the data obtained by semi-structured interview forms. In the descriptive analysis, data are summarized and interpreted according to pre-determined themes. "Data can be arranged according to the themes set out by research questions and considering questions and themes used in the interview and observation processes" (Yıldırım & Şimşek, 2008). In the descriptive analysis, participants' answers were first organized and interpreted. Then, the raw data obtained from the interviews were coded and categorized. Finally, the data were classified into different categories and presented in a more meaningful way for readers. The validity was ensured by including excerpts from participants' perspectives. Moreover, the reliability was checked by coding the participants' answers. Miles and Huberman's (1998) formula of inter-coder reliability ( $\text{reliability} = \frac{\text{number of agreement}}{\text{total codes}}$ ) was used. This reliability was calculated as 84.2%.

### 3. Findings

Under this heading, the findings were presented separately according to the research questions and direct quotations supported the perspectives.

1) Findings including the students' perspectives regarding the reasons for their preference for conservatory piano majors

The findings including students' perspectives regarding the reasons for their preference of conservatory piano majors were presented below. The students' answers are presented in Table 1. In some perspectives, more than one participant expressed some common perspectives.

Table 1. The distribution of students' perspectives regarding the reasons for their preference of conservatory piano majors

Responses	f	%
Desire to study professional piano in the future	1	9.1
Desire to be a qualified and equipped pianist	2	18.1
Passion and love for piano	2	18.1
The teacher's guidance and encouragement		

The piano instrument is a polyphonic instrument	1	9.1
Developing the piano technique at an advanced level and transferring that experience to other individuals	1	9.1
The inadequate piano education obtained in Fine Arts High School	2	18.1
Parental interest and guidance	1	9.1
Total	11	100

As seen in Table 1, the frequency distribution for the students reasons for pursuing piano is as follows: 18.1% of the students have the passion and love for piano; 18.1% obtained inadequate piano education in Fine Arts High School; 18.1% want to be a qualified and equipped pianists; 9.1% wanted to study professional piano in the future; 9.1% considered their teachers' guidance and encouragement as the reason for pursuing piano; 9.1% considered piano as a polyphonic instrument; 9.1% wanted to develop their piano technique at an advanced level and transfer their experience to other individuals; and 9.1% cited their parents' interest and guidance as reasons.

Some of the participants' answers regarding the reason to pursue the piano were as follows:

"My passion for piano since childhood drove me here. I chose my occupation at a very young age have never been undecided among other choices. I started this way without any hesitation because conservatories are the most suitable schools for a musician who wishes to pursue a professional piano education" (Female 1)

"I used to love the piano instrument. I wished to develop myself in this field. I started to study the piano as an art by entering the conservatory exam with encouragement from my teacher who noticed this when I was in the fifth grade in the elementary school" (Female 2).

"I decided to pursue my education in a conservatory when I was in the last grade of my elementary education; however, I had been playing the piano for only a few months. The reason for my preference of piano was that it makes feel like there is an orchestra in it even though it is a solo instrument. Although hearing a single voice was like reading a good sentence, hearing multiple voices was like reading an impressive book. I had realized that I was quite inadequate in the piano field when I was in Fine Arts High School. I loved music and felt. I have preferred the conservatory piano majors to pursue a good piano education, develop my technique, reflect what I feel to the piano accurately and comfortably and finally transfer my experiences to others" (Female 3).

2) Findings including the students' perspectives regarding their expectations from piano majors from the first year to this period

The findings including the students' perspectives regarding their expectations from piano majors from the first year to this period are presented below. The students' answers are presented in Table 2. In some perspectives, more than one participant expressed some common perspectives.

Table 2. The distribution of the students' perspectives regarding their expectations from piano majors from the first year to this period

Responses	f	%
We can say that our expectations were met since our instructors in the piano majors are qualified and can transfer their knowledge.	2	15.3
At first, we were more motivated. We had bigger ideals and wanted to feel a better sense of accomplishment. These feelings began to diminish over time. We thought we would be better equipped in the piano majors. We do not think that our expectations were fully met.	3	23.1
The staff limitation in the art department negatively affects me for my future life. This decreases my motivation. This case does not meet my expectations.	1	7.7
Music courses were given more importance compared to other courses in the conservatory. However, we think that our knowledge should not be limited to music and teachers should change their attitudes at this point. Our expectations were higher in the beginning.	2	15.3

From the beginning, we think that we have shown a significant improvement both in our piano technique and in the interpretation of music. We will enjoy and do our best while performing our occupation in the future.	2	15.3
In the beginning, we had difficulties since we started the piano at a later age and also because the exam threshold pieces were higher than our level. We think that a curriculum that is appropriate for the level can be more beneficial. Therefore, my expectations in this regards have not been met yet.	2	15.3
A course regarding stage performance should be included in the piano majors department because our anxiety increases before the piano exams and at the concerts. Such a course would motivate me more.	1	7.7
<b>Total</b>	<b>13</b>	<b>100</b>

As seen in Table 2, 23.1% of the participants stated that they thought that they would be more equipped in the beginning but their motivation began to diminish over time and this case negatively affected their expectations. Moreover, 15.3% stated that their expectations were met since their instructors in the piano majors were qualified and could transfer their knowledge. Another 15.3% stated that their expectations were higher, in the beginning, the music courses were given more importance compared to other courses in the conservatory and their knowledge should not be limited to music, this case negatively affected their expectations. Furthermore, 15.3% stated that they showed a significant improvement in both their piano technique and the interpretation of music and would enjoy and do their best while performing their occupation in the future. Some participants (15.3%) stated that a curriculum that is appropriate for the level could be beneficial since they started music at a late age while 7.7% stated that the staff limitation in the piano majors department negatively affected them for their future endeavors and decreased their motivation, thus, negatively affecting their expectations; and 7.7% stated that a course regarding stage performance should be included in the piano majors department; however, the absence of such a course did not meet their expectations.

Some of the participants' answers to this question are as follows:

"I had a great motivation in the early years of the piano majors department; bigger ideals, more determination to succeed. There was a more hopeful approach. I noticed that my hope has diminished over time. I do not know why and how this happened and what do to; however, I cannot get enough encouragement. When I was in school, I imagined that I would be better equipped (analysis, harmony, music literature, the history of art etc.) and be at a different level. However, I do not see myself competent at present" (Male 1).

"When I started my education in the conservatory, I had high expectations. However, the staff limitation in conservatories negatively affected my motivation and expectations. This situation puts us in a pessimistic attitude towards the occupation as well as impedes our efforts. These reasons greatly demolish our motivation and make us think that I will not be paid for my efforts by inculcating in us a pessimistic attitude while going about our occupation. Moreover, my piano education does not meet my expectations" (Male 2).

"As soon as I graduated, I expected to be able to be a concert pianist. My current occupational expectation, conversely, is to enjoy my occupation give my best performance" (Female 3).

"My initial expectation was to change my incorrect piano technique, my approach and attitude towards the piano. Moreover, I started playing the piano at a very older age than the age at which piano should be started. Therefore, I encountered problems related to this late start. My piano teacher did his best to help me regarding this issue. My expectations in this regard were met" (Male 3).

### 3) Findings including the students' perspectives regarding their career goals after graduation

The findings including students' perspectives regarding their career goals after graduation are presented below. The students' answers are presented in Table 3. In some perspectives, more than one participant expressed some common perspectives.

Table 3. The distribution of the students' perspectives regarding their career goals after graduation

Responses	f	%
Being a piano artist	2	10.5
Pursuing an academic career	6	31.5
Making a master's degree	3	15.7
Taking formation lesson and teaching piano	1	5.26
Teaching music in a private school	1	5.26
Giving a private piano lesson	1	5.26
Giving chamber concerts as a piano accompanist	4	21.0
Being able to make my music with the instrument	1	5.26
Total	19	100

As seen in Table 3, after graduation participants wish to: pursue an academic career by 31.5%; give chamber concerts as a piano accompanist by 21.0%; make a master's degree by 15.7; be a piano artist by 10.5%; take formation lesson and teach piano by 5.26%; teach music in a private school by 5.26%; give a private piano lesson by 5.26%; and be able to make my own music with the instrument by 5.26.

Some of the participants' answers to this question are as follows:

"I consider myself qualified enough to be an academician in a university. I plan to pursue an academic career by taking all possible education and adapting experiences and be a piano artist. Therefore, I need to guarantee myself financially" (Female 1).

"My priority after graduation is to make a master's degree. I aim to develop myself more. I want to introduce myself by giving solo concerts" (Male 3).

"I want to give concerts as much as possible. I prefer to be a part of a team. I never think of a solo career because I like being with people. For example, I notice that I have improved a lot when we gave chamber concerts as a piano accompanist. While I am playing only the piano, I feel like I am playing other instruments and I find it enjoyable and efficient to discuss as a group about when to breath or who enters the piece when. We become a family at that point. I feel secure on the stage as well. We share our excitement and feel each other by listening" (Female 3).

#### 4) Findings including the students' perspectives regarding the reasons for their preference of the career

The findings including the students' perspectives regarding the reasons for their preference of the career were presented below. The students' answers were presented in Table 4. In some perspectives, more than one participant expressed some common perspectives.

Table 4. The distribution of the students' perspectives regarding the reasons for their preference of the career

Responses	f	%
I preferred to be a teacher since I took my teacher as a model.	1	7.7
I preferred to pursue an academic career to be more qualified.	6	46.1
We will be able to get famous and introduce ourselves when we become a piano artist. This will yield many opportunities.	2	15.3
We will prove ourselves and see what we can achieve by making a master's degree.	3	23.1
I will give private piano lessons since I like to share my knowledge regarding piano education.	1	7.7
Total	13	100

As seen in Table 4, 46.1% of the participants preferred to pursue an academic career to be more qualified; 23.1% want to prove themselves and see what they can achieve by obtaining a master's degree; 15.3% will be able to become famous and introduce themselves when they become a piano artist; therefore, this will yield many opportunities. Moreover, 7.7% preferred to be a teacher since they considered their teacher as a role model and

7.7% wanted to teach private piano lessons since they wanted to share their knowledge regarding piano education.

Some of the participants' answers to this question were as follows:

"The reason for my preference of this career is my love for teaching. I want to see the progress of my students in the future" (Female 3).

"I prefer to give chamber concerts as a piano artist. I enjoy the music made in a team more than anything else. We are aware of our shortcomings. Moreover, I can meet many people, thus, opening new doors at any moment" (Male 3).

"My piano teacher was the greatest inspiration for my preference of this career. I have always considered him as my role model" (Female 2).

#### **4. Discussion, Conclusion and Recommendations**

A student who starts the piano majors education in the fifth grade has a total of twelve-year education including four years in elementary school, four years high school and four years in the undergraduate program. During this education, students are expected to gain the basic and advanced piano skills as well as recognition of the piano majors' works by composers of various periods and cultures (YOK, 2016). Moreover, considering the age of onset for piano education in our country, it is possible that the occupational perception, which is not expected to be developed at an early age is shaped by the changes in the expectations within the occupational education process (now longer than ten years). Therefore, this study aims to determine the occupational expectations of students in the piano majors of a Conservatory in the west side of Turkey.

When the students were asked about their perspectives regarding the reasons for their preference of conservatory piano majors, more than one participant expressed common perspectives in three issues and highlighted that their education in Fine Arts High School was insufficient and that they wanted to be a qualified pianist. Çevik (2007) on the insufficiency of piano education reported the importance of students' readiness level to increase the efficiency of piano courses. This result supports the current study. The participants underlined the importance of their love and passion for piano. A different study stressed that students who are happy in their occupations are more successful in their learning experiences as well as in their occupational life (Kömürcü, Erdoğan, & Eti, 1988). Evans stated that the enthusiasm of piano teachers is very crucial to the learning process of their students. In a different study, the students' perspectives regarding their occupational expectations affected the quality of their education as well as their success during their education (Hussain, Jamil, Noor, Sibtain, & Shah, 2011). These results are also in concurrence with the current study.

The response of the students regarding the expectations from piano majors from the first year, they started their education in this period; the results revealed that most participants expected to be more equipped; however, their motivation began to diminish over time. Some participants stated that they had higher expectations in the beginning and that music courses should be considered more important compared to other courses in conservatories. Moreover, they indicated that their knowledge should not be limited to music and their expectations were negatively affected in both cases. Other participants stated that their expectations were met since their instructors were qualified and could transfer their knowledge and they showed a significant improvement in both their piano technique and the interpretation of music and their expectations in this regard were met. According to Stanton (1985), an ideal teacher should have strong academic qualifications and expertise and be a researcher who knows the field very well. Stanton's (1985) definition of an ideal teacher supports the current study. Conversely, some participants thought that there is a staff limitation in the piano department and this negatively affected their motivation regarding their occupation; therefore, their expectations were negatively affected. Thus, the students developed a pessimistic perception, which impeded their efforts in finding a job in their field after graduation. Bourjaily (1984) reported a relationship between the individuals' occupational perceptions and expectations. According to a different study, schools have an impact on the occupational expectations (Dalal & Singh, 1986). Previous studies overlapped with the results of the current study.

During the interviews, the students were asked about their perspectives regarding their career goals after graduation. Most of the participants stated that they wanted to pursue an academic career. Developing occupational qualifications and financial concerns were determined to be among the main motives behind this preference. In a different study, it was revealed that financial concerns were directly correlated with individuals' economic and occupational expectations (Can & Soyer, 2010). Cevik, Perkmen, Alkan, and Shelley (2013), in their study, focused on the importance of preservice music teachers' sense of success in their occupation and job

guarantee. These results corroborate the current study. Some participants who wished to give chamber concerts stated their fear of performing solo and sharing a scene with a group made them feel safe and making music by listening to each other improved their skills.

Considering the results including students' perspectives regarding the reasons for their preference of the career, approximately, half of the participants stated that they would be more qualified in playing the piano if they pursued an academic career. Moreover, some stated that they would prove themselves obtaining a master's degree and some indicated that being recognized as a pianist in the future might provide new opportunities in their lives. A different study reported that individuals were satisfied with their occupations and developed a perception that they made the right choice regarding their occupation when needs such as success, recognition and prestige were met (Abd-El-Fattah, 2010). The occupational expectations of the conservatory art students are influenced by their educational program since the conservatory's undergraduate programs provided the necessary knowledge for an occupation and field of art.

Students' perspectives regarding the usefulness of their knowledge and skills that they acquired in the instrument courses, the feedback from their teachers and the commission where in they perform at the end of each semester regarding their individual performances influences the expectancy levels of students regarding their future occupational life (Jussim, Smith, Madon, & Palumbo, 1998; Levin & Nolan, 2000). In this regard, teachers need to positively influence students' musical identity development, which is crucial for them to be a professional musician (Lamont, 2010 as cited in Creech & Hallem, 2011). Therefore, Hallam (1998) proposed that the student-teacher relationship is very important to understand the students' instrument level and capacity and highlighted that the student-teacher interaction influences students in their whole education life. Zembylas and Papanastasiou (2005) underlined the importance of communication between students and teachers.

Yokuş (2010) investigated the effect of using strategies appropriate to the individual characteristics of students for their achievement and revealed that the use of such strategies is more effective compared with traditional strategies. Therefore, designing students' education in a particular field of art according to their needs is of critical importance. Various studies expressed the need for the adaptation of an educational understanding, which considers individual differences (O'Brien, 1988; Colwell & Goolsby, 2002). Therefore, it is an undeniable fact that a student in an educational program that is designed according to the student's will have positive occupational expectations. Moreover, students' expectations will improve in a positive way as they reach the outcomes and targets of the educational program with an increase in their age and grade level.

Based on these findings, the suggestions for eliminating the elements negatively affecting the occupational expectations of undergraduate students in the conservatory piano majors at least in the education process were made as follows:

- The teaching plans and programs of the conservatory piano department should be updated regularly.
- Students and instructors of the piano majors should be included in the works of the department's quality assurance system.
- The current courses about chambers musicians in high school, undergraduate and graduate programs of conservatories should be performed with the various groups consisting of piano and string instrument students and/or wind instruments. Therefore, students in the piano majors are provided to gain experiences of playing with other instruments.
- A mixed concert in which all piano students will participate should be organized in each academic year.
- Conservatory administrators should invite the national and international professional pianists and piano music chambers with the support of the university rectorates as often as the financial sources allow. Through such organizations, students should be allowed to gain experiences.
- Piano major students should be encouraged and informed to participate in both national and international contests that are appropriate for their age and categories by their instructors.
- Students' participation in Erasmus exchange programs should be supported and encouraged.
- Students should be allowed to consult in the career planning unit of their universities and benefit from the necessary professional guidance and network.
- The students who aim to pursue a career focusing on teaching and academic should be encouraged to enroll in a formation certificate program together with the students from other departments. In case that there is a Faculty of Education in the University, the students with a high GPA should be provided to enroll in a certificate program free of charge by the university administration.



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# Toward Better Goal Clarity in Instruction: How Focus On Content, Social Exchange and Active Learning Supports Teachers in Improving Dialogic Teaching Practices

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## Abstract

Goal clarity is an essential element of classroom dialogue and a component of effective instruction. Until now, teachers have been struggling to implement goal clarity in the classroom dialogue. In the present study, we investigated the classroom practice of teachers in a video-based intervention called the Dialogic Video Cycle (DVC) and compared it to the classroom practice of teachers in a traditional control group. We conducted video analysis ( $N = 20$  lessons) of teaching practices at the beginning (pre-test) and at the end of the school year (post-test). Furthermore, we performed video analysis of intervention group teacher discussions during DVC meetings ( $N = 6$  meetings). Comparative analysis between groups revealed changes in teaching practices towards better goal clarity for DVC teachers in comparison to the traditional control group. In-depth analysis of teacher discussions during DVC meetings showed that teachers continuously focused on goal clarity as the content of teacher professional development (TPD). They shared learning experiences and were actively involved in TPD learning activities. The study illustrates how components of effective TPD programs (content focus, social and active learning) translated into redefining and changing the teaching practice.

**Keywords:** classroom dialogue, goal clarity, teacher professional development, teacher learning, video analysis

## 1. Introduction

### 1.1 Introduction of the Problem

Classroom dialogue is the predominant mode of teaching in many classrooms all over the world (Mercer & Dawes, 2014). It is typically dominated by a rigid interaction pattern (Mehan, 1979; Resnick, Asterhan, & Clarke, 2015) and does not motivate students sufficiently to participate in discourse (Seidel & Prenzel, 2006). In this context, teachers fail to explicate learning goals and to verbally structure the course of the lessons well (Hugener et al., 2009; Seidel, Rimmel, & Prenzel, 2005).

In order to support teachers in changing their teaching practice, teacher professional development (TPD) programs have been developed (Resnick et al., 2015). In general, TPD aims to refresh the competencies of teachers' initial education and to expand teachers' professional knowledge and skills for further tasks and functions (Timperley, Wilson, Barrar, & Fung, 2007; Vigerske, 2017).

In this study, we present findings of the Dialogic Video Cycle (DVC). The DVC is a video-based TPD program focusing on productive classroom dialogue (Gröschner, Seidel, Kiemer, & Pehmer, 2015). Previous research shows that video-based TPD elements strengthen teachers' capacities for making concrete changes (Ball & Cohen; Borko, Jacobs, Eiteljorg, & Pittman, 2008; Grossman, Compton, Igra, Ronfeldt, & Shahan, Emily, Williamson, Peter W., 2009). We designed a more traditional TPD program called the Advanced Traditional Program (ATP) for the control group. In the ATP, teachers took part in one-shot workshops on the same topic offered by the Teachers' Professional Development Academy in Dillingen, Germany, but they did not work with video recordings of their own teaching. More information about the design of both programs is provided in section 2.1.

The aim of the study was to add value to the question of how teacher learning in TPD can be related to changes

in teaching practice. Until now, a number of studies have examined the effects of TPD by investigating changes in teachers' knowledge and practices as well as student achievement (Reznitskaya & Wilkinson, 2015; Sedova, Sedlacek, & Svaricek, 2016). Hattie (2009), for example, summarized findings from more than 50 000 studies and reported a mean effect size of  $d = 0.62$  for the effect TPD has on student achievement. Recent efforts also examined indicators of teacher learning during TPD (Borko et al., 2008; van Es, 2011). For instance, Borko and colleagues (2008) presented findings from teachers' exchange during their 2-year mathematics TPD program. Their findings indicated that teachers' conversations about video developed over time. It was shown that the conversation seemed to support teacher learning and motivated them to improve their teaching skills. However, there have only been a few studies connecting teacher learning in TPD with changes in teaching practice.

Our study contributes to the state of TPD research by first examining DVC teachers' classroom practice before and after the intervention and systematically comparing it to the control group (Research Question 1). In a second step, DVC teachers' discussions were analyzed to get deeper insights into teacher learning during the TPD program (Research Question 2). We used qualitative excerpts of teacher discussions to illustrate our findings.

In the following, we first describe the theoretical and empirical state of research (Section 1.2.). Section 1.3 then presents the research questions. Section 2 provides an overview of the methodological approach and Section 3 presents the main findings. Section 4 concludes with a discussion of the main findings as well as the further implications for TPD practice and research.

### *1.2 Theoretical Background*

This section is divided into two subsections. Subsection 1.2.1 introduces the concept of classroom dialogue and especially focuses on goal clarity as an element of productive classroom dialogue. Subsection 1.2.2 considers helpful elements for teacher learning within the context of TPD programs. Three elements will be highlighted: Content focus, active learning in a social community of learners, and video as a supportive tool for learning in TPD.

#### *1.2.1 Goal Clarity as an Element of Productive Classroom Dialogue*

Classroom dialogue can provide students with rich opportunities to engage in discourse, to think together and to elaborate on their own ideas (Alexander, 2008; Osborne, Simon, Christodoulou, Howell-Richardson, & Richardson, 2013). However, especially in math and science lessons, classroom dialogue typically follows tight communication structures, so-called initiation-response-evaluation (IRE) patterns (Mehan, 1979; Mercer & Dawes, 2014). According to this pattern, teachers typically initiate (I) classroom dialogue by asking narrow questions. The students then provide brief responses (R) and teachers evaluate (E) students' responses quickly. These tight interaction patterns fail to activate and challenge students sufficiently (Howe & Abedin, 2013; Kovalainen & Kumpulainen, 2005). Therefore, efforts have been made to train teachers to improve their dialogic strategies. For instance, in the TPD program "Accountable Talk" (Michaels, O'Connor, & Resnick, 2008), teachers learn concrete "talk moves" for improving their classroom dialogue. "Talk moves" refer to the conversational practices teachers can use to activate students and to scaffold their responses, such as asking a student to restate a previous response in his/her own words.

Within the context of dialogic teaching, goal clarity is often not implemented clearly (Borich, 2014; Seidel & Prenzel, 2006). Teachers struggle to explicate teaching and learning goals, as well as to make planned teaching and learning processes transparent. However, the clear communication of lesson goals and the presentation of the content structure have positive effects on students' learning processes and motivation (Hugener et al., 2009; Rakoczy et al., 2007; Seidel, Rimmele et al., 2005). Seidel and Shavelson (2007), for instance, conducted a meta-analysis with 112 studies on various teaching strategies. They found that goal setting and orientation had positive effects on students' learning processes, motivation, and cognitive achievement.

The TPD program presented in this study is the one-year video-based Dialogic Video Cycle (DVC). It aims to improve classroom dialogue through the activation of students and the scaffolding of students' learning processes (Walshaw & Anthony, 2008). The first activity comprises the clarification of rules and responsibilities as a basis for a productive classroom dialogue. It aims to activate students to participate in teacher-student interactions. The second activity comprises strategies to scaffold students' ideas. In this study, we focused on goal clarity as an essential instructional strategy for the activation of students (first activity).

But how can teachers be supported in changing their actual teaching practices? How can teachers learn to activate students in classroom dialogue and clarify the learning goals? The following subsection focuses on teacher learning in TPD. An overview of essential elements for teacher learning is given.

### 1.2.2 Teacher Learning within the Context of Teacher Professional Development

From previous research (Scheerens, 2010; Stoll, Bolam, McMahon, Wallace, & Thomas, 2006) we know that teacher learning communities can support teachers' professional development. A learning community is defined as a group of teachers coming together for a sustained period of time to collaborate on and discuss their teaching with regard to shared content and goals (DuFour & Eaker, 1998; van Es, 2012).

The most important element in supporting teacher learning in learning communities is content focus (Desimone, 2009). Focusing on specific content means that the TPD program attends to a specific subject or pedagogical content that is related to the teaching practice, such as classroom dialogue (Desimone, 2009; Wilson, 2013). To foster teachers' content focus, it is helpful to have 20 hours of contact time or more, spread out over a longer time span (Lauer et al., 2014). Teachers need some time to get to know each other and to evolve into a learning community with shared goals and interests (Dobie & Anderson, 2015; van Es, 2012). To situate the content into practice, artifacts of learning, such as lesson plans, teaching materials, students' work or videos of lessons, are useful tools to support teacher learning (Ball & Cohen, 1999; Lampert, 2009).

Beside content focus, active learning in professional learning communities supports teacher professional development (Scheerens, 2010; Vangrieken, Meredith, Packer, & Kyndt, 2017). Active learning takes place when teachers take part in productive discussions about their teaching (Borko et al., 2008; Dobie & Anderson, 2015). According to Borko and colleagues (2008, p. 421), productive discussions "should promote a critical examination of teaching, they should enable teachers to collectively explore ways of improving their teaching and support one another as they work to transform their practice". Van Es' (2012) findings, for instance, show how a group of teachers starting at the beginning level of a teacher learning community evolve into a highly engaged community with a shared commitment between teachers and facilitators to support each other's learning. To foster teachers' active learning, the TPD facilitator's task is to encourage all teachers to take part in the exchange (Arya, Christ, & Chiu, 2014; Molle, 2013; van Es, Tunney, Seago, & Goldsmith, 2015).

Taking the large body of research during the last years into consideration, video can be understood as a third supportive aspect for learning in TPD (Gaudin & Chaliès, 2015). Carefully selected video teaching excerpts provided opportunities to relate TPD contents to the teachers' practices and to enhance TPD content demonstratively (Ball & Cohen; Coles, 2013; Jacobs, Borko, & Koellner, 2009). Video excerpts of their own teaching enabled the teachers to observe their own teaching from a new (outside) perspective and to identify teaching aspects they had not detected during the lesson (Krammer et al., 2006; Marsh & Mitchell, 2014). Video excerpts of other teachers, on the other hand, allowed them to see instructional strategies other teachers use (Marsh & Mitchell, 2014; Zhang, Koheler, & Lundeberg, 2015). Teachers were more engaged in the content when watching videos of their own teaching than when watching other teachers teach (Seidel, Stürmer, Blomberg, Kobarg, & Schwindt, 2011). Teachers were more encouraged to analyze problematic events and implement new content into their teaching practice when watching video recordings of others (Kleinknecht & Schneider, 2013; Moreno & Valdez, 2007).

The TPD programs of the present study were developed based on theoretical assumptions (Borko, 2004; Desimone, 2009; Scheerens, 2010) and empirical findings (Borko et al., 2008; Seidel et al., 2011; van Es, 2012). The video-based Dialogic Video Cycle (DVC) served as an intervention group and the Advanced Traditional Program (ATP) as control group. Further details about the design of the two programs are outlined in Chapter 2.1.

### 1.3 Research Questions and Conjectures

Two main research questions were addressed. The first question focused on teachers' change in practice. The second referred to teachers' learning during the DVC program.

- 1) To what extent do DVC teachers change their teaching practices toward better goal clarity in classroom dialogue in comparison to ATP teachers?
- 2) How can these practice changes be linked to teacher discussions during DVC meetings?
  - 2.1) To what extent do teachers' exchange focus on the content of goal clarity in classroom dialogue?
  - 2.2) To what extent do the teachers actively participate verbally in the discussions?

First, we expected that the DVC would provide more situated learning opportunities for teachers to change teaching practices than the ATP. Therefore, positive changes from pre to post-test for better goal clarity were expected for DVC teachers in comparison to ATP teachers (conjecture 1).

Second, we assumed that the video-based approach of the DVC supported teachers in continuously focusing their discussions on the content (conjecture 2a). Furthermore, we expected that teachers in the DVC learning

community and the teacher on-screen (whose video was being discussed) would be continuously active verbally in the social exchange of experiences (conjecture 2b).

## 2. Method

### 2.1 Implementation of the Teacher Professional Development Programs

As mentioned before, the two TPD programs (Dialogic Video Cycle (DVC) and Advanced Traditional Program (ATP)) were developed. An implementation study showed that both programs generally targeted effective components, such as pedagogical content focus (on classroom dialogue), comparable durations (22 hours) and coherence (Gröschner et al., 2015). The components of collective participation and active learning were fully observed in the DVC and targeted in the ATP at an intermediate level. In the following, the two programs are described in detail and Figure 1 provides a visual comparison.

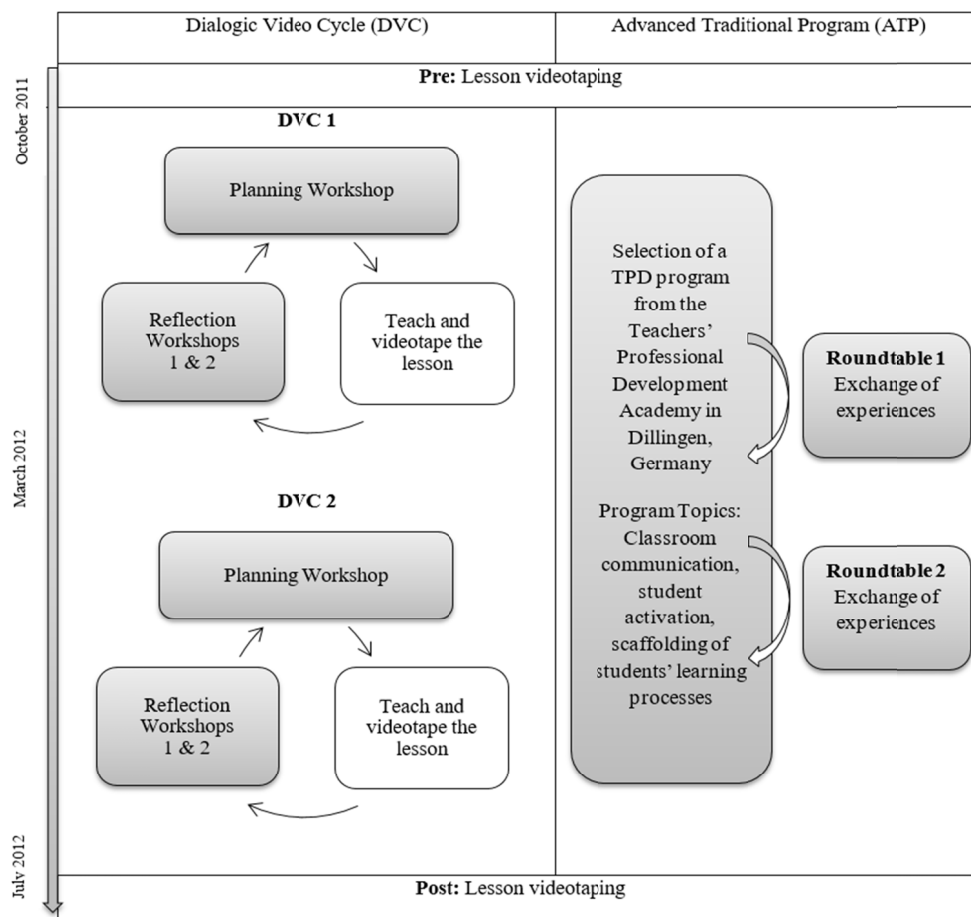


Figure 1. Overview of the Teacher Professional Development programs and measuring points

#### 2.1.1 Dialogic Video Cycle (DVC)

The DVC was applied in a systematic study in the academic year 2011-2012. The main goal was to empower teachers to change their teaching practice in a way that would activate their students to participate in classroom dialogue and support their learning processes (Walshaw & Anthony, 2008).

The DVC was composed of two subsequent cycles (Figure 1), one for the first term of the school year (DVC 1) and one for the second term (DVC 2). Each cycle consisted of three interconnected workshops (about 120 minutes each) and a videotaped lesson of every teacher (about 45 minutes).

In each DVC planning workshop, the facilitator provided a knowledge base on classroom dialogue and introduced conversation rules for appreciated discussions. Then, the facilitator invited the teachers to implement at least three activities for productive classroom dialogue in an existing lesson plan. Following this, the

facilitator supported teachers' discussions about the adoption of lesson plans (Gröschner, Seidel, Pehmer, & Kiemer, 2014).

After the planning workshop, the adopted lesson was taught and videotaped by the research team. Two to three-minute video excerpts of each teacher were chosen for the joint discussion in the following reflection workshops.

In the two reflection workshops of each DV cycle, the teachers watched the video excerpts and discussed their experiences teaching the lessons. The discussion was led by the facilitator who, for instance, repeated the knowledge base of a productive classroom dialogue and provided guiding questions like "How did Laura (teacher in the DVC) ensure that all students understood the goal of the lesson?"

### 2.1.2 Advanced Traditional Program (ATP)

The ATP was conducted during the same school year. The ATP was developed similar to a traditional German TPD program in which teachers chose one-shot workshops on specific teaching and learning topics (Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011). In this study, the research team selected a number of workshops with comparable durations on the topic of productive classroom dialogue and effective components of teaching and learning (such as goal clarity), which were offered by the Teachers' Professional Development Academy in Dillingen, Germany. The teachers were free to choose a set of these pre-selected programs. In order to foster the community of teachers as learners, two additional roundtables were offered by the facilitator. These roundtables are not typical for German TPD, which is why the program was called an Advanced Traditional Program (ATP). In contrast to the DVC, the teachers in the ATP program did not explicitly adopt existing lesson plans and they did not explicitly reflect on concrete examples of teaching practices as shown in video excerpts of their own teaching.

### 2.2 Participant Characteristics

Ten math and science teachers from higher and lower secondary schools in the Munich metropolitan area in Germany participated voluntarily in the TPD programs (Gröschner et al., 2015). TPD in Germany is normally based on the voluntary participation of teachers, so the two programs met the organizational standards and usual routines.

Table 1. Teacher sample

Teacher pseudonym	Intervention	Age	Gender	Teaching experience	Subject	Secondary level
Sarah	DVC	39	F	10	Math	High
Marc	DVC	45	M	4	Math	Low
Laura	DVC	33	F	2	Physics	Low
Caroline	DVC	44	F	5	Physics	High
Lucy	DVC	33	F	2	Math	High
Thomas	DVC	43	M	5	Math	Low
Peter	ATP	43	M	10	Physics	High
Susan	ATP	30	F	4	Math	High
Helena	ATP	33	F	7	Biology	High
Karin	ATP	40	F	8	Physics	High

After participating in a pre-meeting about the programs, the teachers chose one of the two programs (DVC or ATP). Teachers were not told which program would function as the intervention group versus the control group. Six teachers chose to participate in the DVC and four in the ATP. The teachers in the two programs did not differ in their motivation to learn about productive classroom dialogue (four-point Likert scale) ( $U = 7.00$ ,  $z = -1.14$ ,  $p = .25$ ) during their participation in the DVC ( $M = 3.51$ ,  $SD = .47$ ;  $M_{Rank} = 4.67$ ) or the ATP ( $M = 3.81$ ,  $SD = .38$ ;  $M_{Rank} = 6.75$ ) (Gröschner et al., 2014). In addition, teachers' characteristics in the DVC and ATP showed no significant differences in age, teaching experience, gender or subject (math and science) between the two programs (Pehmer, Gröschner, & Seidel, 2015).

### 2.3 Video Coding

Each teacher's classroom practice was video recorded at the beginning and the end of the 2011/12 school year (video recording of teaching practice). Furthermore, all DVC workshops were additionally video recorded (video recording of teacher discussion).

### 2.3.1 Video Coding of Teaching Practice (Research Question 1)

There were 20 video recordings of classroom dialogue teaching practice ( $n = 10$  for pre-test,  $n = 10$  for post-test). The recordings were coded by two independent raters using the software Videograph (Rimmele, 2002). In order to examine research question 1, the lesson served as a unit of analysis. A rating scheme based on four items (see Table 2) to be rated on a four-point Likert scale was used (0 = not true, 1 = partly not true, 2 = partly true, 3 = true) (Seidel, Prenzel, & Kobarg, 2005). Reliability, by means of calculating independent inter-rater correlations, was satisfactory (ICC:  $M = .58$ ).

To give an example, the raters watched Sarah's lesson (teacher participating in the DVC) for the pre-test. Afterward, each rater individually rated the lesson based on the four items (see Table 2). The raters had detailed coding rules for every item. When necessary, consent validation followed the independent coding procedure.

### 2.3.2 Video Coding of Teacher Discussions (Research Question 2)

In addition to the recordings of the teaching practice, there were six ( $n = 3$  for DVC 1,  $n = 3$  for DVC 2) video recordings of teacher discussions during the DVC workshops. These were coded based on a two-minute unit of analysis and three analysis categories (0 = miss, 1 = hit, 2 = not applicable). The coding followed procedures applied in previous research (Borko et al., 2008; Seidel, Prenzel et al., 2005). The total number of video coded units of analysis was 344 ( $M = 57.3$ ;  $SD = 19.53$ ). Although every workshop was about two hours long, the number of units of analysis differed between the workshops (Minimum = 35, Maximum = 83). There were more units of analysis in the DVC planning workshops than in the reflection workshops. In the planning workshops, several small group discussions took place simultaneously. For the video coding, we added the units of analysis of the simultaneous discussions being run and therefore got a higher number of two-minute units of analysis in the planning workshops. In addition, we did not consider units of the reflection workshops in which teachers watched the video excerpts and no discussion took place.

Each unit of analysis was coded with regard to the focus on goal clarity in classroom dialogue. Furthermore, we analyzed who participated in the discussion: a) facilitator, b) teacher on-screen, c) teachers in the learning community. Reliability, by means of calculating independent inter-rater correlations, ranged from satisfactory to excellent (ICCs: 0.65 to 1.00).

To give an example, the raters observed teachers' discussion in the planning workshop of DVC 1. They stopped the recording every two minutes and rated each segment based on all items (see Table 2). In addition, they rated who participated in the discussion during the two minutes.

Table 2. Categories for video coding

Coding category	Video material	Item	Coding role: Is coded if...
Change in teaching practice (Research Question 1)	Teaching practice videos	Goal formulation	...the teacher formulates the main goal/central question of the lesson.
		General concept	...the lesson is structured according to the teacher's general concept.
		Lesson structure	...the teacher chooses an appropriate student working phase and integrates it into the structure of the lesson meaningfully.
		Specific goals	...the goals are formulated specifically and not generally.
Change in the DVC's discussions about goal clarity (Research Question 2)	DVC workshop videos	Clarification of lesson course and student tasks	...clarification of lesson course and student tasks is discussed.
		Clarification of learning goals	...clarification of goals as a possibility to activate students is discussed.

## 2.4 Data Analysis

### 2.4.1 Data Analysis of Change in Teaching Practice (Research Question 1)

Due to the sample size ( $N = 10$ ), non-parametric variance analyses for longitudinal comparisons of the two groups (DVC and ATP) were applied using the software R (Stowell, 2014). Thus, we compared the relative



effects of DVC and ATP. Additionally, since conventional analyses typically refer to parametric analyses, the findings are reported by means of a Wilcoxon signed-rank test. These analyses were applied separately to show changes for each TPD program from pre- to post-test.

#### 2.4.2 Data Analysis of Teacher Discussions (Research Question 2)

Due to the variation in the number of two-minute units of analysis for each DVC workshop, we report results for each conjecture based on the absolute and relative frequencies of the rated DVC items. Furthermore, we present a mean value for both reflection workshops of each cycle, as the main interest was in the nature and change of the DVC discussions over time (from DVC 1 to DVC 2). In addition, we differentiate between the proportion of verbal activity in the discussions among facilitators, on-screen teachers and teachers in the learning community. Due to the fact that video excerpts of one's own teaching were only used in the reflection workshops, we only report the on-screen teachers' verbal activity for these workshops. Finally, discussions from the DVC workshops were transcribed and presented as qualitative excerpts.

### 3. Results

The following results are presented according to the research questions and conjectures. The first section (3.1) starts by demonstrating the findings for the change in teaching practice. The second section (3.2) illustrates the findings for teacher learning during the DVC program.

#### 3.1 Change in Teaching Practice (Research Question 1)

Based on the non-parametric variance analysis for longitudinal comparisons of the two TPD programs, the investigation of teachers' practice changes regarding goal clarity showed a significant interaction effect ( $F = 4.84$ ,  $df = 1$ ,  $p = 0.03$ ) (see Table 3).

Table 3. Changes in teaching practice in the DVC and ATP

	Pre			Post			<i>F</i>	<i>df</i>	<i>p</i>
	<i>M</i> ( <i>SD</i> )	<i>Mean rank</i>	<i>RTE</i>	<i>M</i> ( <i>SD</i> )	<i>Mean rank</i>	<i>RTE</i>			
DVC	1.5(.8)	7.8	.4	2.1(.7)	14.08	.68	4.84*	1	.03
ATP	1.4(.9)	11.6	.6	1.3(.8)	8.00	.38			

Note. \*\* $p \leq 0.01$  \* $p \leq 0.05$ ; *M* was analyzed on a four-point Likert scale (0 = not true, 1 = partly not true, 2 = partly true, 3 = true).

The relative treatment effect (RTE) of the DVC increased ( $DVC_{pre} = 0.37$ ;  $DVC_{post} = 0.68$ ), whereas the ATP's one decreased ( $ATP_{pre} = 0.56$ ;  $ATP_{post} = 0.38$ ) significantly over time. From a parametrical perspective, instructional strategies for clarifying lesson goals (e.g. clear formulation of the central question in the beginning of the lesson) were observed in the DVC at a mean score of  $M = 1.50$  ( $SD = 0.82$ ) at the pre-test, which increased to a mean score of  $M = 2.06$  ( $SD = 0.71$ ) at post-test. In the ATP, instructional strategies for clarifying lesson goals were observed at a mean score of  $M = 1.44$  ( $SD = 0.88$ ) pre-test. This mean dropped to  $M = 1.25$  ( $SD = 0.80$ ) post-test.

Furthermore, a Wilcoxon signed-rank test showed a significant positive change in the DVC teachers' practices ( $Z = -2.21$ ,  $p = 0.03$ ) from pre to post-test. The median goal clarity rating was 1.16 for the pre-test and 1.71 for the post-test, whereas the learning environment of the ATP did not lead to a significant change in teaching practice ( $Z = -0.74$ ,  $p = 0.46$ ). Indeed, median goal clarity rating was 1.66 for pre-test and 1.13 for post-test.

#### 3.2 Teacher Discussions (Research Question 2)

In order to illustrate these findings on teachers' practice, we analyzed DVC teachers' discussions. Table 4 illustrates to what extent teachers discussions were focused on the content of goal clarity in classroom dialogue (Research Question 2.1). In both cycles, between 23% and 37% of the two-minute units of analysis were coded as units in which discussions about goal clarity took place. Comparing the two cycles, there was a decrease in discussions about goal clarity from the first to the second cycle. In addition, goal clarity was more frequently addressed in the planning workshops in which discussions about adapting lesson plans took place.

Table 4. Content focus in (video-based) teacher discussions during DVC workshops

	DVC 1				DVC 2			
	Planning Workshop		Reflection Workshop 1 & 2		Planning Workshop		Reflection Workshop 1 & 2	
	<i>n</i> [%]	<i>n</i>	<i>n</i> [%]	<i>n</i>	<i>n</i> [%]	<i>n</i>	<i>n</i> [%]	<i>n</i>
Goal clarity	37	31	33	30	28	22	23	21
Segments in total	100	83	100	92	100	79	100	90

*Note.* *n* segments in total were the total amount of two-minute units of analysis coded in the particular workshop; *n*[%] segments in total were the relative frequencies of two-minute units of analysis coded in the particular workshop.

Furthermore we examined teachers' active participation in the discussions (Research Question 2.2). Our findings show that the distribution of the verbal activity between the facilitator, the on-screen teacher and teachers in the learning community was almost constant over time (see Figure 2).

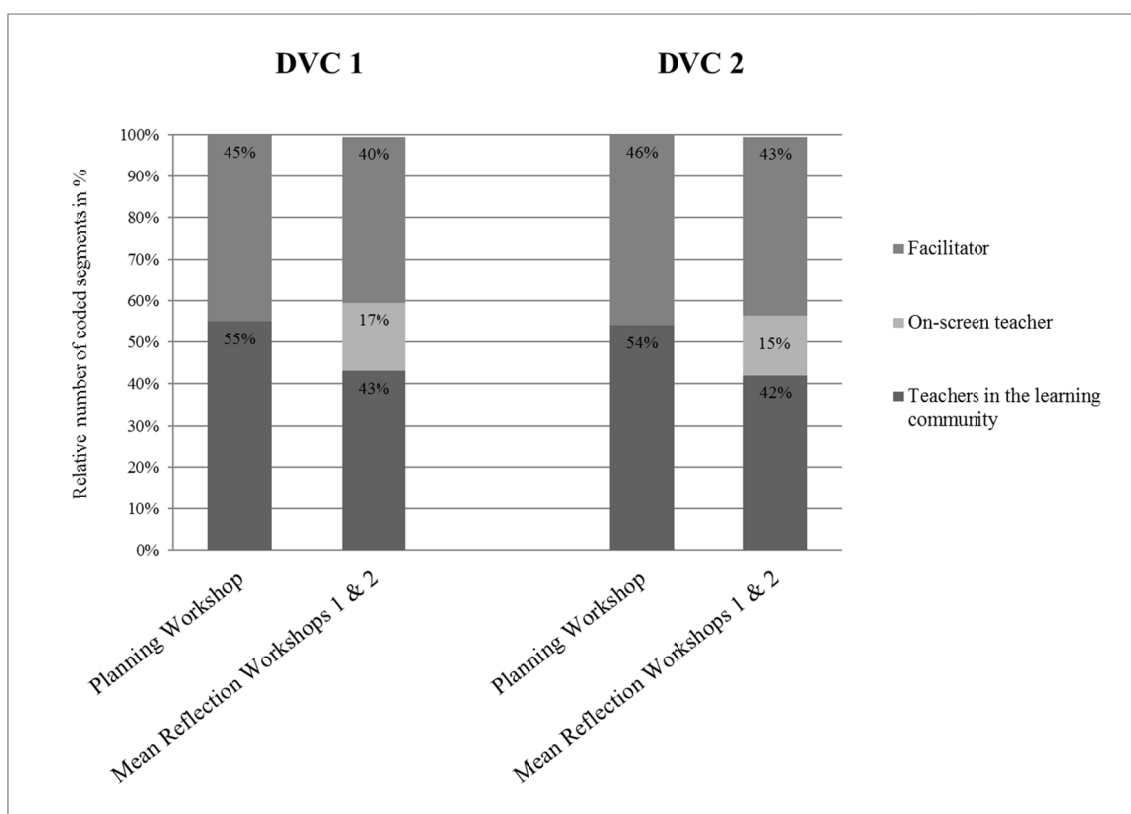


Figure 2. Active and social exchange during DVC (video-based) teacher discussions

Through both DV cycles, the teachers (in the learning community plus the on-screen teacher) had a high proportion of verbal activity in the discussions about goal clarity (between 45% and 58% of units of analysis). In the reflection workshops, the verbal activity of the teachers was distributed between teachers in the learning community and the on-screen teacher. Each teacher was part of the learning community during the entire DVC and served as the on-screen teacher at least once during each DVC. The facilitator's verbal activity was more frequently coded in the planning workshops (about 55% of units of analysis) than in the reflection workshops (about 43% of units of analysis).

In order to illustrate the nature of the DVC (video-based) teacher discussions, qualitative excerpts are presented in the following. The first excerpt exemplifies the discussion about Sarah's (teacher participating in the DVC) lesson plan in the planning workshop of the first DVC. Sarah was planning her next chemistry lesson about the topic "aldehyde" and was not sure whether she could improve her teaching strategies.

Facilitator: *What do you think about using a goal plan to visualize the lesson structure? I think this would be motivating for the students.*

Sarah: *Yes, you are right. I think this is a good idea. Do you think I should have incorporated a goal plan into my previous lesson, too?*

Facilitator: *No, I don't think so.*

Sarah: *I think, for this lesson, a goal plan would be beneficial because we will be working on the topic "aldehyde", which the students already know. The aim of the lesson is to do exercises. When you [looking at Laura and Caroline, two colleagues during this discussion] talked about a goal plan for your lessons, I was thinking about how I could integrate one into my lesson, too.*

(Planning Workshop, DVC 1)

In the following, the facilitator moderated the discussion and supported the teachers in thinking about opportunities for Sarah to incorporate a goal plan. The teachers shared their experiences and related their discussion to Sarah's lesson so that she was able to incorporate some instructional strategies for a productive classroom dialogue. In the reflection workshop of DVC 1, the teachers watched the video excerpt in which Sarah clarified the lesson goals with a goal plan.

Thomas: *I like the way you integrate the goal plan. That makes the lesson structure transparent for students. (...)*

Sarah: *I have never used a goal plan like this. Typically, I explain the first task and after finishing it, I explain the second and so on. (...)*

Lucy: *I think in this case the goal plan was perfect. The students already knew the terms you used. If they had never heard the term "aldehyde reaction equation" before, the goal plan could have been very scary.*

Facilitator: *But, do you remember Marc's (math) video? He said something like "In the end, you will be able to calculate the surface area of every polygon.", and this was very activating for the students.*

Marc: *Right, you do not have to use such complex terms. Just formulate the goals in simple terms!*

Thomas: *What is important is that the students know the goals. (...) This is like hiking. The students see one hill after another and they do not know how far away the mountain peak is.*

#### 4. Discussion

The Dialogic Video Cycle (DVC) is an example of a long-term practice-based TPD program on classroom dialogue. The aim of this study was to examine the extent to which the learning environment of the Dialogic Video Cycle supported teachers in changing their dialogic teaching practices compared to an Advanced Traditional Program (ATP). So far, common approaches have investigated the degree to which a TPD program has an impact on teacher learning by analyzing teachers' practices before and after the intervention. In the case where teachers changed their teaching practice after participating in the intervention, we can assume that the teachers benefited from engaging in the program. However, this kind of approach does not provide further information about effective instructional elements and the process of teacher learning during the intervention. Therefore, in order to learn more about important and effective TPD elements, such as content focus and active, social learning in a community of teachers (Desimone, 2009), we analyzed teacher discussions during TPD workshops in more detail.

As conjectured, the findings of this study show that teachers participating in the DVC changed their dialogic teaching practices and incorporated elements of goal clarity more explicitly compared to teachers in the ATP program (conjecture 1). The DVC's practice-based approach, thus, provided more opportunities for the teachers to learn and to practice (Lampert, 2009; Loewenberg Ball & Forzani, 2009). Putting TPD into practice, for example, using teaching artifacts like lesson plans and video excerpts of their own teaching might have encouraged teachers' individual as well as community-based learning processes and might have provoked practice changes in teachers' classrooms (Ball & Cohen, 1999; Jacobs et al., 2009). This is in line with previous research (Borko et al., 2008), which showed that teaching artifacts provide rich opportunities for teachers to actively exchange information about their own teaching and support one another in changing their practices.

The systematic analysis of teacher discussions in the DVC illustrates that teachers' changes in practice went along with a considerable period of time discussing these aspects during the planning and reflection workshops (conjecture 2a). This is in line with Borko and colleagues' (2008) findings, which showed that video excerpts of one's own teaching supported productive discussions. Video excerpts helped teachers to focus on relevant issues and to change their perspective on student learning. Contrary to our assumptions, there was a decrease in teacher discussions on goal clarity between the first and the second DVC. The TPD program focused on goal clarity as an essential instructional strategy for the verbal engagement of students. However, beyond that, teachers addressed a number of further effective instructional strategies during classroom dialogue in the intervention. The decrease in discussions about goal clarity can be interpreted as an artifact that teachers shifted their attention in the second DVC to other methods and strategies (Michaels et al., 2008) such as teacher feedback.

In line with our conjecture 2b, our analyses indicate that collective participation and active learning among the teachers and facilitator, which were both fully observed in the DVC and targeted in the ATP at a lower level, are essential elements for teachers' learning (Desimone, 2009; Wilson, 2013). A learning community provides a space for teachers to actively learn and collaborate and discuss their teaching methods with regard to a shared goal (van Es, 2012). Encouraged through the practice-based video excerpts, DVC teachers continuously discussed their own practices and collectively linked visual experiences during discussions to their teaching routine. The qualitative excerpts from the workshops illustrate how teachers in the learning community, the on-screen teacher and the facilitator exchanged information about methods and strategies for improving goal clarity in their instruction. In the planning workshop, Sarah (teacher in the DVC) was explicitly supported by the facilitator in incorporating a concrete instructional strategy for clarifying the lesson goal. Therefore, the facilitator asked her directly what she was thinking about a goal plan in order to visualize the lesson structure and ensure that she focused on the content. Unlike in the reflection workshop, the teachers discussed their ideas about Sarah's video excerpt without input from the facilitator. They related the discussion to the pedagogical TPD content, addressed their own teaching routines and shared their experiences. The facilitator just intervened to guide teachers' attention to a previous video. As the example shows, the role of the facilitator changed. While the teachers might need to be pushed by a facilitator toward trying out new instructional practices in a planning workshop, the teachers, as a learning community, took up this initiation within the group and jointly reflected on this issue without further input from a facilitator. In the reflection workshop, the facilitator was then in the role of expanding teachers' ideas or connecting different thoughts in order to foster active involvement and social learning (Borko et al., 2008; van Es, Tunney, Goldsmith, & Seago, 2014).

## 5. Conclusion

In summary, our study illustrates how components of effective TPD, such as content focus and social, active learning, translate into redefinitions and changes in classroom dialogue. Goal clarity in instruction can improve the classroom dialogue by explicating learning goals to students and verbally structuring the course of the lessons.

In addition, our study provides further support for practice-based TPD approaches that use artifacts like lesson plans and video excerpts of one's own teaching to foster teachers' active learning of content and to promote teachers' transfer of TPD contents to the teaching practice. Beyond the focus on practice-based elements in teacher education, future research should pay close attention to putting TPD into practice.

Furthermore, our findings suggest that the facilitator takes a leading role in framing the discussions purposefully in order to support teachers' social and active exchanges.

The study added to the current state of TPD research by relating changes in teachers' practices to components of effective TPD. Within this context, the study's limitation was the small sample size of participating teachers and thus the findings are not generalizable to broad cohorts of teachers. For future research, however, the knowledge from this small-scale study could be expanded to a larger teacher sample (Wayne, Yoon, Zhu, Cronen, & Garet, 2008). Moreover, the findings on full-group teacher discussions are based on a frequency analysis of the verbal activity of the facilitator, the on-screen teacher and teachers in the learning community; no conclusion can be drawn about the type of conversation that took place among the teachers. This will be part of a follow-up study taking into account the findings of Borko and colleagues (2008) that the discussions surrounding the video became more productive because teachers talked in a more analytical manner about specific issues in their PD. We are not able to show individual differences between teachers participating in the DVC in more depth. For that reason, further analyses will address teachers' individual practice changes as well as individual verbal activity during the (video-based) discussions to understand how individual teachers learn during TPD (Kazemi & Hubbard, 2008). Furthermore, additional analyses will consider the type of (video-based) discussions to acquire

in-depth information about the degree of productivity. Our findings indicate that the potential of practice-based TPD in comparison to traditional TPD may be useful for video and facilitation-based programs and studies in the future.

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# Evaluation of the Effects of Conflict Resolution, Peace Education and Peer Mediation: A Meta-Analysis Study

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## Abstract

The purpose of this study was to examine the effects of conflict resolution, peace education and peer mediation on the conflict resolution skills of students via meta-analysis method. 23 studies were determined to be in accordance with the study criteria. According to research findings conflict resolution, peace education and peer mediation education programs have a wide range of effect on the conflict resolution skills of students. In addition, the education program, education level, the type of application, publication type, the duration of application have been examined and evaluated. As a result, it can be stated that conflict resolution, peace education or peer mediation is effective in the constructive development of conflict resolution skills of the students.

**Keywords:** conflict resolution, peace education and peer mediation, school violence, meta-analyses

## 1. Introduction

Violent incidents at schools have adverse effects on the physical and psychological health of students while also preventing the perception of schools as safe locations and hindering the education process. Hence, it is a topic that concerns the society as a whole. Perceptions and opinions regarding the increase in violent incidents at schools both in our country and in the world result in an increased attention to this issue. Ögülmüş (2006) compared the results of two studies on violence at schools thus putting forth an increase in school based violent incidents. The research commission of the Grand National Assembly of Turkey (2007) puts forth striking results regarding violence at schools. As a result of the study carried out, students put forth that they have been subject to violence during the past three months 55.7% of which was physical, 31.9% verbal, 36.3% emotional and 15.8% sexual. When asked who the individual inflicting the violence was, friends came out as the response with the highest ratio. These striking results indicate the extensiveness and frequency of violence at schools while putting forth that violence is an issue that should be emphasized. In yet another study, Bulut (2008) examined violence incidents from students to students in publications between the years of 2001-2006 and determined 302 incidents. It can also be observed in this study that violence occurs mostly inside the school and in the classroom, that violence takes place mostly during school dismissal and recess times and that the reasons for violence are discussion, swearing and hitting. Of the violence incidents, 53% ended up in hospitals. Aküzüm and Oral (2015) carried out a study in which they determined according to the opinions of administrators and teachers that the most frequently observed violence incidents take place from student to student, that physical violence, verbal violence, peer bullying and abusing the opposite sex are among the more frequently observed themes of violence. It has been put forth as a result of the evaluation of violence incidents in press by Teyfur (2014) that there has been an increase in news on abuse, stabbing and drugs at schools. Another striking report (PISA, 2015) put forth the well-being status of children at the age of 15 in 72 countries. Accordingly, sense of school belonging is low for students in Turkey. In addition, 19% of the students in Turkey state that they are subject to peer bullying at school at least several times a month. The results of these studies indicate that violence incidents at schools should be evaluated in a multi-dimensional manner and that the required interventions should be made.

Interpersonal conflicts are natural and inevitable in any given school environment since there are many different people from different purpose, desire, value, relief and personal features. Studies indicate that student's conflict with others in classroom, playground, school bus or during playing and trying to solve these conflicts using

verbal and physical violence (Bemak & Keys, 2000; W. Johnson & T. Johnson, 1995; W. Johnson & R. Johnson, 2001; Taştan, 2004). There are three main source of conflict. Limited sources, lack of satisfaction of basic psychological needs and different values. Limited sources are money, time and asset related and generally easy to solve. According to Glasser psychological needs (being part of something, freedom, power and entertainment) can be the source of conflict. Different values contain different beliefs, cultural differences, attitudes, opinions and prejudices. These conflicts are not easy to deal with and only solved with awareness, respect and tolerance (Schrumpf, Crawford, & Bodine, 2007).

