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**KAYNAŞTIRMA / BÜTÜNLEŞTİRME EĞİTİM ORTAMINDA OTİZM
SPEKTRUM BOZUKLUĞU OLAN ÖĞRENCİLER: ENGELLER VE ÇÖZÜMLER**

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Öz

Otizm Spektrum Bozukluğu (OSB) olan öğrencilerin genel eğitim sınıflarında aldıkları eğitimin bu öğrencilerin davranışların olumlu yönde gelişmesinde büyük rol oynadığı bilinmektedir. Kaynaştırma eğitimine OSB'li öğrencilerin dâhil edilmesi alanyazında tartışmalı bir konudur. Çünkü kaynaştırma eğitimine OSB'li öğrencileri dâhil etme süreci, eğitimin en karmaşık alanlarından biridir. Bu çalışma, kaynaştırma eğitiminde OSB'li öğrenciler ile çalışan tüm paydaşlara, engelleri açıklayarak ve bu öğrencilerin başarılı bir şekilde dâhil edilmelerine yönelik çözümler sunarak alana katkıda bulunmayı amaçlamaktadır. Bu amaç doğrultusunda araştırmada literatürde yer alan çalışmalar derinlemesine incelenmiştir. Araştırma bulgularına göre OSB'li öğrencilere sunulan kaynaştırma eğitiminin etkili olabilmesi için gerekli olan birkaç faktör vardır. OSB'li öğrencilerin genel refahı, okul personeli, tipik olarak gelişmekte olan akranlar, aile katılımı, fiziksel ve sosyal çevre, müfredat ve geçişler OSB'li öğrencilerin tam olarak kaynaştırma eğitimine dâhil edilmesinde anahtar rol oynamaktadır. Kaynaştırma eğitimin başarılı olabilmesi için bu faktörlerle ilgili herhangi bir engelin olmaması gerekir. Bu çalışmada, başarılı kaynaştırma eğitimin engelleri ve olası çözümleri sunulmuştur.

Anahtar Kelimeler: Otizm spektrum bozukluğu; kaynaştırma eğitimi; engeller; çözümler

**STUDENTS WITH AUTISM SPECTRUM DISORDER IN INCLUSIVE
EDUCATIONAL SETTINGS: BARRIERS AND SOLUTIONS**

Abstract

It is well-known fact that education students with Autism Spectrum Disorder (ASD) receive in general classroom plays a great role in their behaviors to develop positively. However, including students with ASD in inclusive

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education is controversial issue in educational setting. This is because the continuum of including students with ASD in inclusive education is one of the most complicated areas of education. For this reason, this study is aimed to contribute to all stakeholders working with ASD in inclusive setting by explaining barriers and offering solutions about successful inclusion of these students. In accordance with this purpose, studies in the literature were reviewed in depth. As the result of the research findings, there are several factors of inclusion which are essential to access fully inclusive education for students with ASD in general classroom. According to literature, general well-being of students with ASD, school staffs, family involvement, typically developing peers, physical and social environment, curriculum and transitions play key role about fully inclusion of students with ASD. In order to inclusive education to be successful, there should not be any barriers regarding these factors. In this study, barriers and its potential solutions of successful inclusive education is presented.

Keywords: Autism spectrum condition; inclusive education; barriers; solutions.

INTRODUCTION

Even though the number of students Special Educational Needs (SEN) has an education in inclusive settings, there are still some drawbacks of inclusive education for students with disability. In particular, including students with ASD in mainstream education is controversial issue in educational setting. As Morewood et al. (2011) state the continuum of including students with ASD in inclusive education is one of the most complicated areas of education. There are some justifications for including students with ASD in inclusive educational settings. Although it is true that the number of students with ASD who receive their education in inclusive classroom has dramatically increased, the continuum of facilitating their participation and learning remains complicated and unperceived in the field of education (Humphrey & Lewis, 2008). According to Fleming et al. (2015), students with ASD often face difficulties in fundamental social skills such as social interaction, communication and imagination. Moreover, some researchers claim that mainstream schools are anxiety-provoking settings for many students with ASD because of social exclusion and isolation, loneliness and bullying (Carrington & Graham, 2001). To hinder these negative outcomes, some precautions should be taken in general classrooms according to literature (Wall, 2004, Costley, 2012; Kluth, 2010, Bowen & Plimley, 2008). For this reason, in this study, barriers and potential overcomes of inclusive education for students with ASD was discussed in terms of literature. Accordingly, in this study, these following questions we seeked: a) What are the barriers to inclusion of students with ASD in educational settings? b) How these barriers might be overcome?

