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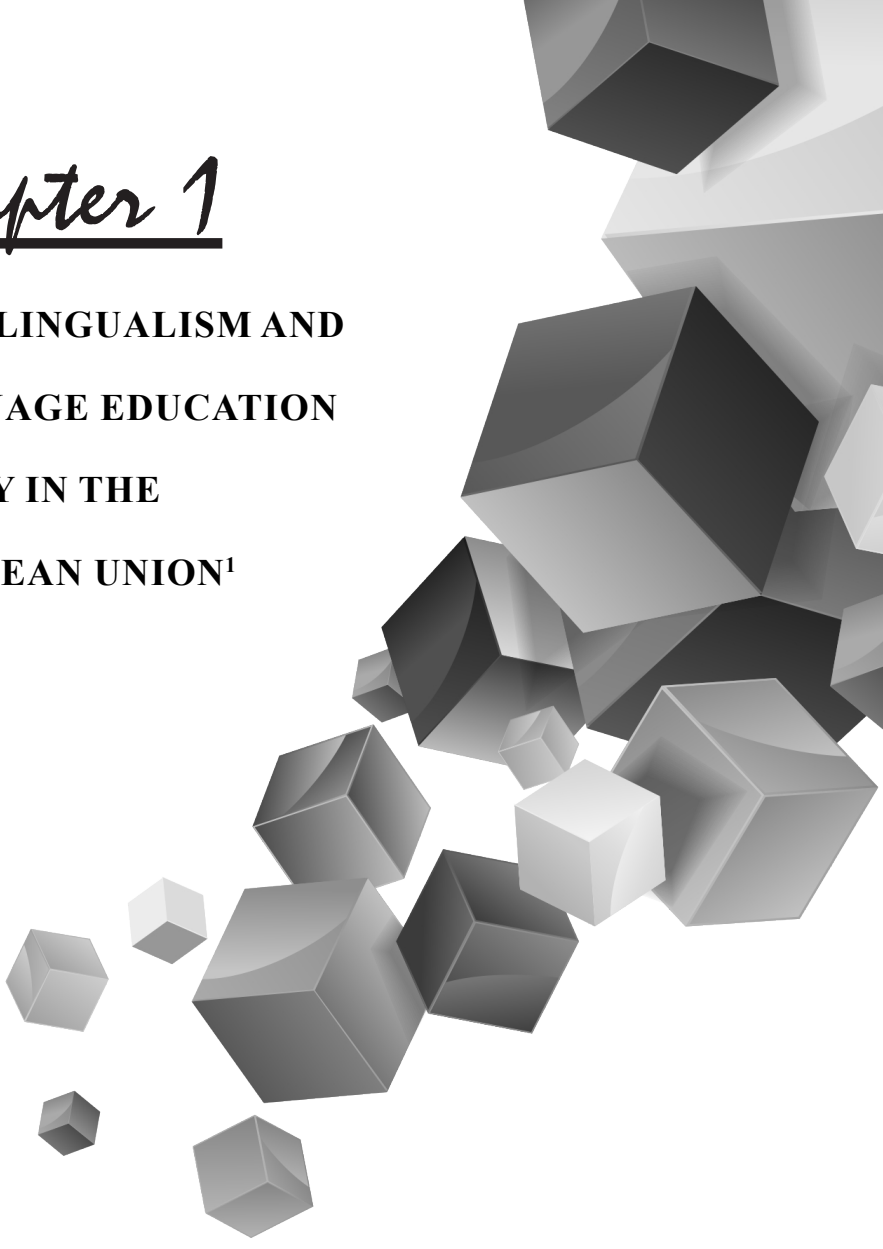
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Chapter 1

MULTILINGUALISM AND LANGUAGE EDUCATION POLICY IN THE EUROPEAN UNION¹



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1. Introduction

Europe was ruined after the Second World War and suffered from massive losses during this period. With the aim of gaining power and maintaining permanent peace and prosperity in the region, economic, political and cultural cooperation was needed. The European Coal and Steel Community was established with this aim in 1951 and then this community turned into the European Union, the EU for short, an international organization of 27 members and 24 official languages currently, after the United Kingdom withdrew from the union in January, 2020¹. This multi-national unity has undoubtedly been home to many different cultures and languages. In order to promote a multilingual and multicultural environment, the union has had several attempts and its foreign language education policy is a good example of these attempts. In this study, the concept of multilingualism in the European Union and language education policy fostering multilingualism, namely, Content and Language Integrated Learning, will be discussed with a focus on the main features and the development of the model in different European countries.

2. Multilingualism in the EU

The EU creates a supportive environment for multilingualism and multiculturalism. Fostering the protection of the linguistic diversity throughout Europe and promoting language learning are among the main facets lying behind the multilingualism policy of the EU (European Union [EU], “Multilingualism”, n.d.). The union is principally based on the diversity of different countries, cultures, traditions, beliefs and languages; as a result, it is expected to support multiculturalism and multilingualism. One of the fundamental principles of the EU is to be open to individuality, different cultures and to respect “others”. For this reason, supporting the use and development of minority languages is a significant issue the EU cares about. Sağlam, Özüdoğru & Çıray (2011) reported that the EU approaches to different cultures with an understanding of “all different-all equal” (p. 93)². One of the surveys the EU commission has conducted reveals that EU citizens support multilingualism policy of the Union. The report named “Special Barometer: Europeans and their Languages” published by the European Commission demonstrates that more than three-quarters (81%) of the respondents believe all languages spoken within the EU should be treated equally and the majority of the Europeans have positive views towards multilingualism (European Commission [EC], 2012, p. 9). In other words, the EU citizens are for the multilingual and multicultural policy of the union.

An important reason why the Union gives importance to multilingualism and follows a multilingual attitude is that multilingualism has a great impact not

1 Although United Kingdom withdrew from the EU on 31 January 2020, findings concerning Content and Language Integrated Learning in the United Kingdom are not excluded from the study since they provide a rich source of information about the education model and United Kingdom is a good comparison country to evaluate the effectiveness of the model in different countries.

2 All translations by the author, unless otherwise noted.

only on the social and cultural world but on the economic relationships as well. The cooperation of economic partners in new markets increases employability, and this way mobility of business people and employees can be fostered. Hall (2013) stated that “Business Platform for Multilingualism”, which was first set up in 2009 by the European Commission, attempted to spread the importance of multilingualism. The study showed that linguistic insufficiencies is a significant factor affecting economy and business transactions within the EU and increasing the awareness of the importance of language skills for the economic mobility is necessary. This platform served to unite several stakeholders representing education and employment world: Representatives of the stakeholders including professional associations, employer organizations, universities, and vocational education institutions had the chance to come together and exchange ideas on how to develop different language learning atmospheres and strategies for increasing employability and fostering economy.

The EU’s multilingualism policy can be observed in several fields. Subsequent documents, directories and agreements are all translated into member countries’ official languages. Also EU citizens have the right to access EU legislation and some key political documents in their own official languages. They can also use their official language in all official correspondence. With all this workload, European Commission carries out one of the biggest translation services around the world (EU, “EU administration-staff, languages and location”, n.d.). It also has one of the largest term banks, which is known as Interactive Terminology for Europe, to help translators in finding equivalents of important terminology in the 24 official languages. EU’s language education policy in parallel with its attitude towards learning new languages is one of the most significant and strongest application fields of its multilingualism policy.

3. Language Education Policy in the EU

The EU supports multilingual and multicultural European citizenship. These two concepts can be observed in “Key Competences for Lifelong Learning Framework” which enlists eight key competences for European citizenship. Concerning multilingualism, language competence, being able to communicate in the mother tongue and the foreign language are on the top of the list. One other key competence that can be associated with multiculturalism is being aware of cultural factors and being able to express cultural features and values (EC, 2018).³ Foreign language education policy of the Union is another signal which clearly shows its attitude supporting multilingualism and multiculturalism. In parallel with this policy, all European citizens are to learn at least two, preferably three, foreign languages apart from their mother tongue and this policy is highly supported by the EU citizens, as well. The citizens reveal their views towards

³ The eight key competences for lifelong learning and active European citizenship are as follows according to the EUR-LEX, “Key Competencies for Lifelong Learning” report: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology, digital competence, learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression (EUR-LEX, n.d.).

language learning and language skills in one of the EU Commission's surveys. What the survey suggests is that more than three-thirds of the citizens (77%) think improving language skills should be a policy priority of the Union (EC, 2012, p. 117).

Some of the reasons why the EU highlights the importance of language learning can be summarized as follows:

- When citizens are good at language skills, they can have more chances to study and/or work abroad, and improve their qualifications for their jobs.
- In a multilingual, multicultural Europe, understanding each other is a must and something to be achieved.
- For trade facilities to be done effectively across Europe, multilingual staff is needed.
- The language industry including translation and interpretation, language teaching, language technologies and so on takes a significant place in economy as it is growing fast day by day with the effect of globalization.

Some important decisions about foreign language teaching have been taken in The European Council held in Barcelona in 2002. The Council has called for action to all European countries concerning foreign language education. Being accepted as one of the key skills for an active European citizenship according to the EU prerequisites, foreign language education needs to start at an early age in at least two foreign languages. Following this decision, the EU countries have initiated practices in teaching foreign languages effectively in compulsory education period starting from primary school level (and in some countries even in kindergartens). This call for action has been agreed by the member states and some priorities were also discussed. For instance, effective communicative ability should be emphasized in language learning and this means that active skills should be improved rather than passive knowledge. Competency at an appropriate level in four basic language skills- reading, writing, listening and speaking- in addition to intercultural competence should be the main focus; yet, native speaker fluency is not the main objective. Reaching an appropriate level of competence in four language skills is the desired aim (Commission of the European Communities, 2003, p. 8).

To achieve these goals, the EU created the "Common European Framework of Reference for Languages" (CEF). The main ideas lying behind the organization of such a framework is to develop a common standard for foreign language curriculum and foreign language teaching across Europe. One of the key competencies, to be able to communicate in a foreign language, can be considered as a key tool for achieving one's goals, maintaining social conformity in today's highly information-based society, increasing employability and being an active citizen. Vankevic (2010, p. 59- 60) reported that the foreign language communication ability basically includes understanding concepts, facts or ideas

and being able to effectively express oneself, one's ideas and feelings within a social and cultural environment, not only orally but also in writing. This expression should be in each of the four basic skills (reading, writing, listening, speaking) in a foreign language.

Although the EU gives great importance to teaching foreign languages for active citizenship across Europe and has been making significant investment in foreign language teaching, Scott & Beadle (2014) revealed that the competence levels, particularly formed in line with CEF, are lower than the expected levels. The EC report which is based on a large-scale survey covering the participation of 26.751 respondents from 27 EU members also supports this fact. According to the report, more than half of all Europeans claim that they speak at least one language other than their mother tongue; the figures of the study show that about 54% of the Europeans can hold a conversation in at least one additional language. However, when it comes to speaking two foreign languages, the number goes down and reaches to 25%. Moreover, the figures go on falling when being conversant in three languages is the issue. The Europeans who claim to be able to communicate in at least three languages are just one out of ten (10%). This automatically leads to the fact that “under half of the Europeans are not able to speak any foreign language well enough to hold a conversation” (EC, 2012, p. 12). All these figures draw the attention to the language education policies across European countries. The number of countries which have designed an effective language education system in this sense is not high. The top eight countries that have achieved the goal of educating bi or pluri-lingual citizens can be listed as follows with the percentages signaling bi or pluri-lingual citizens:

- Luxembourg (84%)
- the Netherlands (77%)
- Slovenia (67%)
- Malta (59%)
- Denmark (58%)
- Latvia (54%)
- Lithuania (52%)

Yet, as mentioned before, the EU has the long-term objective of gaining every citizen some practical skills in at least two foreign languages and strives to achieve the goal of extending the number of foreign language speakers in every member state. It is obvious that an effective language learning policy is the key to achieve this goal. One model the EU encourages member states to use so as to increase the effectiveness of foreign language learning is the Content and Language Integrated Learning model.

3.1. What is Content and Language Integrated Learning?

Content and Language Integrated Learning (CLIL) is defined as a teaching model where “non-language subject is taught through the medium of a second/foreign language” with a balance between language and subject-matter teaching, in other words, the model is a dual-focused one (Bertocchi, Hofmannova, Kazianka, & Pavesi, 2001, p. 7). In simple terms, in CLIL learning environments, any subject-matter is taught through a foreign language and accordingly foreign language competence is fostered via the subject-matter content which is a non-language content in nature. Yet, CLIL should not be confused with a *normal subject-matter teaching* or any *foreign language teaching method or approach* since these two teaching types do not necessarily include a two-fold teaching aim. More specifically, in a normal subject-matter teaching the aim is not developing language-related skills, similarly, a typical foreign language teaching approach does not focus on teaching content lessons or subject-matter (Rowe & Coonan, n.d., p. 2). It should also be mentioned that CLIL is not a replacement for formal language teaching. In CLIL, formal language teaching and teaching a non-language subject through a foreign/second language should go hand in hand. The reason for the attempt to set a harmony between the content teaching and language teaching is that in order for learners to be able to master language skills in such a learning environment, language skills should also be practiced separately. Several studies have shown that learners do need formal language teaching for full mastery of the foreign language in CLIL learning contexts (Bertocchi et al, 2001, p. 10). As of 2014 figures, at least 12 EU countries have been reported to use CLIL and the use of the method seems to be spreading. As the model spreads around different countries, researchers become more curious about the ways to improve the learning outcomes with the help of this model (Scott & Beadle, 2014, p. 1).

Generally speaking, education is conducted in two languages in CLIL model. However, there are some countries where three different languages are used as the medium of education. To exemplify, Germany, Austria and Lithuania are among the countries that design CLIL teaching through three languages. The application of the model in different learning grades also varies; generally the model is applied starting from the primary school level followed by the secondary school. Yet, CLIL is also applicable to higher education and pre-school. The use of CLIL starting from the primary school level is strongly advised since “an early start to foreign language learning is a better guarantee for learning than has hitherto been the case” (Dulay, Burt & Krashen, as cited in Rowe & Coonan, n.d., p. 2). Second language acquisition theories support this fact owing to the critical period hypothesis. Due to the critical period hypothesis which refers to the concept that the ability to acquire a language is biologically linked to age, the earlier learners are introduced with the language, the better they will master it. According to Lenneberg, the founder of the hypothesis, critical period starts when a child is at least two years old and tends to close, for especially certain components of language acquisition such like phonology, around puberty.

The reason why this period tends to end around puberty is directly linked to cognitive mechanisms such as neural plasticity -functioning- and hemispheric lateralization -the growth of mental abilities underlying language in two lobes-taking place in the mind (Ioup, 2005, p. 419).

Before deeply analyzing what CLIL is and what main features it possesses, different types of bilingual education are defined so that the historical development of CLIL will be clearer. When the term bilingual education is used, generally three kinds of education models come to mind. These models are known as *immersion*, *submersion* and *CLIL*. A closer look at these three models can be helpful to understand the development of CLIL.

To start with, the immersion program mainly focuses on teaching a country's other official language (2nd official language) or a regional language. We can see the examples of teaching of a second language in countries like Canada, Belgium, Ireland, Luxembourg, Malta, Finland and Switzerland. On the other hand, Slovenia and the United Kingdom are examples of countries where a regional language is taught through bilingual education. In this program, teachers are generally native speakers of the second language. This model dates back to the 1970's in Canada where both English and French are the official languages of the country. When the English families living in Canada realized the importance of knowing French for their children, they wanted them to be immersed in French language instruction; thereby immersion program was first developed (Eurydice, 2005).

Another bilingual education type, submersion, appeals to the minority groups in a country. In this program language minority children, like migrants, are taught in the language of the majority group, in this way, they get integrated into daily life both in and out of the school linguistically and culturally.

In the last type of bilingual education, that's CLIL, the target language is a foreign language and the audience in teaching is the linguistic majority in a country. In this type, a foreign language is used as the medium of education in mainstream schools to teach both content subjects and some cognitive skills. The Eurydice document on "CLIL at school in Europe" (2005) makes a broader definition of the method by focusing on its distinctive features. According to the document, non-language subjects are taught in at least two languages in this model. Two languages in this definition correspond to the official state language and a target language. Depending on the country, the target language can be any of the following: a foreign language or "any non-indigenous language with no permanent firm footing within the territory of the state concerned"; another official language spoken in the country; and/or a language spoken in a specific region or by a specific minority group in the country. This final term is extended with the following definition in the report: a regional/minority language may refer to "a language spoken by populations that have their roots within the areas concerned or have been settled there for generations" (p. 10). As a result, it

would not be wrong to say that CLIL has become the widely used general term for bi- or pluri-lingual education with a dual-focus teaching aim today.

Bertocchi et. al (2001, p. 23) state that CLIL implementation in a teaching environment may have different forms. For example, CLIL teaching can be total or partial. In the total type, all non-language subjects are taught in a foreign language whereas in the partial one only some of the subject-matter content is taught with the help of a foreign language. The duration of CLIL implementation may change depending on the teacher profile, administrative support, and materials / resources available at the teaching environment. Sometimes application of CLIL can take place in a certain time period for a subject-matter, say 10 minutes a day for a subject matter; sometimes some of the classes related with a subject-matter can be taught using the CLIL matter, or CLIL can be the method of instruction for one or more of subjects-matters in a school. In this way, the foreign language is automatically learnt and practiced by the learners via studying content-based subjects or non-language subjects (Scott& Beadle, 2014, p. 3).

Instructor profile is one of the salient issues if CLIL is to be used in a learning environment because in order to implement CLIL programs, the first and foremost prerequisite is the foreign language proficiency of the content instructors. They need to be proficient not only in their subject matter but also in the foreign language they are expected to teach the content. Even though general application involves a team wok of language teachers and content teachers, different types of teachers may take part in a CLIL program and these can be listed as follows:

Teachers qualified in both content subject and the foreign language, classroom teachers using an additional language as the medium of instruction, foreign language teachers instructing learners on non-language subject content, a content subject teacher and a foreign language teacher working as a team and exchange teachers supported by foreign ministries of education, educational authorities or European programs (Bertocchi et al., 2001, p. 17).

As is mentioned in the previous title, the EU encourages member states to use CLIL model to increase the effectiveness of foreign language learning, thereby aiming to establish its multilingualism and multiculturalism policies as a broad objective. Scott& Beadle (2014, p.4-5) mention that the EU supports the use of CLIL due to certain aims and call it the 4Cs of CLIL (the 4C term refers to content, culture, cognition and communication) as an umbrella term. Some of the more specific objectives lying behind the intention of increasing the use of CLIL include gaining learners an international perspective and giving learners the chance to work on subject contents through different perspectives. CLIL makes learners master subject-specific terminology in a target language, as a fruitful outcome of this way of subject-matter study, their overall target language competence, especially verbal communication skills, improves; with the help of the model learners become more motivated and they get the chance to observe and experience various methods and forms of classroom activities.

All these objectives are gathered under the umbrella term, the 4Cs of CLIL. These are all inter-related and linked to each other. In the model, experiential learning, learning by doing, incidental learning approach is followed with the integration of learners as active participants in the classroom. That's why, projects, presentations, team and pair work activities, hands-on activities, games, visuals, charts and realia are widely used. Since the focus is on communication, real-life situations are created to enhance communication. The priority is on communicative competence rather than grammatical competence since the latter develops in time with the help of the former. As raising intercultural awareness of learners is one of the main foci of language education, teaching cultural elements is fundamental. Also developing cognitive skills such as critical thinking, analysis, synthesis, making judgments and evaluations, problem solving, creating new things on the basis of the things learnt, application of concepts in new situations are essential elements of the model. The belief is that with the integration of all these principles and teaching approaches, students are expected to be life-long learners and more strategic individuals.

3.2. Findings about CLIL

Findings coming from several studies conducted in different countries such as Germany, Netherlands and Spain show what type of competences CLIL learners develop in time compared to learners in traditional classes. For instance, Dalton-Puffer (2007) claims that evidence from CLIL classes demonstrate the development of receptive skills (reading and listening) more than productive skills (speaking and writing). Another issue is the improvement of vocabulary, especially technical and semi-technical terminology of content subjects, the awareness of the morphological elements of the target language such as prefixes or suffixes and general academic language related to the subject-matters are taught through CLIL. In terms of productive skills, a higher level of fluency is observed and learners are able to produce a good amount of output in spoken language in terms of quantity. CLIL learners are also reported to demonstrate high levels of creativity and risk-taking skills.

Moreover, several studies revealed that CLIL students' cognitive development is superior to that of students in traditional classrooms. CLIL has been reported to create a motivating learning environment which increases learners' confidence in learning a foreign language. Fluency, creativity and risk-taking levels of CLIL learners are higher and accordingly they are more courageous to take part in spontaneous face-to-face interaction. CLIL also helps learners to develop positive attitudes towards other languages and cultures, which results in an increase in their intercultural communication skills (as cited in Scott & Beadle, 2014, p. 7- 10).

As a result, the application of CLIL brings several advantages to language education. First of all, the integration of content and language makes learning more interesting but at the same time challenging for learners. The incidental learning style in CLIL increases intrinsic motivation. Traditional language classrooms are

less likely to provide learning environments where pragmatic and sociolinguistic skills and cognitive competences and subject literacy in a foreign language are altogether trained. CLIL is more likely to develop a balanced integration of language skills and subject-matter content with an interactive teaching style. In CLIL classes, learners are so busy with solving the content-matter that they are not directly focused on language learning or pieces of language. Rather than that, they work on topics and themes which are presented with a rich repertoire of materials and tasks that are authentic, comprehensible and meaningful for language development so learners are engaged in the input itself. This way what Krashen calls as “forgetting principle” is achieved in CLIL classes. Within this incidental way of learning, a number of cognitive processes are in action and “this is what normally occurs in the native language” (Bertocchi et.al., 2001, p. 9). Quantity as well as quality of exposure to foreign language is higher in this model of learning. This seems more like an acquisition environment than a learning one which helps to decrease the “affective filter” of learners which, as to Krashen, hinders learning when it is more than necessary (Rowe & Coonan, n.d., p.1-2). Another advantage this twofold education brings is that teaching becomes more condensed and time-efficient. Lastly, it is important to note that the bi- or pluri-lingual school diploma received as a result of CLIL would be more advantageous for future university careers and job opportunities of learners (European Centre for Modern Languages of the Council of Europe n.d.).

3.3. Development of CLIL in EU countries

According to the EU document on CLIL across European schools “CLIL at School in Europe” (2006), status of CLIL, languages used as the medium of education in CLIL and levels of education in CLIL are herein below:

3.3.1. Status of CLIL

- Luxembourg and Malta are the only countries using CLIL in all mainstream classes.

- From a chronological point of view, countries where several official languages are spoken just like Belgium and where there are one or more regional or minority languages are spoken like Luxembourg and Malta have been the first countries to use the model to teach these target languages, dating back to the 19th century.

- Following the above mentioned countries, Germany, Hungary, the Netherlands, Poland, Slovenia, Slovakia and the United Kingdom (Wales) started to apply CLIL in the 1940’s and 1950’s with the aim of teaching regional and/or minority languages.

- CLIL has become more prevalent in the teaching of foreign languages in the 1980’s and 1990’s.

3.3.2. Status of languages in CLIL

CLIL is available with different language combinations including foreign, regional and/or minority and other state languages across European countries. In most of the countries, foreign languages –English, French and German as the most common foreign languages taught in schools- and regional and/or minority languages are the focus of education. The status of languages in CLIL in different European countries is as follows:

- Czech Republic, the United Kingdom (England) and Bulgaria are the countries where the focus of education is a foreign language whereas in the United Kingdom (Wales, Northern Island and Scotland) and Slovenia one or more regional and/or minority languages are the target languages.

- Several countries including Estonia, Latvia, Luxembourg, the Netherlands, Austria and Sweden use a CLIL model in which three different languages form the medium of education. In this pluri-lingual model of CLIL, the combination of a national language with two foreign languages (e.g. Spain and Latvia) or a national language plus a foreign language and a minority language (e.g. Estonia, Latvia, the Netherlands, Austria and Sweden) can be observed.

- Countries where CLIL is applied in two official state languages are Belgium (French and German-speaking communities), Ireland, Luxembourg, Malta and Finland.

3.3.3. Levels of Education in CLIL

The most prevalent use of CLIL across European countries is in primary, lower secondary and upper-secondary levels of education. Although it is known that CLIL is applicable to higher education and pre-school levels as well, data show that the application of CLIL in these levels of education is not common. Depending on the figures given in Eurydice (2005), the provision of CLIL application in different levels of education across some of the European countries can be seen below:

- Belgium (Dutch speaking community), Denmark, Greece, Cyprus, Lithuania, Portugal, Liechtenstein are the countries where no CLIL provision is observed.

- The German and French speaking communities of Belgium, Spain, Italy, Latvia, Poland, Finland, the United Kingdom (Wales, North Ireland and Scotland) and Romania apply CLIL model both in primary and secondary school levels. Some of these countries also offer the model in pre-primary school level but generally the implementation is partially and mostly activity-based.

- Germany, France, Ireland, Luxembourg, Hungary, Malta, Netherlands, Austria, Slovenia, Slovakia, Sweden, and the United Kingdom (England) use CLIL both in primary school and secondary school levels.

- Czech Republic, Estonia and Bulgaria apply CLIL only in secondary school level.

- The duration of CLIL education varies (approximately 9-10 years) depending on the schools' legislations (p. 13-19).

3.4. Key principles for an effective CLIL learning environment

It is no doubt that for an effective CLIL practice, different levels of learning (e.g. primary school, secondary school, and high school) may require different learning activities. Yet, Meyer (as cited in Scott and Beadle, 2014, p. 16) reveals that in order for a CLIL learning atmosphere to be a successful and sustainable one, certain key points should be taken into consideration. These mainly include rich input, scaffolding, rich interaction and pushed output, intercultural communication, and thinking skills.

One of the most salient factors in the establishment of an effective CLIL environment is providing learners with a varied type of input. This basically refers to a series of learning materials and activities that are meaningful to learners but also authentic and challenging for them (especially with the integration of interactive materials such as videos, clips, animations, pod-casts). The main idea here is both to increase motivation of learners and to make strong links with the previous knowledge. The second principle is scaffolding which helps learners to cope with the over load of the cognitively and linguistically demanding content of learning. Scaffolding may include giving learners a list of key phrases and specific vocabulary items to complete certain tasks or providing a comprehensible structuring, graphic organizer, mind map, basically a suitable format related with the task at hand to help them grasp and successfully complete the task. Another basic principle includes the presentation of the learning material using rich interaction and thereby maintaining a pushed output. That is, the use of target language during classroom interaction is of great importance. Encouraging learners to make use of their resources and creating rich peer interaction atmospheres in the target language are essential for a learning environment that is full of an ample amount of output. To achieve this, the selection of learning tasks has great importance. Meyer (as cited in Scott and Beadle, 2014, p. 16) states that task-based language teaching should be a part of the CLIL lesson planning since this learning type facilitates the use of authentic communication materials making learning content more meaningful in the class. The next principle which is the intercultural communication deals with overcoming the cultural codes and meanings that may be hidden in the material and may hinder learning. Learners' awareness concerning the intercultural elements should be increased so that they can use appropriate linguistic and nonlinguistic strategies to solve the culturally-bound themes and concepts when they encounter with them. Finally, especially for academic discourse functions, learners should be able to go beyond understanding the content. Expressing what they have grasped in a complex way, by analyzing and synthesizing the information they have, is an important cognitive ability to be taught and applied in CLIL classes. Therefore, making a blend of language skills with cognitive

skills, higher order thinking skills, for the expressing of one's opinion is a vital skill to be practiced in CLIL learning environments.

4. Conclusion

EU's multilingualism policy in several fields shows its attempts to respect different cultures and different languages and the "others". EU's language education policy in parallel with its attitude towards learning new languages is one of the most significant and strongest application fields of its multilingualism policy. Since 2002, all European citizens are required to be able to speak at least two languages- a foreign language or a regional or a minority language- in addition to their mother tongue. Foreign language competence is accepted as one of the eight key competences that all EU citizens have to possess. To achieve this goal, language education policy, particularly in compulsory education, is of great importance for the union.

Educating multilingual EU citizens is at the heart of EU language education policy and to manage this goal effectively, EU supports the use of CLIL starting as early as possible in compulsory education. Starting from the 1970's, the model has been used in different education contexts around Europe with different applications. The application of CLIL may change from one country to another on the basis of languages (official state language as a target language, foreign language, minority/regional language) used as the medium of education and levels of education in CLIL (pre-primary, primary, lower and upper secondary school level). The model includes the integration of the 4Cs (content, culture, cognition and communication) with a learning by doing approach. The related research on CLIL shows that the application of CLIL brings several advantages to language education and learners are equipped with several important skills and abilities when they are instructed through CLIL model. To name a few, receptive skills (reading and listening), vocabulary skills, especially technical terminology of content subjects, fluency in terms of verbal skills and cognitive skills are improved more effectively when compared to traditional teaching environments. CLIL learners are also reported to demonstrate high levels of creativity and motivation for learning and risk-taking skills. CLIL is more likely to develop a balanced integration of language skills and subject-matter content with an interactive teaching style. In CLIL classes, learners are so busy with solving the content-matter that they are not directly focused on language learning or pieces of language. This twofold education leads to a more condensed and time-efficient education model. However, an effective CLIL learning atmosphere requires the consideration of certain factors such as creating rich input and rich interaction and pushed output atmosphere, providing enough scaffolding and intercultural communication activities for learners, and facilities that will help improve thinking skills effectively. All these positive outcomes coming from several countries seem to prove that the model will develop more and become more widespread across European countries as a good tool for creating a multilingual Europe in the future.

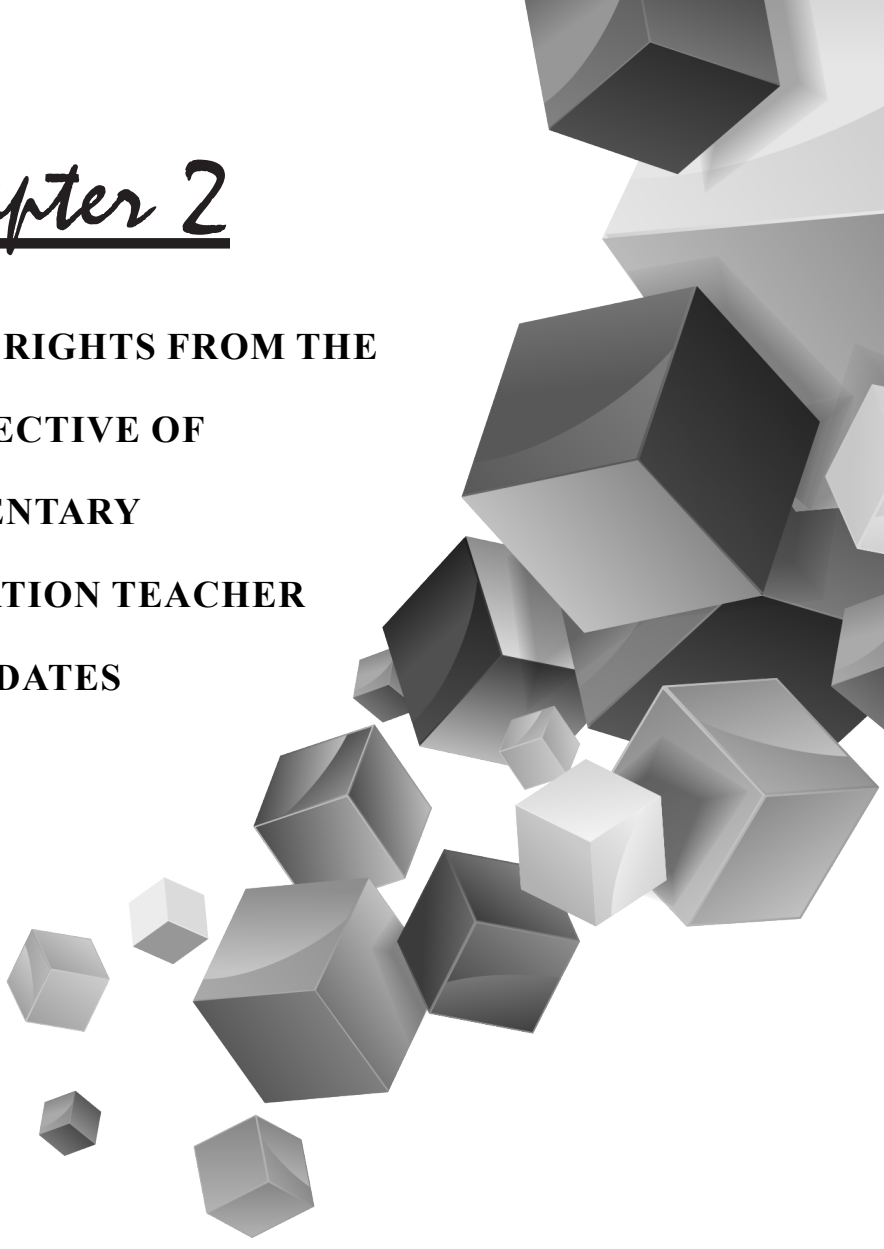
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Chapter 2

CHILD RIGHTS FROM THE PERSPECTIVE OF ELEMENTARY EDUCATION TEACHER CANDIDATES



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Introduction

The most important aspect that determines the future of a country is the importance given to children growing up. Children who grow up with their cultural values require a healthy growing and education process in order to serve their country well. In globalizing world raising independent individuals who can think and decide freely and analytically in a democratic society requires giving importance to child rights.

Child rights is a universal concept that involves physical, psychological, sociological and political rights that children have by birth (Özdemir Uluç, 2008). According to Uçuş & Şahin (2012) child rights highlight the powers that the child need to have in an efficient, equal and free process of being an individual. One of the most important documents is Convention on the Rights of Children within universalization of child rights. Being accepted by United Nations in 1989 Convention on the Rights of Children came into force in worldwide including Turkey. This convention, which is a legal text; is classified as survival rights that meet the fundamental requirements of child, developmental rights required for development of the child such as resting, protection rights of child such as negligence and abuse and participative rights that include children's taking an active role in the triangle of school, society and family they grow up (Akyüz, 2015; Merey, 2017; Yıldırım, Doğru, 2014). In childhood which is the best ideal period for beginning the education of child rights, in order to raise a future respectful to rights, the most effective way is the education of child rights (Flowers, 2010; Seyhan & Cansever, 2017).

Also raising individuals who are aware of child rights and apply it to their life is one of the most important tasks of educational institutions (Gömleksiz, Kilimci, Vural, Demir, Koçoğlu Meek & Erdal, 2008). The education of child rights includes developing the feeling of respect towards individuals, teaching them their rights and the ways to protect these rights (Flowers, 2007; Uçuş, 2013). This education process involves educational applications appropriate for the convention on the rights of the child (Howe, 2005; Howe and Covell, 2007). As a natural result of this situation children will acquire what they learn as behaviors and they will reflect it to their life. Teachers have an important role regarding acquiring child rights as behavior. Teaching child rights beginning from preschool especially in nursery school and primary school will enable children learn their rights and internalize it. In the process of transforming child rights to behavior, teachers must know child rights, be role model via their behaviors, make additional researches to cognitive methods and use methods such as games (Uçuş, 2013). In addition, within the context of hidden curriculum at schools' extracurricular activities such as games, trips and observation activities, examples from daily life, celebrating special days and weeks are important in terms of children learning their rights and developing democratic personality (Çelik, 2009). When literature is examined it is seen that there are studies regarding determination of parents', teachers, students, administrators and teacher

candidates' attitudes and perceptions towards child rights (Akbar, Hameed, Khan & Siddiqui, 2019; Alderson & Arnold, 1999; Bağçeli Kahraman & Onur Sezer, 2017a; Bağçeli Kahraman & Onur Sezer, 2017b; Biçer, Özcebe, Doğan, Haznedaroğlu, & Bertan, 2016; Değirmenci, 2011; Ersoy, 2011; Fazlıoğlu, 2007; Kepenekçi, 2006; Kepenekçi 2010; Kepenekçi & Baydık, 2009; Leblebici & Çeliköz, 2017; Shumba, 2003; Taylor, Smith & Nairn, 2001; Tunç, 2008; Uluç, 2008; Veiga, 2001; Yüksel & Yazıcı, 2019). Besides determination of attitudes and perceptions in Kozikoğlu 's (2018) study in which it is aimed to determine preschool teachers' views regarding child rights and child participation right, it was determined that most teachers explained child rights as living, developing, protection and participation rights.

However, in the study of Asimaki, Koustourakis, Lagiou & Berdeni (2018) it was determined that teachers limit children's rights regarding playing games, participation, resting, expressing themselves and free time. Also in Dinç's (2015) study in which parents' views regarding child rights were determined, it was determined that families do not have adequate information about child rights and they need to be informed. Considering the fact that teachers are the persons who will raise awareness about this issue; it is thought that determining knowledge level of teacher candidates who are the teachers of the future regarding child rights is important. Lundy & O'Lynn (2018) emphasized that education of child rights provided at an early age is important in shaping the future of children. From this point of view, determining the views of Elementary Education teacher candidates regarding child rights constitutes the purpose of this study because they are to manage this process. In accordance with this purpose answers were searched for the questions what is child rights concept, when and how teachers heard about this concept first, child rights they know, when they suggest to begin child rights education and which right they will teach first.

Method

Research Design

Research was designed as general survey model in order to determine the views of teacher candidates from preschool and elementary school teaching departments. General survey models are the studies carried out on the whole of population or on a group from this population or sample in order to reach a general agreement about population Karasar, 2009; Büyüköztürk et.al, 2011). In screening studies participants can be asked to fill a questionnaire (Christensen, Johnson & Turner, 2015). In this research participants of the research were asked to answer questionnaires that consist of open ended questions.

Study Group

Study group consists of voluntary 134 teacher candidates who attend Elementary School Teaching and Preschool teaching departments (60 Elementary Teaching, 74 Preschool Teaching) in a public university. Study group of the

research was determined using convenience sampling (convenient sampling) which is one of the random sampling methods. Convenient sampling method was selected because this sample is easily accessible and applicable in terms of time, finances and work force. Sample group of the research is formed extremely fast and easily (Özen & Gül, 2007; Büyüköztürk et.al 2011).

