

## Examining the game teaching in special education teacher training in Turkey and European Union Member States

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### Abstract

This study aims to examine the compulsory courses related to the game and game teaching in special education teacher training undergraduate programme in terms of number, term, credit and content. The data in descriptive study have been determined using document analysis technique. It has been stated that pre-service teachers in most of the EU countries such as Belgium, Finland, Hungary, Luxemburg, Malta, Portugal, etc. take the courses related to game teaching in the first, second and third years of their education, and the courses with the lowest credit are included in Greece's and Holland's special education teacher training programmes with four ECTS and the highest credits are included in Malta's special education teacher training programme with 20 ECTS. In Turkey, special education teacher training programme which is updated in 2018 includes two ECTS of 'Game and Music in Special Education' course in the sixth term.

**Keywords:** Special education, teacher training programme, game, game teaching.

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## 1. Problem statement

Game is a tool which has an effect on learning and has some rules, in which the participants voluntarily and mutually have and share some interactions based on experience (Adiguzel, 2012; Durkin, Boyle, Hunter & Conti-Ramsden, 2013; Driscoll & Easterbrooks, 2007; Gina, 2013). Using a tool in game teaching is necessary in the education of the children who show different developmental characteristics compared to their peers, accordingly need support in terms of academic, social and emotional, language and communication skills. Playing a game is a process based on interaction and mutual sharing. A game can be played with concrete objects, toys or even by giving different shapes to individual's body. It is important to use concrete stimulus in order to attract the attention of the children with special needs. The language used by the adults in the game process, their being a role model, using it with other teaching methods and techniques seem to relate to their game and using the game as a teaching tool skills (Koegel, Koegel, Hurley & Frea, 1992; Lifter, Sulzer-Azaroff, Anderson & Edwards-Cowdery, 1993; Pistav-Akmese & Kayhan, 2016a; 2017; Rieber & Noah, 2008).

Game, which has important contributions to child development, is also used with the purpose of observation and evaluation. As the children have a natural interaction during game, parents and teachers can have an opportunity for observation. The children's performances regarding social skills can be observed as they are with their peers. Games also serve for developing effective lesson plans in accordance with the universal design. It has been suggested that game teaching shall be used in the education of the children who have individual differences as it is used in the education of the children with normal development. Besides, activities which will support the total participation of the children with special needs to the education with their peers in the classrooms are needed [IDEA, 2004; Ministry of National Education (MEB in Turkish), 2018; United Nations Children's Fund (UNICEF), 2007]. Different activities and games help to richen the education in accordance with the students' existing performance levels, fields of interest and skills. Because universal design is possible with the participation of the individuals in all environments and to all activities. When taking education environments into account, it has been thought to be important for the children with special needs to not only participate in the process in the classroom environment, but also participate in the playgrounds, school gardens, physical education and game teaching-related processes. Parents and teachers have a great responsibility in ensuring the participation of the children with special needs in the out-of-school education processes with different regulations, assistive technology use and educational adaptations [European Commission (EC), 2006; 2018; IDEA, 2004; Meyer & Rose, 2005; Pistav-Akmese & Kayhan, 2015].

In one respect, game is an activity which includes different stimuli. Perception of these stimuli by the children, especially when it is thought in relation with the developmental characteristics in early childhood and preschool period, differs in accordance with their characteristics such as sense of wonder, creative ability, language and social development (Aktas Arnas, 2003; Cakmak Gulec, 2012; Pistav Akmese & Kayhan, 2017; Sevinc, 2004). However, the effective use of game teaching in the education of the children with special needs is related to the game teaching knowledge and skills of the teachers who work in the special education field (Adiguzel, 2012; Deming, 1999; Durkin et al., 2013; European Commission, 2006; Kadim, 2012; Pistav-Akmese & Kayhan, 2016a; 2017). Because the achievements of the special education teachers during their education periods are reflected on their professional practices and have an effect on their efficacy (Hopman et al., 2018; Pistav Akmese & Kayhan, 2016a; 2017; Sahin, 1998; Sooner, Baker, Amber, Ahlgrim-Delzell & Browder, 2007). In a sense, the courses teachers take in their pre-professional education are effective on the prediction of their knowledge and skill levels when they start the profession. For example, when a preservice teacher is observed in a theoretical and applied course by the academic member who gives the lecture in undergraduate education, he or she is also evaluated in terms of how he or she will use that information on what efficacy level in the profession besides theoretical knowledge. In this sense, it has been seen significant to give game and game teaching courses as applied lessons in teacher training undergraduate programmes and in the studies related to the game self-efficacy of the teachers. In the

