European Journal of Special Education Research
ISSN: 2501 - 2428
ISSN-L: 2501 - 2428
Available on-line at: www.oapub.org/edu

doi: 10.5281/zenodo.1470789 Volume 3 | Issue 4 | 2018

ANALYZING SOCIAL PLAY AND SOCIAL INTERACTION OF A CHILD WITH AUTISM SPECTRUM DISORDER IN THE INCLUSIVE KINDERGARTEN EDUCATION

Zeynep Dere[i]
Assist. Prof. Dr.,
Primary Education, Division of Preschool Education,
Yozgat Bozok University, Turkey

Abstract:
The benefits of social play and social interactions have been accepted for children with special needs attending inclusive kindergarten education. This study aims to examine social play and social interaction of a child with autism spectrum disorder in the inclusive kindergarten education. Social play observation form, social interaction observation form, activity adaptation form and parent interview was employed for data collection. Case study was conducted and the sample of this study included one special needed child with ASD. Free play times of the child was video recorded, activity adaptations were reviewed, and an interview with the mother was conducted. The data was analyzed using descriptive analyses technique. The research findings indicated that the child with ASD in an inclusive kindergarten education has limited number of social play and social interactions. Even though these limited social play and social interactions, they had an important impact on the social behavior of the child with ASD. Inclusive classroom teachers and researchers would get benefit for their teaching skills using this study results.

Keywords: inclusive education, social play, social interaction, autism spectrum disorder

1. Introduction

Children in early childhood learn several skills through play and social interactions with their peers. Children with special needs going to school in an integrated preschool setting also have the opportunity to play and interact with their typical developing peers. The benefits of social play and social interactions have been recognized and explained for young children with special needs attending inclusive preschools (Buysse, Goldman & Skinner, 2002). Inclusive education during the preschool years create valuable contexts to learn and practice skills essential to children's social, cognitive,

[i] Correspondence: email zeynep.dere@bozok.edu.tr

communicative, and emotional development (Guralnick, Neville, Hammond, & Connor, 2007). Peer play and friendships benefit children with special needs by creating a sense of belonging and security and by lessening stress (Overton & Rausch, 2002). Social interactions support their social skills development and these skills are considered to be important for life adjustment (Richardson, & Schwartz, 1998).

Children with autism spectrum disorders (ASD) are increasingly included in inclusive early childhood education classrooms in an effort to improve their social involvement. Children with ASD have challenges with social relationships at all ages and functioning levels, including failures in effective communication, being part of enjoyment and interest, and emotional reciprocity (American Psychiatric Association, 2000). Knowing these precise social challenges, many children with ASD are having inclusive early childhood education in general education classrooms. Thus, it is aimed to improve children's social functioning using their typical developing peers and expose them to the traditional curriculum (Gallagher et al., 2000; Hunt & Goetz, 1997).

Play has been defined in several forms. Most of the definitions about play stresses the properties of pleasure, intrinsic motivation, flexibility, non-literal, voluntary and active engagement (Wolfberg, 1995). On the other hand, children with ASD tend to engage in inflexible, repetitive play patterns and may not exhibit symbolic or pretend behavior. Children with ASD often view the world as concrete and literal. For this reason, they may have difficulty with abstract concepts and imaginative behavior. These children display difficulty in sequencing and motor planning (Sipes, Matson & Horovitz, 2011). Their motor skills may affect following required steps to complete a task. They may also not understand the language or thoughts or social cues of their peers, or have the ability to share their feelings with others (American Psychiatric Association, 2000). This lack of interaction and understanding limits reciprocity in relationships. In return, they can be excluded from play episodes and/or interactions by their peers. These challenges can contribute to the lack of social play that supposed to encourage social development and interaction.

Children were observed to have frequent interactions and play social games during free play time (Leseman et al., 2001). Peers come together, choose play materials and play setting as they pleased. Whether typical developing children or children with ASD, they best learn, practice and display social norms and attitudes in the social games. They play together, establish eye-contact, adapt the progress of play and keep being in a social interaction (Kohler & Strain, 1993). It is essential for children with ASD to be in the peer interactions and get benefits of social play. In social plays, they can learn how to develop peer relationships. Having friendships nurtures their self-confidence and emotional resilience. Peer interactions allow them to practice both their receptive and expressive language skills. Besides, they learn pragmatic language skills such as making eye contact and interpreting facial expression. The social context contains social situations that often require problem solving skills. It is expected that children with ASD whom are exposed to these situations will improve their problem solving skills such as conflict resolution.