School is crucially important for student to acquire core life skills. Students claim responsibility for their actions when they solve conflicts with their own skills (Smith, Daunic, Miller, & Robinson, 2002). Conflict resolution skills also help students to gain empathy, effective communication, anger management and problem solving skills (Lane-Garon, 2000). Conflict resolution skills provide opportunity to learn living together and embrace diversity (Droisy & Gaudron, 2003). When students do not have conflict resolution skills, teachers waste most of their time with student conflicts and school is perceived unsafe by students (Hart & Gunty, 1997).

According to Breunlin, Cimmarusti, Bryant-Edwards, and Hetherington (2002), school administrators use one of the three approaches for preventing violence at schools. The first approach is security. Security approach keeps violence fixed. The second approach is punishment. This approach gives the message that violence will not be tolerated. Whereas the third approach is school based prevention programs. School based prevention programs provide alternative methods for decreasing violence. School based prevention programs aim to provide students with constructive skills that will enable them to solve interpersonal conflicts without resorting to violence. Therefore, school based prevention programs make up majority of the studies for preventing violence. These programs provide a safe and constructive learning environment, support the social and emotional developments of the students and assist in creating an environment where conflicts can be resolved by constructive means in addition to decreasing and/or preventing violence (Jones, 2004). Conflict resolution education (CRE), peace education (PE) and peer mediation education (PM) are the primary school based prevention programs.

Conflict resolution education “models and teaches, in culturally meaningful ways, a variety of processes, practices and skills that help address individual, interpersonal, and institutional conflicts, and create safe and welcoming communities” (Association for Conflict Resolution, 2002, p. 1). Conflict resolution education programs provide students with a basic understanding of the nature of conflict, the dynamics of power and influence that operate in conflict, and the role of culture in how we see and respond to conflict (Jones, 2004).

Conflict resolution education is important to: individuals, to build competence in life skills; schools, classrooms, and school communities, to support effective and safe learning environments; and society, to ensure a functioning and peaceful democracy (Association for Conflict Resolution, 2002, p. 1).

According to Johnson and Johnson (2006), peace education is a type of education providing knowledge, skills, attitudes and values that enable the establishment of harmonious relations and the resolution of conflicts in a constructive manner. According to Sommers (2003), peace education helps develop communication skills of active listening and assertive speech, problem-solving skills of brainstorming or consensus building, and orientation skills of cultural awareness and empathy. Through peace education, students can recognize self-understanding and management in addition to external factors as domains of their influence on peace development. They learn that interpersonal and environmental circumstances are outcomes of interaction with internal and external processes. The pervasiveness of conflict topics in each school subject, as well as during interactions at school, provides a broad context for peace education (Carter, 2008).

Mediation is the process of helping two or more people to resolve their conflicts in a constructive manner carried out by an unbiased third party. Mediation is one step ahead of negotiation process and is the sum of all strategies that make negotiations more effective and efficient (Johnson and Johnson, 1995). When this process is carried out by a peer at school, it is called peer mediation. Peer mediation is a process that helps students to resolve their conflicts in a constructive and peaceful manner while supporting their social and emotional developments (Türnüklü, 2006, p. 70). These programs provide a unique opportunity for diverse students to use communication, human relations, and problem-solving skills in real-life settings. Effective programs can help to create a safe and welcoming school environment, improve interpersonal and inter-group relations, and assist in reducing school conflicts and violence, especially when part of a comprehensive violence prevention plan (Association for Conflict Resolution, 2007, p. 2). Peer mediation is the oldest and most common CRE intervention (Cohen, 2003; Schrumpf, Crawford, & Bodine, 2007).

CRE and peace education are similar in terms of basic motivations, goals, key skills, and content. Yet CRE is domestically applied and peace education is internationally applied, and peace education has a stronger emphasis

on social justice orientations and larger systemic issues of violence than conflict education programs (Jones, 2004). Also currently, CRE programs typically fit one of three delivery formats: direct skills instruction, peer mediation, or embedded curriculum. Peer mediation programs train a subgroup (sometimes called a *cadre*) of students in CRE specifically to assist other students to resolve disputes using a prescribed process (Garrard & Lipsey, 2007). In other words, peer mediation is a type of conflict resolution education in which the emphasis is on providing mediation skills.

It has been observed in our country especially starting from the 2000's that many education programs have been adopted/developed and have been subject to effectiveness examinations for preventing behaviors such as violence, aggression and bullying at primary, secondary and high school levels (Sağkal, 2015). Both scientific studies and application studies have gained pace with an increase in the interest and emphasis on violence at schools. It has been observed as a necessity to popularize educations such as conflict resolution, peace education and peer mediation at schools within the scope of the Strategy and Action Plan for Preventing and Decreasing Violence at Educational Environments (2006–2011+). In parallel, this topic is also observed to gain emphasis in scientific studies. Indeed, it has been put forth by Türk and Cihangiroğlu (2017) that CRE and PM trainings are among the most frequently studied topics in graduate theses in the field of psychological counseling and guidance. It is thought that putting forth the effects via meta-analysis of this issue that attracts attention while providing information regarding the solution of a serious problem is an important issue. There is no meta-analysis study in our country that puts forth the effects of CRE, PE and PM trainings. In addition, six studies have been determined as a result of a literature survey that examines the effects of CRE, PE and PM trainings. W. Johnson and R. Johnson (2001) carried out a meta-analysis study in two countries, 8 different schools for 17 studies in which they examined the effects of only their own program entitled "Teaching to Be Peacemakers". Kmitta (1997) examined the effects of three different programs within a period of three years using only eight research studies. Wilson and Derzon (2003) and Wilson, Mark and Lipsey (2007) examined the effects of violence prevention programs on aggression via meta-analysis method. However, cr and pm make up only a small part of this study since the effects of all intervention programs have been examined in these studies. Burrell, Zirbel, and Allen (2003) carried out a study in which they performed a meta-analytic study using the mediation forms including the results of peer mediation applications. Finally, Jones and Kmitta (2000) carried out a comprehensive review study regarding the studies in the field of conflict resolution and they have also used the meta-analysis method in this study. Finally, it is thought that the examination via meta-analysis method of the effects of CRE, PE and PM trainings carried out at schools for preventing violence will shed light to new studies in this field and will give new ideas for future studies.

## 2. Method

Meta-analysis method was used in this study for determining the effects of conflict resolution, peace education and peer mediation education on the conflict resolution skills of students. Meta-analysis is comprised of statistical analyses used for integrating the multiple analysis results acquired from individual studies (Glass, 1976). In short, meta-analysis is the analysis of other analyses. It combines the results of other studies in a consistent and harmonious manner (Cohen, 1988). Meta-analysis is the grouping of similar studies on a certain topic, theme or field of study under certain criteria and the interpretation of the quantitative results of these studies (Dinçer, 2014, p. 4). De Coster (2004) defines it as a statistical method for the qualitative and quantitative combination of the results of studies carried out at different locations and times and different centers (Cit.: Kınay, 2012). In meta-analysis, the results acquired from small-scale individual studies carried out at different locations and times are combined thus reaching quantitatively more accurate results with an enlarged sample group (Çelebi Yıldız, 2002, Cit.: Kınay, 2012). The difference of meta-analysis from other literature survey methods is that it bases the combination, integration and analysis of different research results on statistical methods (Durlak, 1995). The stages followed in this study are as follows:

### 2.1 Determination of the Study Objective and Problem

The question to be researched in meta-analysis should be determined beforehand and the studies to be included in this analysis should be selected based on these criteria (Kang et al., 2000, Cit: Küçükönder, 2007). The objective of this study was to examine the effects of conflict resolution, peace education and peer mediation educations on the conflict resolution skills of students via meta-analysis method. For this purpose, studies have been examined which examine the effects of conflict resolution, peace education and peer mediation educations on conflict resolution skills in Turkey which have been carried out at primary education institutions, high schools and universities with semi-experimental and experimental patterns. Answers to the following sub-questions were sought for in the study:

- 1) What is the level of effect of conflict resolution, peace education and peer mediation educations on the conflict resolution skills of students?
- 2) Is there a statistically significant difference between the effect sizes according to the education program used during the application process?
- 3) Is there a statistically significant difference between the effect sizes of the studies according to the education level at which the application is carried out?
- 4) Is there a statistically significant difference between the effect sizes of the studies according to the publication type (thesis, article)?
- 5) Is there a statistically significant difference between the effect sizes of the studies according to the duration of the application?
- 6) Is there a statistically significant difference between the effect sizes of the studies according to the type of the application (with selected students or to all students as class based)?

### *2.2 Literature Survey*

A comprehensive literature survey was first carried out following the determination of the study question. In this scope, a query was made in the ULAKBIM, Google Academic and YOK thesis scan pages with concepts of “conflict resolution, peace education, mediation, peer mediation”. A total of about 320 studies were reached as a result of this literature survey. Elimination was made according to study criteria following the survey.

### *2.3 Inclusion Criteria*

Determining the study criteria was the most critical point of meta-analysis. These criteria determine which studies will be included in the analysis and which will be excluded (Dinçer, 2014, p. 40). The criteria determined for included studies have critical importance for understanding the scope of meta-analysis. The quality of the studies may be low if the inclusion criteria are very comprehensive resulting in decreased reliability. Whereas results may be acquired from only several studies and it may not be generalized if the criteria are too strict (Lam & Kenedy, 2005).

Studies obtained as a result of the literature survey in accordance with the study objective were evaluated according to the following criteria:

- a) That the study has been carried out in Turkey,
- b) That a semi-experimental or experimental pattern has been used in the study,
- c) That the independent variable of the study is either conflict resolution, peace education or peer mediation education,
- d) That one of the dependent variables of the study is conflict resolution skills,
- e) That the study has a control group,
- f) That the average and standard deviation values related with the number of individuals in the experiment and control groups of the study as well as the conflict resolution skills have been provided in the study.

According to the criteria provided in the study, studies that were not using a semi-experimental or experimental pattern were excluded. A total of 270 studies were excluded. Afterwards, studies were excluded which did not include conflict resolution skills as a dependent variable. Accordingly, 15 studies met the inclusion criteria. Two studies that did not have a control group were not included. Finally, four studies were excluded which did not include the average and standard deviation values for conflict resolution skills. Similarly, 3 more studies were excluded since the measurement tool used was not a scale. Finally, studies with methodological problems among the three problems were not included. Because, studies with serious methodological issues are left out of the meta-analysis and the effect sizes are calculated for each study. While the independence of the data is protected in this manner, equal weights of the included studies are also provided (Bangert-Drowns & Rudner, 1991; Cit.: Kansızoğlu, 2017). As a result, 23 studies were determined to be in accordance with the study criteria.

### *2.4 Coding of the Studies and Ensuring the Validity and Reliability of the Coding Process*

A form was developed by the researcher for coding the studies. The developed form was presented to the opinions of experts in the field. The form was revised afterwards according to the feedback from the experts. The coding process used in the study was comprised of three stages. Information regarding the studies was given in the first section. In this scope, the study number, author/authors, year of publication and type of publication were included. Information on the content of the study was provided in the second section. Within this framework,

education type (peace education, conflict resolution or peer mediation), study group (primary school, high school, and university), study pattern, follow up study, number of sessions and their durations were included. Whereas coding was performed in the final section by providing the numbers, averages and standard deviation values of the study data.

First of all, all studies were filed as a folder in the form of an electronic file with PDF extension. Afterwards, each study was listed in a Microsoft Excel sheet according to the names of the authors and the study numbers. The author names and files with PDF extension were linked via commands. Therefore, the required connection was provided for acquiring the desired information during the coding process. Whereas in the third stage of coding, the study numbers and the author names along with data regarding the study groups, average and standard deviation values were included in a separate Microsoft Excel study sheet thus completing the coding process. First, the researcher made the coding during the data coding process. Afterwards, another rater carried out the coding. Cohen Kappa coefficient (Cohen's  $\kappa$ ) was used for evaluating the level of agreement between the two different raters. The basic feature of Cohen's  $j$  is to consider two raters as alternative forms of a test, and their ratings are analogous to the scores obtained from the test. Well known as a chance corrected measure of inter-rater reliability, Cohen's  $j$  determines whether the degree of agreement between two raters is higher than would be expected by chance (Cohen 1960; Cit: Sun, 2011). When used and interpreted properly, the Kappa coefficient provides information for reliability determination as well as for other analyses. Kappa coefficient corrects the chance dependent section of the agreement thereby providing the real level of agreement (Sim and Wright, 2005; Cit.: Kansızoğlu, 2017). The coefficient of agreement for the two raters was determined as 0,86 in this study. This value is observed to be in a very good value interval (Cohen, 1968). The descriptive properties of the studies included have been given in Table 1.

Table 1. Descriptive Properties of the Included Studies

Author	Year	Study Type	Study Group	Study Pattern	Application Type	Application Period	Education Level	Number of Sessions	Session Duration	Calculated Durations	Follow up Test	Placebo group
Arslan E.	2014	Master	22	Experimental pattern	Peer mediation	2013-2014	7 <sup>th</sup> grade	10	40 min.	10	Yes	N/A
Ateş, N.	2014	Master	30	Experimental pattern	Conflict resolution education	2013-2014	6 <sup>th</sup> grade	7	50 min.	8	Yes	N/A
Coşkun, E.	2008	Master	104	Semi-experimental pattern	Peace education	2007-2008	5 <sup>th</sup> grade	32	40 min.	32	N/A	N/A
Çiçekoğlu, P.	2014	Doctorate	80	Experimental pattern	Conflict resolution education	2013-2014	13-17 ages	10	50 min.	12,5	Yes	N/A
Çavuş Kaşık, N.	2012	Master	20	Experimental pattern	Conflict resolution and peer mediation	2010-2011	7 <sup>th</sup> grade	13	90 min.	29	N/A	N/A
Damirci ve Bilge	2014	Article	70	Experimental pattern	Peace education	2013-2014	7 <sup>th</sup> grade	12	60 min.	18	Yes	N/A

Ergül H.	2008	Master	482	Semi-experimental pattern	Negotiation and mediation	2006-2007	9 <sup>th</sup> grade	32	40 min.	32	N/A	N/A
Gülkokan, Y.	2011	Master	131	Semi-experimental pattern	Peer mediation education	2010-2011	5 <sup>th</sup> grade	32	40 min.	32	N/A	N/A
Gündoğdu, R.	2009	Doctorate	43	Semi-experimental pattern	Conflict resolution	2008-2009	9 <sup>th</sup> grade	14	90 min.	31,5	Yes	Yes
Kaya, B.	2013	Master	161	Semi-experimental pattern	Peace education	2010-2011	4 <sup>th</sup> grade	28	40 min.	28	N/A	N/A
Kuş, M.	2007	Master	30	Experimental pattern	Conflict resolution		9 <sup>th</sup> and 10 <sup>th</sup> grades	5	120 min.	15	N/A	N/A
Kutlu, A.	2016	Master	24	Semi-experimental pattern	Conflict resolution	2015-2016	5,6,7,8 <sup>th</sup> grades	10	60 min.	15	N/A	N/A
Mutluoğlu ve Serin	2012	Article	40	Semi-experimental pattern	Conflict resolution		5 <sup>th</sup> grade	6	Unspecified		N/A	N/A
Öner Koruklu, N.	2003	Doctorate	60	Experimental pattern	Mediation education	2002-2003	University	10	160 min.	40	N/A	N/A
Sünbül, D.	2008	Master	482	Semi-experimental pattern	Negotiation and mediation education	2006-2007	9 <sup>th</sup> grade	32	40 min.	32	N/A	N/A
Şahin Altun, Ö.	2011	Doctorate	105	Semi-experimental pattern	Conflict resolution	2010-2011	University	10	60 min.	15	N/A	N/A
Şevkin, B.	2008	Master	675	Semi-experimental pattern	Negotiation and mediation	2006-2007	4 <sup>th</sup> and 5 <sup>th</sup> grades	32	40 min.	32	N/A	N/A
Tapan, Ç.	2006	Master	37	Semi-experimental pattern	Peace education	2005-2006	8 <sup>th</sup> grade	11	80 min.	24	N/A	N/A
Taştan, N.	2004	Doctorate	68	Experimental pattern	Conflict resolution and peer mediation		6 <sup>th</sup> grade	8	80 min.	16	Yes	Yes
Türk, F. 1	2008	Master	591	Semi-experimental pattern	Negotiation and mediation	2006-2007	4 <sup>th</sup> and 5 <sup>th</sup> Grades	32	40 min.	32	N/A	N/A

Türk, F. 2	2013	Doctorate	57	Experimental pattern	Peer mediation	2010-2011	9 <sup>th</sup> grade	20	45 min.	22,5	N/A	N/A
Uysal, Z.	2006	Master	30	Experimental pattern	Conflict resolution	2005-2006	9 <sup>th</sup> grade	9	50 min.	11,2	Yes	N/A
Zengin, F.	2008	Master	591	Semi-experimental pattern	Negotiation and mediation	2006-2007	4 <sup>th</sup> and 5 <sup>th</sup> Grades	32	40 min.	32	N/A	N/A

When Table 1 is examined, it is observed that the included studies are all dated after the year 2000 despite the fact that a year criteria has not been implemented for the studies included in meta-analysis. The first study that was included in the meta-analysis was from 2003, whereas the last was from 2016. Highest number of publications on conflict resolution, peace education and peer mediation was made in 2008 (26%,  $f=6$ ). The year with the second highest number of publications was 2014 (17.3%,  $f=4$ ). There are two publications per year in the years 2006, 2011, 2012 and 2013. There is one study per year in the years 2003, 2004, 2007, 2009. When the publication type of the studies was examined, it was observed that 65.2% ( $N=15$ ) of the studies included in the meta-analysis were master's degree theses. Whereas 21.7% ( $N=5$ ) were doctorate thesis studies. The number of research articles was two ( $f=2$ , 8.6%). At this point, we should emphasize one point. Some studies that were published as both graduate study thesis and as an article have been included in the literature survey of the study. Hence, it can be thought that the number of articles is lower. When the study groups in the studies are examined, the total number of individuals included in the applications/experimental process was 3933. Whereas the number of individuals in the smallest study group was 20, the number of individuals in the largest study group was 675 resulting in an average number of people of 177. It is possible to indicate that majority of the studies included in the meta-analysis have been carried out with larger groups. When the research pattern of the studies included in the meta-analysis were examined, it can be observed that semi-experimental pattern has been used in 13 studies ( $f=56.5\%$ ) and that experimental pattern has been used in 10 studies ( $f=43.4\%$ ). When the educations applied during the experimental procedure process of the studies were examined; it was observed that peer mediation was applied in 11 studies ( $f=47.8\%$ ), conflict resolution in eight ( $f=34.7\%$ ) and peace education in four ( $f=17.3\%$ ). Since the education has been named as conflict resolution and mediation in two studies, the content of the education was examined. Accordingly, coding was made to the mediation education since the education included mediation process and applications. Since, only conflict resolution education has been included in studies with conflict resolution education. Whereas, even though information has been provided on conflict resolution process in mediation educations, the main theme of the program would be to learn and apply the steps of mediation. When the education level of the groups included in the studies were examined, it was observed that 14 studies ( $f=60.8\%$ ) were carried out at a primary school, seven studies ( $f=30.4\%$ ) at a high school and two studies ( $f=8.6\%$ ) at a university. Accordingly, it can be observed that the primary education group is the most preferred group among the studies included in the meta-analysis. Studies carried out at the primary and secondary education levels have been taken into consideration under the title of primary education in this study. Because primary education was under discussion during the period when the study was carried out, there are studies carried out with both 4<sup>th</sup> grade and 5<sup>th</sup> grade students. When the number and durations of the sessions were examined as another descriptive property, it was observed that the number and durations of sessions varied significantly in the studies. The number and duration of the sessions were multiplied during the coding process in order to be able to carry out a common evaluation thus determining the education time and these education times were recalculated according to a 40 minute course. Accordingly, whereas the longest education time was 40 class course hours, the shortest education time was 8 course hours and the average education time of the studies included in the study was 23.6 course hours. Whereas follow-up measurement was made in seven ( $f=30.4\%$ ) of the studies, follow-up measurement was not made in 16 studies ( $f=69.5\%$ ). Whereas placebo group is present in only two ( $f=8.6\%$ ) studies, there is no placebo group in 21 ( $f=91.3\%$ ) studies.

### 2.5 Calculation of Effect Sizes

Effect size is the fundamental unit of a meta-analysis study and it is a value that reflects the magnitude of the relationship between two variables or the magnitude of the application effect. Effect sizes are calculated for each study. Following these measurements, the effect coefficient is used for determining the agreement between the studies as well as the general impact on the field (Borenstein et al., 2013).

In this study, dates of 23 studies were combined via meta-analysis method for determining the effectiveness of conflict resolution, peace education and peer mediation educations. One of the dependent variables of the studies included in the meta-analysis has to be conflict resolution skills. The measurement tools used for the studies included in the research were Conflict Resolution Skills Scale developed by Sarı (2005), Conflict Resolution Behavior Determination Scale developed by Koruklu (1998), Conflict Resolution Scale developed by Akbalık (2001) and the Conflict Resolution scale developed by McClellan (1997) which was adopted into Turkish by Taştan (2004).

Magnitudes of the study groups along with the averages and standard deviation values of the experiment and control groups were present for all studies included in the meta-analysis. In this study, Hedge  $g$  effect size index which puts forth the corrected and standardized average difference among the groups has been preferred for calculating the effect size values of the studies included in the meta-analysis. The tendency to show the precise value more than necessary in small samples may result in a slight bias of  $d$ . At this stage, the index that is expressed as Hedge  $g$  should be preferred in order for the estimation of Cohen  $d$  to be unbiased (Borenstein et al., 2013, p. 27).

MS Office Excel 2007 and Comprehensive Meta Analysis (CMA) software were used in the generation of the calculations, tables and graphs used in the results and interpretation sections of the study. Thalheimer and Cook (2002) effect size classification has been used in this study: Accordingly;

0.15 < effect size value acts at < 0.15 insignificant level,

0.15 < effect size value at < 0.40 small level,

0.40 < effect size value at < 0.75 moderate level,

0.75 < effect size value at < 1.10 wide level

1.10 < effect size value at < 1.45 very wide level

and 1,45 < effect size at perfect level.

#### *2.6. Validity and Publication Bias of the Study*

Publication bias is one of the most important validity problems in meta-analysis. Publication bias occurs when the bias that occurs in published literature due to the greater possibility of publication of studies with statistically significant results is carried over to the meta-analyses (Borenstein, Hedges, Higgins, & Rothstein, 2013, p. 268; Üstün & Eryılmaz, 2014). The effect sizes of the studies in meta-analysis may be greater than necessary for this purpose. Because meta-analysis studies represent a biased sample group in the target population (Borenstein et al., 2013). Funnel plot, Rosenthal's fail-safe  $N$  method and Orwin's reliable  $N$  method have been used in this study for publication bias.

Funnel plot is a method for putting forth the relationship between study size and effect size. The funnel diagram shoes the effect size on the X-axis, sample size or variance on the Y-axis. In case of publication bias, it is expected that the effect sizes of the studies will be collected symmetrically at the top, that they will be collected in the middle when some studies are missing and that they will be collected at a point very close to the bottom in case a large number of studies are missing (Borenstein et al., 2013, p. 273). The funnel plot for this study has been given in Figure 1:



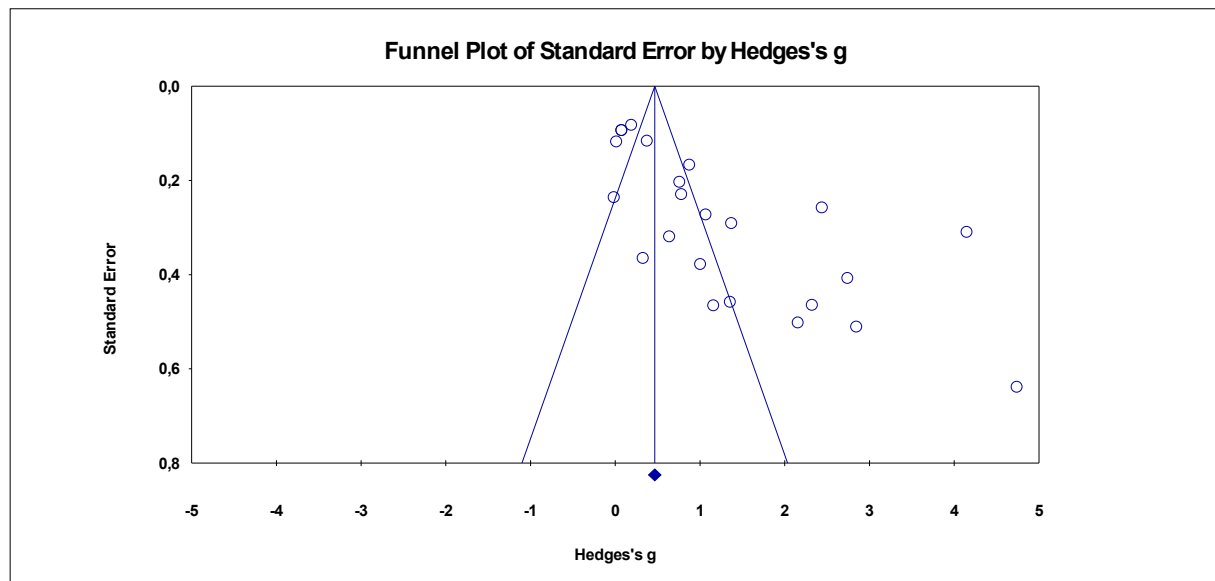


Figure 1. Funnel plot related to study bias

It can be observed when the graph is examined that the included studies are located in the middle and towards the right of the funnel plot and that they are slightly asymmetric. It is put forth here that the possibility of publication bias is increased with decreasing number of samples. Another factor is that studies with statistically significant results have a higher probability of being published in literature in comparison with studies that do not yield statistically significant results (Borenstein et al., 2013, p. 268). As can be seen, there is skewness towards the right in this funnel plot. This puts forth that only studies with statistically significant results have been included in the study. However, studies such as unpublished graduate theses have also been included in this research. As was put forth by Üstün and Eryılmaz (2014), file drawer problem meaning the publication of studies with only statistically significant lead to bias and this bias is carried over to the meta-analysis. It is very important to prevent publication bias by including both published and unpublished studies to the meta-analysis as the most effective means of protection from the adverse effects of publication bias. Nevertheless, inclusion of unpublished studies will not guarantee zero publication bias. That is why, methods developed for diagnosing and eliminating bias should be used in order to provide evidence regarding the fact that the meta-analysis results are sufficiently resistant against the inclusion of new studies with negative results (Üstün & Eryılmaz, 2014). In addition, since the interpretation of funnel plots is strongly subjective (Borenstein et al., 2013, p. 273), it is best to make use of other methods.

Rosenthal's fail-safe N method can be defined as the number of new studies that should be included in the meta-analysis in order to "cancel out" the effect in meta-analysis (Borenstein et al., 2013, p. 274). Rosenthal argues that the results are resistant against publication bias if the FSN value is greater in comparison with the number of observed studies (Üstün & Eryılmaz, 2014). The fail-safe N method results calculated in this study have been given in Table 2.

Table 2. Rosenthal FSN results

Z-value for observed studies	19.00064
p-value for observed studies	0.00000
Alpha	0.05
Direction	2
Z value for Alpha	1.95996
Number of observed studies	23
FSN	2139

As can be seen in Table 2, the value calculated for 23 studies in the meta-analysis study examining the effects of conflict resolution, peace education and peer mediation education is 15,27. This value is calculated as 15,27 using the  $N/(5k+10)$  formula and this value indicates that the results of the meta-analysis is sufficiently tolerant

for future studies. It is concluded when the value of  $N/(5k+10)$  exceeds 1 that the meta-analysis results are sufficiently strong for future studies (Üstün & Eryılmaz, 2014). The fact that the value in this study is quite higher than 1 is an indication that it is quite strong for similar studies that will be carried out in the future.

Finally, Orwin's fail-safe N formula was used in this study to determine publication bias. Different than Rosenthal's fail-safe N method, Orwin's fail-safe N method enables the calculation of the specific effect size that the general effect size magnitude will decrease to with the addition of lost studies in addition to the effect sizes of the lost studies (Üstün & Eryılmaz, 2014). Table 3 shows the results of Orwin's fail-safe N method.

Table 3. Orwin's fail-safe N Calculations

Hedge's g for observed studies	0.46531
Criteria for "insignificant" Hedge g	0.001
Average Hedge g for lost studies	0.000
FSN	1048

As can be seen in Table 3, a total of 1048 additional studies with zero effect are required in order for the general effect size magnitude to decrease down to the 0,01 value that is selected as "insignificant". If the effect size values of the studies to be included are increased from zero to 0,05, the number of studies to be included is 192.

### 2.7 Heterogeneity Test and the Meta-Analysis Model Used

The most important premise of the constant-effect model is that there is only one actual effect size for all studies. This premise also means that the differences in the observed effects are due only to errors in sampling. On the other hand, random-effects model is based on the opinion that the actual effect size may vary from study to study due to certain intervening variables such as the ages of the participants, their education level or class size. Hence, actual effect size is distributed around certain averages (Üstün & Eryılmaz, 2014). The model to be used should be determined in a meta-analysis study. Heterogeneity test is used for determining the model to be chosen. Constant effect model is used in case the results of individual studies turn out to be homogeneous as a result of the heterogeneity test, whereas random effects model is used in case the results are heterogeneous (Dinçer, 2014, p. 19). Table 4 shows the heterogeneity test results.

Table 4. Certain findings related with the heterogeneity test

Average Effect Size (g)	Degrees of Freedom (df)	Homogeneity Value (Q)	Chi-Square Table Value ( $X^2$ )	Standard Error (SE)	$I^2$	95% Reliability Interval for Effect Size (ES;% 95ci)	
0.465	22	422.282	33.924	0.037	94.790	0.392	0.538

When the analysis results given in Table 4 are examined, it can be observed that the  $Q$  statistical value has been calculated as 422,282. This value is much greater than the 33,924 critical value presumed for 22 degrees of freedom at a significance level of 95% for the chi-square ( $X^2$ ) table. In addition,  $I^2$  coefficient is the actual heterogeneity ratio of the total change in the observed effect. This measurement is quite handy for the calculation of heterogeneity measurement since it is not sensitive to the number of studies and the measurement of effect size coefficients (Borenstein et al., 2013, p. 119). Higgins et al. (2003) suggested certain indefinite reference points for  $I^2$ . They expressed these values as low, moderate and high with values of 25%, 50% and 75% (Cit.: Borenstein et al., 2013). In this study, the value of  $I^2$  has been calculated as 94,790. This means that; whereas 94.79% of the variance is the variance between the studies, 5% is the variance inherent to the study based on random error. It can be stated that the acquired 94.79% value has a high level of heterogeneity according to the classification by Higgins et.al. (2003). In addition, the value of  $p$  as .000 is lower than the value of significance which is  $p=.05$ . All these values ( $Q=422,282$ ,  $p<.05$ ,  $I^2=94,790$ ) indicate that there is a heterogeneous distribution among the effect sizes and that random effects model has to be used when interpreting the effect sizes.

### 3. Results

The findings acquired from the study have been answered in the light of the research questions which have been

presented below.

1) *What kind of an effect do conflict resolution, peace education and peer mediation educations have on the conflict resolution skills of students?*

Effect sizes of individual studies along with other statistical results related with the general effect size have been given in Table 5.

Table 5. Effect sizes of individual studies and other statistics

Study	Effect Size	Standard Error	Variance	Lower Limit	Upper Limit	z Value	p
Arslan, E.	1.357	0.458	0.210	0.458	2.255	2.960	0.003
Ateş, N.	2.324	0.465	0.216	1.413	3.236	4.998	0.000
Coşkun, E.	2.442	0.258	0.067	1.936	2.948	9.464	0.000
Çavuş Kaşık, N.	1.161	0.466	0.217	0.248	2.074	2.491	0.013
Çiçekoğlu, P.	0.782	0.230	0.053	0.331	1.233	3.402	0.001
Damirchi ve Bilge.	0.014	0.236	0.056	-0.477	0.450	0.058	0.954
Ergül, H.	0.077	0.094	0.009	-0.107	0.262	0.821	0.411
Gülkokan Y.	4.150	0.310	0.096	3.543	4.758	13.385	0.000
Gündoğdu, R.	0.329	0.365	0.134	-0.387	1.046	0.901	0.368
Kaya, B.	0.877	0.167	0.028	0.549	1.205	5.235	0.000
Kuş, M.	1.006	0.378	0.143	0.265	1.747	2.659	0.008
Kutlu, A.	2.158	0.502	0.252	1.173	3.143	4.296	0.000
Mutluoğlu ve Serin	0.641	0.320	0.102	0.014	1.267	2.004	0.045
Öner Koruklu, N.	1.070	0.273	0.074	0.535	1.605	3.920	0.000
Sünbül, D.	0.077	0.094	0.009	-0.107	0.262	0.821	0.411
Şahin Altun, Ö.	0.760	0.204	0.042	0.360	1.159	3.726	0.000
Şevkin, B.	0.015	0.118	0.014	-0.216	0.246	0.127	0.899
Tapan, Ç.	4.742	0.639	0.408	3.490	5.994	7.423	0.000
Taştan, N.	2.743	0.408	0.166	1.944	3.543	6.724	0.000
Türk, F. 1	0.192	0.083	0.007	0.029	0.354	2.316	0.021
Türk, F. 2	1.373	0.292	0.085	0.801	1.944	4.708	0.000
Uysal, Z.	2.848	0.511	0.261	1.846	3.850	5.570	0.000
Zengin, F.	0.376	0.117	0.014	0.148	0.605	3.228	0.001
General Effect Level	1.256	0.179	0.032	0.906	1.606	7.029	0.000

As can be seen in Table 5, the effect sizes of individual studies range between 0,014 and 4,742. The general effect size for the effect sizes of individual studies has been determined as 1,256. According to the effect size classification by Thalheimer and Cook (2002), this interval is an indication that the effect is quite large.

2) *Is there a statistically significant difference between the effect sizes according to the education program used in the application process?*

Table 6 shows the findings related with whether the effect sizes of the studies differ at statistically significant levels according to whether conflict resolution, peace education and peer mediation educations have been given or not:

Table 6. Findings related with the effect size and heterogeneity test according to the education program used in the study

Education Programs	95% Confidence Interval (95% CI)				Degrees of Freedom (df)	Heterogeneity Test	
	Hedge g	Number of Studies	Lower Limit	Upper Limit		Q Value	p value
Conflict Resolution	1.253	8	0.740	1.765	2	1.460	0.482
Peace Education	1.892	4	0.540	3.244			
Peer Mediation	1.052	11	0.609	1.496			

When Table 6 is examined, it can be observed that all effect sizes are in the positive direction, that the effect size values for studies in which peace education programs have been used are greater in comparison with the other education programs with a value of  $g=1,892$ . On the other hand, when it is considered whether the effect sizes obtained from primary studies differ at statistically significant levels according to the applied education programs or not, it was determined that the value of  $Q=1,460$  is lower in comparison with the critical value of 5,991 determined in the  $X^2$  table at a 95% level of significance and degrees of freedom of 2. The fact that the  $Q$  value between the groups is lower than the critical value puts forth that the conflict resolution, peace education and peer mediation education programs do not differ at statistically significant levels with regard to their effect sizes.

3) *Is there a statistically significant difference between the effect sizes of the studies according to the education level at which the application is carried out?*

Findings have been given in Table 7 related with whether the effect sizes of the studies differ at statistically significant levels according to the education level at which the application is carried out:

Table 7. Effect size according to the education level at which the application has been carried out and the heterogeneity test

Education Level	Hedge g	Number of Studies	95 Confidence Interval (95% CI)		(df)	Heterogeneity Test	
			Lower Limit	Upper Limit		Q Value	p value
Primary school	1.564	14	1.005	2.123	2	5.386	0.068
High school	0.782	7	0.335	1.230			
University	0.871	2	0.551	1.191			

When Table 7 is examined, it can be observed that the effect size values of the studies carried out at the primary education institutions are greater than other education levels with a value of  $g=1,564$ . As was put forth earlier, primary education was used without a distinction between primary and secondary school educations since primary education was eight years when the studies were carried out and various studies were applied to the 4<sup>th</sup> and 5<sup>th</sup> grades together. On the other hand, when it was examined whether the effect sizes obtained from primary studies differ at a statistically significant level according to the level of education, it was determined that the value of  $Q=5,386$  was below the critical value of 5,991 determined in the  $X^2$  table at a 95% level of significance and degrees of freedom of 2. The fact that the  $Q$  value between the groups is lower than the critical value puts forth that the conflict resolution, peace education and peer mediation education programs do not differ at statistically significant levels with regard to the education level applied.

4) *Is there a statistically significant difference between the effect sizes of the studies with regard to the type of publication (thesis, article)?*

Findings related with whether the studies differ at statistically significant levels according to the type of publication have been given in Table 8:

Table 8. Findings related with the effect size and heterogeneity test according to the publication type

Publication Type	Hedge g	Number of Studies	95 Confidence Interval (95% CI)		(df)	Heterogeneity Test	
			Lower Limit	Upper Limit		Q Value	p value
Master's Degree	1.443	15	0.990	1.895	2	8.590	0.014
Doctorate	1.132	6	0.624	1.641			
Research Study	0.278	2	-0.359	0.915			

As can be seen in Table 8, the highest effect size ( $g=1.443$ ) is for master's degree publications. Whereas doctorate thesis publications have an effect size of  $g=1.132$ . The effect size of two studies published as research study ( $g=0.278$ ) were lower in comparison with the others. When it was considered whether the effect sizes varied at a statistically significant level according to publication status or not, it was determined that the value of  $Q=8.590$  acquired was greater than the critical value of 5,991 determined in the  $X^2$  table at a significance level of

95% and degrees of freedom of 2. These findings indicate that there is a statistically significant difference in the effect sizes of conflict resolution, peace education and peer mediation educations according to the publication type of the studies.

5) *Is there a statistically significant difference in the effect sizes of the studies according to the duration of application?*

Findings related with whether there is a statistically significant difference between the effect sizes of the studies according to application duration have been given in Table 9.

Table 9. Findings related with the effect size and heterogeneity test according to the duration of application

Publication Type	95 Confidence Interval (95% CI)				(df)	Heterogeneity Test	
	Hedge g	Number of Studies	Lower Limit	Upper Limit		Q Value	p value
1-10 hours	1.837	2	0.889	2.786	5	7.502	0.112
11-20 hours	1.388	7	0.679	2.097			
21-30 hours	1.894	4	0.776	3.012			
31 hours and above	0.914	9	0.421	1.407			
Duration unspecified	0.641	1	0.014	1.267			

When Table 9 is examined it can be observed that all effect sizes are in the positive direction and that the effect sizes of studies with application durations of 0-10 hours ( $g=1.837$ ) and 21-30 hours (1,894) are greater. However, the difference between the effect sizes is not statistically significant since the  $Q=7.502$  value is lower than the critical value of 11,070 determined in the  $X^2$  table at a level of significance of 95% and a degrees of freedom of 5. Accordingly, there is no statistically significant difference with regard to the application duration of the provided education.

6) *Is there a statistically significant difference between the effect sizes of the studies according to the type of the application (with selected students or to all students as class based)?*

Findings related with whether there is a statistically significant difference between the effect sizes of the studies according to the application type in the studies included have been given in Table 10. The applications have been evaluated in two ways. These have been determined as the trainings the students selected and the studies that the students received as a class.

Table 10. Findings related with the effect size and heterogeneity test according to the type of the application

Application Type	95 Confidence Interval (%95 CI)				(df)	Heterogeneity Test	
	Hedge g	Number of Studies	Lower Limit	Upper Limit		Q Value	p value
Selected	1.245	12	0.796	1.694	1	0.001	0.981
Whole Class	1.253	11	0.762	1.745			

When Table 10 is examined, it can be observed that all the effect sizes are in the positive direction and that the effect size of the applications carried out as a class ( $g=1.253$ ) is greater. However, the difference between the effect sizes is not statistically significant since the  $Q=0.001$  value is below the critical value of 3.841 determined in the  $X^2$  table at a level of significance of 95% and degrees of freedom of 1. Accordingly, no statistically significant difference has been observed between the effect sizes with regard to the application type.

#### 4. Discussion

In this study, the effects of conflict resolution, peace education and peer mediation educations on the conflict resolution skills of the students have been examined by way of meta-analysis method. Accordingly, conflict resolution, peace education and peer mediation education programs have a wide range of effect on the conflict resolution skills of students. Similar results were observed when the study results in the related literature were examined. Johnson and Johnson put forth in a 2001 meta-analysis study that students who received peer

mediation education used mediation and positive conflict resolution methods more in comparison with students who did not receive this education. Burrell, Zirbel, and Allen (2003) carried out a meta-analysis study evaluating the results of peer mediation educations and applications in education environments in which they put forth that peer mediation reached a significant success with a positive impact on the school environment. Garrard and Lipsey (2007) carried out a meta-analysis study examining the effects of conflict resolution education on antisocial behaviors in which it was determined that this education had a moderate level of impact on antisocial behaviors. Wilson, Lipsey, and Derzon (2003) carried out a meta-analysis study in which they examined the effects of school based intervention programs on aggressive behavior which also included peer mediation education programs. It was put forth in this study that these interventions were quite effective on aggressive behavior. They (Wilson & Lipsey, 2007) reached similar results in another study in which they expanded their previous studies. Kmitta (1997) carried out a meta-analysis study in which it was emphasized that school based conflict resolution programs have limited but positive effect which changed according to the quality of the conflict resolution education provided. Jones and Kimitta (2000) carried out a comprehensive review study in which they determined that conflict resolution studies had positive impact on the academic success of students, their communication skills, development of interpersonal skills and constructive conflict resolution skills. The results obtained from meta-analyses carried out on conflict resolution, peace education and peer mediation educations in the relevant literature are limited with these studies. When the study results are examined, it can be observed in parallel with the results of this study that conflict resolution, peace education and peer mediation educations result in an increase in the constructive conflict resolution behaviors of students as well as a decrease in destructive, aggressive and antisocial behaviors. It is thought that it is an important result since the participation of children and teenagers in school based conflict resolution, peer mediation and peace education programs will contribute to the students acquiring new and constructive skills.

For the second question of the study, no statistically significant difference was determined between the effect sizes with regard to the education program used in the application. This result is in accordance with the results of studies in the relevant literature (Garrard & Lipsey, 2007; Lipsey & Derzon, 2003). This result shows that CRE, PE and PM education programs with similar attributes but different focus points have similar impact levels.

Even though, a greater effect size was observed in the primary education level within the scope of the third question of the study regarding the examination of the effect sizes according to the education level applied, no statistically significant difference was observed between the primary school, high school and university students. Garrard and Lipsey (2007) determined that conflict educations are more effective in the 14-17 age group, whereas the age group of 5-9 was the group on which it was least effective. Contrary to this, Jones (2004) states that it is more effective in primary schools. Whereas Johnson and Johnson (2001) emphasized parallel to the findings of this study that the effects of the programs do not vary with regard to age. Garrard and Lipsey may have reached such a conclusion since they examined the effects of anti-social behaviors. Because as put forth by the authors, those who benefit most from conflict education are the young people under risk. Jones (2004) has not carried out a meta-analysis and has not been able to put forth a statistically significant difference since the study only carried out a general evaluation of the study results.

When the differentiation between the effect sizes with regard to the type of publication was examined, it can be observed that master's degree theses have the highest effect, whereas research articles have the lowest effect. This result is statistically significant. An examination has not been carried out in similar studies according to publication type. A small number of research articles have been reached in this study. In addition, it can be stated that the greater effect sizes obtained for unpublished theses is a good result for eliminating publication bias.

The fifth question of the study was the examination of the application duration with regard to effect sizes. Even though it was observed that the effect sizes of educations between 1-10 hours and 21-30 hours were observed to be greater, no statistically significant difference was determined with regard to application durations. Garrard and Lipson (2007) observed that a duration ranging between 11-15 hours was more effective. Even though the studies included in this research have different durations, they all have similar effect sizes. The quality of application is more important than what is applied for conflict resolution educations. Hence, one of the best methods of increasing the effectiveness of the programs is to increase the interest towards the elements for application included in the program (Garrard & Lipson, 2007).

The final question of the study was related with whether effect size changes when the application is carried out with all the students in the class or with a selected group of students. At this point, no difference was observed between the effect sizes according to the application type. Wilson and Lipsey (2007) have reached a similar conclusion. Whereas W. Johnson and R. Johnson (2001) emphasize that the model in which all students participate in peer mediation applications at schools will be more effective in the light of the study they carried

out. They state that in order to develop the constructive conflict resolution skills at schools, both the school staff and all of the students should have knowledge of these skills. This is important for developing a common understanding in the school. However, it is thought that both application types may be effective for the students to acquire these skills individually.

The limitations of the study can be listed as follows: Only the studies carried out in Turkey have been included in the meta-analysis. It is thought that carrying out a meta-analysis with the inclusion of both national and international studies will be more beneficial as a comprehensive study. In this study, the effects of only CRE, PE and PM educations have been examined from among the programs for preventing violence at schools. It is considered that the examination of the effects of other violence prevention programs with different approaches, social emotional learning programs and school based intervention programs is also important.

In addition, this research has been carried out with a total of 23 studies included in accordance with the inclusion criteria. It should not be neglected that a quite high general effect size has been determined since the number of studies was not too high and that statistically significant results have been acquired from all included studies. In addition, it should be emphasized that studies with different measurement tools (conflict resolution scenarios, peer mediation results etc.) in especially conflict resolution and peer mediation educations have not been included in this study.

It has been concluded in this study that conflict resolution, peace education and peer mediation educations are widely effective on the constructive conflict resolution skills of the students in this study. This result shows that these school based educations may be an important part of the studies for preventing violence at schools. Schools play an important role in supporting scientific developments for raising healthy generations in addition to supporting their social and emotional developments as well (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Hence, it is thought that applying these education programs at schools and making them a part of school culture are important. It is considered that the systematic and structured use of these education programs that are also included as part of the MEB (Ministry of Education) Violence Action Plan in addition to making them part of the school guidance and psychological counseling programs at schools will make significant contributions to the students. Because, it should be kept in mind that conflict resolution is an indispensable part of prevention. Conflict resolution cannot prevent violence by itself; however it plays an important role in violence prevention studies (Schrumpf, Crawford, & Bodine, 2007, p. 27). In addition, it is also thought that providing these skills to students from all education levels will contribute to their academic success while also enabling them to acquire new life skills.

In this study, the effects of conflict resolution, peace education and peer mediation educations on conflict resolution skills have been examined. Their effects in decreasing negative behavior (aggressiveness, destructive behavior, disciplinary issues etc.) may be examined in future studies. In addition, empathy is one of the most important skills in conflict resolution, peace education and peer mediation educations. It is not possible to resolve conflicts in a constructive manner without empathy skills (Johnson & Johnson, 1995; Türnüklü, 2006; Wied, Branje & Meeus, 2007). Therefore, it is also thought that the effects of these skills on the empathy skill should also be examined. In addition, it is also thought that the effects of other interventions for preventing violence should also be examined and the results should be compared. A comparison has not been made with regard to student gender in this study. The effects of this variable can be examined in future studies. It is thought that studies on the effects of programs applied at schools following the CRE, PE and PM studies will also be beneficial. Because such studies may put forth the differences for students between acquiring these skills and using them in real life.

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## Appendix A

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# The Effectiveness of Using Online Blogging for Students' Individual and Group Writing

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## Abstract

The current research study investigates the effectiveness of online blogging for students' individual and group writing skills. The participants were divided into individual learners and group learners. They produced pre-writing and post-writing samples through blogging practices. The study conducted lasted for 14 weeks so that blogging could be optimized. The results of the study reveal that unlike traditional ways of improving writing skills, blogging has revolutionized EFL pedagogy and methodology (learning and teaching). Blogging-based writing practice is more participatory and interactive in that learners can dramatically improve their writing skills in terms of content, word choice, style, language mechanics and the like. The learner-blogger becomes aware that the arbiter is no longer the classroom teacher, the audience or readership. This study recommends that blogging be part of writing classes and be incorporated into school curricula. This essentially requires pedagogical consideration of the design of blogging-based writing materials.

**Keywords:** blogging, writing, EFL learners, learner blogger, blogs and EFL writing

## 1. Introduction

Practically speaking, before setting up writing tools for learners, it is vital to create an environment conducive to learning writing skills using a method that is both collaborative and individualized. Not only do learners better improve their writing skills through blogging practices, they can also build their self-confidence as writers and attract a wider audience. In time, students with varied interests can become famous bloggers with large audiences and can take ownership of their blogging-based writing. In addition, blogging practices play an active role in encouraging learners to experiment, take risks and foster their awareness to be private and public writers. Through blogging, learners can express their writing freely and can pool a wide range of ideas from one another when read or published. This helps them gain a stronger sense of analysis and interpretation of the topics they write about. In a classroom context, students are better equipped to use blogging as they receive more instruction before later becoming independent bloggers.

In the digital age, state-of-the-art technology serves as a productive platform for academic purposes. Impressively, digitization has successfully revolutionized the learning process. Blogging is one of the newer tools used in education. Etymologically, 'blog' is a blended term for 'web' and 'log'. Simply put, 'blog' is a web page that contains multimedia, commentaries and hyperlinks (Armstrong & Retterer, 2008). Unlike Internet websites that feature texts and photographs uploaded by web developers, with no room for any participation and communication whatsoever, blogs provide access to students to express their writing ideas and share their writing skills online (Nepomuceno, 2011, p. 92). With many blogging practices introduced into education in the late 1990s, language learners now have a plethora of opportunities to express their ideas and share their writing and reading skills across the limitless Internet community. Blogging quickly gained popularity among language learners supported by web designers and developers (Armstrong & Retterer, 2008). This was fast and easy because using blogging for writing purposes required little technological sophistication; in addition, blogs were available to different types of users and audiences. The rapid growth of interest in blogging is evident from the millions of people who write or read blogs. The Pew Internet and American Life Project revealed that approximately 12,000,000 Americans publish their blogs and approximately 57,000,000 read blogs (Lenhart & Fox, 2006). In the same vein, approximately 81% of school students use the Internet for various purposes, among them blogging (DeBell & Chapman, 2006). More interestingly, blogs are customizable; this allows users to

modify their presentation templates, themes, pictures, designs, colors and several other options.

### *1.1 Literature Review*

Blogging has recently gained considerable interest among EFL teachers and learners as a new approach to teach writing in classroom. Blogs place a special focus on learners' writing mechanics, energize them, and provide them with greater classroom writing dynamics. Blogging is an excellent way for learners to communicate with one another in a socially based context through technology (Lamonica, 2010, p. 5). Using blogs makes learners' writing more participatory and more focused on everyday language use (Penrod, 2007; Boling, 2008; Higginson, 2009; Stanley, 2013). Research studies reveal that blogs play a considerable role in improving learner reflection, classroom dialogue and social networking (Ray & Hocutt, 2006; Khourey-Brown, 2005; Efimova & de Moor, 2005). Blogs also enhance the writing skills of elementary, intermediate and secondary school students (Glewa & Bogan, 2007; Lomicky & Hossain, 2008). The aim of this research paper is to investigate the effectiveness of online blogging for students' individual and group writing skills. The paper also explores how blogs can help students to develop their writing skills in non-traditional ways, which can in turn add a great value to writing pedagogy and methodology.

What is good about using blogs in writing classes is that they introduce the use of outside school practices of literacy (Pahl & Rowsell, 2005). According to sociocultural theory, literacy is as a socially based practice and is mediated by a person's culture (Larson & Marsh, 2005). It can be enhanced through dialogue, discussion and storytelling. This creates self-expression and helps students discuss their ideas and then put them in writing either individually, in pairs or in a group. In this sense, blogging per se is not technology; rather, it is literacy, which underscores the strengths of authentic writing. Collaborative writing becomes a key issue at school that students should be engaged in (Boling et al., 2008). Unlike traditional methods of teaching writing skills, blogging introduces students to conversation, interaction, communication and debate before the actual writing stage. Many teachers unfortunately limit themselves to using a paper-and-pencil method to teach a writing class, but this often seems desultory (Barone & Wright, 2008). Blogging also gives students a personal purpose that makes writing more engaging than the academic critical thinking adopted by most curricula (Boling, 2008).

Academic blogging provides a good environment for literacy processes of various kinds, such as critical thinking, reflection, questioning, modeling, social practices, discussion and development, when teachers adopt it for classroom practices (Merchant, 2005; McGrail & Davis, 2011). Blogging also provides a space for writing down ideas in their embryonic stage to be refined later (Davies and Merchant, 2007, p. 170). When engaged in academic blogging, writers can develop and nourish their community through collaboration (Miller and Shepherd, 2004). Inasmuch as humans are born with an innate desire to learn in a social setting involving collaborative practices, literacy involves all socializing practices that begin at home and are later developed by further communication with others, and blogging is a case in point (Lamonica, 2010, p. 5).

When blogging is used in classroom, it helps learners to be active members of a community characterized by its constant changing rhythm, where knowledge is built up within a large sociocultural system (Larson & Marsh, 2005). This makes a quantum leap in teaching writing, with a shift from traditional methods such as teacher-centered and student-centered methods to a learning-centered method. This means that optimally learning takes place through participation and collaboration in a sociocultural context mediated by instruction. For undergraduate students, blogging is a key to learning, as they share ideas, socialize, communicate, debate, discuss and better express their ideas when they see those of their classmates, and vice versa.

Upper-elementary teachers reported a lack of preparation for teaching writing (Gilbert & Graham, 2010) due to the short 15-minute period. Given such time constraints, teaching metacognitive thinking skills relating to writing ideas and writing development is impossible (Kixmiller, 2004). It is also good to know one's reader and that reader's interpretation of the blogging-based writing material. This is a real challenge for students learning writing skills through blogging activities (Kellogg, 2008). At the undergraduate stage; students must take their writing ideas and their reader's possible interpretation(s) into consideration. With their readers in mind, students writing through blogging can imagine their audience's point of view and thus can revise and improve their ideas and writing style (Hollaway & McCutchen, 2004). Several blogging platforms provide students with access to a larger audience, and when blogging practices are well designed and planned, students can write about interesting ideas for longer periods of time (McGrail & Davis, 2011, p. 417). As such, readers can also serve as a barometer of students' writing in terms of development, interest and sense (Torrance, 2007).

The paradigm shift in language learning dictates a shift from so-called teacher-centeredness to learner-centeredness in an EFL context since the 1950s (Brown, 1987). Empowered by digitization, the learning process can also now shift toward learning-centeredness, and the project-based approach has become more

preferable among EFL teachers and learners (Özdemir & Aydin, 2015, p. 372).

The learning environment, among other socio-cultural factors, is one challenge that EFL learners and teachers face in their writing classes (Okan, 2008). A persistent problem is the lack of classrooms designed for language learning and equipped with the necessary audio-visual tools to facilitate learning language skills (Özdemir & Aydin, 2015, p. 373). What facilitates language learning by learners' perceptions is the way instructions are delivered (Lowyck & Clarebout, 2004). Nonetheless, students with positive attitudes toward their learning environment are more likely to write better. Crowded classrooms can negatively affect language learning (Yaman, 2009).

As practical tools, blogs create wonderful opportunities in an EFL environment both for teachers and for learners (Aydin, 2014). The use of blogging in writing classes could help students improve their writing performance when they receive well-organized instructions (Wu, 2005). In a research study conducted by Vurdien (2013), the results revealed that the use of blogs by teachers helped students improve their writing ability and write better in specific tasks. Blogs also fostered collaboration among students, and the use of blogging played a positive role in understanding how the learners' feedback can be effective. A research study was conducted to examine the effects of extensive writing. The study used different stages of blog entries written by the participants sampled for the same study. The results showed that blogs could play a useful role in improving students' writing performance through motivating them and enhancing what is known as learner autonomy in boosting writing skills (Sun, 2010).

When the potential use and value of blogs in language learning was examined in Taiwan, the results revealed that there was a general acceptance of blogs by students as a productive tool to improve their language skills, such as writing, vocabulary, self-expression, socializing and thinking skills (Noytim, 2010). In the same vein, Hashemi and Najafi (2011) stated that the use of blogs has a positive impact on teaching writing skills to EFL learners. Arslan and Şahin-Kızıl (2010) observed that blog-based writing can play an important role in improving students' writing performance. Similarly, a study conducted by Koçoğlu (2009) revealed that the use of blogs was significant in terms of learners' writing and speaking skills.

### *1.2 Significance of the Study*

This research study aimed to investigate the effectiveness of online blogging on students' individual and group writing skills in an EFL Saudi context. It also explored how blogs can help students to develop their writing skills in a non-traditional way, which can in turn add a great value to writing pedagogy. There is a host of reasons why this study is important. First, the results of this study will contribute to the related literature in terms of the efficiency of utilizing blogs in an EFL Saudi context for the development of undergraduates' writing skills. Second, the study motivates EFL teachers and learners to depart from their traditional pedagogical methods in favor of a digital method conducive to optimizing writing performance: blogs digitize and revolutionize writing classes. Third, the results will offer practical and helpful recommendations for teachers, learners, curriculum designers, blog designers and decision-makers in education.

### *1.3 Questions of the Study*

Bearing the significance of this research study in mind, one question stands out: Does online blogging have an effect on students' individual and group writing skills in the Saudi EFL context? This study examines in particular the role of blogging in EFL writing classes and explores which microscopic writing skills can be affected among learners. It also investigates what benefits EFL teachers gain when adopting blogging in writing instructions.

## **2. Method**

### *2.1 Participants*

The sample group consists of 40 undergraduates in the ELT Department at a Saudi university in 2017. It was all-male because coeducation in Saudi Arabia is uncommon: male students are separated from female students in classrooms to create a better learning environment. All the participants studied English as a foreign language but did not have the same level of English-language skills. They were divided individually and in groups to see how learning through blogging could be different when used alone or in groups. The individuals were asked to write before and after being placed in groups and were examined to see how their blogging-based skills may have developed. There were 14 individual participants and 6 groups, wherein students cooperated closely to write something on a selected topic. Each group chose a name to identify them from their counterpart groups. The individual students used their own names.

## 2.2 Instruments and Procedures

The data collection consisted of individuals and groups writing before and after the use of blogging for writing practice to examine if that use is beneficial for EFL learners. The experiment was conducted over a fourteen-week period, during which participants used online blogging for writing practice both as individuals and as groups. The students were asked to write about a topic of their choice as individuals and as groups before using the blogs. The purpose was to examine what their writing skills would be without utilizing blogging. The participants were asked again to write as individuals and as groups. To check their writing with and without the use of blogging, *Writer's Choice: Writing Assessment and Evaluation Rubrics*, published by Glencoe McGraw Hill (2000), was adopted as a guideline for assessment, investigation and research purposes.