literature, it has been stated that it is related to using the teaching strategies, effective teaching skills, classroom management, educational adaptation skills, communication skills and motivation (Junk & Sainato, 2013; Kadim, 2012; Pistav Akmese & Kayhan, 2016b; 2017). Thus, in the field teaching efficacies obtained in the undergraduate education by the teachers, major area efficacy regarding this field has been accepted as the prerequisite skills in terms of professional knowledge and skills. Therefore, examining the game-related courses taken by the preservice teachers during their undergraduate education in terms of number, credit and content shall contribute to the regulations regarding games in the teaching process of the children with special needs.

## **2. Purpose of the study**

Right-based practices which are based on the total participation of the children with special needs in the education environments like all individuals have been seen significant. However, in spite of the fact that improvements and regulations are made in the legal practices, teachers are primarily responsible for education. Thus, the quality of the education the teachers take in their pre-service undergraduate period and their after-service education should be investigated, their needs in terms of the contribution of it to their professional knowledge and skills should be researched. This study, which was developed based on the idea that game and game teaching should be used in the education of the children with special needs as it is used in the education of every child, aims to examine the game-related courses taken by the teachers who will work with the children with special needs during their education in terms of credit, number and content.

## **3. Methods**

The data in descriptive study have been determined using document analysis technique as the examination of an existing situation with certain criteria (Yildirim & Simsek, 2006). Special education teacher training undergraduate programmes in some of European Union (EU) member countries (18 countries) and Turkey were reached from the international reports of the countries. The reached report was taken from Agencies of the EU, Eurydice-Network on Education System and Policies in Europe websites. The university syllabi shown as resource in these countries have been examined. In accordance with findings obtained by taking only the compulsory courses regarding game teaching into account in the national education reports, the courses are described in accordance with the number of the courses in the term in which they are included in the curriculum, total credit of the course or courses and the general content of the courses. The data of Turkey were obtained from the list of the courses in the Higher Education Institution Teacher Training Undergraduate Programmes Special Education Teacher Training Programme (Higher Education Institution [YOK in Turkish], 2018), the data of EU countries were obtained from the official website of European Agency in which each country publishes its national education reports (EU, 2018), and Information Network on Education in Europe, Network on Education Systems and Policies in Europe (Eurydice) website by document analysis technique (EURYDICE, 2018). During the examination of the written document, the key words 'higher education, faculty of education, special education teaching, early childhood and special education teaching, undergraduate programme, compulsory courses, game, game teaching, game and music, major area course' in National System Overviews reports. The websites of the faculties of education and departments which train teachers for the special education field were reached, their syllabi were examined and detailed data about the credit, term, number and contents of the courses regarding game and game teaching were obtained.

It has been thought that the courses taken in the undergraduate education by the special education teachers who will teach the individuals who show hearing, visual disability, physical disability, difficulty in learning, the individuals diagnosed with autism spectrum disorder, multiple disorder and special talent are important in terms of supporting their professional knowledge and skills, the courses were examined comparatively in terms of credit, content, term and duration. As the courses which are compulsory for each teacher who continues the programme are defined as compulsory course, this

study takes only the courses which have major area code about game teaching, in other words compulsory courses into account. The preservice teachers prefer courses according to their own interest and skills among the elective courses and can take different courses in different terms. For example, drama in education, museum education, out-of-school learning environments, etc. This study does not examine the major field elective courses and professional knowledge elective courses.