Studies showed that children with ASD who are included in typical classrooms have improvements in their social initiations, and the ability to generalize learned social skills in school (Carr & Darcy, 1990; Harrower & Dunlap, 2001). In inclusive early childhood education classrooms, typical peers can be social role models, encouraging the maintenance and generalization of social skills that are often not achieved when using an adult role model in a clinical intervention (Shearer, Kohler, Buchan, & McCullough, 1996). Moreover, teachers teaching in inclusive classrooms are obliged to make adaptation of the activities regarding to the needs of the special child in Turkey (MoNE, 2013; Duman, 2016). However, providing special needed children with the opportunity to interact with typically developing peers in the inclusive preschool settings often is not sufficient for meaningful interaction to occur (Hundert & Houghton, 1992). Because typical children tend to interact with peers similar to themselves and not with the children with special needs (Goldstein, Kaczmarek, Pennington, & Schafer, 1992; Hanline, 1993). Also, adaptations of the activities for inclusive child effects their play and interactions (Campbell, Milbourne, & Silverman, 2002).

Despite the benefits of social development, the efficacy of inclusion alone on the social development of children with ASD is not entirely clear. Properties of social play and social interactions of children with ASD should be carefully examined to be able to understand the contribution of inclusive education. The purpose of this study is determining the properties of social play and social interactions of a child with ASD in the inclusive kindergarten.

2. Material & Methods

This section presents information of the research model, study group, data collection tools, and data analysis.

2.1. Research Model

One of the qualitative methods, case study, was used in this research. Case study is an intensive study about a person, a group of people or a unit, which is aimed to generalize over several units (Gustafsson, 2017). This model requires an intensive, systematic investigation of a single individual or a group in which the researcher examines in-depth data relating to several variables (Yin, 2003). It has been suggested that case studies could be used in studying complex phenomena in natural settings to increase understanding of them (Yıldırım & Şimşek, 2016; Yin, 2003).

This research is a descriptive study delving the social play and social interactions of a child with ASD in the inclusive kindergarten during free play time. Free play time activities of the child had been recorded using a camera to analyze behaviors and interactions of the child comprehensively. Video recordings helped researcher to stop, rewind and/or stop the situations to understand the interactions and play behavior for coding purposes.

Triangulation of the data is recommended for the case studies to improve reliability of the research (Yıldırım & Şimşek, 2016). Besides video recording, teacher's activity plans were analyzed for the adaptations to understand how these adaptations help the child, as a field research. Additionally, a semi-structured interview established with the mother to see inclusive education's effect on the child's social play and social interactions.

2.2. Study Group

Purposive sampling technique was used for sampling purposes. Purposive sampling technique is the intentional choice of a participant due to the qualities the participant possesses (Bernard, 2002). This technique has been used in qualitative research to identify and choose the information-rich cases for the most proper utilization of available resources (Patton, 2002). This study aimed to analyze the behavior of children with ASD in an inclusive kindergarten in one of the suburban city of Turkey. There were very limited number of children (n=3) with ASD registered to a kindergarten. Two of the kindergartens' physical conditions were available to make running observations during free play time. Both students' parents gave consent for the study. One of the students were chosen based on technical utilities and time constrictions regarding to study. The parental consent form was completed and official permissions were supplied for the study. It was verified with the teacher that her activity plans included adaptation strategy for the inclusive child.

2.3. Data Collection Tools

This study aims to describe the social play and interactions of a child with ASD. There were four data collection tools for this purpose. Two of them were social play behavior observation form and, social interaction and attitude observation form, used to describe the child's behaviors during free play time. The third one was an educational activity adaptations form, used for analyzing the content of the adaptations. The last data collection tool was semi-structured interview, conducted with the child's mother.

Social play is a group play that one child plays with one another child or more, with a common purpose (Parten, 1932; Rubin, 1977). Social play sub-dimensions, established and explained by Rubin (1989), were used for social play behavior observation. Social play category consists of three sub-dimensions, solitary, parallel, and group play. *Solitary play* can be defined when the child plays apart from other children at a distance more than one meter. The child is usually playing with toys that are different from those other children are using and centered on his/her own activity (Rubin. 1989). *Parallel play* can be defined when the child plays independently within one meter of other children with similar toys. However, when the child is very attentive to others while playing independently, one meter rule is not required (Rubin, 1989). *Group play* can be defined when the child plays with other children and there is a common goal or purpose to their activity. The children may be following one another in a functional or rough-and-tumble type of activity, or they may be organized for making

some material product, striving to attain some competitive goal, dramatizing situations of adult or group life, or playing formal games (Rubin, 1989).

