



EXAMINATION OF POSTGRADUATE THESIS CARRIED OUT WITH ERRORLESS TEACHING METHODS IN INDIVIDUALS WITH AUTISM SPECTRUM DISORDER

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Abstract

Correct teaching methods are techniques that include teaching techniques used in many areas such as functional, academic, self-care and daily life skills of children with special needs. When the postgraduate thesis studies on correct teaching methods with autistic individuals and children are examined in the YÖKTEZ database, it is seen that thesis studies on the types of correct teaching method are carried out and descriptive and meta-analysis studies are carried out for subheadings; but there is no study that examines these theses in detail under the name of correct teaching methods. The aim of this study is to examine current research trends in postgraduate thesis carried out with using errorless teaching methods in the education of individuals with autism spectrum disorder in Turkey. A total number of 9 open-access postgraduate thesis obtained from Higher Education Research Council of Turkey (YOK) as a result of comprehensive survey from the archives and published in the years 2011 and 2019 were included open access within 9 graduate thesis. Document analysis as one of the qualitative research methods was used in the research. When the postgraduate theses in YÖKTEZ related to the thesis related to the errorless teaching methods of students diagnosed with autism are examined, 3 of the theses are about teaching with gradual help, 2 of the theses are about teaching by increasing the clue gradually, 2 of the theses are about teaching with concurrent hints and 2 of them are about fixed waiting period teaching types. Thesis are examined in the field of academic skills, features of the subjects, features of the method, and features of the model, features of the findings. As a result of the YÖKTEZ survey, 8 master and 1 doctoral thesis related to the errorless teaching methods were reached. When the research methods used in theses are examined, it is concluded that single subject research methods are used in 9 theses. According to the purpose of the research, it was determined that the participants used single subject research methods and that the age ranges of the students formed the participants in the dissertations examined were between 3 and 15 years old. The theses were examined in terms of the area of academic skills taught, the characteristics of the subjects, the characteristics of the method, the features of the model, the features of the findings, and the findings were discussed in the light of forward-looking suggestions.

Keywords: Autism spectrum disorder, errorless teaching methods, postgraduate thesis.

Introduction

The quality of teaching can be improved by offering effective teaching methods to individuals with different learning characteristics that can result in fewer errors and less time at the same time. In accordance with the findings of experimental research, educators continue to seek to develop teaching methods that are supported by their effectiveness and efficiency. In addition to this, individuals who receive teaching and individuals who offer teaching can be given the opportunity to choose among the methods. Being able to make such a choice can positively affect the quality of life of the individual and his / her family as well as affect the professional life of the practitioner in a positive way (Tekin-Iftar & Kırcaali-Iftar, 2012). The success of individuals with intellectual disabilities in social life is closely related to the nature of the education given to them in their educational life and the characteristics of the support and services provided (Tasse, Luckasson & Schalock, 2016). In this respect, teachers need to know what the basic requirements are for students to demonstrate a skill or behavior, (Morse & Shuster, 2004), but also strive to achieve effective teaching strategies that minimize mistakes (Gibson & Shuster, 1992). During the acquisition of the discussed learning stages, several effective and errorless teaching methods are used to teach a variety of skills to the children with disabilities. Errorless teaching methods are grouped into two groups: response tips and stimulus adaptations. During the teaching, before the child reacts, it differs in terms of providing hints and / or clues that ensure the correct reaction and fading the clues (Tekin, 1999; Clare & Jones, 2008).

Errorless teaching is an approach developed from the assumption that learning skills and concepts in the best way occurs not through mistakes made during teaching but through positive responses and exercises during teaching (Wolery, Ault & Doyle, 1992). Three basic prerequisites are required to apply the errorless teaching method; (a) the teacher should determine and present the skill to be taught, taking into account the student's capacity. (b) The teacher should develop skill analysis when necessary and aim to teach only a small part at a time. (c) The teacher should be able to apply different teaching strategies such as tips, modeling, etc. to facilitate student learning.