The data of this study are limited to the national education reports published by EU and compulsory courses in Special Education Teacher Training Undergraduate Programme published by Higher Education Institution. The main access addresses to these reports are; (a) European Agency (EU, 2018); (b) Education in Europe or Network on Education Systems and Policies in Europe (EURYDICE, 2018); (c) Higher Education Special Education Teacher Training Undergraduate Programme (YOK, 2018).

## **4. Findings and results**

### **4.1. System of special education teacher training in Turkey**

Special education teacher training programme started to accept students as of 1983–1984 academic year in the faculty of education of the universities in tandem with educational sciences department in our country. Special education field was addressed as a single field in the programme and the students who graduated from this programme participated in the education of visually, hearing, orthopedically impaired, mentally disabled and gifted children when they became teachers. However, with an alteration made in 1997–1998 academic year, Special Education Programme was turned into a ‘Department’ and five different departments were listed below this department. The teachers who graduated from these five different departments which are High Disability, Hearing Impaired, Visually Impaired, Mentally Impaired Teacher Training and Gifted Children Teacher Training Programmes were appointed in accordance with the programmes from which they graduated in the field. Special field efficacies were created for the preservice teachers graduated from these five different undergraduate programmes. Field efficacies are the statements related to what kind of knowledge and skills a teacher should have while working and their level of reflecting these to the practice. In 2015–2016 academic year, Higher Education Institution made a new regulation and these departments were turned into Special Education Teacher Training undergraduate programme again. With the updates in the current undergraduate training programme from 2015 to 2016 academic year to May of 2018, the field’s education, liberal education, elective courses were reconstituted (Faculty of Higher Education [YOK in Turkish], 2018).

The education policies of the countries include internationally accepting principles, taking into account the knowledge and skills required by the century as well as aiming to meet the national need. Countries aim to train qualified individuals of the future and spare great sources for education investments for this purpose. The achievements of the individuals who form the society in the educational environments are a determinative factor on the future level of welfare of this country. For this purpose, each individual’s right for access and participation to the education at maximum level, support in accordance with their needs and benefiting from a quality education is legally accepted as a fundamental right by various institutions such as Council for Exceptional Children (CEC), Division for Early Childhood, the National Association for the Education of Young Children, UNICEF and is taken into account in the practice-based studies (CEC, 2009; IDEA, 2004; UNICEF, 2004; 2011).

Seventy-eight state, 17 foundation universities, 95 universities in total have faculty of education or educational sciences in our country. Higher Education Institution made curriculum update studies in 25 teacher training undergraduate programmes with the purpose that the preservice teachers who study in these faculties become more qualified personnel, can conduct researches, analyze and cooperate with the shareholders, become teachers who have a good level of language proficiency and effective teaching skills (Higher Education institution, 2018). The distribution of the professional knowledge, liberal education and field education courses revised in the special education teacher training undergraduate programme is as follows: 48 hours of professional knowledge (28% of the

programme); 20 hours of liberal education (13% of the programme); 94 hours of major area education (59% of the programme). While the courses taken in the undergraduate programmes have an important place in the development of the knowledge and skills of the preservice teachers, field knowledge courses which include applied education are significant for the teachers for making practices similar to the ones they see in undergraduate courses, using effective teaching skills, cooperating with their colleagues and being able to prepare individualised teaching plans for the children with special educational needs when they start teaching.

It is highly important to examine the game teaching courses which are included in the programme in terms of duration and content in order to determine how the teachers obtain the special field efficacies for game teaching that has an important place in the education of the children with special needs. The number of EU member countries is 28. The data belonging to 18 of these countries were examined in comparison with Turkey. The number of the countries examined is limited to 18 as the information on the syllabi belonging to all 28 countries were not published in the websites of the universities and the access to the curricula regarding special education teacher training undergraduate programme was not provided. Table 1 is based on the year in which the compulsory courses regarding the game and game teaching are given in the special education teacher training undergraduate programme, which is the first criterion examined in the study. Related data are stated in Table 1.