Data Collection Tools

In the research, teacher candidates were addressed six open ended questions that take place in a questionnaire in order to determine their views regarding child rights. Questionnaire is the data gathering tool that measures participants' demographic information besides views and perceptions. It can include close ended and open ended questions (Christensen, Johnson & Turner, 2015). Besides demographic information regarding gender and departments of teacher candidates, six open ended questions take place within the questionnaire formed in this research. In the questionnaire these questions were asked; what is child rights concept, when and how did they hear about child rights concept first, when must child rights applications begin in the life of pupils, and also they were asked to write three child rights and which right they would like to teach their pupils first. In addition, teacher candidates were asked to write an activity example regarding the right they would like to teach their pupils first. Questions that were prepared after making field research were turned into a draft form and then presented to two experts. Examining the feedback taken from experts the use of questionnaire was determined and accordingly the final form of the questionnaire was given. In order to determine the comprehensibility of the finalized questionnaire pilot study was carried out asking questions to three teacher candidates and the comprehensibility of the questions was determined. Teacher candidates who participated in the pilot study were excluded from other part of the research.

Data Collection

Firstly, elementary and preschool teacher candidates who stated that they would participate in the research voluntarily were determined. These volunteer teacher candidates were asked to fill questionnaire forms.

Data Analysis

Data obtained within the scope of research was stated digitizing as percentage and frequency. Also in order to reflect views of teacher candidates (ET1, PT2...), more explicitly each was given a code number and direct quotations were included. Research data was coded by researchers separately. Consistency of the data coded by two researchers was calculated using agreement (disagreement + agreement) formula (Miles & Huberman, 1994). General concordance coefficient was determined as .87. Since concordance coefficient was considered adequate

when it was .70 and more it can be stated that research has internal reliability at an adequate level.

Findings

Table 1. Opinions regarding “what is child rights concept?”

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
The Right to Life	15	12,9	22	13	37	13
The Right to Education	13	11,2	22	13	35	12,3
Equality of Opportunities	11	9,48	18	11	29	10,2
Rights and freedoms of children considering that they are individuals	10	8,62	16	9,5	26	9,15
Natural rights beginning from birth	10	8,62	13	7,7	23	8,1
The Right to Protection	10	8,62	4	2,4	14	4,93
Housing Right	9	7,76	14	8,3	23	8,1
Protection From Abuse	9	7,76	5	3	14	4,93
Health Right	6	5,17	7	4,2	13	4,58
Rights to Have Until 18	6	5,17	8	4,8	14	4,93
Nutrition	5	4,31	6	3,6	11	3,87
Games	3	2,59	6	3,6	9	3,17
Social Security	2	1,72	2	1,2	4	1,41
Personal Development	2	1,72	5	3	7	2,46
Legal Rights	1	0,86	10	6	11	3,87
Freedom of Expression	1	0,86	3	1,8	4	1,41
The Right to Speak In Society As Adults	1	0,86	-	0	1	0,35
The Right to Get Respect From Society	1	0,86	1	0,6	2	0,7
The Right to Access Their Needs	1	0,86	5	3	6	2,11
Leisure and Play	0	0	1	0	1	0,35
Total	116	100	168	100	284	100

When Table 1 is examined it is determined that regarding the definition of child rights, elementary teaching teacher candidates expressed 116 different opinions and preschool teaching teacher candidates expressed 168 different opinions. It was also determined that among these opinions 12,9% of elementary school teacher candidates and 13% of preschool teacher candidates defined

child rights as the right to life. Additionally, 11,2% of elementary school teacher candidates and 13% of preschool teacher candidates defined child rights as the right to education. Apart from these definitions teacher candidates defined child rights as equality of opportunities, protection from abuse, right to play, freedom of expression and being respected in society.

Examples from teacher candidates' opinions regarding child rights concept are given below:

Child rights are certain rights that every child has since birth beginning with the right to life. (ET29)

I think Child Rights is the protection of children and giving them the rights to life, housing, protection, eating and drinking, education and health. (ET39)

These are the rights that children must have beginning from birth, explained by law and protected by the government and us, and also must include every child. (ET6)

I think Child Rights is a concept that involves rights of individuals until 18 in all living quarters. I suppose these are rights beginning from their care (life quality) to their opportunities and education.

It is a universal concept that includes concepts such as education, health, life, housing, physical, psychological or protection from exploitation that all children on earth possess beginning from birth. (PT85)

Table 2. The replies of teacher candidates regarding when they heard about child rights first

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
At Secondary School	22	37,9	8	11	30	22,4
At Primary School	16	27,6	24	32	40	29,9
At High School	10	17,2	16	21	26	19,4
At University	6	10,3	17	22	23	17,2
At Associate Degree (Two Year Degree)	-	0	2	2,6	2	1,49
In an interview	-	0	1	1,3	1	0,75
I do not remember exact date and time	4	6,9	6	7,9	10	7,46
I have just heard it	-	0	1	1,3	1	0,75
When I started teaching in 2004	-	0	1	1,3	1	0,75
Total	58	100	76	100	134	100

As it is seen in Table 2 it was determined that 37,9% of elementary school teacher candidates and 11% of preschool teacher candidates heard about child rights concept first at secondary school and also it was determined that 32% of preschool teacher candidates and 27,6% of elementary school teacher candidates heard about child rights at primary school.

Table 3. The replies of teacher candidates regarding how they heard about child rights

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
Teacher Mentioned During Class	10	21,3	15	29	25	25,5
Elementary teacher informed	9	19,1	8	16	17	17,3
In Social Studies class at secondary school	7	14,9	4	7,8	11	11,2
In Democracy and Human Rights class	5	10,6	1	2	6	6,12
I heard it in Introduction to Science class in primary school	3	6,38	3	5,9	6	6,12
I heard it in a class in university (Introduction to Teaching, Introduction to Preschool Education, Mother-Child Health, Child Law, Environment Education)	3	6,38	4	7,8	7	7,14
I just heard it as a concept	2	4,26	-	0	2	2,04
In a seminar	2	4,26	0	0	2	2,04
On news	1	2,13	3	5,9	4	4,08
In a TV program	1	2,13	2	3,9	3	3,06
In a conference	1	2,13	-	0	1	1,02
Child rights was discussed in a debate at school	1	2,13	-	0	1	1,02
With UNICEF concept in Citizenship class mentioning Declaration of Human Rights	1	2,13	2	3,9	3	3,06
In a text titled Child Rights	1	2,13	1	2	2	2,04
I prepared a homework at high school	0	0	2	3,9	2	2,04
In primary school it was mentioned in Special Days and Weeks	0	0	4	7,8	4	4,08
It was mentioned in Community Service class in TEGV	0	0	1	0	1	1,02
I read it in a book	0	0	1	2	1	1,02
Total	47	100	51	100	98	100

When the replies of teacher candidates regarding how they heard child rights, it was determined that elementary school teacher candidates expressed 47 opinions and preschool teacher candidates expressed 51 different opinions. When these opinions were examined it was determined that they mostly stated that their teachers mentioned during class (elementary school teaching 21,3%; preschool teaching 29%), their classroom teacher gave information (elementary school teaching 19,1%; preschool teaching 16%) and it was taught in social studies class (elementary school teaching 14,9%; preschool teaching 7,8%).

Teacher candidates' opinions regarding when and how they heard about child rights first are given below:

At secondary school our Social Studies teacher mentioned. (ET5)

I heard that I had some rights in primary school. But I consciously recognized it at high school. (ET8)

I heard this concept in a TV program a few years ago. There was a discussion about news of a raped child. (ET18)

I heard child rights first in an interview in which female children's right of education was being discussed and defended. Apart from that, I heard it in lessons and classrooms briefly. (PT69)

While I was going to primary school I heard it in special days and weeks subject on children's rights day part. (ET59)

Yes, although I am 21 years old I can say that I heard this concept recently. It is not only my fault but also the system's that did not teach this to us as a lesson. Recently I understood the concept of child rights in parallel with the increase in child abuse. (PT133)

Table 4. Three rights that teacher candidates considered important among child rights

	Elementary School Teaching						Preschool Teaching					
	1		2		3		1		2		3	
	f	%	f	%	f	%	f	%	f	%	f	%
Education	21	36,2	22	38	9	15	24	30,8	22	27,2	12	15,6
Life	20	34,5	9	16	7	11,7	19	24,4	9	11,1	12	15,6
Game	6	10,3	1	1,7	2	3,33	11	14,1	10	12,3	11	14,3
Nutrition	2	3,45	1	1,7	4	6,67	4	5,13	5	6,17	8	10,4
Housing	2	3,45	7	12	13	21,7	1	1,28	16	19,8	5	6,49
Protection	1	1,72	3	5,2	11	18,3	4	5,13	2	2,47	6	7,79
Compassion and Love	1	1,72	-	0	-	0	1	1,28	1	1,23	2	2,6
Health	3	5,17	9	16	5	8,33	3	3,85	4	4,94	3	3,9
Equality	1	1,72	1	1,7	-	0	4	5,13	-	0	-	0
Not Being Employed Until 18 Years Old	1	1,72	-	0	-	0	1	1,28	1	1,23	2	2,6
Right of Association	-	0	-	0	-	0	1	0	-	0	-	0
Fun	-	0	1	0	-	0	1	0	-	0	-	0
Rest	-	0	-	0	-	0	1	0	-	0	-	0

Accepting Individual Privacy Expression Thoughts Development Freedom Protection Abuse Clothing	As	An	-	0	-	0	-	0	1	0	-	0	-	0	
			-	0	1	0	4	0	1	0	1	0	2	0	
		of	-	0	-	0	-	0	1	0	5	0	5	0	
			-	0	1	0	2	0	-	0	-	0	4	0	
			-	0	2	0	-	0	-	0	1	0	1	0	
	From		-	0	-	0	3	0	-	0	2	0	3	0	
Total				58	100	58	100	60	100	78	100	81	100	77	100

When Table 4 is examined it was determined that among child rights first three rights that teacher candidates gave importance most were education right, then life and then right to play. Also teacher candidates mentioned nutrition, protection, compassion and love, health, equality, not being employed until 18 years old, association, fun, rest, accepting as an individual, privacy, expressing thoughts, development, freedom, protection from abuse and clothing rights.

Table 5. Teacher candidates' opinions regarding when to start child rights education first

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
By Birth	19	33,3	14	18	33	25
Primary School	17	29,8	8	10	25	18,9
Preschool	9	15,8	30	39	39	29,5
3 rd and 4 th grade in Primary School	5	8,77	0	0	5	3,79
Secondary School	2	3,51	4	5,2	6	4,55
When formal education starts	2	3,51	-	0	2	1,52
2 nd grade Primary School	1	1,75	0	0	1	0,76
University	1	1,75	0	0	1	0,76
After 18	1	0	-	0	1	0,76
In mother's womb	0	0	14	18	14	10,6
Family	0	0	5	6,5	5	3,79
Total	57	100	77	100	132	100

When Table 5 is examined it was determined that 29,5% of teacher candidates stated that child rights education must begin in preschool education, 25% them stated that it must begin by birth and 18,9% of them stated that it must begin in primary school.

Teacher candidates' opinions regarding when child rights concept must begin are given below:

I think these applications must begin in primary school. Because if children grow up being aware of their rights I think they will be more conscious individuals who can defend their rights. Primary school is not early. At that age group children can perceive very well. (ET37)

It must begin in preschool period. Because, if individuals begin to learn these rights in nursery school, they will behave more consciously towards others in their social life and school life. We must make children be aware of their rights from birth. However, its education can start in preschool period. (ET57)

Child rights applications must start in family. When children can learn their rights within family, they can realize other people's behaviors towards them. (PT65)

It must begin in secondary school. Because this consciousness must be formed when they are young. They must be in a condition to perceive this consciousness. They can perceive in secondary school. (PT103),

The children have several rights beginning from mother's womb. Because they become a part of nature, society and family then. As soon as children gain awareness they must be introduced, told and maintained their rights. Because children who grow up without knowing their rights cannot feel themselves as a part of society, they are raised as passive individuals or on the contrary they set their eyes on others' rights. It is important for the child to draw the frame. (PT89)

These applications can be given to children in 2nd grade Life Science and Turkish lessons via reading texts and teachers can start education about this matter in primary school. Because when children are 8-9 years old if they become aware of child rights we can make a more respectful society for children. Child abuses and bullies can decrease significantly. (ET67)

Table 6. Teacher candidates' opinions regarding which right among child rights they would like to teach first

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
Education Right	22	36,1	11	13	33	22,8
Life Right	18	29,5	11	13	29	20
Right of Protection From Negligence and Abuse	7	11,5	21	25	28	19,3
Freedom of Expression	3	4,92	15	18	18	12,4
Personal Privacy	3	4,92	2	2,4	5	3,45
Nutrition Right	2	3,28	3	4,8	5	3,45
Right of Opportunity Equality	2	3,28	2	2,4	2	1,38

Child Right	1	1,64	0	0	1	0,69
Game Right	1	1,64	13	15	14	9,66
Healthy Life and Environment Right	1	1,64	1	1,2	2	1,38
Right not to be employed in hard labor	1	1,64	1	1,2	2	1,38
Right for Shelter	0	0	2	2,4	2	1,38
Right for love and respect	0	0	2	2,4	2	1,38
Total	61	100	84	100	145	100

When Table 6 was examined, it was determined that teacher candidates stated that when they become teachers they would give priority to education right (Elementary Teaching $f=22$, %36.1; Preschool Teaching $f=11$, %13) then the right to life (Elementary Teaching $f=18$, %29.5; Preschool Teaching. $f=11$, %13) and then protection form negligence and abuse.

Table 7. Methods teacher candidates prefer using regarding child rights education

	Elementary School Teaching		Preschool Teaching		Total	
	f	%	f	%	f	%
Drama	12	42,9	17	31	29	35,4
Cartoon, animation, video and story	4	14,3	2	3,7	6	7,32
Demonstration and practice	3	10,7	0	0	3	3,66
Case	2	7,14	1	1,9	3	3,66
Poem, song, poster, banner, board, creating stories	2	7,14	7	13	9	11
Teaching via educational games	2	7,14	14	26	16	19,5
Family education at home	1	3,57	4	7,4	5	6,1
Making rules	1	3,57	0	0	1	1,22
Projects	1	3,57	0	0	1	1,22
Completing pictures	0	0	1	1,9	1	1,22
Teacher training	0	0	1	1,9	1	1,22
Question -answer	0	0	7	13	7	8,54
Total	28	100	54	100	82	100

When Table 7 is examined it was determined that teacher candidates expressed 82 different methods and technical opinions regarding child rights education. When these opinions were examined 35,4% of them stated that they would provide child rights education with drama method, 19,5% of them stated

educational games, 8,54% of them stated question and answer and discussions and 7,32% of them stated cartoons, animations, videos and stories.

Opinions of teacher candidates regarding which child rights they would teach and which methods they would use are given below:

Child rights are inseparable. For example, if a child who has the right to live does not have the privacy right there comes out a big deficiency. Therefore, every right completes one another. (ET14)

I would teach equality first. Thus I would tell my pupils that they are all equal regarding other rights. I would add that nobody is superior to others and they have rights such as education and health equally. (ET44)

Teaching children the right of protection from violence, exploitation and sexual abuse is priority for me. I would like to create awareness with various short films, examples and stories even with a drama show. (ET9)

When I become a teacher, I would like to teach education right first. I think I will begin working as a teacher in eastern part of my country and most children in this region are deprived of education. I would like to go their home and talk to their parents one by one. (ET2)

In my opinion a child must be given the right to play games and education. Because children learn life in games and in social environment. With the games they play they express themselves better. They develop themselves taking education in an appropriate environment with their peers. I would allow them to play freely as the activity. (PT71)

I would teach them the right to live in a clean environment. I would provide recycling bins in my classroom. I would explain them the necessity of putting plastic, glass, paper and garbage in separate places and I would provide them to be conscious individuals. (ET5)

I think protection right is very important. In order to teach this one of the best way is preparing animations. If it is not possible we can ask the question "Who would you go when you need?" we can discuss and then make a drawing and coloring activity and hang these pictures on a board. A song can be taught to pupils including the people they draw and these rights. (PT80)

When I become a teacher I would teach my pupils the right to express their feelings and opinions freely. I would make a drawing activity with kids. However, I would give them a half picture and ask them to complete it according to what they think using their imagination and then we would talk about it. (PT107)

I would teach them education right first. For this I would prepare a drama in the classroom including examples of individuals who are given/not given education right and people who use/does not use it. I would try to emphasize the privileges of those who have education right and also the difficulties of people who do not have education right. (ET47)

Firstly, I would teach children the right to play games. Because game is what they do and it is how they learn. Game right of children must be emphasized in preschool period. I would enable them to play their favorite game during action game time and then would ask them to draw what they feel during these games. (PT100)

I would like to teach the right of respect. I would bring an object to classroom that only one person can use at a time. Then I would ask them to wait and use it one by one. (PT94)

I would teach equality of opportunities in education. For example, I want every student coming from city, village or any other parts of the region to have equal conditions. For instance, I would make a small garden in school yard and try to teach my students to grow fruit and vegetables and country life. (ET46)

When I become a teacher the first right I will teach my students is the right to play games. I would arrange game and family participation activities at school, home or in the garden with families that do not make time for their children in order to tell them the freedom of children to play games. (PT129)

Firstly, I would like to teach children the right to play games. I would show them the pictures of various children around the world. But in these pictures children would be playing games. Then I would ask them questions like “Who can play games in your opinion, is playing games fun?” I would tell them that playing games is one of their fundamental rights. (PT121)

Teaching the right of protection from abuse and negligence would be my priority. Because, children are neglected and abused, although most people think the opposite way. I would bring a stone or a flower to classroom and ask children to behave it badly. Then I would explain them that the stone did not do anything wrong I just brought it there. Likewise, I would tell them that we should not behave badly towards other people and children around without any reason and their existence on earth does not constitute a crime (ET53).

Discussion and Conclusion

As a result of this research, in which views of elementary school teaching department teacher candidates were examined, it was determined that teacher candidates defined child rights as the right to life and education. In addition, as a result of this research it was determined that teacher candidates stated that they would give priority to rights of education, life, and protection from negligence and abuse. When the views of preschool teacher candidates were examined it was seen that they stated that they would inform children regarding the right of protection from negligence and abuse and would perform related activities. It can be stated that the reason for this situation can be the abuse incidents directed to children in preschool period are generally seen in mass media. Also it is thought that Child Negligence and Abuse lesson which was provided as a selective lesson in Preschool Teaching Department at the university in which research

was carried out must have influenced the awareness of teacher candidates. In this study although teacher candidates mentioned life and education right they did not refer acquisition of participation, avoiding discrimination, pursue children's benefit, individual differences among children, and values such as respect, love and tolerance. In the study of Danacı, Pınarcık & Çetin (2017) it was determined that teacher candidates could not make a detailed explanation regarding the content of child rights and their explanation of child rights is limited with daily information. In the research of Yüksel & Yazıcı (2019) it was determined that the awareness level of teacher candidates regarding child participation right was lower than expected. In addition, other studies indicate that teachers and teacher candidates do not have adequate information regarding child rights (Kaya, 2011; Özmen & Özmen, 2011; Uçuş & Şahin, 2012). Considering these results it can be stated that teacher candidates generally do not have adequate information regarding child rights and they require to be informed in order to reflect child rights to activity process and their plans and also in order to be a good role model for children. However, in other researches different from this research it was determined that, teacher candidates' attitudes and awareness regarding child rights were at high level (Covell & Howe, 1999; Karaman & Kepenekçi, 2006; Kor, 2013; Kozikoğlu, 2018; Leblebici & Çeliköz, 2017).

It was determined that teacher candidates firstly heard about child rights at secondary school and primary school. In addition, when the responds of teacher candidates regarding the question how they heard about child rights were examined, it was determined that, they mostly stated that their teachers mentioned in class and their class teacher gave information. To the question when child rights education must start, teacher candidates firstly stated that it must start at preschool and secondly they stated that it must start by birth and in primary school. Similarly, in the study of Eriksen (2018) it was stated that child participation right is important in preschool period. In Ersoy's (2012) research which was carried out with teachers it was determined that elementary school teachers who lecture Life Science and Social Studies and Social Studies teachers know child rights more and course book is the main source of these teachers while teaching child rights. In the study of Küçük, Biçer, Özcebe, Doğan, Haznedaroğlu & Bertan (2016) how frequently university students hear about child rights concept was researched and it was determined that the students attend Education Faculty heard about child rights more than the students that attend other universities. In accordance with the findings obtained from the research it can be stated that students that attend Education Faculty have more information regarding child rights compared to the students that attend other faculties. However, from the result of the research it can be deduced that teaching children child rights beginning from preschool period will be more beneficial.

I was determined that among child rights one of the child rights that teacher candidates gave importance was the right to education which was followed by life and playing games. In the research of Durnalı, Orakçı & Filiz (2017) primary school and secondary school teachers participated and it was

determined that teachers mostly stated children's education and learning rights. In addition, in the study of Uçuş & Şahin's (2012) elementary school teachers and school administrators participated and it was determined that teachers and administrators emphasized children's right to life. In other researches it was determined that teachers and teacher candidates mentioned protection, health, development, education and participation rights (Hannikainen & Puttonen, 2010; Kor, 2013; Kozikoğlu, 2018). Within the scope of this research it was determined that teacher candidates put less emphasis on rights such as shelter, protection, and participation compared to education, life and games.

Teacher candidates stated that they would utilize drama, educational games, question-answer, discussion, cartoons, animations, videos and stories as method in child rights education. Elementary school and preschool teacher candidates mostly stated that they would utilize drama method. It is thought that preschool teacher candidates' second preference of educational games can result from the content of the education they take. As a result of Dinç's (2015) research, which was carried out with parents, it was determined that within the applications parents perform at home regarding the education of child rights they prefer speaking with children, giving examples, learning by experience and being role model. However, parents state that child rights education must be given to both children and parents with various activities in preschool institutions. Child rights education given to parents and children make a major contribution in terms of awareness and internalizing rights (Washington, 2010). However, Ersoy (2012) states that how to teach child rights and which methods and techniques to use are the most important issues and generally child rights education is provided with traditional teaching methods. As a result of this research teacher candidates' stating that they would teach rights utilizing methods such as drama and games indicates that they leave traditional methods. Ersoy (2012) states that school council, student clubs and social activities, which are important indicators of participation right at school, are not used effectively. Within the scope of this research although teacher candidates stated that they would use different methods and techniques in the activities regarding child rights it was determined that they had deficiencies in terms of writing activities. In addition not including rights such as participation and protection, that are included within child rights, forms an impression that their knowledge and skills are not adequate regarding what kind of application they can perform at school especially within the scope of hidden curriculum.

Recommendations

On the basis of the results of this research these recommendations can be given for development of child rights education: Elementary School teachers are not provided a required course regarding child rights education. Within the programs that train teachers including "Child Right Education" course as a required course will develop all teacher candidates' awareness and application skills. In addition, elementary school and preschool teacher candidates participated in this research.

Comparative and profound researches can be carried out in order to reveal the perception of teachers, children and parents regarding child rights education.

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Chapter 3

TEACHING LITERACY WITH VERTICAL BASIC LETTERS IN A MULTILINGUAL CLASSROOM: A CASE STUDY¹

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1. Introduction

Reading can be expressed as the intellectual process that occurs when the written symbols are perceived by the eye, simultaneously organized and structured in the mind. Writing is the ability to express what is meant by symbols and alphabetical relationships. In order for the students to realize their literacy skills, they must recognize the sounds and analyze and interpret the sound combinations and express them with written symbols. For the students who have acquired this skill, the process continues with reading comprehension studies. Understanding is the process of thinking about the information that the mind perceives by seeing, hearing or touching. The process of restructuring information with other information can be called thinking. Individuals understand what they read and think rationally, they understand what is realized with the prior knowledge of the right structure. Reading skills are based on sound awareness and the ability to explore and combine alphabetic symbols, while improving the speed of word recognition and the wealth of vocabulary. This skill gained under the guidance of teachers in the first year of primary school should not be boring and monotonous. Reading is not a task that needs to be learned, but a skill that is interesting, arousing, and acquired by pleasure. Therefore, literacy teaching process should be carried out with fun activities and students should develop positive attitude towards reading. The general purpose of this study is to describe the initial literacy process with vertical basic letters based on the experiences of the teacher working in a class of children whose mother tongue is different. For this purpose, the following questions were sought. The process of teaching primary reading and writing;

- What is the preparation and adaptation phase?
- What is the phase of voice and syllable teaching?
- What is the phase of vocabulary and sentence teaching?
- What are the problems experienced during the literacy teaching process?
- What are the material problems?
- What are the parents' problems?
- What are the system based problems?
- What are student based problems?

The study was conducted in a primary school located in the socioeconomically disadvantaged quarter in Güngören district of Istanbul between 25.09.2017 and 08.06.2018 in the 2017-2018 academic year. According to the results of the research;

➤ It is envisaged that it will maintain some recommendations to provide a more realistic perspective to the teachers who will teach literacy with orthogonal basic letters.

➤ It is expected to create an environment for the process of thinking, discussing and researching on the process of teaching literacy to children whose mother tongue is different.

➤ It is thought that in the literacy teaching program, it will contribute to the regulation of the missing aspects of the existing program by emphasizing the fact of multilingual children and shed light on the development of the existing education program.

2. Method

In the study, one of the qualitative approaches, case study was applied. In case studies, an in-depth analysis of one or more events, environments, programs, social groups, communities or other constrained systems is conducted. The situation can be a teacher, a student, a principal, a program, a group, a class, school, community, or a specific policy, rule, or attitude (McMillian, 2004, p. 271). The study group consisted of students of 1-J branch of Güngören Cumhuriyet Primary School in Istanbul. Data;

- Personal Information Form,
- Unstructured observations,
- Materials related to literacy teaching and
- were collected through the reflective daily.
- The collected data were analyzed by descriptive method.

3. Findings

3.1 Findings on Preparation and Compliance of Reading-Writing Teaching Process with Vertical Basic Letters

When the preparation stage was examined, it was seen that some of the students were ready for the process. On the other hand, it was seen that students who were not ready for the process did not receive preschool education and had difficulty in understanding the rules of school and classroom. It was observed that the students who did not receive preschool education had more difficulty in holding pencils, using scissors and cutting and pasting tasks than their peers. Some students hold the pencil correctly, but others hold it wrong. It was found out that these students pressed the pencil too much. In addition, it was found that the left handed students had problems because they could not fully adjust the angle between the notebook and the pencil.

It has been determined that some of the students who did not succeed in the preparation stage came by migration. Due to inadequate Turkish language skills, students coming with migration have difficulty in following the instructions given. In addition, due to inadequate development of the hand muscles of some students, the activities did not fully reach their goals. In the classroom, it was

observed that the immigrants did not know the language, could not express themselves, exhibited behaviors that did not comply with the rules of the meal, had difficulty in adapting to the school culture and were not ready for the first year. Even if children do not know each other's language, some activities were carried out during free activity hours in order to give the culture of living together. For example, immigration students were matched with Turkish students. Then, both students were allowed to sit side by side and only one story book was left on the bench. The storybook was illustrated with plenty of pictures. Studies were conducted for two students to talk about the book by examining the cover and visuals of the story book. Turkish students were asked to explain what they saw in the paintings to their friends who came with migration. During the breaks, peer-to-peer work was conducted to teach the Turkish equivalents of objects in the classroom or hallway to immigrants. The fact that the immigrants were able to learn and speak the names of the objects in the classroom in the first few weeks of the school had a positive effect on their perception of the school. In another study, both students were asked to go to the letter cards in the classroom to talk about the object representing the letter and then read and voice the letter. In order to ensure the integration of immigrant students with Turkish students, to improve their Turkish language skills and to prevent their encounters with students of their own nationality, friends who will accompany each other during the day were determined by the teacher. It has been determined that such activities carried out during the literacy teaching process are effective in acquiring Turkish language skills, cultural adaptation and socialization.

3.2 Findings about the learning stage of sounds at Reading-Writing Teaching Process with Vertical Basic Letters

At this stage, there were no problems in writing the letters, since the letters included plain lines such as straight, side and round. The findings of the learning phase of voices were examined under three themes: “recognizing the voice”, “distinguishing the voice” and “writing”.

Voice Recognition: At this stage, first of all, various activities were made to make the students aware of the sound. For example, to make the “e” sound different types of the dolls made of cardboard were given to the students. "eee, eee, ee" was sung on the form of lullaby with the class. Then, several objects were placed on the table with the letter “e” and the students were asked which of the objects had the “e” sound. Then, family members (mother, father, brother, sister, grandmother, grandfather, uncle, uncle, aunt, etc.) were asked to think about their names. It was tried to find out who had "e" voice in their names. The students who were silent in the classroom were encouraged for a conversation. Furthermore, the images of fruit and animals including the sound “e” were asked.

At the stage of distinguishing the sound: The students were given the words that the sound that was planned to be differentiated. In the given words, it is aimed that the students realize that the sound can be found at the beginning,

middle and end. For example, the activity for distinguishing the “l” sound is as follows:

Teacher: Should we find three object names that contain the sound “l”? Let's think about it. Raise the hand.

Ayse: Teacher, pencil! (by emphasizing the letter “l”)

Teacher: Very good (Meanwhile he draws a pencil picture on the blackboard. He writes a pencil under it and emphasizes it by writing the letter "l" in pink chalk.) Raise your hand. You can even what you think is wrong. I'm listening to you.

Ahmet: Teacher, the closet!

Ali: Teacher, lemon!

Teacher: Very nice! Lemon. (Lemon picture is drawn with yellow chalk on the blackboard. Lemon is written under it and it is emphasized that the letter is at the beginning of the word by writing the letter “l” with yellow chalk.)

Selin: Cleaner.

Şule: Clothes.

Ayşe: Teacher, shovel!

Teacher: Very good, ruler^{2*}. The picture of ruler is drawn in chalk on the blackboard. Ruler is written under it and it is emphasized that the letter is at the end of the word by writing the letter l with orange chalk.

During the teaching activities of the first group of letters, some of the students were able to

recognize the sound only when they saw it alone. They find it difficult to distinguish the same sound within the word. This situation can be expressed as insufficiency of phonological awareness levels. However, in the teaching of group 3 letters, the majority of the students were accustomed to the process and were able to distinguish sounds when they heard in words.

At the stage of writing the sound: The objects where the given sound remains were repeated. For example, in the writing phase of "a" sound, first of all, air writing and writing on the desk were done. Then the letter “a” was drawn as dots and they were asked to draw over the letter “a”. Sitting positions, postures and pencil holdings of the students were checked by the teacher during the drawing. After the end of the line work, the activity was painted with thick dry paint. An example of the activity performed is as follows.

² Note: Here, the original noun “cetvel” was replaced by shovel since its opponent in English “ruler” has no letter “l” at the end.

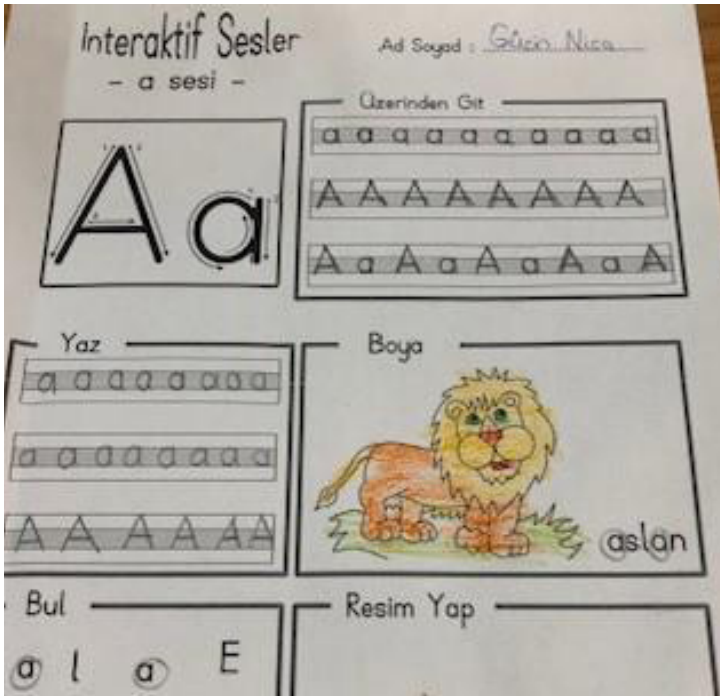


Figure 1: Student Worksheet

In the process of reading and writing the letter, with a visual that introduces the sound, the information of upper and lower spelling of the letters was given.

Teacher: Let's write Miraç.

Miraç: I don't like writing. It's boring.

Teacher: And.. do you love me?

Miraç: Yes, I do.

Teacher: Then help me. I'm so tired. Now you hold the chalk. I'll guide you.

So we can write together.

Miraç: How many times will we write?

Teacher: Only twice if we don't carry the letter.

Miraç: OK.

Teacher: The head of "y" will be in the second space with its tail down. The upper two edges should touch the red line above, the lower edge will touch the last line. Look carefully, I'll do it first..

Miraç: I got it.

Teacher: Let's do this together.

Miraç: I thinki, I can do it.

Teacher: What color of chalk do you want?.

Miraç: Orange.

Teacher: Here you are. (Giving the chalk)

Miraç: How is it, teacher?

Teacher: Perfect, now I want you to do the same on the sheet on your desk.

After completing the first line, raise your hand. I'll check it then. I'm sure you'll write very well. In this process, the teacher modeled the students on the following topics: positioning the letter towards the line, not carrying the letter, and writing in the right gestures. He also checked the studies frequently. Red dots are placed at the starting points of the letter on the distributed papers. They were told that they should start with red dots in order to write the letter in the right gestures. In addition, smiley faces are affixed at the beginning of the lines to ensure that the immigrant students start in the appropriate direction.

The students who performed the given activity with the right movements and without carrying them were rewarded and they were told that they could hang their activities on the board anywhere. To make the process more fun, crescent cookies were used. In order to better comprehend the letter Y and to ensure the permanence in learning, cookies with the letter y written on the form of crescent were brought to the class and distributed to motivate them. During the process, almost 20 minutes of peer cooperation activities took place every day. The dialogue between the student and the teacher with the nickname Zeynep is as follows: Teacher: I like it very much. That's great. Shall we stick the smiley face together?

Zeynep: Yes (smiling)

Teacher: Now I'm going to give you another assignment. Sit next to Ahmet. If he carries that letter, you erase it and tell him he can write better. Maybe he'll write nicer and faster with you. Is it okay?

Zeynep: Okay, teacher.

Teacher: When Ahmet's work is finished, the two of you can hang your work together anywhere on the clipboard.

Zeynep and Ahmet fulfilled the instruction of the teacher. At the end of the day, the teacher stated the process as follows:

I should give more space to peer cooperation. Working together supports students to write more carefully. It allows them to focus better and prevents them from getting bored. The happiness of collaborating is reflected in their faces. This is pleasing ... (Reflective daily 18.12.2017)

When the findings related to the writing process were examined, it was seen that the students had problems in positioning the letter to the line and adjusting the size of the letter. Although the first group had difficulties in positioning the

letters to the line and adjusting the size when the sounds were finished, the students adapted to the process when the third group of letters ended. At the writing stage, it was found that they had difficulty in writing the letters e, a and y. The teacher showed the students who left too much space between words that they should apply a space with a finger.

In the evaluation activity, a study was conducted to find the words in which the letter was mentioned. For example, in the evaluation activity of the letter y, students were given the words containing the letter y and Y. The students were asked to paint the word boxes in which contains the lowercase letter y to pink, and the boxes which contains the uppercase letter Y to light blue. They were warned not to paint the boxes without the letters Y and y. In the next lesson, they were told to count the letters y in the words and write down the number of y letters in the word at the bottom of the word boxes.

3.3 Findings related to syllable teaching

During the syllable phase, the teacher wrote the letter and asked the students to read it. Then he wrote another letter (with different color chalk) next to the written letter and asked them to read it. Then, "How to read if we combine two letters?" she asked the class. The teacher encouraged the students to read the syllable written on the board. She then read the syllable herself and asked her students to repeat it. Finally, the whole class read the newly formed syllable together. One of the problems in this process is that students read "le" syllable as "el". In order to overcome the problem and prevent the students from having difficulty reading open syllables in the first group of letters, rhythm reading was performed. For example, the dialogue between the teacher and the students during the reading of the syllable "ki" can be explained as follows:

Teacher: Now we will learn a new syllable. I want you to listen to me carefully and answer the questions I ask. What's the letter I got?

Students: k (All together)

Teacher: So what's the name of this letter (with the other hand pointing to the card with the letter "i")?

Students: iiii

Teacher: Now I combine these two letters. Let's read it now.

(Some of the students say "ki" right while others say "ik," and others remain silent.

Teacher: So, listen to me carefully. By showing the cards on which the letter k on one hand and letter i on the other other hand are written respectively, she says rhythmically "k" "i", "k" "i", "k" "i", "ki". "ki", "ki", "ki". "ki". However, he wants students to voice the syllable "ki" with the same dialogue and rhythm.

After the teacher showed the students how to do it several times, it was determined that the students read the syllables with the same rhythm without teacher support. They were then asked to read and write the “ki” syllable in their notebooks. They were asked to write only five lines to prevent the writing process from becoming tedious. Finally, the study was controlled by the teacher.

3.4 Findings Related to Teaching Words and Sentences in the First Literacy Process

New syllables were produced to associate each new voice with previously learned sounds, and new words were created from these syllables. Occasionally, sentences were formed from words and this activity was realized with the participation of the whole class. Sometimes, various words were given and they were asked to make meaningful sentences from the given words. Students can read and write words that express names they know like Kaya, Rana, Mina more easily; they had difficulty in reading and writing the words of two consonants such as “kalk(stand up)”, “kask(helmet)” and “sert(hard)”.

As the syllables produced increased, it was observed that the students formed words and sentences more easily. Names of students in the classroom were frequently used in vocabulary teaching. As the letters and syllables were learned, the student names were reached from the syllables and the name of each student whose name could be read was hung on the clipboard in the classroom along with the photograph. The name and surname of each student whose name and surname can be written is written under the photograph. In this context, the students gained awareness about the capitalization of the first letters of the names and all the letters of the surnames. In order to improve comprehension skills, sentences were tried to be formed from concrete words. Throughout the process, students were encouraged to produce words and sentences. In order to make the process more entertaining, game teaching practices are included. For example, the class was divided into two groups and the students were sorted by pairing. Each student who wrote the correct sentence by using the four different words shown in the reflection in the determined period earned a score for his / her group. Four basic language skills, namely speaking, listening, reading and writing, were tried to be developed simultaneously. In order to improve the listening skills, sometimes videos were watched, tales were told and stories were read. They were then allowed to talk about their thoughts and were asked to write the rest of their minds in their notebooks. The students wrote the unknown words on small cards. They wrote a sentence on the back of the card which meant the meaning of the word and the use of the word in the sentence. Thus, unknown words were taught.