Autism Spectrum Conditions and Inclusive Education

Autism Spectrum Condition (ASD) is a complicated developmental disability which impacts on individuals in every parts of life (Costley, 2012). ASD is a pervasive developmental disability that affects individuals in all areas of life (Shelly & Golubock, 2007). ASD is usually first diagnosed in childhood with many of the most obvious signs presenting approximately 2-3 years old. Autism's characteristic features include social communication difficulties, problematic social interaction and lack of social imagination and flexible thinking skills. However, although individuals with ASD are categorized by these features, ASD might reveal itself quite differently in different individuals (Ploog et al., 2012). In other words, individuals with ASD can be different from each other, although they have the core features of autism (Fleming et al., 2015). For instance, some children with ASD may be non-verbal and do not possess adequate speech to communicate at the low-functioning end of the spectrum, whereas some children with ASD in fact have advanced speech but have pragmatic deficiencies and difficulties

in understanding jokes and tropes at the high-functioning end (Sampath et al., 2013). This means individuals with ASD differ from each other in both characteristics and degree of functioning.

Another significant term which is related to this study is “inclusive education”. According to Booth et al. (2003), one of the meanings of inclusive education is about educating students with disability or those classified as “having special education” in general classrooms which is about preventing of barriers to participation and learning for all students, students and adults. Ainscow et al. (2006) mention that there are two types of inclusion; one of the descriptions prefers that students with SEN should attend mainstream settings, another description of inclusion focuses on diversity of students and the responsiveness of all students’ needs. In this regard, inclusion refers to all forms of diversity as well as disability. In other words, inclusion is about educating students with disability and students who are classified as ‘having special educational needs’ in general classrooms (Ainscow et. al., 2006). Furthermore, it is a significant point that inclusion contains transforming the classroom to meet requirements of all students and it is a mainstreaming ideology that mainly aims to adapt the school environments for all students (Goodall, 2015). In this regard, students with a disability attend the same schools as their typically developing peers. According to Lindsay (2003), the purpose of inclusion in educational settings is to remove all barriers, prevent discrimination and advance potential outcomes for all students.

The medical model and social model of disability, which provide constructive ways of considering disability, are associated with inclusive education. As Mittler (2000) mentions, inclusion represents basically a different way of thought about origin of behaviour and learning difficulties of students. One of the models is the medical model of disability, which interprets students with disability as ‘faulty’ and most of students with a disability need to remediate impairments (Baglieri & Shapiro, 2012). In other words, to educate students with a disability, they should be fixed and changed to adapt in mainstream settings. Similarly, Pfeiffer (2002) states that according to the deficit model, individuals with a disability have a deficit and the deficit must be fixed to make the individuals with disabilities ‘normal’. Put simply, the medical model of disability is based on helping students with SEN to fit into the educational setting systems.

On the other hand, the social model of disability is one of the important models because the point of view is radically different from the medical model. The social model of disability is underpinned by the idea of inclusive education in mainstream schools (Baglieri & Shapiro, 2012). In this regard, restructuring of the school environment is seen as a reflection of the social model of disability, which prioritises the value of individuals with disability (Mittler, 2000). This means that schools should be designed to accommodate students with SEN in mainstream schools. In addition, Oliver (2013) mentions that the social model of disability is an idea in which society must change its perspective to remove disabling barriers. Consequently, in the medical model of disability, modifying the school environment is not seen as an assumption to accommodate any specific students and meet all students’ needs (Mittler, 2000). In contrast, according to the social model of disability, every school needs to be designed to include all students in mainstream schools (Mittler, 2000).