**Table 1. The distribution of game and game teaching related courses in the special education teacher training undergraduate programmes in some of the EU member countries and Turkey by years**

Countries	First year	Second year	Third year	Fourth year	Total
Austria	–	2	–	–	2
Belgium	1	1	–	–	2
Cyprus	–	1	1	–	2
Denmark	1	1	1	–	3
Finland	–	1	1	1	3
Greece	–	–	2	–	2
Holland	–	–	1	–	1
Hungary	2	1	1	–	5
Ireland	–	2	–	–	2
Lithuania	1	1	1	–	3
Luxemburg	1	1	1	–	3
Malta	2	1	1	–	4
Poland	–	1	1	–	2
Portugal	1	1	–	–	2
Slovenia	–	1	1	1	3
Spain	–	1	1	–	2
Sweden	2	–	–	–	2
The Czech Republic	2	–	–	1	3
Turkey	–	–	1	–	1

When examining the distribution of the compulsory courses about game and game teaching in the curricula in Table 1, it has drawn attraction that the game and game teaching courses are given in 3 years at different terms in the 4-year undergraduate education in different EU member countries such as Denmark, Finland, Hungary, Lithuania, Luxemburg, Malta and Slovenia. While game teaching-related compulsory courses are included only in first and second years in Belgium and Portugal, they are included only in the second and third years in Cyprus and Spain, in the first year in Sweden, in the second year in Austria, only in the third year in Greece, Holland and Turkey.

The second criterion examined in the study is the ECTS of the courses. Table 2 gives the ECTS information regarding the total credit of the game and game teaching-related courses in the special education teacher training undergraduate programmes in some of the EU member countries and Turkey.

**Table 2. The ECTS distribution of game and game-teaching related courses in the special education teacher training undergraduate programmes in some of the EU member countries and Turkey**

Countries	First year	Second year	Third year	Fourth year	ECTS credits (total)
Austria	–	12	–	–	12
Belgium	4	4	–	–	8
Cyprus	–	6	5	–	11
Denmark	3	3	3	–	9
Finland	–	7	7	4	18
Greece	–	–	4	–	4
Holland	–	–	4	–	4
Hungary	1	2	2	–	5
Ireland	–	10	–	–	10
Lithuania	5	4	3	–	12
Luxemburg	2	2	2	–	6
Malta	12	4	4	–	20
Poland	–	3	3	–	6
Portugal	4	6	–	–	10
Slovenia	–	6	5	4	15
Spain	–	6	6	–	12
Sweden	16	–	–	–	16
The Czech Republic	8	–	–	4	12
Turkey	–	–	2	–	2

Table 2 includes the information regarding the ECTS credits and total credits of the game and game teaching-related compulsory courses in the special education teacher training undergraduate programmes in 18 of EU member countries and Turkey. Malta has the highest credit rate with total 12 ECTS in the first year, four ECTS with one course per year in the second and third years, 20 ECTS in total. It has drawn attraction that the single course credits are mostly three ECTS and above in EU countries (Belgium/Denmark/Finland/Lithuania/Portugal), five ECTS in Hungary with one ECTS in the first year and two in the second and third years, and six ECTS in total in Luxemburg with two ECTS in each year and two ECTS in total in Turkey with a single course in the third year.

The third criterion examined in the study is the content of the game and game teaching-related courses and the subjects taught in these courses. Table 3 includes the content of the game and game-related courses in the special education teacher training undergraduate programmes in some of the EU member countries and Turkey, and the subjects taught in these courses.