## 2.3 Tasks

The study was conducted in two stages over 14 weeks with a (1) pre-test and (2) post-test, both of which have the same writing achievement test materials: a topic of their choice and the writing rubric assessing their writing performance. To draw a valid and useful comparison, the participants were asked to write their topics before and after utilizing blogs to examine how blogging can affect their writing skills in terms of writing ideas, style, mechanics of writing, socializing, discussion and other writing practices. In the pre-test, some of the participants used the traditional pen-and-paper method, while in the post-test; they used blogs to write their topics. Next, the pre-test and post-test of individual and group writing results were compared, analyzed, and assessed to examine the effect of blogging on the participants' writing performance.

## 2.4 Data Collection

The pre-writing and post-writing samples based on blogging make up the primary sources of the data in the research study, in addition to blog posts that students have made throughout the project. As mentioned earlier, students were asked to write twice: once as individuals and once as part of a group. At the same time, they were asked to do so before and after they were exposed to blogging materials. The students were exposed to a substantial sample of blogging materials to show them how their writing skills could be improved through learning microscopic skills from rich blogging materials, and this was done purposefully to investigate the difference between their improvement as individuals and as part of a group. The researcher could not videotape the sessions while the students were working in groups to observe discussions. It might be a good idea to do so and to document students' thought processes while they discuss writing among themselves via blogging and could serve as a pedagogical check for future studies (Cresswell, 2003). It should be noted that a general qualitative approach to data analysis was adopted (Merriam, 1998; Cresswell, 2003). The analysis focused on certain aspects of students' writing samples, in particular on macroscopic and microscopic writing skills, including thinking, cohesion, coherence, content, attitude and social interaction. The researcher examined the writing of the individual students and the group work to see how blogging can be instrumental in improving writing skills.

## 3. Results

The visibility of blogs in Saudi Arabia is becoming an increasingly keen area of interest among those willing to express their ideas through writing via virtual communication on social media. The availability of blogs has given many language learners a major opportunity to show robust engagement in developing their writing skills, whether by working individually or in groups. Surprisingly, enough, approximately 46% of the participants had never heard of blogging before they were asked to use blogs, while 14% had a good idea about blogging, 2% had actively contributed to blogs, and 48% showed a passive use of them: they read the blogging materials but did not participate in activities such as in writing, interaction, discussing and creating ideas. The results of the participants' sample writing revealed interesting indicators about how blogs have contributed to their macroscopic and microscopic writing skills.

### 3.1 Content

The writing by individual participants improved in terms of content. As the participants knew that their writing would be read by others, and as they had looked at blogging-based writing samples, the content was much improved: they developed their thoughts, added in-depth discussion and included rich ideas not found in their first attempts. For the groups' writing samples, it seems that the participants greatly benefited from their collective efforts in including more engaging ideas, which made their writing almost publishable. They included more ideas and approached the topic from different yet related perspectives. As they had made more attempts to see how blogging writing materials were presented, most groups improved their writing content to make it more readable, understandable and informative. By comparison, then, the group's writing content seems to have

improved more than the individual's work through the use of blogging. However, there is room for improvement in both results. Blogging helped both individual learners and groups come up with more engaging ideas, which in turn made their writing lengthier than it had been prior to their interaction with blogging materials.

### *3.2 Language Mechanics*

The use of punctuation as observed in the individual work seems to have improved only somewhat: several cases where capital letters should have been used were left unattended, and several commas and full stops passed unnoticed as well. As for grammar, mistakes in tense were observed before and after the use of blogging materials. Some individual writing samples featured mistakes in the simple present tense in certain instances, while the same sampled individuals used the simple present tense appropriately elsewhere in their writing. The group's work was much improved in terms of language mechanics, but some microscopic skills will require in-depth practice, for which blogging may not prove to be that helpful.

### *3.3 Word Choice*

Individual writings in general showed good word choice before and after blogging was used to improve word choice skills. However, most did not feature any sophisticated language or words of a specific genre. It seems that appropriate word choice is a relative ability that depends on individual differences in language competence. Bernstein (2004) advocates that frequent writing improves writing in that word choice becomes immediate, with much less interference from the learner's first language. While using blogging, learners feel it is easier to verify the words they are unaware of or unsure about. This also helps them avoid first-language interference as much as possible. The group's writings seem generally better with regard to word choice. The participants here have the opportunity to replace any misused word to create a better writing flow. Blogging provides users with words that are more appropriate in terms of register and genre.

### *3.4 Style*

An individual's writing is generally personal, as it reflects how one wish to express one's ideas about a specific topic of one's choice. Blogging seems to have positively affected the individual learners' writings in that their style is now more likely to be publishable. In the group's work prior to blogging, the amount of writing seemed minimal, with many ideas needing expansion. However, after using blogging the style and quantity improved: existing ideas were elaborated, and several new ones were added and fleshed out. Thus, it appears that blogging is a helpful tool that provides learners with good reading models, which in turn help them imitate or even surpass these materials written by bloggers.

The learner-bloggers, so to speak, spent quality time interacting with the blogging writings and became a receptive and motivated audience; this is the stage that precedes effective writing. In the pre-writing samples of both individuals and groups, however, prior to their interaction with blogging, ideas seemed very fragmented and disjointed, and sentences lacked coherence and cohesion.

One should note that many writings sounded as if the writer's voice was addressing a teacher or researcher and not a real or virtual audience. To some extent, this negatively affects the level or quality of writing. However, with time and much practice, the learners felt they had good access to their audience and could write for it and improve their writing, as what they wrote would be read online by someone who might offer comments and feedback. As practice time progressed, learners using blogging tried to transform their writings when they acknowledged their audience and expected or anticipated a level of interaction in the form comments, criticism or support. This required their full attention to produce better work. The participants further improved several macroscopic and microscopic writing skills through the use of blogging, as shown in Figure 1 and Figure 2. The bar graph represents the participants' writing skills with regards to content, language mechanics and use, style, word choice and self-confidence in their pre-writing and post-writing samples of blogging-based practices:



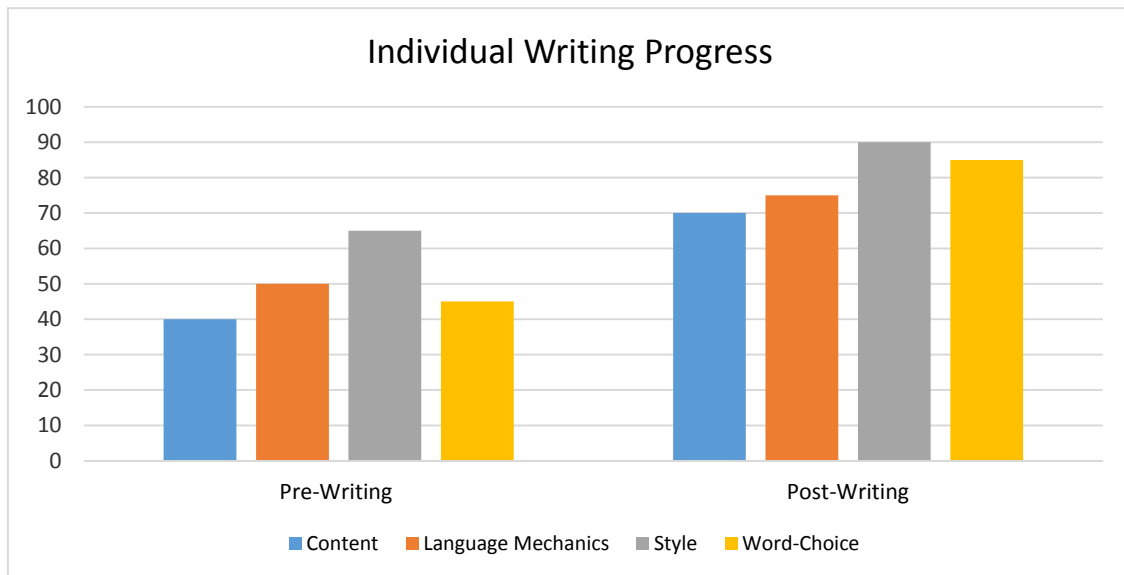


Figure 1. Individual writing progress

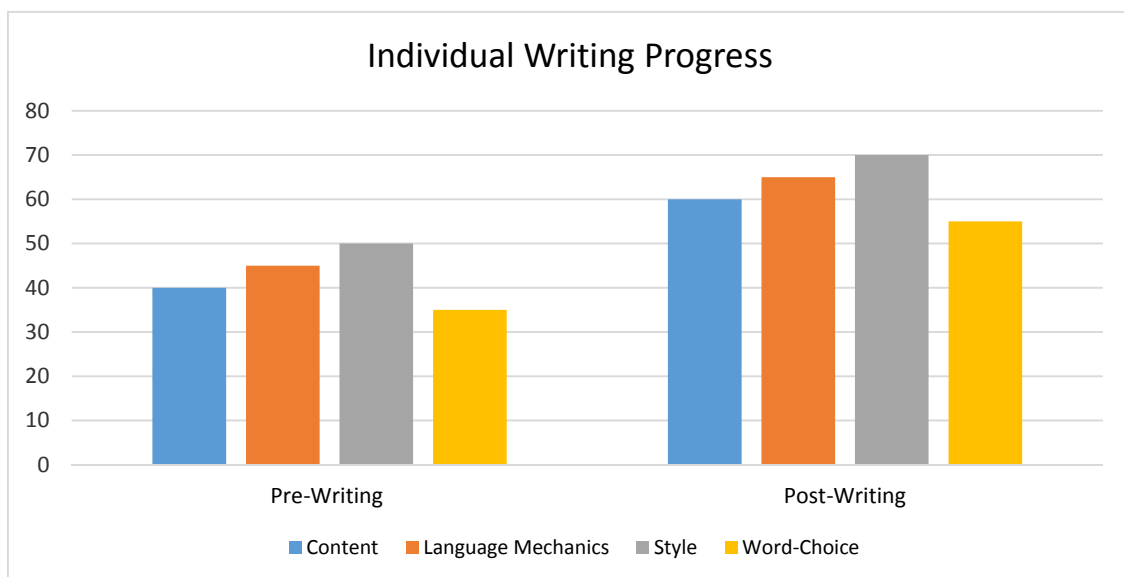


Figure 2. Group writing progress

#### 4. Pedagogical Implications

In the current research study, the sample of participants, so-called learner-bloggers, developed a new understanding and appreciation of blogging-based support to improve their writing skills. Although the teacher was their primary audience at first, participants widened their audience to include bloggers interactively through discussion, comments, criticism and participation (MacArthur et al., 2005). Thus, the teacher was no longer alone in judging their writing. Blogging became a space where they could improve their writing, and where numerous readers and bloggers were also arbiters in matters of language usage and mechanics, cohesion, coherence, idea generation, debate, discussion, critical thinking, and so on (Garret, 2009). This made the learner-bloggers more ambitious, and they could now make plans to improve their literacy skills following their initial attempts. With their conception of which their audience and readership are, their writing skills developed, and they began produce more engaging work in terms of content, style, language mechanics, word choice, and so on.

In other words, the participants' awareness and understanding of their audience and readership changed dramatically, as shown in the research results: they developed a reader-friendly relationship with their blogging audience, which was no longer merely an abstract idea (Walker, 2005). They revealed that the audience and

readers with whom they blogged were real people who shared interesting ideas, interests and passions about the selected topic. This made their writing-based discussions more engaging, in that bloggers can freely express their ideas in various voices. Of course readers play a vital role in directing and developing the participants' writings (Hartley, 2007), which makes participants' ideas, ways of thinking and writing styles more engaging.

The learner-bloggers felt encouraged to revise their writing when they realized that their work would be read interactively by their audience and readers. This makes writing content more effective and convincing (Mortensen & Walker, 2002). Another benefit that participants gained from using blogging to improve their writing skills is that blogging per se allows participants to discuss their ideas in a public forum, as opposed to the traditional writer-reader relationship, which produces printed materials such as books, articles, plays and novels (Merchant, 2008). Now, with the assistance of blogging to improve learners' writing skills, the participants developed their sense of writing in a readerly and writerly fashion (Swenson et al., 2006). When practiced as such, blogging also motivates and empowers participants to enhance their authorial skills.

The researcher who assumed the role of blogging teacher managed to optimize and orchestrate the participants' interactions with their writing materials. Blogging technology opened the doors wide for them to go beyond traditional ways of writing to their teacher, who in this case is the only reader. This helps the teacher in fostering participants' desire to become more influential writers and to self-correct their language through increasingly interactive writing productions. Participants also became motivated learners, acting as representatives of their own ideas, and this helped to inform, change and reshape their writing practices through blogging (Schneider & Evans, 2008). It also created self-confidence among participants and a desire to share their ideas about a wide range of topics willingly.

## 5. Conclusion

Blogging is a user-friendly platform that helps EFL teachers and learners to improve many of their writing skills. Generally, participants showed noticeable improvement in several writing components, such as content development, language mechanics, style, voice, word choice and other writing sub-skills. With the teacher operating through a well-organized instructional design in the classroom or in a virtual platform, a blog is definitely a good starting point for EFL teachers to make EFL learners depart from traditional methods of writing in favor of a much more interactive, writerly and readerly approach.

The results also revealed that working in a group more than working as individuals helped improve writing skills. This is due to the discussions that group members may have had while blogging. Moreover, when the learners realize that their readers and audience is no longer their teacher(s) only, they become more aware of paying particular attention to what they write and to revise it, probably many times, to ensure the final product is more interesting in terms of both content and form. This continued interaction catalyzes the learners' desire to keep writing and communicating in a two-way fashion: with the reader and with themselves.

It is therefore recommended to utilize blogging in such a way that facilitates EFL learners' writing classes and improves their macroscopic and microscopic writing skills. The results also revealed that learners must read more about how to blog and how to interact with 'the other side'; this helps them to discover ways to share ideas and improve their writing styles and preferences. Blogging is a social platform for writing practices, and it is a language (EFL) platform for self-learning and self-teaching in a holistic and, in many cases, heuristic fashion. As writing is a skill based on blogging, EFL learners must be good readers to better write about a variety of topics, as their readers may be remarkably interactive and keen to respond to their ideas.

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# Learner Views about Cooperative Learning in Social Learning Networks

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## Abstract

The purpose of this study was to reveal the attitudes and views of university students about the use of Edmodo as a cooperative learning environment. In the research process, the students were divided into groups of 4 or 5 within the scope of a course given in the department of Computer Education and Instructional Technology. For each group, Edmodo small groups were formed, and the students used these Edmodo small groups to share and communicate with their group friends in relation to the group tasks assigned to them within the scope of the study. This process lasted one academic term. As the data collection tool, an online cooperative learning attitude scale and a semi-structured interview form were used. At the end of the academic term, 15 students were interviewed about their cooperative learning experiences within the scope of the course as well as about how they made use of Edmodo in the process. The results demonstrated that the students had positive attitudes towards online cooperative learning. The findings obtained via the qualitative data analysis were examined under the headings of “social networks used”, “preferences of forming groups”, “communication within group” and “views about the courses executed via Edmodo”.

**Keywords:** Edmodo, social learning networks, online cooperative learning

## 1. Introduction

The rapid changes in students' expectations regarding effective learning and teaching (Durak & Ataizi, 2016; Paechter, Maier, & Macher, 2010) and the rapid spread of new technologies like social media (Arnold & Paulus, 2010; Ebner, Lienhardt, Rohs, & Meyer, 2010; Taylor, García-Peñalvo, Colomo-palacios, & Lytras, 2012) have all brought about the need for renovations in education. In this respect, for the purposes of meeting these expectations and bringing renovations into teaching and learning processes, it is now necessary for teachers to train themselves regarding technology-enabled learning processes (Gan, Menkhoff, & Smith, 2015; Paechter et al., 2010).

With the birth of Social Networking Sites (SNSs), it could be stated that online cooperative learning environments are among the renovations teachers should take into account (Cankaya, Durak, & Yunkul, 2014). One should not ignore the idea that especially Facebook, with its millions of users, can be used as a potential teaching tool (Bosch, 2009; Kabilan, Ahmad, & Abidin, 2010; Odabasi et al., 2012; Selwyn, 2009; Tonta, 2009). Although there are a number of studies demonstrating that SNSs can be successfully used as online learning environments (Al-Rahmi & Othman, 2013; Ekici & Kiyici, 2012; Forkosh-Baruch & Hershkovitz, 2012; Grosbeck, Bran, & Tiru, 2011; Hung & Yuen, 2010; R. Junco, Heiberger, & Loken, 2011; Kabilan et al., 2010; Lawson, Kleinholz, & Bodle, 2011; Mazer, Murphy, & Simonds, 2007, 2009; Wodzicki, Schwämmlein, & Moskaliuk, 2012), there are still other studies revealing that use of SNSs in education environments is likely to have negative effects on the learning process (Cohen, 2011; Reynol Junco, 2012; Karpinski & Duberstein, 2009; Kirschner & Karpinski, 2010; O'Brien, 2011; Rouis, Limayem, & Salehi-sangari, 2011; Wang, Chen, & Liang, 2011; Warner & Esposito, 2009). Therefore, Social Learning Networks (SLNs), which removed the negative aspects of SNSs, appeared. SLNs function in a similar way to SNSs and basically serve as educational environments (Al-kathiri, 2015; Balasubramanian, Jaykumar, & Fukey, 2014; Bicen, 2015; Trust, 2012). Today, use of this type of environments is increasing fast. Edmodo, the most popular SLN established in 2008, has reached more than 65 million users (Durak, Cankaya, & Yunkul, 2014; Durak, Cankaya, Yünkül, & Öztürk, 2017). Figure 1 shows a

sample view of an Edmodo class.

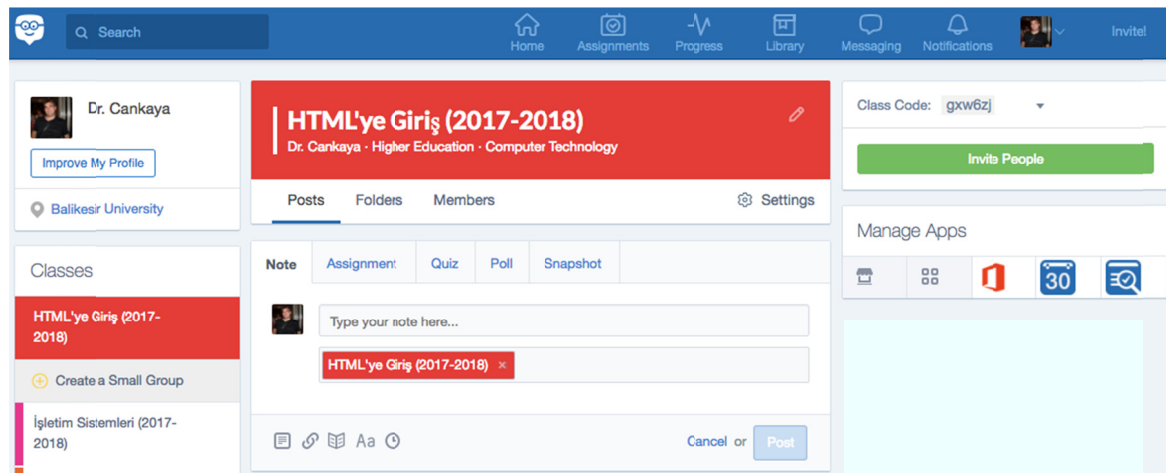


Figure 1. A sample view of an Edmodo class

The present study on cooperative learning via Edmodo was based on the cooperative learning approach. This approach requires students to work in small groups for a common purpose (Wendt & Rockinson-Szapkiw, 2014). Thanks to this, students are supposed to work together and learn by helping each other (Jacobsen, Eggen, & Kauchak, 2002). According to the cooperative learning approach, students are expected to become individuals each of whom can think, produce and share their ideas (Tarim & Akdeniz, 2003). In literature, there are many studies demonstrating that cooperative learning can be used successfully (Bye, Smith, & Rallis, 2009; Ding & Harskamp, 2011; Miller & Benz, 2008; Parveen & Batool, 2012; Yu, Tian, Vogel, & Chi-Wai Kwok, 2010). The benefits of cooperative learning include motivation, feelings of success, mutual interdependence (Miller & Benz, 2008), communication, level of satisfaction (Zhu & Chang, 2012), cognitive growth, and socio-emotional growth (Parveen & Batool, 2012; Wendt & Rockinson-Szapkiw, 2014). Thanks to cooperation, students can build meaningful knowledge by sharing ideas and obtaining feedback from peers as mentioned in the constructivist learning theory (Dewiyanti, Brand-Gruwel, Jochems, & Broers, 2007; Stump et al., 2011).

On the other hand, it is reported that cooperative learning in online environments are not as effective as face-to-face cooperative learning and that it is likely to cause communication problems between students. These communication problems could increase misunderstandings and result in lack of higher-order thinking (Hewitt, 2003; Rovai & Jordan, 2004). In one experimental study carried out using the pretest-posttest design by Wendt & Rockinson-Szapkiw (2014), the experimental group students participated in cooperative learning activities via Edmodo, while the control group students participated in face-to-face cooperative learning activities. The results revealed that the control group students were more successful and had fewer misconceptions. Although there are studies demonstrating that face-to-face cooperative learning environment is more effective than online cooperative learning environment, there are also some other studies reporting that online cooperative learning environments can be used as successfully as face-to-face cooperative learning environments and that online cooperative learning environments contribute to students' academic achievements (Durak, 2017; Erlandson, Nelson, & Savenye, 2010; Johnson & Johnson, 2004; Miller & Benz, 2008). In this respect, SLNs, which are systems based on their members' sharings, naturally support cooperative learning and help students become social and active learners (Ajjan & Hartshorne, 2008; Ozdamli & Uzunboylu, 2008). In addition, the most important point that allows SLNs to be used successfully as an educational environment is that students achieve cooperative learning by sharing something interactively with one another (Inaba & Mizoguchi, 2004; Mora-Soto, Sanchez-Segura, Medina-Dominguez, & Amescua, 2009; Tinmaz, 2013). In one study conducted regarding use of SLNs in education, university students reported that their peers' views about their sharings contributed to their own learning (Wolf, Wolf, Frawley, Torres, & Wolf, 2012).

In literature, there are studies in which Edmodo was used as a support to traditional courses which do not involve the use of the cooperative learning technique. However, as required by its nature, Edmodo somehow makes such courses cooperative. Besides, cooperative learning in Edmodo can be developed more with the help of the small-group feature of Edmodo and with the teacher's guidance of the students for cooperative learning. When

the related literature is examined, it is seen that there is little research on the use of Edmodo especially as a cooperative learning environment (Brady, Holcomb, & Smith, 2010; Bynum, 2011; Cankaya et al., 2014; Enriquez, 2014; Kongchan, 2008; Sanders, 2012). In this respect, it is important to reveal the related attitudes and views of students who use Edmodo for cooperative learning. From this perspective, the present study aimed to determine university students' attitudes and views about use of Edmodo as a cooperative learning environment.

## **2. Method**

This part of the study, in which qualitative and quantitative data were collected together, presents information about the participants, the data collection tools and the analysis of the research data.

### *2.1 Participants*

The participants of the study were 3<sup>rd</sup> grade university students taking the course of Human-Computer Interaction in the department of Computer Education and Instructional Technology at Necatibey Education Faculty of Balikesir University in the academic year of 2013-2014. In the study, a total of 104 students filled in the Attitude Scale, and 15 students responded to the open-ended questions.

### *2.2 Data Collection Tools*

In order to measure the participants' attitudes towards online cooperative learning, the Online Cooperative Learning Attitude Scale developed by Korkmaz (2012) was used. The scale included two factors: positive attitudes and negative attitudes.

For the purpose of examining the participants' cooperative learning experiences in Edmodo in more detail, a form made up of open-ended questions was prepared. While preparing the questions, the theoretical information obtained via review of the related literature and the theories underlying the present study were taken into account, and accordingly, the draft form was prepared. This draft form was examined by experts from the fields of educational technology, assessment and evaluation, and in line with their feedbacks, the form was finalized.

### *2.3 Application Process*

In the study, within the scope of a course given in the department of Computer Education and Instructional Technology, the students were divided into project groups of 4 or 5. For each group, small groups were formed in Edmodo, and the students used their "Edmodo Small Groups" for sharing and communication with their group mates regarding the group tasks assigned to them within the scope of the course. This process continued for the whole academic term. The faculty member giving the course not only monitored the "Edmodo Small Groups" to see whether the groups functioned effectively or not but also gave them advice regarding the use of the system.

### *2.4 Data Analysis*

The research data collected with the Attitude Scale were analyzed using the software of SPSS, and descriptive statistics, t-test and ANOVA were applied.

In relation to the qualitative data, each participant's responses were evaluated individually, and each researcher formed an interview coding key. The coding keys formed by the researchers were examined by a field expert in terms of reliability to evaluate the consistency between the coding keys. After ensuring consistency, the data were divided into themes based on the theoretical foundations of the study. In addition, direct quotations were given to reflect the students' views.

In qualitative studies, the process of data analysis includes three phases: description, analysis and interpretation (Yildirim & Simsek, 2008). The description phase of data analysis focuses on determining what interviewees have said. In the analysis phase, relationship between the data and the themes obtained via the data are established. Lastly, the process ends with the interpretation of the findings within the research context.

### *2.5 Validity and Reliability*

In the study, for validity purposes, the participants were informed about the fact that their views would be used only in an academic study and that their names would be kept confidential. In this way, the intention was to allow the participants to report their views sincerely. As for the reliability of the study, the findings obtained were presented without any related interpretation. In addition, the researchers of the study and a faculty member experienced in the field of qualitative research worked on the data together.

## **3. Findings**

This part presents the findings obtained via the analyses.

### 3.1 Quantitative Findings

In the study, a total of 104 students responded to the attitude scale regarding online cooperative learning applications. In this Likert-type scale, the items were assigned scores ranging from 1 (I completely disagree) and 5 (I completely agree). Table 1 presents the items of the scale and the mean scores regarding the students' responses.

Table 1. Students' responses to the attitude scale regarding online cooperative learning applications

Themes	Items	$\bar{X}$	sd
Positive Attitudes	1. I enjoy solving the problems regarding the group project together with my group mates in Online Cooperative Learning Application (OCLA).	3.87	.966
	2. Interacting with other group members in OCLA increases my motivation for learning.	3.90	.770
	3. I enjoy having cooperative learning experiences together with my group mates in OCLA.	3.85	.932
	4. Online group work increases our creativity.	3.86	.999
	5. I believe the group will work on a document productively in OCLA.	3.74	.975
	6. OCLA develops my social skills.	3.61	1.074
	7. I enjoy helping others in OCLA.	4.07	.741
	8. OCLA is entertaining for me.	3.33	1.009
	9. OCLA allows me to feel psychologically better.	3.33	1.028
	10. More ideas are produced in OCLA.	4.03	.875
	11. I think I get better results in OCLA as I work in group.	3.66	1.076
	Mean	3.75	7.820
Negative Attitudes	12. It makes me tired to try to teach something to my group mates in OCLA.	2.71	1.081
	13. I find OCLA nonsense.	2.08	1.031
	14. I cannot develop my own thoughts in OCLA.	2.04	.902
	15. I don't like people being dependent on me in OCLA.	3.13	1.180
	16. I don't believe my interactions with my group mates in OCLA will contribute to me.	2.63	1.255
	17. OCLA is not for me.	2.30	1.051
		Mean	2.48

When the mean scores regarding the students' responses to the positive attitude items in Table 1 were examined, it was seen that the students generally obtained a mean score of around 4. In other words, the students' responses could be said to be at the level of "I Agree". However, the students' responses especially to two of the items were found to be closer to the level of 3 ("I am Neutral"). These two items were "OCLA is entertaining for me" and "OCLA allows me to feel psychologically better". Although the students thought OCLA contributed to their learning, it could be concluded that they did not regard OCLA as an environment of entertainment. When the students' responses to the negative attitude items were examined, it was seen that five items were lower than 3 and that most of the students did not agree on these items. On the other hand, in one of the items considered to be a negative attitude, the students had a mean score higher than 3. This item was "I don't like people being dependent on me in OCLA". One of the problems likely to be experienced in group works was that the group members did not work equally. Some of the group members worked harder, while some of them worked less. Therefore, the group members working hard might have been uncomfortable with this situation. The course instructor should be able to evaluate group members' works well. In fact, in a course in which the cooperative learning technique is used, the course instructor could easily evaluate group members' works thanks to their sharings via the application of "Edmodo Small Groups". However, it was seen that the students had hesitations regarding this.

The mean scores of the participants regarding positive and negative themes of the attitude scale were compared with respect to the variables of gender, type of high school and GPA. In order to do such comparisons, mean scores must demonstrate a normal distribution. The participants' mean scores for the positive attitudes in the scale ranged from 1.36 to 5.00 ( $M = 3.75$ ,  $SD = 0.71$ ) and demonstrated a normal distribution with skewness of 0.57 ( $SE = 0.24$ ) and kurtosis of 0.41 ( $SE = 0.47$ ). As for the participants' mean scores for the negative attitudes in the scale, they ranged from 1.00 to 5.00 ( $M = 2.48$ ,  $SD = 0.72$ ) and demonstrated a normal distribution with skewness of 0.56 ( $SE = 0.24$ ) and kurtosis of 0.80 ( $SE = 0.47$ ). In order to reveal whether the participants' mean scores regarding the positive and negative attitudes in the scale differed significantly with respect to the variable of gender, independent samples t-test was applied, and the results can be seen in Table 2.

Table 2. t-Test results regarding the positive and negative attitudes with respect to gender

	Female		Male		p*
	M	SD	M	SD	
Positive Attitudes	3.78	0.62	3.72	0.80	0.66
Negative Attitudes	2.42	0.69	2.54	0.76	0.41

\*p<0.05, N=104.

As can be seen in Table 2, there was no significant difference between the male and female students' attitude scores. For the purpose of determining the influence of the type of high school the participants had graduated from on their attitude scale scores, independent samples t-test was used. Table 3 demonstrates the results obtained.

Table 3. t-Test results regarding the positive and negative attitudes with respect to the type of high school the participants had graduated from

	Vocational High School		Other High Schools		p*
	M	SD	M	SD	
Positive Attitudes	3.80	0.64	3.59	0.86	0.18
Negative Attitudes	2.44	0.69	2.57	0.80	0.35

\*p<0.05, N=104.

According to Table 3, no significant difference was found between the attitude mean scores of the students graduating from a vocational high school and of the students graduating from other high schools. In the questionnaire applied in the study, the students were also asked about their GPA, and their responses were transformed into a categorical variable. The categories were as follows: less than 1.5, between 1.5-2, between 2-2.5, between 2.5 and 3 and higher than 3. In order to reveal whether there was a significant difference between the attitude scores with respect to the categories of the variable of GPA, ANOVA was applied. The results obtained can be seen in Table 4.

Table 4. One way ANOVA results regarding the positive and negative attitudes with respect to GPA scores

	Source of Variance	Sum of Squares	df	Mean Square	F	p
Positive Attitudes	Between Groups	1,389	4	,347	,679	,608
	Within Groups	50,664	99	,512		
	Total	52,053	103			
Negative Attitudes	Between Groups	2,170	4	,543	1,037	,392
	Within Groups	51,810	99	,523		
	Total	53,980	103			

\*p<0.05, N=104.

When Table 4 is examined, it is seen that there was no significant difference between the attitude scores with respect to the categories of GPA. In other words, no significant difference was found between the attitudes of the students with different levels of academic achievement.

### 3.2 Qualitative Findings

The data obtained via the analysis of the qualitative findings were coded, and the themes were formed. The findings obtained based on the individual interviews were grouped under the following headings: social networks used, preferences of forming groups, communication within group, views about the courses executed via Edmodo.

#### 3.2.1 Social Networks Used

The participants were asked to state which social networks they used. All the participants reported that they used WhatsApp, and 14 of them said they used Facebook. Besides these two social networks, Twitter was used by 8 participants; Instagram by 6; and LinkedIn was used by 3 of the participants.



### 3.2.2 Preferences of Forming Groups

The participants were also directed to the question of “What are your preferences of forming groups”. In addition, more in-depth information was obtained asking the questions of a-) Why are you with these friends? and b-) How did you form the group? The views of 15 participants responding to the question were analyzed. The frequency distribution of the items under the theme of *favorable characteristics of group friends* can be seen in Table 5.

Table 5. Preferences of forming groups

Favorable characteristics of group friends	f
Having the feeling of responsibility	12
Being a close friend	11
Past experiences	9
Adaptation to team work	9
Showing understanding	8
Common goals	5
Being honest and frank	5
Being respectful	4
Having the necessary knowledge and skills	4
Individuals with different viewpoints	3

Table 5 demonstrates the participants’ preferences of forming groups. Among all the characteristics, the one favored most for group friends by the participants was “Having the feeling of responsibility”. In addition, most of the participants stated that “Being a close friend” was another characteristic they considered while forming a group. These two characteristics were followed by “Past experiences”, “Adaptation to team work” and “Showing understanding”. The other responses included “Common goals”, “Being honest and frank”, “Being respectful”, “Having the necessary knowledge and skills” and “Individuals with different viewpoints”. For example, in relation to this, one of the participants said “*We wanted friends who complement one another. We formed a group including individuals who respect to each other and who can take the responsibility*”.

### 3.2.3 Communication within Group

The participants were asked the question of “How was your communication within your group throughout the academic term?”. In addition, other questions directed to obtain more in-depth information included “a) Where did you meet? b) Which type of communication did you prefer (Individual/Group)? Why? c) Which tool/media (did you use for communication (Edmodo, Facebook, skype, mobile phone, and so on)? d) How did you inform each other about the changes experienced in the process?”. The views of 15 participants responding to the question were analyzed. Table 6 demonstrates the frequency distribution regarding the items under the themes of *place of meeting, communication preferences, media used in communication, influence of effective communication on group success and communication problems within group*.

Table 6. Communication within group

Place of meeting	f
Virtual place (Facebook, WhatsApp)	15
Real place (school, home, café and so on)	14
Communication preferences	
Group	15
Individual	4
Media used in communication	
Edmodo	15
Facebook group	14
WhatsApp group	4
Influence of effective communication on group success	
Active participation	9
Increasing motivation	6
Completing the project in time	5

Communication problems within group	
Irresponsible participants	3
Personal problems (family-related, financial)	2

Under the theme of communication within group, the sub-themes included place of meeting, communication preferences, media used in communication, influence of effective communication on group success, and communication problems within group. The participants maintained their communication within group both via virtual environments and in real places. The meetings in virtual environments were held via such applications as Facebook and WhatsApp, while face-to-face meetings were held in places like school, home and café. When the participants were asked about their communication preferences, all of them stated that they established communication via the group, and four of them reported that they met in pairs. When the participants were asked about the environments they used for communication, all of them stated that they used Edmodo which was also used as a medium to execute the course. In addition, almost all the participants reported that they used Facebook, and some of them said used WhatsApp besides Facebook. For instance, one of the students said *“We met in a café. We made our decisions there. Then, everyone worked individually. We used Edmodo to communicate with each other.”*

When the participants were asked about the contribution of communication to the success of their groups, “active participation” ranked first. This response was followed by “increasing motivation” and “completing the project in time”. For example, one of the students said *“Our constant communication resulted in our success in the phases of the project and helped us progress in our project in line with our teacher’s directions”* In addition, the students were asked about communication problems within group. This question was answered by few of the students, and the related responses included the problems resulting from the irresponsible participants in the groups and some other personal problems.

#### 3.2.4 Views about the Course Executed via Edmodo

The participants responded to the question of “Could you please evaluate the course in general?”. The views of the students responding to the question were analyzed. Table 7 presents the frequency distribution for the items under the theme of *Views about the Course Executed via Edmodo*.

Table 7. Views about the course executed via Edmodo

Views about the Course Executed via Edmodo	f
The course was executed based on discussions and active participation	12
It was an interesting course different from traditional methods	10
It contributed to learning	9
It constantly helped maintain our motivation	7
The activities took a lot of time	4

The participants reported that they carried out discussion-based applications with the help of this course supported with Edmodo and that they actively participated in the course. This response was followed by “it was an interesting course different from traditional methods”. The other responses were related to the students’ motivation and the contribution of the course to their learning. On the other hand, some of the participants stated that it took a considerable amount of time to carry out activities via such discussion-based applications.

#### 4. Conclusion, Discussion and Suggestions

The study was conducted within the scope of a course, and the students taking the course were divided into project group of 4 or 5. The course was supported with Edmodo. The students were expected to work in cooperation, and the process was executed by the instructor. The findings obtained via the scale applied to the students at the end of the course revealed that most of the students had positive attitudes towards online cooperative learning applications.

The results obtained via the individual interviews held with the students who experienced cooperative learning were evaluated with respect to the social networks used, preferences of forming groups, communication within group, and overall views about the course executed via Edmodo. Based on the results, it could be stated that the students made active use of information and communication technologies because almost all the students were users of WhatsApp and Facebook. This situation could be said to help the students adapt themselves easily to the

online cooperative learning environment of Edmodo, which has a similar structure to Facebook.

In related literature, there are three different approaches to forming groups regarding cooperative learning: random selection, self-selection and instructor-selection. These three methods have specific advantages and disadvantages (Sadeghi & Kardan, 2016). In the present study, the self-selection approach was adopted, and the process of forming groups was conducted by the students. The students' preferences of forming groups were examined in-depth, and their responses in relation to forming groups revealed that they mostly preferred their close friends as well as other individuals who had the feeling of responsibility. This finding is consistent with the results of other studies in related literature reporting that learners prefer groups with individuals who take the responsibility (Duque, Gomez-Perez, Nieto-Reyes, & Bravo, 2015). In addition, it is reported in relation to group members' forming groups that they favor individuals who will decrease their own workloads (Worchel, Rothgerber, & Day, 2009). Preferring individuals with the feeling of responsibility will naturally help decrease students' workloads in their group works. Also, in one study, it was found that friendship relations play an important role in forming a group if students form their groups on their own (Moreno, Ovalle, & Vicari, 2012). Lastly, past experiences and adaptation to team work were also among the characteristics considered to be important by the students.

Under the heading of communication within group, the students were asked about the platforms they used during the activities and about their communication preferences. It was found that the students met their communication needs almost equally via virtual and real environments. In addition, it was seen that the students favored group communication more when compared to individual communication. When they were asked about the media they used for communication, it was found that Edmodo, the platform which was used to execute the course, was used by all the students as a means for communication. As the course was supported with Edmodo, it could be stated that the students naturally used Edmodo for communication purposes. In addition, the instructor has the opportunity to monitor students' correspondences via Edmodo. Also, Edmodo does not allow individual communication between students. Besides Edmodo, almost all the students reported that they established communication via Facebook in relation to their group works. This result might have been due to the fact that Facebook is a quite a commonly-used social network; that it was easy for the students to use this social network; that they sometimes needed to establish personal communication; and that they did not want the instructor to see some of their correspondences. In the study, the students were asked about the effects of their communication activities on their group success, and their responses revealed that communication activities could increase their active participation and motivation. In addition to this, the students also reported that communication activities could help complete the project or the work in time. Lastly, under this heading, the students who experienced cooperative learning were asked about the communication problems they faced within group. The students stated that they experienced problems due to their irresponsible friends in their groups. As can be remembered, this result was also found to be the most important result under the theme of preferences of forming groups.

When the students who experienced cooperative learning were asked about Edmodo, which was used to execute the course, among the most frequent response was active participation achieved thanks to the discussion-based structure of the course. This result could be said to be one of possible consequences of cooperative learning. This response was followed by the view that such a course was more interesting than other courses taught with traditional methods. The fact that the students found the course interesting could be said to increase their motivation for the course. One other response was that such a course could help them learn the course subjects better. This view is supported by the result reported in related literature that courses involving cooperative learning contribute to learning (Al-Rahmi & Othman, 2013; Biasutti, 2011; Ekici & Kiyici, 2012; Forkosh-Baruch & Hershkovitz, 2012; Grosseck et al., 2011; Hung & Yuen, 2010; R. Junco et al., 2011; Kabilan et al., 2010; Lawson et al., 2011; Mazer et al., 2007, 2009; Wodzicki et al., 2012). Despite all these positive views, there were some other students with negative views who reported that it took quite a lot of time for them to carry out the activities involving cooperative learning. However, this result might have been due to the problems experienced by the students who had difficulty adapting themselves to the cooperative learning activities.

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# Effect of Video-Cases on the Acquisition of Situated Knowledge of Teachers

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## Abstract

Video footage is frequently used at teacher education. According to Sherin and Dyer (2017), this is often done in a way that contradicts recent studies. According to them, video is suitable for observing and interpreting interactions in the classroom. This contributes to their situated knowledge, which allows expert teachers to act intuitively, immediately and effectively. Situated knowledge is used to give form (design patterns) and direction (educational purposes) to a teacher's actions. Design patterns consist of solutions for recurring problems. In the current research, we investigated whether a course in classroom management either with or without video cases contributes more to the development of situated knowledge, design patterns and educational purposes. The pre- and posttest are based on a written advice, given out by 41 students of the Dutch hbo-teacher training with an average age of 22, to the main character of a video case, in addition to an interview and observation report. The results indicate that the use of video cases does not lead to an increase in the number of educational purposes. There is an increase, however, in the design pattern 'classroom management'. By internalizing this design pattern, the divide between theory, practical experiences and the identity of the teacher is bridged. Although the classroom management theme dominated the video case and course, the results indicate that a targeted use of video cases in teacher education is effective in promoting the development of situated knowledge.

**Keywords:** loop learning, pre-service teacher, reflection, situated knowledge, teacher training, video case

## 1. Introduction

### 1.1 The Expert Teacher

Training better teachers is a necessary end, as teachers are the key factor in facilitating the learning process of their pupils. Better trained teachers can potentially become experienced teachers, or experts. Experts know instinctively how to act in the dynamic environment that is their daily workplace. Being effective in the classroom has to do with both the contents of the course the teacher is teaching, as well as managing the classroom. The current research focuses on the latter: general teaching skills, and not on didactical knowledge in the form of Pedagogical Content Knowledge (PCK) (Shulman, 1987; Geveke, 2016).

When managing a class, an expert teacher can recognize meaningful patterns in practice and knows how to react to them (Boshuizen, 2009; Lesgold, Greeno, Glaser, Pellegrino, & Chase, 1988). Meaningful patterns are regularities in workplace situations as they develop. By identifying them, experts get clues as to their best course of action, because they get an insight in the underlying principles and the deeper meaning of situations. Although experts thus know how to react effectively to their surroundings, this does not mean they explicitly form strategies before they act. Their actions are intuitive, but well substantiated and of expert nature. Further, their actions are tied to the professional situation that presents itself and are formed by the expert's perception of that situation: their actions are domain specific (Sheridan & Reingold, 2011). But what does this mean? It is important to note that this domain specific knowledge is *situated*.

### 1.2 Situated Knowledge

Situated knowledge is defined as knowledge that arises from, and is connected to, the interactions between his material body and the physical environment the action takes place in. The situated aspect of this knowledge



becomes apparent from the fact that it is triggered by this situation, contains all relevant aspects of that situation (holistic) (Putnam & Borko, 1999), applies only to that specific situation (Geerts, Van der Werff, Hummel, Steenbeek, & Van Geert, 2015) and grows with every interaction in that situation (Kim, 2011). The connection between situated knowledge and the context means that its elements are inextricably connected to the situations, interactions and activities in which they occurred, and are therefore of an embedded nature (Brown, Collins, & Duguid, 1989). Every new experience with that situation, interaction or activity adds something to the situated knowledge. For example, when teaching a high school class, a teacher might use a certain strategy to contain a disruption. As he is doing this, he relies on his situated knowledge. Relevant information about the situation is stored, irrelevant information is discarded. Because of this selection process, experienced teachers have access to an increasing amount of situated knowledge, which allows them to act effectively in such situations (Haider & Frensch, 1996; van Meeuwen et al., 2014).

It should be emphasized that not only experience with a situation, but also the perception of that situation and the way it is mentally projected, affect the way the teacher is effective (Wolff, van den Bogert, Jarodzka, & Boshuizen, 2015). A novice teacher will only see superficial elements in his classroom, but the expert teacher will have noticed crucial details. His experience allows him to see specific things to base his actions on in that situation. He uses this skill to focus on the most important aspects of the educational situation at hand. This way, by using his situated knowledge, his mental representation of it will be more accurate (Carter & Doyle, 1987; Borg, 2015). Transfer of this knowledge is difficult, as the expert's knowledge is implicit and embedded in the social context of the classroom. Transfer can only occur when the knowledge is joined with the situation it is embedded in. This process requires effort, reflection and coordination (Lam, 1997; Mor & Havery Warburton, 2014).

### 1.2.1 Classroom Management

Being effective in the classroom not only follows from mastering the contents of the course, but also for a large part from the associated skill of classroom management. Both are conditional for establishing a rich learning environment in which pupils can perform optimally. Classroom management is defined by Brophy (2006; 1988) as “actions undertaken to create and maintain an environment to successfully give instructions in: setting up rules and procedures, arranging the physical space, holding the pupils' attention and managing activities (2006, p. 17)”. To successfully carry out these actions, the teacher needs to recognize the relevant signals and events in the classroom. Because any classroom has a wide variety of signals and events, recognizing them is a complex cognitive process (Berliner, 2001; Copeland et al., 1994; Van Es & Sherin, 2002).

The embedded situated knowledge provides the experience necessary to know where to focus the attention and which pieces of information are relevant. Two aspects of their actions are particularly important here: alertness to identify an event and the ability to choose the right action in the form of productive interactions. How both aspects are used by the teacher determines how he can create a learning environment effectively.

### 1.2.2 Alertness as an Example of an Educational Purpose

Alertness is the teacher's ability to be constantly aware of what is going on in the classroom (Kounin, 1970, Christofferson & Sullivan, 2015). Not only the way this is perceived, also the way these perceptions are interpreted, how signals are received and how problems are anticipated is part of alertness. A teacher bases his decisions regarding the actions he will take to protect and improve the productive climate in the classroom on his alertness. This alertness applies also to any situation that is familiar to the teacher. The relevant aspects of such a situation are closely tied in with this situation, and so it follows that the teacher's alertness is a consequence of his situated knowledge.

Copeland and D'Emidio-Caston (1998) call any choice for an action in a specific situation an educational purpose. Educational purposes are the constantly changing process goals which a teacher determines for himself and allow him to direct the lesson in a way he decides is best. They are based on the principles the teacher acquires during his training (Copeland & D'Emidio-Caston, 1998). A principle is an underlying conviction that determines the constantly changing process goals. For classroom management the teacher realizes, for example, that he must be alert to be able to take corrective action, is responsible for a lesson's momentum, and has to be in charge to successfully manage the group. It is important to note that an educational purpose is not a lesson goal or objective, but a process goal a teacher sets for himself while performing the lesson.

Educational purposes determine what a teacher pays attention to and where his alertness is focused. Specific educational purposes arise depending on the underlying principles a teacher carries, his ideas on what makes a good lesson, his previous experiences with teaching situations and the connections with the theory that he establishes. Such educational purposes are situated and they develop as situated and embedded knowledge. This

means that once acquired, educational purposes are used intuitively, are implicit and linked to a particular context. It also means that an experienced teacher has already, intuitively, carried out his actions before he can make his reasoning behind it explicit. Both the experienced teacher as the one in training can, however, be made aware of their educational purposes by asking him about it, which allows him to translate this broad, theoretical concept into less abstract terms. Specifically, this can be done with the educational purpose operationalization developed by Copeland and D'Emidio-Caston (1998), which asks eight questions about: purpose statements, practical generalizations, guiding principles, theory links, action links, justified changes, positive evaluative statements, and negative value judgements.

### 1.3 'Dealing with Disorder': An Example of a Design Pattern

A teacher's ability to be alert to his surroundings only becomes productive once his reactions are alert as well. And his reactions, together with the interactions that are based on it, become productive only once they are combined with the goal the teacher intended. The teacher uses his educational purposes to determine which actions can contribute to achieving the goal. In case a teacher sets 'teaching a lesson that flows smoothly' as a process goal, this goal decides which actions he will then take. Having the actions correspond to the process goal does not mean these interactions will be effective. The extent to which a teacher can employ such interactions productively and efficiently depends on his previously acquired situated knowledge.

Alexander calls a series of efficient interactions that are used as a solution to a recurring problem a *design pattern* (Alexander et al., 1977). Such a solution consists of a structure of heuristics (global procedures) (Goodyear et al., 2004). Because a teacher acts practically and intuitively, he applies such a design pattern more or less automatically. For example, an experienced teacher focuses his attention to the proceedings in the classroom that surround the pupils' learning process. He might, for example, look at classroom management issues from different perspectives, keep an eye on continuity and act before they can become an issue (Wolff, Jarodzka, van den Bogert, & Boshuizen, 2016). This means that design patterns are not internally represented potential actions that are free of context, but instead, instances of situated knowledge.

To explicate design patterns further, we will now give an example that concentrates on dealing with disorder. The context, in this case, is a group of pupils that keeps disturbing the teacher's instruction, even when they have been given a warning. The group is part of a class of first year secondary school students, and the lesson is taught on a late Friday afternoon. The design pattern 'dealing with disorder' is used to put an end to repeated chitchatting or disturbances of the productive climate. One way of doing this is by making the instruction more exciting. An experienced teacher will apply this automatically, but a teacher in training has yet to learn this. While doing so, he is assisted by making a written preparation of the instruction, or by practicing with the execution of the lesson. In conclusion, one of the elements of the design pattern 'dealing with disorder' can be used: communication, momentum, being alert, multi-tasking, signaling to pay attention, pupil-responsibility and conflict management (Geerts & Van Kralingen, 2016).

#### 1.3.1 Pattern Language

Another characteristic of design patterns is that they exist in groups, which form pattern languages, with a general purpose. A pattern language is a cluster of design patterns, used for a specific domain (Powell, Millwood & Tindal, 2008). In case of the above example, when a teacher engages the disorderly class by using a more exciting instruction, the teacher not only uses the design pattern 'dealing with disorder', but also the design pattern 'instruction'. The design pattern 'dealing with disorder', is tied in with the overarching pattern language 'teaching', which in turn consists of subordinate design patterns like 'pedagogical action', 'dealing with personal characteristics', 'reflecting', 'giving instructions' and 'guiding the learning process'.

Developing a pattern language is, just like other forms of situated knowledge, a long-term process. For the teacher, the process of acquiring a pattern language is iterative (Rusman et al., 2009). It starts with an analysis of the current situation, individualistically figuring out a solution to the problem and then evaluating its results. The result of this cycle forms the input and starting point for the next cycle. Increasingly better solutions are reached by repeating this process, because for each domain multiple design pattern based solutions are possible (Kolfshoten, Lukosch, Verbraeck, Valentin, & de Vreede, 2010). The teacher judges his actions in the situation by determining to what extent they have contributed to reaching the desired goal. In this way, the teacher gradually accumulates increasingly refined design patterns, which form the basis of a pattern language. And in this process, his expertise grows.

#### 1.3.2 Design Patterns at the Teacher Training

The teacher education's task is to support teachers in acquiring the situated knowledge they need to function

effectively in the complex environment that is the classroom (Carter & Doyle, 1987; Borg, 2015). A teacher in training can be viewed as a novice who has a long way to go before he reaches the level of a starting expert. After his initial education, he can grow to become an experienced teacher by gaining an increasingly rich aggregation of educational purposes and design patterns, coordinated in pattern languages.

Recent studies of competence acquisition increasingly focus on the contrast between the way expert and novice teachers experience events in the classroom (van den Bogert, van Bruggen, Kostons, & Jochems, 2014). This includes all aspects of situated knowledge in an experienced teacher, including the difference between the ways in which both are alert to classroom management issues. Echoes of this research at the teacher education lead to an increased attention to possible ways of transferring the necessary knowledge and heuristics (HBO-council, 2011). Heuristics deal mainly with the way interactions can occur in the classroom. The report by the HBO-council defines heuristics as context-specific rules of thumb to deal with a specific kind of problem. In addition, the fact that heuristics are, in fact, good examples of situated knowledge, means that acquiring them is a long-term iterative process, for which the context is a crucial element. And because the practical experience of individual teachers in training is limited, it is no surprise that acquiring design patterns, in the form of situated knowledge, is a challenging task for them. Acquiring design patterns in the form of declarative knowledge is relatively simple, but of little use for improving concrete actions.

### 1.3.3 The Use of Written Design Patterns

There is a disparity between the way an experienced teacher acts effectively by intuition, and the relative inability of novice teachers to be effective in the dynamic classroom that is their daily environment. As he is starting out, the novice teacher can only employ his explicit and self-moderated knowledge, which becomes increasingly automated and internalized, and in this way, situated knowledge. This acquisition model corresponds to several other theories on knowledge becoming internalized, in particular Vygotsky's concept of the zone of proximal development and Gal'perin's theory on the internalization of knowledge (Derry, 2013). Gal'perin posits that the process of internalizing knowledge starts out with explicit knowledge that is used with the support of a competent partner, for example the teacher trainer who supports the novice in his learning. To support this internalization process, the educational publications that are used at the teacher education schools often contain written solutions to problems (Geerts & Van Kralingen, 2016). These are educational situations that have been written down in full and contain the following elements:

- an example that is characteristic of the design pattern;
- an introductory description of the context and its place within a pattern language;
- examples of solutions, described in practical steps;
- a conclusion, including a description of other design patterns and how they relate to other design patterns (Borchers, 2008; Kolfshoten, Lukosch, Verbraeck, Valentin, & de Vreede, 2010; Powell, Millwood, & Tindal, 2008).

However, such a theoretical description can only become part of a teacher in trainings situated knowledge once he links it to his real-world experiences. Without this link, all he has is a memorized, strongly simplified and formalized version of reality, which cannot be implicitly and instinctively used. The theoretical description can serve as a starting point for an improved way of training teachers: one that focuses on internalizing design patterns. Sherin & Dyer's idea is that "if teachers "see" theory in practice, they will more easily be able to understand and adopt similar approaches" (2017, p. 50). They go on to say that research has shown that "without a deep understanding of the practices they observe, teachers may not be able to implement a new pedagogical strategy as it was intended (Blomberg et al., 2014)". The first step towards linking theoretical descriptions to practical experiences is identifying design patterns. This is in accordance with other current findings that indicate that guided inquiry learning is effective. This type of learning assumes an active teacher role (van Vondel, Steenbeek, van Dijk, & van Geert, 2017).

### 1.3.4 Higher Learning Objectives

Before design patterns can be developed, the teacher in training must have educational purposes. These are not learned from a book, and acquiring them requires a processing that is more thorough than merely remembering. For instance, the situation needs to be analyzed, or the teacher's actions evaluated. In this, he can be supported, and support can come from a more competent other, like a teacher trainer or supervisor. In this situation, there is explicitly formulated knowledge that is supported by the social environment. The necessity to analyze a situation means that when training new teachers, the educational facility needs to work with higher learning objectives.

Higher order learning objectives are learning objectives that require higher order thinking skills, such as

analyzing, evaluating or creating study materials. These skills require more cognitive skills than lower order objectives like remembering, understanding and applying (Jensen, MacDaniel, Woodard, & Kummer, 2014; Bloom, 1984). This proposed way of teaching design patterns means that, even before a teacher can act in an educational setting, he must be able to understand or give meaning to what is going on in that setting (Blanton, Blanton & Cross, 1994). Written design patterns can serve, as they contain a conceptual framework to describe the situation. To indeed understand the situation, however, he should be challenged to reflect on his practical experiences, including his educational purposes and evaluating the results of his new design patterns. This evaluation requires higher cognitive functions, so this way of learning ranks higher in the taxonomy of learning objectives. A teacher in training must be able to distinguish important aspects of the situation he is presented with (Masats & Dooly, 2011).

### 1.3.5 Videocases

A teacher trainer that employs higher order learning objectives to impart design patterns and pattern language as situated knowledge in his students, can make use of video cases in achieving those objectives (Geerts, Van der Werff, Hummel, Steenbeek, & Van Geert, 2015).

Using video cases comes with several advantages compared to cases on paper, besides the latter being colored by the author's vision (Blijleven, 2005). First, video cases contain a great deal of explicit details of the recorded situation, which are presented contextually and holistically. Information and scenarios are shown in a way that corresponds to the way real teachers encounter didactical and pedagogical problems (Blijleven, 2005; Geerts, Van der Werff, Hummel, & Van Geert, 2015). Second, video cases allow teachers in training to apply their theoretical knowledge by analyzing a specific, authentic educational situation. By examining the actual behavior of a teacher handling a certain situation on video, they can explore how he deals with that situation (Blijleven, 2005; Kurz, Llama, & Savenye, 2004). Compared to a written case study, a video recording does not contain a textual interpretation that steers the reader. Instead, it allows that viewer to consider the educational situation objectively without being colored by the interpretation of whoever is presenting the case (Rosaen, Lundeberg, Cooper, Fritzen, & Terpstra, 2008; Van Es & Sherin, 2002).

Of course, a video is also recorded from a distinct visual perspective. But in the production process, the producers might choose to record using several visual perspectives, as was the case with Didiclass<sup>1</sup>, whose video database is used in the current research. The Didiclass team explicitly stated their intention to produce realistic videos that capture a multilayered reality, while keeping the corresponding pluri-interpretability intact. By taking multiple perspectives, for example both the students and teachers perspective, the viewer can form a fuller picture of the real world educational situation. Third, authentic videos have both the situated and embedded aspects of the recorded situation captured by the camera. Fourth, teachers in training, by analyzing educational videos, can become convinced that they will be able to obtain the skills, knowledge and attitudes that are necessary to function effectively as a teacher (Shulman, 1992). Fifth, these video-cases can be looked at in the relative peace of the training institutes environment. Because the viewer has time to react, he is challenged to put into words his own ideas, feelings and interpretations. These advantages make that authentic video cases are particularly well-suited to have a teacher in training: analyze the scene presented in the video, make the educational purposes their own and come up with solutions to reach the process goals he set by applying a design pattern, in the form of situated knowledge. As it turns out, when using video cases, teacher trainers focus insufficiently on higher learning objectives, which could support the development of situated knowledge. This poses the question whether teacher trainers are fully taking advantage of the benefits of authentic video cases.

### 1.4 Aims of This Research

The current research aims to study whether the proposed use of video cases based on optimized authenticity can indeed contribute to the acquisition of situated knowledge in the form of design patterns and educational purposes by teachers in training. Specifically, this study will look at the use of video cases in a classroom management course during the 2<sup>nd</sup> year of the teacher education, and what it can contribute to the acquisition of higher learning objectives, in the form of reflecting on design patterns and educational purposes. Due to the curriculum and the timing of the internships, this course is only taught in year two.

The main research question is: to what extent does the use of video cases in a classroom management course contribute to the development of 1. situated knowledge in the form of educational purposes, specifically 2. the design pattern 'dealing with disorder' and 3. the overarching pattern language 'teaching'. These corresponding predictions have been formulated:

Hypothesis 1: Teachers in training who are taking a course that uses video cases can connect more educational purposes to the real-world situation presented in the video compared to teachers in training who are taking the

course but without video cases.