Inclusive education has specifically become a vital issue for educating students with ASD (Leach & Duffy, 2009). This is because researchers investigated the outcomes of inclusion for students with ASD and found that students with ASD who were included in mainstream schools demonstrated increases in social and academic skills (Çakıcı, 2020; Leach & Duffy, 2009; Yates, 2016). In other words, educating

students with ASD plays an essential role due to its positive outcomes. Compared with the past, 30 years ago students with ASD were frequently excluded from mainstream schools as being ‘neither educable nor trainable’, however, now many students with ASD are able to benefit from more mainstream settings, depending on the needs of students (Ferraioli & Harris, 2011). In addition, over the last decade, particularly, students with ASD have dramatically increased in mainstream settings (Emam & Farrell, 2009). It is reported that there are over 500,000 individuals with ASD in Turkey and over 100,000 children with ASD who are at the age of compulsory education (Çakıcı, 2020). According to the data of the Ministry of Health of the Turkish Grand National Assembly, there are 38,661 individuals with autism spectrum disorder in total, 31,388 of whom are boys and 7,273 are girls. It is seen that the greatest majority is in the 0-9 age range (26,365 people) (TBMM, 2020). Even though a greater number of students with ASD is accommodated in mainstream classrooms, this does not mean that inclusion of students with autism is completely successful. There are still many obstacles for students with ASD to access full inclusion in educational settings and the barriers can vary according to the economic and cultural presence of typically developing individuals; eventually, inclusivity needs a powerful community commitment (Dillenburger, McKerr, Jordan, Devine & Keenan, 2015).

Potential Barriers and Solutions

1) General Well-Being of Students with ASD

In general education classrooms, students with ASD may have barriers in variety area. As Costley (2012) state that students with ASD face challenges in mainstream schools because of their characteristic features such as sensory processing, different learning style, lack of communication and social skills, specific interest and routines. For these reasons, these features might impact on students with ASD in a negative way in terms of academic and social aspects.

First of all, one of the major challenges of students with ASD might be sensory issue. As Wall (2004) mentions that they may have sensory and motor difficulties which are areas of touch, vision, hearing, taste and smell. As an example is that they might be afraid of certain objects, equipments or places due to the potential of being touched (Costley, 2012). However, it is inevitable being touched by peers in mainstream school which is problematic for them. In addition, auditory disturbance is another sensory issue such as noise level in the classrooms. Bright or flickering lights might lead to visual disturbance of students with ASD and also they might be sensitive to specific colours. In addition, students with ASD might complain about smells of the classroom and school. Therefore, sensory and motor difficulties can influence learning and concentration on tasks in a negative way (Canavan, 2014).

Secondly, as mentioned above, some students with ASD might have learning difficulties and differences. According to Costley (2012), these differences and difficulties impact on their academic performance. They might have difficulties generalizing tasks or contexts, interpreting ideas and new information and focusing on insignificant or small details (Costley, 2012). Furthermore, Kluth (2010) claims that there is a miscomprehension because students with ASD might not have difficulty in terms of academic skills; they face challenges about general education environment. They might have difficulty performing academically due to the way in which the knowledge is presented (Kluth, 2010). As a result, these learning difficulties and differences may be problematic for students with ASD in mainstream schools.

Next, students with ASD might have language difficulties which affect their communication skills. As Costley (2012) mention that they have difficulties such as expressive or/and receptive language, deprivation of understanding others, processing complicated or abstract verbal language. They have lack of conversational skills, facial expressions and body language. Therefore, they might handle complex language environment without visual clues (Morewood et al., 2011). It is clear that these difficulties can prevent communication and interaction among students with ASD and typical developing peers in general education classroom.

Lastly, most individuals with ASD display with limited repetitive and stereotypical behaviour, interest and routines (Costley, 2012). For instance, students with ASD might be interested in specific tools excessively. These sorts of interest might lead to problematic situation in mainstream schools. This is because the special tools which students with ASD bring to classroom are not generally tolerated by their teachers. When teachers do not allow children with ASD to have their specific objects in the classroom, this situation can be stressful to these children (Kluth, 2010).

As Bowen and Plimley (2008) mention that in order to eliminate the barriers, some changes and strategies might be chosen. First of all, in mainstream school, teachers might take some precaution to reduce sensitivity difficulties of students with ASD. Environmental adaptation should be considered. For instance, students with ASD should seat in a calm part of the classroom. If these students demonstrated signs of anxiety because of the noise of the classroom, reducing classroom noise or quiet room which prepare for them might be useful (Kluth, 2010). In addition, using short and clear oral instruction or showing instructions with symbols may be beneficial. Using perfume which the student cannot stand must not use in the classroom. In brief, teachers should identify and know the student's sensory difficulties very well to eliminate sensory issue (Canavan, 2014).