3.5 Findings Related to Text Formation Process

In the process of creating text, activities were generally organized for the teaching of games. For example, a game called “Haydi Meydana (Let’s come to the stage)” was created. This game was played at least three times a week

with the participation of the whole class. The students were paired in groups of three, and 4-5 words forming a sentence were given in mixed order. The students were asked to read the reflected words and turn them into regular sentences. Each student who correctly formed the sentence earned a star to his/her group. It was determined that the activities carried out during the process attracted the attention of the students and supported the happier courses.

3.6 Findings Regarding Text Reading Process

During the text reading process, the teacher chatted with the students about the visuals in the texts. They used the visuals of the text to predict the subject of the text. During the conversation, she asked children to use the keywords in the text. Then the purpose of reading was determined and the students were asked to read the text in a soft tone. After reading the text several times, the teacher read it as an example to the students. In this process, reverberative reading, choral reading and paired reading strategies were utilized.

Reverberative Reading

Reverberative reading is known as one of the methods that improve fluent reading (Carbo, 1996; Moskal & Keneman, 2011). It creates awareness about how to read (Güneş, 2007; Kato, 2012). During the implementation of the strategy, the teacher; read words, phrases or sentences aloud at a time. After the teacher's reading, the students repeated. The reading process proceeded with this cycle. The teacher read the statements that the students made mistakes or stuck, and this cycle continued until the students read them correctly. In this process, it was ensured that the students followed the text with a pencil to ensure that they were actually following the text.

Choral Reading

Choral reading is defined as the simultaneous reading of text by multiple readers. It was found that the students read the text in the practices performed with the choir reading method, not with the fear of making mistakes, but with the effort of taking good readers as an example.

Paired Reading

Paired reading *is* a teaching technique in which one who reads fluently and one who reads weaker reads the same text (Mathes, Fuchs, Fuchs, Henley & Sanders, 1994; Topping, 1989). The student who reads fluently, then the weak reader reads the text. Thus, the student who reads weakly takes the student who is fluent as a model. The weak reader tries to read by paying attention to the prosody with the model in front of him (Mathes, Fuchs, Fuchs, Henley & Sanders, 1994). It can be stated that this method, which is easy to implement, enriches vocabulary, improves fluency and comprehension. It also motivates students to read.

3.7 Findings Related to Problems in Literacy Teaching Process

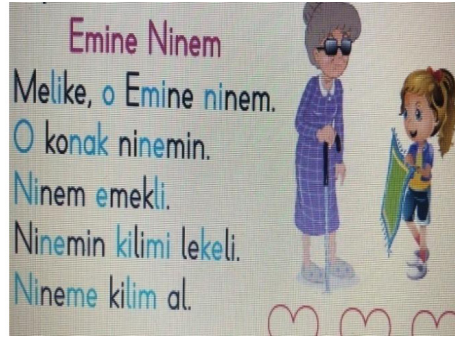
These problems are explained under the headings of material, student, system and parents.

3.7.1 Findings Regarding Material Based Problems

The first of the problems in the research is that state books are not sufficient for teaching literacy in terms of their qualifications. The books are composed of meaningless words for students to voice the letters. The formation of meaningless quatrains from meaningless words negatively affected students' reading motivation. In the quatrains in the book, it was seen that there was no relationship between sentences.



State Book



Required

Figure 2: Free Textbook Text Sample - A Text Sample That Is Considered A Necessary

As seen in the picture above, quatrains are for the repetition of letters. In the book on teaching reading and writing, it has been determined that the visual-text relationship is not established well enough, with better quality printing, more suitable drawings for the child's world, and in short, more qualified preparation should be done.

In terms of readability, it was determined that the quatrains in the book consist of meaningless words and this situation negatively affected the reading fluency. It has been seen that many words in the book do not have Turkish equivalents.

When the textbook is examined in terms of proficiency, it is found that more activities are needed for children to learn how to read and write, so that the book is not sufficient. As a result, it was revealed that the First Grade Reading and Writing Book was not prepared in a functional way. When the texts in the textbooks are examined, it is seen that the number of texts is not enough to enable the child to read fluently. Throughout the literacy teaching process, extracurricular resources were used to help children become more fluent.

3.7.2 Findings of Parent Related Problems

This study was conducted with children living in a socioeconomically disadvantaged environment. One of the reasons why students have difficulty in acquiring their literacy skills is the lack of parental contribution and lack of necessary environment at home. There are also immigrants in the classroom. It has been seen that children who migrate have assumed many responsibilities within the home. During the initial literacy process, students who were not pre-schooled and immigrant students were taken care of. This situation caused the researcher to lack time and decrease the quality of education.

In general, it has been determined that students coming with migration have difficulty in all stages of the literacy teaching process. Similarly, Sari's (2001) study found that bilingual children had more problems in preparation, sentences, words, syllables, vocals, and free literacy circuits than children whose mother tongue was Turkish while learning to read and write with sentence analysis. In the school where the research was carried out, teachers stated that they opened courses to bring some of their students to their peers and they arrived two and a half hours early each day. However, it was found that the process of teaching literacy to non-linguistic students was not generally successful in the school. It was found that the students who migrated did not come to school with adequate nutrition. This situation negatively affected the academic achievement of children. At the beginning of the process, it was observed that there were social hate problems among some parents and creative drama activities were carried out with a parent group of 8 people in order to overcome these problems. As a result of the activities, parents were provided to develop a more positive attitude towards immigrants.

3.7.3 Findings Related to System Based Problems

Learning difficulties were also detected in the two students whose mother tongue was different and who were found to be immigrants. In the end of the second semester, Ayşe was able to gain reading and writing skills as a result of an intensive effort, while Ahmet, again and again, had memory problems. Therefore, it was requested to be directed to Guidance Research Center. As the student could not be subjected to intelligence test in the Guidance Research Center, the reasons for the lack of sound awareness, comprehension of alphabetic relationships and the ability to read in the reading skills could not be determined. During the process, it was not possible for the student to receive support from the guidance and research center. This situation has been recorded as a system-related problem.

3.7.4 Findings Related to Student Based Problems

During the literacy process, some students experienced problems such as violence against their friends, and damaging school and classroom belongings. In order to overcome the problems, "peer bullying" workshops were conducted.

As a result of the workshops, it was determined that violence tendency decreased in all class except one student. The student, who was prone to violence, was shown to the child psychologist. Special attention was paid to the student who was determined to have depression due to the divorce of his parents. It can be explained that this challenging process affects not only the student but the whole class in a negative way.

4. Results, Discussion and Recommendations

4.1 Results and Discussion

In the first group of voices, it was found that the students had problems in positioning the letter to the line and adjusting the size of the letter, while the second group was more successful in the voices. It was found that students had difficulty in writing the letters e, a and y mostly during the literacy teaching process.

➤ As the learning and teaching process continued, positive developments were observed in syllable formation studies. In the first group of voices, students had difficulty in forming and reading syllables, but in the second group of voices they were more successful in reading the two-syllable words of no more than two voices.

➤ It was concluded that the literacy books prepared by the state are not sufficient in quality and quantity. The students whose mother tongue is different and who were found to be immigrants had difficulty in adapting to the school culture.

➤ It was determined that students' problems of comprehending the open syllable were overcome with rhythm repetitions. In particular, it was concluded that reading open syllables with rhythm facilitates comprehension.

➤ It was found that the students who did not have preschool education could not place the size of the letter in the line determined on the page surface and they were forced to write the letters at the specified height and width.

➤ The letters that students have the most difficulty in understanding are “y, p, ğ”. During the writing process, it was found that they had problems with the letters e, a, y in positioning the queues of the letters, they left uncompleted and they could not position them in the appropriate form.

➤ In addition, they had difficulties in reading and writing the words with two consonants side by side such as “alla, telle”. It was found that students who migrated due to lack of Turkish language skills had difficulty in understanding what they read.

➤ Students who could not pay enough attention to the letter-sound relationship read different words similar to the written word during their reading (like konuk instead of konak),

➤ Mistakes of swallowing the last letter of the middle syllables were observed in the words whose middle syllables consisted of three letters. (sarımsak-sarısak, Erzincan-Erzican, ... etc.)

➤ The students whose attention period was not long enough and who had problems of focus read the first sentences correctly and the following sentences incorrectly.

➤ While reading the multi-syllable words, pause, boredom and inability to read were observed. (For example, it has been observed that they could read each syllable that constitutes the word "Kastamonu" separately. However, it is observed that students had difficulties in reading the whole word because they forgot the first syllables until the last syllable. In addition, they exhibited boredom behaviors since they could not intensify in this cyclical process.)

➤ He error of thinking in order to encode words in the mind was observed in the migratory students due to the difference of mother tongue. In this intellectual process, it was found that reading errors such as adding sound or sound combinations to the beginning of the word and not being able to pronounce the word correctly (kalem-ekalem, İskenderun-Eîskenderun).

➤ It was determined that some students who came with migration arrived late to class and did not comply with school and class rules. This result is not similar to the study of Sarıtaş et al. (2016). Sarıtaş et al. (2016) students coming with immigration; They stated that they had problems such as not complying with classroom and school rules, indifference to the lesson and not fulfilling their responsibilities. On the other hand, Özdemir (2016) and Gibson (1987) studies did not show similar results. Özdemir and Gibson stated that immigrant students came to class late in the early stages of school, rarely did not come to school, and discipline problems were low.

➤ It was found that bilingual students who do not receive pre-school education and who cannot receive support from their families during their education have difficulty in learning to read. This situation caused academic insufficiency, negative self-perception and low self-confidence. As a matter of fact, Akyol (2011, p. 42) explained that the physical and mental development of the students may be different so that the students whose development is not sufficient may not be enrolled in the school. This conclusion reached in the study supports this situation stated by Akyol (2011).

➤ Language is the most important problem in teaching children to read and write. Due to the insufficient language skills, students have difficulty following the literacy program. Studies in the literature support this finding. Children who migrate in the studies have difficulty in expressing, reading, writing, understanding and explaining themselves due to insufficient language skills

4.2 Recommendations

➤ The Ministry of National Education can provide vocal letter cards and audio story books to students whose mother tongue is different. In this context, literacy can contribute to the learning process.

➤ Seminars aimed at strengthening parent-teacher relations can be provided. In this context, parents can be more effective in the process.

➤ It is concluded that the books on "teaching of reading and writing" prepared by the state are not sufficient in terms of quality and quantity. The presence of expression disorders in the texts in the book, the use of forcing and fabricated words, inconsistencies between sentences and visuals negatively affected the literacy teaching process and Turkish teaching. Akyol (2003) states that primary school should be focused on establishing in-text meaning in the first grade, and it should be followed by establishing non-text and intertextual meaning. This situation; Unless the textbooks are revised, it shows that language learning skills and the process of establishing in-text meaning will be negatively affected in children.

➤ It can be ensured that the literacy books prepared by the state are equipped with higher quality drawings, more concrete words, more appropriate and aesthetic visual figures.

➤ The purchase of the literacy set by parents is prohibited by the Ministry of National Education. This problem experienced by teachers can be solved by withdrawing the ban.

➤ Teachers can provide visual-weighted word games to their students.- The texts in the reading and writing book can be prepared with consistent words in terms of meaning and visuals that support the words better.

➤ It was found that even if the students whose mother tongue was different gained reading and writing skills, they had difficulty in expressing their understanding and could not form a sentence properly while talking. In addition, it was concluded that they could not express what they understood with an expression style appropriate to their level.

➤ In the context of PISA (2016) data, it is determined that Turkey lags behind OECD countries in terms of reading averages. This clearly shows that more emphasis should be placed on reading education. Therefore, it is not seen as a healthy decision to leave the age of starting school of the students whose mother tongue is not pre-schooled to their parents who have no education life. In this context, it is seen as a necessity and suggestion that legal regulations should be introduced and the age of the child to start school should be determined by a joint decision of psychological counselor, family, class teacher and child psychiatrists.

➤ In developed countries such as England, Wales, Scotland and the Netherlands, it is reported that children start school at the age of 5 (EURYDICE,

2012). However, it is known that pre-school education is much more widespread in these countries and that schools are more equipped in quality. In our opinion, a healthy and qualified education for our country is not imitated by more developed countries; it is thought that it can be developed through conscious practices from bottom to top in terms of conditions and conditions, not from bottom to bottom, ignoring the realities of the country. In this context, it may be suggested to prepare a separate program for immigrants. From the age of 3, the first semester is half an hour to one hour, the second semester is one, one and a half hours, the third semester is one and a half to two hours, the fourth semester is two or three hours, and the next year is likely to receive full-time pre-school education as other students. This is useful for improving language skills in preschool. This way they can learn our language much easier and start happier in primary school.

➤ There are reading experts for students with difficulties in reading in developed countries such as USA, UK, Belgium. Educators, called reading experts, implement a special program for each child with reading difficulties. In our country, this system can be taken as an example and reading experts can be assigned in primary schools.

➤ It was found that the students who migrated did not come to school with adequate nutrition. It can be said that this situation affects academic achievement negatively. For children with inadequate financial conditions, school canteens can be negotiated and fed within the scope of Pictes.

➤ Teachers can build platforms to address the academic problems of bilingual children and share experiences. Conferences for parents and students can be organized. Training coaching, peer bullying, creative drama activities can be realized. Creative drama activities aimed at parents can be realized to develop more positive attitudes towards immigrants.

➤ A leiter intelligence test may be used to identify learning difficulties in some immigrants. Psychological counselors and private sector certified persons can perform this test. However, in RAM, guidance teachers cannot make any determination for students who do not speak our language. Since the Leiter Intelligence Test is not a language-based intelligence test, Arabic teachers can apply the test together with the Guidance Counselor after two to three months of training. For this purpose, two to three days a month, Arabic teachers can be assigned to RAM. They can help children who migrate in Guidance Research Centers during their time of assignment.

➤ With the request and signed consent of immigrant parents, children can receive pre-school education (two years if possible) under pictes. In this process, children can both develop their hand muscles, gain the culture of eating in accordance with the rules of society and cleaning habits. This process can contribute to the development of language skills. So they can start the school happier just like their other friends.

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Chapter 4

CONTEMPORARY EFL

TEXTBOOKS: BIASED OR NOT



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Introduction

English, which is the mostly used language, is considered as the global tool of communication. Around a quarter of the overall people in the world are proficient in English, which clearly signifies the close relationship between language and power (Crystal, 2004), in that a language may have dominance over others (Brumfit, 2006; Ulum & Koksai, 2019; Ulum & Koksai, 2020; Koksai & Ulum, 2020). The power granting the expansion of English in the last century stemmed from Great Britain and the flag has been taken over by the US (Chomsky, 2003) since World War II, and with the dominance of internet, it has established itself almost the sole language for instate communication. The rising power of America has given way to a cycle of a switch in the extent and makeup of teaching English as a foreign or second language, which carried on the custom of practicing English to dictate hegemonic supremacy by means of cultural extension (Howatt and Widdowson, 2004; Ulum & Bada, 2016; Bada & Ulum, 2017). Linguistic hegemony is firmly associated with globalization term, particularly in the present case of English as a lingua franca. Educational strategies and practices should be re-edited to take advantage of linguistic divergence in order to keep balance with a seemingly dominant language (Shakouri and Esfandiari, 2015).

Galloway (1984) defines proficiency as the capability to maintain proper performance of particular universal practices within various societal and efficient language-use settings. Such authentic practices necessitate students to represent spontaneity, adjustability, ingenuity in contexts which may cause both predictable and unpredictable situations. Kramsch (2013, p.71) defines culture as “outdoor gardens with no meaning in themselves unless they are related to and contrasted with indoor apartments and dwellings”. Transmitting knowledge in a language is maintained through systematic and schematic forms. While systematic form refers to syntactic and semantic dimensions, schematic form is based on social background knowledge. Acquisition of native language is achieved through developing both schematic and systematic knowledge (Alptekin, 1993; Ulum, 2016a; Ulum, 2016c). EFL course books bear socio-cultural characteristics which may be encountered implicitly or explicitly. The implicit feature may be attributed to a hidden curriculum which is the reality of any course program (Ulum, 2015; Ulum, 2016b). Neither a curriculum nor a teaching material may be neutral, as particular social values are, implicitly or explicitly, ingrained in them (Cunningsworth, 1995). Ulum (2014) puts forward that once a course book includes diverse cultures, it satisfies learners’ needs. Similarly, Toprak and Aksoyalp (2014) suggest that intercultural communication has developed particular aims in language education– like enhancing intercultural competency. So, taking the lack of EFL contexts, course books may be regarded as the most required materials in EFL settings. Kilickaya (2004) states that languages are intertwined with particular cultures. Once they are learned, their hidden cultures are learned as well. Therefore, when utilizing materials bearing cultural compounds, teachers should check the material to conceive if it is suitable for the learners. Regarding all these issues, this study focused on seeking answers to the following research questions:

1. How do EFL course books portray hegemonic practices?
2. What are the characteristics of inner/outer/expanding circle hegemonic practices contained in EFL course books?
3. How do EFL students perceive the hegemonic practices in EFL course books?

Methodology

Qualitative content analysis has been defined as “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Hsieh and Shannon, 2005, p.1278). Wildemuth (2016) state that qualitative content analysis refers to a practice developed to categorize unprocessed data or themes built on credible interpretation. This practice employs inductive reasoning, through which themes and groups arise from the data by precise analysis. As a content analysis study, this paper investigated the hegemonic practices included in EFL course books used by Turkish university students. This study was carried out through qualitative methods of data collection by using content analysis technique employed to make replicable and valid premises by interpreting and coding textual materials. Qualitative research bears interpretative and naturalistic characteristics in that it is conducted in natural contexts in order to interpret phenomena through the meanings humans bring to them (Denzin and Lincoln, 1994). In other words, qualitative research focuses on reaching an understanding of humans’ lives from their perspectives and their constructing reality. In a similar vein, interpretative phenomenological analysis examines a person’s self-perception of an object (Smith, 2015). In the study, qualitatively collected data through interviews with students aim to affirm the views of the participants about the hegemonic practices included in EFL textbooks. In brief, besides a qualitative document analysis, an interview was also used to obtain qualitative data from the students. The data sets were analyzed by using SPSS (24.00), a Statistical Program for Social Sciences, to present both the extent of hegemonic practices and the views of EFL students in numerical data.

Data Collection

The data for this study were collected from two globally written course books in total. The course books were selected from a list of EFL course books used by Turkish EFL students. The main reason for choosing this material is due to the fact that the books were highly recommended by educational institutions. Each book was analyzed focusing on cultural compounds which would represent the cultural features of inner, outer, and expanding circle culture. In the books all topics with reading passages, dialogues and exercises were perused and consequently employed cultural inner/outer/expanding circle compounds were categorized as social, geographical, entertainment, and economical. Moreover, an interview related to the views of students pertaining to the hegemonic practices in EFL course books was employed to see the users’ approaches.

Participants

The data for the study were collected from prep-class Turkish EFL students studying at Çukurova University, and Adana Science and Technology University, Turkey. The students in the study were selected from the most convenient and accessible schools. The sample consisted of 109 Turkish EFL students who voluntarily participated in the study. In selecting the students, we used the convenience sampling method as the target population was too large (Teddlie and Yu, 2007).

Instruments

As was indicated above, the two EFL course books chosen for the study were extensively used in educational institutions in Turkey. The books are Touchstone Level 1 Student's Book and Touchstone Level 2 Student's Book. Besides, the interview questions were formed by the researchers by reviewing the related literature and asking the views of experts from the related field.

Findings and Results

Initially, for each occurring theme, a frequency test was run utilizing SPSS 24.0 program. Then, a chi-square test was run to define any potential significant difference in dispersion of overall themes for each item. Finally, samples for each cultural ingredient were represented in sentences regarding inner/outer/expanding circle cultural characteristics.

Social Factors

This group of social factors consists of 9 themes categorized into inner, outer, and expanding circles of English with each occurring theme and its related percentages. In Table 1, we can clearly see the frequencies of cultural compounds utilized in the analyzed course books in terms of social factors.

Table 1 Inner, Outer, and Expanding Circle Themes of Social Factors Utilized in Touchstone Course Books

	Themes	Inner		Outer		Expanding		Total	
		f	%	f	%	f	%	f	%
Social Factors	Name	228	78.35	1	0.34	62	21.31	291	100.00
	Personality	20	76.92	2	7.70	4	15.38	26	
	Nationality	9	17.31	3	5.77	40	76.92	52	
	Language	6	13.04	–	–	40	86.96	46	
	History	6	54.54	–	–	5	45.46	11	
	Celebration	3	30.00	–	–	7	70.00	10	
	Cuisine	2	8.70	1	4.34	20	86.96	23	
	Stereotype	1	100.00	–	–	–	–	1	
	Clothing	–	–	–	–	1	100.00	1	

One can clearly understand from the table that the theme *name* in the inner circle group (78.35%) highly outnumbers its counterpart in the expanding circle group (21.31%), while a bare dispersion was observed in the outer circle group within this category (0.34%). Regarding the theme *personality*, it is easy to understand from the table that the inner circle group (76.92%) surpasses its inner (7.70%) and expanding circle correspondence (15.38%). However, the theme *nationality* in the expanding circle group (76.92%) highly surmounts its counterparts in the inner (17.31%) and outer (5.77%) circle groups. Additionally, when we have a look at the theme *language*, it is clear from the table that the expanding circle group (86.96%) highly surmounts the inner circle group (13.04%), while no occurrence is seen in the outer circle group in this category. On the other hand, by looking at the theme *history*, one can notice that the inner circle group (54.54%) surpasses the expanding circle group (45.46%), while no emergence is encountered in the outer circle group. Furthermore, when having a look at the theme *celebration*, it is clear that the expanding circle group within this category (70.00%) greatly surpasses its inner circle equivalent (30.00%), while no occurrence was detected in the outer circle group. Besides, the theme *cuisine* in the expanding circle (86.96%) supremely surmounts its inner (8.70%) and outer (4.34%) circle counterparts. Finally, occurring only once, such themes as *stereotype* and *clothing* were scarcely detected in the analysis. Samples reflecting these themes are given below:

- Sam (inner circle name)
- Samir (outer circle name)
- Joshua (expanding circle name)
- Julia Roberts (inner circle personality)
- Bob Marley (outer circle personality)
- Ang Lee (expanding circle personality)
- American (inner circle nationality)
- Indian (outer circle nationality)
- Russian (expanding circle nationality)
- All my friends studied English in junior high school. All junior high school students take English. (inner circle language)
- Well, we always spoke Chinese at home. (expanding circle language)
- Old St. Mary's Cathedral (inner circle history)
- Colosseum (expanding circle history)
- Bonfire Night (inner circle celebration)
- Children in Taiwan love Chinese new year because they know they are going to get hong bao from their relatives. Hongbao are red envelopes with money inside. (expanding circle celebration)

- The Sea Grill (inner circle cuisine)
- Lassi (outer circle cuisine)
- Tortilla (expanding circle cuisine)
- On average, Americans sleep for 24 years and watch TV for 12 years. (inner circle stereotype)
- Hanbok (expanding circle clothing)

Geographical Factors

Three themes occurred in the inner, outer, and expanding circle of this group. Related themes and percentages are shown in Table 2.

Table 2 Inner, Outer, and Expanding Circle Themes of Geographical Factors Utilized in Touchstone Course Books

	Themes	Inner		Outer		Expanding		Total	
		f	%	f	%	f	%	f	%
Geographical Factors	Location	70	41.92	9	5.39	88	52.69	167	
	Climate	1	100.00	–	–	–	–	1	100.00
	Land Form	1	50.00	–	–	1	50.00	2	

From the table, we can understand that the theme *location* in the expanding circle group (52.69%) was utilized (52.69%) more than its inner (41.92%) and outer (5.89%) circle counterparts. However, the theme *climate* emerged only once in the inner circle group (100.00%), while no such occurrence was detected in the outer and expanding circle groups. Besides, the theme *climate* occurred once in both inner (50.00%) and expanding (50.00%) groups, while no emergence was seen in the outer circle group. The samples below represent these themes:

- California (inner circle location)
- India (outer circle location)
- France (expanding circle location)
- It was hot, but not too hot (in Hawaii). (inner circle climate)
- Lake Tahoe (inner circle landform)
- The Atacama Desert (expanding circle climate)

Entertainment Factors

Two themes emerged in this group of entertainment factors. The themes and their percentages of occurrence are displayed in Table 3.

Table 3 Inner, Outer, and Expanding Circle Themes of Entertainment Factors Utilized in Touchstone Course Books

	Themes	Inner		Outer		Expanding		Total	
		f	%	f	%	f	%	f	%
Entertainment Factors	Music	6	66.67	–	–	3	33.33	9	100.00
	Movie	1	100.00	–	–	–	–	1	
	Sport	2	100.00	–	–	–	–	2	

From Table 3, we can see that the theme *music* in the inner circle (66.67%) was observed to highly outnumber its expanding circle counterpart (33.33%), while no occurrence was detected in the outer circle group. Besides, the theme *movie* was seen only in the inner circle group (100.00%), while no emergence was observed in the outer and expanding circle groups. Lastly, the theme *sport* was only detected in the inner circle group (100.00%), while no occurrence was observed in the other groups. The samples below represent the themes of entertainment factors:

- Rock music (inner circle music)
- Latin music (expanding circle music)
- Friends (inner circle movie)
- The Red Sox (inner circle sport)

Economical Factors

In this group, one theme was observed to occur in the inner and outer circles. Related themes and their frequencies are displayed below.

Table 4 Inner, Outer, and Expanding Circle Themes of Economical Factors Employed in Touchstone Course Books

	Themes	Inner		Outer		Expanding		Total	
		f	%	f	%	f	%	f	%
Economical Factors	Consumption	1	25.00	–	–	3	75.00	4	100.00

As can be understood from the table, the theme *consumption* in the expanding circle group (75.00%) was observed to outnumber its counterpart in the inner circle group (25.00%), while no occurrence was observed in the outer circle group. Related samples are represented below:

- The West Edmonton Mall (inner circle economy)
- You need all day to shop at Takashimaya Times Square, located in the Shinjuku section of Tokyo. (expanding circle economy)

Overall Inner, Outer, and Expanding Circle Factors

All inner, outer, and expanding circle factors include four groups: social, geographical, entertainment, and economical. Table 5 represents these factors as well as their frequencies of occurrence.

Table 5 Inner, Outer, and Expanding Circle Cultural Compounds: Four Categories

Factors	Inner		Outer		Expanding	
	f	%	f	%	f	%
Social	275	59.65	7	1.52	179	38.83
Geographical	72	42.35	9	5.29	89	52.36
Entertainment	9	75.00	–	–	3	25.00
Economical	1	25.00	–	–	3	75.00

From Table 5, we can simply observe a striking tendency towards employing inner circle cultural compounds. For instance, while inner circle social factors occupied 59.65%, we can observe that these compounds in the expanding circle were included with 38.83%, while a scarce occurrence was detected in the outer circle group (1.52%). Themes pertaining to geographical factors in the expanding circle occurred by a 52.36% frequency compared to a 42.35% in the inner circle and a mere 5.29% in the outer circle group. Besides, entertainment themes in the inner circle group (75.00%) outnumbered the expanding circle counterparts (25.00); while no occurrence was observed in the outer circle group. Economical themes, however, occupied a different position; in that, the expanding circle themes (75.00%) outnumbered their correspondents in the inner circle, while no emergence of such themes was encountered in the outer circle group.

Total Inner, Outer, and Expanding Circle Frequencies of Cultural Compounds

From our analysis above, we can observe that the inner circle themes significantly surpassed their outer and expanding circle counterparts. A summary of this analysis can be observed in Table 6.

Table 6 Overall Inner, Outer, and Expanding Circle Cultural Compounds

Items		f	%
Culture	Inner	357	55.18
	Expanding	274	42.35
	Outer	16	2.47
Total		647	100.00

By looking at Table 6, we can simply understand the dominance of inner circle compounds in the analyzed EFL course books. While such compounds were utilized by 55.18% in the inner circle group, compounds of expanding circle group occupied 42.35%. On the other hand, the outer circle group occupied only a mere 2.47%. This finding is appealing in that it represents the tendency of

inner circle coursebook authors carrying their native cultural compounds to the course books they write.

Interview Results

Table 7

The Percentage of Culture the Students Desire to See in their EFL Course Books

Cultural Components	N	%
Target Culture	109	44.31
Source Culture	109	37.41
Other Cultures	109	18.28
Total	109	100.00

As can be observed from the table, most of the participants (44.31%) desire to see the target culture in their course books. Further, while 37.41% of the participants want the source culture to be included in their course books, a mere 18.28% of them suggest other cultures. Samples representing the views of the participants are given below:

- I would like to see American and British cultures in my EFL course books as we learn English.
- I would like to see Turkish culture in my EFL course books as we are Turks.
- I would like to see various local cultures in my EFL course books in order to broaden my worldview.

Table 8 Students' Perspectives on why Target Culture should be more in EFL Course books

Codes	Keywords	f	%	N
Target Culture	To better learn the language	68	68.00	73
	Already familiar with our own culture	15	15.00	
	Curiosity of English-American Culture	9	9.00	
	Being a global language	8	8.00	
Total		100	100.00	73

In terms of why the target culture should be more in EFL course books, the table clearly represents that most of the participants (68.00%) suggest *to better learn the language*, while the rest of the respondents declare the following reasons: *already familiar with our own culture* (15.00%); *curiosity of English and American cultures* (9.00%); and *being a global language* (8.00%). Sample sentences from the remarks of students are represented below:

- If we want to learn English language more, we should be imposed to English culture.

- Since we already know Turkish culture, we should learn more about English and American cultures.
- I have always been curious about the western culture, particularly American culture.
- As English is a global language, we should learn English culture.

Table 9 Students' Perspectives on why Source Culture should be more in EFL Course Books

Codes	Keywords	f	%	N
Source Culture	Ease learning a new language	45	41.28	80
	Should be more dominant	35	32.11	
	Curiosity of my own culture	11	10.09	
	Not to lose own national identity	10	9.17	
	To better express my own culture	5	4.59	
	Already unaware of my own culture	3	2.76	
Total		109	100.00	80

Regarding why the source culture should be more in EFL course books, it is easily comprehended from the table that majority of the participants (41.28%) indicate *ease learning a new language*, while the rest of the respondents declare the following reasons: *ease learning a new language* (41.28%); *should be more dominant* (32.11%); *curiosity of my own culture* (10.09%); *not to lose own national identity* (9.17%); *to better express my own culture* (4.59%); and *already unaware of my own culture* (2.76%). Samples from the remarks of students are given below:

- Being imposed to Turkish culture eases learning English language as I am already familiar with my own culture.
- Turkish culture should be more dominant in the EFL course books as we are Turkish.
 - I am always curious about Turkish culture.
 - I always want to see Turkish culture in the course book, as I don't want to lose my national identity.
 - If I encounter Turkish culture more, I express it sufficiently.
 - As I don't know much about Turkish culture, I want to see it more in my EFL course books.

Table 10 Students' Perspectives on why Other Cultures should be more in EFL Course Books

Codes	Keywords	f	%	N
Other Cultures	Beneficial to learn diverse cultures	28	38.35	73
	Develop worldview	23	31.51	
	Curiosity of other cultures	16	21.92	
	English language includes all cultures	4	5.48	
	To interact with other cultures	2	2.74	
Total		73	100.00	73

As to why other cultures should be more in EFL course books, it is clearly observed from the table that a number of the respondents (38.35%) suggest *beneficial to learn diverse cultures*, while another group (31.51%) state *develop world knowledge*. Besides, the rest of the respondents indicate the following reasons: *curiosity of other cultures* (21.92%); *English language includes all cultures* (5.48%); and *to interact with other cultures* (2.74%). Some remarks of respondents are represented below:

- It is beneficial to learn various cultures because we can easily understand people from other cultures.
- Learning different cultures develop our worldview and we can be more successful by developing our cultural intelligence.
- I have always been curious about diverse cultures and tried to learn more about them.
 - English language being a lingua-franca covers all cultures.
 - Interacting with diverse cultures is important in learning English because it is a universal language.

Discussion and Conclusion

A number of studies have been conducted to see the extent of cultural compounds in EFL course books (Ansary & Babaii, 2002; Aliakbari, 2004; Lee, 2009; Gray, 2010; Bada & Ulum, 2016), however there are not many studies specifically examining the inner, outer, and expanding circle cultural characteristics. By looking at the issue from this perspective, this critical inquiry (Ordem & Ulum, 2019; Ulum & Uzun, 2020) aims to highlight the state of hegemonic practices with regard to the inner, outer and expanding circle cultural compounds imbued in EFL course books used by Turkish university students. Further, this study seeks to understand what the users of these course books think about the mentioned issue. The results of the study display that:

- The inner circle hegemony was dominant in EFL course books used by Turkish students, with a higher frequency compared to outer and expanding circle cultural characteristics;

- Inner, outer, and expanding circle hegemonic characteristics were portrayed in different groups and sub-groups; and
- The users of the globally written EFL course books mostly desire to see the target culture in order to better learn English language.

This study may supply great help for course book authors, policy makers, curriculum designers, researchers in the related fields, and EFL teachers. EFL course books and curriculums should aid the students with an opportunity of raising cultural awareness (Shin, Eslami, and Chen 2011).

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Chapter 5

TURKISH PROSPECTIVE TEACHERS' ACADEMIC EMOTIONS IN MATHEMATICS AND EFL*



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Introduction

Mathematics and English as a Foreign Language (EFL) are, with inconsequential exceptions, taught from primary to higher education in Turkey as compulsory parts of the relevant school curricula. However, the country has not reached the desired level of achievement in PISA assessments as of 2002, when it first participated in the project. Concerning achievement scores in mathematics, which constitutes the core focus of the current research along with English, the country has remained in the lower ranks among the OECD member and partner countries (35th out of 41 countries in PISA 2003; 43rd out of 57 countries in PISA 2006; 43rd out of 65 countries in PISA 2009; 44th out of 65 countries in PISA 2012; 49th out of 70 countries in PISA 2015). Quite similarly, the English Proficiency Index (EPI) scores released by Education First (EF) indicate that Turkey has been categorized among the countries with low or very low proficiency in English since 2011, when it ranked 43rd out of 44 countries. Even though it slightly moved up in the rankings for the following two years, it has been listed among the countries with very low proficiency in English from 2014 onwards, as illustrated in Table 1.

Table 1. Education First- English Proficiency Index for Turkey

Year	Ranking	N of Countries	Proficiency level
2011	43	44	Very low proficiency
2012	32	54	Low proficiency
2013	41	60	Low proficiency
2014	47	63	Very low proficiency
2015	50	70	Very low proficiency
2016	51	72	Very low proficiency
2017	62	80	Very low proficiency
2018	73	88	Very low proficiency

The results informed by PISA and EF, the two esteemed sources of information, also indicated a positive correlation between the reported proficiency in the two core subjects and welfare states of the countries (PISA Technical Reports & World Bank, 2015, 2016). It could be alternatively claimed that the countries with high level of welfare tend to raise students with high proficiency in English and high achievement in Mathematics. In either case, the aforementioned statistics portrays a strong need for Turkey to break the vicious circle in concern. In this vein, the country has launched several educational reforms and curriculum revisions at uncertain intervals particularly since late 1990s. Regarding foreign language education, it is acknowledged in the Education Reform Act of 1997 that “Turkey’s political and economic ambitions and the nation’s desire to keep up its relations with foreign countries using English, particularly with countries of the European Union, are the major motivating forces underlying the decision to introduce English to young learners’ (MoNE, 1997, p. 606). The field-specific novelties introduced in the following reform acts were also grounded on this rationale (e.g. 2005 and 2012). Nonetheless,

it is well-accepted that students who take foreign language courses still have challenges with learning target languages, particularly English, in Turkey (Haznedar, 2010). Likewise, the statistics on the results of the 2019 university entrance exam were not found satisfactory for all stakeholders of the process, as indicated in Figure 1.

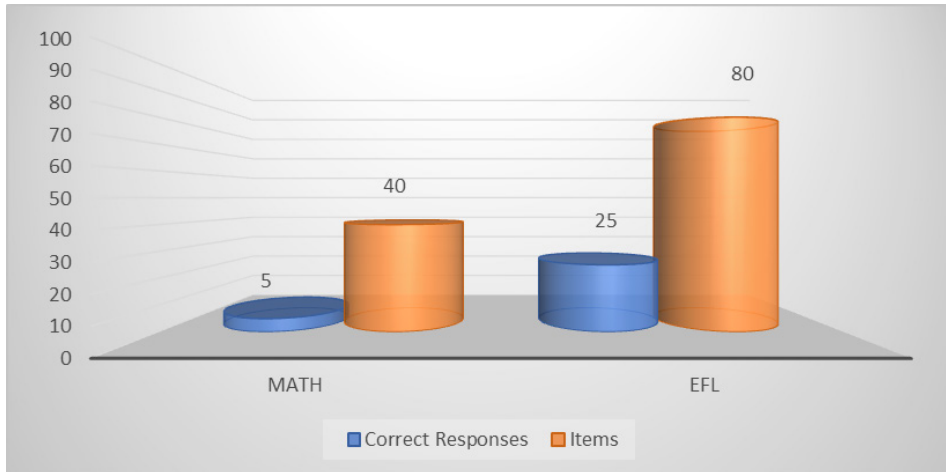


Figure 1. 2019 University entrance exam results in Turkey (CAE, 2019)

As depicted in Figure 1, examinees who took EFL section failed in 55 out of 80 items and those who took the section of Basic Mathematics failed in approximately 35 out of 40 items (Centre for Assessment and Evaluation, 2019). The overall failure in mathematics and foreign language teaching in Turkey has been attributed to a variety of factors such as high proportion of disadvantaged students, inequality of opportunity, lack of pre-school education, school absenteeism, inadequacies in pre-service and in-service teacher training (Taş et al., 2016), being on the margin of Europe, inadequate exchange and integration with Europe, and low socio-economic status of the countries (EF EPI, 2017), lack of well-designed teaching policies, curricular inconsistencies, lack of teaching materials, negative attitudes towards the subjects and/ or teachers, lack of language learning strategies, inadequate use of technology, assessment and evaluation strategies, and feeling of anxiety (Dursun & Dede, 2004; Uğurel & Moralı, 2006; Öner & Gedikoğlu, 2007; Doğan, 2008; Demir & Kılıç, 2010; Dinçer et al., 2010; Savaş et al., 2010; Aydın & Doğan, 2012; Suna & Durmuşçelebi, 2013; Demirpolat, 2015; Şener, 2015; Tuncer & Doğan, 2015; Özmat, 2017).