Hypothesis 2: Teachers in training who are taking a course that uses video cases can connect more components of the pattern language ‘teaching’ to the real-world situation presented in the video than teachers in training who are taking the course without video cases.

Hypothesis 3: Teachers in training who are taking a course that uses video cases show more development of the design pattern ‘dealing with disorder’, compared to teachers in training who are taking the same course without video cases.

## 2. Method

### 2.1 Participants

In this research, 41 teachers in training from two parallel groups of second year English teachers in training (full-time) at the NHL University of Applied Sciences have been examined. The participants were randomly divided into either the control group or the experimental group. The control group attended the regular course with written or verbalised cases, as it had been taught at the school before. The experimental group attended the experimental version of the course which included lessons with video cases. The duration of the course was two months and a measurement was done at the beginning as well as the end of the course. At the start of the course the experimental group consisted of 21 teachers in training. However, seven of them had quit immediately after the beginning of the course and five students left the course at a later point. For that reason, the experimental group eventually consisted of 3 males and 6 females (N=9) with an average age of 21.78 (SD = 1.20). Initially, there were 20 teachers in training in the control group, of whom six quit immediately after the start of the course. Six others dropped out as the course progressed. Consequently, one male and seven females were in the control group with an average age of 22.25 (SD=2.38). The drop-out rate, as well as composition of the groups reflects the nature of the student body at the English teacher education. Most of the teachers in training who dropped out have left the educational program. The high rate of drop-out is in line with nation-wide data of second degree teacher educational programs (Inspectie van het Onderwijs, 2014). Therefore, the remaining groups correspond in terms of age, pre-education, number of obtained credits, underlying motivation for the profession and largely regarding gender distribution.

### 2.2 Materials

For the pre- and post-test, a measuring instrument has been developed, which measures the educational purposes, the pattern language ‘Teaching’ and the design pattern ‘Dealing with disorder’, with which hypothesis 1, 2, and 3 can be answered. The instrument consists of three assignments: creating a written advice for the main character ‘Olga’ in the viewed video case, writing an oral observation report using the participants’ educational purposes and a structured interview about the design pattern ‘Dealing with disorder’. Both the observation report and the interview were recorded with a video recorder and then a transcription was made from the recording. All the components of the measuring instrument were completed by the participants in above stated identical order.

It was decided to rely on the measuring instrument Observation Report to explore which educational purposes are present (hypothesis 1). Eight cards were used to operationalize educational purposes and challenge the respondents to connect educational purposes to the viewed video case. The Observation Report is thus aimed at hypothesis 1: educational purposes.

By using the measuring instrument ‘written advice’, the advice the respondent would give in the situation portrayed in the video through a number of questions was recorded. From the answers, it can be inferred how many components of the pattern language “Teaching” are used in the advice. Following the professional requirements used in The Netherlands (Ministerie van Onderwijs, Cultuur en Wetenschap, 2017), the pattern language “Teaching” had for this research initially been defined as pedagogical action, dealing with human characteristics, reflection, providing instruction, guiding the learning processes, and dealing with disorder. This classification has been secondarily validated by several experienced teacher trainers. This validation took place in 2012, at the annual congress for the occupational group of teacher trainers from The Netherlands and Belgium that took place in Antwerp (Velon, 2012). At the congress, during a workshop the entire survey was done by thirty teacher trainers, highly experienced in teaching secondary education classes. From the answers of these experienced teacher trainers, high conformity was apparent regarding the mentioned components of the pattern language ‘Teaching’.

To obtain a better insight into the given answers, it was decided to examine which components of the pattern language ‘Teaching’ were used the most in the Observation Report. The measuring instruments ‘written advice’ and Observation Report are thus both aimed at hypothesis 2: pattern language ‘Teaching’.

Using the answers to the questions from measuring instrument Interview, it was determined to what extent the design pattern 'Dealing with disorder' has been mastered. The questions in the interview are based on ideas on dealing with disorder from the Handbook for Teachers (Geerts & Van Kralingen, 2016). In summary, the following components of the design pattern 'Dealing with disorder' are considered: communication, fluent lesson progression, reacting alertly, multi-tasking, 'pay attention' signals, student responsibility and conflict handling. The Interview is thus aimed at hypothesis 3: design pattern 'Dealing with disorder'.

The first instrument that was used, the Written Advice, is aimed at the overall picture that the respondent has of the situation. Only with the second instrument the respondent was invited to connect situated knowledge to the situation at a more detailed level. This sequence of conducting the measuring instrument was used to prevent the respondents from falling back on theoretical knowledge from a course book, which is not connected to the situation. Finally, because of the importance of a uniform way of conducting, the choice had been made to have all instruments conducted by a student-assistant.

The video case that was used (casus 'Olga') is part of Didiclass (Geerts, Van Laeken, & Mitzschke, 2007), which comprises a series of cases widely used in the Dutch teacher education programmes. The subjects of the cases are engaging for teachers in training as they offer real-world situations, and feature a wide variety of central figures teaching (male, female, young and old). The case Olga has been chosen because the contents of the case are in line with the subject of the course, classroom management, and keeping order. The case illustrates all components of the design pattern 'Dealing with disorder' and consists of three short videotaped clips. In the first clip Olga is shown as she tells something about her functioning. In the second, four-minute clip, parts of her lesson are shown in chronological order: Olga teaches German in a second year VMBO-T-class. At the beginning of the lesson she teaches, she loses the flow in the way the lesson progresses (momentum), which results in the lesson getting a rough start. Only halfway through the lesson she is finally able to begin the lesson she prepared. The third clip lasts almost three minutes and is a report by two students who have been removed from the lesson by Olga. The students' reflections in the clip are supported by lesson fragments.

### 2.3 Procedure

The candidates all attended a classroom management course, consisting of eight weekly meetings of one and a half hours. The control group attended the regular course with written or oral cases; the experimental group attended an experimental version of this course, designed by using various other video cases from the case database Didiclass (Ruud de Moor Centrum, 2007). In this experimental group, the emphasis of the course was therefore on the situated nature of acquiring educational purposes and design patterns. At the beginning and end of the course, a pre- and post-test were conducted by employing the measuring instruments mentioned above. The respondents were obligated to take part in these. The Olga case outlined is used in both the pre- and the post-test, but not during the course. Since the pre-test was conducted with both the experimental and the control group, and feedback was not provided, it is expected that a possible learning effect for the experimental group is equivalent to that of the control group.

### 2.4 Analysis of the Variables

#### 2.4.1 Educational Purposes

The oral observation report that was made after the participants watched the video case 'Olga' was used to map out the development of their educational purposes. An example is: *'I can see that you give out warnings, but that you don't follow up these warning with consequences. After a second warning you should act, otherwise students become aware that all you do is threaten'.*

In terms of educational purposes, this quote is ranked as 'justified change', because a motivation is given for the advice. This motivation is linked to what the teacher in training has seen in de video.

#### 2.4.2 Pattern Language

To determine the size of the pattern language the number of the design patterns present were measured: pedagogical action, dealing with human characteristics, reflecting, performing instructions, guiding the learning process, and dealing with disorder. Whenever a given answer could be attributed to two different design patterns, the context of the complete answer to the question was judged to determine what the correct coding should be. The coding instructions were adjusted accordingly. By changing the instructions and not re-structuring the instrument itself, an accurate comparison between the groups of respondents was possible, while the respondents did have the ability to, in their own words and without much guidance, answer the questions (Gibb, 2008).

#### 2.4.3 Design Pattern 'Dealing with Disorder'

In the interview, the quality of the design pattern 'dealing with disorder' is determined by questioning the teacher in training about different applicable steps that are part of this design pattern, that is: communicating effectively, handling conflict, continuous signal, alertness, overlapping, the ability to keep students paying attention, student responsibility (Geerts & Van Kralingen, 2016).

Every applicable step has been questioned separately. For each correct part of the answer the teacher in training could receive a point. He could be awarded a point for expressing each of the following elements: a) a good observation of the viewed video case, b) a connection between theory and daily practice, c) a personal practical experience, d) an applicable suggestion for improvement of the appropriate action. So, a total of four points can be scored. Provided that a teacher in training has scored three points or higher, there is a reasonable suggestion that he has the situated knowledge to exercise the design patterns in a practical situation. The following quantitative evaluation has been used: Insufficient for zero points, weak for one point, beginner for two points, and applicable for three or more points.

Because of the small sample size, a Monte Carlo Simulation (Todman & Dugard, 2001) was subsequently performed on both the results of the control and the experimental group. This was done to be able to, based on these simulations, make assumptions with regards to the probability distribution. Using this technique, the observed findings have been simulated many times based on a zero-hypothesis model, to be able to say something about the probability that the scores taken at several measuring moments have been based on coincidence. These simulations consist of random permutations of the observed outcomes. By randomly shuffling the observations 10.000 times, randomly shuffled sets are formed, each of which is an operationalisation of the possible outcome under the zero hypothesis. Whether the empirically detected variances, for example those between the experimental and control condition, under the zero hypothesis, can be expected on the bases of coincidence, can be determined in this way. The result of this collection of simulations is a distribution function that shows the total range of possible outcomes (Landau & Binder, 2015). During the analysis, it was determined whether there are any statistical significant differences, both in terms of the pre-and post-test and the control and experimental group.

To gain a better understanding of the effect size between the groups, Cohen's  $d$  has been calculated where possible. The effect size can be expressed in both a positive and a negative value. In this case, a positive effect size value indicates that learning had occurred, whereas a negative value indicates a learning loss. Following the guidelines set by Cohen (1977), a Cohen's  $d$  value between 0.0 and (-)0.2 cannot be called an effect. A value between (-)0.2 and (-)0.5 means a small effect occurred and there is a moderate effect when the value is between (-)0.5 and (-)0.7. A value over (-)0.7 indicates a consequential or large effect.

The results are reported using a combination of Cohen's  $d$  for effect size and an exact  $p$ -value. The  $p$ -value is reported to indicate the probability of the result that was observed. A  $p$ -value smaller than 0.1 but over 0.05, for instance, indicates that it is probable that the observed values are not the product of random chance (Cumming, 2014; Kline, 2013; Lambkin, 2012). A  $p$ -value smaller than 0.05 indicates that it is very unlikely the product of random chance, and a  $p$ -value smaller than 0.001 means it is extremely unlikely. The  $p$ -value is combined with Cohen's  $D$  to make statements about the difference between both groups in the experiment. A meaningful difference is established with a  $p < 0.05$ , combined with a  $d > 0.7$ . If the  $d$ 's value, however, for the same  $p$ -value falls between 0.5 and 0.7, there is a moderately meaningful difference. Finally, a  $d$ -value below 0.5, for the same  $p$ -value, indicates a difference of limited meaning. As the  $p$ -value increases and the effect size becomes smaller, the results become progressively less meaningful.

### 3. Results

#### 3.1 Hypothesis 1: Number of Educational Purposes

During the pre- and post-test, the participants used cards to link educational purposes to the video case they watched. Table 1 shows the number of educational purposes, out of a maximum of 8, that were linked by the participants. It shows that the experimental group scores lower both on the pre-test ( $M = 6.4$ ,  $SD = 1.33$ ) and the post-test ( $M = 6.4$ ,  $SD = 1.33$ ), than the control group on the pre-test ( $M = 7.75$ ,  $SD = 0.7$ ) and the post-test ( $M = 7.25$ ,  $SD = 0.89$ ). The effect size stated as a difference between the pre-test and the post-test is  $d = -0.67$ ,  $p < 0.001$  for the control group, a moderately meaningful difference. In the experimental group, there is no difference between the pre- and post-test, and consequentially there is no effect at all in this group. For the control group, there even appears to be a moderately sized learning loss. A moderately meaningful difference was observed between the experimental group and the control group ( $d = 0.537$ ,  $p = 0.038$ ). This is contrary to our expectation that the experimental group is able to list more educational purposes. The observed learning loss is more pronounced in the control group compared to the experimental, however.

Table 1. Number of educational purposes linked to the video case for each participant

Ptc.	Experimental group						Control group					
	Pre	M	SD	Post	M	SD	Pre	M	SD	Post	M	SD
1	8	6.4	1.33	8	6.4	1.33	8	7.75	0.70	8	7.25	0.89
2	8			7			8			6		
3	8			7			8			8		
4	5			7			8			8		
5	6			6			8			7		
6	5			6			8			8		
7	7			7			8			7		
8	6			6			6			6		
9	5			4								

### 3.2 Hypothesis 2: Elements of Pattern Language 'Teaching'

#### 3.2.1 Pattern Language 'Teaching' in Written Advice

To compare pattern languages, the clusters of design patterns they consist of were examined. It was decided to compare the quantities of the design patterns that were mentioned by the participants in both the experimental and the control group during the pre- and post-test. The results are presented in table 2 (experimental group) and 3 (control group).

Table 2. Number of design patterns mentioned in the written advice – Experimental group

Participant	Pre-test							Post-test							
	Question	1	2	3	a	b	M	SD	1	2	3	a	b	M	SD
1		1	2	2	2	3	2	0.71	2	2	1	2	2	1.8	0.45
2		2	3	2	2	0	1.8	1.10	1	2	2	1	1	1.4	0.55
3		1	2	2	2	0	1.4	0.89	1	2	1	1	1	1.2	0.45
4		1	2	2	2	0	1.4	0.89	1	3	3	3	1	2.2	1.10
5		1	1	2	1	1	1.2	0.45	3	3	3	2	2	2.6	0.55
6		2	2	1	4	1	2	1.22	1	2	1	1	1	1.2	0.45
7		1	2	1	1	1	1.2	0.45	2	2	1	2	1	1.6	0.55
8		1	2	1	1	1	1.2	0.45	3	3	2	2	2	2.4	0.55
9		2	2	1	1	0	1.2	0.83	2	2	2	2	0	1.6	0.89

Table 3. Number of design patterns per question mentioned in the written advice – Control group

Participant	Pre-test							Post-test							
	Question	1	2	3	a	b	M	SD	1	2	3	a	b	M	SD
1		3	3	3	2	0	2.2	1.30	3	4	3	3	1	2.8	1.10
2		2	1	1	1	1	1.2	0.45	1	2	2	2	1	1.6	0.55
3		2	2	3	2	2	2.2	0.45	2	2	3	2	2	2.2	0.45
4		1	3	3	3	2	2.4	0.89	1	2	1	1	1	1.2	0.45
5		2	3	2	2	2	2.2	0.45	1	3	2	2	2	2	0.71
6		2	2	3	2	2	2.2	0.45	1	4	3	3	2	2.6	1.14
7		2	3	2	2	2	2.2	0.45	1	2	1	1	1	1.2	0.45
8		3	2	2	2	2	2.2	0.45	3	4	3	3	3	3.2	0.45

The values of the experimental group indicate progress between the pre- ( $M = 1.49$ ,  $SD = 0.39$ ) and post-test ( $M = 1.78$ ,  $SD = 0.51$ ). The control group shows no such progress between the pre- ( $M = 2.1$ ,  $SD = 0.37$ ) and post-test ( $M = 2.1$ ,  $SD = 0.74$ ). This suggests that the experimental group has made more progress than the control group. The observed difference between the pre- and post-test is significant for the experimental group ( $d = 0.698$ ,  $p < .001$ ), which is interpreted as a moderately meaningful difference.

Next, the design patterns that were mentioned for each question in the written advice were listed. The results of the pre-test illustrate the distribution of the responses (see Figure 1). This distribution was not tested: as the



second hypothesis is used to investigate the number of design patterns, just the total number of design patterns mentioned is relevant for the intervention. Specifically which design patterns have been named is, in the context of the current inquiry less important.

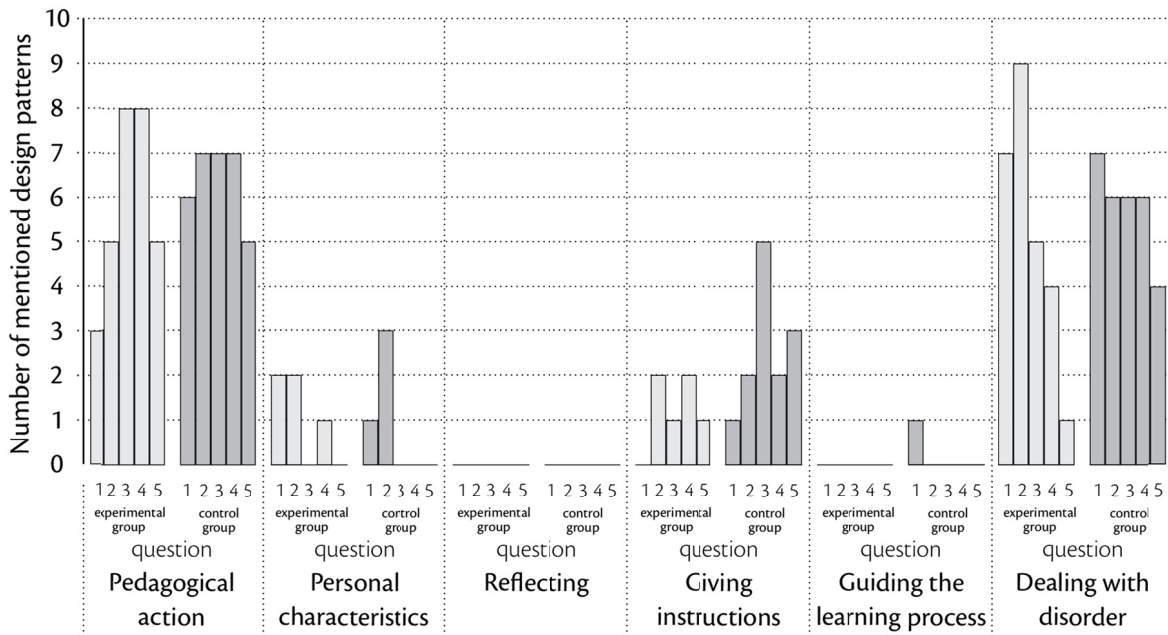


Figure 1. Design patterns mentioned per questions (pre-test)

The most frequently mentioned design patterns were ‘pedagogic action’ and ‘dealing with disorder’. They were mentioned at each question, but mainly when sharing the advice and when composing concrete, applicable advice. During the pre-test, participants in the control group more often mention the design pattern ‘instruction’, compared to the experimental group. Figure 2 shows how, during the post-test, there was more proportionality in the frequencies of design pattern mentions, but also how pedagogic action, instruction and dealing with disorder still come up most frequently. Here, instruction is mentioned more often by the experimental group than the control group.

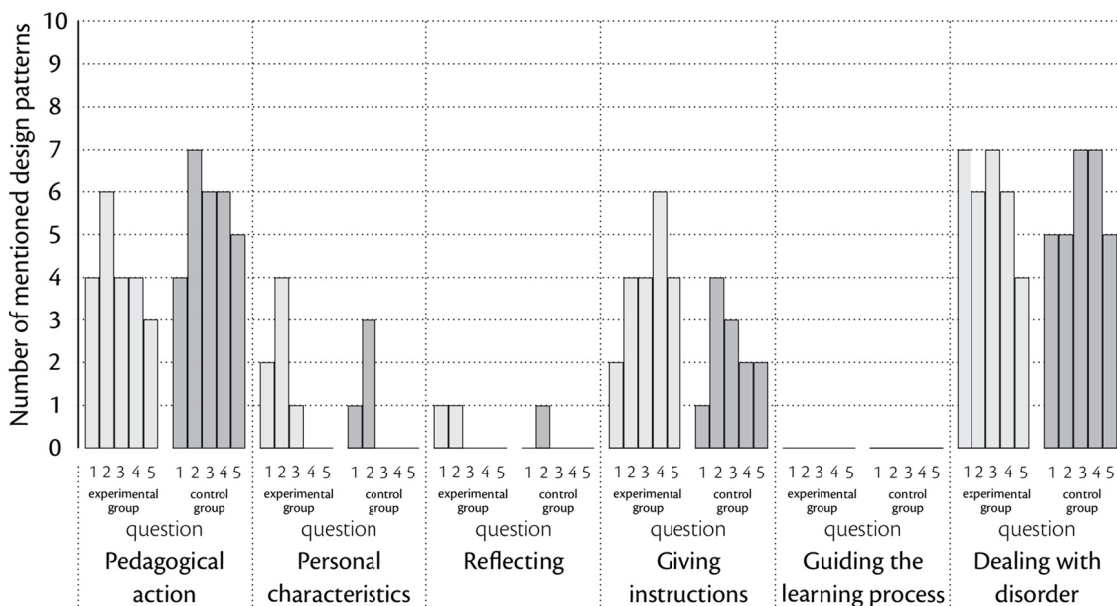


Figure 2. Design patterns mentioned per questions (post-test)

## 3.2.2 Pattern Language ‘Teaching’ in the Oral Observation Report

As a result the participants were able to link most of the educational purposes to the video case. To get a better understanding of these answers, it was decided to investigate the number of design patterns of the pattern language ‘teaching’, per respondent, that occurred in the answers (Table 4).

Table 4. Number of design patterns – oral observation report

Ptc.	Experimental group						Control group					
	Pre	M	SD	Post	M	SD	Pre	M	SD	Post	M	SD
1	13	10.44	3.0	11	11.33	2.65	22	13.13	4.45	16	11.38	3.34
2	15			15			16			9		
3	14			10			11			10		
4	7			14			13			15		
5	9			13			13			9		
6	10			12			13			15		
7	11			10			10			8		
8	8			11			7			9		
9	7			6								

Fewer design patterns were mentioned during the pre-test by the experimental group ( $M = 10.44$ ,  $SD = 3.0$ ) compared to the control group ( $M = 13.13$ ,  $SD = 4.45$ ). During the post-test, the difference between the experimental ( $M = 11.33$ ,  $SD = 2.65$ ) and control group ( $M = 11.38$ ,  $SD = 3.34$ ) shrank.

The effect size as a difference between the pre-test compared to the post-test is, for the control group  $d = -0.476$ ,  $p < 0.001$  and for the experimental group  $d = 0.334$ ,  $p < 0.001$ . In both the experimental as the control group there is a difference of limited meaning. Examining the differences in scores in the experimental group and the control group, it can be seen that there is a meaningful difference ( $d = 0.867$ ,  $p = 0.049$ ). This indicates that the experimental group performs substantially better during the post-test compared to the pre-test, whereas this increase is less pronounced for the control group. Thus, the learning gains in the experimental group are significantly greater than those in the control group: there is even a learning loss in the control group.

Additionally, for each educational purpose the number of design patterns the group could come up with was assessed (Table 5). It was decided to differentiate between the total number of mentioned design patterns, number of unique design patterns (maximum 6) and the number of design patterns that were mentioned at least five times by the participants.

Table 5. Number of mentioned design patterns – oral observation report, per card

Ed. purpose	Experimental group						Control group					
	Pre-test			Post-test			Pre-test			Post-test		
	Total	Unique	$\geq 5$ times	Total	Unique	$\geq 5$ times	Total	Unique	$\geq 5$ times	Total	Unique	$\geq 5$ times
1	12	4	1	20	5	3	15	3	2	14	3	1
2	6	2	0	6	2	0	12	4	1	9	3	0
3	10	4	1	11	4	1	10	4	1	8	1	1
4	15	5	2	12	5	1	15	5	1	14	3	1
5	7	3	0	9	3	0	13	3	1	10	3	1
6	16	5	2	18	4	2	12	4	1	10	3	1
7	15	5	0	14	4	1	16	4	3	15	2	2
8	13	5	1	12	4	1	12	4	0	11	3	1
M	11.75	4.13	.88	12.75	3.88	1.13	13.13	3.88	1.25	11.38	2.63	1
SD	3.77	1.13	.83	4.56	.99	.99	2.03	.64	.89	2.62	.74	.53

The number of design patterns mentioned by the experimental group (Table 5) is, on average, higher in the pre-test ( $M = 12.75$ ,  $SD = 4.56$ ) compared to the post-test ( $M = 11.75$ ,  $SD = 3.77$ ). This contrasts with the control group, which on average mentions less design patterns in the post-test ( $M = 11.38$ ,  $SD = 2.62$ ) compared to the pre-test ( $M = 13.13$ ,  $SD = 2.03$ ). Cohen's effect size value  $d = -0.798$ ,  $p < 0.001$  suggests a meaningful negative difference between the pre- and post-test for the control group. Cohen's effect size value  $d = 0.256$ ,  $p < 0.001$  for the experimental group, which suggests a difference of limited meaning: the experimental group performs better during the post-test compared to the pre-test. The experimental group learned more than the control group did: the control group even displays a meaningful learning loss. The Monte Carlo simulation demonstrates that the chance of these differences in scores being accidental is less than 10% ( $p = 0.096$ ).

From the post-test sections of Table 5 can be gathered that the experimental group can name more ( $M = 3.88$ ,  $SD = 0.99$ ) unique design patterns than the control group ( $M = 2.63$ ,  $SD = 0.74$ ). When the attention is shifted from the total number of design patterns mentioned to the number of unique design patterns, both groups show a decline between the pre-test and the post-test ( $p = 0.001$ ).

Using the Monte Carlo simulation (10,000 simulations), it was determined that there is a meaningful difference in learning gains of the control group on the one hand, and the experimental group on the other ( $d = 0.907$ ,  $p = 0.096$ ). This means that it is very likely ( $p = 0.096$ ) that there was a pronounced learning gain in the experimental group, while the control group most likely did not progress at all, and even displays a learning loss.

### 3.3 Hypothesis 3: Design Pattern 'Dealing with Disorder'

To analyze the design pattern 'dealing with disorder', the answers to the questions in the interview were used. The participants in the experimental group have mastered more design patterns on level 2 (beginning) and level 3 (applicable) at the end of the course (Figure 3).

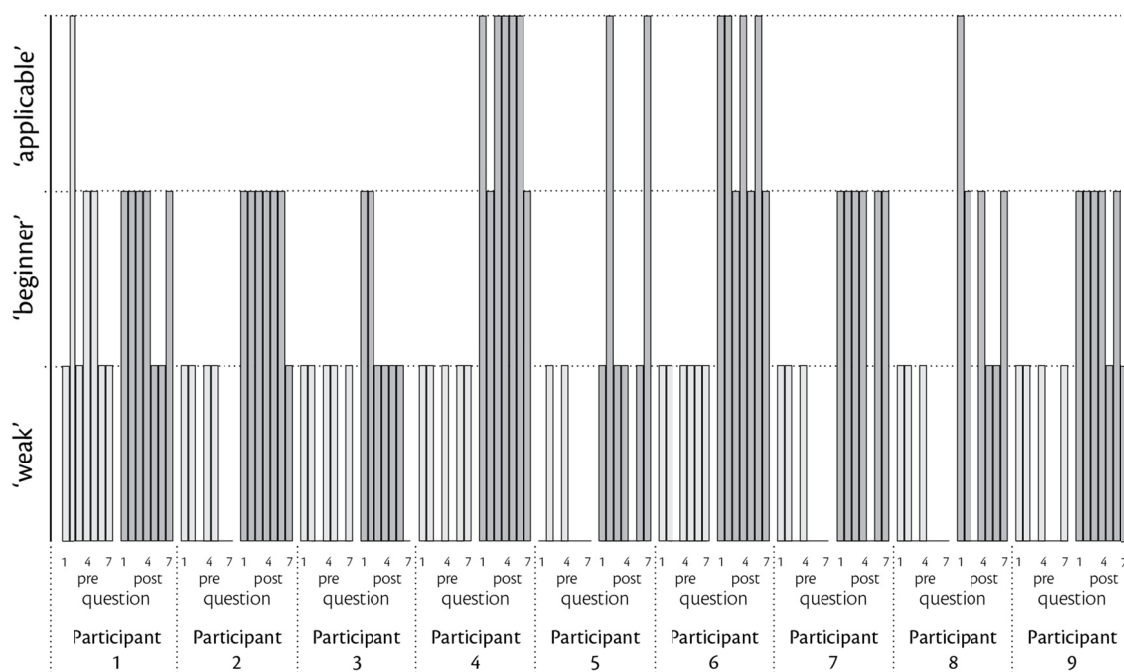


Figure 3. Applicability of the design pattern 'dealing with disorder' as reported in the pre- and post-test interview experimental group

The control group also shows growth, but not as strongly as the experimental group (see Figure 4).

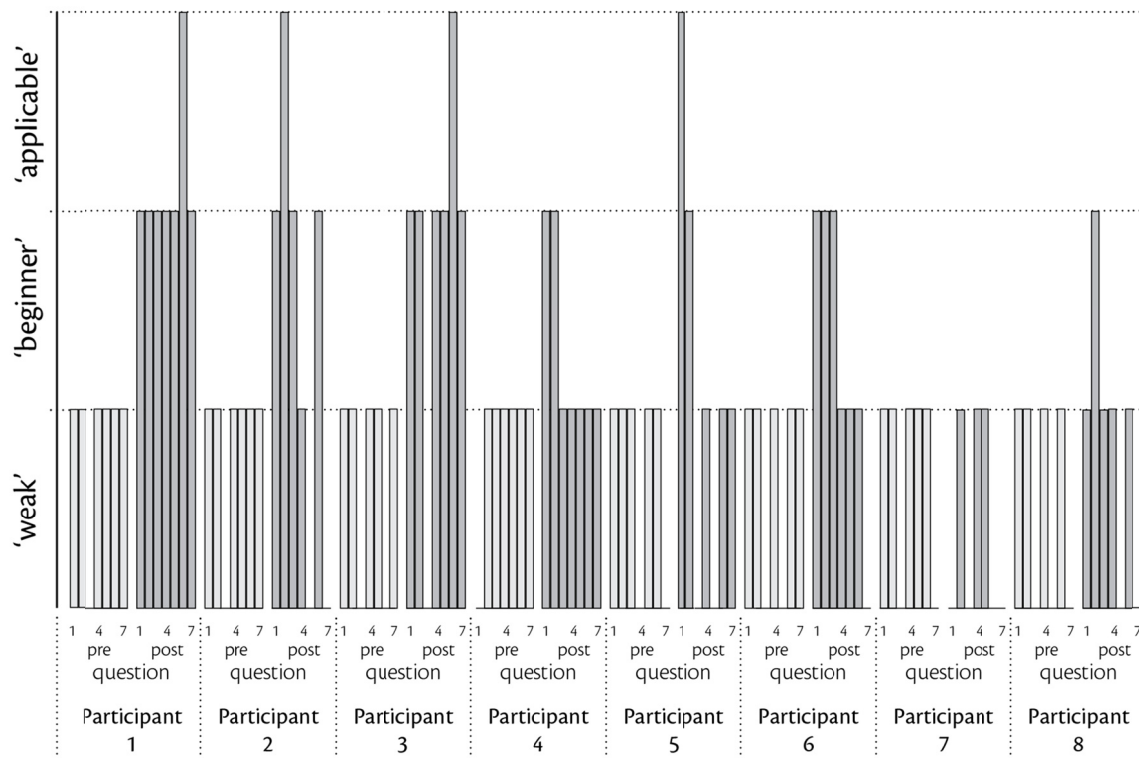


Figure 4. Pre- and posttest results of interview in control group

The difference between the pre-test relative to the post-test is for the control group  $d = 1.757$ ,  $p < 0.001$  and for the experimental group  $d = 3.473$ ,  $p < 0.001$ ). The differences are meaningful for both groups, but for experimental group the difference is indeed particularly meaningful. The effect size expressed as a difference between effect sizes in both the experimental and the control group is also meaningful ( $d = 2.198$ ). The empirically determined way the experimental and control group differ in their pre- and post-test results was tested using the Monte Carlo-simulation (10,000 simulations). The results of this simulation show that the probability of this difference occurring by chance is just over 5% ( $p = 0.056$ ). The experimental group's increase in performance between the pre-test the post-test, is much larger than the control group's increase in performance. This means that the learning gains of the experimental group are larger than the learning gains of the control group.

#### 4. Conclusions and Discussion

In this study, three hypotheses were used to test whether the use of video cases in a classroom management course in the second year of the teacher training contributed to the acquisition of situated knowledge in teachers in training.

Using the first hypothesis the amount of educational purposes participants linked to a real-world situation as they viewed it in a video case was investigated. Teachers in training who attended a course that included the use of video cases could link, on average, an equal amount of educational purposes to the video case both before (pre-test) and after (post-test) the course. Teachers in training attending a course that did not use video cases linked fewer of educational purposes to the video case in the post-test compared to the pre-test. Therefore, for both groups, the number of educational purposes that were measured was lower than expected. The observed learning loss in the control group was larger than the one in the experimental group.

The number of elements of the pattern language 'teaching' that teachers in training linked to a video case was investigated using the second hypothesis. Teachers in training who attended a course that included video cases could link more design patterns in the post-test compared to the pre-test. The teachers in training who attended the same course without video cases could also link more design patterns in the post-test, but the difference was less pronounced. Comparing the experimental and the control group's pre- and post-test results allowed that there is a meaningful difference between them to be established. Watching videos thus contributes to the development of the pattern language 'teaching' in teachers in training.

The third hypothesis was that the design pattern 'Dealing with disorder', would be more developed in teachers in training who had taken a course that used video cases, compared to their fellow students who had taken the same course without video cases. Both groups showed progress of their applicability of this design pattern. For the group who attended the course without video cases this progress was less strong. The data indicates that the development of the design pattern 'Dealing with disorder' is stimulated more by a course that includes video cases compared to one without video.

From the way the first research question was answered, it can be gathered that there was no increase in the number of educational purposes that was linked to case by the experimental group, but that there was a learning loss in the control group. An obvious explanation would be that the results are sound and that the hypothesis can be rejected. But, since the teachers in training who are attending the course are also experiencing their first time being in front of a class, the challenge of thinking about their own process goals while teaching will only start once their internship has begun. Furthermore, the goal of a classroom management course is exclusively focused on classroom management, and pays less attention to educational purposes that do not, or to a lesser extent, deal with classroom management. In addition, it could well be the case that the intervention is too premature, as the intended learning experience can only take shape in the long term. Creating new frameworks for educational purposes will have to have been preceded by a lengthy process of reflection on the teacher in training's own workplace experiences.

Finally, seven out of eight operationalizations of educational purposes were, on average, registered by the measuring instrument used. In future research, the length of the video fragment should accommodate the measuring instrument in such a way that the average number of educational purposes, per respondent, falls in the middle of the scale distribution, so that outliers can be better detected.

Having analyzed the results of hypothesis 2, it can be seen that both groups feature a pattern language, but the number of elements contained within them is limited. This is the reason the answers are spread out mainly over three out of the six possible elements of the pattern language 'teaching'. The fact that one of these, 'pedagogic action' features prominently, might be explained with the experiences that the participant had as a pupil, which forms the base of their choice of becoming a teacher (Padhy, Emo, Djira, & Deokar, 2015). It is possible that a teacher in training, who as a pupil witnessed pedagogic successes, but also pedagogic failures in their teachers, formed a wish to do better themselves. It makes sense that 'instruction' and 'dealing with disorder' are frequently mentioned, as they are important parts of the course and because the teachers are immediately confronted with giving instructions and keeping order themselves. In order to teach quality lessons, the teachers need to show improvement in all the elements of the patterns language 'teaching'. A teacher in training who needs to develop on all elements of this pattern language, does not optimally benefit from a course classroom management that is specifically focused on the design pattern 'dealing with disorder'.

The results of hypothesis 3, regarding the applicability of the design pattern 'dealing with disorder' are the least ambiguous, in the sense that the experimental group does better during the post-test, and this improvement is more pronounced compared with the control group. The most likely reason for this is that the use of video cases contributed to this learning growth. It is important to note that this research involuntarily operationalized situated knowledge in a very specific and narrow way, namely, as knowledge within the context of a video recording. Even the context of authentic video images, cannot replace the full, real, situation in which the situated knowledge is used. One consequence of the situated character of design patterns is the fact that they are not easily transferable (Mor & Harvey Warburton, 2014). As a result, a teacher in training does not feature a balanced set of design patterns, but is very much still developing one.

In summation, the notable outcome of hypothesis 1 is that there is a learning loss in the control group and an unchanging level of educational purposes in the experimental group. In hypothesis 2 there is a partial learning loss in the control group. It is possible that the decline that was found can be explained as random fluctuation. However, because the Monte Carlo simulation ruled that the chance of that occurring is very small, it could also be possible that the deterioration is not a random fluctuation, but rather that for a number of teachers in training an actual decline in their number of educational purposes and elements of the pattern language 'teaching' occurs. On the one hand, an explanation for this learning loss is that the course that was featured in the research is unilaterally focused on classroom management, which leaves an attention to other educational purposes to be desired. On the other hand, it could mean that in a number of teachers in training there was an actual loss in the number of observed educational purposes and elements of the pattern language 'teaching'. Such a decline is not uncommon when people reflect on issues that were previously obvious to them. In these cases, the realization that not enough thought has been put into the matter leads to doubt (Barden & Tomala, 2014). A restructuring of knowledge is occurring, and indeed there is a learning experience: the video case they watched gave the

participants food for thought regarding those aspects of being a teacher, which until then were indisputable to them. Their doubts are demonstrated by the results found, which were measured during a short course. This would mean that learning loss or lack of growth might be explained from the unilateral focus of the course that was used, in addition to the underlying learning experience which can probably only be mapped in the long term.

Because a teacher in training's growth towards becoming an expert is a process that takes time, a suggestion for future research is to investigate the changes in educational purposes and design patterns between students from the second and fourth year of the teacher training. Using these findings, the way a teacher in training thinks about his own actions and the development of his underlying principles and identity can be outlined. Because teacher education seeks to bridge the divides between their students' identity, the theoretical framework the education offers and the classroom their future teachers experience during their internship, understanding the way situated knowledge is accumulated through reflection, supported by video cases, is a priority.

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# What Makes a Change Unsuccessful through the Eyes of Teachers

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## Abstract

Over the past two decades, Turkey has initiated a reform movement to change her classroom assessment system to accommodate performance-based alternative assessment methods in schools. However, research investigating the impact of assessment reform on learning and teaching in schools report that performance assessment approaches have not been implemented effectively. This study investigated the teacher related factors behind the adoption decisions of teachers of these changes introduced. Data for the study were collected through interviews with 53 biology teachers in 24 schools. According to the findings, teachers' lack of self-agency, superficial understanding of the ideas introduced, mistrust that the innovations will work in practice, skepticism about the need for a change and inadequate knowledge and abilities as a result of ineffective dissemination and professional guidance were the main factors affecting the success of the reform. Suggestions to overcome barriers to reform and implications of the findings in managing change are presented and discussed at the end of the paper.

**Keywords:** assessment reform, educational change, teacher views

## 1. Introduction

Recently, education systems worldwide have been increasingly focusing on the effective implementation of performance assessments in schools (Assessment Reform Group [ARG], 2002; Black & Wiliam, 1998; Bol, Nunnery, Stephenson & Mogge, 2000; Ross, Hannay & Hogaboam-Gray, 2000; Scouller, 1996; Stiggins, 2000; Stiggins & Conklin, 1992). This growing interest in performance assessment is due to an emerging awareness that it increases student learning and achievement (Black & Wiliam, 1998; Borko, Flory & Cumbo, 1993; Gardner 2006; McMillan, 2007). Based on the research evidence showing that performance assessment indeed provides the means for improving student learning, the rationale, purpose, and format of assessment in schools in Turkey have also been questioned and reviewed as part of the efforts to reform education for the last two decades. Performance assessment approaches which are based on the constructivist view of teaching and learning have been introduced by the Ministry of National Education and the curriculum programs and textbooks for both primary and secondary schools have been re-written according to the requirements of the new system.

Since then, a number of studies have been conducted to investigate the effects of the reforms or whether performance assessment approaches had been implemented in the classrooms (Ayas et al., 2007; Cimer, Cakir, & Cimer, 2010; Demir, Ozturk, & Dokme, 2011; Metin & Ozmen, 2010; Yasar, Gultekin, Turkan, & Yildiz, 2005). Nevertheless, they all report that the changes introduced have not been implemented in schools effectively. The factors identified in the literature as affecting the implementation of the changes were the university entrance exam which is a high stakes test, inadequate facilities in schools, low quality of students, ineffective in-service training etc.

It is true that change cannot be successfully implemented simply by the production of policy documents and curriculum standards. Research has shown that the teacher is the key factor in any reform in education (Armstrong, 2008; Goh, 1999; Harris, 2005; Morrison, 2010; Riley & Louis, 2000; Sarason, 1996 ). Teachers' knowledge and perceptions of change serve as critical factors that impact their decisions about implementing (Putnam & Borko, 1996). As Goh (1999) indicates, successful implementation of any innovation or change lies in the hands of teachers because 'at the end of the day, it is these teachers who will determine whether innovations will eventually be carried out inside the classroom' (p. 18). Fullan and Hargreaves (1996) also argue that there is a "need to first focus on how teachers make sense of the mandates and policies because there will be

no educational reform until after teachers interpret the policies and make decisions based on their beliefs about the new demands” (p. 12).

It is well-accepted fact that change is not always accepted easily and experienced teachers are often criticized for being resistant to change (Fullan & Hargreaves, 1996). Many reasons were listed in the literature for such resistance (Evans, 1996; Fullan, 1991; Fullan & Hargreaves, 1996). One is that teachers feel that they are left out and do not feel ownership of the ideas imposed. They generally are not given chance to provide input when policies are constructed even though they are the individuals who are expected to implement changes. Another reason is that reforms challenge teachers’ old views of teaching, learning, and assessment. Some teachers worry that the innovation will not work or will make the matters worse (Fullan & Hargreaves, 1992, p. 5). Fullan (1991) indicates that the failure of many reform movements has been attributed to the neglect by reformers of teachers’ perceptions. Thus, teachers’ role is critical to the success of reforms. In other words, without support and commitment from teachers, there will be little or no chance for any reform effort to succeed. Especially when reforms are top-down as those in Turkey, the role of the teacher becomes more important because s/he is the final agent who determines whether these top-down initiatives will enter the classrooms. In fact, if a proposed change is recognized by teachers as addressing an important need, then it is more likely to be implemented (Ayas et al., 2007; Fullan, 1991). Thus, the change of teaching practice relies on the change of teachers’ knowledge and perceptions. Hence, teachers’ perceptions of reform or change are important to determine if they exert commitment or adapt their practice accordingly.

All these insights suggest that in order to understand the role of teachers in reforms, their knowledge, attitudes, and beliefs should be analyzed first. Such empirical evidence provided by the implementers of the reform may offer lessons for those who plan reforms and pave the way for professional development initiatives. Specifically, this paper aims to explore teachers’ perceptions that shape their decisions to adopt changes. For this purpose, the paper draws on data gathered through 53 in-depth interviews of secondary school Biology teachers. The results of the research will help policymakers and educational leaders to better understand the perspectives of the teachers. If teachers’ perspectives are known and understood, they will have the knowledge to provide support and plan for future changes by implementing any suggestions or outcomes introduced through this study.

## **2. Method**

### *2.1 The Sample*

The study was conducted with 53 Biology teachers working in 24 secondary schools. They ranged in years of teaching experience from five to twenty-six years. The scope and focus of this study were delimited to include only teachers, rather than all stakeholders (e.g., students, administrators, parents) involved in the change.

### *2.2 Data Collection*

This study employed the survey method using semi-structured interviews as the data collection tools to reveal teachers’ views on the factors that impede effective implementation of reforms in assessment. The semi-structured interview was chosen as the data collection tool in this study in order to leave areas where the conversation could lead in different directions or more in-depth with each person. This inquiry is a qualitative phenomenological study that reveals the perceptions of 53 teachers in 24 schools.

The interview questions asked teachers about their knowledge and use of performance assessment methods. Since the interviews allowed for conversation between the teachers and the researcher, the interviews were audio recorded and later transcribed into Word document.

### *2.3 Data Analysis*

The data from the interviews were analyzed qualitatively following the procedures advised by Merriam (1988), Bogdan and Biklen (1992) and Miles and Huberman (1994). After completing the data collection, tape recordings were transcribed verbatim as soon as possible. Word-processed transcripts were taken back to the participants and they were asked if they wanted any changes in the text. This aimed to increase the accurateness of the transcripts, in other words, contribute to the reliability of the data, engender trust and confidence in the researcher and provide the informants with a sense of contribution (Miles & Huberman, 1994). However, none of the participants made any changes. However, Afterwards, content analysis – which comprised generally determining codes first; then, pulling them together to form categories based on the research questions, so that they became the answers to the research questions – was carried out. Because of ethical considerations, when analyzing the data every teacher was assigned an identifier number; for example, T1 stands for ‘Teacher 1’.

### 3. Results and Discussion

The data obtained from the interviews showed that the changes introduced through the new assessment reform had not been implemented effectively in practice. Different reasons could be identified from the data. These reasons are presented and discussed in this section based on the interview data.

#### 3.1 *Superficial Understanding of the Innovation*

As indicated earlier, the idea brought by the reform should present an innovation to teachers (Fullan, 1991). The results of the current study showed that this was an obvious issue for the study's teachers. Interestingly enough, all of the teachers indicated that the ideas brought by the reform were not innovative. In other words, performance assessment in terms of conducting oral exams, assigning projects and assignments was not new to them as they had already been using them. Thus, they did not seem to understand what to change. A common view was:

I have already been doing oral exams and looking at their (students) in class performance. I assign research tasks. I have not changed anything in my practice. They (policymakers) do not ask anything really different from what I already do ... (T5)

Clearly, the concept of performance assessment has not really been understood by the study's teachers. As they did not realize that the proposed reform indeed introduces new concepts and requirements, they downgrade its value thinking that they had already been doing it. Thus, the requirements of the reform have not been implemented.

However, there were teachers who reported making some changes in their practices as a result of the reform. Eleven of the teachers indicated that they started using 'branched three', 'structured grid' and 'word association' methods as the performance assessment methods. All of these teachers were those who had experience of 5-10 years. They indicated that these were the methods taught during the in-service courses that they had attended or their preservice education. Surprisingly, indeed, these three methods were the only methods mentioned by all of the teachers who indicated that they had attended in-service courses on the new assessment system. Thus, obviously, the teachers limited the performance assessment to use of "branched three", "structured grid" and "word association" methods, which do not present essential characteristics of performance assessment concept.

Looking at the contents of the in-service programs conducted by the Ministry of National Education, it can be seen that these are the only methods of assessment covered. These methods indeed are different forms of tests rather than being performance assessment methods. Hence, clearly, not only the teachers but also the policymakers misinterpret what performance assessment is. What seems to be wrong is that we try to construct a building without a foundation.

The new assessment system requires teachers to set tasks that assess students' higher-order thinking skills and use clear criteria and rubrics to evaluate the results. None of the teachers in the study mentioned using rubrics. Only one of the teachers indicated using portfolio in his biology classes. He indicated that he had not attended any in-service courses or seminars on the new assessment system; however, he learned about the requirements of the system from the official documents that had been sent to the school by the Ministry of National Education and from his own efforts. Upon examining the portfolios that his students had prepared, it can be said that they were nothing more than a collection of the student selected items in a folder. This indeed was not surprising, since the teacher did not have any training on how to use portfolios.

There are certain elements that make a portfolio portfolio (Cimer, 2011). One is the self-reflection. Students need to write reflective comments on each piece of work that they included in the portfolio and on the whole learning process. Another element is continuous feedback and guidance. Portfolios should be periodically collected by the teachers and returned with feedback. The other element is using rubrics to evaluate the portfolio process. The evaluation criteria should be known by the students from the beginning of the process. There are certainly other things to be considered when implementing portfolios, which have not been included here, such as the quality of work assigned during the process. Hence, the portfolio is not a mere collection of work in a folder and, if used properly, it can increase students' learning (Cimer, 2011).

Thus, the concepts introduced through the assessment reform are not adequately understood and implemented by the study's teachers. It is self-evident that one cannot implement what one do not know. In addition, as indicated earlier, unless teachers accept changing their practice, there is no chance for reforms to succeed. Hence, change starts with teachers' understanding and acceptance of the requirements. This is followed by the commitment. To achieve this, it is vital to convince teachers that the requirements of the change are necessary and feasible (Gunstone & Northfield, 1988). Literature presents convincing evidence that performance assessment if

implemented properly, has a potential to enhance and increase students' learning (Black & Wiliam, 1998). Teachers should be convinced by this evidence, or warrant, before the implementation.

### *3.2 The Warrant Is Not Convincing Enough Considering the Context*

The interview data revealed that there was distrust among the study's teachers regarding the benefits of the new assessment approach. Thus, they felt skepticism about the need for a change. During the interviews, although most of the teachers initially expressed positive feelings about the performance assessment approach, when they asked further about the reasons for their ideas, they all confessed that it was not "that helpful" to students in our "examination based" system.

The effects of high stakes tests on instructional and assessment practices in schools have been widely reported by many researchers from different contexts (for example, Black & Wiliam, 2003; A. Cimer, 2004; S. O. Cimer, 2004; Coombe & Hubley, 2003; Shepard, 1990; Shepard & Dougherty, 1991; Smith & Rothenberg, 1991; ). These studies point out a "backwash effect" from external high stakes tests, that is, tests control curriculum, teaching and learning processes in the classroom. Teachers think that they should adjust their teaching according to the requirements of the tests to increase their students' chances to achieve success and the students only study and learn what they need to know for the test (Black & Wiliam, 2003; Coombe & Hubley, 2003).

This study is not an exception. During the interviews, the teachers did acknowledge a constant preoccupation with readying students for the university entrance examination. Below conversation between me, as the researcher, and the participant teachers reflects the common view:

Researcher: You know that performance assessment requires students "do" something, such as conduct research or an experiment. Do you assess your students using these methods?

Teacher14: There is university entrance examination and it is a multiple choice test. They do not assess students' ability to conduct research or do something.

Teacher 2: The students want to take tests instead of doing research or experiment. In the end, they will be assessed through a test.

Such comments were frequently mentioned throughout the interviews. Obviously, competition for university places determined by points obtained in the university entrance examination exerts a powerful backwash effect on the culture of assessment in schools and thereby, on the reforms in assessment.

### *3.3 Ineffective Dissemination and Professional Guidance*

Effective dissemination may solve most of the problems on the road to the successful implementation of reforms. In Turkey, as evidenced from the interviews in this study, ineffective dissemination policy was the main reason for the failure of the recent assessment reform. First of all, training of the teachers started after the implementation process. Although this study was conducted about two decades after the reform had been introduced, 29 out of 53 teachers reported that they had not been given any training or seminars on the new assessment system.

Actually, 12 of these 29 teachers indicated that they had attended courses on the curriculum reform in general, which was supposed to introduce the new assessment system, had not included anything about it. In Turkey, the curriculum and assessment reforms have been introduced concurrently. Thus, teachers have been expected to implement both constructivist teaching and performance assessment. The in-service training and seminars conducted to disseminate these reform initiatives were supposed to cover both topics. However, as the teachers indicated, the courses they had attended only covered constructivist teaching and the introduction of the new curricula but there was nothing about the topic of performance assessment. One teacher said; "The training supposed to be on the new curriculum and assessment, but there was nothing about assessment. They just presented what student centered teaching was and, that was it" (T16).

Therefore, teachers without knowing what and how they would do were expected to do. They had the textbooks prepared by the Ministry of National Education and the official forms to be filled in, but they did not have the knowledge of how to implement the new system. One of the teachers said, "What I know is to follow what is in the textbook. The book says 'students do this and students do that' and I assign those tasks. But, there are many different forms to be filled in about different aspects of students' learning. I just fill them in..." (T3).

Another complained about the problems she faced with assigning quality projects and their evaluation; "What is a good project and how will I mark them? They say rubrics should be used, but I do not know what a rubric is and how to use it. I did not have any training on them" (T36).

The teachers who indicated that they had attended a training or a seminar on the new assessment system

indicated that the courses they had attended actually covered the introduction of both the curriculum and assessment system. They all agreed that only the methods of “branched three”, “structured grid” and “word association” were introduced as the performance assessment methods.

In addition to the shallow course content, deskilled course instructors was another concern for the most of the study’s teachers. None of the teachers who had attended to the in-service courses on the new assessment system was happy with the quality of the training they had been given. None of the teachers talked positively about the course instructors’ knowledge of the new assessment system. One said; “he was supposed to teach us the new assessment approach but he did not know about it either” (T12).

In addition, theoretical presentation without any practical work and limited time were other issues raised by the teachers regarding the quality of the training. These findings regarding the quality of the training were also reported earlier in other studies researching into the effectiveness of in-service courses on the new curriculum and assessment (Ayas et al., 2007; Cimer et al., 2010). Researching into the effectiveness of in-service courses for teachers on the new curriculum and assessment reforms in Turkey, Ayas et al. (2007) report that “current in-service courses are criticized that they are too theoretical and does not involve practical element, and more importantly the course instructors are not expert in their subject. Therefore, current in-service courses were not found effective by the most of the teachers.”

Consequently, regardless of attending any courses or seminars, none of the study’s teachers actually understood what performance assessment was and how it could improve student learning. They were just applying what they, themselves, picked from the textbook and other official forms.

### *3.4 Lack of Self-agency and Ownership*

Teachers, school leaders as well as peer pressure, professional learning, government policy, research findings and public opinion may all be change agents. Especially, teachers as the implementers of change are important change agents in education. Their understanding, acceptance, and commitment determine whether a change or innovation will enter the classrooms since “teachers can always shut the door and get on with what they want to do anyway” (Fullan & Hargreaves, 1996, p. 14).

The lack of self-agency was obvious in this study’s teachers. The self-agency is related to self-motivation and commitment to improve or change practice. Gardner et al. (2008) define “self-agency” as a “powerful device in fostering change because it draws on self-motivation” (p. 8). They claim that without teacher commitment through the self-agency, successful dissemination or professional learning will not be effective. Hence, if it is absent, there is a risk of teachers to downgrade the value of the proposed changes and minimal engagement in practice (ARG, 2008). On the other hand, it is necessary to develop a sense of ownership of the process of change, thereby its implementation sustainability.

These claims are validated by the findings of this study. All of the teachers defined student self-assessment forms as a “useless paperwork” which they do as the Ministry of National Education asked them to. One of the teachers said; “there are lots of paperwork which are no use for pupils. But we have to do them. As the Ministry asks, we have to”. During the interviews, comments like “they (the policy makers) never ask for teachers’ opinion” were repeated frequently.

Clearly, the teachers implement ideas as the authorities demand them. Therefore, they do not feel ownership of the process nor do they demonstrate self-agency. In order to develop self-agency and the feel of ownership in teachers, there needs to be an external support such as well-organized and delivered professional development programs and they should be involved in the process of formulating changes. Teachers, indeed, may be more knowledgeable about the real problems in schools and the things to be done to solve them than the education authorities (Armstrong, 2008). Teachers’ input can beat the odds of reform failure and be extremely valuable to shape teaching and learning in the classroom. Thus, attitudes of either resisting or welcoming change seem to be a question of ownership (Niemi, 2002).

## **4. Conclusions and Suggestions**

It is well-known that teachers play a crucial role in the efforts to implement educational change. This study aimed to analyze and review recent reform initiative in classroom assessment in Turkey to reveal teacher-related factors that impede reform efforts in the light of the teachers’ views.

Obviously, as the data have shown, the recent reform movement has not been a success in Turkey. Based on the views of the teachers, the study revealed the factors that impede assessment reform being implemented effectively. These factors as the barriers in front of the reform can be summarized under two headings; one is teachers’ resistance to change and the other is superficial understanding of the requirements of the change.

Teachers' resistance to change was mainly due to the lack of self-agency and ownership of the innovation as a result of "top-down" changes mandated by the authorities.

Resistance is a normal reaction to change as it demands new learning, causes anxiety and confusion (Fullan, 1991). It is true that change challenges teachers' acceptance of, and comfort with the status quo. Therefore, implementation of change cannot be possible without convincing teachers that it is essential (Evans, 1996). The self-agency requires two factors to work. One is convincing teachers that the ideas will work in practice and the other is providing well organized professional support. As indicated above, the teachers in this study neither had the theoretical background to implement performance assessment in their classrooms nor did they believe that it would work in practice. Thus, they were not committed to implementing changes.

Hence, as a starting step, a conceptual change in teachers seems essential to make the new concept appear necessary and feasible, so that teachers believe in the benefits of the reform requirements and become willing to implement them (Gunstone & Northfield, 1988).

To achieve this, teachers need to be supported to overcome difficulties they experience during the implementation of the requirements of the change. Recent research showed that formulating professional learning communities could be a solution to achieve this (e.g. Priestley, Miller, Barrett, & Wallace, 2010; Wiliam, 2012). The teachers especially reported problems with using the new assessment methods although they indicated that they had attended to in-service courses on the new system. Thus, obviously in-service programs should be prepared adequately and presented by experts.

In addition, teachers tend to resist "top-down" changes mandated by the authorities. In such systems, they implement new methods or ideas because the authorities or curriculum demand them. As Fullan (1991) indicated these changes tend to be superficial and do not last long. However, if teachers are involved in the process of formulating changes, they may be positively willing to change (Hackman & Johnson, 2004). Thus, attitudes of either resisting or welcoming change are a question of ownership and teachers are more likely to implement changes if they feel ownership of the process (Niemi, 2002). In addition, teachers may know more about the real problems in schools and what could be done to solve them than the education authorities (Armstrong, 2008). Hence, teachers' input can beat the odds of reform failure and be extremely valuable to shape teaching in the classroom and student learning.

Superficiality is determined as another issue in front of the reform. The teachers call what they do 'performance assessment' without realizing that they do not actually do it. Hence, they do not know what they do not know. It was obvious from the data that neither the teachers nor, as the previous research has shown (Ayas et al 2007; Cimer et al., 2010), the reform planners and appraisers had understood the theoretical foundations of the assessment change. Clearly, lack of well-articulated and planned professional development opportunities and dissemination resulted in a superficial understanding of the reform requirements by the teachers.

It is true that success of any reform effort depends on teachers' understanding, acceptance and application of the reform requirements. When asked if they had attended any in-service courses, more than half of the teachers in this study indicated that they had not had any training on the requirements of the new assessment system. However, they did indicate that they tried to do things with what could be learned through their own efforts, namely from textbooks and with the help from colleagues. Obviously, the teachers are struggling with the meaning of change to themselves and their students and the implications it has on their lives. Knowing this, one should not be surprised that the new system has not entered into the classrooms yet. Without training teachers or making them aware of the requirements of the reform how can we expect success? Thus, changes only on paper do not mean that they are implemented in practice.