**Table 3. Contents of the game and game-related courses in the special education teacher training undergraduate programmes in some of the EU member countries and Turkey**

Countries	Course content			
	First year	Second year	Third year	Fourth year
Austria	–	Game and learning Game-based curricula	–	–
Belgium	Game and children with special needs	Game teaching	–	–
Cyprus	–	Creative learning and game	Games for kids	–
Denmark	Games and children development	Games for environment	Digital games and learning	–
Finland	–	Games and shapes	Game and learning	Games for children
Greece	–	–	Play pedagogies	–
Holland	–	–	Technology game	–
Hungary	Function of game	Learning through games	Game teaching	–
Ireland	–	Game	–	–
Lithuania	Digital games for children	Game	Environment and play	–
Luxemburg	Games for learning environment	Games for children	Children games	–
Malta	Creativity games	Teaching games	Game, arts and teaching	–
Poland	–	Basic games and curricula	Teaching games	–
Portugal	Play and observation	Play and child development	–	–
Slovenia	–	Games for special children	Game method	Assessment through games
Spain	–	Evaluation and game	Game and learning	–
Sweden	Assessment to games	–	–	–
The Czech Republic	Arts and games for children with special needs	–	–	Game teaching method
Turkey	–	–	Game and music in special education	–

As seen in Table 3, prominent course contents in the EU member countries are related to the use of game as a teaching tool (Austria/Belgium/Denmark, Greece/Hungary/Finland), game in the education of the children with special needs (Ireland/Spain), creativity and game (Cyprus/Malta), technology and game (Holland/Lithuania), observation and assessment during game (Portugal/Sweden/Slovenia), arts and the use of games in the assessment of the children with special needs (Malta/Lithuania/Sweden/Spain/Slovenia/The Czech Republic).

## 5. Conclusion and recommendations

In this study which comparatively examines the number, year, ECTS of the courses related to game and use of the game as a teaching tool in special education teacher training undergraduate programmes, with the data of the 18 countries out of 28 EU member countries and the latest regulations which will be applied in 2018–2019 academic year in Turkey, the courses in the 240-ECTS programme of which 71 ECTS are Professional Knowledge, 30 ECTS are Liberal Education, 139 ECTS are Major Area Knowledge were examined. For the data of EU member countries, the national education reports, curricula of the referred universities, compulsory courses related to game (syllabi) were taken into account while the reports published by Higher Education Institution were taken into account for our country (EU, 2018; EURYDICE, 2018; Higher Education Institution [YOK], 2018). This study was thought to be necessary with the idea that the undergraduate education forms the pre-service education processes of the teachers and the courses they take in this period affect their knowledge, skills and efficacy in the profession. There have been studies that support this opinion in the literature (CEC, 2009; Davis-Temple, Jung & Sainato, 2014; Kadim, 2012; Lifter et al., 1993; Pistav Akmese & Kayhan, 2016b; 2017; Sooner et al., 2007).

CEC (2009) have stated the fact that the personnel who will work in the special education field are qualified and hold to ethical principles, support the access and participation of each student to education in a total and correct way, mind personal performance in educational adaptations is related to the quality of pre-service training and after-service in-service training. In the study in which the interaction and communication skills of the children with special needs with their peers in a primary school in which integration applied, Davis-Temple et al. (2014) emphasised that the skills of teachers for structuring this process, using the right strategies, using the teaching methods and techniques effectively and making assessments through game are significant. Game can be used effectively in educational environments and out-of-class environments for the children with special needs. It provides data for determining the problem behaviour pattern in a natural observation process. So, teachers and parents can make some observations about the children by focusing on the behaviours during game. Because the children can take their peers and adults as a role model. Thus, activities such as behavioural change, teaching the questioning skills, social interaction, communication and studies based on language development can be planned in the game process. The effective use of the games especially in early childhood period is an effective teaching tool for all children with special needs and children with normal development (Akmese & Kayhan, 2017; Cakmak Gulec, 2001; Lifter et al., 1993).

In the study, which examines the self-efficacies of the teachers who work in the preschool institutions regarding game, Kadim (2012) has emphasised that the preschool teachers' self-efficacy levels regarding planning, application and assessment of the game activities are generally low, it is necessary to work with pre-service teachers in order to support these skills and in-service training should be given to the teachers who work in this profession. In their study in which they examine the game teaching self-efficacies of the preschool teachers, Pistav Akmese & Kayhan (2015) have stated that there is a statistically significant difference between the planning, assessment of the age-based game teaching and their professional self-efficacies; this difference is on behalf of the teachers who are 25 and below.