More specifically, Baştürk (2012) reported that classroom teachers attributed students' failure in Math to such factors as the overuse of multiple-choice tests in educational assessment and evaluation, inadequate time allotted to Math topics in the curriculum and inadequate use of technological tools in math teaching. In a recent qualitative research, Yayla and Bangir-Alpan (2019) explored the factors that cause students to have difficulty in learning math based on teachers'

and students' views. The researchers classified the factors into the categories of teacher-driven (e.g. ineffective teaching, choosing inappropriate teaching methods and techniques), student-driven (e.g. allotting inadequate time to study, not reviewing the newly learned items at home, not following the lessons) and curriculum- and system-driven (e.g. frequent change of assigned teachers). Haase, Guimarães and Wood (2019) argue that anxiety is both an antecedent and a consequent of low math achievement and it leads to negative attitudes, beliefs, and avoidance of math, reducing math learning opportunities and constraining career choices (p. 469). Likewise, Dowker (2019) states that negative emotions associated with mathematics such as anxiety cause people to avoid it and do less practice in math; as a result, they have less opportunity to learn and improve their math competence.

Academic emotions refer to 'emotions that are directly linked to academic learning, classroom instruction, and achievement (e.g., enjoyment of learning, pride of success, or test-related anxiety)' (Pekrun et al., 2002, p. 92). A growing body of research conducted in various countries has also pointed out a negative correlation between negative emotions (e.g. anxiety and shame) and students' achievement in math and EFL (Fritz, Haase & Rasanen, 2019; Dowker, 2019; Erdik, 2018; Gopang et al., 2016; Haase, Guimarães, & Wood, 2019; Horwitz, 2001; McKim, 2014; Na, 2007; Ramirez et al., 2016; Sin, 2004; Teimouri, Goetze, & Plonsky, 2019). In their compilation article, Suna and Durmuşçelebi (2013) reported on the causes of Turkey's chronic problem with learning and teaching English as a foreign language. They attributed the failure in foreign language education to such factors as lack of language teaching policy, problems arising from differences between policy and practice, overuse of grammar-based teaching, insufficient time to language learning, crowded language classrooms, foreign language status of the target language, lack of motivation, inappropriate methods used in foreign language assessment and evaluation, inadequacy of foreign language teaching programmes, lack of qualified in-service teaching programmes and inadequacy of class hours. However, to the best of the researchers' knowledge, decreasing achievement of the Turkish students in the 2019 university entrance exams has not been previously outlined with a special focus on the academic emotions they experienced in these two school subjects prior to their higher education.

In order to bridge the afore-mentioned research gap, this particular study was motivated to scrutinize whether Turkish university students' math and EFL achievement in the 2019 university exam is correlated with academic emotions they experienced while learning these subjects during their primary and secondary education. This particular research scrutinized the relationships between Turkish freshman students' math and EFL achievement in the 2019 university entrance examination and the emotions they experienced towards these courses during their primary and secondary education such as frustration,

anxiety, shame, enjoyment, hope and pride. Accordingly, it was tried to find out whether there is a relationship between these feelings for both courses.

Research questions

In this research, answers to the following questions were sought;

1) Is there a relationship between Turkish freshman students' math achievement in the 2019 university entrance examination and the emotions such as frustration, anxiety, shame, enjoyment, hope and pride they experienced towards these courses during their primary and secondary education?

2) Is there a relationship between Turkish freshman students' EFL achievement in the 2019 university entrance examination and the emotions such as frustration, anxiety, shame, enjoyment, hope and pride they experienced towards these courses during their primary and secondary education?

METHOD

Research Design and Participants

This study was carried out by adopting a quantitative research method. The ethical approval was obtained from Kahramanmaraş Sütçü İmam University Social and Humanities Ethics Committee (Date: 24.03.2020; No. 13704). Research data were collected from 221 freshmen students attending five teacher training programmes at a state university in Turkey (Female: 167; Male: 54) through the Academic Emotions Scale developed by Govaerts and Grégoire (2008) and adapted to Turkish by the researchers. Based on the research objective, the participants were selected via the purposive sampling method, which allows researchers 'to recognize and explain different phenomena and events in many cases' (Yildirim & Simsek, 2016, p. 135).

171 of the participant students who took math test in the 2019 university entrance examination were enrolled in the programmes of Psychological Counselling and Guidance (28%), Mathematics Teaching (26%), Classroom Teaching (26%) and Science Teaching (20%). It is noteworthy that they previously took Mathematics as a compulsory subject during their primary and secondary schooling. The remaining 50 students took EFL test in the examination at stake and were enrolled in the English Language Teaching programme at the time of data collection. Similarly, they had taken EFL during their primary and secondary education as compulsory part of their school curricula. The students in all groups are mostly from the Mediterranean region. Most of them reported that they graduated from Anatolian high schools the previous year (ELT: 76%; Math: 62%). They were moderately successful in the tests of English and Math in the 2019 university entrance exam, as shown in Figure 2 and Figure 3.

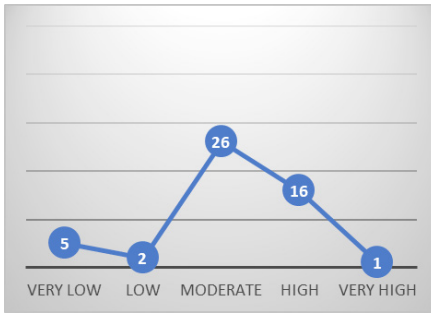


Figure 2. Level of test achievement (EFL)

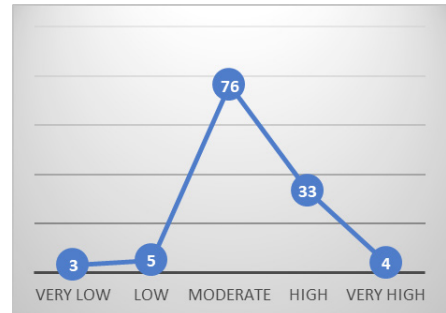


Figure 3. Level of test achievement (Math)

Data Collection Tool

The participants were administered the Academic Emotions Scale to measure their level of frustration, enjoyment, anxiety, shame, hope and pride in English and Math subjects they took during primary and secondary education. The reliability statistics of the scale are presented in Table 2.

Table 2. Reliability Statistics for Academic Emotions Scale

Dimension	Cronbach's Alpha (EFL)	Cronbach's Alpha (Math)
Frustration	,866	,870
Anxiety	,899	,870
Shame	,859	,830
Enjoyment	,826	,841
Hope	,896	,803
Pride	,829	,799
Total	,937	,885

As shown in Table 2, the overall scale and its dimensions were found highly reliable. The participant students were kindly asked to respond to the Likert-type scale items pointed from 1 (strongly disagree) to 5 (strongly agree) (See Appendix). Subsequently, their responses were analysed through the Pearson Correlation, and the related coefficients were standardized through Fisher Z to reveal whether their academic emotional experiences in the afore-mentioned school subjects they had taken prior to their higher education are correlated with their achievement scores on the 2019 nationwide tests. The expert opinion was obtained from a scholar holding a doctoral degree in evaluation and measurement during the data analysis procedure.

In this research, correlation coefficients were used to evaluate the strength and direction of linear relationships between variable pairs. The Pearson correlation coefficient is used to quantify the relationship between normally distributed variables. Correlation coefficients do not provide information on causal relationships between a dependent variable and an independent variable; instead, they are used to account for the concordance between two variables (Ünal, 1996, p. 171). The research data were analysed and interpreted in accord

with the rule of thumb for interpreting the size of a correlation coefficient (Hinkle, Wiersma & Jurs, 2003), as indicated in Table 3.

*Table 3. Rule of Thumb for Interpreting the Size of a Correlation Coefficient**

Size of Correlation	Interpretation
.90 to 1.00 (-.90 to -1.00)	Very high positive (negative) correlation
.70 to .90 (-.70 to -.90)	High positive (negative) correlation
.50 to .70 (-.50 to -.70)	Moderate positive (negative) correlation
.30 to .50 (-.30 to -.50)	Low positive (negative) correlation
.00 to .30 (.00 to -.30)	Negligible correlation

*Source: Hinkle, Wiersma, & Jurs (2003)

As depicted in Table 3, the relationship between the variables is evaluated positive if they simultaneously increase or decrease and negative if they do not; consequently, the strength of the relationship is evaluated through the correlation coefficient (Karasar, 2012). The statistical findings of the study are discussed and outlined in the following section.

FINDINGS

This particular research scrutinized the relationships between Turkish freshman students' math and EFL achievement in the 2019 university entrance examination and the emotions they experienced towards these courses during their primary and secondary education such as frustration, anxiety, shame, enjoyment, hope and pride. Accordingly, the Pearson correlation analysis was conducted to reveal the relationship among the normally distributed sets of data. The related test results for math are provided in Table 4.

*Table 4. Pearson Correlation Results for Relationship between Math Achievement and Academic Emotions**

	Achievement		Frustration		Anxiety		Shame		Enjoyment		Hope		Pride		
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	
Achievement	1		,825*	,000	,867*	,000	,530*	,000	,851*	,000	,821*	,000	,690*	,000	
Frustration		,825	,000	1		,705*	,000	,261	,001	,696*	,000	,507*	,000	,476	,000
Anxiety					1		,365	,000	,667*	,000	,684*	,000	,501*	,000	
Shame							1		,233	,002	,325	,000	,180	,018	
Enjoyment								1		,753*	,000	,598*	,000		
Hope									1		,621*	,000			
Pride										1					

*Correlation is significant at the 0.01 level (2-tailed). N:171

The following are the results obtained from Table 4:

✓ High and moderate positive correlations were found between the students' math achievement in the 2019 university entrance exam and the academic emotions they experienced in math classes during their primary and secondary education. The most positive correlation was found between their

math achievement and the feeling of anxiety, followed by enjoyment, frustration, hope, pride and shame.

✓ Frustration was found positively correlated with math achievement and anxiety at the high level while it was moderately correlated with enjoyment and hope. Besides, a very low positive correlation was found between frustration and shame.

✓ Anxiety was found positively correlated with math achievement at the high level while a moderate positive correlation was found between anxiety and enjoyment, hope and pride. A low positive correlation was calculated between anxiety and shame.

✓ Shame was positively correlated with math achievement at the moderate level. A low and negligible positive correlation was measured between shame and the other academic emotions.

✓ A high positive correlation was found between enjoyment and math achievement. Enjoyment was also positively correlated with frustration, anxiety and pride at the moderate level. A negligible positive correlation was found between enjoyment and shame.

✓ A high level of positive correlation was quantified between hope and math achievement. Hope was also positively correlated with frustration, anxiety and pride at the moderate level. A very low level of positive correlation was found between hope and shame.

✓ Pride was found positively correlated with math achievement, anxiety, enjoyment and hope at the moderate level. A negligible positive correlation was measured between pride, and frustration and shame.

In the light of these findings, it could be concluded that students' math achievement is positively correlated with frustration, anxiety, shame, enjoyment and pride at varying levels. However, this does not allow us to claim that the more anxious the students, the more successfully they perform in the math test as no negative correlation was found between their test achievement and the other emotions they experienced during their former learning. Finally, it could be yielded that there is a negligible positive correlation between shame and other academic emotions. Table 5 presents the Pearson correlation results for the relationship between ELT students' EFL test achievement and their academic emotions towards this course.

*Table 5. Pearson Correlation Results for Relationship between EFL Achievement and Academic Emotions**

	Achievement		Frustration		Anxiety		Shame		Enjoyment		Hope		Pride	
	r	p	r	p	r	p	r	p	r	p	r	p	r	p
Achievement	1		-.447	,001	-.391	,005	-.379	,007	,400	,004	,415	,003	,325	,021
Frustration	-.447	,001	1		,423	,002	,299	,035	,699*	,000	-.381	,006	-.501	,000
Anxiety	-.391	,005	,423	,002	1		,655*	,000	-.489	,000	-.562*	,000	-.347	,014

Shame	-,379	,007	,299	,035	,655*	,000	1	-,428	,002	-,374	,007	-,319	,024
Enjoyment	,400	,004	,699*	,000	-,489	,000	-,428	,002	1	,575*	,000	,760*	,000
Hope	,415*	,003	-,381	,006	-,562*	,000	-,374	,007	,575*	,000	1	,775*	,000
Pride	,325	,021	-,501*	,000	-,347	,014	-,319*	,024	,760*	,000	,775*	,000	1

*Correlation is significant at the 0.01 level (2-tailed). N: 50

The following are the results obtained from the data analysis presented in Table 5:

✓ No positive correlation was found between EFL test achievement and the academic emotions students experienced while learning EFL during their primary and secondary education at a significant level. A negligible negative correlation was calculated between their EFL achievement and frustration, anxiety and shame while a low level of positive correlation was found between EFL achievement and the emotions of enjoyment, hope and pride.

✓ Frustration was positively correlated only with enjoyment and pride at the moderate level. It was negatively correlated with EFL achievement and hope at a negligible level.

✓ Anxiety was positively correlated with shame and negatively correlated with hope at the moderate level. It was also found negatively correlated with EFL achievement, enjoyment and pride and positively correlated with frustration at a negligible level.

✓ Shame was found positively correlated with anxiety at the moderate level. It was also found positively correlated with frustration at a negligible level. A low level of negative correlation was measured between shame and the emotions of enjoyment, hope and pride as well as their EFL test achievement.

✓ A high level of positive correlation was found between enjoyment and pride while enjoyment was moderately correlated with frustration and hope. It was negatively correlated with the emotions of anxiety and shame and positively correlated with EFL achievement at a negligible level.

✓ A high positive correlation was quantified between hope and pride. Hope was negatively correlated with anxiety and positively correlated with enjoyment at the moderate level. A low level of negative correlation was found between hope and the emotions of frustration and shame. Hope was positively correlated with EFL achievement at a negligible level.

✓ Pride was positively correlated with enjoyment and hope at a high level. A moderate level of negative correlation was found between pride and frustration. Pride was also negatively correlated with anxiety and shame and positively correlated with EFL achievement at a negligible level.

DISCUSSION, CONCLUSION AND SUGGESTIONS

The current research primarily investigated whether Turkish students' achievement in Math and EFL tests in the 2019 university entrance examination is correlated with their academic emotions towards the two courses they took prior to their higher education. Based on the research objective, the Academic Emotions Scale (Govaerts & Grégoire, 2008) was administered to the students attending a Turkish state university. Their responses to the scale items were quantitatively analysed through the Pearson correlation.

The afore-mentioned findings indicated a negative correlation between the students' EFL test achievement and the academic emotions of frustration, anxiety and shame and a positive correlation between the students' EFL test achievement and the emotions of hope and pride. This might lead us to claim that students should not feel frustrated, anxious and ashamed while learning EFL in order to perform well in EFL courses/ tests. This finding largely coincides with those previously reported in the existing literature (Horwitz, 2001; Batumlu & Erden, 2007; Aydın, 2008; Doğan, 2008; Öner & Gedikoğlu, 2007; Haznedar, 2010; Demirdaş & Bozdoğan, 2013; Önem & Ergenç, 2013; Suna & Durmuşçelebi, 2013; Şener, 2015; Tuncer & Doğan, 2015; Çakıcı, 2016).

The findings revealed a high positive correlation between the students' math achievement and their feelings of frustration, anxiety, enjoyment and hope. Besides, a moderate level of correlation was found between their math achievement and their feelings of shame and pride. As no negative correlation was found between the students' math achievement and their academic emotions towards this course, it could be stated that these feelings may increase and decrease in the same fashion. As for ELT students, their EFL achievement is negatively correlated with their emotions of frustration, anxiety and shame and positively correlated with those of hope and pride. Moving from these particular results, teaching of both courses should be planned in a way that does not create frustration in students. It should be kept in mind that they need encouragement rather than frustration when they make mistakes while solving a mathematical problem or coming up with sentences with the newly learned language items. Their anxiety for these courses could be triggered by various external factors. Hence, the teachers are recommended to be aware of this fact and to organize their teaching in a way that facilitates students to develop positive attitude toward these courses with the ultimate aim of decreasing their anxiety to the intended level. Namely, the teachers should avoid assigning the students with tasks well beyond their readiness or competence in a particular subject. They are also suggested to convince the students of the fact that these courses are not challenging indeed as they require cumulative learning of interrelated subjects. This sort of approach will allow students to obtain pleasure from the courses while learning math or a foreign language and to perform better during classes.

The students' being hopeful about their future career and professional development is positively correlated with their achievement in these courses.

Hence, they should be encouraged to believe that learning these subjects is an effective way of fulfilling their dreams. In addition, it is well-documented that feeling of failure causes students to feel ashamed. Math and EFL are no exception in that regard. For this reason, both courses should be taught through games that allow them to socialize and to have fun while learning. This will be exclusively beneficial for introvert students to engage more actively in the learning process. Furthermore, it is not surprising to see that individuals feel proud when they achieve something that cannot be easily achieved by others. Both math and EFL are listed among the subjects that could not be succeeded by the majority; in other words, anyone good at math or EFL tend to be considered 'smart' by the society. Therefore, their teaching should be carefully planned to inspire confidence in students and to allow them to feel proud while learning these subjects.

This study is confined to the investigation of the relationship between math and EFL achievements of a limited number of Turkish undergraduate students attending teacher training programmes at a state university in Turkey and academic emotions they experienced while learning these two subjects prior to their higher education. So, further studies might be conducted with the participation of a larger number of students attending different undergraduate programmes in other countries. It is also limited to the analysis of the participant students' responses to the Academic Emotions Scale items. Hence, more generalizable results might be obtained in a further and longitudinal study via different data collection tools such as interview, keeping diaries and in-class observation.

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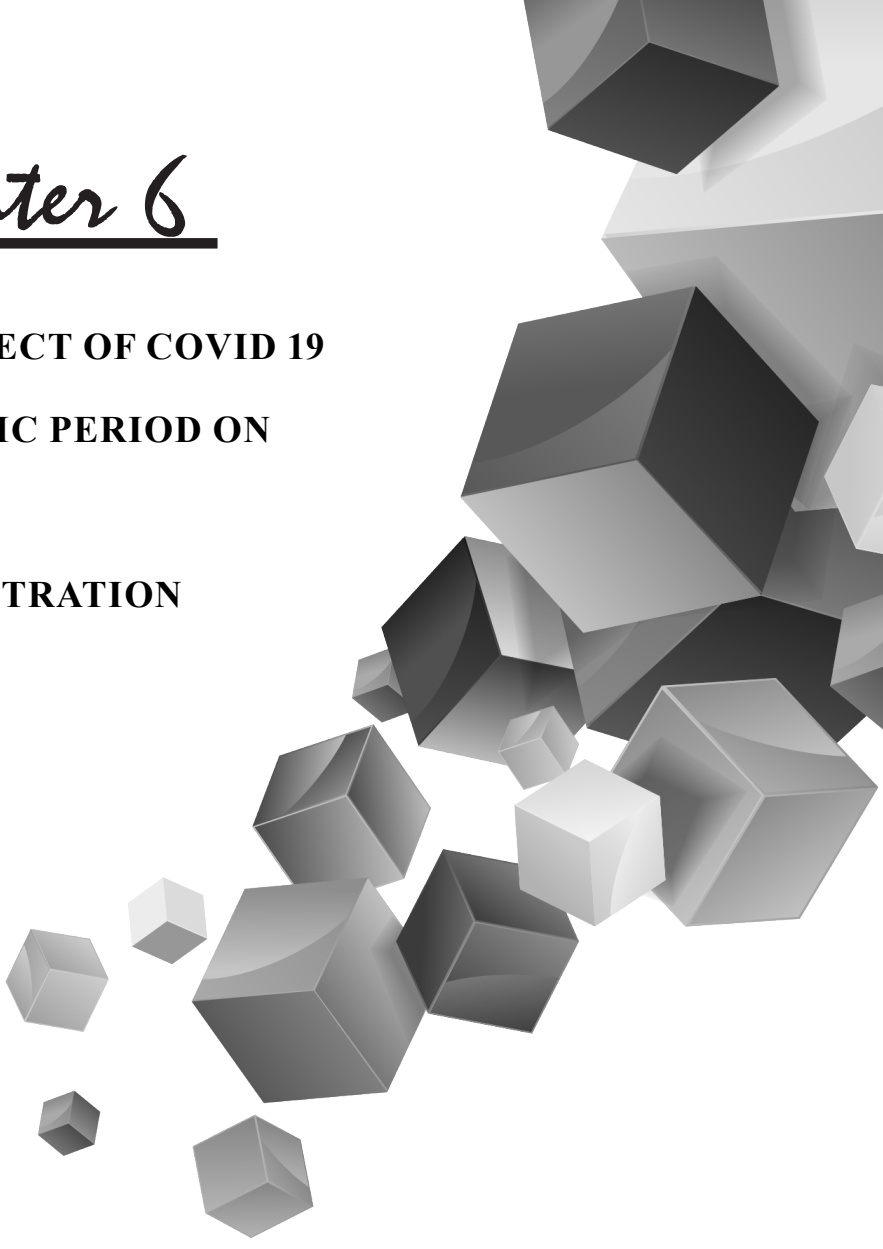
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Chapter 6

THE EFFECT OF COVID 19 PANDEMIC PERIOD ON SCHOOL ADMINISTRATION



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Introduction

The existence of the organization is as important as its establishment in line with its objectives. From time to time, organizations may encounter unexpected and undesirable situations to maintain their existence. Such unexpected situations in organizations that can lead to unexpected results and chaos are described as crises (Demirtaş, 2000; Fener and Cevik, 2015). Although there is no clear definition of what the crisis is in organizations, different situations can be presented (Gainey, 2009). Kılınç-Çelebi (2019) stated that the crisis in schools emerges as a result of violence and injuries while Pekgöz (2020) stated that terrorism causes crisis and negatively affects working in a safe environment, quality of life, education, and talking the same language. Sayın (2008) provided a list of situations that may cause a crisis as follows: earthquake, fire, attack, violence, infectious diseases, poisoning, suicide, and substance abuse. In a similar approach, Ayyürek (2014) expressed the situation that causes a crisis like an earthquake while January (2006) highlighted earthquakes, floods, fires, biological and chemical attacks, and infectious diseases as examples of situations that can be considered as a crisis in schools. Martinez-Cerda, Torrent-Sellens (2017) evaluated the crisis economically. Merriagan (2014) addressed education as a human right and considered violations of education as a crisis. This is because education is accepted as a compulsory and fundamental right.

As in all organizations, the specified crises can affect educational organizations and lead to various consequences. King, Delfabbro, Billieux, and Potenza (2020) stated that epidemic diseases, one of the crises, direct students to different activities at home, such as play, but an excessive tendency may cause problems in adapting to post-pandemic life. Viner, Russell, Croker, Packer, Ward, Stansfield, Mytton, Bonell, and Booy (2020) stated that keeping schools closed during pandemic diseases would not be enough on its own (effective around 2-4%), but keeping schools closed along with other health measures would make sense. Stebbins, Downs, and Vukotich Jr (2009) stated that effective measures should be taken during the pandemic disease period, the required materials should be delivered enough, and the importance of the materials should be explained to the users as the expected benefit will not be achieved otherwise. Barclay (2004) suggested that the traumas caused by crises can seriously impair both the personality, social, and academic development of students, and, therefore, having a team that can manage the crisis may be beneficial in reducing harm. Barclay (2004) also pointed to a specific crisis management plan to mitigate the harm. Nwogbaga, Nwankwo, and Onwa (2015) emphasized the importance of communication and especially formal communication in reducing the impact of crises. Formal communication is preferred because it brings order to the flow of information and contributes to the transmission of correct information.

School administrators also have a responsibility to reduce the impact of crises in schools and to take measures. Considering what school administrators do, Özer (2020) stated that the school administrators should ensure continuity in

students' educational life through the distance education process and contribute to the production of materials needed in society while Miraglia (2015) emphasized the school administration should adapt the students' environment to the period and the student as the students cannot perceive the crisis period sufficiently. During the crisis, the school administration should adopt a determined and controlled approach without panic. There should be a plan providing information on who can intervene in the crisis, how they can intervene, in what way they can intervene, and what they will use. In the crisis management plan, decisions are expected to be implemented in cooperation. For this purpose, teams can be organized at schools (Fener and Cevik 2015; Rock, 2000). There are different studies on how school administrators meet expectations in crisis management. Alawawdeh (2016) stated that school administrators struggled with the crisis at schools, Özsürer (2019) stated that school administrators were competent in managing the school in times of crisis as a requirement of their commitment to school, and Yılmaz (2019) states that school administrators had skills in solving the crises that might be experienced at school thanks to their emotional intelligence. It can be said that school administrators can find solutions because they communicate, express the situation, and prepare for the crisis at every stage of the crisis. In addition to studies revealing that the school administrators are competent, there are other studies with different results. Akkuş (2019) emphasized that, in times of crisis, school administrators' ability to manage before, during, and after the crisis was at a medium level and should be improved, Ayyürek (2014) emphasized that they were far from the desired level in managing a crisis like an earthquake, Sayın (2008) emphasized that their knowledge on crisis management was insufficient and measures should be taken, and Ocak (2006), MacNeil and Topping (2007) emphasized that there were deficiencies in terms of experience, enthusiasm, knowledge, skills, and capacity to be effective in crises and necessary measures should be taken accordingly.

It can be stated that the problem in the management of the crisis in the school is not only caused by the school administration but because the crisis is not intervened as a team (Kılınç-Çelebi, 2019) and a governance problem for controlling whether the learning process is effective or not during the pandemic manifests itself. The lack of a clear approach towards the duties, roles, and responsibilities of the employees can also be stated as a problem (TEDMEM, 2020). Sadovnikova, Sergeeva, Suraeva, and Kuzmina (2016) state that the problem stems from the fact that teachers have positive reactions to the pre-crisis period, but a similar approach is not observed during the crisis period.

In this study, the recent pandemic in schools was considered a crisis, and this aspect of the issue was investigated. The fact that the COVID 19 Pandemic period was encountered for the first time by the school administrations is thought to bring about confusion in the education system and schools. It is expected that the presentation of the results of this study based on a situation affecting the school administration will guide the plans to be made and the education policies to be formed. In addition to this, the fact that there is only a limited number of

studies on the effects of crises on school administration in the literature (only 10 studies on the crisis in organizations were found in the National Thesis Center) or the number of studies is insufficient (MacNeil and Topping, 2007) suggests that this study will contribute to the field.

This study aims at revealing the activities that can be performed to provide quality education in the COVID 19 pandemic period from the perspective of school administrators. In this regard, the following questions were investigated:

1. What kind of situations have school administrators witnessed during the pandemic?
2. How can the pandemic period be evaluated in terms of school management?
3. How do the school administrators prepare for the post-pandemic period?

Method

A qualitative research method was used in this study and the opinions of the participants were obtained based on their experiences. Qualitative research is a type of research that focuses on the meaning and aims to extract new meanings (Neuman, 2010, p. 233). As this study included the opinions of the participants on the changes since March 11, 2020, the date of the first case in Turkey, a case study design was used. The case study is a qualitative research design suitable for intensive and systematic examination of a particular situation (Christensen, Johnson, and Turner, 2015, p.416; Merriam, 2015a, p.40).

Study Group

The study group consisted of 18 school administrators working in public schools. The participants declared their willingness to participate in the study. In determining the sample group size, the focus of the participants on certain points despite not knowing each other was taken into account. Therefore, the specified number of participants was considered to be sufficient. In the literature, the determination of the sample size in qualitative studies by the researcher according to the answers obtained from the participants is considered to be appropriate (Patton, 2014a, p.4; Merriam, 2015b, p.79). As the participants worked in different school types, maximum diversity was achieved, and chain sampling and the easily accessible situation sampling method was used as different school administrators were reached based on the recommendations of the interviewed school administrators and some of the school administrators, who were interviewed in formal and informal settings, contributed to the study. According to Miles and Huberman (2015), the purpose of maximum diversity sampling is “to document different varieties and identify important common patterns” and the purpose of the snowball (chain) method is to “describe the situation of relevant people knowing someone who knows which situations are rich in information (p. 28)”. The data obtained were evaluated by the researchers and two academicians who conducted qualitative research in the field of

educational administration. The data regarding the participants were presented in Table 1.

Table 1. *Study Group*

Role	School Principal	Assistant School Principal	
	9	9	
Management seniority	0-5 years	6-11 years	12-17 years
	6	10	2
School type	Primary School	Elementary School	High School
	9	7	2

Considering Table 1, it was observed that there was a balance among the number of roles of the participants, the number of participants with 6-11 years of administration seniority was more than the other groups, and the number of administrators working in primary school type was predominant.

Data Collection and Analysis

A semi-structured interview form was created to obtain data for this study. For this purpose, a preliminary interview was held with a school principal, and the interview form was revised according to the data obtained and the status of the questions serving the specified purposes. The semi-structured interview form was finalized after taking the opinions of two academicians and two Turkish teachers who conducted research in the field of educational administration by using qualitative research methods. The semi-structured form consisted of two sections. The first section included questions regarding the profile of the participants while the second section included questions regarding the research subject. Apart from the research subject, questions were added to ask for the permission of the participants and to determine whether the research permission or the questions reflect the research subject or not. After finalizing the interview form accordingly and getting the necessary permissions and appointments, the implementation stage started. The data were collected through e-mail. The data were analyzed by using a descriptive analysis method. Yıldırım and Şimşek (2011, p. 224) expressed descriptive analysis as a type of analysis in which direct quotations are brought to the fore to better reflect the opinions of the participants. In this study, the opinions of the participants were provided as direct quotations, and the interpretations and results were obtained from these quotations. The secondary data source of this study was the documents. This study included 61 accessible documents among the official documents sent by the Ministry of National Education, Turkey, through the national education directorates. According to Patton (2014b, s. 242), organizational correspondence and records can be evaluated as documents in scientific research.

Validity-Reliability in the Study

To increase the validity and reliability of the study, four of the strategies stated by Christensen et al. (2015, p. 405) were used. These strategies were reflected in

the study as follows: **Data diversification:** Data were collected through a semi-structured interview form (applied to eighteen educators) and official documents (61 documents). **Comprehensive fieldwork:** Local and foreign literature related to the subject field was reviewed and the result of this review was mentioned in the problem statement and discussion sections. **External auditing:** Considering this study, the evaluations were made together with two academicians who are experts in the field before, during, and after the research process. As a result of the evaluation, the academicians stated that the data collection tools, findings, and results were generally consistent. **Incomplete and incorrect evaluations** were reviewed accordingly. **Quoting:** The findings were presented in parallel with the opinions of the participants.

Research Ethics

In terms of research ethics, permissions were obtained from the participants both before the interview and for using the data in the study. Therefore, at the end of the interview, the following questions were used: “Would you like to give permission for this interview to be used and published in a scientific study (provided that personal information is kept confidential)?”. The data were used after receiving positive responses from all participants. The participants were coded as SA (School Administrator) 1, 2, etc. instead of using their real names. Thus, the ethical principles suggested by Creswell (2016) before, during, and when presenting the research were attempted to be implemented.

Findings and Interpretations

In this section, the data obtained from the interviews and documents were analyzed. In addition to this, interpretations were made to ensure the contribution of the data to the field.

Findings obtained through the interviews

Analysis results based on the data obtained from the interviews were presented in Table 2.

Table 2. *Themes and Categories Emerged in Research*

Theme	Theme 1	Theme 2	Theme 3
	Educational Experiences During the COVID 19 Pandemic Period	The Effect of COVID 19 Pandemic Period on the School Administrators	Plans for Post-COVID 19 Pandemic Period
Categories	Effects of the period	Decisions and their reflections on the practices	Educational and administrative preparations
Sub-categories	Change in the educational approach	Bureaucracy and continuation of routine works	Hygiene approach and practices
	Change in the communication approach	The coordination of communication	Performing planning studies in councils

Effects on the plans	The coordination of the activities	Guiding others
	Measures taken at school	Following the decisions of the MoNE
	Change in the working model	

Considering Table 2, it was seen that there were three categories and twelve sub-categories. It was seen that more sub-categories were emerging in terms of school administrators compared to the other themes. In addition to this, it was understood that there were practices aimed to be done after the pandemic period as well as already completed ones.

Theme 1: Educational Experiences During the COVID 19 Pandemic Period

The participants stated that the pandemic period had many effects on the education community as well as on the whole society. Considering the effects of the pandemic period, all of the participants focused on the change in the educational form. It was observed that there was an inevitable and necessary transition from face-to-face education to Internet-based practices for health reasons. However, it was seen that there were more than one and various sources for this purpose. This situation can be expressed as a certain accumulation in terms of both knowledge skills and technological infrastructure regarding distance education. SA 5 expressed his/her opinions in this regard as follows: *“We took necessary measures for all classes, students and teachers to benefit by using Zoom, Tealink, and similar software for live lessons in the early stages of the pandemic.”* SA 8: *“Our teachers do their best by using the applications and software such as WhatsApp, Zoom, and Eba.”* SA 17: *“The lessons were started to be provided by the Ministry of National Education on EBA TV.”*

Participants stated that the pandemic period also affected communication, which was one of the foundations of education. Communication was provided through the Internet as the education itself. It was noteworthy that special attention was paid to have constant communication with the environment. SA 2 expressed his/her opinions in this regard as follows: *“...The communication opportunities of the technology were used by our teachers, administrators, and students.”* SA 3: *“...The administrative works of the school were provided through electronic mail, DMS (Document Management System of the MoNE).”* SA 14: *“Communication between teachers, students, and parents is attempted to be ensured by using remote access resources”*

Participants stated that the compulsory and necessary change in understanding had an impact on the studies and works planned before the pandemic. It was also mentioned that plans were changed, postponed, or even abandoned. The sudden revision of the plans also affected the motivation of the participants. However, it was understood that the school administrators attempted to sustain their efforts despite the changes in the means and methods. SA 5 expressed his/her opinions in

this regard as follows: *“The educational activities, activity plans, and programs we prepared before the pandemic were directly affected, and we had to cancel most of these plans.”* SA 8: *“We suddenly switched to distance education.”* SA 11: *“As it was experienced for the first time, there was an adaptation problem in terms of the administration, personnel, students, and parents. We experienced difficulties in being motivated.”* SA 18: *“...We have plans and we cannot carry out these plans...”*

Theme 2: The Effect of COVID 19 Pandemic Period on the School Administrators

Participants stated that they sustained administrative practices such as correspondence during the pandemic period. In other words, the bureaucratic procedures were carried out without any interruption. This situation also showed that formal communication continued at school. SA 1 expressed his/her opinions in this regard as follows: *“Additional course fees, bill payments, and payments of paid teachers continued in this period.”* SA 2: *“Previous correspondence with our superiors and subordinates continued in the form of questions and answers.”*

It was seen that the administrators coordinated the communication by including technology in both formal and informal aspects to manage the process. This situation showed that the school administrators cared about communication and that they attempted to sustain it by making use of different sources continuously. SA 3 expressed his/her opinions in this regard as follows: *“As the school administration, we served as a bridge between the province and the district in terms of the school-related issues.”* SA 4: *“We continue to communicate with our families through notifications and messages to ensure the continuation of our students’ contact with education. We provided seminars for our teachers on how to carry out live lessons.”*

During the pandemic period, school administrators made vigorous efforts and were interested in coordinating the educational activities of students. For students to be affected by this period at a minimum level, school administrators implemented technology-based practices such as distance education, online meetings, etc. In addition to this, they guided their surroundings by considering the warnings from higher authorities. It was seen that there was an effort to continue education without interruption and by making use of all available opportunities. It is thought that the above-mentioned issues are reflected in the opinions. SA 6 expressed his/her opinions in this regard as follows: *“To support our students, we direct our classroom counselor teachers to support them through WhatsApp groups and phone calls. We follow this through weekly follow-up charts.”* SA 7: *“We hold online meetings with our teachers every month. And our teachers hold online meetings with the parents.”* SA 18: *“...Our 8th-grade students need to prepare for the exam. We found websites for them to*

interactively prepare for the exam and put these websites at their service. ...Both the directions of the MoNE and the correspondence continues.”

It was determined that the understanding of cleaning in schools changed in this period. In this regard, it was observed that the practices in schools were made more rigorously and by using different tools. In addition to this, it was understood that cooperation between different institutions was important, and suggestions from superiors and different institutions were taken into account. SA 7 expressed his/her opinions in this regard as follows: “... *We cleaned up our school. Within the scope of COVID 19 measures, we disinfected our school with the disinfectant provided by the district national education directorate.*” SA 12: “*I performed disinfectant work of our school once a week. I certainly did not let civilians into the building. I measured his/her temperature when I had to let them in.*” SA 13: “*We plan to end the pandemic period without damage or with the least damage by acting within the framework of the rules set by the Ministry of Health, Ministry of Education, and other relevant ministries.*”

It was observed that the pandemic period also affected the working method of the school administrators. It was reflected in the opinions that the flexible working understanding was appropriate provided that the work was not allowed to be interrupted instead of a certain working shift. It was also reflected in the opinions that the flexible working model was a practice implemented by the upper authorities to reduce the impact of the pandemic. SA 15 expressed his/her opinions in this regard as follows: “*We made a plan to work in a coordinated manner in accordance with flexible working procedures so that the school administrators and other personnel could carry out the work and operations of the school without interruption, and we continue to work in line with this plan.*” SA 17: “*In line with the instructions of the Ministry, one of us, the school administrators, goes to our school every day.*”

Theme 3: Plans for Post-COVID 19 Pandemic Period

It was seen that the pandemic period changed the perspectives and plans of school administrators. It was reflected in the opinions that there were educational and administrative works to be done after the outbreak of the pandemic. It was thought that the first and most important reflection of the changes was in the cleaning practices carried out in schools. It was seen that the participants agreed that they would implement more practices for cleaning understanding and measures in their schools. SA 1 expressed his/her opinions in this regard as follows: “*First of all, our school is ready in terms of hygiene ...*” SA 5: “*... more cleaning measures will be taken.*” SA 12: “*I think we will live with COVID 19 for a long time. In other words, it is becoming our normal. I have plans for maintaining social distance after the school is opened*”.

The interruption, postponement, or cancellation of the work in schools in this period provided school administrators with experience. They preferred making preparations by making post-pandemic plans based on the experience

they gained in the process. Therefore, it was understood from the opinions of the participants that they continued to communicate with the teachers. SA 3 expressed his/her opinions in this regard as follows: “In terms of school management, guidance, committees, commissions, units, total quality groups, social activity studies, and project groups will be planned and end-of-year teachers’ board will be concluded.” SA 12: *“I have plans for maintaining social distance after the school is opened. But my plans will be shaped in line with the ministry’s directions.”*

The participants believed that guidance activities should be carried out especially for the environment to eliminate the effects of the pandemic. School administrators preferred this way to prevent both the physical and psychological alienation of students and families from schools. It was understood from the opinions that school administrators planned to do these practices comprehensively and willingly. SA 3 expressed his/her opinions in this regard as follows: *“In terms of education, we will carry out adaptation studies for our students and teachers after the pandemic.”* SA 4: *“Considering the compensatory work to be carried out by the Ministry, we will plan counseling activities to improve the mental state of our students affected by the process, hold seminars for parents, and offer all the facilities of the school to the service of our teachers and students for seven days and twenty-four hours by taking the support and opinions of our teachers when compensations are needed.”*

As stated in the previous themes in all the practices, it was considered to act in accordance with the instructions of the Ministry of National Education. This is common and binding for all schools. SA 11 expressed his/her opinions in this regard as follows: *“Preparations are made in line with the instructions of the Ministry of National Education.”* SA 12: *“My plans will be shaped in line with the ministry’s directions.”*

Findings obtained through the documents

Regarding the COVID 19 Pandemic period, a total of 61 documents, including 6 Presidential Circulars, 2 regulations, and 53 official letters, were examined. These circulars were issued between March and August 2020 (Circular 2, 3, 4, 5, 8, 11). The circulars contained measures to be applied to public institutions and employees. It was observed that there were additional measures for a healthy life in both individual and public spaces (such as postponing the organizations and employees’ not going abroad). In addition to this, there were also arrangements in the working hours of the employees to reduce the spread rate and effect of the disease (2020/11 numbered circular).