Wolery et al. (1990) attribute the emergence of errorless teaching methods to four reasons; (1) errorless teaching methods are effective teaching methods. (2) In the errorless teaching methods, the teacher helps the student develop a positive relationship, as the student responds correctly to almost any attempt. (3) A small number of negative behaviors are exhibited in errorless teaching method sessions. (4) Since students learn little from the mistakes they make, errorless teaching methods are used. It is important for practitioners to take into account the learning characteristics, age, and environment characteristics of the individuals to whom they will be teaching, and to decide accordingly on the teaching method to be applied.

Autism spectrum disorder (ASD) is a neurological developmental disorder that is characterized by persistent deficiencies in social interaction and communication and limited repetitive behavior and occurs in the early stages of development (American Psychiatric Association [APA], 2013). One of the most widely used methods in teaching both domestic skills and academic and other fields of skills for individuals and children with autism diagnosis is errorless teaching methods (Terzioglu & Yikmis, 2018). For this reason, one of the scientific sources that include scientific-based practices in which errorless teaching methods are used for individuals and children with autism diagnosis is related thesis studies. Thesis studies are the most important sources that enable us to reach broad, comprehensive and reliable information on many subjects such as application, teaching process, methods, data collection tools, programs and studies carried out at home and abroad (Gul&Diken,

2009). Therefore, it is considered important to evaluate the effectiveness of this method through the examination of the master and doctoral theses in thesis center of Higher Education Council of Turkey (YÖKTEZ) where it is aimed to determine the effectiveness of the errorless teaching methods. However, no work has been found in which these theses have been examined in detail.

It is considered that collection of theses related to errorless teaching methods in general in education of students with autism in Turkey and presentation of the information related to these theses in a study (eg. participants, characteristics of the participants, research method, data collection tools used, application process, findings) will make it easier for people and specialists who deal with students with mental disabilities to access the necessary information. In addition, such a study provides researchers to be able to present important inputs for developing solutions to problems related to the topics that are not addressed about errorless teaching methods for students diagnosed with autism or those diagnosed with autism spectrum disorder, or deficiencies in researched topics, determining the current situation, determining teachers, family and student views, and using the errorless teaching. In addition to these situations, identifying similar and different aspects of the studies that show common features may guide future research. Therefore, the aim of this study is to review the graduate thesis studies conducted in Turkey on students diagnosed with autism or autism spectrum disorder.

Method

Research Model

Document analysis from qualitative research methods was used in the research. Document review covers the analysis of written materials containing information about the cases or cases to be investigated. Document review can be implemented in five major stages: (1) Reaching documents, (2) checking authenticity, (3) understanding documents, (4) analyzing data and (5) using data (Yildirim & Simsek, 2013).

Data Collection

The research included 9 accessible post-graduate theses obtained from the thesis archive of the Turkish Higher Education Council which was carried out between 2011 and 2019. The databases were scanned to access documents using keywords such as “autism spectrum disorder”, “autism” and “errorless teaching”.

As a result of the survey of the sources, all theses by 1989 were examined. However, as of 2011, a total of 9 thesis studies have been reached on the subject of the practices that include any of the 8 sub-headings and the errorless methods used in the education of individuals with autism diagnosis.

Data Analysis

The theses included in the research were analyzed using a thesis analysis form prepared in advance by the researchers. In the form prepared, theses were examined according to year, thesis level, university, and institute, and department, title of thesis advisor, research model, and number of participants, data collection tool, and data analysis method. The findings

obtained within the framework of the examination were interpreted according to descriptive analysis technique and suggestions were made for future research and applications in this field.

During the analysis of theses, the studies were divided into categories according to their subjects, and which theses were included in each category were specified. Information about the name of the author, year of publication, level of thesis, title of consultant, design of the research, data collection tools, data analysis method and findings are provided in tables. Studies emphasized to have similar or common characteristics were examined comparatively and brief information was given regarding the research findings. The features that were considered important for thesis studies were presented in tables.

Results

As a result of the survey of the field literature within the scope of this study, 9 graduate theses (8 master, 1 doctorate thesis) were obtained for the theses of the students with autism diagnosis in Turkey where the methods of errorless teaching are used. When the postgraduate theses in YÖKTEZ related to the thesis related to the errorless teaching methods of students diagnosed with autism are examined, 3 of the theses are about teaching with gradual help, 2 of the theses are about teaching by increasing the clue gradually, 2 of the theses are about teaching with concurrent hints and 2 of them are about fixed waiting period teaching types. Thesis are examined in the field of academic skills, features of the subjects, features of the method, and features of the model, features of the findings.