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# The Relationship between Affective and Social Isolation among Undergraduate Students

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## Abstract

We examined the correlation between social isolation and affective isolation among 457 undergraduate students using a stratified cluster sampling technique. Participants comprised 221 men and 236 women, all of whom were either first- or fourth-year students enrolled in various majors at King Saud University. Means, standard deviations, Pearson (Spearman) correlations, z-values, a regression analysis, and an analysis of variance were used to address the study questions: (Are there significant differences ( $\alpha \leq .05$ ) in affective isolation per sex and academic level? Does the interaction between sex and academic level have a significant impact on affective isolation? What is the nature of the relationship between affective isolation and overall social isolation and its dimensions? Are there significant differences ( $\alpha = .05$ ) in the relationship per sex and academic level? Does affective isolation contribute towards the prediction of social isolation?). Significant differences regarding sex were found, as men showed more affective isolation. Significant differences were also found regarding the interaction between sex and academic level on affective isolation. However, the correlations between the social isolation dimensions of self-confidence, family containment and communication, and interaction with friends with affective isolation were negative. In addition, affective isolation predicted social isolation among students.

**Keywords:** academic level, affective isolation, sex, social isolation, student

## 1. Introduction

Scholars have long been interested in exploring the topic of isolation. This interest is typically attributed to the prevalence of isolation, particularly among adolescents, who tend to feel more isolated than people of other age groups (Grippio et al., 2007). This may contradict the extent of adolescents' social relations and wide connections; the lives of many are characterized by isolation and loneliness (Heaven, 2001). Humans are social by nature and tend to live in groups to feel safe, secure, peaceful, and to satisfy their needs for affiliation and derive social and moral standards from the group (Jung, 2014). Isolation is considered a social, emotional experience that is indicated by one's social relationships; some people measure it by an individual's relations with others, while others measure it by the weakness, strength, or degeneration of the relationships (Shaver & Scott 1991).

Affective isolation is an evasive psychological trick that aims to relieve one of anxiety and tension, and helps one stay away from the pain caused by frustration, criticism, and insults (Jahoda, 1958). Affective isolation is used by some individuals to deal with pressure, based on their personalities; this technique aims to reduce obstacles that hinder individuals' adjustment or goal achievement (Mikulincer & Florian 1995).

Adolescents' physical changes contribute towards feelings of isolation, reflect feelings of ambiguity about life and one's future, and are characterized by a loss of identity. These feelings influence adolescents' behavior, which is characterized by shame, laziness, inactivity, and the development of negative attitudes towards the social environment (Hall-Lande et al., 2007).

Many theories, such as psychoanalytic theory, have explained affective isolation. Proponents of this theory believe that affective isolation is a process of dissonance between one's psyche (i.e., id, ego, and super ego), which leads to maladjustment towards oneself and the surrounding environment. Freud (cited in Baumeister et al., 1998) refers affective isolation back to painful and unpleasant events and emotional shocks that individuals experience during their lives. Therefore, the affective isolation experience may be considered a defensive

psychological mechanism that protects the personality from surrounding threats. In his self-theory, Adler posits that feelings of affective isolation are a result of deprivation of love, passion, and encouragement, which leads to feelings of inferiority (Adler, 2013; Bhugra, 2004). Furthermore, Jung (cited in Wedding, 2010) believes that affective isolation is a unique personal process that facilitates the development of one's relationships with others while attempting life adjustment. Levin (cited in Jung, 2014) explains that affective isolation is a state of incapacitating emotional imbalance and affects behavior so that it seems inconsistent or maladjusted to the real world. Maslow (cited in Jalal, 1985) referred to affective isolation as the inability to satisfy needs and to prove oneself because of a threatening environment that does not allow for natural development. Consequently, if individual needs are not satisfied, the situation becomes stressful and the individual's balance in relation to the environment is disturbed.

Social isolation is considered a stressful experience that affects individuals' personalities and their relationships with the social environment; it decreases social interaction and leads to withdrawal from social participation, affecting the individual personally and socially (Haines et al., 1993). It is a painful experience that results from individuals' inability to satisfy the needs of intimacy, closeness to others, and lack of social solidarity. For individuals experiencing social isolation, relationships are characterized by apathy, hopelessness, fearfulness, and rejection, and feeling isolated, detached from others, and not interacting with them (Weiss, 1973).

Social isolation may start at preschool age and persist until adolescence or even for life. There are many factors that adolescents worry and become miserable about. These include physical changes and the consequences of behavioral changes and the development of negative attitudes toward the social environment, especially when adolescents are misunderstood by adults and their physical changes are criticized (Tomaka et al., 2006).

Psychoanalytic theory interpreted social isolation as a state of inhibiting frustrating unconscious experiences of early childhood. The rejection and denial of painful experiences and inhibition of behavioral patterns that violate the social environment in turn lead to failure to enter intimate relationships with others (Jung, 2015). Behaviorists assert that there is conflict between processes leading to behavior and those leading to inhibition. The latter are a result of individuals' inability to abandon old conditional responses acquired in childhood, which lead to the development of inappropriate habits that do not facilitate an effective, successful life with others (Fenz & Constantinou 2008).

Cognitive theorists believe that illogical beliefs and ideas contribute towards the emergence of illogical behavior and social isolation. Cognitive reconstruction is partly based on how individuals interpret the environment. According to cognitive theorists, negative adjustment refers to an individual's failure to comprehend and organize mental experiences; therefore, failure to adjust is a product of nonfunctional thinking (Wedding, 2010).

Chan, Dennis, and Funk (2008) confirmed the results of different theories. They indicated that the most common problems among undergraduate students are self-alienation and social isolation. The results showed that 80% of adolescents and youths feel lonely and lack feelings of belonging to society. Moreover, the level of social isolation highly correlated with sex, with girls showing higher levels of social isolation (Sanders et al., 2000).

Familial links have been revealed as well. The stronger the relationships between parents and their children, the more parents can protect children from feelings of isolation from society (Williamson 2004). Affective isolation has been found to be more prevalent among individuals who have lost their wives (Dugan & Kivett, 1994). The results of different studies have concluded that general health, smoking, retirement, and having a deceased friend may predict social isolation (Nicholson 2010). In turn, social isolation predicts feelings of loneliness (Dugan & Kivett, 1994; Murray, 2010).

Sanders et al. (2000) showed a positive relationship between average hours of Internet usage and social isolation; however, Hollos and Cowan (1973) also found that mental abilities may be negatively influenced by social isolation.

Other researchers have found a correlation between social isolation and diseases such as schizophrenia, which entails feelings of isolation and affective avoidance (Frampton & Thomas, 2011). Feelings of loneliness and social isolation may also increase the predisposition towards high blood pressure among people of both sexes (Coyle, 2014).

As discussed above, isolation is a common phenomenon and may cause many problems among individuals of different age groups and sex. However, the psychological field lacks studies exploring the correlation between affective and social isolation among undergraduate students; therefore, this study tries to bridge this gap. The reviewed literature shows a diversity of results attributed to different sample sizes and locations; therefore, additional research is required. The current study is different from other studies because we identified

correlations more accurately by examining sub-fields other than the overall results or using standardized tests and we explored the correlations and predictive abilities of social and affective isolation.

### *1.1 Study Problem*

Revealing the correlation between affective and social isolation among undergraduate students at King Saud University requires deep analysis, to enable the elucidation of the magnitude of the phenomenon, its reality, and the extent of its prevalence among students. Feelings of isolation may have a negative impact on the educational process, lead to a weakened sense of responsibility, indifference, lack of self-esteem, and dropping out. The accumulation of these problems or failure to treat them may lead to less satisfaction with one's studies, motivation, efficiency, and self-esteem, and may result in personality disorders (Platt, 2009). The research problem stems from sensitivity during adolescence, an age characterized by many psychological and social issues, building a future requiring substantial effort and a readiness to accomplish one's goals, and openness in one's relationships with others. The stage may result in confusion, impair development, or may facilitate self-realization and personal refinement.

Based on the reviewed literature and efforts exhausted by the Ministry of Education (Al-Ghamdi, 2011) to develop the educational fields, the authors attempted to explore the problem and identify its causes. This was also due to the authors having noticed a few cases of maladjustment and isolation in their classes; some students had poor social skills, which prompted the authors to examine the students' contexts and to explore their affective isolation and its correlation with social isolation. Specifically, we attempted to answer the following questions:

- 1) Are there significant differences ( $\alpha \leq .05$ ) in affective isolation per sex and academic level? Does the interaction between sex and academic level have a significant impact on affective isolation?
- 2) What is the nature of the relationship between affective isolation and overall social isolation and its dimensions? Are there significant differences ( $\alpha = .05$ ) in the relationship per sex and academic level?
- 3) Does affective isolation contribute towards the prediction of social isolation?

### *1.2 Importance of the Study*

This study shed light on the state of undergraduate students at King Saud University, which may hinder their scientific and practical development. Understanding students' feelings of isolation is the first step toward resolving isolation problems. Studying the relationship between affective isolation and social isolation outlines a means of preventing isolation and promoting methods to treat it.

This study draws attention to the psychological status of students, and urges developers of educational counseling and guidance programs in the Ministry of Higher Education to overcome difficulties, achieve psychological compatibility, and strive towards the positive development of students' personalities to enhance self-appreciation and create a positive psychological and social environment for them. The study will inform the design and assessment of counseling programs. Isolation may place individuals at risk and requires effort towards diagnosis, as it is an internal emotional state that is not easily observed by others. This renders it a concerning phenomenon that requires psychological and social intervention, coupled with attempts towards providing positive solutions that could effectively facilitate social and affective adjustment among students.

### *1.3 Procedural Definitions*

Affective isolation is a method of treating stress that some individuals resort to, based on their personality style. It aims to ease obstacles that hinder adjustment balance or goal achievement (Mikulincer & Florian, 1995). Operationally, it is defined as the score that a student obtains on the Affective Isolation Test used in this study.

Social isolation is an unpleasant experience that causes a sense of undesirable pain to the individual; it represents subjective awareness of the lack of social relationships in quantity (the individual does not have enough friends) and quality (the individual lacks intimate relationships with others) (Weiss, 1973). Operationally, it is defined as the score that a student obtains on the Social Isolation Test used in this study.

### *1.4 Study Variables*

We examined the following variables: social isolation, affective isolation, sex, and academic level.

## **2. Method**

A descriptive, correlative approach was used in this study.

## 2.1 Sample

A stratified random cluster sample of 457 (221 men, 236 women) undergraduate students enrolled at King Saud University in the academic year 2015/2016 participated in the study. Participants were first- and fourth-year students enrolled in various majors (see Table 1 for details).

Table 1. The sample distribution based on sex, academic level, and major

Sex	Academic level	Statistics	Major			Overall
			Humanitarian	Health	Scientific	
Male	First-year	Number	29	38	47	114
		Percentage	13.1%	17.2%	21.3%	51.6%
	Fourth-year	Number	30	31	46	107
		Percentage	13.6%	14.0%	20.8%	48.4%
	Total	Number	59	69	93	221
		Percentage	26.7%	31.2%	42.1%	100.0%
Female	First-year	Number	31	27	57	115
		Percentage	13.1%	11.4%	24.2%	48.7%
	Fourth-year	Number	22	46	53	121
		Percentage	9.3%	19.5%	22.5%	51.3%
	Total	Number	53	73	110	236
		Percentage	22.5%	30.9%	46.6%	100.0%

## 2.2 Instruments

We utilized two instruments: the Affective Isolation Test and the Social Isolation Test.

### 2.2.1 Affective Isolation Test

The test was developed by Khader (2009); it includes 21 items and measures the level of affective isolation. Participants respond to the test items using a 4-point Likert scale ranging from “rarely applies” to “totally applies.” The students were required to identify the degree of practicing the behavior described in each item. Based on the test, affective isolation was classified into four levels: “very weak” (1–1.75), “weak” (1.76–2.50), “high” (2.51–3.25), and “very high” (3.26–4).

To ensure validity, nine professors reviewed the initial version of the test and evaluated the test items in terms of their suitability to the aim. Their observations were considered in the modification of the test. Generally, it was agreed that the items matched the purpose of the study, and the test had an acceptable validity degree of 79%.

The test’s reliability was calculated based on the responses provided by a pilot sample (N = 20) of undergraduate students. The item-total correlation coefficients ranged from .36 to .70 (Table 2).

Table 2. Correlation coefficient of affective isolation based on test dimensions and the overall test

Item	Item-total correlation coefficient	Item	Item-total correlation coefficient	Item	Item-total correlation coefficient
1	.59**	8	.70**	15	.47**
2	.49**	9	.61**	16	.36*
3	.64**	10	.51**	17	.49**
4	.57**	11	.51**	18	.51**
5	.61**	12	.52**	19	.55**
6	.59**	13	.51**	20	.42**
7	.45**	14	.47**	21	.49**

Note. \*p < .05, \*\*p < .01.

Table 2 indicates that all the correlation coefficients were suitable and acceptable; therefore, none of the items were removed.

To calculate the Affective Isolation Test’s reliability, the authors used Cronbach’s alpha to compute the internal consistency of the pilot sample’s responses. A value of .81 was obtained and considered adequate. The instrument was retested after an interval of two weeks to determine its test-retest reliability. Pearson’s correlation

analysis yielded a score of .89.

### 2.2.2 Social Isolation Test

The test was adopted from Saleh's (2012) test and consists of 80 items distributed on seven dimensions of self-awareness and confidence in others' acceptance (11 items), self-confidence (11 items), family containment and communication (11 items), interaction with friends (12 items), affective and social skills (17 items), friendly withdrawal and avoidance (10 items), and emotional emptiness (9 items). Negative items responses were graded on a 5-point Likert scale: 5 = "strongly agree," 4 = "agree," 3 = "neutral," 2 = "disagree," and 1 = "strongly disagree." For the positive items, scores' levels were inverted. The negative test items were categorized into five levels: (1–1.80) "very low," (1.81–2.60) "low," (2.61–3.40) "moderate," (3.41–4.20) high, and (4.21–5) "very high." These levels were also inverted for positive items.

To ensure the test's validity, nine professors reviewed the initial version of the test and provided observations on the test items in terms of suitability to the aim, and their observations were considered in the modification of some items. Generally, it was agreed that the items matched the purpose of the study; the test had an acceptable validity score of 85%. Test reliability was computed. The correlation coefficient with dimension ranged from .32 to .72 (Table 3). The item-total correlation coefficients ranged from .33 to .68 (Table 4).

Table 3. Correlation coefficients for social isolation items, dimensions, and the overall test

Item	Correlation coefficient with dimension	Item-total correlation coefficient	Item	Correlation coefficient with dimension	Item-total correlation coefficient	Item	Correlation coefficient with dimension	Item-total correlation coefficient	Item	Correlation coefficient with dimension	Item-total correlation coefficient
A1	.45**	.42**	B11	.46**	.33*	D9	.56**	.44**	E17	.55**	.52**
A2	.60**	.52**	C1	.46**	.39*	D10	.68**	.40*	F1	.53**	.43**
A3	.42**	.36*	C2	.45**	.49**	D11	.38*	.55**	F2	.46**	.47**
A4	.59**	.43**	C3	.52**	.33*	D12	.36*	.47**	F3	.52**	.54**
A5	.42**	.41**	C4	.50**	.38*	E1	.61**	.50**	F4	.50**	.43**
A6	.46**	.40*	C5	.63**	.45**	E2	.39*	.37*	F5	.52**	.40**
A7	.70**	.48**	C6	.46**	.47**	E3	.56**	.47**	F6	.52**	.35*
A8	.37*	.46**	C7	.46**	.40*	E4	.54**	.55**	F7	.52**	.38*
A9	.73**	.46**	C8	.32*	.40*	E5	.50**	.40*	F8	.63**	.48**
A10	.68**	.44**	C9	.53**	.47**	E6	.43**	.33*	F9	.50**	.35*
A11	.60**	.48**	C10	.52**	.43**	E7	.58**	.44**	F10	.61**	.57**
B1	.46**	.37*	C11	.51**	.45**	E8	.55**	.49**	G1	.54**	.45**
B2	.63**	.47**	D1	.55**	.45**	E9	.54**	.50**	G2	.52**	.47**
B3	.61**	.58**	D2	.47**	.34*	E10	.57**	.56**	G3	.65**	.51**
B4	.53**	.48**	D3	.51**	.33*	E11	.48**	.51**	G4	.73**	.68**
B5	.67**	.41**	D4	.57**	.34*	E12	.33*	.50**	G5	.72**	.60**
B6	.72**	.49**	D5	.36*	.44**	E13	.44**	.43**	G6	.70**	.62**
B7	.60**	.42**	D6	.45**	.44**	E14	.49**	.36*	G7	.54**	.58**
B8	.61**	.46**	D7	.57**	.37*	E15	.58**	.51**	G8	.67**	.60**
B9	.52**	.43**	D8	.51**	.34*	E16	.57**	.52**	G9	.68**	.65**
B10	.55**	.55**									

Note. \*p < .05, \*\*p < .01.

Table 4. Correlation coefficients of the dimensions and affective isolation test

Dimensions of Affective Isolation Test	Self-awareness and confidence in others' acceptance	Self-confidence	Family containment and communication	Interaction with friends	Affective and social skills	Friendly withdrawal and avoidance	Emotional emptiness	Overall
Self-awareness and confidence in others' acceptance.	1							
Self-confidence.	.593**	1						
Family containment and communication.	.625**	.522**	1					
Interaction with friends	.669**	.561**	.736**	1				
Affective and social skills.	.711**	.672**	.667**	.677**	1			
Friendly withdrawal and avoidance.	.657**	.637**	.577**	.506**	.789**	1		
Emotional emptiness.	.723**	.603**	.777**	.589**	.815**	.823**	1	
Overall.	.837**	.776**	.834**	.818**	.911**	.830**	.891**	1

Note. \*\* $p < .01$ .

It is inferred from Tables 3 and 4 that all the correlation coefficients and item-total correlations were suitable and acceptable; therefore, none of the items was removed.

**Test Reliability.** To calculate the Social Isolation Test's reliability, the authors used Cronbach's alpha to compute the internal consistency of the pilot sample's responses. The test was retested after an interval of two weeks to verify test-retest reliability. Pearson's correlations of the estimates of the pilot sample over the two periods are shown in Table 5.

Table 5. The internal consistency and test-retest reliability of the social isolation test

Dimension	Internal consistency	Test-retest reliability
Self-awareness and confidence in others' acceptance	0.87	0.89
Self-confidence	0.86	0.90
Family containment and communication	0.88	0.92
Interaction with friends	0.76	0.81
Affective and social skills	0.82	0.87
Friendly withdrawal and avoidance	0.74	0.87
Emotional emptiness	0.80	0.83
Overall	0.92	0.93

### 2.3 Procedures

The test-retest reliability and validity of the two tests were ensured. Participants' demographic information (i.e., name, sex, and academic level) appeared at the beginning of the questionnaires, followed by the test items. The sample was selected using a stratified random cluster technique. Participants indicated the degree of their agreement with each item of the two tests. Responses were computed for each test. Informed consent was obtained from the relevant authorities (king saud university, Ministry of education) to apply the questionnaires of the study.

### 2.4 Statistical Analysis

The authors computed means, standard deviations, Pearson (Spearman) correlations, z-value, a regression

analysis, and an analysis of variance (ANOVA) to address the study questions.

### 3. Results

To answer the first question, “Are there significant differences ( $\alpha \leq .05$ ) in affective isolation per sex and academic level, and does the interaction between sex and academic level have a statistically significant impact on affective isolation?”, the means and standard deviations of affective isolation based on sex and academic level were computed and were clearly apparent (Table 6).

Table 6. Means and standard deviations of affective isolation based on sex and academic level

Sex	Academic level	M	SD	Number
Male	First-year	3.18	.613	114
	Fourth-year	3.35	.598	107
	Total	3.26	.610	221
Female	First-year	3.14	.578	115
	Fourth-year	3.07	.486	121
	Total	3.10	.533	236
Overall	First-year	3.16	.595	229
	Fourth-year	3.20	.558	228
	Total	3.18	.577	457

To determine significance of the means, a two-way ANOVA was conducted (Table 7).

Table 7. An analysis of variance of the impact of sex and academic level and their interaction on levels of affective isolation

Source of variance	Sum of squares	Degree of freedom	Means squared	F	Sig.
Sex	3.057	1	3.057	9.441	.002
Academic level	.325	1	.325	1.003	.317
Sex $\times$ academic level	1.629	1	1.629	5.030	.025
Error	146.694	453	.324		
Overall	151.591	456			

Table 7 shows that there was a significant difference ( $\alpha = .05$ ) per sex, with men scoring higher than women; however, no statistical difference ( $\alpha = .05$ ) was shown per academic level. Moreover, the results showed a significant difference ( $\alpha = .05$ ) in affective isolation, based on the interaction between sex and academic level (Figure 1). Specifically, fourth-year male students and first-year female students obtained higher scores than did their first-year and fourth-year counterparts, respectively.

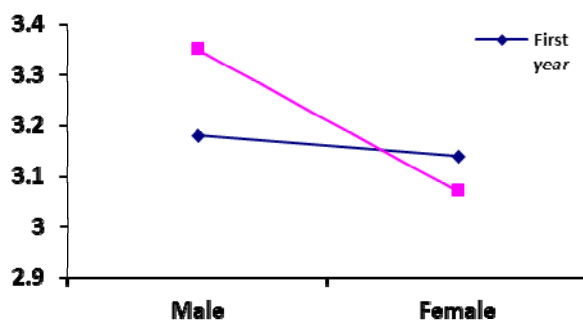


Figure 1. Interaction between academic level, sex, and affective isolation

To answer the second question, “What is the nature of the relationship between affective isolation and overall

social isolation and its dimensions and are there significant differences ( $\alpha = .05$ ) in the relationship per sex and academic level?”, Pearson’s correlation coefficient was computed for affective and social isolation (Table 8).

Table 8. Pearson’s correlation coefficient of affective and social isolation and its dimensions

Affective Isolation Test and its dimensions	Pearson’s correlation coefficient (r)	Sig.	No.
Self-awareness and confidence in others’ acceptance	-.034	.466	457
Self-confidence	-.125**	.008	457
Family containment and communication	-.162**	.001	457
Interaction with friends	-.673**	.000	457
Affective and social skills	-.069	.139	457
Friendly withdrawal and avoidance	.441**	.000	457
Emotional emptiness	.250**	.000	457
Overall	-.237**	.000	457

Note. \*\* $p < .01$ .

As shown in Table 8, the differences between self-awareness, confidence in others’ acceptance, and affective and social skills within affective isolation were not significant. There was a significant negative correlation between the social isolation dimensions of self-confidence, family containment and communication, and interaction with friends for social isolation. A significant negative correlation was found between overall social affection and overall affective isolation.

To answer the third question, “Does affective isolation contribute towards the prediction of social isolation?”, the authors conducted a regression analysis to compute the effect of affective isolation on social isolation (Table 9). A significant negative effect of affective isolation on social isolation was found.

Table 9. Regression analysis on affective isolation’s impact on social isolation

Independent variable	B	t	Sig	Correlation	Explained variance	F	Sig.
Social isolation	-.067	5.200	001. >	237.	056.0	27.044	001. >

Dependent variable: affective isolation.

#### 4. Discussion

Maslow and colleagues believed that affective isolation is an individual’s inability to satisfy his or her needs and self-actualization, due to the harsh and threatening environment that does not allow for natural development and growth. If these needs are not satisfied appropriately, the situation becomes stressful, and the individual’s psychological balance breaks down (Maslow, Frager, & Cox, 1970). The stress that individuals are confronted with, such as life difficulties, scarcity of resources, and loss of psychological security, reinforces feelings of inferiority and leads to feelings of isolation, constant failure, and despair, and creates many psychological and social problems (Bargh & Morsella, 2010).

A higher amount of affective isolation among males is attributed to their physiological make-up and biological functioning (Rook, 1985). Males have been reported to have poor adjustment, and to be extremely loyal to their clans or territories; these reportedly precipitate their maladjustment and tendency to detach themselves from the environments that they live in. Fromm (cited in Katz, Boggiano, & Silvern (1993) stresses that feelings of affective isolation are a natural human characteristic that accompanies development. Feelings of affective isolation represent a painful personal experience that individuals are confronted with at a certain stage of their lives and emerge at all life stages. Everyone experiences affective isolation, but in different degrees and at various times. However, it reaches its peak during adolescence; adolescents are considered the largest group to be affected by affective isolation (Fenz & Constantinou, 2008).

Certainly, low levels of self-confidence, less containment and communication, and decreased interactions with friends increases a predisposition towards affective and social isolation. Insults, being teased, low self-esteem, and perceived lack of social acceptance among youths all represent the emotional neglect that stimulates isolation (Haines et al., 1993). Life’s complexities and modern-day problems have resulted in the emergence of



technological, social, and educational outputs that have changed standards for the family structure and the conceptualization of the community structure. The mechanisms of social networking, standards of family education, and the concept of family have changed dramatically. Similarly, our child-rearing methods and ways of communicating with friends have changed. Life requirements and the pace of global development have resulted in different standards altogether. The feelings of failure, frustration, and stress that follow from failing to achieve one's aspirations and desires negatively affect the family unit, leading to disruption of communication between family members (Profitt, 1999).

The positive relationships between the level of affective isolation, containment and withdrawal, and emotional emptiness are attributed to negative aspects of the personalities of isolated individuals, such as withdrawal, lack of assertiveness, waiving one's rights, a lack of openness and severe secrecy, cautiousness, and vulnerability (Caspi et al., 2006). Adler (cited in Mohammed, 2000) attributes feelings of affective isolation to emotional deprivation, such as lack of love, affection, and encouragement, which leads to feelings of inferiority and social withdrawal.

According to Freud, affective isolation is a process of dissonance within the individual's psyche (id, ego, and super ego), which leads to maladjustment with the self and the social environment. Social and affective isolation are considered a defensive psychological mechanism that protects the personality from emerging threats from the social environment and individuals' risk of rejection, whether it is real or imagined (Jung, 2015). Some individuals experience affective isolation because they lack the "id" skills that enable engagement in social relations, cannot follow standards and act in accordance to them, and engage in a very complicated social pattern. Others accept social isolation culture willingly due to active rejection of the predominant culture and its standards, or the pursuit of goals that require periods of isolation and being away from others. Therefore, being socially isolated reflects individuals' voluntary or forced isolation (Cutrona, 1982).

#### 4.1 Limitations

This study had some limitations that inhibit the generalizability of the findings. First, the sample only comprises first- and fourth-year undergraduate students enrolled at King Saud University. Second, we used psychometric tools (i.e., the Affective Isolation Test and the Social Isolation Test). Lastly, we only examined participants during a specific period (i.e., second semester of the 2015/2016 academic year).

#### 4.2 Implications and Future Directions

Considering these results, we suggest a need for more studies concerning affective isolation that further address the effects of age and sex. Researchers should develop training programs that teach individuals how to avoid isolation. Studies exploring the correlations between affective and social isolation that incorporate different variables within different social contexts are also needed.

#### Compliance with Ethical Standards

This study was conducted with approval from the responsible ethics committee (King Saud University, Ministry of education) and in accordance with national law and the Helsinki Declaration of 1975 (in its current, revised form). Informed consent was obtained from all participants.

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# Classroom Teacher Candidates' Metaphoric Perceptions Regarding the Concepts of Reading and Writing: A Comparative Analysis

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## Abstract

The purpose of this study is to determine and compare candidate classroom teachers' metaphoric perceptions about reading and writing. The study was conducted with teacher candidates who were studying at Ömer Halisdemir University's Department of Elementary Education in Niğde/Turkey during 2016-2017 academic year. A total of 266 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> grade candidate classroom teachers participated in the study. The study design was organized according to phenomenological design. According to the study findings, teacher candidates created 23 metaphoric categories in reading, 17 in writing and 15 in both reading and writing. The most categories developed by classroom candidate teachers on the concept of reading is necessity. As to writing; the most categories developed by classroom candidate teachers on the concept of writing is on expressing feelings. The category with the least metaphor about writing concept is the negativity and watching. The common metaphors used by the classroom teacher candidates regarding the concepts of reading and writing are mostly gathered in the categories of water and its derivatives and life. Whereas the category with the least common metaphors about is infinity. Another result of the research is that the teacher candidates produce a more negative number of metaphorical concepts in the writing concept. Metaphors on the concept of writing are outpouring, effusion and the man himself. As a result, metaphors can be used as a research tool to determine teacher candidates' perceptions and opinions about reading and writing.

**Keywords:** metaphor, reading and writing, comparison

## 1. Introduction

Throughout people's lives, there are certain skills that they use all the time and that they have used since elementary school. The first skills that come to mind among these are no doubt the reading and writing skills because if these skills were not acquired effectively, even daily lives will be limited, and life quality will decrease. Prerequisites for literacy and functional literacy, these skills have a big role in people's lives.

Reading is important in terms of people fulfilling themselves and maintaining their lives and in terms of being used as a primary acquisition and sharing tool among all the educational fields starting from elementary school to higher education (Maden, 2012).

Looking at the related literature, it is seen that there are many definitions regarding readings and that these definitions include different characteristics of reading. Reading is the activity of making meaning from written symbols by working psychomotor skills with cognitive behaviors (Razon, 1980). According to Akyol (2005, p. 1), reading is the process of meaning making in which prior knowledge is used in an organized environment in line with appropriate method and purpose based on effective communication between the writer and the reader. Kavcar, Oğuzkan and Sever (1997, p. 41) define reading as the process of seeing, perceiving and comprehending a writing with its words, sentences, punctuation marks and other elements. Özdemir (2011, p. 11) describes reading as perceiving, meaning making, comprehending and interpreting printed or written words through the sense organs. Also, reading is the coding of a number of print-based elements and the thinking skills needed to understand a text (Harris & Hodge, 1995). As is seen, there are various definitions made regarding reading.

Starting from the first years of elementary school to the last years of schooling, reading and reading

comprehension are important factors for people's success (Ünüvar & Çelik, 1999). The richness of reading reflects on people's worlds of thought and their lives. In addition, behaviors and worlds of thought of individuals who read are different. While reading constitutes the basis for information acquisition, it also forms the basis for critical thinking and interpretation. If people make effort to improve themselves instead of making effort to age, they will be more productive (Ungan, 2008). There are, no doubt, many benefits of reading for people. Reading allows people to learn new words, gain new insights, imagine new dreams and expand their horizons by improving their creativity (Akyol, 2008).

As is known, learning happens mostly through reading. Students who do not have the habit of reading and who do not comprehend what they read are not expected to be successful in their classes, to develop their vocabulary and to gain new experiences (Ünalın, 2006).

Reading is an exciting way for people to better understand their experiences and to discover themselves. Reading is one of the most effective tools in the systematic development of language and personality (Pala & Yıldız, 2012, p. 15). In addition to helping people increase their knowledge, reading helps people to develop different perspectives, to increase their ability to interpret life and to improve their speaking and writing skills (Gün, 2012). Therefore, the concept of reading is also related to other language skills like listening, speaking and writing. Starting from this point of view, it can be said that someone who reads a lot can also write well. In a study conducted by Erođlu (2013), the relationship between teacher candidates' reading habits and accurate writing skills was found positive, and students who read more frequently were successful in written expression. Similarly, in his study, Clark (2010) put forth that there is a relationship between handwriting and early literacy skills.

One of the four basic language skills, writing is a product of thought. Thought is a sum of products that emerge as a result of certain accumulation. When a writing is finished and presented for use, there is no possibility to come back and revise (Yıldız, Okur, Arı, & Yılmaz, 2006, p. 203). According to Güneş (2007, p. 107), writing is the transfer of information that is constructed in the mind to writing. The writing process happens through construction in the mind, and this process ends with thoughts being transferred to writing. For this to happen, it is necessary to construct in the brain by understanding well what is said and read. The writing process starts with reviewing the constructed information in the brain. Then, the information that will be written is selected by determining the writing's purpose, method, subject and limitations. Later, the selected information that goes through various cognitive processes is transformed into letters, syllables, words and sentences (Güneş, 2007). Akyol (2000: 146) defined the writing skills as the use of symbols and signs necessary for expressing thoughts and as production of thought that is readable. In the Primary Turkish Education Curriculum (Meb, 2005: 22), writing skill is explained as follows: "*Writing is the written expression of feelings, thoughts, desires and plans. Making up an important part of Turkish education, writing requires skills in addition to knowledge. These skills are gained by practice. Writing skills is directly related to the reading skills. The development of students' writing skills depends on continuous reading, writing, examining and discussing their writing, and finding and using the expressions they like*".

Metaphor is described as a simile in the Turkish dictionary and defined as "the use of a word or a concept in a way other than its accepted meaning" (TDK, 2011, p. 1641). Saban (2008, p. 460) argued that the concept of metaphor symbolizes cognitive and intellectual comprehension system and that it has a literary and artistic functions like other simile arts (for example, comparison, simile, allegory, etc.) used in metaphorical literature. Metaphors help the expression to remain vivid and exciting (Altun, 2003, pp. 1-5). The word metaphor is derived from the word "metapherein", which is formed by the combination of the Greek word "meta" (change) and "hpererein" (transfer) (Levine, 2005, p. 172).

Metaphors are how one expresses a concept or a phenomenon by using analogies (Aydın, 2010, p. 1296). Metaphors are considered tools to explain life, environment, events and objects by using different analogies (Cerit, 2008, p. 694). The use of metaphors improves people's creativity by associating the unknown with the known and by creating new associations between concepts (Aydođdu, 2008, p. 27). Conducting the first studies on metaphors, the Greek philosopher Aristotle defined metaphor as a word string comparing two or more objects that are not exactly alike (Angus & Rennie, 1988 cited in Karairmak & Gülođlu, 2012). Also, Bruner (1979, p. 63) explains metaphor as people expressing their different experiences deeper and more emotionally through images.

Some of the basic functions of metaphors are grasping, interpreting and transferring a large number of data and information, perceiving new information and coping with uncertainty (Petrie & Oshlag, 1993 cited in Ekiz & Koçyiđit, 2013). Metaphors are generally regarded as just a figure of speech and in this sense it appears to be

related to language and the use of language (Yıldırım & Şimşek, 2013) but its importance is more than this. When words are not enough, individuals express some of their inner thoughts and feelings with metaphors in the outer world (Zuniga, 1992).

In literature, there are many studies on metaphors discussing different topics. Some of these studies are about students (Aydın & Sulak, 2015; Bektaş, Okur, & Karadağ, 2014, Gömleksiz, Kan, & Öner, 2012; Kahyaoğlu, 2015; Soysal & Afacan, 2012; Kırmızı & Çelik, 2015; Korkmaz & Bağçeci 2013; Oflaz, 2011; Şahin & Tüzel, 2014; Yalçın & Erginer, 2012;); some on teacher candidates (Aydın, 2011; Aydın & Yalmanlı, 2013; Geçit & Gencer, 2011; İter, 2015; Kalyoncu, 2013; Ulusoy, 2013; Yalçinkaya, 2013; Yılmaz, Göçen & Yılmaz, 2013) some on teachers (Ekiz & Koçyiğit, 2013; Ünal, Yıldırım & Çelik, 2010); some on administrators (Ünal, Yıldırım & Çelik, 2010); and some on counselors (Kararımak & Güloğlu, 2012). However, it is seen that there are no two-way comparative metaphorical studies. In this sense, this study will be the first one to bring a different perspective to the literature by a metaphorical view. Metaphors attract today's educators as it appeals to the individual's own world to understand and to configure as a powerful mental mapping and modeling mechanism (Arslan & Bayrakçı, 2006). In this study, classroom teacher candidates' metaphorical views on the concepts of reading and writing were discussed and comparisons were made.

## 2. Purpose

The sub-purposes developed for the study's purpose are as follows:

- 1) What are classroom teacher candidates' metaphors regarding the concept of reading?
- 2) What are classroom teacher candidates' metaphors regarding the concept of writing?
- 3) What are the categories classroom teacher candidates use regarding the concepts of reading and writing?
- 4) How are classroom teacher candidates' metaphorical perceptions regarding the concepts of reading and writing negative?

## 3. Method

The study is designed as a phenomenological inquiry, one of the qualitative research methods. Phenomenology aims to put forth the phenomena that people encounter in their daily lives as experiences, perceptions and tendencies. People are aware of these phenomena but do not have in-depth and thorough understanding of them (Yıldırım & Şimşek, 2013). In the study, the data were analyzed by content analysis.

## 4. Study Group

The study was carried with teacher candidates who were studying at the Department of Elementary Education of Niğde Ömer Halisdemir University's Faculty of Education, Turkey during the academic year of 2016-2017. 266 first-, second-, third- and fourth-year students participated in the study.

Table 1. Distribution of the study group according to sex

Sex	Number
Male	49
Female	217
Total	266

The majority of the study group is made up of female (217) students.

Table 2. Distribution of the study group according to years

Years	Number
1 <sup>st</sup> -year	70
2 <sup>nd</sup> year	97
3 <sup>rd</sup> year	44
4 <sup>th</sup> year	55
Total	266

The majority of the study group is made of second-year students.

## 5. Data Collection

A form was developed by the researcher in order to determine participating classroom teacher candidates' perceptions about the concepts of reading and writing. The students were asked to fill out personal information about certain variables in the first section. In the second section, they were asked to complete the statements "Reading is like ... because ..." and "Writing is like ... because ...". According to Yıldırım and Şimşek (2005, p. 213), "analogies alone cannot reveal the descriptive and visual power of metaphors. Following this, it is absolutely necessary to ask the reason. The power of analogies is really in this section which is related to the adjectives". For this reason, the students developed both metaphors and their reasons for the metaphors they used. This was carried out for each year in one class hour. Later, the writings of the students were collected and analyzed after the necessary steps.

## 6. Data Analysis

Students' perceptions regarding the concepts of reading and writing were evaluated through content analysis. In this process, the related analysis and process were carried out by examining many studies where metaphor analysis was used. According to Yıldırım and Şimşek (2005, p. 227), the data that were summarized and interpreted during the descriptive analysis was subjected to a more detailed process, and the concepts and themes that could not be determined through a descriptive approach can be discovered through this analysis. The basic process in content analysis is to bring together similar data within the framework of specific concepts and themes and to interpret these by organizing them in a way that readers can understand (Yıldırım & Şimşek, 2002, p. 227). Before data analysis were made, the forms that were filled out by the teacher candidates were numbered. Then, in order to easily identify the metaphors, the metaphors written by the participants were color coded for the concept of reading and the concept of writing separately. Later, during the classification stage, a sorting process took place. The forms of the students who could not develop a metaphor, who gave explanations by providing their own views and who could not write reasons for their metaphors were eliminated and were not included in the study. In this way, the number of papers that were 320 initially fell down to 266 papers. During the category development stage, the developed metaphors were examined in terms of common characteristics, and conceptual categories were created and grouped. The reasons students provided for their metaphors were also taken into consideration while developing categories. Afterwards, the related data were entered in the excel program in the computer environment, and percentage frequency values were calculated.

In addition to these, the validity and reliability analysis of the study were performed. For this, two experts grouped the metaphors under categories. These categories were matched with the categories developed by the researcher. After comparing these categories, the consensus and dissidence numbers were determined. Miles and Huberman's (1994) formula ( $\text{Reliability} = \text{consensus/dissidence}$ ) was used to calculate the reliability coefficient. According to this, the reliability coefficient was found to be .958.

## 7. Findings

In the present study, the metaphors developed by the classroom teacher candidates about the concepts of reading and writing are presented in the following tables in line with the study purposes.

Table 3. Metaphors developed by the classroom teacher candidates about the concepts of reading

Category	Metaphor	1	2	3	4	Total	Percentage
necessity	water <sup>22</sup> , food <sup>3</sup> , to breath <sup>5</sup> , to eat <sup>2</sup> , medicine <sup>2</sup> , air <sup>2</sup> , to be born <sup>1</sup> , to live <sup>3</sup> , to rest <sup>2</sup> ,	11	17	9	12	49	18.42
saving	Piggy bank <sup>1</sup> , map <sup>1</sup> , sapling <sup>2</sup> , experience <sup>5</sup> , money <sup>5</sup> , forest <sup>5</sup> , tree <sup>18</sup> , stream <sup>5</sup>	8	18	11	5	42	15.79
Reading journey	travel <sup>2</sup> , trip <sup>9</sup> , life journey <sup>12</sup> , adventure <sup>1</sup> , discovery <sup>4</sup> , compass <sup>1</sup> , new life <sup>2</sup>	12	12	1	6	31	11.65
Imagination-abstractness	dream <sup>7</sup> , imagination <sup>9</sup> ,	7	6	0	3	16	6.02
food	cofee <sup>1</sup> , ashure <sup>1</sup> , ketchup <sup>1</sup> , nameless food <sup>11</sup>	3	6	3	2	14	5.26
Infinity- continuity	sea <sup>4</sup> , ocean <sup>3</sup> , life <sup>3</sup> , sky <sup>1</sup> , space <sup>1</sup> , igniting gunpowder <sup>1</sup> , Different window <sup>4</sup> , using someone else's objects <sup>1</sup> ,	1	5	4	3	13	4.89
originality-different worlds	experience <sup>2</sup> , horizon <sup>1</sup> , bees collecting pollen <sup>1</sup> , key <sup>1</sup> , ending of a period <sup>1</sup> , abstraction <sup>2</sup>	4	3	2	4	13	4.89
art	Folk song <sup>2</sup> , activity <sup>5</sup> , to listen music <sup>2</sup> , to do needlework <sup>2</sup> , song <sup>1</sup>	5	4	2	1	12	4.51

temporariness	pleasure2, bird1, stars1, desire to live1,	1	6	0	3	10	3.76
light	sun5, light1, knowledge2	2	2	1	3	8	3.01
tranquility	pencil1, paper1, therapy5	0	2	4	1	7	2.63
making meaning	Symbol1, carpentry1, making meaning of life4, world1	2	1	1	3	7	2.63
movement	sports5, to run1	4	2	0	0	6	2.26
health	baby1, development5	2	1	1	2	6	2.26
love	love5	1	2	0	2	5	1.88
limitation	cliff1, page4	2	2	0	1	5	1.88
freedom	plane1, flying2, running away1	0	1	1	2	4	1.50
Seeing-looking	Looking at a scenery1, looking at a painting1, looking through someone else's eyes2	2	0	2	0	4	1.50
deservingness	jewelry2, friend2	1	3	0	0	4	1.50
dependence	To sleep1, radio1, not to be full up1,	0	1	2	0	3	1.13
Natural event	Wave1, snowball1, twister1	1	1	0	1	3	1.13
negativity	difficult2	1	0	0	1	2	0.75
watching	TV series, movie	0	2	0	0	2	0.75
Total		70	97	44	55	266	100.00

When Table 3 is examined, it is seen that the metaphor classroom teacher candidates developed the most is water (f:22) under the necessity (f:49, 18.42%) category. This is followed by the metaphor tree (f:18) under the saving (f:42, 15.79%) category and the metaphor life journey (f:12) under the journey (f:31, 11.65%) category. These are followed by the metaphor food (f:11) under the food (f:14, 5.26%) category. It is also seen that the least metaphors are developed under the negativity and watching (f:2, 0.75%) categories. The direct quotations about the metaphors and their reasons given by the teacher candidates are as follows:

- I think reading is like the world because it helps us to understand the world and the universe.
- I think reading is like the sun because it warms people and enlightens their world.
- I think reading is like the sea because it never finishes.

Table 4. Metaphors developed by the classroom teacher candidates about the concepts of writing

Category	Metaphor	1	2	3	4	Total	Percentage
Writing	Expression of feelings – inner world	23	17	8	24	72	30.82
	light2, feeling1, skill1, man himself8, outpouring13, spirit1, thought accumulation2, effusion12, family1, therapy2, to talk1, germination of a seed1, river3, trust1, rain cloud1, psychologist1, number line1, large body of water3, to cry1, blackboard1, tea1, falls4, stream3, world of imagination2, mirror5						
	comfort	7	13	4	1	25	9.40
	To sleep2, tranquility8, beauty4, medicine2, be going great guns1, using one self's property2, house3, freedom3						
	permanence	3	12	3	7	25	9.40
	connection1, diamond1, embroidery1, memory1, recollection1, historical work1, memories1, pencil2, nail1, person1, scar1, signature1, line in life1, document1, tattoo1, world history1, to scratch1, concretization1, trace4, record1, seal1						
	art	3	7	5	3	18	6.77
	painting4, craft2, weave carpet6, needlework4, beautiful melody1, artist1						
	completion	3	6	1	3	13	4.89
	Symbolisation1, movie5, work2, sentence2, composition1, home2						
	negativity	2	4	2	4	12	4.51
	effort1, difficult7, rule1, occupation2, burst with anger1,						
	necessity	1	4	2	5	12	4.51
	power1, heart1, breath1, water8, phone1						
	productivity-originality	3	7	2	0	12	4.51
	plant	5	0	5	1	11	4.14
	tree5, seed3, sapling2, flower1						
	friend	6	4	0	1	11	4.14
	good friend5, friend6						



eating drinking	Food8, Turkish coffee1	2	4	3	0	9	3.38
sensuality	love7, to fall in love1, favour1	2	4	2	1	9	3.38
infinity	sky3, large body of water1, ocean3,	0	3	2	2	7	2.63
saving	To crawl1, machine1, construction5, rain1, sow seed1, TV series1, bees making honey1, to let the fox guard the henhouse1, stream3, fall1, pencil, river1	0	3	2	1	6	2.26
to guide- journey	plane1, to travel4	2	1	1	1	5	1.88
experience	Life itself3, life1, world1,	4	0	1	0	5	1.88
movement	To do sports1, to run3	0	0	0	3	4	1.50
Total		70	97	44	55	266	100.00

When Table 4 is examined, it is seen that the most metaphors were developed under the by the expression of feelings – inner world category (f:72, 30.82%). This followed by the permanence and comfort categories (f:25, 9.40%), and later by the art category (f:18, 6.77%). The least metaphors were developed under the movement category (f:4, 1.5%). The direct quotations about the metaphors and their reasons given by the teacher candidates are as follows:

- I think writing is like a stream because it becomes clear as it flows.
- I think writing is like a mirror because it reflects what is inside.
- I think writing is like an occupation because it is tiring.

Table 5. Categories developed by the classroom teacher candidates about common concepts for reading and writing

Category	Category	1	2	3	4	Total	percentage
Common Concepts for Reading and Writing	Water derivatives	10	7	6	19	42	15.79
	life	10	16	7	9	42	15.79
	Art related	6	15	5	2	28	10.53
	Imagination-abstractness	5	7	1	7	20	7.52
	journey	8	9	1	2	20	7.52
	Eating-drinking	5	6	5	2	18	6.77
	tranquility	4	9	4	0	17	6.39
	Expression of feeling-inner world	8	5	2	2	17	6.39
	necessity	4	7	2	3	16	6.02
	saving	2	4	2	2	10	3.76
	sensuality	1	4	2	3	10	3.76
	negativity	3	3	0	2	8	3.00
	plant	2	0	5	1	8	3.00
temporariness-permanence	2	3	0	1	6	2.26	
infinity	0	2	2	0	4	1.50	
Total		70	97	44	55	266	100.00

When Table 5 examined, it is seen that the most common categories classroom teacher candidates developed for the concepts of reading and writing both are grouped under the water derivatives (f:42, 15.79%) and life (f:42, 15.79%) categories. These categories are followed by the art (work) (f:28, 10.53%) category. The least common categories were under the infinity category (f:6, 1.5%). The direct quotations about the common categories for both of the concepts and their reasons given by the teacher candidates are as follows:

- I think reading is like water because water gives life to plants. Just like that, reading keeps us alive.
- I think writing is like water because writing is a necessity for me.
- I think writing is like water because it keeps us connected to life.
- I think reading is like art because it presents something that the student does not have.
- I think writing is like art because it brings forth the aesthetics in people.

Table 6. Negative metaphors about reading and writing

Reading	Writing
Solely negative: sea, to run	Solely negative: rule, to burst with anger, work, embroidery (3), tea
Reasons: Does not finish, having shortness of breath	Reasons: Obligation, difficulty, exhaustion, long labor, end of things
	Positive and negative together: friend, going great guns, craft, movie, sky, ocean (2), pencil, painting, Turkish coffee
	Reasons: love and hate together, both difficult and easy, difficult or easy depending on the person, will either continue or end after one time, endless, never ends, constantly written, sometimes bitter sometimes sweet

When the negative thoughts on reading and writing in Table 6 examined, it is seen that there have been no direct negative metaphors developed about reading. However, when the reasons are examined, there are statements evoking negativity. There are two of these. In writing, there are 10 (+-) both positive and negative metaphors and 7 (-) solely negative metaphors. As is seen, there are more negative metaphors developed about the concept of reading. Some of the direct quotes are as follows:

- I think reading is like running because when you run faster, you get shortness of breath.
- I think writing is like going great guns because it is both difficult and easy.
- I think reading is like bursting with anger because it is difficult.
- I think writing is like a friend because I can transfer what I want, feel or hate.
- I think writing is like Turkish coffee because sometimes it gives us a bitter taste but sometimes a sweet taste.

## 8. Results and Discussion

When the related literature is examined, it is seen that there are studies on metaphors. However, similar to the present study, there are no metaphorical studies where two different concepts were analyzed by combining them together. In this respect, this study differs from the other metaphorical studies. In the study, it was aimed to put forth classroom teacher candidates' metaphorical perceptions about the concepts of reading and writing. In line with this general purpose, it was aimed to group metaphors about reading, metaphors about writing and metaphors about both reading and writing under categories. According to this, the most metaphors classroom teacher candidates developed about the concept of reading are respectively: water (f:22), tree (f:18), life journey (f:12), food (f:11) and travel (f:9). The metaphors developed for the concept of writing were discussed under 23 categories, and it was found that there were no metaphors directly evoking negativity. These categories are: journey, necessity, food, movement, limitation, imagination-abstractness, saving, art, health, temporariness, infinity-continuity, originality-different worlds, tranquility, light, love, freedom, seeing-looking, negativity, watching, meaning making, natural event, deservingness and dependence. Similarly, in their study named "Book as a metaphoric perception in last class of the primary and secondary students", Bektaş, Okur and Karadağ (2014) put forth positive metaphors about the concept of book. Discussing elementary school students' metaphors regarding the first reading and writing process, Kırmızı and Çelik (2015) found similar metaphors like plant, plant's development, skill, nature, fun, development, imagination, personalization, travel, sports, space, innovation, food and tree were developed by the participants. According to this result, regardless of the participants' age, similar metaphors about reading and writing come to people's minds. If metaphorical thought is shaped by conditions in which the person is in, cognitive stance and experiences the person has, as Lakoff and Johnson (2003) pointed out, it can be said that even if the age group of the sample is different, common concepts emerge from similar experiences. Likewise, while similar metaphors about reading like art, water, travel, life and painting were developed in Tiryaki and Demir's (2016) study, metaphors like love, life, painting, water, travel, imagination, eating food, new world, road and trip were developed in Mert's (2013) study. In their metaphorical study conducted with first-grade teachers on the process of teaching first reading and writing, Shaw, Barry and Mahlios (2008), the metaphor "mountain" was compared to "challenging the mountain to climb it" during the process of teaching first reading and writing.

According to the second purpose of the study, the most metaphors about the concept of writing were developed in the expression of feelings-inner world (f:72, 30.82%), permanence (f:25, 9.40%) and comfort (f:9.36, 9.40%) categories. The least metaphors were grouped under the movement (f:4, 1.5%) category. Besides, the metaphors developed about the concept of writing were discussed under 17 categories. These are: expression of

feelings-inner world, necessity, productivity-originality, saving, eating drinking, experience, sensuality, movement, plant, art, comfort, infinity, permanence, completion, immortality, friend and guide-journey. The results of this study show similarities with the results of Tiryaki and Demir's (2016) study on the metaphorical perceptions of teacher candidates on the skill of writing. Similarly, in their study, students developed the most metaphors under the transference (41.6%) category and the least in the infinity (8.3%) category. In this study, too, the most metaphors were developed under the expression of feelings (30.82%) category, which is similar to the transference category, and the least under the infinity (2.6%) category. Also, in Mert's (2013) study, similar metaphors like mirror, water, catharsis, expression of oneself, outpouring, large body of water, pencil and trace were developed about the writing skill.

According to the third purpose of the study, the most common metaphors classroom teacher candidates developed for the concepts of reading and writing both are grouped under the water derivatives (f:42, 15.79%) and life (f:42, 15.79%) categories. These categories are followed by the art (work) (f:28, 10.53%), life (f:20, 7.52%), travel (f:20, 7.52%) and eating-food (f:18, 10.53) categories. The least common metaphors developed under the infinity category (f:6, 1.5%). In the common concepts used for both reading and writing, 15 categories emerged. These are water derivatives, imagination-abstractness, travel, life, necessity, art, love, immortality, tranquility, eating-food, tree, expression of feelings-inner world, saving, infinity and temporariness-permanence.

According to the fourth and last purpose, the metaphors containing negative thoughts about reading and writing were examined. There were no direct negative metaphors about reading. However, when their reasons were examined, there were only two. There were 10 (+-) metaphorical concepts containing both negative and positive attributes about writing. There were 7 (-) metaphors evoking solely negativity.

However, it can be said that students' metaphorical perceptions regarding both reading and writing are positive. Nevertheless, compared to writing, students explained reading with less negative metaphorical concepts. This can be explained by the fact that students have more difficulty with the writing skill. In Mert's (2013) study, the writing concept was stated with negative metaphors like difficulty, torment, revenge, torture, grave stone, death and boring. It is expressed that there are various problems about the writing skill in every stage of education from elementary school to university (Bağcı, 2007; Çeçen, 2011; Çelik, 2012; Erkinay, 2011; Göçer, 2011). Among these reasons are the fact that organization about the form of the writing (paper layout, punctuation marks, writing rules, writing style) comes before the organization about the content and students cannot list their feelings and thoughts (Karatay, 2011).

As a result, metaphors can be used as powerful research tools in order to understand, determine and explain teacher candidates' perceptions regarding the concepts of reading and writing. In line with the study findings and results, the following suggestions can be given:

Academicians, administrators, teachers, students and experts designing curriculum can benefit from the findings and results of the study.

Metaphors can be used as a learning tool for students in all grades for reading and writing and courses similar to these. By this means, students' perspectives can be analyzed. The sample can be chosen from students studying different departments or faculties or students studying in different cities and their metaphors regarding reading and writing can be compared.

It is also evident that the concepts of reading and writing are associated with the metaphors developed by teacher candidates. In future studies, studies where these two concepts are discussed together can be conducted.

In this study, metaphorical perceptions were obtained through qualitative method. Future studies can be enriched studies using mixed designs, containing also the quantitative method.

The study determined that teacher candidates have more negative metaphoric perceptions about writing compared to reading. In addition to organizing reading activities with students, entertaining writing activities can be prepared to change their negative thoughts.

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# An Investigation of Pre-Service Primary School Teachers' Attitudes towards Digital Technology and Digital Citizenship Levels in Terms of Some Variables

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## Abstract

This study aims at investigating the relationship between pre-service primary school teachers' attitudes towards digital technology and digital citizenship scale levels. The research was designed in descriptive survey model. The data collection tools were "Attitude Scale for Digital Technology" (ASDT) developed by Cabı (2016) and "Digital Citizenship Scale" (DCS) developed by Isman and Gungoren (2014). Some of the research findings are as follows: While there is a statistically insignificant difference between pre-service teachers' scores from two scales in terms of the variable of gender, the variable of class creates a statistically significant difference between the scores from two scales. The scores from the Attitude Scale for Digital Technology was not affected by the number of years pre-service teachers had spent using the Internet, whereas the same variable affected their Digital Citizenship Scale scores. When the correlations were analyzed, it was seen the relationship between digital attitude and digital citizenship was positive and significant, i.e. as the digital attitude scores of the participants increase, so do their digital citizenship scores.

**Keywords:** attitude towards digital technology, digital citizenship, pre-service primary school teachers

## 1. Introduction

Advancement in technology creates new research fields. Technology is an indispensable part of our lives due to its extensive usage. The word technology in recent studies connotes digital technology. Today, technological devices can be mainly categorized as digital technology products.

Compass, telescope, battery, elevator, television, computer, operating system, and the Internet can be listed among many other technological inventions (Kalelioğlu, 2013). Various types of audio-visual, printed and written material which facilitate finding and creating information have created the concept of information and communications technology (ICT) (Coşkun, 2015). With the digitalization of telecommunication systems, digital data can be transmitted easily and quickly and the term of digital technology has been widespread under the category of ICT (Cabı, 2016).

Some popular platforms such as Facebook, Twitter, Youtube and smart devices along with the Internet are digital technology products. These products are expected to contribute positively. There are numerous studies which investigate the terms of technology along with the word "addiction." Some examples are mobile phone addiction and Internet addiction. In addition to that, new concepts such as cyber-bullying emerge as the acts of bullying are transferred to cyberspace. Therefore, we need a positive attitude and a conscious approach towards digital technology. At this point, the concept of "Digital Citizenship" emerges.

The advancement and proliferation of digital technology turns individuals into digital citizens. According to Vizenor (2014), digital citizenship is an individual's using technology for social, communal, and political aims. According to Farmer (2011), digital citizens are the individuals who participate in digital platforms by selecting and sorting the electronic information appropriately and use the information both for social and personal development. Digital citizenship is "[to] advocate and practice legal, ethical, safe, and responsible use of information and communications technology in the online environments" (ISTE, 2007). Mossberger, Tolbert and McNeal (2007) define digital citizens as individuals who can read, write, understand, and transmit the online information, has broadband access, and use the Internet regularly and effectively. According to Bailey and Ribble

(2007), “digital citizenship can be described as the norms of appropriate, responsible behavior with regard to technology use.”

There are some rules and responsibilities concerning digital citizenship. According to Ribble, Bailey and Ross (2004), these are “the process of teaching and learning about technology and the use of technology, electronic exchange of information, electronic standards of conduct or procedure, electronic precautions to guarantee safety.” Digital citizenship is a product of technology-society acculturation rather than a result of constitutional or official rights (Şendağ & Uysal, 2010).

A lack of knowledge and skills in digital content evaluation is one of the struggles for teachers when it comes to integrating digital technologies into their classes (C. Kim, Kim, Lee, Spector, & DeMeester, 2013). “Despite the increasing accessibility and availability of technology in classrooms (e.g. open educational resources, e-text books, supplementary digital materials, and software), teachers confront new challenges when using digital technology effectively (Davies and West, 2014). Therefore, “teachers must select appropriate digital resources for their lessons and determine which resources will work best in their classrooms” (M. K. Kim, Xie, and Cheng, 2017). Also teachers must improve their strategies of determining and evaluating digital content (Wiley, Bliss, & McEwen, 2014).

Attitude towards digital technology and digital citizenship are interrelated. Today’s teachers need to adopt a positive attitude towards digital technology, be a good digital citizen, and provide digital learning opportunities to their students. The nature of the relationship between attitudes towards digital technology and digital citizenship on the part of pre-service primary school teachers must be investigated. This study was designed for this purpose. The aim of this study is to investigate the relationship between pre-service primary school teachers’ attitudes towards digital technology and their digital citizenship levels in terms of some variables. Therefore, this study seeks answers to the following questions:

- 1) Is there a significant difference between pre-service primary school teachers’ Attitude Scale for Digital Technology (ASDT) scores and Digital Citizenship Scale (DCS) scores in terms of gender, class, having Internet connection, the number of years the participants spend using the Internet, and Internet-using skills?
- 2) What is the relationship between pre-service primary school teachers’ Attitude Scale for Digital Technology levels and Digital Citizenship Scale levels?
- 3) Do pre-service primary school teachers’ Attitude Scale for Digital Technology scores predict their Digital Citizenship Scale levels?