Social interaction is an exchange between two or more individuals and is a building block of society (Goffman, 1974). Sub-dimensions of social interaction were defined as direction and formation (Knox, 1997; Kihlstrom, 2010; Duman & Koçak, 2013). The *direction* of interaction determines who the child communicates with (adult and peer). The *formation* of interaction shows how communication occurs (initiation and response). Social attitude in interactions discloses the child's emotional state during conversation and the attribute of conversation. Sub-dimensions of social attitude in interactions were defined as emotional state and attribute as well (Knox, 1997; Jung, Wranke, Hamburger & Knauff, 2014). The *emotional state* of the child defines a positive, neutral, or negative emotional shape and the *attribute* of conversation determines a repetition or progress in the content. Both the social interaction observation form and social attitude in interactions observation form was used in several studies in general and inclusive early childhood education settings to determine the properties of social interaction (Knox, 1997; Duman & Koçak, 2013). Using observation forms, data was collected in spring semester of 2018. Observations were completed in three months during four days of the week. The first free play time of the day was observed and each observation took 25 minutes approximately. The total recorded observation time was 1200 minutes.

Educational activity adaptations form was developed by Gökkaya (2018) for the content analysis of preschool/kindergarten level activity plans. Educational activity adaptations form consisted of educational, developmental, and adaptation properties. The educational properties section of the form seeks adaptations for social interactions and group play. In this study, 50 activity adaptations planned for the inclusive child and analyzed to understand the program support. Besides, semi-structured interview was established with the child's mother at the end of the semester. The interview aimed to understand whether inclusive kindergarten education had effect on child's out of school social play and social interactions.

2.4 Data Analysis

Video recorded observations were used to determine the child's play behaviors and interactions. Three types of patterns were followed: social play, social interaction, and social attitude. Time sampling was applied using five minutes intervals. The behaviors were coded using observation forms and frequency and percentage values were given. Four of the free play times of the child were observed by two researchers for inter-observer reliability. The inter-observer reliability was .90 for social play, .88 for social interaction and attitude. Four of the activity plan adaptations were analyzed by two researcher. The inter-observer reliability was .90 for the adaptations. Total of 45 minutes interview was transcribed in terms of social play and social interaction by two researchers. The inter-observer reliability was .90 and the researcher completed the remaining analyses by herself.

3. Results

This study aimed to analyze social play and social interactions of a child with ASD in an inclusive kindergarten education. Distribution of the social play behaviors of the child is presented in Table 1.

Table 1: Social play behaviors

Dimensions	**f**	**%**
Group play	22	09.2
Parallel play	46	19.2
Solitary play	67	27.9
N/A	105	43.7
Total	240	100

Social play behaviors of the child with ASD in inclusive kindergarten were analyzed under the dimensions of group, parallel and solitary play. There were 240 observations using five minutes intervals of time sampling. The child with ASD in an inclusive kindergarten education was observed 22 times in group play (9,2%), 46 times in parallel play (19,2%), 67 times in solitary play (27,9%). The child was not displaying any play behavior 105 times (43,7%) during free play time. According to Duman and Temel (2011) group plays consist of 70 % of the games of children during preschool education. Findings showed that because the child with ASD had limited interaction skills, the social play opportunities had been missed. Similar disadvantages were reported for children with ASD by several researchers (Dawson, Toth, Abbott, Osterling, Munson, & Estes, 2004). The children with autism were observed to engage primarily in solitary play activities even when they were with their peers in active and crowded places (Anderson, Moore, Godfrey, & Fletcher-Flinn, 2004; Kamps, Royer, Dugan, Kravits, Gonzalez-Lopez, Garcia, et al., 2002).

Properties of social interactions of the child with ASD in the inclusive kindergarten during free play time are presented in Table 2.