As a result of the YÖKTEZ survey, 8 master and 1 doctoral thesis related to the errorless teaching methods were reached. When the research methods used in these are examined, it is concluded that single subject research methods are used in 9 theses. According to the purpose of the research, it was determined that the participants used single subject research methods and that the age ranges of the students formed the participants in the dissertations examined were between 3 and 15 years old.

Table 1.

Graduate theses on the use of errorless teaching methods in children with autism diagnosis

Name of the Author and Year	Thesis Level	Research Method	Data Collection Tool	Data Analysis Method	Participants	Findings
Kilic (2019)	Master thesis	Multiple Probe Design Among Participants	Data Record Form, Video Records, Observation	Teaching, Polling, Monitoring and Generalization Effectiveness Data, Social Validity and Reliability Data Related to "Tapping (proper rhythm)"	Students with ASD (2 Boys and 1 Girl)	Along with the Orff approach, it is to determine the effectiveness of the use of teaching method with the simultaneous hint of the wrong teaching methods in teaching rhythm-holding skills to the students of OIZ who continue to the special education business application center.
Kumaz (2018)	PhD thesis	Multiple Probe Design Among Subjects	Subjective Evaluation and Social Comparison Methods	Effectiveness, Social Validity And Reliability Data	Four Male Subjects aged 4-6 years diagnosed with ASD	The effectiveness of teaching by gradually increasing the clue in teaching common attention behaviors used during conversation to individuals with autism spectrum disorders
Ergin	Master	Multiple	Natural	Graphical	Three Boys, 3-6	The aim of this study is to examine the

(2017)	thesis	Probe Design Among Participants	Teaching Methods, Observer Information Form	Analysis, Reliability Calculation Formula, Parent Social Validity Form, Descriptive Analysis	Years Old, with ASD	effectiveness of teaching by increasing the clue in the diversification of imaginary play behavior of children with autism spectrum disorder (ASD).
Dogan (2016)	Master thesis	Multiple Probe Design Among Participants	Data Registration Forms where Teaching, Generalization and Monitoring Sessions are Recorded, Social Validity Questionnaires	Column Chart With Pretest And Posttest Comparison, Video Records Application Reliability Analysis Formula, Opinion Analysis of and Suggestion	5-6 Years Old children with ASD (1 Girl 2 Boys) and 6 Children with Normal Development	The aim of this course is to examine the effectiveness of fixed waiting education offered in small group in teaching professions to children with ASD.
Cattik (2016)	Master thesis	Repetition of Multiple Probe Design Among Behaviors Model to Participants	Digital Game Skills Data Record Forms, Pretest And Posttest Data Column Chart	Digital Skills Observer Reliability Application Reliability Data Registration Form, Social Validity Interview Question Form	4 Boys With ASD Diagnosis, Researcher, Assistant Teacher, Observer And Parents	Teaching children with autism spectrum disorder (ASD) in a small group arrangement, on the smart board, with gradual assistance, using the teaching method, digital play and observation, and determining the views of the families of the children participating in the study about the realized teaching process
Boyras (2016)	Master thesis	Multiple Probe Design Among Participants	Beginning, Polling, Monitoring, Generalization Data Skill Analysis Record, Social Validity Data Form	Recorded Formula "Consensus (Consensus 43 + Disagreement) X 100, Observed Practitioner Behavior / Planned Practitioner Behavior X 100" Formula	3 Children 6-7 Years Old, Pre-School With ASD Diagnosis	The effectiveness of the teaching method with gradual help in teaching the rules of playing games to children with autism spectrum disorders has been investigated.
Sahin (2015)	Master thesis	Adaptive Transformed Applications Model.	Gobdö-2-Tv Evaluation, Reinforcement Determination Form, Errorless teaching Method Steps	Analysis Methods of Data on Generalization of Effectiveness and Efficiency of Instructional Methods	Four ASD-diagnosed male subjects whose ages ranged from 36 -74 months	The efficacy and efficiency of fixed waiting-time teaching (SBSS) practices, which are structured in the teaching of the names of social warning signs to children with autism spectrum disorder (ASD) and presented with scattered experiments embedded in the game, were compared.
Porsuk (2018)	Master thesis	AB Pattern	Demand Behavior Data Registration Form, Inter-Observer Reliability Data, Application Reliability Data Registration Form, Social	Graphical Analysis in accordance with A-B Model, Observed Practitioner Behavior / Planned Practitioner Behavior x 100 "	Three Male Students Aged 11,12,15	To evaluate the effectiveness of tablet computer application, "Which one do you want?", on the demanding behavior of children with ASD using the stepwise teaching method,.