## 2. Method

This study, which investigates the relationship between pre-service primary school teachers’ Attitude Scale for Digital Technology levels and Digital Citizenship Scale levels, is designed in associational research model – a sub-category of survey models. This type of research usually analyses associations and connections (Büyükoztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2008). The sample of the study was selected via convenience sampling method. Convenience sampling can be defined as acquiring data from a group that is convenient to find for the researcher (Büyükoztürk et. al., 2008). The sample of the study is composed of 461 pre-service primary school teachers studying at Adnan Menderes University, Kırıkkale University, Muğla Sıtkı Koçman University, and Nevşehir Hacı Bektaş Veli University. The information on the participants is presented in Table 1 below:



Table 1. The information on the participants

Variables		
Gender	Male	142
	Female	319
Class	Class 2	119
	Class 3	220
	Class 4	122
Internet connection	Yes	34
	No	454
Years of Internet use	Less than 1 year	6
	1-2 years	18
	2-5 years	98
	More than 5 years	339
Daily Internet use	Less than 1 hour	18
	1-2 hours	115
	2-5 hours	195
	More than 5 hours	133
Internet using skills	Low	15
	Intermediate	285
	Advanced	155

The data collection tool was Attitude Scale for Digital Technology (ASDT) developed by Cabı (2016) and Digital Citizenship Scale (DCS) developed by İsmen and Güngören (2014). Attitude Scale for Digital Technology has 39 items and 8 factors. Digital Citizenship Scale, which aims at measuring digital citizenship levels, has 34 items. The results of the reliability tests conducted by the developers of the abovementioned scales reveal that Cronbach Alpha value is .90 for Attitude Scale and .85 for Digital Citizenship Scale. The reliability test results conducted during this study is .87 Cronbach Alpha value for Attitude Scale and .85 for Digital Citizenship Scale. The data was analyzed via SPSS 20.0 program. The data was analyzed by means of descriptive statistics, t-test, one-way analysis of variance for unrelated samples, as well as correlation and regression analysis for the relationship among variables.

### 3. Results

Is there a significant difference between pre-service primary school teachers' Attitude Scale for Digital Technology (ASDT) scores and Digital Citizenship Scale (DCS) scores in terms of gender, class, having Internet connection, the number of years the participants spend using the Internet, and their perceived Internet-using skills?

#### 3.1 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of Gender?

There is a statistically insignificant difference among pre-service primary school teachers' ASDT scores in terms of gender [ $t_{(461)} = .68$ ,  $p > .05$ ]. Similarly, there is a statistically insignificant difference among pre-service teachers' DCS scores in terms of gender [ $t_{(461)} = 1.49$ ,  $p > .05$ ]. The means of the scores from both scales are close for both genders.

Table 2. t-test results concerning pre-service primary school teachers' gender

	Gender	N	Means	t	p
Digital attitude	Male	142	137.34	0.68	0.496
	Female	319	136.14		
Digital citizenship	Male	142	120.10	1.49	0.136
	Female	319	117.75		

#### 3.2 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of Class?

There is a statistically significant difference among pre-service primary school teachers' ASDT scores in terms

class [ $F_{(2-458)} = 4.08$   $p < .05$ ]. When paired comparison results are examined, the difference emerges between class 2 and class 4. DCS scores also reveal significant difference. [ $F_{(2-458)} = 4.637$   $p < .05$ ]. The results of the post-hoc tests, conducted to determine which classes create this difference, show that the difference is between class 2 and class 4.

Table 3. ANOVA results concerning pre-service primary school teachers' ASDT and DCS scores

	Smf	N	Means	F	p
Digital attitude	Class 2	119	132.76	4.08	0.02
	Class 3	220	137.22		
	Class 4	122	138.86		
Digital citizenship	Class 2	119	115.02	4.637	0.01
	Class 3	220	118.95		
	Class 4	122	120.95		

### 3.3 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of Having Internet Connection?

There is an insignificant difference among pre-service primary school teachers' ASDT scores in terms of having Internet connection [ $t_{(461)} = 1.54$   $p > .05$ ]. However, there is a significant difference among DCS scores [ $t_{(461)} = 2.09$   $p < .05$ ]. It is seen that the difference is in favor of the ones who have Internet connection

Table 4. t-test results concerning pre-service primary school teachers' ASDT and DCS scores according to having Internet connection

	Internet Connection	N	Means	t	p
Digital attitude	No	25	131.28	1.54	0.12
	Yes	454	136.81		
Digital citizenship	No	25	112.16	2.09	0.03
	Yes	454	118.83		

### 3.4 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of the Number of Years the Participants Spend Using the Internet?

There is a statistically significant difference among pre-service teachers' ASDT scores in terms of the number of years they spend using the Internet [ $F_{(3-457)} = 5.236$   $p < .05$ ]. The results of the post-hoc tests, conducted to determine which units create this difference, show that the difference is between the ones who have been using the Internet for more than 5 years and for 2-5 years.

Table 5. ANOVA results concerning pre-service teachers' ASDT and DCS scores in terms of the number of years they spend using the Internet

	Year	N	Means	F	p
Digital attitude	Less than 1 year	6	133.83	5.236	0.00
	1-2 years	18	129.38		
	2-5 years	98	131.46		
	More than 5 years	339	138.39		
Digital citizenship	Less than 1 year	6	121.33	4.099	0.01
	1-2 years	18	110.56		
	2-5 years	98	115.07		
	More than 5 years	339	119.83		

### 3.5 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of the Duration of Daily Internet Use?

There is a statistically significant difference among pre-service teachers' ASDT scores in terms of the duration of

daily Internet use [ $F_{(3-457)} = 4.44$   $p < .05$ ]. The results of the post-hoc tests, conducted to determine which units create this difference, show that the difference is between the ones who use the Internet for more than 5 hours and for 2-5 hours. There is an insignificant difference among DCS scores [ $F_{(3-457)} = 2.48$   $p > .05$ ].

Table 6. ANOVA results concerning pre-service teachers' ASDT and DCS scores in terms of the duration of daily Internet use

	Duration	N	Means	F	p
Digital attitude	Less than 1 hour	18	132.67	4.44	0.00
	1-2 hours	115	134.29		
	2-5 hours	195	135.08		
	More than 5 hours	133	141.05		
Digital citizenship	Less than 1 hour	18	115.00	2.48	0.06
	1-2 hours	115	116.01		
	2-5 hours	195	118.49		
	More than 5 hours	133	121.05		

### 3.6 Is There a Significant Difference between Pre-Service Primary School Teachers' ASDT Scores and DCS Scores in Terms of Their Perceived Internet-Using Skills?

There is a statistically significant difference among pre-service teachers' ASDT scores in terms of their Internet-using skills [ $F_{(3-457)} = 27.6$   $p < .05$ ]. This difference is between low and intermediate levels and between intermediate and advanced levels. There is a statistically significant difference among pre-service teachers' DCS scores [ $F_{(3-457)} = 32.5$   $p < .05$ ]. This difference is between low and intermediate levels and between intermediate and advanced levels.

Table 7. ANOVA results concerning pre-service teachers' ASDT and DCS scores in terms of their perceived Internet-using skills

	Level	N	Means	F	p
Digital attitude	Low	15	126.93	27.6	0.00
	Intermediate	285	132.82		
	Advanced	155	144.43		
Digital citizenship	Low	15	105.07	32.5	0.00
	Intermediate	285	115.41		
	Advanced	155	125.88		

### 3.7 What Is the Relationship between Pre-Service Primary School Teachers' Attitude Scale for Digital Technology Levels and Digital Citizenship Scale Levels?

As it is seen above, the relationship between ASDT and DCS scores is positive and significant ( $r = .759$ ,  $p < .05$ ), i.e. as ASDT scores of the participants increase, so do their DCS scores. The correlation coefficient indicates that the relationship is strong.

Table 8. Correlation coefficients and descriptive statistics concerning the relationship between ASDT and DCS scores

Variables	Means	Standard deviation	t	p
1- digital attitude	136.51	17.45	1	
2- digital citizenship	118.47	15.60	0.759**	1

\*\* $p < .01$ ,  $n = 461$ .

### 3.8 Do Pre-Service Primary School Teachers' Attitude Scale for Digital Technology Scores Predict Their Digital Citizenship Scale Levels?

Table 9 shows the results of linear regression analysis which aims at clarifying how much of the variability of

digital citizenship can be explained by pre-service primary school teachers' digital attitude levels. The analysis results, which are summarized below, are based on the data gathered from 461 students:

Table 9. Regression analysis results concerning digital attitude and digital citizenship variables

Variables	B	Standart Error B	Beta	t	p
Invariant	25.84	3.74		6.9	.00
Digital citizenship	0.679	0.03	0.76	25.0	.00
R=.759, R <sup>2</sup> =.577					
F(1.460)= 625.42 p= .000					

According to the Table 9 shows that ASDT and DCS has a strong relationship – as it has just been revealed in the second sub-question ( $r=.759$ ). When we examine the extent to which digital attitude affects the variability of digital citizenship, i.e. how much of the digital citizenship can be explained through digital attitude, regression coefficient shows us that digital attitude is a significant predictor of digital citizenship ( $r^2 = .58$ ,  $p < .001$ ).

#### 4. Conclusion & Discussion

Negative behaviors such as downloading music from the Internet illegally, plagiarizing via the Internet and using mobile phones during lessons (Yang & Chen, 2010) make the advancement of digital attitude and digital citizenship skills necessary. These problems can be attributed to lack of Internet literacy (Livingstone, Bober, & Helsper, 2005). With the significance of this issue in mind, this study has analyzed the ASDT and DCS scores of pre-service primary school teachers who will raise the digital citizens of the future.

According to the results, there is an insignificant difference between ASDT and DCS scores in terms of gender. Studies by Isman and Gungoren (2014) and by Bardakci, Akyuz, Samsa-Yetik, and Keser (2014) conclude that gender is not a significant variable. However, a study by Oyedemi (2012) claims otherwise. Açıcı and Usluel (2013) and Ono and Zavodny (2007) conclude that gender does not affect access to ICT. Cepni, Oguz, and Kılcan (2014) conclude that male students have higher digital attitude levels than female students.

When the issue of having Internet connection is considered, it has been observed that there is an insignificant difference among digital attitude scores whereas there is a significant difference among digital citizenship scores. DCS scores are higher among the ones who have Internet connection compared to those of who do not possess Internet connection.

There is a significant difference among both ASDT and DCS scores of pre-service primary school teachers in terms of their class. Paired comparison results show that the difference emerges between class 2 and class 4. The results are in favor of class 4 students. This suggests that the classes pre-service teachers take throughout their higher education and the progress they make affect their interaction with technology. The same educational progress also makes pre-service teachers better digital citizens. Further studies can focus on this finding. The impact of higher education can be studied for a better investigation.

There is a significant difference among both ASDT and DCS scores of pre-service primary school teachers in terms of the duration of their Internet experience. The results show that as the number of years pre-service teachers spend using the Internet increase, so do their ASDT and DCS scores. An increase in length of the duration Internet experience improves the digital citizenship qualities of individuals. This is also true for digital attitude.

Attitude towards technology can be defined as personal choice. However, digital citizenship is not a personal skill that can be developed individually. Although new technologies create better opportunities and advantages that can be used to improve education and teaching, the incidents of abuse and misuse of technology in and out of schools increase (Kaya & Kaya, 2013). Therefore, it is vital for all individuals to have better digital citizenship perception. Pre-service primary school teachers who will raise the digital citizens of the future must have improved digital citizenship qualities.

There is an insignificant difference among DCS scores of pre-service primary school teachers in terms of the duration of daily Internet use. On the contrary, there is a significant difference among ASDT scores. The participants who use the Internet more on a daily basis have higher ASDT scores. These results suggest that the attitude towards technology is likely to change with the advancement of technology and the Internet.

According to Mossberger et al. (2007), digital citizenship is a skill of online social participation. It is believed that positive use of the Internet can create better outcomes. Accordingly, governments transfer their services into

electronic platforms (Baqir & Iyer, 2010) so that individuals can act efficiently as digital citizens.

There is a significant difference among ASDT scores of pre-service teachers in terms of their perceived Internet-using skills. This difference is between low and intermediate levels and between intermediate and advanced levels. This result suggests that when pre-service primary school teachers believe they have advanced skills, they adopt a positive attitude towards digital technologies. The high levels of perceived Internet-use skills also affect DCS scores. Higher levels of self-esteem about the Internet and digital technologies create positive impacts on digital citizenship skills. In other words, participants with digital citizenship qualities perceive their skills as advanced. Shelley et al. (2004) detects a positive relationship between improved computer skills and digital citizenship. Çoklar (2008) states that pre-service teachers are more competent in tasks which require Internet-use skills.

This study concludes that the relationship between ASDT and DCS levels is positive, significant, and strong. It can be deduced that as the ASDT scores of the participants increase, so do their DCS scores. Linear regression analysis results shows us that attitude towards digital technology is a significant predictor of digital citizenship.

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## Note

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# Direct Problem-Based Learning (DPBL): A Framework for Integrating Direct Instruction and Problem-Based Learning Approach

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## Abstract.

Direct instruction approach has been widely used in higher education. Many studies revealed that direct instruction improved students' knowledge. The characteristics of direct instruction include the subject delivered through face-to-face interaction with the lecturers and materials that sequenced deliberately and taught explicitly. However, direct instruction resulted in low creative thinking and teamwork skills among students. Therefore, problem-based learning activities were adapted to reform and create an innovation of a direct instruction approach in developing the new situation.

**Objective:** This study aimed at exploring lecturers' and students' perspectives towards Direct Problem-Based Learning (DPBL) activities as a new approach for activities in the classroom.

**Design:** A quasi-experimental design was used.

**Participants:** Third-year students (N = 276) who signed up for Computer Networks subject from Dian Nuswantoro University, Indonesia and five lecturers were involved.

**Findings and Results:** Learning outcomes were significantly positively (Sig. p=.00). Creative thinking skills score increased 8.4%, Teamwork skills score increased 11.5%, and knowledge score increased 25.9% of DPBL approach. The majority of students have difficulties in the direct instruction approach  $\bar{x} = 4.71(.472)$ . Whereas,  $\bar{x} = 1.99(.655)$  students have low difficulty in DPBL approach. Expert participants agreed that DPBL approach can enhance creative thinking and teamwork skills  $\bar{x} = 4.70(.50)$ .

**Keywords:** direct instruction, problem-based learning, direct problem-based learning, problem-solving skills, creative thinking skills, teamwork skills

## 1. Introduction

Direct instruction approach (DIA) has been widely used in higher education. The computer network subject (Vinay & Rassak, 2015) is one of the courses that applied DIA. Many studies revealed that DIA is the best teaching strategies to improve students' knowledge (Hattie, 2009; Stockard, 2010; Flynn et al., 2012; Robert et al., 2014; Gurses et al., 2015). The characteristics of DIA include the delivery of subject through the face-to-face interaction with the lecturers, materials that are sequenced deliberately and taught explicitly, and division of the students into small groups (Carnine, 2000, pp. 5-6). However, there are many disadvantages of DIA. One of them is that it decreases students' problem-solving skills (Choi et al., 2014).

Problem-solving skills refer to the students' ability to investigate the solution to a given problem or find a way to realise the given aim (Zhong et al., 2010). Many ways in order to solve a problem involve capability in creative thinking and group discussion or teamwork (Siswono, 2014; Sockalingam, 2010). Creative thinking is necessary for coming up with ideas for resolving the problem and finding a fresh approach. Meanwhile, team working is often a key component to solve a problem.

Problem-based learning is the instructional approach in which students learn about a subject through the experience of solving an open-ended problem. As an approach to improve problem-solving skills, problem-based learning is considered as the most appropriate teaching method. Problem-based learning is described as an inquiry-based approach that is student-centred and builds problem-solving skills (Becker & Maunsaiyat, 2004;

Blumberg, 2000; Chen et al., 2001). One of the characteristics of problem-based learning is the students work in small groups usually no larger than nine students. It helps the lecturers to easily monitor the learning environment and increase students' problem-solving skills (Yusof et al., 2012; Choi et al., 2014). Barrow (1996) and Savery (2006) showed more than ten characteristics of problem-based learning. However, this study only adopted four characteristics as follows (1) Learner-centred approach where students engage with the problems related to whatever current knowledge or experience they afford; (2) Ill-structured problems in the real world; (3) Lecturers take the role of a tutor or facilitator; and (4) Students work in small groups usually no larger than nine students.

Currently, teaching and learning processes in Computer Network subject in the Dian Nuswantoro University of Indonesia are using DIA, which is an approach to teaching; it is skill-oriented, and the teaching practices are teacher-directed (Carnine, 2000). However, this strategy has caused low creative thinking and teamwork skills among students. Therefore, the reformation and innovation of DIA of Computer Networks are imperative in the new development situation.

This study discusses impacts of the Direct Problem-Based Learning (DPBL) activities toward students' knowledge, creative thinking, and teamwork skills. The DPBL activities are a combination of direct instruction and problem-based learning activities. The current study aims to investigate to what extent are the impacts of DPBL teaching approach versus direct instruction education on creative thinking and teamwork skills of Computer Networks students in Dian Nuswantoro University, Indonesia.

Three phases of the UTM PBL model were developed. The first phase was the problem restatement and identification in which the students read the problem scenario, reflect, and articulate probable issues individually. The second phase was learning application and solution which deal with peer learning, synthesis, and application. The last phase was generalisation closure and internalisation which deal with the presentation, reflection, team rating, and feedback (Yusof et al., 2012).

## 2. Purpose and Scope of the Study

This study aimed at exploring lecturers' and students' perspectives toward DPBL activities as a new approach for activities in the classroom. DPBL activities are a combination of the Direct Instruction and Problem-Based Learning activities. This model was designed as an alternative teaching approach to improve students' knowledge, creative thinking, and teamwork skills. Meanwhile, the scope of this study was the third-year students (N=276) who took Computer Networks as a subject in Dian Nuswantoro University, Indonesia.

The DPBL conceptual framework (Figure 1) was developed from direct instruction (Carnine, 2000, pp. 5-6) and problem-based learning activities (Barrows, 1996; Savery, 2006) to enhance students' knowledge, creative thinking, and teamwork skills. The DPBL integrated model (Figure 2) was modified from the UTM PBL frameworks.

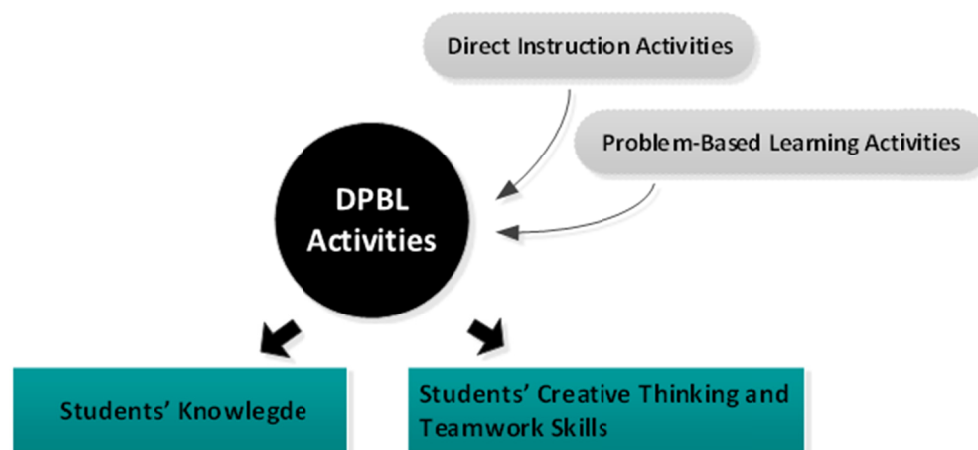


Figure 1. Conceptual approach



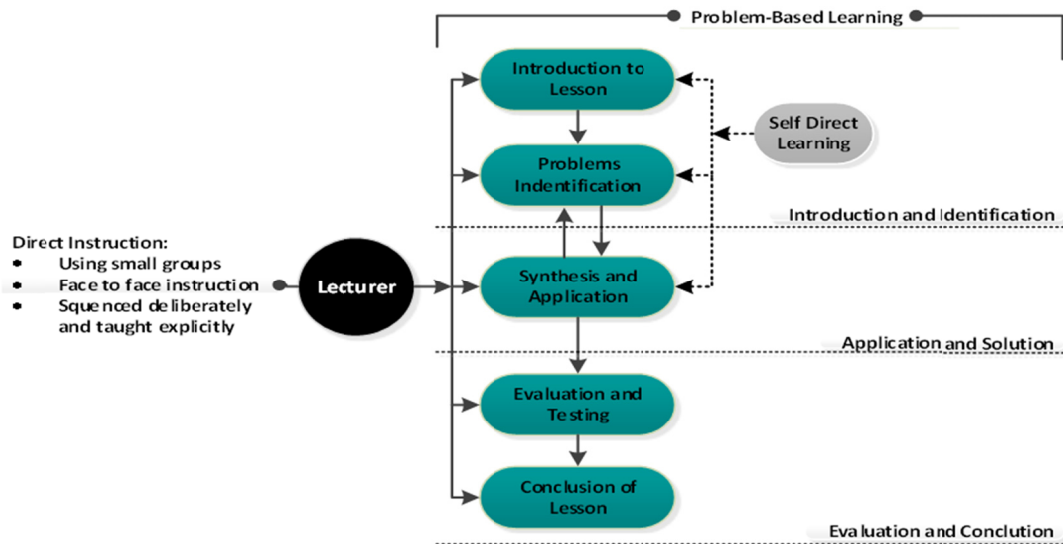


Figure 2. The DPBL integrated approach

The DPBL model consists of three main phases: The introduction and identification, application and solution, and evaluation and conclusion. The description of phases is as follows:

Phase 1: Instruction and Identification:

This phase consists of two steps, namely instruction to the lesson and problem identification. In this phase, the lecturer explains the purpose of the learning activity and objective and the theory of the subject as well as to help the students in searching, finding, and resolving the problem during the teaching and learning process.

Phase 2: Application and Solution:

The lecturer and students are engaged in synthesising the related data and final solution.

Phase 3: Evaluation and Conclusion:

The lecturer and students are engaged in presenting the final report, summarising the concepts description, and closing the lesson.

### 3. Method

The research was performed in Dian Nuswantoro University, Indonesia. Two departments (i.e. Informatics Engineering and Information System Department) were involved.

#### 3.1 Design and Sample

The quasi-experimental group pre-test and post-test designs were used. The third-year students (N=276) who took Computer Networks from two departments in Dian Nuswantoro University, Indonesia were involved. In two selected educational programs, one used DIA that consists of 140 students, while the other used DPBL approach that consists of 136 students. Five lecturers teaching Computer Networks in the sample class also participated in this study.

#### 3.2 Instrument and Procedure

The protocol was reviewed and ethical permission for the study was received from the university through each department. The DPBL and direct instruction program approaches were conducted over one semester comprising 14 weeks. Students in both groups completed the demographic form and creative thinking, teamwork, and knowledge questionnaires at the same time, prior to direct instruction and DPBL lecture instruction. For the DPBL group, there were 136 students assigned to 25 DPBL groups, where each DPBL group consisted of five to six students. The DPBL group session was 2 hour per week for 3 weeks.

#### 3.3 Pilot Study

A pilot study was conducted on thirty undergraduate students and five lecturers to determine the reliability of the tools. The Cronbach's Alpha coefficient for the questionnaires in the pilot study was .797. In general, the

respondents of the pilot study gave positive feedback toward the general structure and presentation of the questionnaire, the survey questionnaire was further refined to improve the face validity of the scales based on some comments collected from the participants. In order to assess the face and content validities, and to ensure its adaptability to the local cultural context, the instrument was reviewed and approved by the Faculty of Computer Sciences, Dian Nuswantoro University, Indonesia.

### 3.4 Data Analysis

Standardised questionnaires of creative thinking, teamwork, and knowledge abilities were administered before and at after 16 weeks (after instruction). IBM SPSS statistics 21 was used to analyse the data. The frequencies and descriptive analyses and t-test were employed to compare the baseline measurements of demographic and dependent variables between the two groups using five criteria for evaluation according to Likert scale.

## 4. Results

DPBL activities were set in the DPBL phases. The DPBL activities are shown as follows:

### Phase 1: Introduction and Identification

#### Introduction to Lesson

- 1) The lecturer starts the lesson and explains the purpose of the learning activity.
- 2) The lecturer divides the students into small groups in a class which consist of five to six members.
- 3) The lecturer gives suggestions on how to work in groups and explains the role of group members and criteria of the works.

#### Problem Identification

- 1) The lecturer presents the theory and objectives of learning.
- 2) The lecturer presents step-by-step progress from one subtopic to other subtopics.
- 3) The lecturer presents the problem and final solution.
- 4) The lecturer asks the students to find, identify, and analyse the problem.
- 5) The lecturer monitors group activities in the class through discussion conducted by each group or group members.

### Phase 2: Application and Solution

- 1) The groups define the real world problem and final solution.
- 2) The groups define the assumptions and learning objectives.
- 3) The groups search the data related, data synthesis, application, and final solution.
- 4) The lecturer monitors the groups' behaviour as well as provides advice and suggestions.

### Phase 3: Evaluation and Conclusion

- 1) The groups present their work report.
- 2) The groups present the concepts and characteristics of problem-solving.
- 3) The lecturer and groups share their ideas to achieve the learning goals.
- 4) The lecturer explains and summarises the concepts and then closes the lesson.

Figure 3 depicts the teaching and learning situation using DPBL activities. The lecturer divides the students into small groups in a class which consist of five to six members. The lecturer gave suggestions on how to work in groups, explained the role of group members and criteria of the works. The lecturer presented step-by-step progress from one subtopic to other subtopics. The lecturer presented the problem and final solution. The groups defined the real world's problem and final solution. The lecturer explained and summarised the concepts and then stopped the lesson.

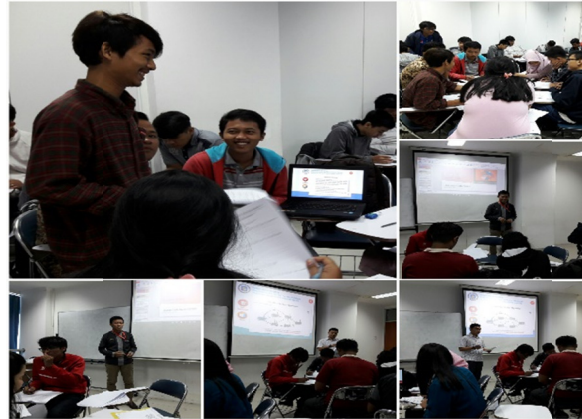


Figure 3. Teaching and learning situation using DPBL activities

Table 1 presents comparison demographic of the students in the direct instruction group versus DPBL group. The age was divided into two categories. Nearly all participants were under 20 years of age. Meanwhile, the gender of direct instruction group showed 101 males (72.1%) and 39 females (27.9%), while 92 males (67.6%) and 44 females (32.4%) of DPBL group. Nearly all participants were male.

Table 1. Demographic of students in the control (N=140) and DPBL (N=136) groups

Demographic		Control Group N (%)		DPBL Group N (%)	
Gender	Male	101	(72.1)	92	(67.6)
	Female	39	(27.9)	44	(32.4)
Age	18<Age<20	119	(85.0)	110	(88.2)
	21<Age<26	21	(15.0)	26	(11.8)

Table 2 presents the comparison mean score of the students in the direct instruction group versus DPBL group. There is a mean score difference between the direct instruction and DPBL approaches (Figure 3). Mean score of direct instruction group showed  $\bar{x}$  = 18.01 of creative thinking skills,  $\bar{x}$  = 21.61 of teamwork skills, and  $\bar{x}$  = 32.06 of knowledge. Meanwhile, DPBL group showed  $\bar{x}$  = 19.67 of creative thinking skills,  $\bar{x}$  = 24.42 of teamwork skills, and  $\bar{x}$  = 43.28 of knowledge.

Learning outcomes were significantly positive [Sig. (2-tailed)  $p$  = .00]. There is a mean score difference between direct instruction and DPBL approaches. Creative thinking skills score increased 1.66 points (8.4%), teamwork skills score increased 2.81 points (11.5%), and knowledge score increased 11.22 points (25.9%).

Table 2. Descriptive test between groups based on abilities

Variables	Frequencies		t-test for Equality of Mean				
	Control Group $\bar{x}$ (SD)	DPBL Group $\bar{x}$ (SD)	t	df	p	$\bar{x}$ Difference	Std. Error Difference
Creative Thinking	18.01(2.27)	19.67(2.05)	-6.43	274	.000*	-1.66	.261
Teamwork	21.61(3.55)	24.42(2.32)	-7.77	274	.000*	-2.81	.362
Knowledge	32.06(7.67)	43.28(2.94)	-15.93	274	.000*	-11.22	.704

\* Significant at  $p < .05$ .

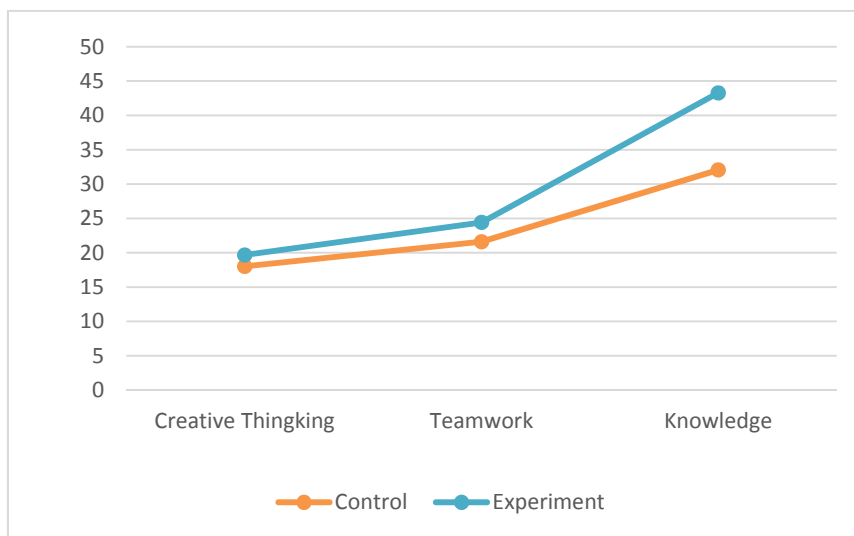


Figure 4. The mean score comparison of each group

Table 3 presents the comparison of students’ difficulties and their perception scores toward direct instruction and DPBL approaches of each group. There are score differences between direct instruction and DPBL approach. The findings indicated that the majority of students had high difficulties in the direct instruction method  $\bar{x}=4.71(.47)$ . Whereas,  $\bar{x} = 1.99(.66)$  students had low difficulties in the DPBL teaching approach.

The majority of the students had a positive response toward DPBL teaching approach.  $\bar{x} = 4.80(.42)$  students had a positive response to DPBL teaching approach. Whereas,  $\bar{x} = 2.04(.72)$  students had low response toward direct instruction method.

Table 3. The evaluation student response of DPBL activities

Evaluation List	Frequencies		t-test for Equality of Mean				
	Control Group $\bar{x}(SD)$	DPBL Group $\bar{x}(SD)$	t	df	p	$\bar{x}$ Difference	Std. Error Difference
Difficulties	4.71(.47)	1.99(.66)	39.211	271	.000*	2.715	.069
Effective approach	2.04(.72)	4.80(.42)	-38.402	271	.000*	-2.758	.072

\* Significant at  $p < .05$ .

Table 4 shows the lecturers agree that DPBL activities were appropriate, which showed highest level  $\bar{x} = 4.70$ , S.D =.50). The mean scores of the possibility in using DPBL were  $\bar{x}=4.80(.45)$  and  $\bar{x} = 4.60(.55)$  showing that DPBL is an effective approach.

Table 4. The evaluation of lecturers’ responses of DPBL activities

Evaluation List	Results		Level of appropriateness
	$\bar{x}$	Std. Deviation	
DPBL is possible to be used	4.80	.45	Highest
DPBL is effective to improve creative thinking and teamwork skills	4.60	.55	Highest
Summary	4.70	.50	Highest

### 5. Discussion

DPBL is an alternative approach for teaching and learning process, especially to enhance students’ knowledge, creative thinking, and teamwork skills. According to the assessment by participants, it was found that students felt low difficulties towards DPBL approach. In addition, it was found that DPBL is an effective approach to improve students’ creative thinking and teamwork skills. This is a sample case study for supporting students to develop knowledge, creative thinking, and teamwork skills as the outcome of positive development and

experiences while undergoing DPBL approach.

## 6. Limitations

This study has limitations. Results cannot be generalised to other settings because the study was employed with large samples of third-year Computer Networks students from two departments in Dian Nuswantoro University, Indonesia. Further research will be needed to further examine DPBL as an alternative approach to all levels of education, which require other representative samples. Quasi-experimental group pre-test and post-test designs were used. Participants came from only two departments to prevent the flaw between the experimental and control groups. However, there were differences between groups in baseline variables, and thus frequencies, descriptive, and t-test analysis were used.

## 7. Conclusion

Direct Problem-Based Learning (DPBL) was designed to improve students' knowledge, creative thinking, and teamwork skills in the teaching and learning process. From the model illustration, this model was simple and easy to be implemented in the classroom.

Learning outcomes were significantly positive. There were scores of differences between direct instruction and DPBL approach. The students' knowledge, creative thinking, and teamwork skills were increased. The findings indicated that the majority of students have difficulties in the direct instruction approach. Whereas, students had low difficulties in the DPBL teaching approach. The majority of the students showed a positive response towards DPBL teaching approach, whereas, students had low response toward the direct instruction method.

Nearly all lecturers agreed that DPBL approach can enhance students' creative thinking and teamwork skills. DPBL approach is considered appropriate for the high levels of education. Therefore, DPBL approach was suggested as an alternative approach for teaching process.

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# Effectiveness of a Selective Advising Program in Reducing the Degree of Compulsive Buying Behavior among Umm Al-Qura Female Students

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## Abstract

The present study is an attempt to investigate the effectiveness of a selective advising program in reducing the degree of Compulsive Buying Behavior among female students, Faculty of Education at Umm al-Qura University. The sample consisted of (200) female students to verify the validity and reliability of the tool. The quasi-experimental method was utilized through two groups (experimental and control). The results indicated high rates of compulsive buying among the participants (18-30) years, where there was a great difference between the items of the scale and a great desire for buying for many reasons. The study results showed that there are statistically significant differences between the mean scores of experimental and control groups at the pre- and post-test in the compulsive buying scale, significant at (0.005) in favor of the pre- and post-test. There are also statistically significant differences between the mean scores of the experimental group at the pre- and post-test in the compulsive buying scale, significant at (0.005) in favor of the post-test, i.e. the selective advising program decreased the rate of Compulsive Buying Behavior. The results also showed that there are no statistically significant differences between the mean of the experimental group ranks in the post- and follow-up test, which reveals that the advising program is being effective.

**Keywords:** selective advising program, compulsive buying behavior, Umm Al-Qura

## 1. Introduction

Oniomania is a term that describes compulsive desire or buying obsession. It is called compulsive buying; an obsessive feeling to get artificial and temporary delight that terminates after purchase. It occurs due to emotional vacuum, feeling anxious or fear of refusal. It is utilized as a method of avoiding pressure, feeling good and forgetting sorrows and distress. It indicates impulse control disorder, since it is followed by regret, frustration, anxiety as well as psychological and physical disorders. It is characterized by persistence and negative impact on the individual's performance, family life and financial situation. Although researchers agree on functional weakness associated to the disorder, there is a considerable controversy concerning the classification of Compulsive Buying Disorder (CBD), whether it is a separate disorder or it is associated to another one, such as obsessive compulsive disorder (OCD), mood disorders, or drugs abuse disorders.

Concerning the impact of culture, compulsive buying is seen as a psycho-social phenomenon (Dickie, 2011) or a religious activity (Arya, 2009). CBD often coincides with other disorders, especially anxiety disorders, mood disorders, eating disorders, personality disorders (Black, 2001) and violence in personal relationships.

Such disorder is called compulsive buying because the individual will be busy with shopping and behavior frequency. He also can't control himself when he has the great desire to buy (Filomensky et al., 2011). Furthermore, it causes psychological and social problems in the lives of the people suffering from CBD. Although compulsive buying has received an increased attention in research, it has not received the same attention in clinical practice and has no effective therapy. More studies should be conducted on its diagnosis. Accordingly, advising programs, which treat compulsive buying and its negative impact on the whole community and the individual's delight; family, psychological and professional stability, should be designed.

The American Psychiatric Association (APA), in its DSM-IV, identifies individuals suffering from compulsive buying within indefinite control disorders. Shopaholism is a medical term that refers to the compulsive desire to

purchase; it is synonym to Oniomania, which is derived from the Greek word *onios* for sale and *mamio* for mania.

### *1.1 Statement of the Problem*

Several literature indicate that rate of compulsive buying is 5% in the United States and (5%-8%) in Europe, substantially among females. Such disorder often occurs among adolescents (18-30 years). Its ratio among university students is higher than that of other groups; it is (6%-10%). Perhaps they will have impulsive behaviors, such as compulsive buying and compulsive storage (Brougham et al., 2011). Compulsive buying is one of chronic psychological disorders which occur as a result of personal, social and material complexities. Depression, OCD and hoarding disorder stimulate CBD (Kyrios et al., 2013). Frost et al. (2000) argued that compulsive buying is associated with OCD if it's taken into account that CBD is more comprehensive than abnormal consumption; similar to food and drugs abuse disorders as well as compulsive sexual disorders.

The researcher had meetings with female students, Faculty of Education at Umm Al-Qura University who frequently visits psychological clinics and psychologists to complain about their frequent buying and inability to control such desire. They require the assistance of Psychological Counseling Department to overcome their problem. In addition, some meetings were conducted with some female students who suffer from such disorder to define its reasons. It showed that a high ratio suffer from CBD which results from various causes. More above, there is no Arabic or foreign study that handled the effectiveness of a selective advising program in reducing the degree of CBD. Accordingly, the problem of the present study is defined in the following questions:

- 1) What is the ratio of compulsive buying prevalence among female students at Umm Al-Qura University?
- 2) Are there statistically significant differences between the mean scores of experimental and control groups ranks in the CBD pre- and post-application of the advising program?
- 3) Are there statistically significant differences between the mean scores of experimental and control groups ranks in the CBD after the application of the advising program in favor of the experimental group?
- 4) Are there statistically significant differences between the mean of the experimental group ranks in compulsive buying in the post- and follow-up scales?

### *1.2 Objectives*

The present study aims at identifying the ratio of CBD among female students at Umm Al-Qura University. It also identifies the effectiveness of a selective advising program in reducing the degree of CBD among a sample of female students from Faculty of Education at Umm Al-Qura University and the continuity of the program impact after its application and follow-up within two months.

### *1.3 Significance*

Psychologically, the present study tackles CBD, which is a novel and significant variable. It explores such disorder, its criteria, diagnosis, theories which handled it, reasons, methods of treatment, the role of social and cultural aspects and relevant demographic variables. It proposed an advising program to reduce the degree of CBD among a sample of female students from Faculty of Education at Umm Al-Qura University. It designs a psychological tool to measure disorder degree because Psychological and Arabic lacks such psychological measurements. The sample of the study should be provided due care because they are in charge of upbringing future generations. They should also have perfect mental hygiene to be capable of playing their roles, as mothers, properly.

Results shall enable specialists in mental hygiene and psychological counseling to create and implement advising programs which members of the community who suffer from the aforementioned disorder and need treatment and counseling. They provide female school students and parents with preventive and counseling programs to avoid such behaviors.

### *1.4 Terms*

**Counseling Program:** The present study adopts a program based on selection from various schools, theories, techniques and strategies, such as psychological, behavioral, behavioral cognitive and religious analysis.

**Compulsive Buying Disorder:** Edwards (1993) provides the most prominent definition of compulsive buying. It is an extraordinary form of shopping and expenditure. Consumer suffers from a compulsive, chronic and frequent desire of shopping and expenditure. Compulsive expenditure is a method to reduce negative feelings, such as stress and anxiety. Procedurally, it is the score which the participants obtain after responding to the items of compulsive buying scale.



## 2. Theoretical Framework

### 2.1 Compulsive Buying Disorder (Oniomania)

Psychological researches, particularly those which tackled confusing behaviors, have increasingly handled CBD (Black, 2001). Emil Kraepelin was the first to tackle and specify Oniomania in his report in 1915. It is defined as total preoccupation with buying or its motivations which can't be resisted. Buying behavior results in remarkable depression and contradicts with social behavior and leads to economic problems (Osso et al., 2008; Pazarlis et al., 2008). McElory et al. (1991) stated that compulsive buying is related to other psychological disorders, such as mood, anxiety and impulse control disorder. They suggested incorporating it into Diagnostic and Statistical Manual of Mental Disorders–DSM–IV–TR as impulse control disorder (Lee & Mysyk, 2004). Koran et al. (2006) examined compulsive buying and proposed diagnostic definitions and criteria, including stress and low performance associated with such disorder. Moore (2009) also presented diagnostic criteria, so the disorder has numerous definition and diagnostic criteria (Hollander & Allen, 2006).

Edwards (1993) argued that there are five levels of consumer behavior: non-compulsive purchase, recreational purchase, low compulsive purchase, compulsive purchase, and addictive purchase. Non-compulsive buyers tend to plan for what they buy, but those who buy for recreation tend to improve their mood, so they often buy in a hurry and without planning. Low compulsive buyers have similar tendencies as they can highly improve their mood, but they feel guilty after buying what they don't actually need. Compulsive purchasers buy to reduce stress and anxiety. They also feel depressed when they get items they don't need. Whereas, buying addicts have a constant and strong desire to buy things. Thus, they may neglect many social relations as well as demographic and cultural variables. Compulsive buying is associated with demographic elements, such as the consumer's age and gender. Results of the studies that handle the relation between age and compulsive buying reveal that youth are terribly affected comparing to other age groups.

#### 2.1.1 Characteristics of Compulsive Buyers

- They prefer to go shopping alone because they are afraid to be condemned by others.
- Collectors spend much time searching for valuables to keep and brag about. The compulsive buyers focus on the purchasing process itself, so they do not care about what they buy. So, they may try to hide, store, or get rid of what they bought.
- They make great efforts and frequent attempts to stop CBD, but they fail.
- After buying, they feel ashamed and guilty.
- They show impulsive behaviors, do things at the moment of motivation, feel frustrated when they cannot get what they want. They find it difficult to establish and maintain affection and affability with others, so they feel lonely and isolated. These behaviors are observed among addicts and individuals with eating disorders.
- Most buyers go shopping to reduce depression and to raise their spirit (Ertelt et al., 2009; Workman, 2010; Lejoyeux & Weinstein, 2010; Dickie, 2011; Shanmugam, 2011).

Compulsive buying is associated with lack of self-regulation and self-control, low self-esteem, depression, anxiety, food disorders (Bulimia), kleptomania, and lack of emotional awareness and perseverance.

#### 2.1.2 Theories of Compulsive Buying and its Causes

##### Disease theory and biological factors

Impulsive disorders, such as compulsive buying, can be understood as dysfunctional neurocircuits and rewards behaviors. Neurotransmitter dysfunction, i.e. dopamine and Serotonin (hormones of mood regulation) results in compulsive buying and reward behaviors. In other words buying becomes a delightful and interesting process which changes the brain chemistry. Compulsive buying has a normal genetic basis (Ertelt et al., 2010; Lejoyeux & Weinstein, 2010; Workman, 2010; Dickie, 2011).

##### Psychodynamic and Psychological Factors

Compulsive buying occurs as a response to and a method to escape and reduce negative impulses. Impulsivity contributes to compulsive buying where rapid and unplanned responses occur (for both internal and external stimulant) and minimizing the negative results (Lejoyeux & Weinstein, 2010). It involves unpleasant ideas and stressful family events, such as divorce. Accordingly, it is a mechanism addicted to deal with psychological tension through escape or avoidance. Addictive purchasing begins as a pleasant and interesting behavior that turns to preoccupation and addiction. It can be also a co-existence response rooted in the individual's early

experiences “child-parents relationship”. On the other hand, buying behavior provides self-rebalance and self-nurturing, regulates disconnected sense, and improves self-identity (Wang, 2007; Ertelt et al., 2010; Weaver et al., 2011)

#### Dickie Model of CBD

It comprises four phases: Anticipation, Preparation, Shopping, and Spending. First, the individual feels occupied with purchasing and developing his motives towards purchases. Next, s/he prepares for shopping through the following steps: What will s/he wear? Where will s/he go? Which credit cards will s/he use? Then he buys and spends. Eventually, he feels guilty and regretful (Dickie, 2011).

#### 2.1.3 Consequences of CBD

##### Positive Short-term Results

Compulsive buyers experience some positive results and reinforcement through their behavior, including reducing stress and tension, feeling delighted and entertained, reforming self-concept, reinforcing self-esteem and self-respect and getting over feelings of psychological loneliness and negative emotions. Such positive feelings motivate purchasers to repeat CBD as a means of self-support.

##### Negative Long-term Results

Despite the positive results of CBD, the long-term results are harmful and negatively impact the individual. They are represented in personal grief and financial debts, marital and family turmoil, legal problems, confusion of interpersonal relationships, low self-esteem, self-criticism, criticism of others, feelings of guilt, anxiety, lying, addiction, isolation, and suicide attempts (Ertelt et al., 2009; Workman, 2010, Weaver et al., 2011; Muller et al., 2011; Dickie, 2011).

#### 2.1.4 Treatment for CBD

It is difficult to treat CBD because purchasing cannot be canceled from the individual's life. Limited research about CBD was conducted and there is no specific treatment for it. Using drugs and psychotherapy paves the way for treatment. Antidepressants reduce the desires for compulsive behavior, while Serotonin organizes purchasing motives. Moreover, psychological analysis and cognitive behavioral therapy effectively treat compulsive buying. Psychological analysis helps to understand and know the causes of the individual's negative emotions, depression and anxiety, and low self-esteem (Pazarlis et al., 2008; Ertelt et al., 2009; Muller et al., 2011; Dickie, 2011).

#### 2.2 Review of the Literature

Young et al. (2006) analyzed a 24 year-old Korean female with CBD and excessive credit card use over nine months. Her behavior resulted in various debts and negatively influenced her family and interpersonal relations. The study aimed to identify the effectiveness of family therapy in reducing compulsive buying and the factors affecting CBD. The total number of sessions was 15, taking place from 2001 to 2004. The types of therapy were comprised of individual sessions, parents sessions, family sessions, and phone-call sessions. Results revealed that CBD comes as a response to anxiety, depression, stress, and family problems.

Mitchell et al. (2006) aimed to identify the effectiveness of cognitive behavioral therapy in treating CBD. The sample consisted of 28 participants (experimental group) and 11 participants (control group). Yale–brown obsessive compulsive scale and shopping version and the compulsive buying scale were used. Results demonstrated the effectiveness of cognitive behavioral therapy in reducing obsessional thoughts associated with CBD and shopping time. Also, positive results lasted after six months.

Darabshi (2015) aimed to identify the relation between CBD and other psychological disorders. The sample consisted of (88) female students from King Saud University. The author used compulsive buying scale and the Symptom Checklist-90 (by Almohareb and Al Naem) which proved its validity and reliability. The study results showed that there are statistically significant relation between CBD and other psychological disorders, including general anxiety, depression, OCD, Somatization disorder, psychosis, Paranoia, aggressiveness and phobia.

### 3. Methodology

The quasi-experimental approach was utilized through two groups (experimental and control). Pre-, post- and follow-up assessment was applied to the participants. Such approach is consistent with the objective of the present study which attempts to investigate the effectiveness of a selective advising program in reducing the degree of CBD.

### 3.1 Sampling Procedures

The compulsive buying scale was applied to (200) female students from Faculty of Education (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> level students at Kindergarten and Special Education Departments) at Umm Al-Qura University. (10) Female students got the highest scores and participated in the advising program as a sample of both groups (experimental and control).

According to the following table, Mann-Whitney Equation was used to estimate the compatibility of both the experimental and control groups at compulsive buying variable:

Table 1. Results of estimating (Z) value for the mean scores of the experimental and control groups ranks at the pre-test in the compulsive buying scale

Research Variables	Experimental Group		Control Group		Mann-Whitney- U Coefficient	Z	Significance
	N=10		N=10				
	Ranks Mean	Ranks Total	Ranks Mean	Ranks Total			
Age Level	112	112	9.8	98	43	532	insignificant

Table 1 reveals that there are no statistically significant differences, i.e. there is equivalence between means of the experimental and control groups ranks at the pre-test in the compulsive buying scale. (Z) Value is statistically insignificant, so both groups are highly equivalent.

### 3.2 Tools

#### 3.2.1 Compulsive buying Scale

The author reviewed theoretical framework and previous literature which tackled compulsive buying scale, such as excessive buying scale (Galal, 2012) and Moore (2009) scale. However, these scales are inappropriate for estimating such variable in Saudi Arabia. Consequently, another scale appropriate for the population of the present study (Saudi Arabian female students) was prepared. It comprises 32 paragraphs that measure the degree of compulsive buying among female students at Umm Al-Qura University.

**Standardization Sample:** the scale was applied to (80) female students at Umm Al-Qura University.

#### 3.2.2 Psychometric Characteristics of the scale

**Reviewers Validity:** 10 Faculty members of Mental Hygiene at some Saudi Arabia Universities were electronically asked to examine the dimensions of the scale, according to its appropriateness for the variable, Paragraph's consistency with dimension, Paragraph's appropriate wording, and adjusting, adding and deleting some paragraphs. Reviewers' agreement to 24 paragraphs was 90% after omitting (5) paragraphs due to their frequency or inappropriateness. Thus, total numbers of the paragraphs was 27. Responses involve five phrases (always, very often, sometimes, rarely, never) (5-4-3-2-1), i.e. Scale is checked according to Fifth Likert Scale (5-4-3-2-1). Accordingly, total score is (27-135). The highest score indicates excessive compulsive buying, while the lowest reveals mild compulsive buying (or none).

**Internal Validity:** Correlation Coefficient between the score of each paragraph and total score in the scale was estimated after subtracting the paragraph's score from the total score and the other paragraphs have to be taken into account. Table (2) indicates the paragraphs validity in compulsive buying scale.

Table 2. Internal validity of the scale paragraphs (N =80)

Paragraph No.	Its Relation to Total Score	Paragraph No.	Its Relation to Total Score	Paragraph No.	Its Relation to Total Score
1	0.389**	10	0.519**	19	0.548**
2	0.485**	11	0.518**	20	0.349**
3	0.441**	12	0.446**	21	0.425**
4	0.483**	13	0.483**	22	0.502**
5	0.638**	14	0.518**	23	0.446**
6	0.450**	15	0.421**	24	0.518**
7	0.481	16	0.566**	25	0.415**
8	0.5150**	17	0.347**	26	0.514**
9	0.418**	18	0.379**	27	0.451**

\*\* Means that the paragraph is statistically significant at 0.01.

Table 2 illustrates that all paragraphs have statistically significant correlation with total score in the scale, i.e. the scale involves a high degree of internal validity which indicates that paragraphs participate in measuring compulsive buying degree.

### 3.2.3 Reliability of Compulsive Buying Scale

The scale reliability was calculated using three methods: a. Spearman–Brown Split-half, b. Cronbach’s Alpha coefficient, c. Re-application (the scale was re-applied to 35 students from the sample after the passage of three weeks on the first application and calculated the correlation coefficient between the two applications). Table 3 shows the reliability coefficients of the three methods of the scale as a whole.

Table 3. Reliability coefficients of compulsive buying scale (N=80)

Split-half	Cronbach’s Alpha	Reapplication
0.817	0.857	0.867

Table 3 indicates the scale is reliable, so it will be conveniently utilized.

### 3.2.4 Final Form of the Scale

Final form of the scale comprises 27 valid and reliable paragraphs applicable to the study sample.

## 3.3 The Advising Program

Attempting to benefit from theories and schools of psychology, the author prepared advising program based on Selection Theory. The program aims to reduce the degree of CBD among a sample of female students from Faculty of Education at Umm Al-Qura University.

### 3.3.1 Contents of the Advising Program

Benefit from the advising program and various behavioral programs to reduce the degree of psychological and behavioral disorders. The author also used group counseling in some sessions to motivate the participants to interact and share their experiences. Whereas, the individual counseling was used in other sessions.

### 3.3.2 Advising Sessions

The author prepared (10) group sessions (over 5 weeks, 2 sessions per week) for the participants of the selective advising program. Each session was 50-60 minutes and a follow-up session was conducted a month later. Sessions had been conducted in Psychology Laboratory at Faculty of Education. Table (4) indicates a summary of the sessions.

Table 4. A summary of the selective advising program

Type of the Program	Selective Advising
General Objective	Reducing the degree of compulsive buying among a sample of university female students. At the end of the program, the participants will be capable of identifying CBD, various strategies and skills that help reduce the degree of CBD, as well as motives, symptoms, triggers, and emotional symptoms of CBD which force the individual to spend much time shopping aimlessly and buying unrequired things.
Special Objective	They can also identify the emotions relevant to CBD, either when they have psychological suffering and marital and family disturbed relations or when they feel worried. They also gain positive experiences which enable them to overcome such disorder in their social and scientific life, increase their self-confidence and self-control in distress.
Sampling	10 female students who tend to provide help and frequently visit Department of Psychology at Faculty of Education
Program Designer	The author
Place of implementation	Psychology laboratory at the faculty.
No. of Sessions	(10) Group selective advising sessions, including individual sessions and a follow-up session after a month.
Session Duration	50-60 minutes
Program Duration	Five weeks.
Tools	Laptop- PowerPoint- Projector-movies-pens-material
Methods of Evaluation	Pre-, post- and follow-up compulsive buying scale

Table 5. A summary of the advising sessions

No. of Session	Title	Objectives	Methods and Techniques
1 <sup>st</sup> + 2 <sup>nd</sup>	Introducing and identifying the program	Reciprocal understanding between the researcher and the participants, building a successful advising relation and affability. Explaining the program and the desired benefit. Setting regulations for sessions. Confirming confidentiality and privacy within sessions. Explaining the researcher and the participants' role in the program. Illustrating the objectives and significance of the program.	Discussion Group dialogue
3 <sup>rd</sup>	Material on CBD	Identifying CBD Identifying its symptoms, motives and consequences. Identifying its triggers. Discussing methods of minimizing and mitigating CBD. Identifying psychological stress, its sources, causes and effects.	Lecture and discussion Assignment <i>Insight Catharsis</i> Brainstorming
4 <sup>th</sup>	Educational material on psychological stress and mechanisms of overcoming it.	Training on using positive ways to confront psychological stress and avoid psychological disorders. Presenting real examples on the individuals who suffered from CBD, and methods of mitigating such disorders. Facing the problem Making new friendships and creating ideas that help change the participants' attitude towards CBD.	Discussion about emotional ventilation role play Cognitive reconstruction of ideas Assignment
5 <sup>th</sup>	Time planning and management	An educational lecture to identify time and its importance, including some prophetic sayings that tackle the importance of time and how the individual spent it. Some instructions on time management and setting schedule for every task.	Lecture and discussion, Feedback, Assignment, and Cognitive Reconstruction

6 <sup>th</sup>	Self-change, Self-control and self-confidence	<p>Helping the participants change themselves and admit that they have a simple psychological disorder and they can change, so they can change and replace negative behavior with positive one.</p> <p>“Allah does not change what people do until they change themselves.”</p> <p>It is a title of lecture on self-change and the real attempt to do such change</p> <p>Helping them control themselves and adjust negative thoughts.</p> <p>Modifying ideas on buying to restore self-confidence.</p> <p>Dissemination of religious awareness among the participants and motivating them to participate in volunteering, donation and charity instead of unjustified compulsive buying.</p> <p>Creating positive ideas on how to buy to help others and satisfy their needs.</p> <p>Increasing Qur’an reciting, prayer and resort to Allah (Almighty be to Him) to alleviate such suffering because our true religion prohibits extravagance and wastefulness.</p>	<p>Lecture, dialogue and discussion</p> <p>Assignment</p> <p>Cognitive reconstruction</p>
7 <sup>th</sup>	Religious Counseling	<p>Presenting examples from the biography of Prophet Mohammad (peace be upon him), how to carry out asceticism in life, the desire to help others, particularly the needy and the poor to feel delighted.</p> <p>The counselor presents a hypothetical case that combines the characteristics of the person suffering from compulsive purchase, relevant consequences, and his/her wrong thoughts and behaviors.</p> <p>Creating a perfect purchasing plan in collaboration with a friend or relative.</p>	<p>Lecture, dialogue and discussion</p> <p>Assignment</p> <p>Cognitive reconstruction</p>
8 <sup>th</sup>	Purchase planning and finance management	<p>Financial planning for purchase according to a certain budget.</p> <p>Planning for purchasing the essential needs.</p> <p>Presenting real models and stories of some characters who suffered from CBD and how they managed to get rid of it.</p>	<p>Lecture, dialogue and discussion</p> <p>Assignment</p> <p>Cognitive reconstruction</p>
9 <sup>th</sup>	Summarizing, finalizing and assessing the program	<p>Summarizing what had been handled in all sessions and evaluating benefit from the advising program sessions through asking each participant to talk about her success story and benefit from the program.</p> <p>Rewarding themselves for achieving success in the advising plan as method of internal reinforcement and self-empowerment.</p> <p>Asserting adherence to what has been learned in the program.</p> <p>Finalizing the advising program.</p> <p>Application of post-test of compulsive buying.</p>	<p>Lecture, dialogue and discussion</p>
10 <sup>th</sup>	Follow-up of the advising program	<p>Ensuring the participants’ continuous improvement and reduction of compulsive buying.</p> <p>Application of follow-up test of compulsive buying.</p>	

### 3.3.3 Evaluating the Program

Ten Reviewers in the field of mental hygiene, psychological counseling and psychology had examined the preliminary form of the program to make sure that the applied and methodological procedures of the program follow the instructions. Simple modification was conducted to present the program in its final form.

The compulsive buying scale was applied to 200 female students (20-30 year) from the Faculty of Education. Female students who got the highest scores were selected to participate in the program application.

The program was applied to the sample. Compulsive buying scale was applied after the end of the programs sessions. It was also applied after follow-up period to make sure of the programs continuous effectiveness.

Some non-parametric statistical methods, including arithmetic mean, standard deviation, Wilcoxon test, and Mann–Whitney test were utilized to make sure of the hypotheses validity.

## 4. Results and Discussion

The first Question (Psychometric): What is the ratio of compulsive buying prevalence among female students at Umm Al-Qura University?