Secondly, as mentioned before, students with ASD learn differently; therefore, different strategy might be required to support them in mainstream classroom. Firstly, visual schedule and timetables should be provided to show the next activities which allow them more independent (Kluth, 2010). In other words, presenting information visually might assist students. Secondly, avoiding abstract terms and figures, sarcasm might be useful to understand the context. In addition, giving regular routine instructions and being predictable and reliable is crucial to help students to adopt the lessons. Lastly, differentiating the National Curriculum which is explained in curriculum section is also important to support students with ASD (Bowen & Plimley, 2008).

In order eliminate communication difficulty which is another concern, using gestures and visual supports can be useful (Töret, 2018). In addition, using Augmentative and Alternative Communication (AAC) devices such as Picture Exchange Communication System (PECS), sign language and, communication books can assist effectively students with ASD. In particular, PECS plays key role as a visual support. It based on the principle of involving the child in communication by offering them opportunities to request items, which is not a skill students with ASD feel they have a need for. PECS purposes to teach students with ASD to initiate communication (Jones, 2002). As it is seen that the use of PECS might assist students to understand words' meaning and may improve speech.

Several supports might provide to reduce repetitive and stereotype behaviour. According to Wall (2004) more structured environment might assist reduce anxiety. Self-regulation skills which increase an individual's insight might help them to control their behaviour. In addition, special interest and

obsessions might be used to improve student's skills and encourage socializing in the classroom (Gunn et al., 2016). For instance, if a student with ASD is interested in history, this student can join history club. In these ways, it is possible to reduce repetitive and stereotype behaviour in time.

2) School Staffs

School staff attitudes and training are the critical factors to working with students with ASD. As Park and Chitiyo (2011) mention that their attitudes and received training can play a key role in effecting the inclusion of students with ASD in general classrooms. The role of school staffs and challenges that they face should be considered in order to overcome the barriers.

Teachers and teaching assistants (TAs) face challenges when they are responsible for the education of students with ASD in the classrooms. As Hammel (2012) states that teachers and teaching assistants in mainstream schools are concerned about the idea of inclusion due to their deprivation of education and teaching practice students with ASD. This is because teachers and other school staffs are not prepared to meet the personal learning needs of students with disability. In addition, a variety number of training programs do not include a course in working with young people with disability (Chang et al., 2005). In other words, they might be not well-educated in terms of educating students with disability. For this reason, they can confront some problems in the classroom. Moreover, they might face challenges motivating students with ASD, managing their behaviour and understanding their special interest, obtaining, maintaining and refocusing their interest and attention (Morewood et al., 2011). As a result, teachers and TAs may experience several tensions because of poor understanding of ASD among classroom teachers and the deprivation of awareness of the pedagogical approaches.

Another concern is about the influence of TAs in the classroom. TAs have usually a positive effect on students with ASD, accordingly teachers, typically developing peers and families (Howes, 2003). However, the deployment of TAs is controversial areas in mainstream classrooms. TAs might have roles and responsibilities more than teachers in the classroom which can reduce students' attention from teachers (Blatchford, Bassett, Brown & Webster, 2009). In addition, teaching assistants might discourage students from studying independently (Howes, 2003). Therefore, the use of TAs might have negative influences of social and academic inclusion of students with ASD (Howes, 2003). Lastly, support for specific students might be stigmatising in a certain situation (Howes, 2003). Consequently, training and attitudes of teachers and TAs and the deployment of TAs plays critical roles in order to access full inclusion.

In order to overcome the barriers, fostering school staff's knowledge and skills about any student can play essential role in mainstream schools. As Jones (2006) mentions that when working with any student, it is essential for school staffs to know the rationale of their work, and to observe and assess the students' response to interventions. This is because notion of rationale provides teaching staff to amend their work to adapt the student's changing responses and requirements (Jones, 2006). Furthermore, school staffs who work with the same students with ASD should exchange opinions. Otherwise, if school staffs do not have knowledge about language, interest and intellectual level of student with ASD, the student might not benefit from implementations which are not appropriate to them (Jones et al., 2009). For these reasons, not only student's teachers but also all school staffs should be given some awareness training.