Table 2: Properties of social interactions

Property	**Components**	*f*	**%**
Direction	Adult	67	27.9
	Peer	38	15.8
	N/A	135	56.3
	Total	240	100
Formation	Initiating	23	09.6
	Responding	78	32.5
	N/A	139	57,9
	Total	240	100
Attitude	Positive	75	31.3
	Negative	29	12.1
	Neutral	70	29.2
	N/A	66	27.4
	Total	240	100

Attribute	Repetitive	52	21.6
	Progressive	53	22.1
	N/A	135	56.3
	Total	240	100

N/A: Not applicable

Social interaction properties of the child with ASD in the inclusive kindergarten were analyzed under the dimensions of direction, formation, attitude, and attribute. There were 240 observations using five minutes intervals of time sampling. The child with ASD in an inclusive kindergarten education was observed 67 times (%27.9) interacting with adults, 38 times (%15.8) interacting with peers, and 135 times (%56.3) in no interaction. The formation of these interactions was 23 times (%9.6) initiated by the child and 78 times (%32.5) the child was responding to an interaction. There was no interaction to be able to determine the formation for 139 times (%57.9). The attitude of the child was observed positive 75 times (%31.3), negative 29 times (%12.1), and 70 times (%29.2) neutral during the interactions. The attitude was not available for coding purposes for 136 times (%56.6). The attribute of the child's interactions were 52 times repetitive (%21.6) and 53 times (%22.1) progressive. There was no interaction to be able to determine the attribute of the child for 139 times (%57.9).

The results indicated that the child with ASD in the inclusive kindergarten classroom mostly interacted with the teacher. These interactions were also mostly started by the other companion. Even though the child's attitude was not negative most of the time, the attribution of the child was considerably repetitive. Similarly, Hilton and Liberty (1992) stated in their study that most of the interactions in inclusive settings were instructional in nature and occurred between the students with special needs and their teachers. Fewer than the 5% of the interactions were related to companionship or friendship activities with the students' typical peers.

It has been required and collocated by the Ministry of Education that all educational activities implemented in inclusive kindergartens should be adapted in regards to special children's needs. Social aspects of these adaptations are supposed to help these children to develop their social skills. Social properties of activity adaptations planned by the teacher for the child with ASD are presented in Table 3.

Table 3: Social properties of activity adaptations

	Poor		**Fair**		**Good**	
Property	*f*	%	*f*	%	*f*	%
Supports functional engagement to the activity	18	36	20	40	12	24
Supports collaboration with peers	34	68	11	22	05	10
Supports interaction with peers	29	58	13	26	08	16
Supports social and emotional development	22	44	20	40	08	16
Supports reaching targets and goals	14	28	30	60	06	12

n=50, %100

The social properties of the activity adaptations (*n*=50) were analyzed under five sub-dimensions. When we analyze the first sub-dimension 'supports functional engagement

to the activity', the activity plan adaptation met the requirement 18 times (%36) at poor level, 20 times (%40) at fair level, and 12 times (%24) at good level. The second sub-dimension 'supports collaboration with peers' met the requirement 34 times (%68) at poor level, 11 times (%22) at fair level, and 5 times (%10) at good level. The third sub-dimension 'supports interaction with peers' met the requirement 29 times (%58) at poor level, 13 times (%26) at fair level, and 8 times (%16) at good level. The fourth sub-dimension 'supports social and emotional development' met the requirement 22 times (%44) at poor level, 20 times (%40) at fair level, and 8 times (%16) at good level. The fifth sub-dimension 'supports reaching targets and goals' met the requirement 14 times (%28) at poor level, 30 times (%60) at fair level, and 6 times (%12) at good level.

The adaptation of the activities applied in inclusive early childhood settings are in the responsibility of the classroom teacher. These adaptations became compulsory in 2013 by the Ministry of Education. There have been very few studies delving the content and the quality of these adaptations (Temiz & Parlak Rakap, 2018; Gökkaya, 2018). The results of this study are consistent with previous research indicating that the adaptations made by the classroom teacher need improvements to support social development of the child with ASD.

A semi-structured interview was made with the mother. The results of this interview indicated that the child preferred mostly playing alone out of the school, especially at home. The mother also indicated that the child showed less aggressive attitude with the peers in the social settings. The interview showed that the child's social play involvement was very limited yet, the child's attitude in social games or social interactions were improved. It can be concluded that inclusive kindergarten education has some benefits on the child's social behavior.

4. Discussion

This study aimed to analyze the social games and social interactions of a child with ASD in the inclusive kindergarten education. It has been observed that the child preferred to play alone. But, when the child engaged in play with peers, the play mostly became parallel play. There was also a considerable amount of non-play behaviors. Various studies also showed that the children with ASD in inclusive classrooms mostly prefer to play alone and show parallel play behavior places (Dawson, Toth, Abbott, Osterling, Munson, & Estes, 2004; Anderson, Moore, Godfrey, & Fletcher-Flinn, 2004). The purpose of inclusive education is to improve interactions among peers to support their social behavior. This study put forth that inclusive education has positive impact on social interactions for the child with ASD. Still, the child with ASD in the inclusive classroom mostly had social interactions with adults and these interactions were also started by the teacher. The peer interaction between the child with ASD and the others were very limited. The peers and the child with ASD should be involved in the group play using activity adaptations techniques. This might help the increase the awareness of the typical developing children towards special needed children. The teacher should

react as a catalyzer in the interaction between the typical developing children and the children with special needs instead of direct interaction with the special needed children. This study indicated that even though there were limited number of interactions among peers, the child with ASD mostly has positive or neutral attitudes towards others. The positive interaction between typical developing children and the child with ASD also improves the emotional stability of the child.