The question can be answered in the light of the three levels of compulsive buying (high-moderate-low), as follows: Always occur, moderately occur, and rarely occur.

Frequencies and percentages of the three levels of the descriptive sample (200 female students from the

educational and scientific departments), were estimated according to the following table:

Table 6. Frequencies and percentages of the participants (200 female students) in the compulsive buying scale

Variable	Level	High (More)		Moderate (Mild)		Low		Frequencies	Total Percentage %
		Frequency	%	Frequency	%	Frequency	%		
1-I tend to go shopping frequently.		150	75	35	17.5	15	7.5	200	100
2-Shopping decreases my psychological suffering and social stress.		50	25	120	60	30	15	200	100
3-I go shopping to improve my mood.		100	50	60	30	40	20	200	100
4-I go shopping to feel relieved when I have a problem.		90	45	75	37.5	35	17.5	200	100
5-Shopping reduces my anxiety and tension.		100	50	70	35	30	15	200	100
6-I feel entertained when I go shopping, whether I need the item or not.		45	22.5	65	32.5	90	45	200	100
7-I spend much time shopping when people don't accept me.		150	75	40	20	10	5	200	100
8-My interest in shopping negatively affects my social relations.		170	85	29	14.5	1	0.5	200	100
9- I go shopping alone because I don't like to be criticized.		130	65	55	27.5	15	7.5	200	100
10-I aimlessly buy, so I spend much money.		160	80	34	17	6	3	200	100
11-I spend much time shopping.		95	47.5	70	35	35	17.5	200	100
12-I feel regretful because I buy various things I don't need.		85	42.5	95	47.5	20	10	200	100
13-My desire to purchase increases after watching commercials and method of presentation.		75	37.5	100	50	25	12.5	200	100
14-If I don't go shopping, I feel anxious and tense.		105	52.5	85	42.5	10	5	200	100
15-My desire to purchase increases after feeling nervous and stressed.		65	32.5	110	55	25	12.5	200	100
16-I feel psychologically relieved after purchase.		70	35	100	50	30	15	200	100
17-I feel myself when I go shopping.		100	50	80	40	20	10	200	100
18-People, who know me, get annoyed because I frequently go shopping.		120	60	70	35	10	5	200	100
19-I postpone important family affairs due to shopping.		175	87.5	15	7.5	10	5	200	100
20-After shopping, I feel delighted, frustrated and guilty.		155	77.5	10	5	35	17.5	200	100
21-I hide annoyance and frustration feelings while shopping.		135	67.5	20	10	45	22.5	200	100
22-I attempt to satisfy my family members with the necessity of my purchases.		95	47.5	45	22.5	60	30	200	100
23-I go shopping when the individuals, I know, disregard me.		165	82.5	25	12.5	10	5	200	100
24-I eagerly and excitedly go shopping.		80	40	65	32.5	55	27.5	200	100

25-Shopping provides me with temporary delight, followed by annoyance.	150	75	15	7.5	25	12.5	200	100
26-I frequently go shopping as long as I am not in the mood.	150	75	25	12.5	15	7.5	200	100
27-I excessively and inconveniently go shopping.	110	55	80	40	10	5	200	100

Results of Table 6 are as follows:

High rate of compulsive buying is prevalent among the participants (21 out of 27 paragraphs). All paragraphs represent high rate except paragraphs No. 2, 6, 12, 13, 15, and 16. (21) Paragraphs indicate urgent desire of CBD among females. Such desire results from various factors, such as being a frequent habit, reducing feelings of pain and annoyance, sorrow and family or social stress, and her tendency to buy, whether she needs the item or not. She also feels delighted during shopping. She persistently tries to convince her family with her purchases. She sees that purchase enables her to overcome anxiety and disappointment. Accordingly, she endeavors to find reasons and justifications, either psychological or temperamental, to satisfy her desire and achieve her compulsive desire of buying.

Moderate rate of buying is obviously low; it was observed in (5) paragraphs only (2, 12, 13, 15, 16), while its percentage was relatively high. Shopping decreases psychological suffering and social stress. She feels regretful because she buys various things she doesn't need. Her desire to purchase increases after watching commercials and method of presentation. She is relieved after purchase.

Low rate of compulsive buying is so rare; it was obvious in one paragraph (6), I feel entertained when I go shopping, whether I need the item or not.

Result of the study assures the prevalence of CBD among female university students, in particular, and women, in general, despite the diversity of its triggers.

CBD is a common behaviour among adolescent as well as university students (18-30). The present study also indicated that teenagers have tendencies to buy compared to other age groups. Moreover, the present study demonstrated that adolescent females are more prone to CBD due to the culture of Saudi community and the high standard of living among some families. Consequently, many individuals prefer welfare, purposeful and non-purposeful shopping, buying necessary and unnecessary items and the unconscious openness of shopping world.

Nevertheless, we cannot generalize such result in the light of the Saudi community's religious values and behavioral ethics which assert spending moderately and prevent extravagance. The program showed that participants liked buying to improve their mood and to relieve psychological stress and anxiety, whatever the cost and the negative results. However, they temporarily feel happy because they face a strong and urgent desire for buying which negatively impacts their social responsibilities.

Results of the second Question: Are there statistically significant differences between the mean scores of experimental and control groups ranks in CBD before and after the application of the advising program to the experimental group?

Mann-Whitney Equation is used to answer the second question as follows:

Table 7. Results of estimating "Z" value of the means of the experimental and control group ranks at the pre- and post-test

Variable	Ranks	Number	Ranks Mean	Total Ranks	Z	Significance
Compulsive Buying	Negative Ranks	0	Zero	Zero	2.805	0.005
	Positive Ranks	10				
	Equal Ranks	0	5,5	55		
	Total	10				

Table 7 indicates statistically significant differences between the mean scores of experimental and control groups at the pre- and post-test in the compulsive buying scale, significant at (0.005) in favor of the post-test.



Results of the third Question: Are there statistically significant differences between the mean scores of experimental and control groups ranks in CBD before and after the application of the advising program?

Wilcoxon equation is used to answer the third question as follows:

Table 8. Results of estimating “Z” value of the mean scores of the experimental group ranks at the pre- and post-test in the compulsive buying scale

Variable	Ranks	Number	Ranks Mean	Total Ranks	Z	Significance
Compulsive Buying	Negative Ranks	0	Zero	Zero	2.805	0.005
	Positive Ranks	10				
	Equal Ranks	0	5,5	55		
	Total	10				

Table 8 indicates statistically significant differences between the mean scores of experimental groups ranks at the pre- and post-test in the compulsive buying scale, significant at (0.005) in favor of the post-test, i.e. The advising program reduced the degree of compulsive buying scale.

## 5. Discussion

Zahran (1989) stated that group psychotherapy effectively reduces anxiety and tension and increases self-confidence. Advising groups assert such perspective because interaction and affability among participants reinforced sincerity and self-confidence and enabled them to learn and teach new behaviors. Variety of techniques used in the selective religious advising program motivated the participants to reduce the degree of CBD and face psychological problems during the program application. Religious counseling provides the individual with pleasure, satisfaction and belief in fate and destiny. That’s why; the individual will have the ability to face stress and problems. He will also have self-confidence and power which helm him/her to overcome challenges and crises in life. Accordingly, he/she will feel secured and optimistic. Also, he will be confident that no one except Allah (Almighty be to Him) will change his state to better through prayer, Allah’s remembrance, reciting the Holy Qu’ran, reliance on Allah, and endeavoring reassurance. So, the individual, bestowed with such virtues, will enjoy psychological adjustment.

Religious counseling program provided the participants with some values and principles and motivated them to do some voluntary charitable deeds and to help the orphans and the poor. It had a great impact on the hearts of participants and reduced internal psychological conflicts, tension, and annoyance during the process of unjustified spending and compulsive buying.

Religious counseling and psychotherapy are relevant to the culture, beliefs, and Islamic values of the advising group participants. They helped participants to change and learn new behaviors. Some techniques motivated the participants to express their inner feelings and conflicts, to let off some steam in the discussions and group dialogues, and to detect all the troubles and problems that made them spend most of their time in the compulsive purchasing process to get rid of their excitement. Their motives were also understood, so they were more self-confident and capable of overcoming such problem and controlling their behaviors.

Therefore, the effectiveness of the religious selective counseling program in reducing the seriousness of CBD among the participants in the program has been indicated. The participants, who attended the sessions, stated that CBD deprived them of their most enjoyable moments and incurred many health and material losses. They also get the item for no reason. They go shopping when they lack family pleasure or face a problem. They foster the concept that compulsive buying relieves their psychological suffering and bestows them self-confidence. Whereas, some participants pointed out that compulsive buying is similar to addiction in terms of irresistible motivation; they lose control and balance and continue to buy despite the consequences and financial losses. A participant indicted that she goes shopping alone because she hates criticism. She also stated that purchase provides her happiness, which may be temporary, although it involves several negative consequences. CBD helped the participants kill their leisure and get rid of their negative emotions despites of its psychological effect and negative consequences.

Moreover, the insight technique motivated the participants to quietly express themselves, to change their behaviors and emotions, to observe their conducts, and to express improper concepts to be replaced with proper, real and positive ones. They also learnt some rational and positive concepts. Accordingly, they felt relieved.

Cognitive building technique made them modify their improper concept and replace them with proper one and

control themselves and positively manage their time to organize their life and benefit from it. It also taught them planning and creating budget properly. As a result, they could resist such concepts and motives which attract them towards compulsive buying. They also felt self-confidence.

Result of the present study indicated the effectiveness of the advising program. Compulsive shoppers go shopping to feel happy. However, such happiness is temporary because guilt and frustration will follow it. It is a continuous act because compulsive buyers attempt to reinforce their identity, get social acceptance, attract attention, and increase self-esteem through getting the others presents.

Result of the present study is consistent with some studies, such as Young et al. (2006); Muller et al. (2011); Darabshi (2015), and Al-Nabati (2011) which proved the effectiveness of the program, methods and strategies in reducing CBD.

Results of the fourth Question: Are there statistically significant differences between the mean scores of experimental group at the post and follow-up test in the compulsive buying scale?

Table 9. Results of estimating “Z” value of the mean scores of the experimental group ranks at the post- and follow-up test in the compulsive buying scale

Variable	Ranks	Number	Ranks Mean	Total Ranks	Z	Significance
Compulsive Buying	Negative Ranks	6	6.17	37	3.29	insignificant
	Positive Ranks	4				
	Equal Ranks	0	4.5	18		
	Total	10				

Table 9 reveals that there are no statistically significant differences between the means of the experimental group ranks in the post- and follow-up test, which reveals that the advising program is effective.

The effectiveness of the religious and selective advising program in reducing the degree of CBD among a sample of female students from Faculty of Education at Umm Al-Qura University over a two-month follow up is illustrated in behavioral changes because the program aimed to motivate the participants to apply what they have learned in order not to behave negatively as before. They also have to control false thoughts, stress and psychological problems which cause compulsive buying.

The author sees that the participants have to consult a family member or friends before buying any item. They also should adhere to good planning for time management and financial planning for purchases management. In addition, they should help the poor and the needy and solve their problems through devoting them specific time. As a result, they diminished purchasing motives where were previously irresistible. They started to feel glad, so their feelings of tension, guilt and anxiety reduced. They also were motivated to apply what they learned in the program.

## 6. Recommendations

The present study recommends the following: 1) Specialists in mental hygiene and psychological counseling should provide symposia and lectures on the concept of CBD, its negative consequences; psychological, social and health problems for the individual and community and methods of reduction at school and universities; 2) Providing courses on time and financial management because Allah will ask the believer about spending his time and how he earned and spent his income; 3) Motivating the adolescents to participate in voluntary and charitable work to share the others' suffering, to learn from real experiences and to teach them selflessness; 4) Parents should provide their kids love, care and attention to be psychologically sound and self-confident because such characteristics will protect them from negative consequences and psychological disorders, such as compulsive buying; 5) Raising the family awareness about the necessity of admitting any disorder that affects them, especially if it caused distress or many problems which have no logical explanation. Such method is the substantial therapy for these emotional and behavioral disorders; 6) the necessity of utilizing compulsive buying scale in addition to the other tools of diagnosis when examining CBD.

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# ‘Professionalism’ in Second and Foreign Language Teaching: A Qualitative Research Synthesis

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## Abstract

This qualitative research synthesis concludes and displays pictures of professionalism in second/foreign language education. Adopting Weed’s processes as the methodological framework for doing qualitative research synthesis, the researcher employed seven steps, from retrieving to selecting studies directly associated with professionalism. The findings identify the notion of professionalism in language education, external factors affecting professionalism, concerns about professionalism, and teachers as essential agents of professionalism.

**Keywords:** professionalism, second language, synthesis

## 1. Introduction

Due to economic and cultural change at the global level, teaching and learning a second/foreign language plays a significant role in all levels of education in every country. For example, in Europe, students in both primary and secondary schools generally learn foreign languages. Some even learn multiple languages (Devlin, 2015). In the USA, despite there not being compulsory foreign language learning for elementary schools, high schools offer a number of foreign language options, depending on the demographic contexts of each state. Thus, the implementation of second or foreign language education varies, for example, in the forms of dual language and transitional bilingual programs. Meanwhile, the term ‘professionalism’ has always shed light on language education. A rationale for promoting the roles of professionalism is an attempt to ensure the quality of teaching and learning a second/foreign language. This process seems to result in a number of aspects of professionalism including, for example, the concepts of ideal teachers, effective teachers, teacher education, and teacher development.

Initially, professionalism was perceived as a concept that represents meanings and qualities of ideal teachers starting with having necessary credentials (Etzioni, 1969). Similarly, teachers are expected to perform teaching tasks effectively enough to be called professionals. In the field of teacher education, therefore, teacher professionalism is regarded as missions when carrying out teacher preparation and development processes.

In other professions, in general, the concepts of professionalism have evolved depending on the movement of sociopolitical power. For example, as Evetts (2014) concluded, professionalism became evident during the early phase as a normative value, evolved through the critical phase as ideology, turned more complicated as a discourse, and has integrated diverse changes as new professionalism.

The movement and importance of professionalism also led to an increasing amount of research in different contexts. Such topics in the field of language education are no exception despite its smaller number of studies when compared to the other areas of education. The focuses include, for example, how professionalism is perceived and what counts as professionalism.

As cited in research on teacher professionalism and teacher knowledge base, Shulman’s (1987) proposed that the attributes of being a professional teacher include knowledge of curriculum, content, general pedagogy, pedagogical content, education goals, educational contexts and learners. His seven categories have been cited in the literature review and expanded to integrate more characteristics required for teachers to be called professional teachers. In second language research published in the last two decades, various aims and findings have presented a wider scope of professionalism. Therefore, this study aims at identifying the synthesized findings in language education research in order to uncover the conceptualized pictures related to

professionalism in language education.

## 2. Literature Review

Initially, the status of the teaching profession was limited to being viewed as a semi-profession, or even a craft (Flexner, 1915 cited in Bair, 2014). Later, with an attempt to elevate the status of teaching, scholars began to consider repertoires of being a full profession and the core concept of professionalism. Among the complexities of the concept of whether teaching counted as a profession were the definitions of professionalism. For example, professionalism refers to “an ideal to which individuals and occupational groups aspire in order to distinguish themselves from other workers” (Pratt & Rury, 1991 as cited in Shon, 2006, p. 4). Note that defining ‘professionalism’ unavoidably relates to considering its construct. As Bair (2014) summarized from the literature in this field, the construct of professionalism is dynamic, and the assumptions are varied. Yet, the pillars of professionalism include knowledge, autonomy, and service. That is to say, without solid knowledge accompanied by particular specialization, it is unlikely for a career to be called a profession. In addition, knowledge, skills, and any other required qualities need to be accepted by a professional community. Such specialized knowledge should also benefit other communities via occupational services. In terms of different forms of professionalism, functionalist perspectives regard the shared attributes or sets of required skills, knowledge, and code of professional conduct as the elements of each occupation. However, ideological perspectives believe that self-interests of each professional community are the foundation of professionalism (Johnson, 1997 cited in Gleeson & James, 2007).

Examining the core characteristics of professionalism in general, scholars in the field of education also attempted to explain the concept of teacher professionalism. For example, Hoyle (1980) assumes that a teacher’s professionalism can be seen through the behaviors exhibited in his/her practice. Similarly, Sockett (1993) notes that there are five repertoires which form professionalism include character, commitment to change and continuous improvement, subject knowledge, pedagogical knowledge, and obligations and working relationships beyond the classroom. Later, Kramer (2003) added attitude, behavior, and communication to the list. In terms of professional requirements, Stronge (2002) asserts that the teacher should both possess and demonstrate the expertise in managing class, organizing for instruction, implementing instruction, and monitoring student progress and potential. Practically, the teacher that meets professionalism expectations recognizes the complexity of teaching, communicates clearly, and is devoted to the teaching profession through conscious services. Yet, the range of low and high professionalism tends to be too broad. Thus, M. Tichenor and J. Tichenor (2005) argue that the range is like a continuum with one end as the basic point of professionalism at which a person who teaches and receives payment and the other end as the highest standards or expectations. In addition, according to Evans (2008), professionalism can be either demanded or transformative. While demanded professionalism appears to be governed by top-down bureaucratic organizations, transformative professionalism is devised by the members of the profession themselves.

In addition to the complexity, professionalism is associated with phases viewed as the journey of its development rather than only one complete state. The first phase of professionalism is called the pre-professional age when teachers were controlled by managerial and technical work. The second phase, the autonomous professional age, provided teachers with autonomy to make decisions on curriculum development. The third phase, or the collegial professional age, highlighted the development of professional communities. The last phase, perceived as the post-professional age, becomes clear when teachers start to critically consider and question themselves what professionalism really means.

Partly due to its complexity, professionalism became a research topic and the sub-topics of studies. However, the scope is seen to be both on teacher professionalism in general and that in specific fields or subject areas in particular. Note that in the last two decades, educational research on professionalism is mainly associated with teachers’ perceptions on professionalism, the changing notion of professionalism influenced by external constraints including business and political changes, and the comparison of teacher professionalism in different contexts. For example, a study in England indicated that teachers’ beliefs, dedication, self-efficacy, and opinions about how the public recognize teachers affect the teachers’ perception on professionalism (Swann et al., 2010). In Romania, a study revealed that advanced content knowledge, professional freedom, and the alignment with professional standards affect the formation of professionalism (Popa & Acedo, 2006). In Australia, professionalism shares the notions of professional standards that require knowledge, practice, and engagement at the professional levels. Another study from Romania revealed that novice teachers focused on teaching skills while experienced teachers focused more on student learning. These two groups justified professionalism differently.

In the field of second and foreign language education, and since professional teaching has become a necessary framework of the profession, an adequate number of scholarly papers on professionalism have been published. Concurrently, Faez (2011) and Leung (2012) note that language teacher education programs should take into account the concepts and movements of professionalism in order to prepare effective foreign/second/additional language teachers. Leung (2012) asserts that the first view of professionalism in language education involves the necessity of possessing professional expertise including disciplinary knowledge, knowledge of student needs, pedagogic content knowledge, and authority management. These can be called prescribed professionalism. However, with prescribed requirements of professionalism, teachers' voices seemed to be inhibited in both policy making and any documented expectations. The second view of professionalism being recognized nowadays is independent professionalism that involves individual teachers' abilities and manifests idea, teaching, and any adaptations while performing effective teaching practices. Fortunately, with the empowerment of teacher agency, teachers' voices began gradually to receive attention. This results in a wider range of research on educational professionalism in various subject areas including language education to emphasize professionalism in teachers' perspectives. Part of more vivid roles of professionalism emerged in language education when researchers began to identify the goals of second and foreign teaching and learning language. Interestingly, with similar theoretical frameworks of professionalism, different studies revealed a broad spectrum of findings ranging from teachers' perceptions to the changing concepts and the depth of professionalism. As such, a substantial amount of studies, both directly and indirectly on professionalism, have gradually contributed to research in this field. This is a reason why this study aims to synthesize research findings on professionalism to present a crystallized picture of professionalism in second and foreign language education. Two questions that guided this synthesis include: what professionalism really means, and how it is displayed in second/foreign language education.

### 3. Methodology

This study adopted Weed's (2005) meta-interpretation procedures for qualitative research with an aim to generate new interpretive findings from existing qualitative studies related to second/foreign language professionalism. Weeds commented that in addition to descriptive reviews, the synthesis of previous research can provide what researchers need via the meta-interpretation of qualitative research. In this study, an analysis of published articles in peer-reviewed journals and a set of selected studies that met the predetermined criteria were explored. The following were the inclusion criteria for selecting the studies: (a) studies that explored any aspects of professionalism in language education (b) articles that got published in peer-reviewed journals between 1995 and 2015 (c) studies that used qualitative data analysis methods, and (d) studies published in English that contain detailed findings. In retrieving qualitative studies relevant to the objectives of the study, the researcher strictly followed the criteria above, adopting purposeful sampling via electronic bibliography databases including Education Resources Information Center (ERIC) and H.W. Wilson Databases.

Adopting Weed's (2005) processes as the methodological framework for doing qualitative research synthesis, the researcher employed seven steps. Firstly, keywords were identified for accessing published articles in the electronic databases. The keywords included professionalism, professional teachers, second language teachers, foreign language, modern language, and language education. Secondly, twenty-six retrieved research articles were initially examined, with emphases on the keywords stated in the abstracts, findings, and the discussions. This stage shares Patton's (2001) explanations that purposeful sampling on the basis of the topical parameter is appropriate for qualitative research. Thirdly, the studies that did not seem to be relevant to professionalism in language education or the purposes of the synthesis were excluded. Fourthly, nine studies that met both the criteria and the relevance of the findings and the keywords were ready for the following step of a theme analysis. Fifthly, all seventeen excluded studies were re-examined in case some relevant parts were missed. At the completion of this stage, one excluded study was added to the selected list. Sixthly, the researcher identified, sorted, and grouped themes situated in each study so as to reveal the results of the research synthesis guided by the objectives. The last stage was associated with developing the findings by scrutinizing the overlapping data to yield finalized themes of professionalism in second or foreign language education. In addition, Weed (2005)'s five fundamental features were also treated as a supplementary framework. These include (a) avoiding pre-determined themes of findings, (b) focusing on the meanings on the basis of the context of each study, (c) interpreting the data that is presented in the studies, (d) limiting the theoretical sampling for the purpose of synthesis, and (e) focusing on the trustworthiness of the synthesis. In short, all seven stages together with the five features above served as the approach to conducting the present research synthesis to manipulate the answers to the guided question: What does 'professionalism' provide to language education?

## 4. Findings

The findings in all studies contributed to this synthesis both directly and indirectly and present four key themes associated with professionalism in language education. These include the notion of professionalism in language education, external factors affecting professionalism, concerns about professionalism, and teachers as essential agents of professionalism.

### 4.1 *The Notion of Professionalism in Language Education*

The notions of professionalism in language teacher education cover a wide array of concepts, with detailed meanings that include both abstract and concrete features. Derived from concepts, professionalism is believed to include repertoires that, in the meantime, serve as qualities for language teachers to abide. Primarily through a basic lens, professionalism refers to the overall quality of being a subject matter specialist, educator, and human being that leads to an effective teacher (Oder, 2008). Being a subject matter specialist equipped with pedagogical competence, qualifications that meet the requirements, target language competence, and language teaching experience are the elements of professionalism. Through a lens that focuses on professionalism for educators, teamwork, classroom management, assessment, and psychological skills are all a subject matter specialist needs to exhibit while performing teaching. Additionally, another angle of professionalism involves character traits and communication competence.

Professionalism also refers to a state of effective teaching that includes an ability to integrate foreign language competence with pedagogical competence in a motivational environment for students (Oder, 2008). That is, professionalism carries the notions of high quality of teaching practices. In addition to teaching, the notion of professionalism reaches commitment to self-professional development while maintaining membership of a social context, resulting in the growth of a partnership. This notion seems to emphasize collective professionalism as a discourse of the teaching community. The additional layer of professionalism includes an ability of an individual teacher to adjust ideas, knowledge, and attitudes into any new situation. Clearly, because the emphasis on teaching, being part of a professional community, and the necessity of ongoing professional development, professionalism encompasses expectations related to all components which result in effective language teaching and leads to students' effective learning.

### 4.2 *External Factors Affecting Professionalism*

While the concept of professionalism has been widely integrated in all processes associated with language teacher education, professionalism itself is situated among a number of factors that have impacts on its notion. These are bureaucracy and administration, social values, and social change.

In terms of bureaucracy and administration, top-down strategies seem to intervene not only the roles but also the expectations of professionalism. With political power, administrators, mostly at the government level, can review and revise the concept of professionalism while practitioners, especially language teachers, seem to lack voices. Once professionalism has been defined and the expected qualifications issued, practitioners can never resist, or even negotiate them. As such, whenever policies change, new notions and expectations of professionalism emerge. This results in changes in the forms of, for instance, emphases and required qualifications of second language teachers. In other words, due to mere centralized bureaucracy and administration, professionalism plays a role of top-down rigid requirements.

Social values would be another influential factor for professionalism. One of these is the status of the language and the expected outcomes of teaching and learning a language. The status of the language also influences how native speakers of the target language are viewed. That is, native speakers are still believed to be more qualified than non-native teachers. Likewise, native speakers are believed to be qualified by nature because of 'nativeness' that unarguably conforms to the concept of professionalism.

The other factor, social change, became an external factor that may provide directions for defining professionalism in language education. Inevitably, with the increasing power of business and globalization, professionalism expands itself yielding more complex notions. Concurrently, business-based movements add measurable qualifications and expectancies into professionalism that share those of business contexts.

### 4.3 *Concerns about Professionalism*

Various notions of professionalism and factors presented above potentially trigger language teachers to raise at least three major concerns. The first one is about the concepts and attributes of professionalism demanded by agents distant from language education fields. This may cause gaps between professionalism perceived by insiders and assumed by outsiders. Incongruent perceptions would discourage language teacher educators and practitioners whose voices seem to be void. Moreover, this concern relates to the perception of devalued teachers'



identities.

The other concern is a consequence of the superiority of native speakers to non-native teachers as perceived by administrators and stakeholders. This value not only affects misconceptions of professionalism but also challenges the concept of qualified teachers. On the basis of professional attributes, being a native speaker should not compensate for a lack of necessary qualities for professionalism.

#### *4.4 Teachers as Essential Agents of Professionalism*

While external factors and concerns seem to exist in the discourse of professionalism, second and foreign language teachers believe that the concept of *self* also exists. Yet, they seem to fail to voice their selfness individually. Self in this instance refers to few roles that teachers play in language education discourse. The first role involves attempts to articulate beliefs with strong identity to, if possible, resist external power. Moreover, teachers themselves believe that they can internally reconstruct knowledge that may bring about change in language teacher professionalism. In doing this, when limited opportunities allow, teachers engage in self-reflection as a gateway to critically analyze their social environment and their professional stories. Through self-reflection, language teachers employ a self-designated discourse of agency that, in the meantime, empowers them through professional development based on their needs. When teachers share similar missions that professionalism can be embedded with their identity, communities are formed. This can result in professional empowerment that is strong enough to contribute to educational society. For example, new meanings of curriculum and learning/teaching standards were drafted and enacted by associations of second/language teachers.

### **5. Discussion**

Overall, this study demonstrates that professionalism definitely exists in the field of language education. The findings also lead to discussion. First, the notions and expected characteristics of professionalism have received much attention. A reason for this could be because of concrete lists on the basis of the concepts. These all are broadly consistent with Socket's (1993) proposed repertoires. As Socket notes, professionalism is exhibited through character, commitment to change and continuous improvement, subject knowledge, pedagogical knowledge, and obligations and working relationships beyond the classroom. This study confirms these all as well as a repertoire on professional development as added points. It should be noted that all elements of professionalism serve as criteria professional teachers are supposed to meet. Nonetheless, part of the concept of professionalism maintains its complexity because no single set can represent the complete notion. Hence, instead of solely focusing on the definite meanings, manipulating core features of professional practices and effective language teachers should be highlighted.

The concentrated findings also uncover language teachers' perspectives on their restricted voices. It is not surprising that they raised question of who really defined professional for whom. Similarly, regardless of specific concepts, professionalism somehow leaves discrepancy between practitioners and those who can affect the expectations. To confirm the vitality of professionalism in language teaching, particularly disciplinary knowledge, pedagogical skills, and dispositions, no teachers should receive privilege. If possible, it can be argued that an issue on the native-non-native dichotomy should not devalue either category. In short, professionalism is not limited to *who* a language teacher is, but *how* professionally an individual teacher performs teaching practices instead

The other aspect of the findings indicated that professionalism is dynamic. According to Sachs (2001), professionalism gradually evolves over time and contexts as a response to external power including, for example, scientific development and business movement. With this in mind, new forms and concepts of professionalism have been adapted to serve business needs. If the external power maintains its strengths, professionalism in language education would also face changes led by outsiders' needs. A significant part of this seems to be professionalism that demands accountability of all who are responsible for the success of language education. Eventually, professionalism would continue being shaped by broader stakeholders.

### **6. Conclusion**

This study employed a qualitative research synthesis method with a focus on synthesizing professionalism in second/foreign language education. Drawing on the findings and data of previous research published in the last 15 years, this study has presented four themes: the notions of professionalism in language education, external factors affecting professionalism, concerns about professionalism, and teachers as essential agents of professionalism. All of the four themes seem to be interwoven and display professionalism in this field. The implications of this study include displaying synthesized pictures of professionalism when considering policies

and practices about language teaching education, from educating pre-service teachers to managing professional development activities. More importantly, this study lays out the complexity of professionalism which can be studied in more depth.

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# Improving Junior High School Students' Spatial Reasoning Ability Through Model Eliciting Activities with Cabri 3D

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## Abstract

One of students' abilities which can facilitate them to understand geometric concepts is spatial reasoning ability. Spatial reasoning ability can be defined as an ability involving someone's cognitive processing to present and manipulate spatial figures, relationship, and figure formations. This research aims to find out significant difference on students' spatial reasoning ability between students who are given Model Eliciting Activities with Cabri 3D (MEAC) and those who are only given Model Eliciting Activities (MEA). Quasi experimental design is used in this research which involves 143 junior high school students as the sample. The result of this research shows that students who are given Model Eliciting Activities with Cabri 3D have better spatial reasoning ability than those who are given Model Eliciting Activities. It is suggested for Mathematics teachers to implement instruction with Model Eliciting Activities with Cabri 3D.

**Keywords:** spatial reasoning ability, model eliciting activities, Cabri 3D

## 1. Introduction

Geometry has been taught since primary school. Learning geometry helps students develop their logical reasoning ability (Nur'aini, 2012). There are many mathematical concepts and procedures which can be explained by geometry representation. Geometry tends to be abstract which is one of many problems making it difficult to understand. However, with the development of ICT, teachers can choose suitable media for teaching geometry in addition to presenting realistic problems. According to Hershkowitz (2014) since 250 years ago, some aspects of geometry have been developed: (a) interaction with spatial geometry figures. Students learn about length, area, volume, and relations among them; (b) spatial geometry figures and its shape transformation; (c) spatial geometry figure is as a basic reflection of visual information through representation, explanation, generalization, and documentation.

The implementation of geometry does not only happen in schools but also in daily activities. It can form students' knowledge about spatial figures and they can apply this knowledge in any fields like design, mechanical engineering, GPS technology, and many others. It also helps them understand other mathematical concepts such as algebra, linear equation, calculus, arithmetic, etc. However, despite the important roles of geometry knowledge, the fact shows that many high school students still experience difficulty in understanding its concepts. A study conducted by Pradika (2012) analyzed students' problems in understanding materials about planes. This study revealed that students had difficulty in the plane visualization especially the shapes, elements, and the nature of planes. These are also confirmed by the observation results in several junior high schools in Palembang conducted by the writer which shows students' understanding in geometry is still unsatisfactory. When the students are given a combination of three cuboids with the same length and width but different height which resembles stair steps and they are asked about its surface area, most of the students cannot answer it. They even calculate the surface area by separating the cuboids. In geometry, the ability which can help students to find solution of such mathematical problem is spatial reasoning ability.

Spatial reasoning ability is an ability involving someone's cognitive processing to present and manipulate spatial figures, relationship, and figure formations (Clement and Battista, 1992). In addition, according to *National Research Council* (2006), it relates to location and movement from a particular object or person physically or

mentally. Spatial reasoning covers three components namely spatial concept, representation, and reasoning. These components involve relationship among spatial structures and possible representations. This ability involves spatial visualization and orientation, such as the skill of reading figures and representing 2D figures from 3D figures based on various points of view (Nurlatifah, Wijaksana, & Rahayu, 2013) and nowadays the awareness of the importance of spatial reasoning ability in Mathematics education is increasing (Khan, Francis, & Davis, 2014).

There are many softwares provided for teachers to solve mathematical problems and use it in teaching and learning process one of that software is Cabri 3D. Besides use Cabri 3D to improve spatial reasoning ability, a meaningful learning approach is needed, and one of learning approaches is Model Eliciting Activities (MEA). It is one of the mathematical learning approaches which allows students to construct mathematical concepts through realistic problems. Software integration into this approach makes the teaching and learning process more interactive. Students can understand concepts with the help of Cabri 3D. Students also can manipulate and visualize figures through this software.

## 2. Research Objective

This research is aimed to find out is there significant difference on students' spatial reasoning ability between students who are given Model Eliciting Activities with Cabri 3D (MEAC) and those who are only given Model Eliciting Activities (MEA).

## 3. Research Method

This research used quasi experimental design which involves 143 junior high school students as the sample. They are divided into two groups, one group of students is given Model Eliciting Activities with Cabri 3D (MEAC) and the other group is given Model Eliciting Activities. Before the instruction, learning materials and student's workbook are created by the writer for both groups. A test to measure students' spatial reasoning ability is also developed and given before and after learning process.

## 4. Result

Statistical analysis is conducted by firstly testing the normality of the data in order to know whether the obtained data are distributed normally or not. For this purpose, Kolmogorov Smirnov is used with the following hypotheses:  $H_0$ : The data are distributed normally and  $H_1$ : The data are not distributed normally. The criterion of testing these hypotheses is that if p value  $> 0.05$ ,  $H_0$  is accepted and the other one is rejected and vice versa. The result is displayed in Table 1.

Table 1. The result of normality test

	Instruction	
	MEA	MEAC
Number of Students	71	72
K-S	0.651	0.651
Asym. Sig	0.791	0.791
$H_0$	Accepted	Accepted

As shown in Table 1, p value (Sig.) is more than 0.05. It means  $H_0$  is accepted indicating that the data are distributed normally. After normality test, homogeneity test is conducted. The hypotheses are as follows  $H_0$ : The data are homogen,  $H_a$ : The data are not homogen. The criterion of testing these hypotheses is that if p value  $> 0.05$ ,  $H_0$  is accepted and the other one is rejected. The result of homogeneity test can be seen in Table 2 below.

Table 2. The result of homogeneity test

	Instruction		F value	Sig	$H_0$
	MEAC	MEA			
Number of Students	72	71			
Mean	0.447	0.315	8.264	0.005	rejected
Std. Dev.	0.161	0.212			

As shown in Table 2, p value (Sig.) is lower than 0.05. It means  $H_0$  is rejected indicating that the data are not

homogen. Due to this result,  $t^2$ -test is used to see the difference of means.

$H_0$ : there is no significant difference students' spatial reasoning ability improvement between students who are taught by using MEAC and those who are taught by using MEA.

$H_1$ : there is significant difference students' spatial reasoning ability improvement between students who are taught by using MEAC and those who are taught by using MEAC.

If the p value is more than 0.05,  $H_0$  is accepted, and if p value is lower than 0.05,  $H_0$  is rejected. The result is displayed in Table 3.

Table 3. The result of difference means test

	Instruction		t' value	Sig (2 tailed)	$H_0$
	MEA	MEAC			
Number of Students	71	72			
Mean	0.315	0.447	-4.181	0.000	rejected

As shown in Table 3, the p value is lower than 0.05 so that  $H_0$  is rejected. Thus, it can be concluded that there is significant difference students' spatial reasoning ability improvement between students who are taught by using MEAC and those who are taught by using MEAC.

## 5. Discussion

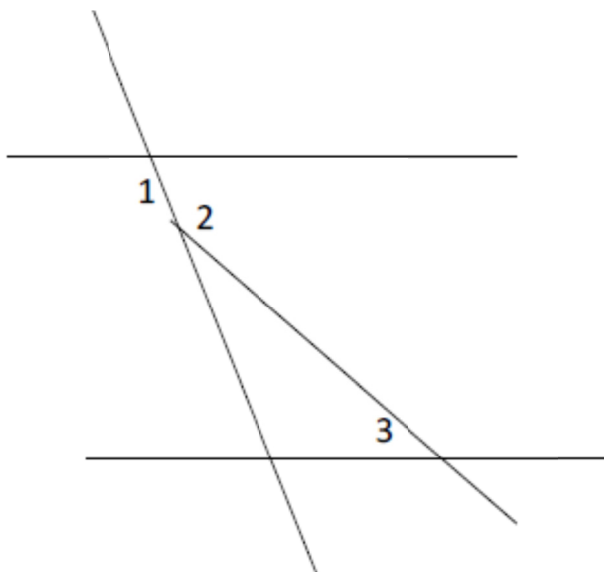
The result of statistical analysis shows that there is significant difference on students' spatial reasoning ability improvement between students who are taught by using MEAC and those who are taught by using MEAC. Thus, it can be concluded that MEAC instruction has positive effect on students' activities during the teaching and learning process in the classroom. In other words, MEAC instruction is more effective to improve students' spatial reasoning ability.

The positive result is because MEAC instruction facilitates students to practice and develop their spatial reasoning ability caused by the fact that students are involved directly to understand the given concepts with visuals in Cabri 3D. It is in line with what Presmeg's statement in Encyclopedia of Mathematics Education (Presmeg, 2014) that visualization in Mathematics is not a new thing as Mathematics uses symbols, diagram, abstract notation which need visualization. Visualization is the ability, process, and product from creation, interpretation in mind. Besides, students are given opportunities to discuss with their classmates, create plans, and determine appropriate steps to solve mathematical problems. This activities also help students enhance their knowledge and reasoning ability.

The finding of this research is in agreement with a research conducted by Wulandari (2013) revealing that there was a significant difference in students' learning success between students who were taught by using realistic mathematical instruction with Cabri 3D and those who were not about spatial geometry figures. Besides, Maarif (2015) in his research also claimed that in geometry instruction the use of media such as Cabri II Plus can be used as an effort to improve students' ability in forming geometry evidence. Furthermore, Widiyarsari (2013) in her research also mentions that mathematics teaching with Model Eliciting Activities is necessary to implement in schools which results in broader instruction. She also states that there is a need to develop varieties of instruction by using Model Eliciting Activities. This will improve students' ability to master mathematical concepts.

The analysis result of students' work also shows that they are able to understand line and angle concept well, as shown in Figure 1. The question item and student's answer to see the relationship between figures to determine the angle are as follows:

Item 1: Angle 1 is  $95^\circ$  and Angle 2 is  $110^\circ$ . What is the measure of Angle 3?



Student's Answer

Diketahui  
 sudut 1 =  $95^\circ$   
 sudut 2 =  $110^\circ$   
 Ditanya  
 sudut 3  
 Jawab  
 Sudut 4 =  $180 - 110$   
 $= 70^\circ$   
 Sudut 5 = sudut 1 karena sudut dalam  
 berseberangan jadi besarnya sama,  $95^\circ$ .  
 Sudut 3 + sudut 4 + sudut 5 =  $180^\circ$   
 Karena terdapat dalam segitiga.  
 Jadi sudut 3 +  $70^\circ$  +  $95^\circ = 180^\circ$   
 Sudut 3 =  $180 - 70 - 95$   
 $= 15^\circ$   
 $=$

Figure 1. Student's Answer of questions item 1

As shown above, it can be seen that the student understands the relationship between angles intersected by a line. In the student's figure, the student states that Angle 1 is the same as Angle 5 due to alternate interior angle. Besides, she also knows supplementary angles and the sum of angles in a triangle. She does not mention which angle supplements another angle. However, in her calculation, she writes that the angle which is  $70^\circ$  is supplementary to the other angle which is  $110^\circ$  so that she can determine the angle value which can help her find the answer of the question.

Then, in the question item with indicator which is drawing or designing a geometry figure and representing the line size in the figure and other indicator which is finding out the relation among elements of geometry figure. The question item and student's answer are provided below:

Item 2

- a) Draw a cube of KLMN. OPQR with sides 3cm.

- b) Which line is the intersection between side of PQRO and side of KORN and between side of KLQR and side of MNRQ

Student's Answer:

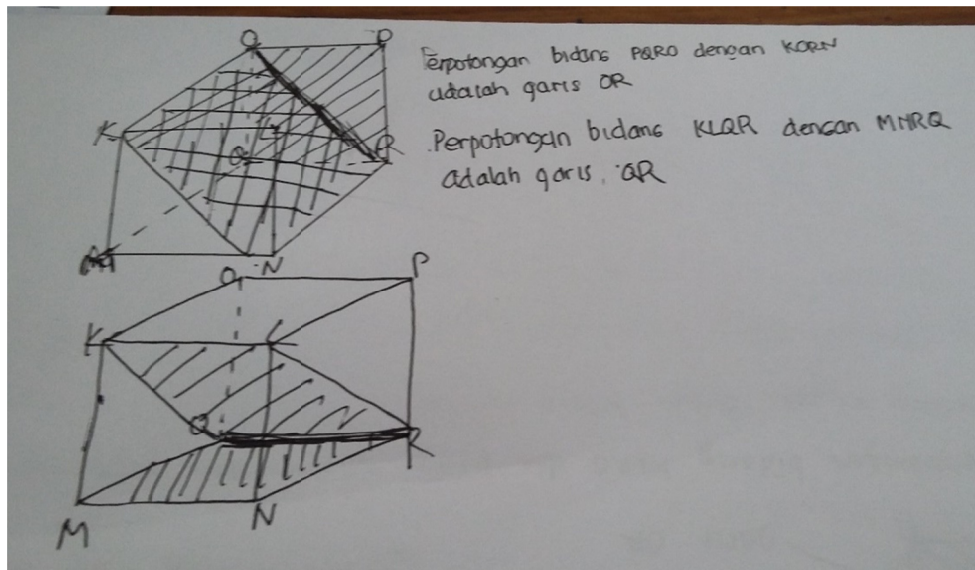
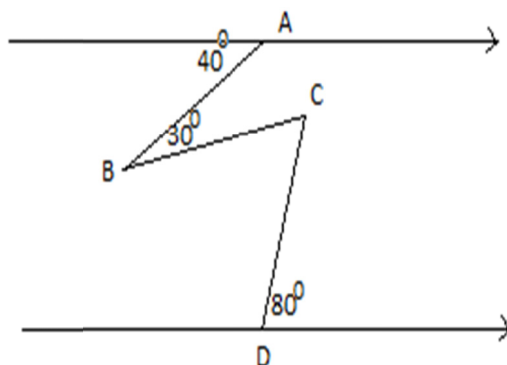


Figure 2. Student's answer of question item 2

As shown in Figure 2, the student is able to draw a cube. Eventhough the cube is not well-drawn yet, she can name the cube correctly so that she can determine the intersection among sides asked in the question.

Next, in the question item below, the indicator is manipulating figure to determine angle.

Item 4: Look carefully at the figure below:



How is the process to find out the measure of angle BDC?

Student's Answer:



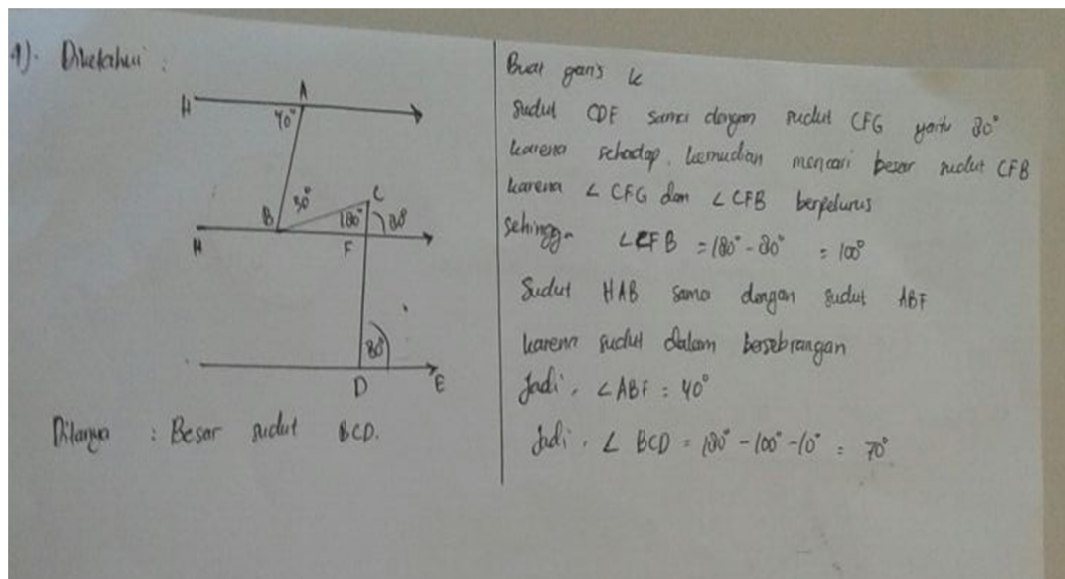


Figure 3. Student's answer of question item 3

As shown in Figure 3, the student can manipulate the picture by adding other line to help her. With this line, she can find the relation between Angle CDE and Angle CFG, namely corresponding angle so that both angles are the same. From the relation, students can determine Angle CFB is supplementary to Angle CFG. Finally, she also knows that the sum of angles of a triangle is  $180^\circ$  so that she can determine Angle BCD.

## 6. Conclusion and Suggestion

From the results of this research, it can be concluded that students who are given Model Eliciting Activities with Cabri 3D shows better reasoning ability than those who are given Model Eliciting Activities. It is suggested for Mathematics teachers to implement instruction with Model Eliciting Activities with Cabri 3D. For better learning outcomes, facilities such as computer laboratorium or notebooks, Cabri 3D software, and other relevant media or references can be used.

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# Religious Education in Public Schools in Western Europe

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## Abstract

Christianity is one of the cultural and ethical cornerstones of Europe. In the European Union (EU) there is no overarching policy on religious education (RE) in the school system. The authors use a comparative methodology to analyze the constitutions of Western European countries in relation to different aspects of RE. Specifically, it is focused in Germany, Austria, Belgium, France, Ireland, Luxembourg and the Netherlands. Whereas the right to religious freedom for all is clearly established in these constitutions, obvious differences are revealed in the legal provisions for and attitudes towards religious education. For example, the legal framework of this education has been included in the constitutions of all the analyzed countries, except in the case of France. Also, optional subjects are on offer in Germany, Belgium, the Netherlands, and Luxembourg, however no alternative subjects to RE are on offer in Austria. In this sense, the authors defend that it is essential to open up the academic dialogue about religious and spiritual issues.

**Keywords:** religion, education, Europe, school, constitution

## 1. Introduction

The policies planned at the heart of the European Union (EU) and favoring the establishment of a joint identity are encouraging initiatives for the creation of a European Constitution and more homogenized national education systems. In turn, the role of religious education within these systems is questioned in order to predict and shape their future.

In order to fully comprehend the current European culture it is necessary to take into account the pillars which have gradually formed it over time, including religion. Europe, far from being a monolithic block, is made up of a diverse set of communities whose histories are steeped in religious experiences and beliefs.

Without expounding on the unavoidably complex history of the current situation, it should be highlighted that if we are to fully examine and understand this phenomenon we need a suitable historical cultural perspective which goes beyond our competence. However, it should be noted that for centuries Christianity permeated and radically influenced European society, in art, language, laws, morality, music, politics, family life... even in our way of thinking. In this regard, the history of Europe cannot be understood without taking into account the advent of Christianity, its subsequent expansion, or the religious conflicts of the 15th and 17th centuries.

Religious education in schools has been greatly affected by the changing relationships between Church and State (Hand, 2015). In the 19th century, the balance established between State and society brought about a concept of secular State where religion was limited to the private sphere. However, as both fields were clearly outlined in the 20th century the state took on a subsidiary role in society, where freedom covered the religious aspects of teaching (Goodman, 2016). The religious neutrality of the State was respected, and parents could choose the religious education of their children. In fact, after the Second World War in Western Europe protection was guaranteed for human rights, the secular nature of education was blurred, and the tendency was to grant parents the right to educate their children freely according to their personal religious beliefs. This meant that religion moved beyond the private spheres and into state schools, although not in France, where compulsory state education continues to be totally secular.

### 1.1 International Declarations and Recommendations

The Universal Declaration of Human Rights (United Nations General Assembly, 1948) guarantees the rights of everyone in its article 18 "to freedom of thought, conscience and religion; this right includes freedom to change

his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance”.

In addition, it also states in its article 26.2 that: “Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace”.

However, the interpretations of the texts of international agreements signed by Spain and those of our constitutional charter do not align. Far from constituting a point of union between the different countries and their citizens, the interpretation of this article is a matter of conflict, used to strengthen the arguments for or against religious education in classrooms. The dilemma lies in knowing whether the full development of human personalities requires instruction in religion or not. We thus encounter a part of society chiefly supported by religious communities which consider man to be a religious being by nature, and in turn demand that religion be compulsory within the formal curriculum. In contrast, other sectors of society are opposed to religious education in schools as an integral part of life.

When referring to freedom of thought, conscience and religion, the European Convention on Human Rights of 4 November 1950 (Council of Europe, 1950) states in its article 9.1 that: “Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief and freedom, either alone or in community with others and in public or private, to manifest his religion or belief, in worship, teaching, practice and observance”.

In order to guarantee the rights stipulated in the Convention the additional Protocol is adopted for the protection of Human Rights and Fundamental Freedoms (Council of Europe 20 March 1952), where on the subject of teaching it states in its article 2: “No person shall be denied the right to education. In the exercise of any functions which it assumes in relation to education and to teaching, the State shall respect the right of parents to ensure such education and teaching in conformity with their own religious and philosophical convictions”.

The Universal Declaration of Human Rights took on the form of an international legal norm when two major agreements were signed, in the articles 18.4 and 13.3 (UNESCO, 1966):

- 1) In the International Covenant on Civil and Political Rights, the Party States undertake to “have respect for the liberty of parents and, when applicable, legal guardians to ensure the religious and moral education of their children in conformity with their own convictions”.
- 2) With the International Covenant on Economic, Social and Cultural Rights, the Party States also undertake to respect the freedom of parents, and when applicable legal guardians, to choose for their children or wards to attend schools other than those set up by public authorities, providing they meet the minimum requirements set or approved by the State as regards education, and ensuring their children or wards receive religious or moral education in line with their convictions.

The Covenant on the fight against discrimination in education (UNESCO, 1960) stated in its article 5.1 that the freedom of parents to provide their children with the religious training they consider suitable, in agreement with their own beliefs and conviction, must be respected.

In the Declaration on the Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief (General Assembly UN, 1981) it is stated that parents may educate their children in morals and religion in line with their own beliefs within the family context. Children have the right to receive a religious education according to the preferences of their parents, with the greater interest of children as a guiding principle. In the event of the minor not being in the charge of parents or guardians, the child's interests are taken into account.

In the Convention on the Rights of the Child, adopted by the General Assembly of the UN (General Assembly UN, 1989) it is stated, in its article 27.1, that Party States must recognize the rights of all children to a standard of living suited to their physical, mental, spiritual, moral and social development.

The Charter of Fundamental Rights of the European Union (European Union, 2000) categorically states that, according to national legislation, it is necessary to respect the freedom to set up educational institutions respecting democratic principles, as well as the right of parents to guarantee the education and instruction of their children according to religious, philosophical and pedagogic convictions.

The Consultative Assembly of the Council of Europe, dedicated to Religion and Democracy (Parliamentary Assembly, 1999), advised the Ministers' Committee to invite the governments of the Member States to promote and develop religious education, establishing as specific suggestions:

- That religious education becomes a means for promoting a set of values that allow younger generations space for reflection and understanding within a democratic and ethical education.
- To encourage education in all world religions, analyzing them comparatively and eventually identifying their main ideals.
- To encourage the study of religions, not only in compulsory education and among children, but as part of actions and research at university level.
- To attempt to prevent any quandaries caused by the beliefs of children's parents and the religious education established by the state in order to ensure respect of the freedom to decide of families.

### *1.2 Constitutions and Religion*

Controversies and discrepancies arose when attempts were made to define the major role played in the past and at present by Christianity in the EU (Barnes & Felderhof, 2014). When drafting the Constitutional Treaty of the EU, the mere inclusion in its Preamble of an expression mentioning the “Christian roots” of European societies divided the countries. Twelve countries defended its inclusion: Germany, Austria, Slovakia, Spain, Hungary, Ireland, Italy, Lithuania, Malta, Netherlands, Poland and Portugal, all countries which were Catholic or mostly Catholic. Its inclusion was finally ruled out due to rejection from Belgium, Cyprus, Denmark, Slovenia, Estonia, Finland, France, Greece and Latvia, who claimed this could jeopardize a possible European secular identity (Petschen, 2008). Despite the fact that this statement was simply the expression of an undeniable historical fact, it was considered politically inconvenient.

The European Constitution (European Union, 2005) includes, in its article II-74, the right to free and compulsory education, the liberty to set up educational centers, and to guarantee to parents that their children will be educated and taught in line with their religious beliefs. Freedom of education is thus associated with religious freedom.

Nevertheless, differences - to be examined at a later stage - become apparent when comparing the German version of the European Constitution which does refer to the religious values of the EU, to the official version in which the French stance speaks only of spiritual values.

The rejection of the Constitutional Treaty by some countries brought about a constitutional crisis in the EU which finally ended with the ratification and implementation of the Lisbon Treaty, modifying the European Union Treaty and the Constitutive Treaty of the European Community. The aspect of religion was modified with the inclusion in the Preamble of the following text:

Drawing inspiration from the cultural, religious and humanist inheritance of Europe, from which have developed the universal values of the inviolable and inalienable rights of the human person, freedom, democracy, equality and the rule of law (EUR-Lex, 2004).

The difficulties of a common policy on this are highlighted after observing differences in the treatment given to religion in the constitutions of each member country. The table below shows the legal basis established in each country mostly based on the right to religious freedom and when applicable to religious education taught at primary and secondary school level.

## **2. Method**

Given the ongoing difficulties that EU countries are experiencing in adopting a common stance on religion, this study focuses on examining the current differences and similarities of the situation of Germany, Austria, Belgium, France, Ireland, Luxembourg and the Netherlands. To do so, we aim to analyze the constitutional and legal framework to ascertain how far the rights and obligations of parents in educating their children extend, as well as the freedom to choose religious education (RE) in state schools, and the safeguarding of the approvals of RE curricula and textbooks. For this purpose a characteristic methodology in Comparative Education is used, following the phases proposed by García (1996) and Llorent-Bedmar (2002). The comparison units are the selected countries between of which similarities and differences have been highlighted. This study was based on the original version of the National Constitutions of each country.

## **3. Results**

The difficulties of a common policy are highlighted after observing differences in the treatment given to religion in the constitutions of each member country. The table below shows the legal basis established in each country mostly based on the right to religious freedom and when applicable to religious education taught at primary and secondary school level.

Table 1. Constitutions, education and religion

Country	State and Education	State and Religion
Germany	Freedom of education remaining loyal to the Constitution (art. 5, 3). Educational system under the supervision of the State (art. 7, 1).	Those in charge of the child's education have the right to decide on religious education. This type of teaching takes the form of an ordinary subject in state schools, except in secular schools (art. 7, 2-3). Religious education in schools attended to by the Church or religious community in charge. The state is responsible for the management and supervision of education (Annex 1: art. 17).
Austria	The Federation is in charge of the legislation and execution of schooling (art. 14.1).	All minors must be open to political, religious and ideological thought in order to take part in the cultural and economic life of Austria, Europe and the World, as well as in common missions of peace and love of peace (art. 14. 5a) Education described as neutral, implying respect for philosophical, ideological or religious beliefs of parents and students (art. 24.5).
Belgium	Guarantees the enjoyment of rights and freedoms (art. 11), categorically determining the freedom of education and the prohibition of any measures preventing or hindering it (art. 24).	Students of compulsory school age with a right to moral and religious education (art. 24.3). State schools offer in obligatory schooling the chance to choose between the teaching of a specific recognised religion or a secular moral education (art. 24.1).
France	The law determines the main principles of education (art. 34).	France is a non-divisible, secular, democratic, and social Republic which guarantees equality in the eyes of the law for all citizens, regardless of origin, race or religion and respecting all beliefs (Preamble, art. 1). The State recognises that public worship is due to Almighty God. The State shall reverence his name, respecting and honouring religion (art. 44.1).
Ireland	The State must ensure children of schooling age receive basic education, respecting the educational wishes of parents. The family is recognised as primary and natural educating agent, respecting the right and obligation of parents to take charge of the religious, moral, intellectual, physical and social education of their children (art. 42.1). The State provides free primary education and makes an effort to complement private initiatives (art. 42.2).	State funding will not discriminate against schools managed by religious confessions. Students are not obliged to attend the religious education classes taught in these centres (art. 44, 2.4). The State contributes with educational facilities or centres, especially as regards religious and moral education (art. 42, 4).
Luxembourg	The State must ensure that all Luxembourgers receive primary education, which will be obligatory and free (art. 23).	The freedom of worship and its public exercise as well as the freedom to manifest religious opinions are guaranteed (art. 19).
Netherlands	Education is the object of constant attention from the Government. (art. 23.1). It is executed freely, yet may be supervised, and teachers will have to pass an ability and morality exam (art. 23.2). All municipalities provide basic public education (art. 23.4).	State education is regulated by law, respecting religion or individual convictions (art. 23.3).

*Source.* Die Verfassung des Deutschen Reichs, 1919; Die Österreichische Bundesverfassung, 1920; Constitution de la Belgique, 1994; Constitution de la République française 1958 ; Constitution of Ireland, 2004; Constitution du Grand-Duché de Luxembourg, 1868; Verfassung des Königreiches der Niederlande, 1983.

### 3.1 Germany

This type of education is characterized by the agreements signed between the religious confessions and each of the sixteen länder (states). RE is provided in state and private schools and is included in the curricula for primary and secondary education. It is presented as an optional ordinary subject (Religionsunterricht), but with academic

effects. Although it depends on individual states, there are normally two hours of class a week. Parents are chiefly in charge of choosing the subjects to be taught to their children in accordance with faith and religious belief. From the age of 14, students can freely decide whether or not they want to study RE, as well as the educational itinerary or doctrine they desire for their education. The predominant religious confession, Catholic or Protestant, varies depending on the state. Content taught is ultimately the responsibility of religious communities, as is the selection of textbooks and teacher training. RE is a regular subject in state schools with the exception of secular schools. Without detriment to the right to state supervision, RE is taught in keeping with the main principles of religious communities).