Two regulations examined within the scope of this study were issued by the Ministry of National Education, Turkey. Considering Article 39 of the Regulation on Preschool and Primary Education Institutions and Article 78/c of the Regulation on Secondary Education Institutions of the MoNE, the duties

and responsibilities of the school principal includes taking hygiene and health-related measures at school (MoNE, 2013; 2014).

The following points draw attention in the 53 official articles about the research, which were sent to schools in a hierarchical order and can be reached:

- It was noteworthy that different ministries had guidelines on their respective areas of responsibility. For example, The Ministry of Health, Turkey, explained what kind of measures should be taken for 29 sectors operating in the society in the COVID 19 Outbreak Management and Working Guide of the Scientific Advisory Board on May 30, 2020.

- The Ministry of National Education published the Workplace Health and Safety Unit Introduction Guide (COVID 19) and this guide explained what measures should be taken in schools. Paying more attention to hygiene, using disinfectants, airing the classrooms, hanging up the 14-day rule and warning signs, and paying attention to these were among the measures to be taken and followed.

- The recommendations of the World Health Organization were also considered in these guidelines. For example, in the 15/04/2020 dated letter sent by the Ministry of Environment and Urbanization, Turkey, this situation was revealed among the measures to be taken.

- The measures were supported not only in written form but also with visuals and included explanations for different sectors (39 sectors). In its 29/05/2020 dated letter, the Ministry of Family Labor and Social Services, Turkey, recommended the establishment of preparation teams, the preparation of an emergency plan, and the use of “Alo 184 Coronavirus Hotline” as measures. These measures were announced not only on official channels but also on social accounts.

- It was aimed to plan, implement, and control this pandemic period not only throughout the country but also on a provincial basis and within each institution. In the meetings held under the coordination of Pandemic Committees in the provinces (such as the meeting on 11/05/2020), evaluations were made for the current practices.

- The measures taken involved not only the physical dimension of the healthy life but also its psychological dimension. In this regard, the MoNE General Directorate of Special Education and Guidance Services issued an information guide for adults during pandemic periods.

- In the 02/06/2020 dated letter of the Ministry of Internal Affairs and the Ministry of Health, it was seen that the working hours of those over the age of 60 and those with special conditions such as chronic diseases were also regulated.

- All these documents indicated that the pandemic period had been followed through both formal and informal communication channels since

March 2020, and efforts were made to ensure cooperation and coordination in this regard.

Results, Discussion, and Recommendations

This study was conducted to understand the COVID 19 pandemic period in the context of school administration and the following results were obtained: The pandemic period has serious effects on the school and school administration as it has on every segment of the society. It was necessary to change the understanding of education and communication and to make plans to serve these purposes. It was seen that various and many practices based on the Internet and technology were widely used in the activities carried out in this period. These practices were used at both formal and informal levels. The same approach was also reflected in communication. The lessons were provided to the students by distance education and communication with parents, teachers, and higher levels was carried out by using technological means. Therefore, the planning included distance education and communication instead of face-to-face education and communication. In this whole process, a significant amount of importance was placed to carry out the process together with parents, students, and, especially, teachers. In the literature, it was argued that teamwork should be done to fight the crises in schools effectively and necessary training should be provided for the students to be prepared for the crises they may encounter. It was also noteworthy that schools developed their own unique methods for a solution (Javed and Niyazi, 2015; Kılınç-Çelebi, 2019; Moindi, Changeiywo, and Sang 2016). Şahin (2014) emphasized that teachers' preparations in crisis management were not sufficient in terms of both psychological and sufficient knowledge and skills, and they should take necessary training in this regard. Eren (2020) stated that the pandemic period affected education and education policies and that the training was conducted in the form of distance education. Chung (2016) argued that remote communication methods such as social media could be effective in crises. Gainey (2009) argued that remote communication tools such as e-mail were used in crises and that schools should have plans for crisis management as a solution. It can be said that the results of the studies mentioned in the literature that technology-based practices will contribute to education and that the process can be carried out with teamwork is consistent with the results of the current study. However, the fact that the participants did not suggest the finding regarding the training for crises in the literature shows that the results of the current study and the literature are not consistent with each other in this regard.

It was also concluded that the pandemic period affected the decisions and practices of school administrators. School administrators acted as a bridge between their environment and higher authorities in communication with their superiors during this period. In addition to this, the school administrators controlled what teachers, students, and parents do in terms of educational activities, and strove for minimal damage from this period. In doing so, they also strove to take measures for

health inside and outside the school. While doing all these, school administrators made use of a flexible working model to avoid negative situations. Ulutaş (2014) demonstrated that there was a link between the leadership characteristics of school administrators and their ability to manage the crisis in times of crisis. Considering the hygiene measures in managing crisis, Ocak (2006) argued that schools were not sufficient due to the lack of related staff and lack of awareness. Shirivastava, Mitroff, and Alpaslan (2012) stated that the crisis should be addressed in all aspects, necessary measures regarding its effects should be taken, and the crisis should be put forward theoretically and practically. Robertson (2017) emphasized that the training provided for the school administrators in terms of managing the crisis was insufficient and that the necessary training should be given in the context of leadership qualities. The training to be provided will contribute to better overcoming the effects of crises. It can be stated that the above-mentioned studies support the results of the current study.

It was also concluded that the school administrators had plans for the post-pandemic period. However, it was understood that the process firstly provided an experience for the school administrators and, then, plans would be prepared based on these experiences. It was preferred to take permanent measures in schools in terms of health, to help to overcome the effects of this negative situation in and out of school faster and better, and to work in coordination with the Ministry of Education when taking all these steps. Willis, Krausen, and Caparas (2020) emphasized that schools should implement practices to improve the quality of education, provide additional resources, act planned, and maintain communication with the inside and outside of the school for unforeseen situations such as crisis. Wang (2007) stated that crises can provide a learning opportunity for the organizations and Adams and Kritsonis (2006) stated that schools should have plans to prepare for crises and improve themselves by eliminating their deficiencies. In addition to this, it is thought that one of the ways to overcome the crisis in organizations is to transform the organization into a structure that is constantly learning and adaptable to developments. However, since there is no data in the literature regarding the determinant attitude of higher authorities on this issue, it is thought that the results of this study do not support the results of other studies in literature in this regard.

For practitioners, the following recommendations can be made: As crisis periods are expressed as uncommon and unforeseen situations that may lead to undesirable consequences, crises can be taken into account in the plans made/to be made. Periodic training can be provided for the school administrators as they do not have enough training regarding crisis periods. Based on the fact that it is important to use infrastructure and cleaning materials frequently and sufficiently to reduce the effects of the crisis, schools can be supported in terms of adequate infrastructure and materials (Internet, cleaning, and disinfecting materials). For the researchers, it may be suggested to conduct similar research by using different methods, to include school administrators working in different school types, and to examine the subject in terms of education administrators.

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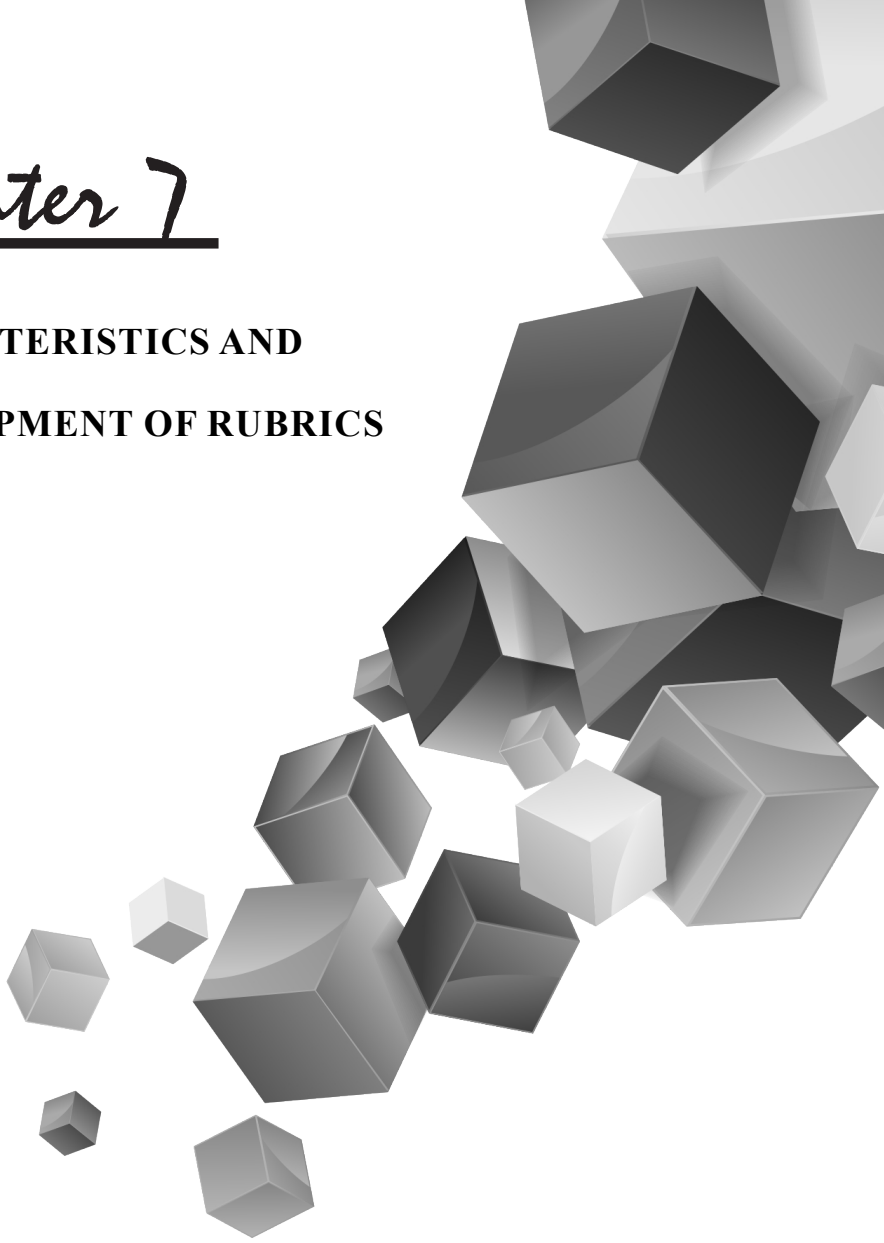
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Chapter 7

CHARACTERISTICS AND DEVELOPMENT OF RUBRICS



Elif Kübra Demir¹

Rubrics are used as a grading guide, providing helpful feedback to support ongoing learning efforts (Airasian, 2000; Chase, 1999; Leydens & Thompson, 1997). Rubrics can be used for a wide array of assignments: written papers, projects, oral presentations, group projects, posters, or practice behaviors. Many instructors believe that rubrics enhance student learning and improve students' end products. Well-developed rubrics can enhance student learning by effectively addressing key issues that are part of the learning goals (Andrade, 2000; McGury, Shallenberger, & Tolliver, 2008; Stefl-Mabry, 2004).

The rubric is a scoring tool that sets out specific expectations for an assignment. Rubrics break down a task into component parts and provide a detailed description of what constitutes acceptable or unacceptable performance levels for each of those parts. Rubrics can be used to rate a wide variety of assignments and tasks: research papers, book reviews, discussion participation, lab reports, portfolios, group work, oral presentations, and more (Stevens & Levi, 2005).

Rubrics are seen as an alternative way to be used in the solution of the problems faced in grading student studies and encouraging student learning through integrating student assignments, teaching and assessment (Whittaker, Salend and Duhaney 2001). In the same sense, Andrade (1997) defines rubric as "a scoring tool in which the quality grades of each criterion are expressed clearly through listing the criteria relating to the most important points in the study". On the other hand, while Stix (1996) states rubric as a scoring map prepared with the participation of both teachers and learners.

According to Moskal (2000), the rubric is a defined scoring design developed under teacher guidance to analyze students' work or products. The scoring key can be used to evaluate a wide range of topics and activities. Linn (1998) defines rubric as the scale of acceptable or unacceptable performance limits set of criteria explicitly defined for students and teachers. According to Haladayna (1997), the rubric is a tool that allows us to determine our observations in scored categories, and the scoring key is a more abstract and only expert, such as the quality of the article, the fluency of the sentences, the integrity of the subject, rather than the concrete behaviors that everyone can easily observe such as size and length. They are used for scoring behaviors that can be observed by people.

According to Goodrich (2001), the rubric is a tool where a job is scored by listing the measured parts. The criteria in the rubric prepared to evaluate an article; It can be determined as "purpose, organization, detail, compliance with spelling rules".

Goodrich (2001) defines scoring directive as a tool in which the grading criteria are listed and the parts of a study are graded separately. For instance, the criteria in a rubric for grading an article can be divided and identified as purpose, organization, detail and coherence with the rules of writing. A true

scoring directive also determines the degree of the characteristics which each criterion must have. Performance degrees can differ from each other.

Rubric, a specific type of scoring tool used in grading student performances, addresses to the following questions (Mertler, 2001):

- What are the criteria for the performance evaluation?
- What points should be taken into consideration in performance evaluation?
- What should be the point we desire to reach in performance evaluation?
- What does the classification of the performance quality look like?
- What is the difference between a good study and a weak one?
- How to assure the validity and reliability of our assessment (scoring) type?
- How to define different levels of qualifications and how they should be distinguished from each other?

When students receive rubrics before assessing, they understand how they will be assessed and can be prepared accordingly. Rubrics provide a clear and descriptive set of criteria indicating the importance of the task objectives. They help ensure that the instructor's grading standards are fair. Rubrics also reduce the time spent on grading by preventing instructors from making lengthy explanations for scoring. Besides the advantages of rubrics, there are also some difficulties. For example, it takes considerable time and effort to develop a rubric.

Rubrics have many benefits for teachers. Rubrics help teachers to be more objective when evaluating students' work, increase rater reliability, and help students give effective feedback. Teachers can evaluate students in a shorter time. It ensures that students do not need an extra time to write information notes about their tasks. It provides a clear definition of the learning objectives. Rubrics also help teachers to intervene when students are hesitant or unsure about their work or expectations for the job (McCollister, 2002). At the same time, rubrics act as a guide when preparing projects and activities, allowing the teacher to clearly consider the nature of the performance, expectations, goals and feedback processes.

Although rubrics provide scoring objectivity and convenience for teachers, they also have many benefits for students. Rubrics make students can evaluate their own performance. Thanks to the information provided to students in rubrics, they can better understand the task to be done and know clearly what is expected of them. In addition, students can evaluate themselves and their peers. Yell (1999) believes that rubrics help students learn what to work towards and base it on a more constructive, student-centered teaching approach. Shepard (2000) states that rubrics help students to see assessment as a source of understanding and comprehension. Effective feedback provided by rubrics both increases students'

learning and creates awareness about themselves. Phillip (2002) argues that the most important purpose of a rubric is to help students know exactly what they need from them: The clarity of learning expectations as written in a good rubric makes students responsible for their own assessment of learning.

Rubrics also have positive aspects for parents. When parents want to follow their child's work, they are unaware of the teacher's expectations, so they cannot follow up or help. Parents also become aware of these expectations through rubrics.

According to Popham (2018), a rubric used to score students' responses to a performance assessment has at least three important characteristics:

Evaluation criteria: These are factors to be used in determining the quality of a student's response.

Definitions of qualitative differences for all evaluation criteria: For each evaluative criterion, an explanation should be provided so that qualitative distinctions can be made in students' responses using the criteria.

An indication of whether to use a holistic or analytical scoring approach: The rating scale should indicate whether the evaluation criteria will be applied collectively in the form of holistic scoring or on the basis of criteria in the form of analytical scoring.

TYPES OF RUBRICS

The rubrics are generally classified according to two different directions. The first is whether the evaluation scale deals with the criteria separately or together. Accordingly, it is divided into two as holistic and analytical rubrics. The other is whether the rubric is general or not. It can be used for similar tasks or is task specific and only applicable to one assessment. Accordingly, they are divided into general or task-specific.

Holistic and analytic rubrics

A holistic rubric requires the instructor to score the overall process or product as a whole, without judging the component parts separately (Nitko, 2004). The focus of a holistic rubric is on the overall quality, proficiency, or understanding of the specific content and skills (Mertler, 2001).

Holistic rubrics are typically used when the purpose of the performance assessment is summative in nature. Since student performance is not divided into sub-dimensions in holistic rubrics, student performance is evaluated as a whole. In this case, detailed information about the student cannot be obtained and it cannot be seen where the student's deficiencies are. Despite these limitations, a quick scoring can be made as a general evaluation is made.

While the holistic rubric is developed, the scores that show the student's success can be divided into levels. While determining these levels, the sensitivity

to determine student performance and the level of the student should be taken into account. Then, the performance that the student should show at each level is defined. While making performance definitions, the performance task to be performed should be considered and defined as a whole. Performance levels are ranked from high to low and each level is given a score. The difficulties faced by the raters during the application and whether the results obtained from the scoring provide accurate information about the students will give information about how useful and valid the scoring key is for future applications. With repeated applications, a measurement tool is developed in which more objective results are obtained by eliminating the inoperative aspects of the rubric. Figure 1 shows an example of a holistic rubric.

Figure 1. Holistic rubric for creativity

Creativity Rubric	
Very Creative	Ideas represent a startling variety of important concepts from different contexts or disciplines. Created product draws on a wide-ranging variety of sources, including different texts, media, resource persons, and/or personal experiences. Ideas are combined in original and surprising ways to solve a problem, address an issue, or make something new. Created product is interesting, new, and/or helpful, making an original contribution that includes identifying a previously unknown problem, issue, or purpose.
Creative	Ideas represent important concepts from different contexts or disciplines. Created product draws on a variety of sources, including different texts, media, resource persons, and/or personal experiences. Ideas are combined in original ways to solve a problem, address an issue, or make something new. Created product is interesting, new, and/or helpful, making an original contribution for its intended purpose (e.g., solving a problem or addressing an issue).
Ordinary/Routine	Ideas represent important concepts from the same or similar contexts or disciplines. Created product draws on a limited set of sources and media. Ideas are combined in ways that are derived from the thinking of others (e.g., of the authors in sources consulted). Created product serves its intended purpose (e.g., solving a problem or addressing an issue).

Imitative	Ideas do not represent important concepts. Created product draws on only one source, and/or sources are not trustworthy or appropriate. Ideas are copied or restated from the source(s) consulted. Created product does not serve its intended purpose (e.g., solving a problem or addressing an issue).
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Source: Brookhart, 2013, p.55

Where holistic rubrics are better than analytical rubrics is when students will not see the results of the final summative assessment and you will not actually use this information for anything other than a grade. Some high school final exams fall into this category. Grading with rubrics is faster when only one decision is made, rather than a separate decision for each criterion (Brookhart, 2013).

Analytical rubrics describe the work on each criterion separately. Focusing on the criteria one by one is better for teaching and for formative assessment because students can see what aspects of their work need what kind of attention. By dividing the process or product into parts in the analytical graded scoring key, each part can be evaluated separately, so feedback can be given to the student on more specific issues (Nitko, 2004). Criteria are defined by determining the critical points of the performance of the student while doing the study in the analytical scoring key. Criteria are defined in detail for each level in accordance with the performance that the student has to show and these levels are scored. Performance levels may vary depending on the grade level or the characteristics of the behavior to be measured. In the analytical rubric, each criterion is divided into stages within itself. Since the criteria are defined in detail, biased raters are prevented. Therefore, it can be said that the measurement made is more objective. To obtain detailed information about the student, the performance level can be increased. However, in this case, it may take time to prepare the analytical rubric and scoring with such a detailed measurement tool. Relative expressions should be avoided as much as possible while defining the criteria and performance levels. These types of statements can be evaluated differently by each rater and may reduce the reliability of the measuring tool. Figure 2 shows an example of a analytic rubric.

Figure 2. Analytic rubric for creativity

Creativity Rubric				
	Very Creative	Creative	Ordinary/Routine	Imitative
Depth and Quality of Ideas	Ideas represent a startling variety of important concepts from different contexts or disciplines.	Ideas represent important concepts from different contexts or disciplines.	Ideas represent important concepts from the same or similar contexts or disciplines.	Ideas do not represent important concepts.

Variety of Sources	Created product draws on a wide-ranging variety of sources, including different texts, media, resource persons, and/or personal experiences.	Created product draws on a variety of sources, including different texts, media, resource persons, and/or personal experiences.	Created product draws on a limited set of sources and media.	Created product draws on only one source, and/or sources are not trustworthy or appropriate.
Organization and Combination of Ideas	Ideas are combined in original and surprising ways to solve a problem, address an issue, or make something new.	Ideas are combined in original ways to solve a problem, address an issue, or make something new.	Ideas are combined in ways that are derived from the thinking of others (for example, of the authors in sources consulted).	Ideas are copied or restated from the source(s) consulted.
Originality of Contribution	Created product is interesting, new, and/or helpful, making an original contribution that includes identifying a previously unknown problem, issue, or purpose.	Created product is interesting, new, and/or helpful, making an original contribution for its intended purpose (e.g., solving a problem or addressing an issue).	Created product serves its intended purpose (e.g., solving a problem or addressing an issue).	Created product does not serve its intended purpose (e.g., solving a problem or addressing an issue).

Source: Brookhart, 2013, p.54

General and task-specific rubrics

The general rubric is a rubric that focuses on a general performance such as the power of written expression or the ability to make a presentation. All of the tasks should be examples of the same learning outcome. Performance explanations are general, so students learn general characteristics and learn non-isolated, task-specific characteristics (Brookhart, 2013; Kutlu, Doğan, & Karakaya, 2008).

Task-specific rubrics are specific to the performance task in which they are used. Task-specific rubrics contain answers to a problem or explain the logic students should use or list facts and concepts students should talk about. General rubrics have several advantages over task-specific rubrics:

- Can be shared with students at the beginning of an assignment to help them plan and monitor their own work.
- Can be used in many different tasks, focusing on the knowledge and skills students have developed over time.

- Describe student performance in terms that allow for many different paths to success.
- Focus the teacher on improving students' learning skills rather than completing the task.
- It does not need to be rewritten for every assignment (Brookhart, 2013, p. 9)

Developing task-specific rubrics is more complex and time-consuming, but once developed with the tasks that accompany them, this scoring key can be used over and over again with that task. Task-specific rubrics serve as “scoring guidelines” for the person grading the study. Therefore, using task-specific rubrics for large-scale assessment, it is quicker to train raters to achieve acceptable levels of scoring reliability.

Rubric Development

Rubrics consist of four basic parts. The rubric includes a task description, a type of scale, the dimensions of the task, and what constitutes each performance level, as shown in Figure 3.

Figure. 3. Basic Rubric Format

Title			
<i>Task Description</i>			
	Scale Level 1	Scale Level 2	Scale Level 3
Dimension 1			
Dimension 2			
Dimension 3			

Stevens and Levi (2005) explained these 4 elements that, the task description almost always originally includes some kind of “performance” by the instructor and the student. The task can take the form of a specific assignment such as paper, a poster or a presentation. The task can also apply to general behaviors such as participation, the use of appropriate laboratory protocols, and behavioral expectations in the classroom. The scale explains how well or poorly any task has been performed and is located elsewhere in the grid to complete the assessment objective of the rubric. Terms used to describe the level of performance should be gentle but clear. In the overall rubric, words such as “mastery”, “partial mastery”, “progress”, and “emerging” provide a more positive, active, verb description of what is expected after the learner, and also mitigate the low-level potential shock. marks on the lowest levels of the scale.

The dimensions of a rubric organize the parts of the task in a simple and complete way. A rubric can explain to students how their tasks can be broken

down into components and which of those components are most important. The dimensions should actually represent the type of component skills students need to incorporate in successful academic work, such as the need for a firm. Understanding of content, technique, quotation, sample, analysis and using a language appropriate to the situation. Individual dimensions are all-encompassing categories, so a rating scale for each of the dimensions should at least include a description of the highest level of performance in that dimension. A rubric that contains only the definition of the highest performance level is called a scoring grid rubric. Scoring grid rubrics provide more flexibility and a personal touch, but the need to explain in writing where the student is not meeting their highest performance levels increases grading time using scoring guide rubrics. Figure 4. illustrates the rubric with three levels on the scale that is actually used for grading the “Changing Communities in Our City” assignment.

Figure 4. Three Levels Rubric

Changing Communities in Our City			
Task Description: Each student will make a 5-minute presentation on the changes in one Portland community over the past thirty years. The student may focus the presentation in any way he or she wishes, but there needs to be a thesis of some sort, not just a chronological exposition. The presentation should include appropriate photographs, maps, graphs, and other visual aids for the audience.			
	Excellent	Competent	Needs work
Knowledge/ understanding 20%	The presentation demonstrates a depth of historical understanding by using relevant and accurate detail to support the student’s thesis. Research is thorough and goes beyond what was presented in class or in the assigned texts.	The presentation uses knowledge that is generally accurate with only minor inaccuracies and that is generally relevant to the student’s thesis. Research is adequate but does not go much beyond what was presented in class or in the assigned text.	The presentation uses little relevant or accurate information, not even that which was presented in class or in the assigned texts. Little or no research is apparent.
Thinking/ inquiry 30%	The presentation is centered around a thesis, which shows a highly developed awareness of historiographic or social issues and a high level of conceptual ability.	The presentation shows an analytical structure and a central thesis, but the analysis is not always fully developed or linked to the thesis.	The presentation shows no analytical structure and no central thesis.

Communication 20%	The presentation is imaginative and effective in conveying ideas to the audience. The presenter responds effectively to audience reactions and questions.	Presentation techniques used are effective in conveying main ideas, but they are a bit unimaginative. Some questions from the audience remain unanswered.	The presentation fails to capture the interest of the audience and/or is confusing in what is to be communicated.
Use of visual aids 20%	The presentation includes appropriate and easily understood visual aids, which the presenter refers to and explains at appropriate moments in the presentation.	The presentation includes appropriate visual aids, but these are too few, are in a format that makes them difficult to use or understand, or the presenter does not refer to or explain them in the presentation	The presentation includes no visual aids or includes visual aids that are inappropriate or too small or messy to be understood. The presenter makes no mention of them in the presentation.
Presentation skills 10%	The presenter speaks clearly and loudly enough to be heard, using eye contact, a lively tone, gestures, and body language to engage the audience.	The presenter speaks clearly and loudly enough to be heard but tends to drone or fails to use eye contact, gestures, and body language consistently or effectively at times.	The presenter cannot be heard or speaks so unclearly that she or he cannot be understood. There is no attempt to engage the audience through eye contact, gestures, or body language.

Source: Stevens & Levi, 2005, p.13

According to Popham (1997), the following steps should be followed while developing a rubric:

1. Criteria for performance that will provide a basis for evaluation should be determined.
2. Definitions of performance criteria should be made in accordance with performance levels.
3. Scoring strategy should be determined (analytical / holistic).

Considering the suggestions of Haladyna (1997), Moskal (2000) and Goodrich (2001) for the rubric development steps, it is seen that there are some common features. These can be briefly listed as follows:

1. Determining the goal according to the expected performance
2. Defining metrics based on expected performance

3. Deciding on the upper, middle and lower qualification levels of the criteria defined
4. Deciding how to use a scoring key (holistic or analytical)
5. To inform students on what criteria they will be evaluated and explain the criteria to students
6. Make the application according to the determined principles and evaluate the studies according to the scoring key to score
7. Sharing the results with students. First of all, to enable them to see what they can do and then to see their shortcomings, if any, and to improve themselves.

According to Steff-Mabry (2004), the following steps should be followed when creating a rubric:

1. Make a preliminary decision about the dimensions of performance, product or capability to be evaluated
2. Review student work to ensure that important dimensions are not overlooked.
3. Refine and combine the list of sizes.
4. Describe each dimension in writing.
5. Develop a scale describing the performance, product or range of competencies for each of the dimensions.
6. Critically evaluate the rating scale.
7. Determine if the criteria are in line with the standards and examine if they reflect current understandings of excellence in the field.
8. Make sure the categories or scales are well defined.
9. Determine if there is a clear basis for assigning scores at each scale point.
10. Pilot test the rubric on real examples of student work.
11. Have a colleague test the rubric with their students.

Nitko and Brookhart (2011) stated that there are two main approaches for designing rubrics, and these are top-down and bottom-up approaches. A top-down approach is deductive. It starts with a conceptual framework that defines the content and performance you will evaluate. A top-down approach can be used when your curriculum clearly defines the intended content and performance. A bottom-up approach is inductive. It starts with examples of student work and uses them to create an assessment framework. A bottom-up approach can be used when defining content and performance statements or when students are wanted to be included in the process.

Consequently, not all of these steps have to be performed in classroom practice. The rubric can be customized according to the subject to be prepared.

For example, whether it is task-specific or general, holistic or analytical, affects the steps in rubric development. In addition, the purpose of using rubric results also affects the development process. The use of rubrics for different purposes such as formative assessment, student self-assessment, peer assessment, and grading may also change the steps to be followed in the development process. If a simple and quick rubric is to be prepared for in-class evaluation, some development steps may be skipped.

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Chapter 8

INTEGRATED KNOWLEDGE MANAGEMENT SYSTEMS IN EDUCATION¹



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¹ This chapter is revised from the author's doctorate dissertation entitled "Knowledge Management Systems and Application of Knowledge Management System In Education"

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1. Development of Knowledge Management

With the discovery of writing; information was recorded to written books and libraries established afterwards. In 4000 BC various documents such as existing trade relations and proof of civilisation were held in Sumerian and Akkadian government palaces. In the 3rd century BC, there were more than 500.000 manuscripts at the Alexandria Library in Egypt (Ives et al., 1998). Vocal and written recordings, preservation and distribution of knowledge can be seen as the traditional first period of knowledge management.

Nearly 250 years ago, the meaning of knowledge went through a change and thus, it began to be applied into tools, processes and products (Drucker, 1994). Technology evaluated in the second half of the 20th century has mostly allowed easier processing and distribution of data and information in larger quantities as well as continuing heavily to process and diffusion of knowledge.

While terms being used in the 1980s have been abolished, some disciplines which are thought to be unrelated are merged. As a result, while entering the new century, some of the countries which have completed the industrialisation process began to establish a new societal foundation named Post “Industrial Society” or “Knowledge Society”.

The effort to manage information clearly and systematically has released naturally as a result of various developments. After the Second World War, developments in socio-economic and business environments caused information-based products and services to develop. While in 1950s information technologies attempted to automatise many different applications with artificial intelligence, operational researches, management sciences, strategic planning and notion of system got improved in the 1960s. Because of these changes, work process and interactions, internal operation and topics such as how human think and make decision began to gradually taking shape. Cognitive sciences began to develop around the beginning of the 1970s. Finally, in 1980’s, developments began to occur regarding behaviours of knowledge mechanisms such as individual and collective decision making (Wiig, 1997).

A significant and increasing number of professionals and academicians who established themselves in this new economic age began conducting studies about knowledge management with their principles and applied technologies (Chauvel & Despres, 2002). At the end of the 20th-century knowledge management began to be inspected in the discipline of decision support systems and expert systems. However, several studies about knowledge management has risen recently (Nissen, 2000).

1.1. Terms of Knowledge in Knowledge Management

There is a primarily accepted definition of knowledge in pretty much all knowledge management terms. While some of these definitions of knowledge may extend into philosophical terms or sometimes it can be defined through a

narrow, professional perspective. Definitions accepted for knowledge are also useful in answers given to “what is knowledge” question.

Before the presentation of terms defined, accepted regarding knowledge management, it is beneficial to inspect data and information terms which will be explanatory within the knowledge management term. Knowledge, data and information are inspected separately within knowledge management.

Data is defined as raw results (Raisinghani, 2000), collected results and numbers (Clarke, 1998), a set of distinct, neutral facts about occurrences (Davenport & Prusak, 1998). Another definition is the records of transactions made in specific formats. Data cannot be related to other events alone and have no purpose in themselves (Davenport & Prusak, 1998). It is also defined as unresolved and uninterpreted observations, unprocessed facts. It often has no meaning nor content (Barutçugil, 2002). For example, TK1979, TK1720, TK1755 are data, but does not make sense for many people.

There is no evaluation, interpretation within the data, and they cannot provide a pure basis for decision making. They do not give an idea of their importance or whether it will work (Davenport & Prusak, 1998).

Another concept is information, which is organised (Tuomi, 1999) and formatted (Raisinghani, 2000) data. Information is also defined as a message that makes a difference (Davenport & Prusak, 1998), meaningful (Nonaka, 1995) “has relationships and purpose” (Drucker, 1999). In short, it is the data that’s compiled and combined in a meaningful way; in this context, it is the content of the message transmitted from a source (Orkan, 1986). The standard definition of information in the literature is to make sense for data within a given context (Checkland, 1999).

Michael Buckland provided a different approach to information: *To say that a document “contains” information is convenient but metaphorical; the document may have meaningful marks, but the meaning is something attributed to the marks and is not a physical property of the marks. The meaning of the marks can change even if the marks do not* (Buckland, 1991).

Considering the similarity of concepts and definitions in knowledge management and information management, it is tempting to assume that knowledge can be treated as similar to information. Apparently, information can be transmitted, stored, processed, and retrieved very efficiently (Lueg, 2001).

There is a sender and a receiver in all messages. The goal of information is to differentiate the recipient’s thoughts on an issue, to make an impact on their assessment or behaviour. Information has to shape its receiver as it makes a difference in its perspective or understanding. It is the recipient who will decide whether the received message has a true informational nature and will reformat it. A record of scattered statements that are unrelated to each other may be seen as “information” by its author, but has no value for the recipient (Davenport & Prusak, 1998).

Knowledge is not a concept that can be easily or directly defined, and there are many attempts to define knowledge from various disciplines. According to Bell, information is “a set of regular expressions of ideas or facts that present a rational judgment or an experimental result transmitted to others through various communication tools in systematic form (Bell, 1974).

Leonard and Sensiper, for example, describe knowledge like “information that is relevant, actionable, and based at least partially on experience”. Knowledge is a subsection of information; it is subjective; it is connected to meaningful performance; and it has tacit features gained by experience (Leonard & Sensiper, 1998).

According to Nonaka and Takeuchi, who are essential academicians working on knowledge management; knowledge is justified, truth beliefs (Nonaka & Takeuchi, 1995).

In his work “Personal Knowledge”, Michael Polanyi (Polanyi, 2015) first expressed the classification of tacit and explicit knowledge, which has been emphasised and accepted in many publications and books on knowledge management. This classification generally accepted in the knowledge management literature with Ikujiro Nonaka’s used in his book “Knowledge-Creating Company” (Nonaka & Takeuchi, 1995).

- **Tacit knowledge:** Tacit knowledge is individual knowledge that is difficult to formalise or transfer to others. It contains personal know-how, foresights, and feelings that come to a individual from having gained in an experience for a long time.

- **Explicit knowledge:** is formal knowledge that is easy to transfer between individuals and groups. It is often expressed in the form of formulas, rules, descriptions.

Tacit knowledge also tends to be local; as it is not included in databases, handbooks, books, or files. It is created and shared in every local part of the organisation. Tacit knowledge spread when people get together and talked about the stories and feelings (Stewart, 1997).

While explicit knowledge can be edited, transmitted, transferred, latent knowledge has a personal, content-dependent structure that is difficult to organise and transfer (Bernbom, 2001).

Explicit knowledge manifests itself in books and documents, reports, databases and policy handbooks. On the other hand, latent knowledge is in the minds of the employees, experiences of the customers, and the memories of the vendors who worked together in the past. Tacit knowledge is difficult to document as it mostly consists of experiments. It is not easy to determine the details. It is short-lived and temporary. Beside Tacit / Explicit, the terms official/unofficial are also being used (O’Dell et. al., 2003).

If an iceberg analogy to be made on the ratio of tacit and explicit knowledge, that ratio would be 90 to 10 for most people. To explain it in another way, most people are unaware of 90% of the information they already know. Furthermore, sometimes they are aware of the known knowledge, but unable to express it either written or verbally when asked.

1.2. Major Knowledge Management Approaches

1.2.1 Knowledge Creation

Krogh, Ichijo, and Nonaka believe that knowledge cannot be managed, but can only be supported. Managers argue that instead of trying to control information, it is products should be supported. In their book, “Knowledge Creation”; they suggest that focusing on knowledge creation rather than management and they continue to work in this direction they describe the five knowledge enablers, suggesting various conditions to support its production. Those are Inject a Knowledge vision, Managing Dialogues, Mobilising Knowledge Advocates, Create the True Context, Globalise Local Knowledge (Krogh et al., 2002).

In the first stage of the knowledge creation process, knowledge is organised, classified and structured on an individual level. At this stage, the individual can make connections between various pieces of information that are not related to each other. When an individual joins a group afterwards, a more significant knowledge accumulation is achieved than the sum of individual knowledge. By inspiring each other, people enable the creation of new knowledge and the expansion of the knowledge field. In a way, this is the widening of the information creation cycle. The basic processes here are “Integration” and “Socialization” (Krogh et al., 2002).

Knowledge flows from sources to sinks. There are several ways this happens in an organisation: through informal networks, formal networks, briefing and debriefing, documents, workshops, shared experience encounters (Broking, 1999)

As new pieces of knowledge emerged at the team level and encoded through externalisation and internalisation methods, many new connections will occur at the organisational level. This knowledge will be transformed into the product or service requested by the customer. When we pass beyond the boundaries of an organisation, knowledge starts to widen again (Barutçugil, 2002).

1.2.2. The Transfer of Best Practices

There are various solutions to the problems of organisations. It is considered that the transfer of best practices, one of the knowledge management practices, is the fastest, most effective and most vital. This argument generally derives from the experience of innovative organisations trying to apply new management approaches.