			Validity Interview Form			
Taptik-Sahin (2011)	Master thesis	Multiple Probe Design Among Subjects	Skill Analysis, Collective Polling, Daily Polling, Monitoring and Generalization Sessions	Graphical Analysis Method, Pretest - Column Chart with Posttest Model	Primary school students, 2 girls and 1 boy with ASD diagnosis, ages 9-10	In teaching children with autism the ability to brush teeth, the effectiveness of teaching with simultaneous clues was investigated.

Discussion and Conclusion

In this study, children with autism diagnosis were considered as participants in the study groups in the related research in line with the findings of descriptive analysis. One of the results obtained from the theses examined is that individuals with autism can acquire behaviors by using eight types of errorless teaching method. To teach a new skill, process or concept to individuals with special needs and to enable students to have a successful learning experience depends on the teaching method or approach used/used by the teacher (Yikmis, 1999). Therefore, the use of errorless teaching methods with autism individuals has functional effect. In the literature review of the domestic and international literature, a study comparing the error-free and error-correction application practices of fixed-waiting education, which is one of the errorless teaching methods, was encountered in teaching skill for individuals with autism (Wolde, 2009; Klaus et al., 2019).

A study investigating the effectiveness of teaching with the simultaneous clue to autistic individuals was encountered. In line with the data obtained in the research, it was noteworthy that the types of single-subject research methods were used in all of the research. In the related theses, it was observed that single-subject experimental designs were selected as the research model, and multiple polling models were chosen among the single-subject experimental designs (Tooper, 2006). This is due to the fact that working with small groups in skill or concept teaching reaches effective results in less time. In the theses examined, boys are more in the distribution of participating children compared to gender in the studies (n=23 boys, n=3 girls and n=3 no gender specified). The prevalence of autism in boys was 4-5 times higher than in girls (Morales-Hidalgo et al., 2018). Polling, monitoring, generalization and application data were included in each of the theses examined. The rate of validity and consistency data was specified. A descriptive analysis study of simultaneous clues was conducted when the literature was scanned, but no descriptive analysis study was found under the name of errorless teaching methods.

In this study, a total of 9 theses (8 Masters, 1 PhD) related to the non-false teaching methods used for individuals with autism were examined from YÖKTEZ database. 3 of these theses were about education with gradual assistance, 2 of them were about education with gradually increasing the clue, 2 of them were about education with simultaneous clues, and 2 of them were about education with fixed waiting period education. When the theses dealing with the gradual assistance of these researches, the education with increasing the clue gradually, the teaching with the simultaneous clue, the fixed waiting period education are examined, it was concluded that single-subject research design was used in 9 theses. As a result of the dissertations examined, it was concluded that the age distribution of individuals diagnosed with autism varies between 3-15 years.

While monitoring data was collected in all thesis where single subject research methods were used. Generalization data, reliability data and application data were also collected. In the thesis database of the higher education institution (YÖKTEZ), it is observed that the number of research related to theses in which errorless teaching methods are used in individuals with autism is very small. However, in other databases, it is suggested that meta-analysis and descriptive study of articles associated with errorless teaching methods for individuals with autism be performed.

In this study, a literature review was conducted for local resources and postgraduate theses. In future researches, literature reviews can also be made about foreign sources and articles or declaration studies, and trends in studies related to studies using errorless teaching methods for individuals diagnosed with autism in the world can be revealed. This study revealed current trends in autism spectrum disorder in research using errorless teaching methods. Therefore, it may be suggested that this research should be repeated at different periods in the future and that the current research trends in that period be determined.

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