Repetition in the interaction of children with ASD is an expected behavior. The children with ASD missing the opportunity of social games and social interactions, shows that the attribute becomes more repetitive instead of being progressive. Guralnick, Neville, Hammond, and Connor (2007) stated that limited contented interaction skills of special needed children decreases the progressiveness of the interaction. However, it should be remembered that the repetition is useful in improving the interaction and learning. That is why the inclusive kindergarten education is still beneficial for the social development of the child with ASD.

One of the objectives of inclusive kindergarten education is to use the advantages of typical developed children in the learning of children with ASD. It is also expected that the adaptation of the activities to the children with ASD will help to reach this objective. The inclusive kindergarten education has a positive and beneficial impact on the social play and social interactions of the children with ASD. As a conclusion, the features of social play and social interactions of the child with ASD in an inclusive kindergarten education would contribute to the inclusive classroom teachers and researchers, as indicated in this study.

References

American Psychiatric Association. (2000). *Diagnostic Statistical Manual*, 4th edition, Text Revision. APA; Washington, D.C.

Bernard, H.R. (2002). Research methods in anthropology: Qualitative and quantitative approaches (3rd ed.). Walnut Creek, CA: Alta Mira Press.

Buysse, V., Goldman, B. D., & Skinner, M. L. (2002). Setting effects on friendship formation among young children with and without disabilities. *Exceptional Children, 68*(4), 503-517.

Campbell, P.H., Milbourne, S.A., & Silverman, C. (2002). Philadelphia inclusion network, participant materials. *Child and Family Studies Research Programs*:PA.

Carr, E.G., & Darcy, M. (1990). Setting generality of peer modeling in children with autism. *Journal of Autism and Developmental Disorders*, 20(1), 45-59.

Dawson, G., Toth, K., Abbott, R., Osterling, J., Munson, J., & Estes, A. (2004). Early social attention impairments in autism: Social orienting, joint attention, and attention to distress. Developmental Psychology, 40, 271–283

Duman, G. (2016). *Okul öncesi eğitimde beden eğitimi ve oyun*. Ankara: Eğiten.

Duman, G. & Koçak, N. (2013). Anaokulu kaynaştırma sınıfında yer alan özel gereksinimli bir çocuğun sosyal oyun ve sosyal iletişim özellikleri. *Cumhuriyet International Journal of Education*, v.2(3), p.99-108.

Duman, G. & Temel, Z.F. (2011). Türkiye ve Amerika Birleşik Devletlerinde anasınıfına devam eden çocukların oyun davranışlarının incelenmesi. *Kırıkkale Üniversitesi Sosyal Bilimler Dergisi*, v.1(1), p.279-298.

Gallagher, D., Heymsfield, S.B., Heo, M., et al. (2000). Healthy percentage body fat ranges: an approach for developing guidelines based on body mass index. *American Journal of Clinical Nutrition*, 72, 694-701.

Goldstein, H., Kaczmarek, L., Pennington, R., & Shafer, K. (1992). Peer-mediated intervention: Attending to commenting on, and acknowledging the behavior of preschoolers with autism. Journal of Applied Behavior Analysis, 25, 289-305.

Goffman, E. (1974). Frame analysis: An essay on the organization of experience. Cambridge, MA, US: Harvard University Press.

Gökkaya, Y. (2018). Okul öncesi eğitimde kullanılan eğitsel etkinlik uyarlamalarının çeşitli değişkenlere göre incelenmesi. (Yayımlanmamış Yüksek Lisans Tezi), G.Ü. Eğitim Bilimleri Enstitüsü: Ankara.

Gustafsson, J. (2017). Single case studies vs. multiple case studies: a comparative study (Thesis). Halmstad, Sweden: Halmstad University.

Guralnick, M.J., Neville, B., Hammond, M., & Connor, R. (2007). The friendships of young children with developmental delays: A longitudinal analysis. *Journal of Applied Developmental Psychology*, 28, 64-79.