O'Dell (2003) describes "Transfer of Best Practices" as; "*best practices take information/data and put them in the context of real people and real experiences within the company. We learn by doing, and by watching others do. The transfer of best practices helps others in the firm learn better, faster and more effectively*".

O'Dell et al provide various case studies of companies they work on, Chevron Corporation has adopted a simple definition of best practices: "*Any practice, knowledge, know-how, or experience that has proven to be valuable or effective within one organisation that may have applicability to other organisations*" (O'Dell et al., 1998). Chevron recognises four levels of best practices in both its corporate databases and Best Practice Teams:

- Good Idea
- Good Practise
- Local Best Practise
- Industry Best Practise

The transfer of best practices is a model consisting of three main parts (O'Dell et al., 2003).

- Customer intimacy
- Product Leadership
- Operational Excellence

Four enablers of the transfer of best practices approach;

- Culture
- Technology
- Infrastructure
- Measurement

Four-phase change process;

- Plan
- Design
- Implement
- Scale-up

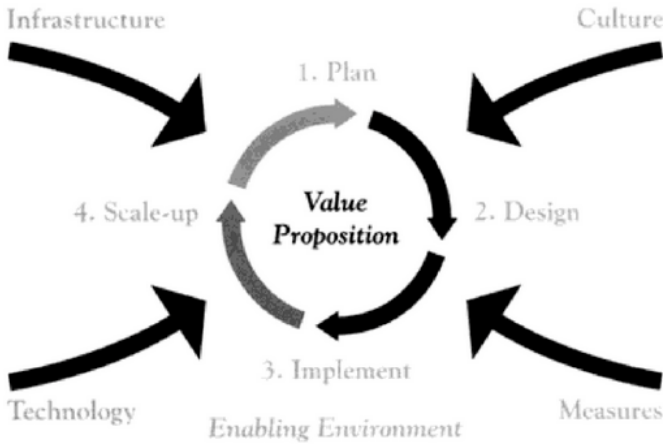


Figure1. *Transfer of Best Practices Approach in Knowledge Management (O’Dell et al., 2003)*

The main reason for choosing best practices transfer is that it allows staff to learn better, faster and more effectively. Each company can develop a definition of “best” that will suit its structure and goals. The important thing is that the criteria for this definition are clearly defined.

Knowledge management should not be a goal by being caught up in widespread changes in companies. The underlying idea is to increase the return of the knowledge production factor and to take advantage of the opportunities and benefits it provides. There may be different methods provide to be successful in the firm. Knowledge can be enriched by setting up a lesson learned office within the organisation or by designating a responsible person to address information issues during restructuring effectively. There may be different approaches that manifest themselves, such as best practices for knowledge management, centre of excellence, knowledge centre and competence centre (Barutçugil, 2002).

1.2.3. Community of Practise (CoP’s)

Wenger et al. (2002, p. 4) defined “CoP’s as groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, 2002).

There are various types of CoP’s serving different purposes such as solve to problems, creation of knowledge, sharing the best practice in organisation, and the others (Pavlin, 2006).

Communities of practice are everywhere. People belong to a number of them—at home, at school, in our social groups. Some of them have a name; some of them do not. Some we recognise, some generally remain invisible (Wenger, 2002).

An communities of practise group may or may not have a clear schedule for a particular week. Even if there is such an agenda, strict adherence to it is not necessary. However, those in occupational societies inevitably share their experience and knowledge in fluid and creative ways, which strengthen new approaches to problems (Wenger, 2001).

The CoP's approach has a structure that can be encountered at home, at work and in many other places. The group members both learn and try to find solutions in their discussions. In this social structure, tacit knowledge is revealed and diffused; solutions are produced; in short, a social structure is established. Technology use is not mandatory in occupational communities (Kakabadse et al., 2003).

It contributes to the occupational community to direct the strategy in the organisation, to open new business areas, to solve problems quickly, to transfer best practices, to develop professional skills, to recruit and retain talented employees (Wenger, 2000).

1.3. Knowledge Management Processes

According to Alavi and Leidner's (2001) *framework, organisations as knowledge systems consist of four sets of socially enacted "knowledge processes": (1) creation (also referred to as construction), (2) storage/retrieval, (3) transfer, and (4) application*

Nissen (2000) consider in his article to develop the combined knowledge management life cycle model (Nissen, et al., 2000) (Table 1).

Model	Phase1	Phase2	Phase3	Phase4	Phase5
Nissen	Capture	Organise	Formalise	Distribute	Apply
Despres and Chauvel	Create	Map/bundle	Store	Share/Transfer	Reuse
Gartner Group	Create	Organise	Capture/Codify	Access Transfer	Use
Davenport and Prusak	Generate		Codify	Transfer	
Amalgamated	Create	Organise	Formalise	Distribute	Apply

Table 1. Amalgamated Knowledge Management Life Cycle

Johnson and Blumentritt' in (1998) identified nine separate but associated knowledge processes, which drive differently on the three "places" of knowledge. These are the following:

- Identification of Knowledge
- Acquisition of Knowledge
- Generation of Knowledge
- Validation of Knowledge
- Capture of Knowledge
- Diffusion of Knowledge

- Embodiment of Knowledge
- Realisation of Knowledge
- Application and utilisation of Knowledge

Zack (1999) consider the knowledge in a depository in five stages: (Zack, 1999).

- *Acquisition.* An organisation either produces information and knowledge or obtains it from various interior and exterior sources.

- *Refinement.* Before putting acquired knowledge to a depository, an organisation subjects it to put value processes (refining), such as purifying, labelling, indexing, sorting, abstracting, standardising, integrating, and categorising.

- *Storage and retrieval.* This stage bridges upstream repository creation and downstream knowledge distribution.

- *Distribution.* This phase includes the tools an organization uses to make storage content accessible.

- *Presentation.* The context in which an organisation uses knowledge persistently effects its worth. Organisations has to develop capabilities that enable elasticity in organising, selecting, and participating knowledge assets.

Davenport and Prusak, consider four fundamental categories for knowledge management; knowledge generation, knowledge codification and coordination, knowledge transfer, knowledge roles and skills in their well-known book “Working Knowledge” (Davenport & Prusak, 1998).

Knowledge Generation

Davenport and Prusak (1998) emphasise that knowledge is as much an act or process as an product or thing. He enlightens five types of knowledge generation: Those are production acquisition, dedicated resources, fusion, adaptation, and knowledge networking (Davenport & Prusak, 1998).

- **Acquisition:** Acquisition of knowledge is a multi-step process. This model activates with data and finales with the top and end product of learning and wisdom. Organisations aim to somehow quickly modify their data, information and select and use those that are relevant to the organisation’s business and objectives. An organisation acquires knowledge by purchasing, leasing, and developing.

- **Dedicated Resources:** A definite way to create knowledge in an organisation is to launch units or groups particularly for the goal. Research and development departments are the typical example. Their whole aim is to come up with new knowledge new ways of doing things.

- **Fusion:** While the research approach is based on decreasing the pressure and distractions that can suppress productive research, knowledge generation

through fusion deliberately introduces complexity and even conflict to create new interaction. It brings collected employees with dissimilar sides to work on a problem or task, forcing them to come up with a joint answer.

- **Adaptation:** New goods from competitors, innovative technologies, and socio-economical changes drive the creation of knowledge because companies that do not change in response to changing situations will fail. A company's ability to adapt is based on two essential factors: first, having accessible internal assets and experiences that can be utilised in new ways, and second, being open to change or having a high "absorptive capacity."

- **Networks:** Knowledge is also created by informal, networks within corporations that may, extra, become more formalised. In the companies how significantly, an informal network can create knowledge when every member increases an incremental capacity.

Knowledge Classification and Coordination

The goal of coding is to put the knowledge in organisation to a form that makes it reachable to every member needs in organisation. Main purpose is change tacit knowledge to explicit knowledge and to information. Some specialised personnel such as "knowledge managers" can categorise knowledge, define, map or model and simulate knowledge, and convert it in rules and instructions (Davenport & Prusak, 1998).

Coding knowledge is a crucial step in increasing its value in the organization. Coding gives permanence to information that would else only occur in a human mind. Represents or implants information in forms that can be shared, stored, combined and influenced in different ways. The development of new technologies will increase the application possibilities, but it seems that it will be done intensively by people (Davenport & Prusak, 1998).

Knowledge Transfer

Knowledge is abundant in companies, but its presence does not guarantee its use. Whether we manage the process or not, it is transferred to organizations. Although knowledge management implies formalized transfer, one of its key elements is developing specific strategies to encourage spontaneous exchange. This is especially necessary for organizations whose major role is to creating knowledge (Davenport & Prusak, 1998).

It is particularly difficult to transfer covert knowledge from the source that created it to other parts of the organization. Probably the most reliable way to get this information circulating is to get people in and out of the allocated resource. (Davenport & Prusak, 1998).

Some strategies for knowledge transfers are talk rooms, transferring knowledge through personal conversations, knowledge fairs and forums. Curial point is when transfer knowledge is necessary, the method must always suit the culture of a corporation (Davenport & Prusak, 1998).

Knowledge Roles and Skills

Davenport and Prusak (1998) firstly underline that managing knowledge should be everyone's job. One of the roles of knowledge are "knowledge integrators" who are sufficiently expert in a particular field to identify and synthesize which information is most valuable. Another role is defined as "knowledge managers" whose work are that to capture, to store, and to maintain knowledge generated by others.

Many firms started to have new kind of job title; appointed chief knowledge officers (CKOs) to manage responsibility for knowledge management. Particularly critical, the three chief information managers' responsibilities are to create an knowledge culture, establish an information management infrastructure, and ensure that they all gain economic benefits. The cultural factors often require long-term change, but in the short period a company can begin to develop a culture of knowledge, partly through training, motivation programs, and management cases (Davenport & Prusak, 1998).

2. Integrated Knowledge Management Systems (IKMS)

Information systems that have been developed and applied or implemented in organisations in the past years were not satisfied to managers, and there were often problems during the implementation stages which various projects unfortunately failed. As it was realised that the efficiency of management processes could not be improved only with the developing of information systems, alternative approaches emerged. One of these approaches is knowledge management systems (KMS).

KMS indicates to a information systems implemented to the process of knowledge management. These are information technology-based systems developed to support and enhance the organisational processes of knowledge management process; creation, storage/retrieval, transfer and share, and application (Alavi & Leidner, 2001). KMS is mostly about people, not about software, documents or notes (Brooking, 1999).

It was believed that by establishing systems based on new technological tools in the transition to the information age, the management processes of the institutions could be enhanced quickly and smoothly.

An organisation uses information strategically in three areas: change in its environment; to produce new knowledge for innovative products; and to get decisions about courses of activities (Choo, 1996).

Various researchers have attempted to identify and clarify the processes in KMS. The prominent studies in this direction are "knowledge production" (Krogh, et al., 2002), "Best Practices Transfer" (O'Dell et al., 2003), and "Community of Practise" (Wenger, 2000).

The IKMS is an approach that by focusing on people, who are the core source and user of knowledge, sociocultural factors of the organisation integrates

into the infrastructure of knowledge management processes. Briefly, the IKMS consists of two fundamental dimensions: “knowledge management processes” and “sociocultural factors”. Knowledge management processes are the processes in which the data, information and knowledge trio are developed based on the information systems. Sociocultural factors, on the other hand, consist of the processes of “organisational communication”, “organisational learning” and “organisational culture” within the organisation where employees who are creators, producers, sharers and users of knowledge are together.

2.1. Knowledge Management Processes in Integrated Knowledge Management Systems

In developing process of the IKMS, approach two prominent models were used. One of them is the knowledge management processes explained by Bouthillier and Shearer (2002) and the other by Davenport and Prusak in their books “Working Knowledge” (1998) as a result of their review in the literature.

Conceptual framework of knowledge management processes consist of four basic processes which are Knowledge Creation, Knowledge Acquisition and Store, Knowledge Share and Transfer, Use of Knowledge (Figure 2).

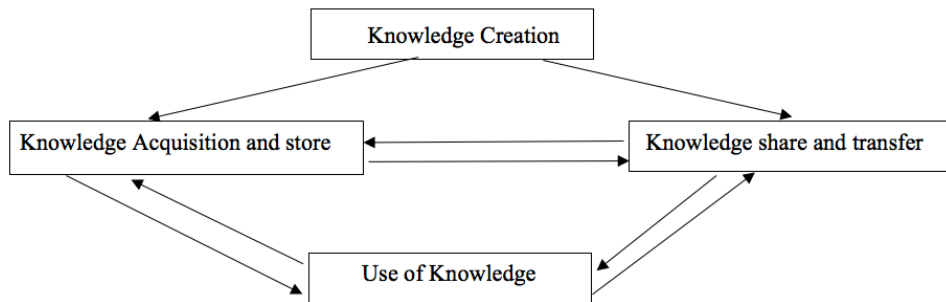


Figure 2. Conceptual Framework of Knowledge Management Processes in Integrated Knowledge Management Systems

These processes do not have a hierarchical structure, nor are they superior to each other. In each process in the organisation, actions with different intensity take place continuously. It is necessary to see these processes in which information is in motion as a whole. Relationships between each process and processes need to be organised simultaneously.

The process of knowledge creation is defined as the activities carried out by the employees in line with the aims and needs of an organisation by using the data, information, knowledge resources of the organisation and own knowledge, experience, abilities and intelligence.

All data and information produced by employees during their business activities are obtained, collected and stored by various information systems. Some cases are sales reports, research results, field investigations, and meeting

notes. Information systems store the created knowledge to the extent that tacit knowledge transforms into explicit. Tacit knowledge could not transformed to explicit knowledge remains with its creators, these can be transmitted through individual or group communications.

The process of knowledge transfer and share is defined as the sharing and transferring of stored or created knowledge by an information system or with individual relations, and all activities related to these.

Stored knowledge is transferred or shared according to the needs of the employees. If the stored knowledge is required for employees or is aware of, then it is organised in a way to be transferred in the information system. If the stored knowledge that the employees sometimes need, then the knowledge is organised to be shared in the information system.

If the created knowledge cannot be transformed into an explicit form, it is firstly shared with employees one-to-one or group communications. One-to-one and group communications are stored digitally and used later, not as much as functional in using structured information, with online digital communication tools.

Employees use post-sharing knowledge immediately or whenever they require. If this knowledge can be transformed into an explicit form, then it is stored again. However, if it still maintains its tacit form, it can be shared and transferred again with one-to-one or group interactions.

The process of use of knowledge is defined as the use of knowledge acquired, stored, shared and transferred by employees in all activities in the organisation in line with the goals and objectives of the organisation and all activities related to this.

Employees use shared or transmitted knowledge. Employees store the recreated knowledge after using (for their use or for later sharing), and also share or transfer it.

In order for the knowledge management processes to be organised effectively, each process within the organisation must be wisely analysed in detail before the development of information systems. According to the results of analysing, the framework of information systems are designed, after the implementation of the system's organisation of data, information and knowledge trio are managed enthusiastically.

2.2. Sociocultural Components of Knowledge Management Systems

IKMS are used to manage the organisation successfully include sociocultural factors that are complementary to knowledge management processes.

Sociocultural factors include all social processes of the human within the organisation, consisting of organisational communication, organisational

learning and organisational culture. In this sense, IKMS consider both the information systems developed for knowledge management processes and the social processes related to the culture, communication and learning of the organisation an integrated as a whole.

2.2.1. Organisational Communication

There are some various definitions of communication: Beattie & Ellis (2014) defines communication as the human language that is used to transfer information, whereas Drenth defines communication is sending and receiving of messages through symbols and in that context organisational communication is a critical element of organisational culture (Drenth et al., 1998).

Communication in an organisation takes place in a variety of contexts, such as one-one, small groups, large groups or with an external environment (Fielding, 2006).

Briefly, organisational communication can be defined as the form of communication established by members of the organisation “to achieve organisational goals”, inside and outside the organisation (Tutar, 2003).

Organisational communication occur at a variety of stages, interpersonal and dyadic interaction, small teams, big meetings, or across organisational departments or units, entire organisations, industrial parts.

According to Francis (1989), organisational communication generally has two goals (De Ridder, 2003). The first goal of organisational communication should be to inform the employees about their tasks and about the policy and other issues of the organisation. The second goal is communication with a mean to create a community within the organisation (Elving, 2005).

Well-organized communication is not only necessary, but also crucial to success in an organisation, and it is a vital tool for accomplishing organisational goals (Fussell & Kreuz, 2014, Rajhan, 2012, Kowalski, 2000) and also essential factor (Spaho, 2011) because it significantly influences three areas of an organisation: employee engagement, customer satisfaction and public perceptions.

A positive relationship exists between organisational communications and job satisfaction and commitment (Goris et al., 2000).

The functions of communication within the organisation are realised in four groups: information provision, persuasion and influence, imperative and instructive and combining (Elma, 2003).

Research on organisational communication shows that there are many different forms of communication in organisations. Organisational communication styles vary according to the structure of the organisation and its management. For example; Organisational communication can be established much more quickly when the organisational structure is structured in an

extrovert, participatory, professional, open system style and the organisational culture (common behavioural patterns, business philosophy and attitudes shared by the organisation members) is in a way that supports this structure. On the other hand, in the organisations has authoritarian and conservative cultures communication processes realise insufficiently and lack of required information which members of the organisation need (Tutar & Yılmaz, 2003).

Communication processes within the organisation are particularly crucial for the information-sharing part of knowledge management processes. Information systems within the organisation can provide the sharing of information to some extent. While digitalised data, information and knowledge can be shared with information systems, the sharing of tacit knowledge is spread and shared through traditional one-to-one communication.

2.2.2. Organisational Learning

After the technological infrastructure and systems of information management systems are established, it is necessary to organise mechanisms and activities for the employees to use them effectively within the framework of an information management approach.

“People”, that is, knowledge workers who will create innovation in organisations, especially in knowledge-based organisations, need to learn to use the tools they have, no matter how technologically advanced they are.

Learning sometimes occurs individually and sometimes organizationally in organisations. Individual learning occurs as the gain of the individual between education or experience. Organisational learning has a systematic structure. Organisational culture brings this learning to new members (Töremen, 2001).

A learning organisation is capable of organisational management skill for learning processes.

Organisational learning is the process of acquiring knowledge and developing the skills necessary to enable workers in the organisation to understand their work better and ultimately to operate more effectively. It emphasises that the organisation is a social activity and points out that organisations can survive only with cooperation and solidarity. Employees can perform their duties together more effectively and efficiently. Information acquisition, distribution and sharing of information, processing of information and creating institutional memory are activities associated with organisational learning (Barutçugil, 2002).

Senge (1998) states that organisational learning is based on a “mentality change.” Organisations based on learning are based on the past course of success and question the fundamental judgments. Healthy analyses can be made by looking at past events with new eyes. Organisations need experimentation and self-disclosure to adapt. This situation requires a change in the structure, processes, areas of occupation and goals for optimal adaptation. He claims that

this adaptation period is the first step in developing learning in the organisation (Senge, 1998)

Organisations always desire to improve themselves, their services and products in all aspects by learning to learn. As the organisation and individual development, employees will feel a renewed commitment to their work, and the organisation will prepare a better future for itself. In the IKMS, processes are managed not only to learn in line with the needs of the individual, but also to support the organisation's knowledge management. Learning activities are planned, supported and managed organizationally from the creation of knowledge to its use within the organisation.

It is vital for managers who want to establish a learning organisation to consider both individual and organisational learning and support both.

2.2.3. Organisational Culture

The behaviours and culture in the organisation are the key drivers of internal sharing. One of the essential reasons for this is that learning and sharing information is a social activity that takes place between people. Another reason is that the features embedded in the culture and the environment have a very complex and rich quality (O'Dell et al., 2003).

Collectivist cultures draw attention to the needs and goals of the group as a whole through the needs and desires of individuals. In such cultures, relationships with other members of the group and the relationship between people play a central role in each individual's identity.

Last three decades, competitive organisations spent much of their time developing capabilities that set the period for a thriving culture of sharing (O'Dell & Grayson, 1998).

In a collectivist culture, knowledge is always learned together by being produced and shared. Personal relationships of employees who share common interests and expertise are sincere, close and caring. In a culture against sharing, there is no incentive or sanction to improve information sharing in the organisation, and the appreciation and support systems are generally against sharing. Managers and other employees do not want to debate (share failures) about failed projects. The different missions and visions of the departments create different cultures and prevent the transfer of knowledge and learned (O'Dell et al., 2003).

The organisational culture must be a part of the sociocultural dimension of KMS which has to have a collaborative and sharing culture.

In order to ensure that the knowledge management processes are successful, data, information and knowledge in each process must be realised within the organisation in line with the objectives of the organisation under a collectivist culture.

3. Application of Integrated Knowledge Management Systems in Schools

During the transition to the information society, it has emerged that there is a need for a creative and productive workforce endowed with digital skills. In this context, education has essential duties in the preparation of the workforce that will form the informatics society.

It has been revealed that the existence of opportunities for individuals to access and use information with extensive and rich technologies in a society does not make that society an informatics society. In addition to having new digital equipment and digital tools, members of the society has to be willing, tend to and used to produce, share and use information.

New and challenging tasks are required from educational institutions as well as all institutions in this rapid information change (Petrides, & Nodine, 2003).

Hesapçioğlu (2001) explains the changes that may appear due to these demands expected, especially from schools.

- Change in the definition of educated people: The educated person should have the fundamental computer skills besides being literate. They should be raised as individuals who have learned to learn.

- Change in educational content: The education program should direct the teacher and students to the underlying core content. The educational curriculum should allow students and teachers to participate in the cultural development process.

- Change in new teaching and learning styles: The focus of attention on teachers and learning processes is increasingly learning-centred, which means that it should be accepted that different individuals learn in different styles. Considering that it has been teaching-oriented for several thousand years in the history of education, this change will be a challenging and long period.

- Change in the quality of knowledge: The fundamental element of the economy in the informatics society is knowledge, which on the one hand ensures that individuals live a life, and on the other hand provides the skills earn their living.

Teachers and schools develop and manage the knowledge of society through teaching and learning. However, schools do not always manage their knowledge efficiently, as in many organisations (Carrol et al., 2004).

Knowledge management approach is also added to the studies carried out to develop the educational institutions of the information age. Although it is developing and there is no consensus on many issues, it is an approach that organisations emphasise strongly in the information society.

There are various studies on knowledge management approach in the field of education. For example, Kidwell explains their knowledge management

practice approach in higher education institutions according to their departments. Accordingly, information management systems are presented as an approach that can be developed in research units, in the curriculum development process, in the department of student affairs and alumni service, and finally in the department of management (Kidwell et al., 2001).

The studies of Petrides and Guiney (2007) are based on Davenport's knowledge ecology (Davenport, 1997). The study focuses on how knowledge ecology can be applied in schools. They suggest four steps for implementation.

- Evaluation of available information
- Identifying the information needed to support decision making
- Evaluating the school's business processes, organisational structure, human resources
- Evaluating the information culture and policies of the school

The studies required for the use and sharing of information in the decision-making process should be supported by information infrastructure.

3.1. Application of Knowledge Management Processes in Schools

In the information age, what kind of education and training students will receive and how they will be educated for the future are investigated. The dazzling development of technologies causes students to be asked more often the question of how to prepare for the future. Similarly, it is tried to be determined that teachers will improve their professional development.

The new understanding developed in the field of education emphasises not the knowledge of the student, but the reaching the knowledge-producing capacity. The student is expected to analyse, interpret and reproduce the information obtained. The classroom should not be an environment in which information discovered by others is transferred, but an environment where students produce new knowledge as a result of their interactions with them and with their teachers (Özden, 2002).

Considering the qualities that individuals of the informatics society should possess, it is expected that students will be educated as individuals who can access, interpret, process, reproduce and share information in various media through various digital tools, and work collaboratively.

In a way, this is the students' management of their knowledge, just like information management processes. In order to educate students of this quality, structural changes in the education system and new approaches in schools must, of course, be implemented. A significant amount of these changes are; development of technological infrastructure, changes to the curriculum and the professional development of teachers.

All over the world, educational institutions, especially in developed countries, are under pressure to improve students' outcomes. In this context, the primary purpose of implementing IKMS in education is to improve decision-making within the organisation for progress, to effectively manage all knowledge processes in the school, to ensure that all education and training activities are carried out in the school in the best way and ultimately to improve the achievements of students.

Three primary sources of schools, people, technologies and processes, need to be analysed before the application of knowledge management processes, (Petrides & Nodine, 2003).

- **People:** People manage information, not machines. Nevertheless, organisations can promote policies and encourage implementation to help people share and manage knowledge. Knowledge management can build upon an academic working group that will voluntarily participate from various levels of the departments and share their knowledge with other employees. In many schools, teachers from different departments come together and share information regarding general needs. These groups support their surroundings by forming a partnership based on trust and experience over time. They are called “community of practice” (CoP's). All group members come together to share their experiences and collaborative works. Knowledge management seeks to ensure the sustainability of these groups.

- **Processes:** All administrative processes, development of curriculum processes, ways of information sharing, rewards, and many other work exercises affect the stream of information in all schools. Information management envisages developing effective processes to access the required information whenever it is requested. Knowledge management practices encourage these processes for more information-based decision making.

- **Technology:** Technology needs to be recast as a cost-effective for the limited resources of the institution and essential and productive part of the institution and not as a driving force of knowledge management. The most efficient technologies within the information management framework are those that can reach target user groups and promise to exchange and track useful information among the departments.

There is no consensus on what are the key elements in knowledge management and applications of knowledge management, and what are the most effective ways in its practice. However, there are many results and lessons learned by institutions that use and develop knowledge management practices in their schools, colleges and universities. As a result of spirited discussions took place at the Knowledge Management in Education Summit held in 2002, some primary suggestions for the implementation of knowledge management in education were illustrated (Petrides & Nodine, 2003).

- To extend the knowledge management in school build mottos, and vocabulary.
- Focus to active and energetic employees in the school.
- Make clear all work processes and patterns in the school.
- Make sure technology is usable.
- Focus on student learning and outcomes.
- Expect an repeated process will occur in future.
- Consider the big picture.

Knowledge management processes can be applied within the school in relation to the answers found to the questions and depending on decisions taken after the analysis. Information systems are designed to support these three processes and to ensure that all activities in the processes are carried out effectively and quickly.

3.2. Application of Sociocultural Components in Schools

3.2.1. Communication in Schools

Effective and productive work of employees, which is essential for organisational purposes, can only be achieved with the high motivation of the employees. Communication is considered as a motivation-enhancing force, as it provides clarity to employees about what to do, how to do it better, and how they can improve it when they show poor performance (Robbins & Judge, 2012). Communication plays an active role in encouraging employees to adopt organisational goals and motivate them in line with organisational goals. In this context, communication is an important process that motivates both teachers, other employees and students at school.

Teacher's efficiency appears to regard to how can motivate themselves to the educational process (Büyükses, 2010). The communication problems teachers may experience in their schools, mainly with their administrators, may reduce their motivation, and as a result, they may be reluctant to fulfil their primary educational duties. This reluctance of teachers inevitably reflects on the lecture and the students performance in the classroom. The lack of communication and problems that may be experienced between teachers and administrators directly affect the performance of teachers and students. Therefore, school administrators should competently manage the communication processes in the school.

The positive or negative communication style between the internal stakeholders of the school directly affects the organisational climate (Tuzcuoğlu, 2009). School administrators should use verbal/non-verbal communication appropriately and effectively, pay close attention to all employees at the school, especially teachers and students, inform them, listen to them, and establish

sincere and open communication with them. From time to time, they should go to the teachers' room and meet with the teachers, and they should be administrators whom teachers can easily reach and consult with (Sümer, 2007).

A school administrator can apply various strategies to manage communication processes at school effectively. For example, it can motivate the leader teachers around him by including them in activities, projects and decision processes. The principal can establish a regular and rapid communication order between himself and the teachers by using different communication tools (Bursalıoğlu, 2002). Besides, it can use communication methods and ways that will set an example for all employees and students, especially by training in individual communication. Preventing rumours by presenting the facts can contribute to communication processes by knowing the communication barriers. These behaviours will develop and settle over time as a part of the school culture.

3.2.2. Learning in School (Learning Schools)

According to Marks and Louis (1999) in learning schools staff support each other, exchange ideas and reach consensus, and treat each other in professional and egalitarian ways.

Teachers are curical factor for school improvement and school effectiveness. Research shows that in the learning schools much more time spend for professional development than normal schools. Learning schools have strategies and policies that support teachers for their professional development (Muijis et. al., 2004).

The domain of organisational learning activities in the school is all units of the school. The school must continuously shape the learning process for itself and its staff.

Two fundamental elements should be considered for organisational learning activities in schools. The first is to focus on teachers because they are the central pillar in schools. Teachers have a crucial role in developing a more effective organisation, potentially learning the school. The second is the school's development issue, management and decision-making processes, each of which can reinforce the other. If school administrators enter the process of scrutiny and questioning and question school-level norms and practices, teachers may perceive that questioning is vital, which will encourage teachers to do the same in their teaching duties.

The principles underpinning all structures in learning schools are non-hierarchical, encourage engagement, encourage autonomy in decision making, remain flexible (Middlewood, 2005).

Some activities in the learning school are as follows: permanent communication with parents and other stakeholders, frequent teacher meetings, keeping the school library open; Social club activities, meetings for total quality management, some professional seminars, parent meetings for class and school

informations, collaboration among teachers, trips for children sometimes for teachers, and a continuous learning culture activities are the other activities (Can, 2011).

Learning schools are managed with values that support the learning potential of all stakeholders in the schools. The learning school can be a critical starting point for raising lifelong learners.

Employees usually gain new knowledge and skills through various activities. However, they cannot perform new knowledge and skills to their work, sometimes because of strict rules and lack of time. It has to be avoided planning learning activities if the staff does not have opportunities and time to apply their new knowledge and skills to their works (Barutçugil, 2002).

All in-service training activities at the beginning and end of the semester are carried out to support the professional development of teachers. In order for these trainings to be effective and successful, all teachers at school should be open and willing to learn. Teachers who are far from learning and see learning as a chore cannot improve themselves, and they also affect the learning climate in the school negatively. They undermine the students' desire and effort to learn from the very beginning. Therefore, the learning process of all employees in the school, especially teachers, should be supported both technologically and socioculturally.

3.2.3. School Culture

School cultures is described in terms of the socio-cultural environment in schools, contains of the organisational structures and interaction in this to realize the professional teacher learning (Avolos, 2011) and support all student academic achievement.

In literature, school culture is usually associated to communities of inquiry (Cochran-Smith & Lytle 1992) professional learning communities (Stoll et al., 2006) or communities of practice (Wenger 1998),

Although school culture and school climate include the processes of social life within a school, they are not the same (Bryk et al., 2010). School climate consists of behaviors that are often experienced and therefore the emotional atmosphere in a school. School culture, on the other hand, is a pattern of shared central beliefs, norms, values, or past experiences (Hoy & Miskel 2013). School culture and climate both explain the character of a school, what goes on in the school, feelings or academic positive mood (Hoy et al., 2006).

Like any organisation, the school has a unique personality climate. In other words, the school has an organisational climate versus the individual's personality (Bursalioglu, 2002).

School culture is the structure that differentiates a school from other schools and affects teachers' behaviour. It is the perception of the school's external

environment on the school's collective behaviour. Schools with a healthy organisational climate are practical and successful in using the resources they have. Besides, trust in school, students' academic and emotional success is at high levels, (Hoy & Miskel, 2015).

A collaborative school culture provides the ideal situation for student learning. It is also a situation in which teachers learn together. It would be hard to argue against the thought of teachers learning together as a strategy for improving a school. The difficulty for school leaders is getting the school culture to embrace this approach (Gruenert, 2015)

It takes lots of time for a teacher and a manager to adapt to their new school, which is why changing managers, along with teachers, might cause erosion within the school's culture.

Conclusion

Leadership is necessary but not sufficient for a healthy culture and basic information technology. IKMS should be institutionalized within the organization through the creation of new support systems other than knowledge-based systems, new job titles and defined responsibilities, new teams, a new formalized networking.

Technology culture is the widespread and effective use of technology at every stage of the planning, development, evaluation and educational activities of the educational institution. For example, teachers have access to computers in the classroom, guidance teachers can access previous student interviews online, teachers do daily student evaluations online, research, learn and use new tools, and follow educational technologies and tools.

Information culture includes procedures in information sharing circulating in the organisation. Such as, whether important information is shared to improve performance, its meaningfulness, whether the school administrator uses the relevant data and systems in their work and plans, whether new teachers are provided with the necessary information to improve themselves, etc.

IKMS helps storing sources of knowledge and with the help of a shared context, increases the scope of sharig knowledge among employees before storage of knowledge itself (Alavi & Leidner 2001).

Applying IKMS in schools settings improves school administration, leverages innovative teaching knowledge for enhancing student learning and improves services

IKMS should be integrated to realize the major needs of organisation, because knowledge does not occur in technically but occur in human who are able to create the knowledge (Jelavic, 2011).

Although we need good school infrastructure and tech-savvy, well-educated human resources in our schools those are key element of students'

learning performance, unfortunately these could become together in very few of our schools. Despite this deficiency, if the existing infrastructure and human resources are managed with a different approach such as IKMS, it will be seen that the expected, anticipated and desired school achievements are realised in the schools of the information age.

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Chapter 9

PROGRAMS AND THERAPIES FOR CHILDREN WITH AUTISM



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Introduction

The term autism source from the Greek word “autos“, which stands for alone or can be translated as self-withdrawal or selfish existence (Trajkovski, 2004).

Childhood autism is a pervasive developmental disorder defined by the presence of abnormal or impaired development that manifests before the third year of life with a characteristic form of pathological functioning in all three areas of social interactions, communications, and repetitive behavior (World Health Organization- WHO, 1992).

The American Psychiatric Association defines autism as a broad continuum of related cognitive and neurobehavioral disorders, including three characteristics: socialization disorders, verbal and nonverbal communication disorders, and restrictive and repetitive patterns of behavior APA, 2013)

Research on autism first appeared in 1943 in Leo Canner’s publication, which describes 11 children with so-called “infantile autism” or in today’s literature that can be found as Caner autism. These children have been characterized by extreme loneliness, poor communication, and resistance to changes. In his paper *Autistic Affective Contact Disorders*, he describes the classic signs of autism, such as the use of idiosyncratic phrases, stacking toys in a long line, and remembering trivial facts (Kanner, 1943).

Autism is a spectral disorder whose symptoms and features can be presented in a large variety of combinations, from mild to very severe. Although autism is defined by certain behaviors, children and adults can exhibit any combination of behaviors in any degree of impairment. Two children with the same diagnosis may react unlike to each other and have different abilities. That is why there isn’t “standard type” of a child with autism. Various terms can be found in the literature to describe this spectrum, such as autistic tendencies, autistic spectrum, autistic continuum, high-functioning autism, or low-functioning autism. Diagnostic criteria change over the years, as research progresses, new changes are expected in the future (Trajkovski, 2011).

Although there are numerous papers in the world medical literature devoted to autism, it is still a real challenge for any author, due to its characteristics of a global developmental disorder with early reflection in the child’s behavior, adaptation to their environment and communication (Trajkovski, 2011).

Ideally, educational programs should start as soon as the child is diagnosed, at preschool age. Early intervention programs focus on learning social and communication skills. It used to be thought that children with autism could not learn. This attitude was the reason for children with autism to be placed in institutions for children with intellectual disabilities, and the absence of any progress has been considered as evidence of their inability to learn (Trajkovski, 2011). Current findings indicate that the number of children who are not able to

learn is very small, regardless of their intellectual level. The basic principle is that learning should be tailored to each individual child, and the ability to learn is proven by the progress that is made, no matter how fast (Mauk, Reber and Batshaw, 1997).

It is considered that most is achieved with highly structured learning programs. There are several reasons for this. First, the problem of social behavior in autism is such that if the teacher is not active in establishing the interaction and if he is not directive, then the child with autism will simply withdraw from the social situation in his or her circle of repetitive activities. Repetitive behavior, in itself, does not allow the acquisition of new information. Second, a highly structured approach implies that each task can be divided into clearly defined, simple, small steps that can be easily performed. Children with autism accept such a methodical approach because they are able to accept predictable things. For example, they want to know that on Wednesday morning they cook, and in the afternoon, they draw, on Thursday morning they learn math, and in the afternoon, they learn music. Surprising and insufficiently explained schedule changes can lead to bouts of rage or great anxiety (Trajkovski, 2011).

Choosing the right school is simple. It should be a school with an understanding of the child's problems nature; which will be open enough to attempt the most effective procedures. There is currently no single method that will work for all children with autism. Teachers must be sufficiently prepared for experiments to be able to adapt the method to the needs of the individual. If a child with autism is not treated individually, then it can easily return to loneliness and their repetitive activities. Some children are able to work individually without the help of others. This ability develops very late, around the age of 8-10, and needs special training. In order to maintain the attention of the class, necessary for learning, it is considered that the optimal average is three students per teacher (Trajkovski, 2011).

Children with autism who show learning success have the best prognosis. Children with average or above-average IQ can even get an academic education. There are adults with autism who have received higher education and graduated from college. A rare example of this is Dr. Temple Grandin, who earned the title Doctor of Agricultural Sciences. Children with autism who have normal intelligence usually prefer subjects that do not require social and communication skills, probably because they can learn them more easily. Those subjects are mathematics, technical, and music education. This also applies to subjects that require a good memory. Contrary, learning literature is a significant difficulty because it requires the interpretation of other people's thoughts and intentions. Because most children with autism have an associated intellectual disability, their learning progress is much slower. Such children, with the help of a special educational program, by the end of schooling master only the basic knowledge of reading, writing, money recognition, and simple computer operations. many children achieve some independence in self-care and self-help, such as cooking, dressing, laundry, ironing, and the like. This basic knowledge must

not be neglected, as it allows children with autism to somehow engage in social interaction and gain a degree of independence (Trajkovski, 2004).

The question is often asked whether children with autism can be part of regular schools. Separating these children in special schools may increase their social problems, as they will be less likely to establish normal social interactions, compared to regular schools. Because of this, it is good for children with autism to be allowed to be in the company of healthy peers. But this does not mean that enrollment in regular schools is always better than special schools for autism because special schools have better equipment and professionals than regular schools. The ratio of the number of students to one teacher should also be taken into account. In addition, when a child with autism is in a regular school, his stigmatization is possible (Koen and Bolton, 1995).

TEACCH PROGRAM

The Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) is a program created by Eric Schoppler and his colleagues in North Carolina in the United States and has been used since 1966. The treatment consists of individually prepared programs aimed at speech and behavior (Figure 1), in consultation with schools and other institutions. This program also includes working with parents in the area of in-house training and counseling or organizing parent groups (Schopler and Mesibov, 1995).