According to the Bremen Clause (Parlamentarischen Rat, 1949), RE is voluntary and the responsibility of the Church, except in the states of Bremen, Berlin and Brandenburg, with legislation predating the Basic Law (Rodríguez, 2004). The German education system offers alternative subjects to RE. Their naming and content depend on individual states. These optional subjects are Philosophy, Ethics, Values and Norms and Free Study (Spanish Centre for Educational Research and Documentation, 2001).

### 3.2 Austria

Despite the institutional and organizational separation in Austria between Church and State there is reciprocal cooperation between both bodies as regards religious education: "It will be the task of the Austrian school to promote the development of talents and the potential skills of students in keeping with ethical, religious and social values" (Austria National Council, 1949).

RE (Religionsunterricht) is regulated by the Religious Education Law of 1949 (Austria National Council, 1949). It is obligatory in state schools until the age of 14, after which it is classed as an optional subject. Legally, all religious communities, Catholic, Protestant and Muslim, are treated equally. It is up to the individual communities to train teachers in the subject, as well as to supervise content and textbooks.

The autonomy of schools allows an independent administration of resources, which according to the Church limits religious education, as it depends on the "religious climate" of individual schools.

Due to the number of students who do not request religious education, some schools have incorporated the alternative subject of Ethics. However, this subject is not yet widely available due to high costs.

### 3.3 Belgium

After endless religious conflicts the School Pact was signed in Belgium in 1959. It guarantees the teaching of religion and moral although there is no official State religion.

At present RE (Godsdienstonderwijs) is compulsory and counts towards the average mark (Serbeto, 2013). Students are allowed to receive an education in one of the religions recognized by the State (Catholic, Protestant, Orthodox, Jewish and Muslim) or receive secular moral education. This is decided by the parents, but there are also special instances, such as in the case of Jehovah's Witnesses, in which the student can be completely exempt from receiving religious education.

At present, discussion is focused on the elimination of both subjects and the inclusion of a single subject combining the history of the different religions, although no changes have been implemented to date.

With the Decree of 1 December 1993 the government established regulations for the inspection and educational support of the subjects of Philosophy and Religion. This means that the inspection service has no competences on RE and every centre which teaches religious subjects has an ad hoc association in charge of study plans, inspection, and support in the courses of Moral Education and Religion. These associations are also in charge of implementing training and retraining courses for the teachers in charge of these subjects. The selection of teachers, curriculum content, and education manuals is the competence of the religious communities themselves, although individual schools have decision-making autonomy.

### 3.4 France

Considering that in 2010, 64% of French citizens declared themselves to be Catholic, while 28% claimed not to profess any religion (Département Opinion et Stratégies d'Entreprise, 2010), it might be deduced that the country is predominantly Catholic. However, there has long been a strict separation between Church and State which the French are very proud of. Currently, state schools are secular, and religion is excluded from their classrooms. Furthermore, in 2004, following intense debate Law 2004-228 (Assemblée nationale, 2004), applying the principle of secularism to regulate the wearing of signs or clothing manifesting a religious affiliation in state schools, lower secondary and secondary schools was passed, prohibiting the public display of religious symbols in state schools.

Since the 2013-14 academic year all schools have been obliged to feature the Secularism Charter (Ministère de l'Éducation Nationale, 2013) in a visible location. This charter is a brief text, composed of 15 articles, the first five of which relate to the secularism of the Republic, while the remaining 10 reference secularism in schools. Most of the articles highlight the merits of secularism in school and maintaining it. The Charter explicitly states that France is secular and establishes a clear separation between religions and the State, which is held to be neutral as regards religious or spiritual convictions. It also prohibits all forms of proselytism in schools, ensuring staff are completely neutral in exercising their functions, without expressing their own political or religious beliefs, while transmitting the significance and value of secularism to their students.

No student can claim political or religious conviction when appealing to a teacher in relation to the right to study a part of the programme, and it is forbidden to appeal to religious beliefs when rejecting the rules applicable in schools in the Republic.

Nevertheless, the school calendar specified in the study programme sets aside a half-day a week in primary education so that the different religions can teach RE outside school. In secondary education an hour is left free every week within the school itself so that a chaplain may teach anyone wishing to study RE.

Exceptionally, RE is part of the school curriculum in the regions of Alsace and Lorraine, which conserved their traditional agreement with the Vatican. Attempts are currently being made to gradually negotiate the application of secularism in both regions (UFAL, 2016).

### *3.5 Ireland*

The 1937 Constitution reflects the Roman Catholic, social, and educational thinking of the Irish people, as it defends the right of parents to RE and the role of the state as guarantor of this right. Although there is no religion officially recognized by the State, most citizens are Roman Catholics (European Commission, 2013).

The vast majority of Irish primary schools are under the control of religious communities. Private education is recognized but confessional schools are not necessarily part of this sector.

In primary education, 90% of schools are both national (or state) and confessional (Christian), as they both profess Christian educational ideas (usually Catholic) and are under the supervision of local committees where the Church - almost always at parish level - has predominant representation. These schools are of course fully funded by the State, resulting in a major degree of State control, albeit with considerable leeway for autonomy, even as regards hiring teaching staff. In no case are they "exclusively confessional", that is to say, they cannot reject students on religious grounds (García, 2006).

In pre-primary (ages 4 to 6 and non-compulsory) and primary education (ages 6 to 12 and compulsory) there are 30 minutes daily for RE (Religious instruction). This is also taught as a compulsory subject in secondary education (obligatory from 12 to 16).

Although confessional RE is included in the compulsory curriculum, individually students can opt out of this education (Moreno, 2013), without there being an alternative subject. The 1998 Education Law recognizes the right of parents or tutors to select the education centre depending on their religious choice. From the 1970s parents have taken on a rather active role in the setting up of multi-confessional schools, not very successfully.

The curriculum and study plans for subjects are organized and planned at national level. However, this is not the case with RE due to the rights of the different religions to design and supervise their own curriculum and textbooks.

### *3.6 Luxembourg*

In Luxembourg there is no strict separation between State and religion. The Constitution accepts that religious communities carry out an important public role. Therefore, the cooperation between the State and the religious communities is institutionalized through signed agreements. At present, the Catholic, Jewish, Protestant and Anglican communities benefit from different agreements and are funded, with RE teachers also being paid by the State.

Although most Luxembourgers are Catholic - 68.7% of the population in 2008 - it should be noted that 24.9% do not profess any religion and there has been a noticeable increase in the Muslim community (Borsenberger & Dickes, 2011).

As regards the freedom of religious conscience of the children, with the exception of the subject L'instruction religieuse et morale, the 2009 schooling law (Éducation nationale, 2009) establishes that school education cannot privilege any religious doctrine.



The law on the organization of Primary Education (Éducation nationale 2009) stipulates that the subject of religious and moral education should become a field of learning for second, third, and fourth years. It is obligatory and can be assessed, and is offered as an alternative to the subject of Moral and Social Education. RE is taught 2 hours a week in keeping with the agreement signed between the government and the archdioceses of Luxembourg. The alternative subject is taught in the same time slot. The choice between the religious option or the alternative is made by parents. The RE study programme and the textbooks are set by the Ministry following suggestion of the heads of religious authorities.

### *3.7 The Netherlands*

Freedom of religion is guaranteed in the Netherlands, where there is a separation between Church and State. Its society is becoming increasingly secular and the demand for RE is decreasing.

As in most countries, it is possible to find schools governed by public authorities as well as private ones, which are mostly religious. Both types of schools are recognized and approved by the Ministry of Education and state-funded.

Primary education includes the subject “Religious and Ideological Movements”, about the religions of the world and their different visions. This subject, introduced in 1985 to encourage tolerance in Dutch society, is offered as an optional subject in schools, and it is up to parents to request it for their children (Pol, 2008).

The goals of RE are structured into three nuclei: A. Personal, contributing to the development of the religious identity of students. B. Social, promoting respect for other religious views of the world and treating morals in society. C. Professional, educating the students in the religious/ideological/moral aspects that can later be developed professionally.

Although RE is part of the Dutch education system, differences can be found depending on the type of educational establishment. For instance, in state schools it is secular and its aim is to educate on the different beliefs. At the same time, private schools are authorized to teach their religion and beliefs as a compulsory part of the curriculum. In this last case study programmes and textbooks are chosen by the individual religious confessions and subsequently approved by the education authorities.

## **4. Discussion**

The European Union is a community of states with a good present and an even better future. The continuous negotiation process between the members of this union of States is yielding results that far exceed the merely economic and mercantile. Without a doubt, in recent decades the different peoples that form the EU have been brought closer together, overcoming linguistic and cultural borders, promoting qualification equivalences, greater professional mobility, and a long list of socio-economic advances of great importance. However, the results desired should not create unfounded expectations and lead us to suppose that an educational unification similar to the economic-commercial one is to occur in the short or medium term.

Christianity plays an important role in European societies, defining and guiding models and ways of life for most of its citizens. Considered a basic pillar of their cultural baggage and a vital tool for the transmission of values, it has constituted an essential element in the formation of European states and their national education systems, and can be found in the cultural and ethical foundations of Europe. Therefore, RE is not at all a trivial matter, as all the countries studied integrate it in school curricula.

The legal framework of this education has been included in the constitutions of Germany, Austria, Belgium, Ireland, Luxembourg, the Netherlands, Spain, Greece, Italy and Portugal. In addition, all these constitutions explicitly state the right to freedom of religion (in Belgium, this is implicit). The sole exception is the case of France, where the principle of secularity is held. Only Germany, Austria, Belgium, and Ireland refer to religious education in the school system.

In all the countries studied, except France, this education is included in schools. In France it does not appear on the school curriculum, although it is obligatory in the region of Alsace and the department of Mosela, due to the still applicable Napoleonic concordat with the Holy See (Guénois, 2012).

Luxembourg is an exception to the general separation between Church and State, as it has no strict separation between Church and State or significant connotations: in Germany and Austria taxes are collected for religious confessions; the Irish Constitution features religious references; and part of the budget in Belgium and Luxembourg is set aside for religious confessions.

As regards the free choice of RE it is observed that in Austria it is still a compulsory subject within the school curriculum. It is also a compulsory subject in schools in Germany and Luxembourg, but students, or their parents

or guardians if they are under 18, can request exemption. There are also countries where this education can be freely requested, as is the case of Belgium and the Netherlands. Although it is not obligatory in Ireland, the country's school curriculum is imbued with a religious and moral education.

In general, the content and textbooks of these countries are decided and approved by the different religious confessions and subsequently ratified by the educational administrations. This is the case of Germany, Austria, Belgium, Ireland and Luxembourg.

No alternative subjects to RE are on offer in Austria (although some schools have recently started offering them). However, optional subjects are on offer in Germany, Belgium, the Netherlands, and Luxembourg.

We are in agreement with most of the international declarations and national constitutions when they state that parents have the right and obligation to educate their children. As the ultimate aim of the education process is the integral development of the students, all their skills and potentials should be exercised in order to provide them with an education that can make them independent people with ideals of their own. Obviously, for someone with religious principles the aspect of religion should also be part of their children's education. Another matter is how this should be executed, taking into account the rights of the rest of the students, even if in the case of EU citizens they are in a minority. However, what should really be questioned is whether this education should be carried out in state schools and how it should be carried out. In this regard we feel it is essential to open up academic dialogue towards the religious and spiritual, as is being called for (Iranzo, 2013).

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# The Effectiveness of Neurological Impress Method on Reading Fluency of Students with Learning Disabilities in Amman, Jordan

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## Abstract

The aim of this study was to evaluate the effectiveness of Neurological Impress Method (NIM) on reading fluency of students with learning disabilities in Amman, Jordan. A sample of forty students (boys and girls) between the ages 10-12 years old with learning disabilities were selected from the Fourth Amman Educational Directorate in the Hashemite Kingdom of Jordan.

Students focused groups in this research were separated into two different groups including the satisfactory controlled group. The participants were taught for one complete semester. Two hypotheses were formulated to guide this research.

Statistical analysis to the gathered data revealed that the focused group of students who were trained according to the scheduled strategy to improve students reading ability or became more fluent in reading.

Full analyses were applied using the T-test on all available data, indicating that students who were trained according to the scheduled strategy.

The study found out that the strategy reduced the reading fluency deficiency in teens with different levels of learning disabilities. Consequently, it was recommended that the strategy can be used to improve reading fluency of students with learning disabilities.

**Keywords:** classification, effectiveness, Jordan, learning disabilities, NIM, reading fluency

## 1. Introduction

Learning disabilities are problems that may affect the brain's ability to receive, process, analyze, or store information. These issues make it hard for a student to learn as quickly as someone who isn't affected by learning disabilities (Oladele, 2013).

Many researches indicate that there are a staggering number of disability cases occurring worldwide according to many different reasons.

To be able to read is a basic fundamental for a student to succeed in the classroom, despite the fact that reading is a complex process. Students with learning disabilities have problems in comprehending what they read and what they have learned on the long span process without support. That due to the difficulties they may face while they are processing information.

Such students can be identified by the fact that they can't comprehend at similar level and rate like their peers of their age in the same classroom. The complications of students with learning disabilities revolve to be more complicated especially at public schools as most teachers are not equipped and trained with specialized techniques that are required for students with learning disabilities (Oladele, 2013; Barden, 2009; Hasbrouck & Tindal, 2006, and Omotoso, 2001).

The school's curriculums in Jordan are designed for general academic needs of all students without any considerations to students with learning disability. Such categories of students usually face difficulties in reading fluency and comprehension leading to their lacking behind in comparison to other normal students in the classroom. Despite the location and the education levels, many researchers worldwide acknowledge the fact that

learning disability is a universal problem (Young, 2011; Ming & Dukes, 2008; Spear-Swerling, 2006). The researchers used the school's curriculums to debate the research in the chosen schools.

Moreover, this research focused on fluency in reading due to the fact that most of the students with learning disabilities are faced with challenges not only in the reading area but also in other school subjects. In addition, Ming and Dukes 2008 stated that the general classroom dynamics paid more attention to reading comprehension rather than the reading fluency. So, the researchers decided to focus on this method (Neurological Impress Method) and investigate its effectiveness especially many studies recommended and found its importance to use it with students with learning disabilities.

The intervention strategy used in this research is the Neurological Impress Method (NIM). This method relies on more of concentrations on reading loudly from both the teacher and the student at the same time repeatedly and directly with the teacher in order to stay at the same rhythm of the teacher tone with every repeated statement keeping in mind that this strategy requires a quiet environment.

Nelson & Gordy 2004, Flood & Fisher 2005, and Barden 2009 confirmed this approach as approved technique for teaching reading fluency to students with learning disabilities.

Many researchers worldwide showed satisfaction with the results of the Neurological Impress Method (NIM) developed as very prevalent method with sufficient techniques for practicing reading fluency to students with reading disabilities (Heckerman, 1986; Chard & Tyler, 2002; Feazell, 2004; Flood & Fisher, 2005; Wise, 2007 and Barden, 2009).

## **2. Statement of the Topic**

Educators in public schools of Jordan evidently showed a limited mastery of the technical methodical approach, and the effective ways of dealing with students with learning disabilities in regular classrooms. This can be attributed to the inadequacy of professional training and in-service training workshops/seminar for teachers. Due to this inadequacy, the majority of teachers can hardly identify such students and even when they do, they assume that such students must act and obtain knowledge just like all other normal students in the classroom.

The study therefore introduces the NIM in the Jordan educational community with the hope of showing its efficacy in the reading fluency of students with learning disabilities. The method was applied as a modern proposal to improve the reading fluency of students with learning disabilities in four public primary schools in Amman in particular and Jordan as a whole.

Forty students between (10-12) years old with learning disability were involved in the study. The participants comprised of twenty boys and twenty girls in comparison to a controlling group of normal students in the same classrooms with the exact controlling environmental conditions.

The research used the statistical hypothesis with no significant differences ( $\alpha=0.5$ ) reading fluency of students with learning disabilities revealed to the NIM with gender differences, and also no significant differences ( $\alpha=0.5$ ) in the reading fluency of the Neurological Impress Method groups and the control group.

## **3. Research Methodology**

Two experimental groups and one control group were used in this study. Each group consisted of twenty students (ten boys and ten girls) in the fourth grade in four different schools. The control group didn't receive any treatment. Students were initially identified as having reading fluency difficulties during the pre-test and according to the Savath College Diagnostic Test which is used to classified those students who have learning disabilities in reading, writing Arabic and math. The student has to read a paragraph according to his age and level. If he couldn't or face a problem, then he gave a text below his age (two years). All parents consented to the participation of their students in this study. Four experienced teachers who taught students with learning disabilities in the four public schools were selected and trained for one week on how to effectively intervene using the Neurological Impress Method for reading fluency with these students keeping in mind that targeted students groups (experimental groups) were taught by the same teachers chosen and who they were already familiar with them.

To conduct this experimental work in four public schools, a permission from the Ministry of Education in Jordan was granted prior the study and during the academic year 2016/2017. The teaching sessions took place five days a week for 45 minutes about sixteen weeks between (February-May). The students were originally addressed by the class teachers as poor readers; they were also classified with incapacities according to Savath College Diagnostic Test and confirmed at the resource rooms of the schools district at Marka District Directorate in Jordan.

For the pre-test, two unread passages consisting of 85 words were chosen from the curriculum and read aloud by the students to their teachers for 15 minutes for each passage. The same passages used for the pre-test were also used for the post-test. A tabulated format was developed to evaluate the weekly improvements of the treated students as the training was customized for these two groups of students only. Scores of the pre-test revealed that all students were reading at 2 degrees lower than their anticipated reading level, based on the categories of Savath College Diagnostic Test. During each experimental class session with the students with reading disabilities, the Neurological Impress Method was applied. The student sat slightly in front of the teacher so that the voice was clear and direct to the student's ear. The student was asked to focus and not to be distracted by any of the surroundings. He/she was asked to just read along with the teacher's voice. The student and teacher read together, with the teacher using lots of expressions. The teacher didn't stop to correct the student. Where and when the student read a portion poorly, he/she simply reread it again until improvements were visible or obtained. It is important to observe here that, the focus was not on accuracy but on fluency.

The study population consisted of students with learning disabilities from the fourth Amman Educational Directorate in the Hashemite Kingdom of Jordan. Table (1) below shows the numbers of male and female students groups, with a total of twenty students according to the pre-test and post-test. This category was put after the implementation of the Neurological Impress Method for reading fluency.

Table 1. Demographic variables of the study sample (Gender).

Student Groups	Gender		Total
	Male	Female	
Control Group/Pre-test	10	10	20
Experimental Group/Pre-test	10	10	20
Control Group/Post-test	10	10	20
Experimental Group/Post-test	10	10	20
Total	40	40	80

The current research consists of two aspects; theoretical and practical. In the theoretical aspect, the researchers relied on the scientific studies that are related to the topic of this research using the practical approach to gather, analyze data, and response the questions.

The current research is based on two sources:

Main Source: a set of questions which was intended to represent the study main objectives, including questions, and participants responses.

Secondary Sources: books, journals were used to initiate the background outline of the study.

Program: This was built according to their level and from the curriculum which was adapted in the Hashemite Kingdom of Jordan. The researchers adapted the curriculum which was obtained and used for all students in the public schools in Jordan. The experimental group worked for four months. They also used the same text throughout for the fourth grade in Jordan.

A full review of the most recent published research regarding behavior and attitudes of students with learning disabilities in the Middle East and especially in Jordan were reviewed and followed by data collected from a specially formulated questionnaire for this research and for the intention of this work.

The questionnaire instrument can be divided into two sections as follows:

Scores were calculated using Likert Scoring procedures as recommended by Golderg (1972)

This section was measured through twenty items on a Likert-type scale as follows:

Excellent	Good	Bad
3	2	1

In order to evaluate the students' performance before and after implementing the Neurological Impress Method on the chosen students with learning disabilities, twenty questions were developed attach as appendix clearly identifying what aspect each of the questions addressed and the responses to these questions were evaluated. Such questions and the level of improvements according to the teacher's evaluations of the students with learning disabilities reflected on many aspects of the students improvements in their reading fluency before and after the implementation of the Neurological Impress Method. The Statistical Package for Social Sciences (SPSS)

was used to evaluate the collected data. The Standard Deviation, Arithmetic Mean, analysis of Co-Variance Two Way ANOVA and the Two Way ANCOVA statistical analyses were used on the data collected from the questionnaire. Relative importance, assigned due to:

$$\text{Class Interval} = \frac{\text{Max. Class} - \text{Min. Class}}{\text{Number of Levels}}$$

$$\frac{3-1}{3} = \frac{2}{3} = 0.66$$

The Min. degree from 1- 1.66

The Medium degree from 1.67 – 2.33

The Highest degree from 2.34 – 3.00

The questionnaire was evaluated by ten professionals from different Jordanian Universities specialized in education for its subject matter, simplicity of language, and suitability of the parts prior to implementing the study using a preliminary draft form. Some questions were added, modified, or formulated while other questions were dropped based on the reviewer valuable comments and recommendations in order to enhance the research instrument. The developed questions were consequently appreciated based on the pre-test in order to match the objectives of this research. The test-retest reliability coefficient ( $\alpha$ ) was used to test the reliability, and the consistency of the questions, which was measured to be (0.73). This is a responsible result as it exceeds 0.60 (George & Mallery, 2003).

#### 4. Purpose of the Study

The purpose of this study was to investigate the efficacy of the (NIM) on the reading fluency of children with learning disabilities in four public primary schools in Amman, Jordan.

#### 5. The importance of the Study

The study is important because the (NIM) was successfully used as intervention strategy to improve the reading fluency of 40 students with learning disabilities Amman, Jordan.

The study also sensitized some regular public primary school teachers to the fact that they used to plan intervention strategies to address the reading fluency problems experienced by children with learning disabilities in particular and all other children with reading problems in their classrooms.

#### 6. Hypotheses of the Study

The objective of this work was to determine the impact of using the Neurological Impress Method on students with learning disabilities. The following hypotheses were applied:

Hypothesis I: the first hypothesis to this study is as follow:

“No significant difference to be shown in the reading fluency of the Neurological Impress Method groups and the control group?”

The study used the arithmetic mean, standard deviation, and Two Way ANCOVA test to show the result about the statistical significant difference between experimental and control group, as follows:

Table 2. The Mean and S.D for Pre, and Post Measurements using the NIM among the sample groups. We measured here the Pre. and Post. Reading Test by using the (NIM) among a sample groups

Source	Pre-Test			Post-Test		
	Mean	Std. Deviation	Number	Mean	Std. Deviation	Number
Controlled Group	1.79	0.29	20	1.84	0.25	20
Experimental Group	1.68	0.26	20	2.44	0.30	20
Total	1.73	0.28	40	2.14	0.41	40

Table 2 shows that mean for controlled group in pre-test reading was 1.79 with standard deviation 0.29, the mean for experimental group in pre-test reading was 1.68 with a standard deviation of 0.26. Meanwhile the mean for controlled group in post-test reading was 1.84 with a standard deviation of 0.25, and the mean for experimental



group on post-test reading was 2.44 with standard deviation 0.30.

To identify the statistical significant differences, the Two Way ANCOVA test, was applied and the results tabulated as shown in Table 3.

Table 3 shows that (F) value for group was (46.54), and it's significant at level of (0.05), this explains that there were statistically significant differences among the different students groups (controlled and experimental in the post measurement) and the variance was in favor of the post measurement for the experimental group, this result can be attributed to the implementation of the Neurological Impress Method and the students with learning disabilities.

Table 3. Two ways ANCOVA test to identify the statistical differences between the groups

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	3.57	1	3.57	46.54	0.000
Intercept	183.39	1	183.39	2391.29	0.000
Group	3.57	1	3.57	46.54	0.000*
Error	2.91	38	0.076		
Total	189.88	40			
Corrected Total	6.48	39			

\* Significant at level (0.05).

Hypothesis II;

The second hypothesis applied in this research is as follow:

“No significant difference in the reading fluency of students with learning disabilities exposed to the Neurological Impress Method and gender”.

The study used the arithmetic mean, standard deviation, and Two Way ANOVA test to show the results regarding the statistically significant difference between experimental groups of students and control group students in their reading according to the (NIM) on the post measurement, as shown in Table 4.

Table 4. Mean and standard deviation for pre, and post measurements in their reading fluency of students with learning disabilities exposed to the NIM and gender

Source	Gender	Mean	Std. Deviation	N
Controlled Group	Male	1.97	0.26	10
	Female	1.72	0.17	10
	Total	1.84	0.25	20
Experimental Group	Male	2.64	0.18	10
	Female	2.24	0.26	10
	Total	2.44	0.30	20
Total	Male	2.31	0.41	20
	Female	1.98	0.34	20
	Total	2.14	0.41	40

Table 4 shows that there were differences in the Means in the reading fluency of students with learning disabilities exposed to due to gender, and the study used Two Way ANOVA test to identify the statistical significant differences, as shown in Table 5.

Table 5. Two way ANOVA test significant difference in the reading fluency of students with learning disabilities exposed to the NIM and gender

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	4.695 <sup>a</sup>	3	1.56	31.48	0.000
Intercept	183.39	1	183.39	3.690E3	0.000
Group	3.57	1	3.57	71.83	0.000*
Gender	1.07	1	1.07	21.58	0.000*
Group * Gender	0.05	1	0.05	1.058	0.311
Error	1.78	36	0.05		
Total	189.88	40			
Corrected Total	6.48	39			

\* Significant at level (0.05).

Table 5 shows that (F) value for the group was (71.83) and its significant at level of (0.05). The (F) value for gender was calculated as (21.58), and its significant at level of (0.05), and the differences was in favor of males students with learning disabilities', as shown in the previous table. According to the results, the Neurological Impress Method was more effective with male's students more than the females' students with learning disabilities.

## 7. Results and Discussion

The results of this research showed that the Neurological Impress Method is a respectable influence instrument that can be applied successfully to instruct reading fluency for students with learning disabilities. The Neurological Impress Method as an effective technique for reading fluency intervention for students with reading disabilities. This is in full agreement with other researchers who conducted similar research in different parts of the world (Nelson et.al. 2004, Barden 2009). Many variables can be used in this method to solidify causes consequence relationship among reading fluency and comprehension (Young, 2011). On the other hand, this research provided clear evidence that the controlled group students who didn't receive the Neurological Impress Method and they were not exposed to any intervention showed no improvements.

## 8. Conclusion and Recommendations

To summarize, reading fluency is a carousal segment of the reading techniques, with significant possibility that such problems will attribute to further difficulties and also affect reading comprehension and all other fields of reading. It is desirable for students with learning disabilities to become better readers after frequent training and regular repeated practicing. Educators at different levels and teachers should pursue to apply the (NIM) for teaching reading fluency to students with learning disabilities. It is worth mentioning that students with learning disabilities deserve more attention and care from teachers in order to improve the capabilities of fluency at different levels of education specially that the majority of such students are usually characterized as hyper-active students. It is essential to improve the applications of the Neurological Impress Method in different public schools in the Hashemite Kingdom of Jordan and the other Middle Eastern countries.

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## *Kalosara* Revitalization as an Ethno-Pedagogical Media in the Development of Character of Junior High School Students

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### Abstract

The aims of the research are (1) to identify types of character through *kalosara* revitalization as an ethno-pedagogical media in social sciences (IPS) learning at junior high school (SMP), (2) to develop strategy of *kalosara* revitalization as an ethno-pedagogical media in the development of characters of students, and (3) to develop a model of student character education through *kalosara* revitalization in IPS learning in SMP as an ethno-pedagogical media. The research is conducted through naturalistic approach. The research subjects are social science teachers at the junior high school, junior high school principals, and local public figures. Data collection is conducted at SMP Negeri 1 Wawotobi representing a heterogenous student group. Data was collected qualitatively using domain and taxonomy analysis models. Research result indicates that: (a) there are 74 values identified and distributed in 18 types of character that can be developed through *kalosara* revitalization as an ethno-pedagogical media in social sciences learning in junior high school, (b) *kalosara* revitalization strategy, as an ethno-pedagogical media in the development of characters, is conducted in form of integration in each theme and sub-theme in the syllabus of social sciences subject, (c) The character education development model through *kalosara* values as an ethno-pedagogical media indicates that there are three strengths of the model, i.e.: it elevates the local culture into national culture, it is a scientific model, and it is easy to understand and implement by teachers and students.

**Keywords:** revitalization, *kalosara*, ethno-pedagogy, value, character

### 1. Introduction

At present, there is a tendency of a decrease in the appreciation and implementation of cultural values and national integrity and identity among young generation. The decrease occurs due to the lack of integration of environmental culture of the students to their learning both at school and at their home and environment. Therefore, students seem to be uprooted from their cultural root. As consequences, junior high school children are vulnerable to negative behaviors and have attitude to try something new and if there is no good character education to control them, they can do contra-productive acts.

Negative behaviors of teenagers are not only occurred in the big cities but also in inland areas, especially in the remote areas that experience sudden change into open areas due to the exploitation of environment by mining and plantation companies controlled by and employed skilled people from outside of the area. As consequences, social jealousy occurs in local community showed through negative behaviors, such as vandalism of the facilities and infrastructures of the company and a clash with company's employees. On the other side, the business people and the employees from outside the area have less appreciation on local cultural values and even damage the local socio-cultural environment, thus, rejection arises among local community that bring conflict. On surface, the conflict seems to be economic in nature however it is actually due to the socio-cultural differences (Anwar, 2013).

Based on the phenomenon, real efforts are needed to strengthening the nationalism values and nation characters through the extraction and preservation of local wisdom values by means of formal and non-formal education.

The strategy can be conducted easily through an ethno-pedagogical model education, which is a local wisdom-based education (Surya, 2011). In line with this, culturally, each tribe tries to give lesson to their generation in order to preserve their culture and to adjust with their environment. Therefore, a cultural continuum should present so that there will be a new embodiment added as well as released (Linton, 1984). Thus, according to Edwards (2012), training for teachers is needed to integrate content and pedagogy in learning. According to Peursen (1988) good individuals are expected to make their culture as a learning process to have a better life; in addition, learning process is a cultural transmission process (Tilaar, 2008).

The view is in line with the ethno-pedagogical study emphasizing on the ethnical aspect since it is relevant to overcome national character awareness problem. Klara (2015) explained that ethno-pedagogy is related to the background of certain ethnic.

Historically, ethno-pedagogy according to Tufekčić (2014) is started in the second part of the 20<sup>th</sup> century and it was first written by GN Volkov in 1999, which is a science that study about upbringing, the real pedagogic view, and daily educational practices in the family and community.

The current internationalization and inclusivity of culture has brought important principles in guiding a change. McLoughlin (2006) offered pedagogical frame of inclusive culture that can be applied for online environment and suggested a study link of inclusive culture by using principle of constructive alignment with ethno-pedagogical approach.

The inheritance system of knowledge, values and skills in various ethnics is the form of ethno-pedagogy. For Tolaki people, their local wisdom is tied in the *kalosara* philosophy that has four functions, i.e.: (1) an idea, (2) a focus and integration of cultural elements, (3) a way of life, and (4) a unifier (Tarimana, 1989).

*Tolaki* people have no letters thus the values inheritance system is conducted orally. Nevertheless, they have their own way based on the educational principles that leaning on *Kalsara* as their educational philosophical view. The view stresses on the affective aspect that highly uphold the positive characters and presents in the daily life both symbolically or factually (Anwar, 2015a).

Based on the thought, a solution formula need to be found that based on local wisdom. *Kalosara* that culturally and historically always be a media in various problem-solving of Tolaki people needs to be revitalized as an educational media in form of ethno-pedagogy. The formulation is important to be done due to the development of contemporary context and it should be conducted through intercropping model in junior high school learning considering the students at this age are vulnerable to the development of attitude thus they need to be provided with local cultural-based character education through social engineering in form of teaching materials by modifying the function of *kolasara* in the learning without eliminating the sacred cultural values.

## 2. Literature Review

### 2.1 Ethno-Pedagogic Concept

Ethno-pedagogy is an education science related to an ethnic or nation (Kartadinata, 2014). In this case, education cannot be separated from the life philosophy of a nation or ethnic in form of local wisdom of students' environment. Ethno-pedagogy is an education based on community culture that should be preserved in order to progress and develop so it can achieve a superior life and living side by side with other countries in the world. Ethno-pedagogy is not only promoting superior fields in the communities based on their culture but also it should develop, repair, and change the code of conduct or mindset of the communities so they can explore various kinds of knowledge and develop a life with other communities while preserving their culture (Ernest, 1992).

According to Tufekčić (2017) the basic effort of ethno-pedagogy is to achieve harmony between individuals, social condition and natural environment. The harmonization of relationship in childhood implies the development and preservation of natural activities of the children without full control from the adults. The presence of ethno-pedagogy, according to Fahrudinova (2016), is to overcome ethnic conflict that develops in the new socio-cultural environment, a study about interaction process in education environment and multi-ethnic education, and a national identity that occurs for ages, thus the actualization of ethno-pedagogical education is needed in this contemporary situation. Multicultural space in the new socio-cultural condition is achieved by learning the pedagogy of Russian in ethno-pedagogical journey.

According to Tufekčić (2014), Fahrudinova (2016), the preservation and development of spiritual culture is unimaginable without an adequate and developed pedagogical practice. The focus of each pedagogical culture is a successful child care by considering the essence of upbringing. Everyone gives sample on the real and universal achievement related to one's upbringing. The specificity of pedagogical culture is proven in the

parenting process where people collect spiritual wealth from generation to generation and change, improve, develop and enrich the pedagogical practices.

Pedagogical knowledge is closely related to the life philosophy, morality, and general knowledge. Through ethno-pedagogy, someone could witness a work and act of an educator as a craftsman, singer and story teller, whom that have a concrete and practical ability. An important component of a saying is the lesson since it provides goals, tools, and methods of parenting. Through puzzles, someone could find a combination of influence on the understanding of children about the world with the intention of building intellectual education that aligned with all other aspects of personality formation. The role of song is to develop love and build esthetic and taste.

According to Brodovskaya et al. (2016), education conducted to students in their mother language could give contribution to the spiritual enhancement of non-Russian community and their adjustment with the Russian. Teachers should have the same nationality as their students and they are not only a trusted person but also have pedagogical education previous to their teaching, thus they could deliver Christian teachings to the foreigners in accordance with the religious concept, moral beliefs and their way of thinking.

How importance ethno-pedagogy is so a thought and effort of ethno-pedagogical training for teachers occurs that aimed to promote spiritual and moral education to the young generation, to increase teacher competence, and to identify the opportunity to use teaching system, tools, method and types of modern ethno-pedagogy. Ethno-pedagogical concept involves the achievement of a number of goals: preparing future teachers to work to strengthen and preserve progressive ethno-pedagogical tradition; forming an understanding of the goal of ethno-pedagogy; and developing the ability to use ethno-pedagogy in modern education system.

Tufekčić (2014) gave example in the traditional culture of daily Bosnian as a shelter for ethno-pedagogical practice. The practice is born in a concrete community and covers the whole life cycle from birth to death. *Dneprov* (2010) gave example of ethno-pedagogical heritage of native West Siberia that rich of shapes and materials that need to be restudied, reconstructed and implemented in modern condition. Various physical activities facilities, such as traditional games, health improvement methods, physical training for industry and economy, trading process, military campaign, and daily activities, provide all condition needed to form healthy and intelligent young generation. Khairullin (2017) also gave example of the integration motivation of Kazakhs on patriotic education of the youth into a system of the formation of professional competence of pre-service teachers.

The life condition and education system between the past and the present is very different; therefore a connecting line needs to be drawn between both. In this context, a process is needed to select important parts of the past to be integrated into the modern education system. The selection of integration content, according to Yachina et al. (2016), should include knowledge, ability and skill from the field of ethno-aesthetics, technology and scientific knowledge that able to give achievement continuity in ethnical values and scientific values in the school system to a subject of education. Content arrangement is conducted by considering age as an influencing factor for harmonious personality development in the field of technology, professional, emotional, spiritual, and aesthetics.

According to Masyitoh (2015), ethno-pedagogy-based character educational model had positive and significant influence on student character. Moreover, homogenous school environment was more dominating the strong character compare to heterogeneous school environment.

Arthur (2004) stated that one of the most effective models in the history of ethno-musicology was Alan Merriam model that base on the concept, behavior, and sound related to the music. Ethno-pedagogical model consists of: actor, analyst, reader, and guide. In this model, everyone involved in the pedagogical process is influenced by others. Just like a ring (circular waves) formed by a rock that fall into a water pool, one action creates other actions. In the end, each part of the model influences the interpretation of pedagogical process and how the musical culture is built.

Khairullin (2017) stated that for the effectiveness of the use of tradition as patriotic media, it is useful for the pre-service teachers to use a lecture method on the tradition of physical development of a man that reflects the patriotic education to the youth.

Ethno-pedagogic model is not aimed to educate the community to merely learn and preserve their culture and disrespect other cultures. On the contrary, it educate the community to explore knowledge, skill, and value based on their culture as well as support the shared order of life, which is the basic to achieve democratic life (Kartadinata, 2014). Education through local wisdom adaptation, including reinterpretation of values containing in a number of proverbs with the contemporary condition, could be an instrument to solve social problems since

mostly social problems come from local issues.

There are some characteristics of local wisdom, i.e.: (a) it is based on experience; (b) it is tested after being used for centuries; (c) it can be adapted with; (d) it is unified in the daily practice of the community; (e) it is common to be conducted by an individual or community as a whole; (f) it is dynamic in nature and simultaneously change; and (g) it is strongly related to a belief system (Alwasilah, 2008).

Local wisdom can be a synergic vehicle between modernization goals and local superiority preservation. For Tolaki people, local wisdom of *kalosara* can function as ethno-pedagogical media.

Ethno-pedagogy is defined as to give new understanding that adjusted to the prevailing cultural values in local environment. A novelty can be easily accepted if it contains values that in line with the local values since education through ethno-pedagogical approach views local knowledge as the source of innovation and skills that can be empowered (Surya, 2011).

Ethno-pedagogy is closely related to multicultural education. It views knowledge and local wisdom as source of innovation and continued with multicultural education that empower innovation thus it can contribute positive input for other social groups and national cultures.

## 2.2 Concept and Function of Kalosara

*Kalosara* consisted of three parts: (a) *kalo* means a coil of three circular rattans, (b) white fiber as a layer, and (c) *siwoleuwa* means a woven from palm leaves in rectangular shape. Stand alone, the three containers have no meaning and customary function unless they unite in an order with a structure as the very bottom cover in form of *simoleuwa* and coated with white fiber and above both containers a *kalo* is put (Anwar, 2015a).

An event where someone, who are embarrassing by the impolite behavior of others toward him/her in public, gives strong reaction in form of persecution threat against those people to defend him/her pride. In this situation, a third party emerges to perform *kalosara* between the two parties who threatening each other. The event will automatically stop with both parties forgive each other since they consider *kalosara* to be identic to an expression of: “*don't, ask forgiveness and mercy, you, him/her, and me are one, one in three and three in one.*” Torturing him/her means that you are torturing yourself and torturing me as well as all of us (Anwar, 2015a). Through the performance of *kalosara* in that situation, both parties make a peace. If one of them or both of them reject the *kalosara*, they are cursed and should be exiled from Tolaki people or receive punishment based on the prevailing customary provisions.

According to Tarimana (1989), *kalosara* for Tolaki tribe is a focus that integrates elements in their culture. It has four functions: (a) *Kalo* as an idea, (b) *Kalo* as a focus, (c) *Kalo* as a way of life, and (d) *Kalo* as a unifier and solution.

*Kalosara*, anthropologically, is the focus of Taloki culture. Linton (1984) called it a cultural interest or social interest, which is a complex of cultural elements that seems to be liked by the community thus it looks like dominating the whole life of the related community (Koentjaraningrat, 1981).

Ethno-pedagogy based on the values of Javanese tradition has been covered by Ki Hajar Dewantoro. It consists of three aspects: (a) *ingngarsa sung tuladha*, (b) *ingmadyamangunkarsa*, and (c) *tut wurihandayani* (Dewantara, 1977). The educational concept is adopted into the national educational value in Indonesia (Surya, 2011). For Bugis people, the ethno-pedagogy is based on the value initially developed by a scholar named La Mellong who also served as the advisor of the King of Bone the 6<sup>th</sup>, La Uliyo, who ruled in 1543-1568 (Ali, 1986). The slogan is *Rioloinapatioang*= the front gives example/guide; *Ritengngainasiraga-raga* = the middle gives spirit; *Rimunrinapponglopi*= at the back gives encouragement.

In Tolaki people, the educational philosophy is rooted from a saying: *Inae konasara ie pinesara; inae liasara ie pinekasara* = who know the custom will be respected; who violate the custom will be treated rudely (Tamburaka, 2004). Conceptually, Cobern (2008) stated the importance of cultural aspect of learning science.

Empirically, ethno-pedagogical model utilizing local wisdom has been proven by a research result from Hermani (2012) that facilitate the chemistry learning in senior high schools in West Java, such as *batik* culture in Garut and *ruwatan* (a ceremony conducted to get rid of bad things) *keris* in Cirebon. It is also in line with a research by Wahyudi (2003) on local cultural-based natural sciences learning. Similar research is also conducted by Wuryandani (2013) on the integration of local wisdom values in learning to cultivate nationalism. The empirical findings support the research on the importance of revitalization of *kalosara* as a local wisdom in the development of character through social sciences learning in junior high school.

### 2.3 Character Education

A research from Harvard University stated that the success of an individual is not merely determined by his/her knowledge and cognition (hard skills) but it is more to the ability in managing self and other (soft skills). The research revealed that success is 20 percent hard skills and 80 percent soft skills. Soft skills are formed through character education to students (Anwar, 2014).

According to Raharja (2010), character education is an effort to create noble character. Character education should be implemented in the educational pattern given to students (Benninga, 2006). It should be formulated in a curriculum and implemented in learning (Koesoema, 2007). Therefore, superior generation of Indonesia will be born from character education system (Anwar, 2014).

The Ministry of Education formulates 18 value items as the priority of refinement to the junior high school students: religious, honest, tolerance, disciplines, hard work, creative, independent, democratic, curiosity, nationalism, patriotism, respect achievement, friendly, love peace, love reading, environmental awareness, social awareness, and responsible (Anonym, 2012).

According to the result of a research by Mislia (2016), there are some strategies to be conducted to shape the characteristic of students at SMPN 1 Maros: intervention, example, habituation, strengthening, mentoring, and the involvement of other parties. Intervention strategy aims to cultivate certain character or change the character of students closer to certain expected characters. Example strategy is a good example for students in the daily life. Students tend to imitate their teacher both good and bad.

Due to the importance of character education in form of example, parents and teachers should develop positive characters so they can be transformed to the young generation in form of deeds and learning.

### 3. Research Method

The research was conducted in Konawe Regency area, which is the concentration area of Tolaki Tribe settlement and they still maintain *kalosara* culture in their life. The location selection was aimed to develop and preserve the local culture that tended to be forgotten by the young generation. On the other hand, they have inheritance tradition of values through their cultural philosophy in form *kalosara*. Therefore, the research was conducted at SMP Negeri 1 Wawotobi and SMP Negeri 2 Konawe. The research subjects were social sciences teacher in both schools of 8 people, the principals of both school, local public figures, and students at eight grade in both schools and in each school one study group was chosen as trial subject.

Data collection was conducted through observation (participative and structured), in-depth interview and focused discussion. Data validation techniques used were: (a) triangulation method, (b) data source triangulation, (c) intensive observation and (d) negative case analysis. Data analysis was conducted through qualitative model of domain analysis and taxonomy (Spradley, 1980).

### 4. Result

#### 4.1 Types of the Developed Characters

The research finding indicates that there were 74 characters distributed in 18 values sourced from the culture of Tolaki Ethnic Groups. As stated by Tarimana (1989) that *kalosara* is the focus that could integrate the existing elements of Tolaki culture. Therefore, in the research, all character values developed from Tolaki culture were called as character values of *Kalosara*.

Table 1. Types of character from the developed *kalosara*

No	Value	Number of Character	Description
1	Religious	2	
2	Honest	5	
3	Tolerance	3	
4	Disciplines	2	
5	Hard work	5	
6	Creative	9	
7	Independent	5	
8	Democratic	6	
9	Curiosity	2	
10	Nationalism	5	
11	Patriotism	3	
12	Respect achievement	4	



13	Friendly	2
14	Love peace	1
15	Love reading	2
16	Environmental awareness	4
17	Social awareness	9
18	Responsible	5
	Total	74

Source: Research Result, Processed, 2017.

The values and characters were the essence of Tolaki culture identified in the research. One interesting result was the nine creative characters found in the research. It indicates that the ancestors of Tolaki ethnic group had put creative foundation to be used in the development of human resources since the creative value was an important value for individual or group wanted to progress and develop. Another predominate value was social awareness. The symptom proves that Tolaki people have been provided with high social solidarity attitude and it maintained in the daily life up to present. The social solidarity character value made various heavy jobs could be overcome since everyone will do it together. If an individual or group tried to avoid the attitude, they would be given social sanction inform of isolation in the social life.

The democratic value was also quite predominating and the phenomenon was in line with the social attitude. Therefore, all problems in the community were solved through deliberation (*musyawarah*), such as *medulu* (help each other).

#### 4.2 Strategy of Kalosara Revitalization as an Ethno-Pedagogic Media

Revitalization strategy was started with discussion with Tolaki public figures in terms of asking permission for the implementation of *kalosara* revitalization in broader context. The public figures welcomed the plan as stated by M. SyarifTabara (Interview, April 11, 2017) that the inheritance of cultural values to young generation is needed so that the noble values of Tolaki people would not be vanished. Revitalization was defined as an exploration of the existing values in *kalosara* by maintaining the originality of the goods and their attached meaning.

Revitalization is defined as a learning in formal educational institution since according to the statement by Mardin (Interview, April 11, 2017) that our students at SMP Negeri 2 Konawe gave no respect if they walked in front of the teacher; therefore character learning is needed through the cultivation of ancestral cultural values, such as an expression of *nggomiu* (excuse me sir) used when talking in front of older or respected people.

Furthermore on the need of the preservation and development of *Kalosara* as the focus of Tolaki culture was stated by CecepSupriaYudowono (Interview, April 11, 2017), among others, that in addition to integration in the learning of character values in Tolaki culture, documentation is also needed in form of book and it is jointly written by education practitioners, humanist and academics to facilitate the distribution and the adoption by students. In addition, if there was no effort for the writing, the cultural noble values of the nation in Tolaki people could be eroded, eventually.

Empirically, students in both schools were dominated by parents from Tolaki ethnic groups and there were also students who are not from the ethnic group. Both student groups should understand the noble values in the Tolaki culture since they had to have basic noble culture of their origin in the daily intercourses and activities. The condition is important so that children have cultural footing of politeness and discipline since childhood thus they will bring the culture in their association to a wider life.

In the effort to facilitate the integration of noble values of positive characters from Tolaki culture, the relevance of each main subject in the syllabus to Tolaki culture, which was the description of *kalosara*, needed to be found. Following are the example of integration model in two sub-themes.

Table 2. The integration model of character from *kalosara* in social sciences learning in SMP; Grade VII

No	Theme	Sub-theme	Material	Value	Character
1	Theme 1: the natural condition and activities of Indonesian People	Sub-theme: The location of the territory and its influence on the natural condition of Indonesia	The location of the territory and its influence on the natural condition of Indonesia	Creative	<i>Morinimbu'umbundimona pambu'undawaro:</i> As cold as banana tree, as cool as sago tree / prosperity and welfare
2	Theme 2: The condition of Indonesian people	Sub-theme A: the Origin of Indonesian people	Material: The Origin of Indonesian people	Patriotism	<i>Taaehetinuwa-tuay,</i> and <i>Ni-are-are:</i> an invitation to always be proud as a part of Tolaki people.

Source: Field data, processed, 2017.

Strategy of *kalosara* revitalization as an ethno-pedagogic media was something to enrich the materials of teachers as well as to facilitate teachers to implement contextual learning. Teaching material is generally in form of oral tradition, such as: *onango* (fairy tale), *taenango* (folklore), *sua-sua* (poem), *singguru* (puzzles), *susua* (song), *livelihood system*, and *lifecycle ceremony*. All of them contained relevant positive values to be developed as cultural spirit for the teenagers.

The teaching materials were intended for education not only to form an intelligent Indonesian man but also in order for them to be noble so that generation with characters based on the noble values of Indonesia will be born. It is also expected that it could develop the surrounding community in various life aspects.

#### 4.3 The Development Model of *Kalosara* Revitalization as an Ethno-Pedagogical Media

The development model of *kalosara* revitalization in social sciences learning in junior high school was conducted in form of joint formulation between researcher team and social science teachers at the research subject schools. There were three main components of learning tools developed by teachers: Lesson Plan, learning materials and learning media.

Local content was developed through stages of: (a) analysis of the context of socio-cultural environment; (b) identification of local content, and (c) conceptual validation of local content in forms of study materials on the superiority and local wisdom of Konawe area, which is the implementation of the cultural values of Tolaki tied in *kalosara*.

The three dimensions of competence expected from the junior high school graduates were contained in the local content of revitalized *kalosara* in form of integration in social sciences learning. The process of model formulation and validation involved public figures and social science teachers at the junior high schools. The process was in form of conceptual validation through a practitioners test and workshop.

The research result indicates that there were three strengths of the development model of the integration of character values from Tolaki culture into social sciences learning in junior high school, which were: (a) elevate the local culture into the nation's culture, (b) it is a scientific model, and (c) it is easy to understand and implement by the students. The findings are in line with the state recognition of three Tolaki cultures as the non-objects cultural inheritance of Indonesia through an establishment by the Minister of Education and Culture of the Republic of Indonesia. The three cultures were *Kalosara*, *Lulo* and *Mosehe*. The establishment was related to the existence of the three cultures in the community.

Of the 10 subjects, all of them stated an agreement of integrating the values of Tolaki culture into social sciences learning. There were five reasons for the readiness of the teachers to integrate the culture into the learning, which were: (a) for cultural preservation, (b) to accustom the students to love the culture more, (c) the values of Tolaki culture is relevant to the material of social sciences learning, (d) to add reference of national culture originated from local culture, and (e) to widening the students' knowledge beyond the national and international cultures with knowledge on local culture in their surrounding area.

The weaknesses of the development model of the integration of character values from Tolaki culture into the social sciences learning at SMP were: there were no books available for teaching materials, less knowledge of teachers on Tolaki culture, and less initial knowledge of students on *Kalosara* values.

The research subjects reminded of the need of documentation for Tolaki cultural values so they could be used as learning materials for teachers as well as students. The research result found that there were many teachers with lack of comprehension on Tolaki cultural values, thus it was difficult to integrate it into the school learning. The teachers expected learning materials in form of books containing the character values of Tolaki culture as well as media that become a link between traditional media and modern media in form of audio visual media, such as ritual activities video. The teachers realized the need of contextual learning based on social and natural environment of the students.

The data implies that the teachers realized the scarcity of learning materials; therefore, it was right to use method that involved students actively to explore information individually or in group. Methods developed were: persuasion, sample, order, explanation, exercise, advice, instruction, warning, will, threats and punishment. The result of discussion with the teachers stated that they had conducted some adjustments, such as discussion method, study tour, assignment and question and answer were appropriate to be used. Theoretically, the finding was felicitous since the learning materials are exist in the middle of the community and natural environment of the students. Therefore, through the three methods, students are asked to explore the environment in form of critical thought so it will give impact on the occurrence of environmental and social awareness of the students. The appropriate media used are map, picture or photo, the original objects in certain situation.

There are seven suggestions from teachers on the implementation of model of integration of character values of *kolasa* into social sciences learning: (1) more literature on Tolaki culture is needed, (2) the character values of Tolaki culture need to be implemented in school to give insight to the students, (3) training for teachers on Tolaki culture, (4) the involvement of teachers in Local/Tolaki Culture Seminar, (5) teachers give more assignments to students so that parents are encouraged to learn Tolaki culture, (6) teachers need to use good and correct vocabulary so it can be copied by the students, and (7) application in a curriculum as an independent local content subject.

The trial result indicates that student at SMP Neger 2 Konawe located in the hinterland had acceptance level of 42 characters (56.67%), which was higher than those students at SMP Negeri 1 Wawatobi located in the urban area of 39 characters (52.70%). Both were distributed in 12 similar values as indicated in the following Table 3.

Table 3. Types of Characters Developed by Junior High School (SMP) Students

No	Value	Numbers of Characters	
		SMP Negeri 2 Konawe	SMP Negeri 1 Wawatobi
1	Religious	2	2
2	Honest	5	4
3	Tolerance	3	3
4	Disciplines	0	0
5	Hard work	0	0
6	Creative	0	0
7	Independent	0	0
8	Democratic	4	4
9	Curiosity	2	2
10	Nationalism	4	4
11	Patriotism	2	1
12	Respect achievement	3	3
13	Friendly	2	2
14	Love peace	1	1
15	Love reading	0	0
16	Environmental awareness	4	3
17	Social awareness	6	6
18	Responsible	4	4
Total		42 (56.76%)	39 (52.70%)

Source: Field data, processed, 2017.

The finding indicates that the development of characters of students in the hinterland area (homogenous) tended to be better than those students in the urban area (heterogeneous). The data gave information that

ethno-pedagogical values of Konawe people were high thus it needed to be preserved and developed in education process for teenagers both through formal and informal education. Ethno-pedagogical system developed in *kalosara* culture needed to be revitalized according to the dynamic in the community life without changing the essential meaning contained.

## 5. Discussion

The finding of the research that developed *kalosara* culture as a local content according to Chapter 4 of Permendikbud (the Regulation of Minister of Education and Culture) No. 79/2014, stated that: (a) local content is a cultural art, (b) learning content related to local content is in form of learning materials on the superiority and local wisdom, (c) learning content related to local content is integrated in social sciences subject.

The finding had three dimensions: knowledge, attitude and skills (Permendikbud No. 20/2016). In attitude dimension, the competence of the expected graduates for SMP students is for them to have behavior that reflects the attitudes of: (a) faithful and cautious to the One Almighty God; (b) having character, honest, and care, (c) responsible, (d) lifelong true learner, and (e) physically and mentally healthy according to child development in the environment of family, school, community and the surrounding natural environment, state, nation, and regional area.

The research result strengthen the research finding of Maryam (2015, p. 59) stated that the use of oral tradition in the learning of social sciences (IPS) subject could increase teaching effectiveness of the teachers and could improve positive character of the students, such as: discipline, friendly, democratic, responsible, and creative, and to facilitate teachers to control the learning implementation. For students, it is a training process in developing idea and forming positive communication way in the future.

It is also in line with a research result by Asban (2016) stated that the implementation of local history in form of oral tradition in history learning could increase teaching effectiveness of the teachers and increase positive character of the students. The phenomenon is supported by Anas's (2011) statement that character education is intended to improve the quality of the implementation and educational outcomes at school that lead to the achievement of character and moral building of the students as a whole, integrated and sustainable.

The research finding is also in line with the mandate of chapter 3 of Law No. 20/2003 on the development of learners potential to have intelligence, personality and noble characters. According to the mandate in the goals of national education, education units should focus more on the development of learner potential related to the characters. It proven that education process should have orientation on behavioral aspects. Regarding the finding, Tatarko (2017) found that ethnic diversity in Russia was positively related to the informal friendliness and has no influence on the community trust and organizational life of the community.

The research finding is an effort to train teachers in developing pedagogic competence and their professionalism rooted from the culture. Tolaki, especially the obedience to the norm, should be taught to the students as stated by Fahrutdinova (2016) that in this context, training for teacher regarding the ethno-pedagogical development process in modern school is needed including moral character building, mental development and the love of culture. Arsaliev (2017) formalized the ethno-pedagogical process into technology thus it allows rational, objective and valuable disclosures. It made education experience belong to most of the teachers thus it allowed moving further in solving problems of character building and the development of ethno-pedagogical theories.

Related to learning method, the research result strengthens the opinion of Fahrutdinova (2016) that added the need of the selection of a relevant method such as: persuasion, sample, order, explanation, exercise, spell, vow, request, advice, instruction, approval, warning, agreement, remorse, repentance, preaching, will, threats and punishment. According to Yachina et al. (2016), to give innovative orientation of integrative content selection, alternative system needs to be studied in form of methodology guidance to select content and method, the content of education technology as a didactic mean to enrich intellectual, spiritual quality and the development of technical and artistic creativities.

*Kalosara* revitalization sourced from oral tradition as the research finding is strengthened by the opinion of Fahrutdinova (2016), Tufekčić (2014), Dagbaeva (2014), Khairullin (2017) that ethno-pedagogical education facility is generally used verbal creation style, such as: rhymes, proverbs, puzzles, fairy tales, legends, myths, proverbs, songs, stories, traditions, traditional games, customs, epics, and poetry.

According to Dagbaeva (2014), to date, the pedagogical experience of the people was less used in the practice of modern education institutions. Currently, it is necessary to allocate the basic value of the people experience on children socialization that appropriate to the current condition in the implementation of the practice of modern education institutions.

Tufekčić (2017), Yachina et al. (2016), Tufekčić (2014) stated that in every life situation, education is proven to influence the creation of harmonious relationship between individual and the community.

Saragih (2017) stated that the presence of local cultural context in learning supported the meaningful learning process as expected. In addition, for Tolaki people in Konawe area, there are many non-objects and objects of cultural heritage that should be socialized and developed so that they could become the national culture and that contain character values.

Trial finding stated that the adoption process of student character from SMP with homogenous background was better than those from SMP with heterogeneous background. The finding supports the research result of Masyitoh (2015) that ethno-pedagogy-based character education model had positive and significant influence on student character. Moreover, homogenous school environment dominating the strong characters than those of heterogeneous school environment.

Finally, it can be stated that kalosara culture, which is an oral tradition, needed to be revitalized through ethno-pedagogy since it is needed in the practice of modern education.

## 6. Conclusion

The research identified 74 types of positive characters that can be developed through *kalosara* revitalization as an ethno-pedagogical media in social sciences learning in junior high school.

Strategy of *kalosara* revitalization in the development of characters was conducted in form of integration in each theme and sub-theme in the syllabus of social sciences subject. In each sub-theme, at least one character developed from cultural values which are the operationalization of *kalosara* in the life of Tolaki people. Teaching material was generally sourced from oral tradition passed through ethno-pedagogical process with varied learning methods according to the situation and condition.

The development model of character education through *kalosara* values as an ethno-pedagogical media was started with joint formulation between research teams and social sciences teachers: there were three main components in the learning media, which were Lesson Plan, learning materials and learning media. Local content was developed through stages: analysis of socio-cultural environmental context, identification of local content, and conceptual validation. The research result indicates that the character building of students in the hinterland area (homogenous) tended to be better than those students in the rural areas (heterogeneous). The data gives information that ethno-pedagogical values of Konawe people were still high thus they need to be preserved and developed in the education process of the teenagers.

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