Grenot-Scheyer, Ilene S. Schwartz, & Beth Harry. (1997). *Making friends: The influences of culture and development* (Eds.), (pp. 65-80). Baltimore, MD: Paul H. Brookes.

Hanline, M.F. (1993). The inclusion of preschoolers with profound disabilities: An analysis of children's interactions. *Journal of the Association for Persons with Severe Handicaps,* 18, 28–35.

Harrower, J.K. & Dunlap, G. (2001). Including children with autism in general education classrooms. *Behavior Modification*, 25(5), 762-784.

Hilton, A., & Liberty, K. (1992). The challenge of ensuring educational gains for students with severe disabilities who are placed in more integrated settings. Education and Training of the Mentally Retarded, 27, 167–175.

Hundert, J., & Houghton, A. (1992). Promoting social interaction of children with disabilities in integrated preschools: A failure to generalize. *Exceptional Children*, 58(4), 311- 320.

Hunt, P. & Goetz, L. (1997). Research on inclusive educational programs, practices, and outcomes for students with severe disabilities. *Journal of Special Education*, 31, 3-29.

Jung, N., Wranke, C., Hamburger, K., & Knauff, M. (2014). How emotions affect logical reasoning: evidence from experiments with mood-manipulated participants, spider phobics, and people with exam anxiety. *Frontiers in Psychology*, 5, 570. http://doi.org/10.3389/fpsyg.2014.00570

Kamps, D., Royer, J., Dugan, E., Kravits, T., Gonzalez-Lopez, A., Garcia, J., et al. (2002). Peer training to facilitate social interaction for elementary students with autism and their peers. Exceptional Children, 68, 173–187.

Kihlstrom, J. F. (2010). *The person-situation interaction*. In D. Carlston (Ed.), Oxford handbook of social cognition (pp. in press). New York: Oxford University Press.

Kohler, F.W., & Strain, P.S. (1993). The early childhood social skills program: Making friends during the early childhood years. *Teaching Exceptional Children*, 25, 41-42.

Knox, S. H. (1997). Development and Current Use of the Knox Preschool Play Scale.
L. D. Parham & L. S. Fazio (Ed.), Play in Occupational Therapy for Children (s. 35-51). St. Louis, MO: Mosby.

Leseman, P.P., Rollenberg, L., & Rispens, J. (2001). Playing and working in kindergarten: cognitive co-construction in two educational situations. *Early Childhood Research Quarterly*, 16(3), 363-384

MoNE, (2013*). Early childhood education program*. Ministry of Education Press: Ankara.

Overton, S., Rausch, J.L. (2002). Peer relationships as support for children with disabilities: An analysis of mothers' goals and indicators for friendship. *Focus on Autism and other Developmental Disabilities*, 17(1), 11-29.

Parten, M.B. (1932). Social participation among pre-school children. *The Journal of Abnormal and Social Psychology*, 27(3), 243-269.

Patton, M. Q. (2002). *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, CA: Sage.

Richardson, P., & Schwartz, Ilene. (1998). Making friends in preschool: Friendship patterns of young children with disabilities. In Luanna H. Meyer, Hyun-Sook Park, Marquita.

Rubin, K.H. (1977). Play behaviors of young children. *Young Children*, 32(6), 16-24.

Rubin, K.H. (1989). The Play Observation Scale (POS). University of Waterloo.

Shearer D.D., Kohler F., Buchan K., McCullough K. (1996). Promoting independent interactions between preschoolers with autism and their nondisabled peers: An analysis of self-monitoring. *Early Education and Development*. 7:205–220.

Sipes M., Matson JL, Horovitz M. (2011). Autism spectrum disorders and motor skills: The effect on socialization as measured by the baby and infant screen for children with autism traits (biscuit). *Developmental Neurorehabilitation*, v.14, pp. 290-296.

Temiz, Z. & Parlak Rakap, A. (2018). Uyarlama çalışmaları ile kaynaştırma için hazırlanmak. *İlköğretim Online*, v.7(3), p.1738-1750.

Wolfberg, P.J. (1995). Enhancing children's play. In K.A. Quill (Ed.), *Teaching Children with Autism: Strategies to Enhance Communication and Socialization* (pp. 193-218). Albany, NY: Delmar Publishers.

Yıldırım, A. & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri*. Ankara: SeçkinYayıncılık.

Yin, R.K. (2003). *Case study research: design and methods*. 2nd edn. Thousand Oaks: Sage.