Figure 1. Individual TEACCH treatment

It is used as a treatment for babies, children, adolescents and adults. It includes diagnostics and assessment for creating individual programs, special education, skills development, vocational training, school counseling, family

treatment, counseling, and organizing family group activities (Schopler and Mesibov, 1984).

TEACCH Programme provides services for diagnose, evaluation, and treatment, while working with individual families in order to explicate teaching programs while focusing on the behavior and the child with autism development, that are of most concern to the family (Watson, 1985).

The main purpose of the TEACCH method is to help prepare children with autism for more successful life at home, at school and in the community. A special place in the treatment is taken by the help for a better life in the family through joint overcoming of the autistic behavior. The main task of this method is to enable children with autism to truly fit into the community as independently as possible. The idea of the TEACCH program is to enable the discovery of the meaning of an environment that becomes more predictable than intimidating. This means preparing for a simpler environment at an early age and gradually complicating it as development and autonomy progress. By discovering the meaning of communication, understanding and expression will enable them to better understand what is being said / asked and will enable them to express their feelings and needs with real meaning (Schopler and Mesibov, 1984).

Most of the TEACCH strategies are implemented in early intervention programs. This program can be used in homes, local public schools, social groups, residential programs, counseling sessions for individual or group, summer camps, and other recreation programs. Unfortunately, there are experiences of incorrect application and understanding of the techniques and concepts of the TEACCH program between those who are trying to use it. Yet, the strategies and principles of the program have been used internationally in classrooms, residential programs, and day programs (Mesibov and Shea, 2010).

LOVAAS PROGRAM

The individualized educational program is grounded on the practice of Dr. Ole Ivar Lovaas who devoted 50 years to ground-breaking research and training with the aim to enhance the lives of children with autism and their families (Smith and Eikeseth, 2011).

The program is based on rigorous research due to the effectiveness in the children with autism treatment (Figure 2). The therapy includes 40 hours per week of intensive therapy that is used to maximally improve the child's behavior. It is recommended to start this therapy as early as possible, preferably at the age of 3.5, and at the latest by the age of 5. Cooperation with parents is necessary because they are also trained to perform the treatment independently at home. Lovaas developed and published a model of intensive (40 hours per week), detailed, individualized learning (Lovas, 1993).



Figure 2. Dr Ivar Lovaas treating a child with autism (1965)

The curriculum includes hundreds of individual lessons to learn a specific language and social behavior. Treatment generally begins when the child is two years old. The goals of the first year of treatment include language development, improving social behavior, promoting joint play, and reducing excessive rituals, anger, and aggressive behavior. In the second year, treatment focuses on expressive and abstract speech, and interactive play with peers (Trajkovski, 2011).

In one study, the work program has been conducted by students under the supervision of Lovas and his team. The results have been published in 1989 and have aroused great interest because until then there has been no research that could prove that behavioral strategies can lead to such positive results. Of the 19 children who have been included in the treatment for 40 hours per week, 47% no longer have shown any signs of autism, 40% have made significant progress but still have shown signs of autism, and only 10% have shown no change. The therapy has been implemented 6-8 hours a day, 5-7 days a week for two years. Due to the intensity of the treatment, there has been a need for the organization of the team which has been consisted of 3 people who had previously attended the training. Parental involvement has been very important for maintaining the skills learned. All skills have been divided into a series of small parts (sequencing of tasks) and taught in a structured way with consistent application of reinforcement (food, play with the dearest toy, social rewards). Gradually the food and other amplifiers have been reduced or replaced with others, if possible, with social and everyday enhancers. Aggressive and self-stimulating behavior has been ignored (unless they are dangerous for the child and the environment), and efforts have been made to express frustrations in a socially adequate way.

The program gradually had progressed from learning about self-care, learning verbal and non-verbal imitations to establishing the beginning of a game (Harris and Delmolino, 2002).

Shea (2005) has pointed out that professionals shouldn't cite this 47% in the context 'normal functioning', 'indistinguishable from average children', and 'recovered' from autism. She thinks that the reports of Lovaas's research are not consistent with these expressions. Additionally, she explains that over 30 years since the research has begun, the other studies have continuously fallen short of the 47% (Shea, 2005).

SON-RISE PROGRAM

The Son-Rise program is a good example of an interactive treatment at home that focuses on a child with autism (Figure 3). Parents are allowed to receive training and then work independently at home with their children to encourage their development (Trajkovski, 2011).

The principles of the Son-Rise program are:

- The potentials of the child are not limited- they do not believe in hopelessness because it is not possible to predict exactly what each child will achieve during development,

- Autism is not a behavioral disorder - it is a disorder of relationships and interactions. Behavioral disorders occur as a result of neurological disorders that affect the occurrence of difficulties in interactions with the environment. Therefore, the Son-Rise program seeks to influence the child's socialization and the development of close relationships with parents through play,

- The basis of every learning is motivation and not repetition- attention, retention and generalization are improved when the child works with desire,

- "Unusual" behavior for the child with autism has great significance and value - entering the repetitive and ritual behavior, the therapists of the Son-Rise program get to know the child more deeply, redirect this behavior and use it for therapeutic purposes,

- Parents are the best teachers for their children- Son-Rise program helps parents to become reliable leaders and educators of their children because no one can love and dedicate himself to the child as much as his parents,

- The child can progress only in a real environment in which it is necessary to find a few things as possible that would distract him,

- Parents and therapists are most effective in their work when they feel comfortable with the child, when they are optimistic and when they have hope for a better future,

- Other interventions can be inserted in the Son-Rise program (Jordan, 1990).



Figure 3. Son-Rise Program

Houghton et al (2013) analyzed the effects of the Son-Rise Program, as an intensive treatment with a goal to enhance the social communication skills in children with autism. They implemented 40 hours of Son-Rise Program to 6 children at the age of 47 to 78 months. They have also used a novel passive interaction probe task to test the changes before and after the behavioral treatment. Their results have shown an increase in spontaneous social orienting communication, as well as in the frequency of gestural communication. Furthermore, the children's duration and the total time spent engaged in social interactions increased from before and after the Son-Rise treatment. The suggestion of the researches has shown that intensive intervention which is concentrated on raising child-initiated interactions have increased the social and communicative behaviors for children with autism (Houghton et al, 2013).

SOCIAL SKILL TRAINING

Social skills training is the name given to a range of procedures used in teaching children and adults with autism how to behave in society. It is one of the basic educational and therapeutic procedures because it is known that social behavior problems are the biggest challenge for children with autism (Figure 4.). Examples of learning social skills are: learning to telephone, going to the store, or learning to behave on a bus. In each of these cases, the difficulties are caused not only by the physical aspects of the task (to search for the phone number, to count the money) but also by the social rules about them (how to start, maintain and end the telephone conversation, as decent to wait in line at the store, etc.). The way to achieve this is to play roles and watch videos of one's own behavior, as well as individual learning in real-life situations (Trajkovski, 2011).



Figure 4. Social skill training for children with autism

Social skills can be learned to some degree, although teachers and therapists point out that it is very difficult to get a child with autism to generalize the learned skill to new situations. Acquired the ability to behave socially, even when taught, may seem strange to other people because it is achieved through systematic learning and is not “naturally acquired.” There are also some important aspects of social behavior that are known to be very difficult to learn. Like empathy, for example, as a sensitivity to the emotions and thoughts of other people (Koen and Bolton, 1995).

There are different models of learning social skills, such as social stories (short interpretations that demonstrate a given situation, explain the characters’ thoughts and feelings, and provide guidelines for appropriate response), story scenarios, and social scenarios (Trajkovski, 2011).

Recent researches suggest the need to implant the social skills intervention in a more general context of early intervention which will stimulate the development of children with autism in all dimensions (Strain and Hoysen, 2000).

LOGOPEDIC THERAPY

Children with autism have social communication deficits and logopedic therapy is very helpful. Developmental advancement must include speech therapy by emphasizing the pragmatic aspects of language. Interactive and meaningful conversations should be modeled and practiced. This therapy is implemented in many schools and preschools for autism where it has shown good results (Figure 5.). Speech therapists work at every stage of speech-language development,

from the development of voices in non-speaking children to the development of syntax in children with slow speech development (Trajkovski, 2004).



Figure 5. Logopedic therapy

In children who speak complete sentences, speech therapists work on fine-tuning the intonation and pragmatic aspects of the language. They also work on developing understanding. However, when evaluating speech therapy objectively, despite the intensive individual treatment, a spontaneous conversation is difficult to achieve. The conversation should be supported in natural conditions, such as playing at home. It is assumed that the application of speech therapy has more effects at an early age (Mauk, Reber, and Batshaw, 1997).

Traditional speech therapy models are often ineffective and speech therapists are likely to be more successful if they practice with the child in close partnership with teachers and families to encourage functional communication in natural situations during the day. The use of alternative and augmentative communication, including sign language, gestures, and image communication programs, is often beneficial for improving communication (Millar, Light and Schlosser, 2006).

Some nonverbal children with Autism Spectrum Disorders may benefit from voice communication aids. The introduction of augmentative and alternative communication systems in nonverbal children with autism spectrum disorders does not prevent them from learning to speak and there is evidence that they may be more stimulated to learn speech if they already understand symbolic communication (Bondy and Frost, 1994).

Collected studies have shown that when specific motivation is combined with a naturalistic teaching paradigm, dependably influence the effectiveness of speech therapy for children with autism. However, the effectiveness of this approach hasn't been examined yet with respect to improving speech interpretability (Koegen et al., 1998).

MUSIC THERAPY

Music therapy was accepted as a treatment and has begun to be used in England in the 1950s by Juliet Alvin, Paul Nordoff and Clive Robbins. Since 1999, music therapy has become a registered profession in England. Creating music involves a number of basic elements of social interaction, including getting to know yourself and “me in relation to others”. Therefore, the musical aspects of interpersonal adjustment of reciprocity in the other person playing, moving, listening, and responding can be used in music therapy for children with autism to adjust and redirect their frequent idiosyncratic and repulsive behaviors (Brown, 1994).



Figure 6. Music therapy

Music therapy has been shown to develop the ability for anticipation, which is very important for the development of social skills (Figure 6). It has not yet been systematically explored whether the ability to anticipate music sessions can be generalized to other situations. But in addition to improving communication, music therapy allows them to express other abilities, especially their special musical talents. It is possible for children with autism to manifest their talent for music without training, and to play melodies that they have heard only once, with great accuracy. The other children, express their good sense of rhythm and melody and manage to learn to play a musical instrument, with patient learning. Music therapy has a calming effect on many children with autism and it has been shown that singing to some children is more understandable and more acceptable than speech. That is why singing is used as a stimulus for communication (Koen and Bolton, 1995).

In an open-label study of 8 adults with autism, 60 minutes of music therapy during the week, which included singing and playing the piano, has improved autistic symptoms over a 52-week period (Boso et al, 2007).

Another open-label study of 4 children with autism has shown that the use of music therapy improved play skills (Kern and Aldridge, 2006).

In a randomized, controlled study of 15 children with autism, the use of music therapy has led to significant improvements in attention and eye contact compared to playing with toys (Kim, Wigram and Gold, 2008).

In a meta-analysis of 9 studies, the use of music therapy in children with autism spectrum disorders has been examined and significant improvements have been found compared to those who did not undergo music therapy (Whipple, 2004).

The results of another study have shown that music therapy has been superior to placebo in improving the communication skills of children with autism spectrum disorders, but had no significant effect on autistic behavior (Gold, Wigram and Elefant, 2006).

Nicole Allgold has noted that music therapy is recognized as well functioning treatment for children with autism. Her study has examined opinions of parents during a 7-week family-based group music therapy intervention. The data has been conducted as interview sessions with the parents before the therapy and after the intervention for focus group. In conclusion, the parents have reported a positive experience in music therapy and have been able to articulate new techniques about their children and themselves (Allgold, 2005).

HOLDING THERAPY

Holding therapy has been founded by Martha Weltch and today it is implemented in many centers around the world. Parents are required to hug their child firmly and hold it for a long time, even if the child tries to pull away (Figure 7). During the holding, the child gradually calms down, and the parents declare that the child begins to examine their face and establishes better eye contact. Some parents point out that this procedure leads to better social behavior and communication. For example, some extremely aggressive children with autism could tolerate the posture. Others, who had no eye contact, became able to withstand this contact for longer. Holding therapy is also beneficial for parents who say they have begun to feel closer to the child, and some have noticed that the child is showing attachment for the first time. But the negative aspects also need to be considered. One of them is when the child is seen from the side reacting uncomfortably to this forced posture and struggling to move away (Trajkoski, 2011).



Figure 7. Holding Therapy

When some positive interactions begin, holding therapy is in order, the aim is to fulfill the child's need for control in order to allow symmetry in the relationship. This is accomplished by requiring the child to share his rage, fears, hurt, and grief in order to be able to establish trust. Holding therapy is worth doing because it requires faith and unconditional love. Whether or not the goal is reached, according to Anderson, it is well worth the effort (Anderson, 1986).

There is still no evidence that holding therapy cures autism, although such a claim is made by holding therapists. Some aspects of the behavior are changing, but it is far from the fact that understanding the social environment and communication has become normal after the therapy. This is supported by the fact that some children with autism show similar behavioral changes even though they have not had holding therapy. A scientific evaluation for examining the effectiveness of this therapy is needed (Koen and Bolton, 1995).

DAILY LIFE THERAPY

Daily life therapy is found by Kiyoko Kitahara from Japan. In 1964, she founded a school for healthy children in a Tokyo suburb. She named the school Higashi, which in Japanese means east, or the direction where the sun rises, which symbolically represents its educational goals. Children with autism are gradually included in the program and it has expanded to include kindergarten, elementary, high school, and dormitories. This therapy focuses on group activities. Children with autism, under the guidance of qualified teachers, are subjected to intense physical activity, according to a precise schedule, so that the child is not allowed to retreat into his or her autistic loneliness (Figure 8), (Kitahara, 1984).



Figure 8. Daily life therapy

Daily Life Therapy, consist 3 main elements: pursuing a “rhythm of life” and “stabilizing the weak emotions” of the child with autism, with a physical training program; extraction of the child’s “spirit of dependence”, through education in a group; and nurture the child’s intellectual development through continuous repetitions of the same actions (Quill et al, 1989).

It has been reported in the media that this regime enables children with autism to participate more in social activities, but there is still no scientific confirmation of this method. There are certain dangers associated with intense physical exercise for children, especially those with epilepsy, and therefore they are not included in such schools. The positive side of this program is the impressive art programs that are prepared in these schools and the group activities in which many children successfully participate. A similar Higashi school has been opened in Boston in 1987, where the educational program has been transferred to a new culture with a large number of Tokyo staff (Trajkovski, 2011).

The five fundamental principles of daily life therapy are group orientation, highly structured routine activities, instructional techniques aimed at learning through imitation, reducing the unproductive activities of the child through rigorous physical exercises, and a curriculum focused on movement, music, and art (Kitahara, 1984).

BELGRADE INTEGRATIVE METHOD

The Belgrade Integrative Method has been first applied in 1994 at a therapeutic-educational seminar held on Mount Tara. The experience of the Higashi School in Tokyo is used as a basis for this method, and it is based on the collective work and socialization of alienated persons in the social field. It is essential for the child to build a rhythm of life by involving it in a group process, the main part of which is physical exercise and a lot of time spent on the move, exercises at school, picnics in the mountains, going to the pool. The predictability of the rhythm of the day calms the children, channels their energy through doing exercises and productive activity. The greatest achievements are in controlling stereotypes, increasing physical fitness, regulating sleep, etc (Bojanin, Milacic, and Selakovic, 1997).

Learning daily life activities based on the principles of group education and group achievements, through repetition of highly structured tasks and activities and reduction of unproductive activities through physical exercise, while also developing the ability of self-control, behavioral predictability and better attention organization, combined with a development-based program ability of physical, music and art education, forms the basis of Belgrade Integrative Method (Aleksic, 2012).

Every child, especially at a younger age, is determined by its biology and the environmental factors that surround it. The Belgrade integrative method seeks to capture the “personality of the child in a complete existential situation from the absolute point of existence” to the existence of the social environment and the distant horizons of space. Therefore, the creators of this method believe that the second link of the program should be psychomotor reeducation. In doing so, psychomotor reeducation is experienced not only as a method and way of working with children but above all, as a result of a certain philosophical approach to the child. The re-educational method does not teach or educate the child but reorganizes the life experience of the child in himself, his body, to experience the child himself in space, time, and social life (Trajkovski, 2011).

Involvement of an autistic child in psychomotor reeducation exercises (for the purpose of self-knowledge of one’s own existence, the discovery of space, time, and others, through movement, touch, voice, words). Group and individual work with parents, siblings (psychotherapy-oriented conversations, Rogers counseling method). Due to the severity of the disorder and chronicity, it is important to involve parents in counseling work in order to provide support and assistance in crisis situations. Treatment is complex, the approach to family problems is multidisciplinary, and is conducted by appropriate autism services (Aleksic, 2012).

This integrates the individual approach to self-knowledge of movement and body through psychomotor reeducation with the program of daily life therapy, which proves to be interrelated and significantly affects the well-being of the individual in relation to himself and others. This set of activities includes working with parents. The family, as the first place for socialization, remains the most dominant setting for children with autism. It is necessary for the circle of the family to make the ways of communication, and by understanding the mutual relations to realize and branch new forms of connection. This is an attempt to discover a possible whole in the divided world of a child with autism, which is an example and a chance to achieve their own existence (Bojanin, Milacic, and Selakovic, 1997).

OCCUPATIONAL THERAPY

Occupational therapy is a treatment that prepares the child with autism to function in the daily activities and engagements that make up an individual’s life. It helps them to develop the skills to take care of themselves, work, play,

go to school, social interact and develop skills for independent living. This type of therapy can help children with autism to learn, play, develop social skills and everything they need to fit in. It is performed by university-educated therapists or specialists called occupational therapists (Figure 9). In their work, the occupational therapist uses a number of known therapeutic methods that depend on the special needs of the child with autism. This type of treatment for children with autism is widely used in Canada (Canadian Association of Occupational Therapists, 2002).



Figure 9. Occupational Therapy

Occupational therapy is well integrated with the conceptual basis of the interventions for Autism Spectrum Disorders, that have been examined and have evidenced effectiveness. Participation in autism researches should be a priority for the occupational therapists that work with children with Autism spectrum disorders, with an accent on the researchers that should increase their contribution to this positive stimulus (Case-Smith and Arbesman, 2008).

SENSORY INTEGRATION THERAPY

The theory of sensory integration has been originally modeled by an occupational therapist and researcher Jean Ayres. In the United States and Canada, many occupational therapists use the principles of sensory integration, although, in order to use it, special training and certification from the International Organization for Sensory Integration are required. Sensory integration is based on the idea that people with motor and sensory problems have difficulty processing the information their body receives through different types of senses (Figure 10). Children with autism are often either hypersensitive or not sensitive to light, sound, or touch. These disorders in sensory processing can be treated with specific sensory activities such as rocking, jumping, brushing, massage, balance exercises, water aerobics, etc. (Dawson and Watling, 2000).



Figure 10. Sensory Integration

Before starting the sensory integration treatment, the therapist assesses the child's senses according to standardized tests and then prescribes sensory therapy for which he trains the parents to implement it at a certain time of the day at home. Sensory integration has been shown to be effective in improving the sensory processing capabilities of information in the brain in many children with autism, intellectual disability, cerebral palsy, and other disorders such as learning disabilities, communication problems, hyperactivity, and motoric skills problems (Trajkovski, 2011).

The research of Pfeiffer and her colleagues showed preliminary support for using Sensory Integration for children with Autism Spectrum Disorders, still, they believe that further research is necessary. The results of their study detected significant progress concerning the individualized aims and decrease in autistic affectedness after Sensory Integration interventions, still, no significant changes have been found on the other measures (Pfeiffer et al, 2011).

Although the treatment of sensory integration is practiced for a long time, it has not yet undergone rigorous research because it is practiced individually. The caused pleasure for the child cannot be measured, if and how it affects changes in the brain. If changes occur, then they need to be monitored over a longer period of time in order to be measured and compared with a control group (Maurice, Green, and Luce, 1996).

AUDITORY INTEGRATION TRAINING

French physician Guy Bernard was the first to publish a theory of autism behavioral disorders that resulted from impaired sound sensitivity in the early 1980s (Figure 11). Using the "TOMATIS" invention, he built the first auditory integration training that was the basis for the experiments that followed to discover the most appropriate duration and intensity of treatment (Berard, 1997).

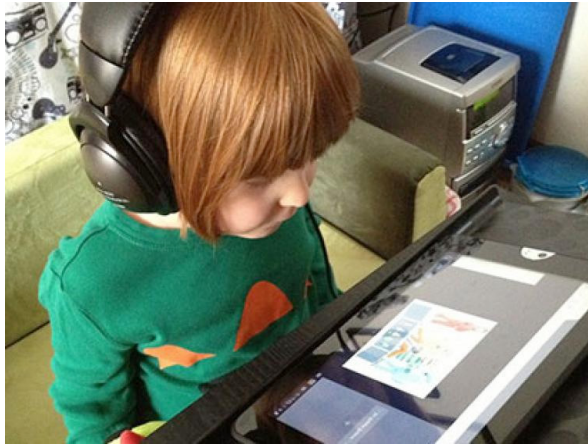


Figure 11. Auditory Integration Training

The first publication on Auditory Integrative Training was published in 1991 by Annabel Stehl “The Sound of a Miracle”, where she described how her daughter with autism responded to this treatment and the results she achieved with this method. This method consists of a number of electrical components that include a number of auditory filters that allow the modification of sounds and its adaptation to the child with autism, according to its auditory sensitivity and deficiency that is previously checked with an audiogram (Trajkovski, 2011).

It is estimated that up to 40% of children with autism have some degree of hypersensitivity to sounds. In a three-month double-blind controlled study of 17 children with autism, those who underwent auditory integrative training had significant improvements in irritability, stereotypes, hyperactivity, and expressive speech, compared with a control group listening to the same music but without filters (Rimland and Edelson, 1995).

According to Sinha et al. the children with autism have experience with abnormal responses to sounds, as well as problems with social interaction, behavior, and communication. The purpose of their research has been to assess the evidence for the relevance of auditory integration therapy. Only 7 relatively small studies have met their criteria for review. Benefits for participants who have received auditory integration therapy have been reported in only two studies, with 35 participants, for two outcomes. A study of Tomatis therapy didn't evaluate the outcomes in behaviors and didn't show any language development differences between intervention and control groups. As aforesaid, there isn't enough evidence for supporting the use of auditory integration therapy, at this time (Sinha et al, 2011).

BEHAVIOR THERAPY

Behavior programs, formed by psychiatrists and psychologists in consultation with parents and teachers, are procedures that form adaptive behavior and reduce

inappropriate behavior. Behavior is first analyzed by looking for the causes and consequences of certain actions of the child with autism, and then the behavioral program is applied (Figure 12). The aim is to identify the factors that reward or encourage unwanted behavior, as well as those that eliminate unwanted behavior. Rewards should be chosen so that the child really appreciates them, and they should be given clearly and consistently. According to modern behavior programs, children are not punished for misbehavior because the punishments are not ethically acceptable. Instead, misbehavior should be reduced by removing the factors that caused it and replaced it with positive behavior (Trajkovski, 2011).

When elements of positive behavior begin to emerge, new techniques are used to reinforce and fine model the behavior. Behavioral therapy is useful for reducing problems such as self-harm (hitting the head, biting the hands), hyperactivity, aggression, and anger attacks. It is also useful for improving self-care abilities (dressing, washing, etc.). Successfully applied to improve the quality and quantity of speech. Unfortunately, despite all these advantages, behavioral therapy has not been successful in removing abnormalities in social behavior, communication, and imagination, as they do not depend solely on simple patterns of behavior (e.g., eye contact) that may increase or reduce (Koen and Bolton, 1995).



Figure 12. Behavior Therapy

Behavioral approaches have been used in special education and rehabilitation for decades and are most commonly recognized in Applied Behavioral Analysis (ABA). These approaches start very early (ideal starting time is before 42 months), and significant successes from their application in the treatment of children with autism have already been confirmed (Bengt and Bengt, 2004).

CONCLUSION

There are many programs, therapies, and methods that can help intervene in reducing the most common autism symptoms. Most of the therapies improve communication skills, socialization skills, and eye contact for children with autism. The positive outcome from the therapies shows that autism treatment needs a different approach in the education system, too.

Unfortunately, the practices in many countries show that children with autism are treated with the same educational programs as children with intellectual disabilities. In Special schools and pre-school Institutions, the programs are not adjusted to the needs of the child with autism and they often attend classes which are not according to their abilities. Even the Special Education and Rehabilitation centers are offering programs almost the same as for children with intellectual disabilities.

Autism needs an individual approach and intensive work corresponded to the abilities of every child. Special Educators and other professionals should be able to recognize the child's potential and be able to implement the most appropriate program linked with their previous assessment.

The education process of children with autism should be focused on socialization and communication problems. Perhaps, speech therapy in a combination with behavioral therapy can be the ideal choice for them.

As most important, some of the programs that proved to be beneficial during the education and treatment of children with autism should be implemented in the Special schools and Rehabilitation Centers.

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Chapter 10

WORKING ALLIANCE IN COUNSELING AND PRELIMINARY EVIDENCE FOR VALIDITY OF TURKISH WORKING ALLIANCE INVENTORY-SHORT FORM FOR COUNSELORS

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Introduction

The therapeutic relationship or therapeutic alliance is an important variable that is created jointly between the client and the counselor, which can neither be attributed to the client alone nor to the counselor alone (Hill & Lambert, 2004). In recent years, research has evidenced that the quality of the relationship between the counselor and the client is important to the counseling outcomes (Beutler & diğ., 2004; Clarkin & Levy, 2004; Horvath & Symonds, 1991)

The relationship between the counselor and the client has always been the focus of attention during counseling. With his explanations on transference, Freud (1912; cited in Horvath, 1994) emphasized that the relationship between the therapist and the patient is extremely important.

Moreover, he used the interpretation of the transference relationship between the therapist and the client as one of the techniques that bring about change in therapy Freud (1912; cited in Horvath, 1994). Besides Freud's work, Rogers (1957/1992) was another name that drew attention to the quality of the relationship between the counselor and the client.

Rogers (1957/1992) suggested that the quality of the therapeutic relationship between the client and the counselor was the only necessary and sufficient condition that creates change in the client, and he began to conduct empirical studies on this subject and brought the therapeutic relationship to the focus of research in the field of counseling and psychotherapy.

Since the beginning of psychological counseling process and outcome research, it is known that therapeutic relationship or working alliance is the most noteworthy process variable (Orlinsky et al., 2004).

There is a widespread consensus in the field that the psychoanalytic theory and the concept of transference are the starting point for the emergence of the therapeutic relationship or therapeutic alliance (Bordin, 1994; Constantino, Castonguay & Schut, 2002; Horvath, 1994).

After Freud's (1913/1958; cited in Constantino et al., 2002) studies on transference, Stelba (1934; cited in Constantino et al., 2002) introduced the concept "ego alliance" which corresponded to the therapist-client relationship. Stelba (1934; cited in Constantino et al., 2002) argued that the success of therapy depends to some extent on the client's ability to work in alliance with the therapist's perspective and the maturation of the client's ego function.

Later, Zetzel (1956; cited in Constantino et al., 2002) first used the concept of "therapeutic alliance" and proposed that the client re-establishes the positive and secure relationship in the mother-child relationship through the identification and bond he establishes with the therapist. Greenson (1965; cited in Constantino et al., 2002), on the other hand, was the first psychodynamically oriented therapist to distinguish between transference and therapeutic alliance Greenson (1965; cited in Constantino et al., 2002), used the concept of "working alliance" for the

first time and defined working alliance as the ability of the client to cooperate correspondingly with the therapist on personal issues, regardless of whether or not he developed a transference relationship.

Rogers (1957/1992) was the first theorist to deal with the importance of therapeutic relationship or working alliance in counseling and psychotherapy independent from a psychodynamic perspective. Rogers (1957/1992) bounded the necessary and sufficient conditions for positive therapeutic change in counseling with the quality of the therapeutic relationship between the client and the counselor.

Rogers (1957/1992) stated that in order to create a positive change in the counseling process he stated that 6 conditions should exist in counseling (a) establishing a relationship with the client (b) the presence of a client who is inconsistent (c) the presence of a counselor who is being transparent and sincere (d) a counselor who experiences an unconditional positive respect for the client and (e) counselor who is empathizing with the client, and (f) presence of client's experience counselor's empathy and unconditional respect. Rogers's (1957/1992) efforts to empirically test the therapeutic relationship factor, which he described as necessary and sufficient for change, encouraged other researchers focus on the therapeutic relationship.

Another factor that promoted the research on the therapeutic relationship was the fact that no counseling or psychotherapy approach was found to be greatly more effective than another since the beginning of counseling outcome research (Lambert & Ogles, 2004). Although counseling theories and approaches have their own theoretical foundations and techniques, the lack of empirical evidence that one approach is far more effective than the other has led researchers to investigate the existence of some common factors that contributed the effectiveness in each.

Another important study in therapeutic relationship field was the work of Bordin (1979; cited in Bordin, 1994), who defines the therapeutic relationship as a pantheoretical concept by defining "therapeutic working alliance". Bordin's (1994) definition separated the concept of working alliance from psychodynamic and Rogerian perspectives and made it a concept that different theoretical approaches can use commonly.

Bordin (1994) defined working alliance as a concept that included the agreement in goals in counseling, what needs to be done to achieve these goals, and the establishment of a relationship that will promote this work between the client and the counselor.

Bordin's (1994) definition included three basic elements of working alliance. These elements are named as (a) goals, (b) tasks, and (c) bond between the counselor and the client (Bordin, 1994). The "goals" in working alliance was defined as the counseling and the client having a consensus about what the client should change in counseling (Bordin, 1994).

The “task” in working alliance was defined as the counselor and the client’s having a common understanding of how the work would be done in the counseling process in correspondance with goals (Bordin, 1994). The “relationship” dimension of working alliance includes the counselor and the client’s having positive attitude for each other, respecting each other, feeling a common bond and sharing a common understanding of what happens in the process (Bordin, 1994). Bordin (1994) stated that these three dimensions should work in accordance with each other in establishing a working alliance.

Horvath and Greenberg (1989) developed working alliance inventory based on Bordin’s (1979; cited in Bordin, 1994) definition of working alliance including goals, tasks, and relationship dimensions, hence made Bordin’s definition of working alliance measurable. As working alliance concept became a measurable variable, research on its effects in the counseling process has increased rapidly.

Horvath and Symonds (1991), Beutler et al. (2004) and Horvath, Del Re, Flückiger, and Symonds (2011) found the effect size of working alliance on counseling outcome as .26, .22 and .28, respectively, in their meta-analyses. As a result, studies in the literature consistently point to the same finding: there is a consistent and moderate relationship between working alliance and effective counseling / therapy processes .

In other words, working alliance explains a variance varying between 20% and 30% on the counseling outcome. Although this explanation rate seems to be at a moderate level, as Horvath (1994) stated, besides the methods and techniques used in the counseling process, the variance explained by the working alliance is quite important in the therapeutic change in which many variables related to the counselor and the client are involved. As a matter of fact, Norcross and Lambert (2011) found the variance explained by the therapeutic relationship as 12%, and the variance explained by counseling interventions as 8%, as a result of their meta-analysis on the factors that explains the effectiveness of counseling and psychotherapies. This finding seems important in terms of showing that the role of the therapeutic relationship on change is more than the intervention and methods.

In summary, the importance of the therapeutic relationship and working alliance in for an effective counseling process has become a widely accepted fact today (Beutler et al., 2004). Now, many variables related to workin alliance are being investigated for the client (e.g. Marmar, Weiss & Gaston, 1989; cited in Constantino & et al., 2002) and the counselor (eg Luborsky, 1994) and the search for evidence-based explanations to establish working alliance continues. Although it can be said that there is a growing interest in working alliance concept and how it works in the counseling process in recent years, it can be said that the number of studies on this subject in Turkey is quite limited.

Soygüt and Işıklı (2008) attempted to adapt a Horvath’s working alliance inventory to Turkish for clinicians. They conducted their adaptation study on

a very limited sample ($n=63$) and introduces some evidence for validity and reliability of Turkish form of Working Alliance Inventory (TWAI). Besides they used “therapist” word for defining the mental health professional instead of counselor. Again, Gülüm, Uluç. And Soygüt (2018) attempted to adapt the short-form of TWAI for clinical psychologists. They covered data from 83 patients for validity and reliability study and again aimed to obtain a working alliance inventory for clinicians and patients with a limited sample. In this context, it is clear that there is a need for a valid and reliable measurement tool that measures working in Turkish for counseling professionals and for non-clinical, large samples. Within the scope of this study, it was aimed to present the findings regarding the Turkish adaptation and construct validity of the short form of the Working Alliance Inventory (TWAI-S) which was adapted by Tracey and Kokotovic (1989) based on Horvath and Greenberg’s original scale.

Method

Participants

In order to determine the factor structure of TWAI-S and reliability coefficients, the clients who received assistance from the counselor trainees within the scope of the individual counseling practice course in the guidance and psychological counseling undergraduate programs of five different middle-sized and large-sized universities were selected as participants. After assuring informed consent of clients, data set included 283 clients and 208 (73.5%) of the clients were females and 75 (26.5%) were males. Their ages ranged between 18 and 29 ($X = 22.18$, $SD = 2.12$).

Instruments

The original form of Working Alliance Inventory (WAI- Horvath & Greenberg, 1989) is a scale developed to measure the therapeutic working alliance between the counselor and the client. There are two separate forms for measuring working alliance from the client’s and the counselor’s perspective, with the same items and structure. WAI consists of three subscales each includes 12 items. These subscales are named (a) goals, (b) tasks, and (c) bond., Horvath and Greenberg found the internal consistency coefficients of WAI as .93 for the client form and .87 for the counselor form. In addition, the internal consistency coefficients of the subscales were found between .85 and .88 for the client and .68 and .87 for the counselor form.

Tracey and Kokotovic (1989) conducted confirmatory factor analysis in order to confirm the factor structure of the Working Alliance Inventory by Horvath & Greenberg (1989), and revealed that the inventory can measure the validity of three different dimensions and a common and general study fit at the second level. In addition, as a result of the confirmatory factor analysis, they formed the short form of the scale with 12 items, and they showed in their studies that this 12-item form was equivalent to the 36-item long form. The high

scores from the TCUE indicate positive therapeutic study compliance; The high scores obtained from the subscales indicate the harmony of the psychological counselor and the client in terms of goals, tasks and relationship issues. In this study, it was aimed to adapt the short version of the client form as Tracey and Kokotovic obtained.

Procedure

Language Adaptation Process of Turkish Working Alliance Inventory Short Form

In order to follow the steps that were taken by Tracey and Kokotovic (1989), the translation of the items were made by the researcher on the original 36-item form (Horvath & Greenberg, 1989) in order to create the Turkish form of the Working Alliance Inventory. Then the Turkish form was given to five experts who have at least doctorate degree in the field of counseling and guidance and who had proficiency in English. Discrepancies were solved by researcher. Final version was formed accordingly.

Final version was distributed to counselor trainees of five different middle-sized and large-sized universities. Instructors of individual counseling practicum courses of undergraduate counselor education programs gave instruments to counselor trainees so that they administer it to their clients. Instruments were administered in an enclosed envelope so that the privacy issues were handled. Moreover their informed consent was assured by informing them about the research and their voluntary participation.

Results

In this study, the steps that were taken in the study of Tracey and Kokotovic (1989) was followed in order to verify the factor structure of the TWAI-S. The univariate and multivariate outliers were deleted and normal distribution of the data was assured. First of all, a confirmatory factor analysis performed on the 36-item form and it was observed that the confirmatory factor analysis results regarding the factor structure of the scale did not give acceptable fit values.

Based on the confirmatory factor analysis conducted by Tracey and Kokotovic (1989), confirmatory factor analysis was repeated for Turkish form including 12 items as Tracey and Kokotovic found in their study. In their study they confirmed a 12-item short form which consisted of three subscales (goals, tasks, bond) and 4 items in each. They also confirmed the of a second-order factor by which these three dimensions together measure a general working alliance. However, they reported that the fit values did not exceed acceptable fit values at best.

They interpreted this situation as an expected result based on the complexity of the concept of working alliance. At this stage, it was aimed to obtain the

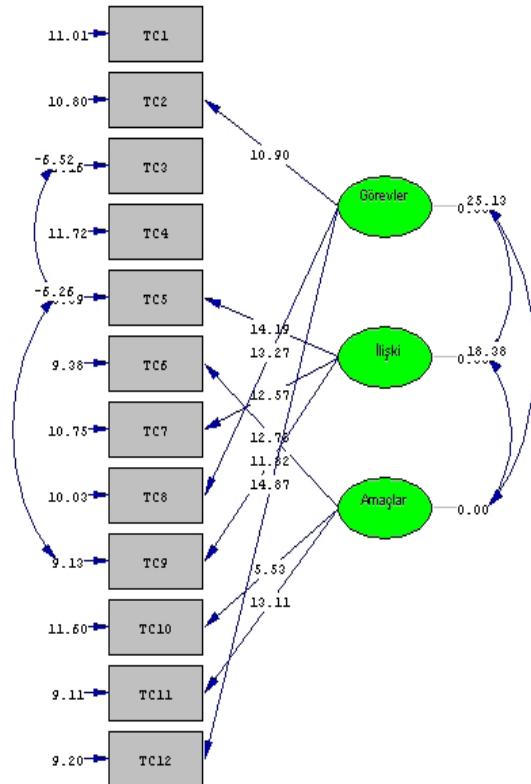
equivalent of the short form in Tracey and Kokotovic's work. For this purpose, first-level factor structure of the scale including tasks, relationship and goals sub-dimensions was examined. As a result of the confirmatory factor analysis, the Chi-Square value for the measurement model including the first level was found to be significant, $\chi^2 = 122.86$, $df=52$, $p<.01$.

When the ratio of Chi-square value and degree of freedom is examined, it is seen that it is below 3 and this indicates an acceptable fit value (Schermelles-Engel, Moosbrugger, & Müller, 2003). Looking at the fit indices of the measurement model, GFI value was .93, AGFI value was .90, CFI value was .94 and RMSEA value was found as .070.