Today, teacher training has a highly important place, most countries include mainly theoretical and applied courses into their undergraduate and postgraduate education programmes taking the necessities into account and make regulations to increase the quality of the preservice teachers in the practical internship. In this regard, besides professional experience, the studies to create a global teacher model in which the preservice teachers can use at least one foreign language sufficiently, can reflect his or her knowledge and skills to the educational regulations, follow technological development, take the individual differences into account and can cooperate (EU, 2018; Higher Education Institution, 2012a; 2012b; 2018; Ministry of National Education [MEB in Turkish], 2012a; 2012b).

In a study which examines the use of the games in inclusive environments, it has been stated that the games are an effective teaching tool for the children with special needs in the preschool period; however, the teachers need in-service training to learn how to use game teaching skills in special education and need practices that will show which games to prefer with regard to the type of the disability while choosing the materials and including the game activities into individual education plans (Pistav Akmeae & Kayhan, 2016a). Thus, it has been thought that the teachers should be supported in special education, making educational regulations in accordance with the needs, effective teaching skills and assessment through concrete experience before they start working with the individuals with special needs.

In another study which examines the game self-efficacies of the special education teachers, Pistav Akmese & Kayhan (2017) have stated that according to the area of the graduation of the teachers who work with the children with special needs in the preschool period, they differ significantly in accordance with the fact that if they take game-related courses in their undergraduate education and according to their educational background. In the study conducted with 127 teachers in total, while 72 of the teachers state that they took game teaching-related courses and 55 states they did not, the planning, application and assessment of the teaching and self-efficacy total scores of the teachers who took the courses are higher. This finding shows that the courses taken during the undergraduate education have an effect on the game teaching skills. On the other hand, the same study stated that the total game teaching, planning of teaching, application of teaching, assessment and professional self-efficacy scores of the teachers who graduated from preschool teaching and work in special education field are higher.

As a result, when the total number of the courses in the special education teacher training undergraduate programmes in accordance with their term and year information, it has drawn attention in this study that the number of the compulsory courses in the programme is 5 for Hungary, 4 for Malta, 3 for Denmark, Finland, Lithuania, Luxemburg, Slovenia and The Czech Republic. It has been seen that one course (Game and Music in Special Education) in the sixth term is given in Turkey. When looking into the total ECTS rates, it has been determined that it is generally 10 ECTS (Ireland/Portugal) and above (Austira/Cyprus/Finland/Lithuania/Malta/Slovenia/Spain/Sweedden/The Czech Republic) in the EU member countries while Turkey has a two-ECTS course in the sixth term, namely in the third year. It has drawn attention that these courses which especially aim at the functional use of the games are given theoretically and applied to the preservice teachers, and the course contents are game information, use of the game as a teaching tool, and then observation, game, assessment, technology and practice in accordance with the year and the term. In Turkey, in the content of the game and music course, it has been seen that the prominent subjects are generally 'the basic concepts regarding the game and use of the game as a teaching tool in the education, researches regarding the use of the games in special education and their results, teaching through music and game and the effective educational regulations in accordance with the individual education of the children with special needs'. When thinking their developmental characteristics, game is an effective teaching tool for the children who show different developmental characteristics from their peers in terms of academic, social, language and communication skills and have special educational needs. In this sense, parents and teachers have a great responsibility in the effective use of game in special education. The age group with which the teacher will work when they start working, the type and level of the disability of the individuals they will work with have an effect on the game teaching-related practices. Thus, it has been thought that the fact that the courses are conducted as observation based, with examples of the practices in the schools which serve in the special education field during undergraduate education in terms of credit and content will contribute positively to the professional self-efficacy levels of the preservice teachers.

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