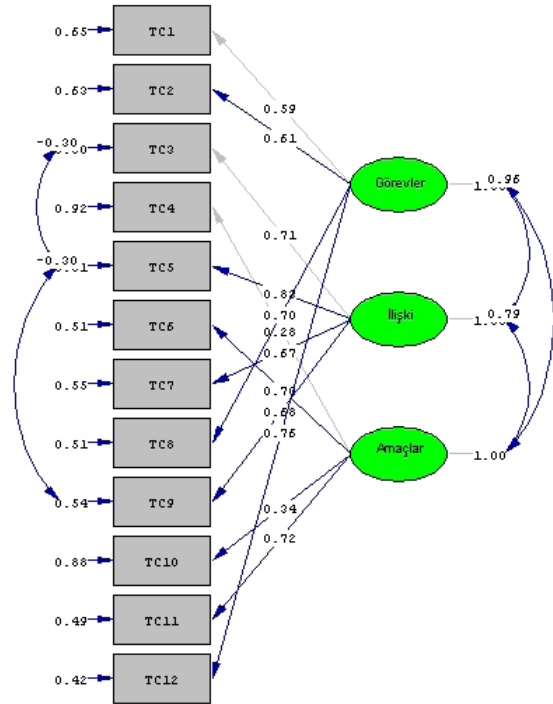
These fit values indicate that the measurement model, which includes the first level tasks, relationship and goals sub-dimensions for the TWAI-S, is an acceptable model (Schermelles-Engel et al., 2003; Şimşek, 2007).

In addition, the t values of all items were found to be significant (Figure 1) and the path diagram containing the standard values of the confirmatory factor analysis is given in Figure 2.

Figure 1 Item factor loadings and t values of TWAI-S



Chi-Square=122.86, df=52, P-value=0.00000, RMSEA=0.070



Chi-Square=122.86, df=52, P-value=0.00000, RMSEA=0.070

Figure 2 Path diagram of first-order confirmatory factor analysis of TWAI-S

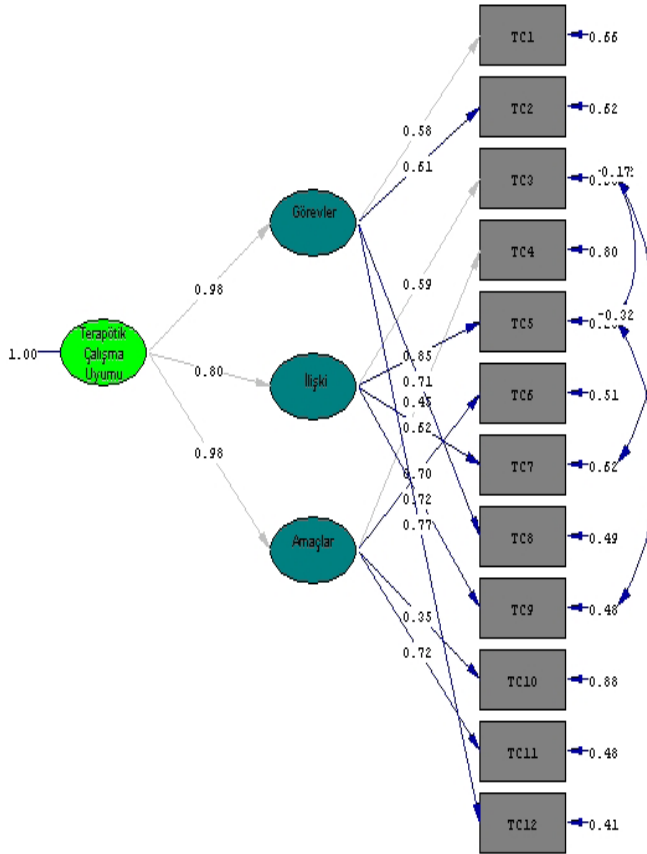
Another confirmatory factor analysis was conducted to examine whether the scale has a structure that measures tasks, relationships, and goals sub-dimensions, as well as a second-order general working alliance. As a result of the confirmatory factor analysis at the second level, chi square of the model was found as significant $\chi^2 = 128.22$, $df=50$, $p < .01$.

When the ratio of Chi-square value and degree of freedom is examined, it was less than 3 and this indicates an acceptable fit value (Schermelles-Engel et al., 2003).

Fit indices of the second-order measurement model were .94 for GFI, .89 for AGFI, .94 for CFI and the RMSEA value was found to be .074. These fit values showed that the measurement model, which measures the tasks, relationships and goals dimensions at the first-order and a general working alliance at the second-order is an acceptable model for the TWAI-S (Schermelles-Engel et al., 2003; Şimşek, 2007)

The first-order and second order and the second-order model were compared, and it was found that the fit level of the second-order model was not statistically significant from the first-order model. Therefore, the second-order

solution, which is theoretically significant and previously reported by Tracey and Kokotovic (1989), was accepted. The path diagram containing the standard values of the confirmatory factor analysis is given in Figure 3.



Chi-Square=128.22, df=50, P-value=0.00000, RMSEA=0.074

Figure 3 Path Diagram for second-order confirmatory factor analysis of TWAI-S

Confirmatory factor analysis confirmed that TWAI-S measures a general working alliance, has three sub-dimensions, namely tasks, relationship and goals, and has a second-order factorial structure. Within the scope of TWAI-S, items 1, 2, 8 and 12 belonged to “Tasks” sub-scale, items 3, 5, 7 and 9 were placed under the “bond” sub-scale and the items 4, 6, 10 and 11 belonged to the “Goals” sub-scale.

Tasks sub-scale included items related to the work done in counseling such as “We agree on what is important to work on (item 8)” and “I believe the way we are working with my problems is correct (item 12)”. The “bond” sub-scale included items such as “I feel that my counselor appreciates me (item 7)” and “My counselor and I trust one another (item 9)” that focus on the relationship between the counselor and the client. Finally, the “Goals” sub-scale is related to

the purpose of the counseling process and included items such as “My counselor and I have different ideas on what my problems are (item 10)” and “We have established a good of the kind of changes that would be good for me (item 11)”.

The internal consistency of TWAI-S and its sub-scales was calculated by Cronbach’s Alpha coefficient. The internal consistency of the total scale was .86 and item-total test correlations of 12 items .27 and .65. The Cronbach Alpha coefficient for the “Tasks” sub-scale was .78; item-total test correlations for the four items in the Tasks sub-scale ranged from .55 to .64. The Cronbach’s Alpha value was calculated as .76 of the “Bond” sub-scale and the item-total test correlations of the items of the Bond sub-scale were found between .46 and .70. When the internal consistency of the “Goals” sub-dimension was examined, Cronbach’s Alpha value was .57, and the item total test correlations were between .25 and .48 for the four items of this sub-scale. Considering the low number of items and when the sufficient item total test correlations were examined (Nunnally & Berstein, 1994), although the internal consistency of the goals subscale was relatively low, there was no item to be excluded from the scale. These values indicated that the TWAI-S has sufficient internal consistency features.

The “Mc Donald’s Omega (ω)” coefficient, which is calculated based on the results of the confirmatory factor analysis and called as structural reliability (Nunnally & Berstein, 1994), were also calculated for the sub-scales. The omega coefficients were .74, .79 and .51 for “Tasks”, “Bond” and “Goals” sub-scales, respectively; Omega coefficient was found as .86 for the total scale.

The factor loadings (λ_i), R^2 values of the items and Cronbach’s Alpha and McDonald’s Omega values of the scale and sub-scales for TWAI- S were given in Table 3. When Table 3 is examined, it is seen that the R^2 values of the 4th and 10th items under the “Objectives” sub-dimension are relatively low. However, considering the general fit of the model and the contribution of these items to the internal consistency of the subscale to which they belong, their contribution to the overall internal consistency of the scale, and the high factor loadings, the integrity of the scale was not dissolved and these items were not removed from the scale.

Table 1 Factor loadings, R^2 , Cronbach’s Alpha and Mc Donald’s Omega values of TWAI-S

Factor	Item	λ_i	R^2	α	ω
	1	.59	.29		
	2	.61	.35		
Tasks	8	.70	.51	.78	.74
	12	.75	.56		

	3	.71	.38		
	5	.82	.69		
Bond	7	.67	.43	.76	.79
	9	.68	.46		
	4	.28	.04		
	6	.70	.43		
Goals	10	.34	.11	.57	.51
	11	.72	.49		

Discussion

In conclusion, TWAI-S measures a general working alliance, as well as includes sub-scales that will measure “Tasks”, “Bond” and “Goals” dimensions of the working alliance. Results provided sufficient values for the psychometric properties of these dimensions.. In scoring the scale, items 4 and 10 are scored in reverse. The scores that can be obtained for the whole scale range from 12 to 84, while the scores for the subscales range from 4 to 28. While the high scores on the whole scale indicate a high level working alliance, the high scores on the sub-scales indicates a high level of alliance on (a) tasks, (b) bond, and (c) goals.

It is known that there is a consistent and moderate relationship between working alliance and the effectiveness of the counseling process (Horvath & Symonds, 1991; Orlinsky et al., 2004). Therefore, the findings regarding what counselors could do or what kind of conditions they could control in order to develop a better working alliance with the clients are important. In addition, it may be very important for the practitioners to determine that if their working alliance with their clients is at a sufficient level in monitoring the effectiveness of their service.

It is possible to say that studies examining the counseling process in our country are limited. In this respect, it is crucial to have a scale that can be used to explain how the therapeutic relationship working alliance between the counselor and the client develop. In particular, considering their reflections on the field of counseling training, as Sexton and Whiston (1991) emphasized, it is necessary to make use of the findings of counseling process and outcome research in counselor education, to examine the counseling skills of the counselor candidates and to identify the behaviors that negatively affect the outcome of the counseling. In this context working alliance inventory provide evidence-based information on examining the working alliance and related factors established by counselors and counselor trainees in Turkish.

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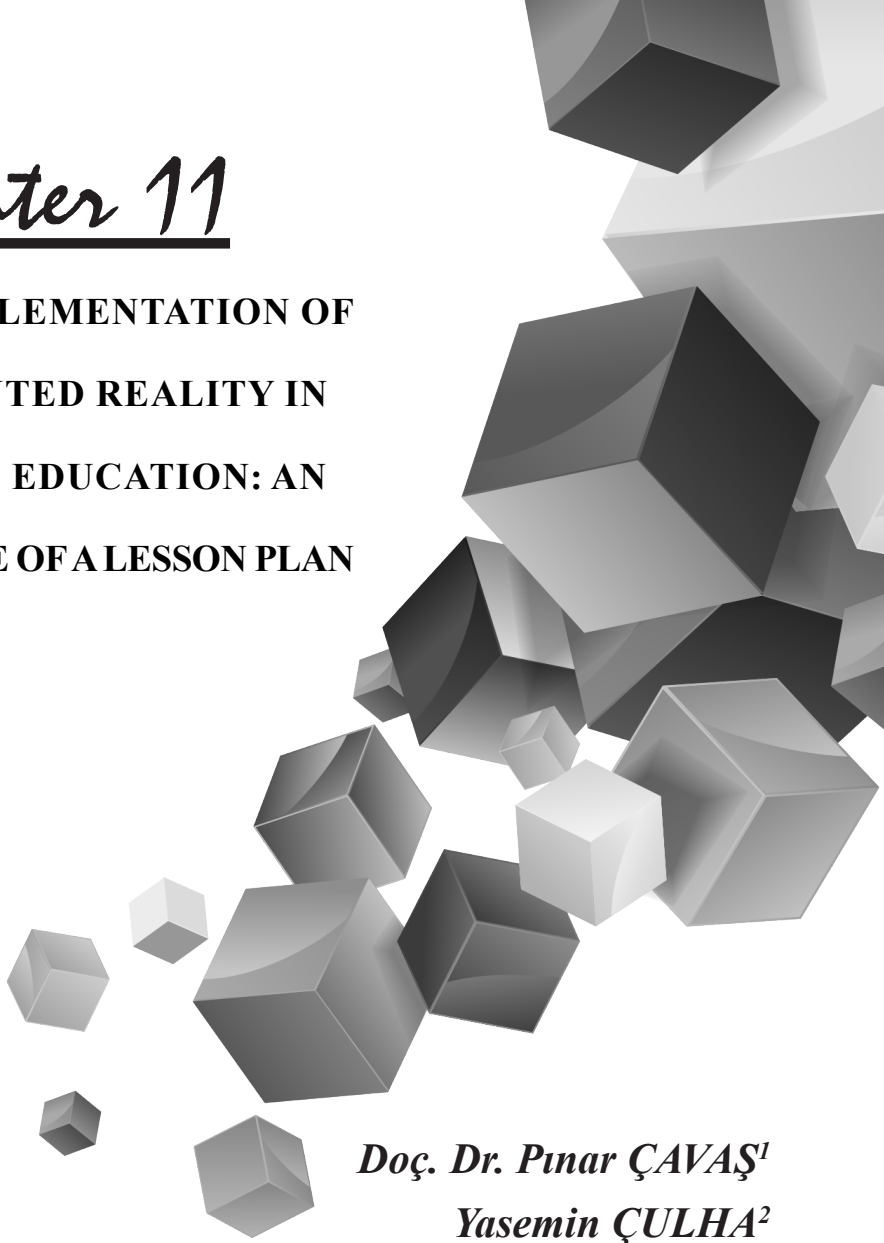
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Chapter 11

THE IMPLEMENTATION OF AUGMENTED REALITY IN SCIENCE EDUCATION: AN EXAMPLE OF A LESSON PLAN



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Introduction

Today, the development of internet, computer and mobile technologies has made it easier for people to access information. Developing technology has brought new educational opportunities with it. Accordingly, traditional methods were insufficient in the education of Generation Z individuals who were born into the digital age and required the use of new education-training technologies. Equipping learning environments with rich stimulants, active participation of the student in the lesson, and concretizing the subject or concepts make the knowledge permanent. At this point, Augmented Reality (AR) applications have been developed for the student to achieve quality and efficient learning.

According to Küçük (2015), as being the one of the new generation technologies, AR is a development that combines reality and virtual environment that creates remarkable, versatile, stimulating and impressive learning environments. Because of these practices, the opportunity to learn by doing-experiencing events, concepts or experiments that teachers or students do not have the opportunity to experience for various reasons is offered. It creates a concrete learning environment by presenting events, topics or concepts in real time and three dimensions. By enriching the objects or places in the real world with virtual elements, it attracts the attention of the students and provides an advantage in terms of shortening the motivation time for the lesson.

Augmented Reality (AR) is the technological systems that enable the simultaneous interaction of virtual objects (pictures, music, video, 3D objects and animations) created in the digital environment by adding them to the real existing environments. In order to use AR technologies, there is a need for software and smart devices that can detect this software (imagers that can be used manually on the real environment or images with head-mounted imagers (HMD), etc.). With softwares and smart devices that enable us to use them, individuals have experienced different experiences with the enrichment of actually existing objects or environments with virtual items. In this way, users interact with the objects that are virtual but also giving a feeling of reality (Kuzgun, 2019).

Along with the AR technology, Virtual Reality (VR) technology should also be mentioned. Although they have similar or even the same elements, they have important nuances. In both AR and VR technologies, there are simultaneous interaction, virtual objects and visual equipment created in digital environment. However, while users experience the real world environment enriched with virtual elements in AR technology, the environment in VR technologies and every content added to the environment is completely virtual.

Events, situations or concepts are embodied by enabling the interaction of the contents (pictures, music, video, animation, 3D objects) produced virtually with AR technologies with real world environments. Due to this simultaneous interaction, the visual experience of the users is increased by creating reality environments.

When we look at the history of AR, the years of 1950s are important. A simulator was developed in 1957 by a cinematographer named Morton Leonard Heiling. This device, called “Sensorama”, appeals to the five senses of the users. The simulator offers users the opportunity to experience a combination of three-dimensional visuals, stereo sounds, aroma scents, wind effect and vibration (Sung, 2011).



Figure 1. The first VR device “Sensorama” invented by Morton L. Heilig (Mortonheilig, 2019).

The invention of Sensorama was followed by the head mounted display designed by Bob Sproull in 1966. With the use of the head mounted display (HMD) designed by two researchers working at Boeing aviation company in 1992, the concept of AR emerged clearly. Over time, the development of AR technologies has accelerated. The development of computers, internet, mobile technologies and wireless networks have an important role in this progress. At this point, HoloLens was designed with the cooperation of Microsoft and NASA. With this designed HoloLens, Augmented Reality has been taken to an advanced level, and wide and advanced features have been revealed.

AR technologies developed from the 1950s to the present are used in many areas such as education, health, culture and arts, tourism, advertising, military, maintenance and repair, architecture and home decoration.

What is Augmented Reality in Education? The Usage of Augmented Technology

Augmented Reality (AR) technologies, which started with the invention of the device called “Sensorama” by Morton Leonard Heiling in 1957, is a technology that has been developing and still developing until today. The inclusion of Generation Z and the gradually Generation Alpha in education accelerates the effective use of this technology in the education sector.

In AR technologies developed for educational environments, multimedia materials such as two-dimensional or three-dimensional animation, three-dimensional object, picture, sound and video are used according to the purpose of the education (Wei et al. 2015). In this way, students’ interest and motivation to the lesson increase and students take an active role in the learning process. With the help of the AR technologies, the complex structures that need to be visualized in student’ mind are made three-dimensional and concretized and the content is made more understandable.

There are many studies in the literature on the use of AR technology in educational environments. In this section, some examples of Augmented Reality technologies integrated with education and its effects on students will be explained.

In the Guanda Nature Park in Taiwan, an elementary school teacher carried out Natural Sciences education in the open field with his students. This learning was done with the Augmented Reality system created by using radio frequency identification (RFID) technology. As a result of the analysis made after the lesson, it was revealed that there are important developments in the learning of students.

The MagAR device was developed by Abdüsselam (2014) according to a research-based learning approach that can show the direction and intensity of the magnetic field. In this study, the group in which the Augmented Reality environment was applied, the group in which the classroom environment was applied and the group in which the laboratory environment was used were compared. At the end of the study, it was determined that augmented reality environments and laboratory environments had positive progress on student achievement.



It is also seen in the studies that Augmented Reality libraries have been created. The most common of these libraries is the ARToolKit library developed

by Hirokazu Kato. Using this library, Augmented Reality book named “The Magic Book” was developed by Billinghursts (2002). With this developed book, markers were placed on the pages of a story book, and the figures in the story were viewed in three dimensions by holding a handheld demonstrator.



Figure 2. Reality and AR states of “Magic Book” application (Billinghurst, 2002)

Kul (2019) conducted a master thesis aimed to reveal the effect of a science course supported by AR applications on the academic achievement of middle school students, their motivation towards the science lesson, their attitudes towards AR applications and their motivation towards the materials used. As a result of the study, AR applications increase the academic success of students and has a positive effect on their motivation.



Figure 3. An example of BuildAR Application (Kul, 2019)

A 3D live anatomy book was developed with augmented reality by Patirupanusara (2012). It was observed that the augmented reality-based teaching was more effective on students compared to the traditional teaching with this book.

Küçük (2015) conducted a thesis study with the 2nd year students of the Faculty of Medicine. In this thesis, students were divided into two groups as experimental and control groups. In the research, the subject of Anatomy Lesson Neuroanatomy was chosen because of its intensive and difficult to understand content. Mobile Augmented Reality (MAG) book has been developed to be

used in the study. The application was carried out as five lesson hours in the classroom and the time spent by the students outside of the classroom with the Augmented Reality book. At the end of the study, a significant difference was observed between the two groups. It was determined that the experimental group who used the AR system was more successful than the control group in terms of academic achievement and cognitive load. The students stated that they found the Augmented Reality technology is interesting and it arouse a feeling of reality.

All these studies show that the use of AR technologies in education has a positive effect on students and that the subjects are handled effectively and efficiently. When the content of the studies is examined, it is seen that the effect on students' motivation, attitude and success is examined. Considering the research and studies conducted both in Turkey and abroad, it has been determined that there is very little work for primary school students. It is seen that most of the studies are applied to students at secondary school and university level.

It has been observed that the number of AR studies in educational environment has increased after 2010. Between 2001, Taiwan worked more on AR applications, and among the countries where these studies were published, Taiwan ranks first, while Spain and America follow Taiwan with these studies.

Considering the intended purpose of these applications, it is seen that they focus on providing and reinforcing learning, that is, they help the cognitive acquisition and learning process. AR technologies, which are used in education as well as in many other fields, are mostly preferred in teaching subjects in science and engineering. The educational area where these applications are used the least is tourism and entertainment.

When analyzing the learning approaches on which AR applications are based in the educational environment, game-based learning and mobile learning come into prominence. In addition, subjects are presented with place-based learning, problem-based learning, simulation and collaborative learning approaches.

The Advantages of Using Augmented Reality in Teaching and Learning

Research related to the integration of Augmented Reality technologies into education showed that these systems are effective and efficient and provide many advantages to both students and teachers. Advantages of using Augmented Reality technologies for teaching and learning are listed below:

- ❖ Increases students' interest and motivation.
- ❖ It enables the student to develop a positive attitude towards the lesson.
- ❖ It makes the student active in the learning process.
- ❖ It makes learning enjoyable.
- ❖ It concretizes the content by visualizing the structures that are difficult to visualize in the real world environment and mind.

- ❖ Makes complex issues more understandable.
- ❖ Presents the information visually.
- ❖ It enables the contents to be examined from different angles by making them 3-dimensional.
- ❖ It gives instant feedback to the student thanks to its real-time interaction. It provides the opportunity to control the learning processes of students.
- ❖ Increases students' academic success.
- ❖ It makes a positive contribution to permanent learning.
- ❖ It makes it easier to conduct dangerous and difficult experiments in the classroom and to examine small objects to observe.
- ❖ It enables students to develop different perspectives on topics.
- ❖ It offers students the opportunity to learn wherever and whenever they want.
- ❖ It contributes positively to the development of spatial abilities.
- ❖ It significantly reduces students' misconceptions.
- ❖ Develops students' critical thinking and problem solving skills.

While the use of AR technologies in the field of education provides many advantages to educators and students, it also reveals some difficulties. The most important of these is content development. Good technical knowledge and skills are required to develop the contents. It is important that the contents are up-to-date and new contents are developed rapidly. In addition, its preparation in accordance with educational goals is another aspect. Therefore, it is extremely important that AR applications are developed together by people who are experts in the field of education and those who have good technical knowledge and skills in order to achieve the intended educational goals.

Augmented Reality Applications in Science Education: Some Examples

When the studies in the field of Augmented Reality are examined, it has been observed that it is the most preferred tool in Science education and has increased after the 2000s. However, these studies are limited in number and generally with secondary school students in our country.





In the study conducted by Önder (2016) on "Cell and Organelles", "Color Mix" and "aurama" applications were used. It was stated that these applications contribute to individual learning and can be used as an assessment tool.


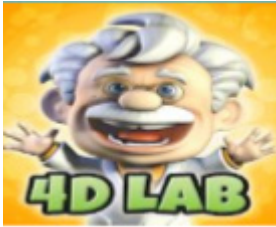




A study was conducted by Şentürk (2018) with 7th grade middle school students in 2016-2017. The aim of the study is to examine students' academic achievement, motivation and attitudes towards using Augmented Reality applications in Science course. The subject of "Solar System and Beyond" has been chosen as the subject of study. Space Adventure, iSolarsysytem, Solar







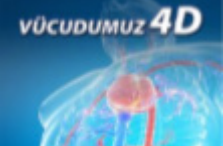
System 3D, Astronaut and Space 4D+ Augmented Reality applications were used for the selected unit. At the end of the study, it was observed that there was a positive significant difference between the attitude and motivation first test-post test scores where the academic achievement of the students was high.





The number of Augmented Reality applications used in the field of education is increasing day by day. Some examples of AR applications that can be used in the field of science education are presented in the Table 1. (Kul, 2019, p.40).

Table 1. Some Examples of AR Applications Used in Science Education

	<p>FenAR APPLICATION OF AUGMENTED REALITY</p> <p>FenAR is a pointer-based augmented reality application prepared for the 'Force and Energy' unit of the secondary school science lesson. Since FenAR applications are prepared with a problem-based approach, there are problem scenarios, 3D models and animations in their content.</p>
	<p>SCIENCE AUGMENTED EXPLORE AR</p> <p>The augmented reality app is designed to support education about the species that make our ecosystems interesting.</p>
	<p>AUGMENTED- 3D AUGMENTED REALITY</p> <p>Developed by Avenue Parmentier. We can use the application in the area we want. In this way, the desired topics in the fields of biology, chemistry and physics are presented to the users in three dimensions. It is integrated in real time, in real sizes and environments. It is a mobile application that enables visualization of 3D models.</p>
	<p>STAR WALK FREE 2</p> <p>It was developed by Vito Teknolog. Star Walk 2 is a sky map. Combining astronomical data with the latest technology, it allows you to navigate comfortably among thousands of stars, comets, constellations, satellites, dwarf planets, moon, meteor shower, asteroid, deep sky object, nebula and galaxy. The program works by turning the device towards the sky. The star map will show what is happening in the night sky.</p>
	<p>AR CIRCUITS 4D PHYSIC</p> <p>It teaches students to create and explore various electrical circuits using augmented reality technology. Cards containing the elements on which child development games are based are downloaded directly from the application or via a link. The created electrical circuit can be monitored and examined in Increased</p>

	<p>HUMAN BRAIN -AUGMENTED REALITY</p> <p>The Human Brain is one of the most important organs of the human body. It allows you to explore the Human Brain like never before with this AR app. It has been developed for educational purposes. It presents the parts of the brain to its users in three dimensions.</p>
	<p>PROFESSOR MAXWELL'S 4D LAB</p> <p>An app that takes users virtually to Professor Maxwell's 4D lab. Each work of the professor is presented to users with step-by-step illustrations and augmented reality. It is an augmented reality application to learn about chemistry and physics.</p>
	<p>ISCIENCE-AR</p> <p>This application is specially designed to work with iScience book. Experiments can be done to discover atoms, experiment with some of the reactive metals, and see what happens when they come into contact with water. Presents topics such as seeing how gravity effects affect objects in the Gravity Space Lab in 3D.</p>
	<p>CHEMISTRY AR</p> <p>This application combines the elements of chemistry with augmented reality. It shows 3D models of chemistry reactions with AR application.</p>
	<p>AR-CHEMİST</p> <p>It is an application created to learn about chemical elements and chemical bonds. It allows users to easily recognize the chemical elements present in our environment.</p>
	<p>EARTH- AUGMENTED REALITY</p> <p>An augmented reality application that gives detailed information about the only habitable planet earth. It shows the layers of the earth in the form of 3D animations. It is an application that gives detailed information about the layers of the world. It has been developed for educational purposes.</p>

	<p>AR SCIENCE CARDS</p> <p>This application includes biology, chemistry, physics and astronomy topics. It presents objects, planets, elements to users with augmented reality application.</p>
	<p>PLANETS AUGMENTED REALITY</p> <p>The sizes, velocities and orbits of the planets relative to each other are taken from real values in real proportions. It is an application that provides extensive information about the solar system.</p>
	<p>AR SOLAR SYSTEM</p> <p>It presents the solar system and planets to the users in 3D with the augmented reality application. It presents the movements of the planets and their orbits with a realistic representation.</p>
	<p>STAR SPACE TELESCOPE AR</p> <p>It allows us to learn about the three basic functions of telescopes. You can choose your mission, learn how to use telescopes, and view them in both 3D and augmented reality.</p>
	<p>MICROSAR-MICROSCOPE AUGMENTED REALITY</p> <p>The Microsar (Augmented Reality) application can be used to make the use of the microscope within the scope of the science and technology lesson easily and quickly whenever and wherever the student wants, both inside and outside the classroom.</p>
	<p>AR HUMAN ATLAS</p> <p>It presents the functioning of the human body with the 3D modeling method in detail. It is an application that will enable us to explore the skeleton, respiratory, muscle, circulation, digestive and nervous systems.</p>
	<p>OUR BODY 4D</p> <p>The application animates the body systems and organs in 4D Augmented Reality cards in 3D.</p>

	<p>PLANET AR. Y</p> <p>It offers an augmented reality interface and projects a window into the solar system using the device's rear camera. It presents the planets and their features to the users in a fun and understandable way.</p>
	<p>ATOM VISUALIZER FOR ARCORE</p> <p>It is an augmented reality application that shows the basic structure of the atom and the orbits of electrons and electrons. Developed for science lessons. Atom is presented in three dimensions with visuals</p>
	<p>SOLAR SYSTEM -SPACE MUSEUM</p> <p>It is an application that provides information about the Solar System and planets and animates them in 3D.</p>
	<p>OUR UNIVERSE AR</p> <p>It offers our planet and other planets in the solar system to users with augmented reality application. It provides information about the surface shapes, features and sizes of the planets.</p>
	<p>RAPP CHEMİSTRY (A): AR</p> <p>It is an application developed for educational purposes. He explains the elements in the field of chemistry with augmented reality application.</p>
	<p>ISOLAR SYSTEM AR</p> <p>This application is specially designed to work in accordance with the iSolar Solar System book. With this application, you can see our sun and the solar system rotating around it in general. You can fly a research plane over the barren surface of Mars.</p>

Mobile Learning, Mobile Devices and Augmented Reality Applications

Education with portable devices is called mobile learning, provided that it is connected to a wide network at any time and place. Five stages are required for mobile learning to take place. These; connectivity, sensitivity to context, mobility, instantness and individuality. With mobile learning, the student can perform the learning action anytime, anywhere. It determines the learning speed and level. It does not have to learn with a group, it provides individuality. Applications that can be used on mobile devices have been developed with the spread of augmented reality technologies in the field of education. Some of these are presented in the Table 2.

Table 2. AR Applications

Anatomy 4D	It provides the opportunity to observe the sensory organs in the human body, the nervous system, the digestive system, the excretory system, the reproductive system, the endocrine system and the functioning of the heart in 3D.
Element 4D	It is used to observe the atomic number, mass number, chemical-physical state of the elements and the shapes of the compounds formed by the elements in 3D form.
Dinosaur 3D+	This technology provides the opportunity to watch many different types of dinosaurs in 3D. There are 10 models available, and each one has the ability to show just how massive the creature would have been if it still roamed the earth.
Animals 3D	It presents the animal kingdom in a fun way. It provides 3D observation of creatures that cannot be found in the city environment.
Skyview lite beta	This application explains the stars, the properties of the planets and enables them to discover the places of the stars in our position.

Example of a Lesson Plan

PART I

THE NAME OF LESSON	SCIENCE
GRADE	3
THE NAME OF THEME	Lets Learn Our Planet
TOPIC	What Does Our Earth Look Like? The Layers of Our World
RECOMMENDED TIME	9 Hours

PART 2

STUDENT GAINS	<p>F.3.1.1.1. Realizes that the shape of the Earth looks like a sphere.</p> <p>F.3.1.1.2. Prepare a model for the shape of the world.</p> <p>F.3.1.2.1. Understands that land and water are located on the surface of the world.</p> <p>F.3.1.2.2. Explains that there is a layer of air surrounding us in the world.</p> <p>F.3.1.2.3. Compares the areas covered by land and water on the earth's surface on the model.</p>
PERSONAL QUALIFICATIONS TO ACHIEVE	Thinking, understanding, classifying, questioning, relating, analyzing, synthesizing and evaluating.
UNIT CONCEPTS:	Sphere, Land, Air, Water Layers. Mantle, Core. In this unit, students realize that the shape of the world on which they live resembles a sphere and have knowledge about the ideas put forward about the shape of the Earth; have explanation that the world is made up of land, air and water layers; develop a model which aims to visualize the shape and layers of the Earth by comparing them in their minds.
TEACHING-LEARNING METHODS AND TECHNIQUES:	<ol style="list-style-type: none"> 1. Lecture (statement or discourse) 2. Induction 3. Deduction 4. Discussion Method, 5. Question-Answer Teaching Technique, 6. Brainstorming Technique, 7. Teaching by Presentation 8. Model Preparation
TOOLS AND RESOURCES USED:	<p>Teacher: Computer, phone, tablet, visual resources (video, activity examples), augmented reality applications</p> <p>Student: Textbook,</p> <p>Materials to be used to prepare an earth model and display its layers (colored play dough, plastic knife)</p>

PART 3

TEACHING-LEARNING ACTIVITIES:	
ENGAGE	Teacher draws attention by saying that they will travel in space today.
EXPLORE	Teacher asks what they can do with the printout of the world image. Teacher makes students curious about the target by making them think and reflect on previous knowledge.
EXPLAIN	Explanation of the course is done through presentation method, question-answer teaching technique, and brainstorming technique. Various opinions about the shape of the world, the layers of the world and the shape of the world are conveyed to the student.
ELABORATE	What has been learned in the explanation section is concretized at this stage by making an Earth model from plasticine, presenting the view of the shape of the Earth from space with augmented reality applications and a detailed view of the Earth's layers.
EVALUATION	At the end of the course, activity papers and visual works prepared on the subject are made by the students.

TEACHING-LEARNING ACTIVITIES:**ENGAGE**

The teacher enters the classroom and has a short conversation with the students. The course is entered by asking the question “What would you most like to see if you had the opportunity to go to space?”

EXPLORE

The teacher comes to the classroom with a world model in his hand and asks what he can do with the tablet and the output of the world image are discussed, and brainstorming is done before the subject to be learned in the course. In this process, students are made curious about the target by making them think and put forward an idea about the previous information. Students are motivated by saying that they will find the answers they seek in the lesson. The video is watched so that the subject felt becomes concrete.



Figure 4. Educational World Globe

EXPLAIN

The teacher explains the subject as follows; (Supported by slide, video and various visuals). Our Earth we live on consists of land, water and air. So, by asking the question “What is the shape of our world like?”, Students are provided with their previous knowledge. The teacher continues his explanations with the answers from the students. The Earth we live on is a very large planet and we see a very small part of this planet. If we want to see our entire Earth, we need to observe the planet from space. However, the shape of our Earth resembles a sphere like a watermelon, orange or ball.

(Then the video of the view of the Earth from space at the link <https://www.youtube.com/watch?v=rFotONWt2rQ> is watched.)

Evidence that the shape of the Earth is like a sphere;

- When we sit by the sea and look forward, we see that there is a thin line separating the sea and the sky. This line is called *the horizon line*.

-The disappearance of the main part, then the masts, and then the smoke of a ship moving away from the shore. When approaching, seeing the smoke first, and then the body after the poles. This observation tells us that the shape of the Earth looks like a sphere.

- The return of an airplane or a ship moving from a part of the world to the same point by always moving in the same direction.

IMPORTANT !! We should say that the shape of the Earth is similar to a sphere, we should not say that our world is in the shape of a sphere. Because the shape of the Earth is not a full sphere. Our world is somewhat flattened from what we call poles. In other words, it would be more accurate to say that it is flattened at the poles and bulged from the equator.

In the past, when technology was not so advanced, people defended various opinions about the shape of the world as a result of their observations.

In ancient times people thought the Earth's surface was like a flat tray. In fact, it was thought that there were lands in the middle of this tray and seas around it. They believed that ships and aquatic creatures would fall down if they went too far. With the subsequent research, the development of technology and the progress of science, the claim that the Earth is round was put forward, and this was proven over time. Opinions that the world is round are shared with the students. (The subject is expanded by watching a video containing various opinions on the subject.)

ELABORATE

- Each student brings colourful play dough to the class and they prepare their materials to make world model and to see the layers of it.
- First of all, they form the inner core by making the yellow colored play dough into a ball shape.
- It forms the outer core by wrapping the orange colored play dough on it.
- Then, they are made to form the mantle by wrapping it with red colored play dough on the outer core.
- Students cover the first layer of the world model with a blue play dough and also they put some different size of green play dough on the first part to create land at the end of these steps world model is completed.



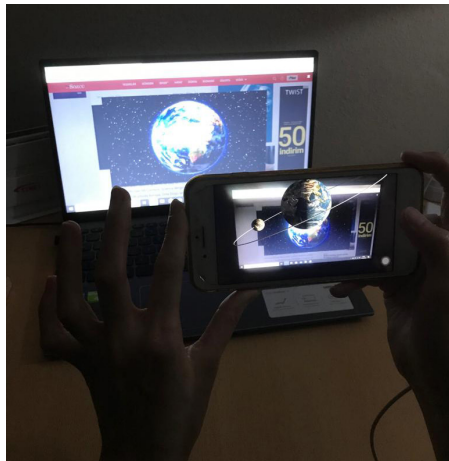
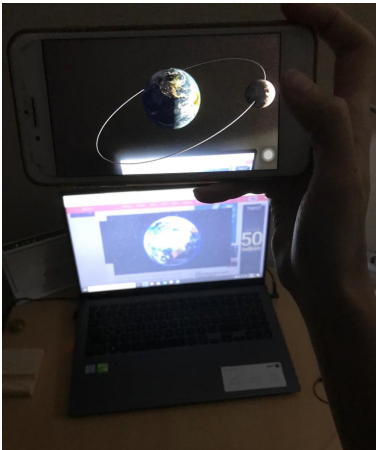
Figure 5. Students are provided to obtain this image.

The world model prepared with the students is examined and the world model printout is placed on the table at the beginning of the lesson. With the SolAR application (with augmented reality application) downloaded to the mobile phone, the view of the Earth from space, its shape is observed with augmented reality.



Figure 6. solar app view

Screen images from implementations



Then, the SOLAR WALK augmented reality application is used, where we can see the view of our Earth from space, the place in the solar system and its layers.



Figure 7. App appearance

Screen images from the application step by step, first the solar system, then the world and the view of the last layers;

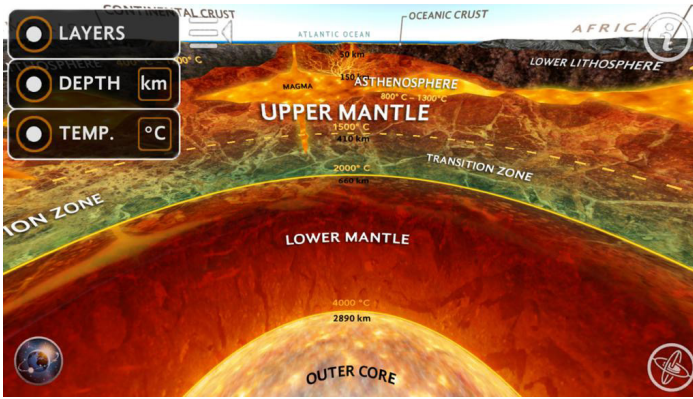


When the application is used in the classroom, students will be able to see the movements in the solar system, the position of the planets, the earth model and the layers of the earth.



With this application, students are given the opportunity to closely examine the inner core, outer core and mantle of the world. With this augmented reality application, students can closely examine this layer and get information about the temperatures of the layers.

Screen Image from app:



Finally, between 1.15 and 2.40 minutes of the video in the link <https://www.youtube.com/watch?v=nXa9FH5VJYc> is cut by the teacher before the lesson and let the students watch it.

EVALUATE

Students are asked to fill in the blanks in the prepared study and activity papers. The student's attainment is determined by performing screening tests on the subject.

After all the blanks are filled, the subject is summarized by the teacher over these studies.

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