All school staff should know about ASD and how to meet the needs of students with ASD (Jones et al., 2009). In the United Kingdom, The Department for Children, Schools and Families (DCSF, 2009) presented the Inclusion Development Program (IDP) as a part of Government policy which aim is to support to teachers, TAs and trainee teachers. IDP provides school staffs knowledge and skills to improve their qualification in working with students with SEN. In addition, written materials, CDs and DVDs should be developed to enhance knowledge and skills by school staffs. In Service trainings should be given guidance on "good practice in autism" to all school staffs (Jones et al., 2009). Otherwise, they may not understand the student's needs and abilities, it might be impossible to access full inclusion for students with ASD.

3) Typical Developing Peers

Having interaction with same age classmates play key role for all students; however, students with ASD have difficulty in terms of peers understanding and attitudes towards them in general classroom. In this regard, students with ASD are often bullied and excluded by typical developing peers (Morewood et al., 2011). This is because the characteristic features of students might influence the understanding and the attitudes of typically developing peers. For instance, students with ASD face challenges in social situations; specifically, they do not seem to listen to other individuals (Carrington & Graham, 2001). Another example is that they might have difficulties making eye contacts and using facial expressions (Reid & Batten, 2006). For these reasons, students with ASD might be perceived as "odd" by their peers (Lever, 2011). In other words, peers might not understand why students with ASD are different than them. The attitudes of teachers towards students with ASD might affect peer understanding as well. According to Morewood et al. (2011), peers might be hurt because of the extra interest given to the students with ASD, and they might also resent if their social progression are ignored by teachers. Thus, peers might feel nervous and the attitudes might be bias towards students which prevent successful interaction in the classroom.

There might be some negative outcomes of inclusion due to peer attitudes such as bullying. As Humphrey and Symes (2010) claim that students with ASD might be specifically at risk of bullying due to their lack of social skills. The types of bullying can vary involving name-calling, physical violence or social isolation. The potential influences of bullying on students with ASD are heartrendingly obvious (Reid & Batten, 2006). Being bullied can affect development of students with ASD in a negative way. Self-esteem, social and academic development and mental health are some negative effects of bullying (Reid & Batten, 2006). All these considered, peer understanding and attitudes play crucial role to access full inclusion for students with ASD.

Positive peer attitudes, social interaction and acceptance are essential to a student's social and academic development. In addition, positive relationship with peers plays an important role in order to overcome inclusion barriers. For this reason, at first, peer awareness education is one of the significant factors in mainstream settings in order to eliminate peer barriers. As Maich and Belcher (2012) mention that peer education for students with ASD might be practically achieved in the classroom environment; therefore, peer awareness, teaching students about disability and peer support can provide typically developing peers. As a result, peer awareness can be seen as a corner stone to access full inclusion amongst students in the classroom.

“The Circle of Friends” is a practical tool which is designed to constitute network of support by creating links between typical developing peers and a student with ASD who is vulnerable socially and its aim is to create companionship between students with ASD and their peers (Jones, 2002). This means that it is possible to overcome prejudicial behaviours toward the students by building relationship. In the process of the strategy, peer group are encouraged to develop their perceptions about difficulties and differences of students with ASD (Dubin, 2007). Before implemented the strategy, school’s educational psychologist should meet with the typical developing peers in order to give information and discuss the approach with the whole class, and then volunteers should be decided to create a “Circle of Friends” (Jones, 2002). In the process, peers start social contact with the peers and also they share their experiences in order to improve the situation in the meetings (Dubin, 2007). It is reported that peers who had stated negative feelings and attitudes towards the child, have altered their perceptions and attitudes and also they have supported and become a friend of the students. By using this strategy, firstly, peers can understand why students with ASD are different than them; secondly, peers can emphasize and change their perception and attitudes towards them; lastly, they can start to support them (Jones, 2002).

Other potential strategies to foster peer support are peer buddy and peer mentors. In this process, peer buddy should have a conversation with the child, play with him/her in the same game, and spend time together in the playground. It is an effective strategy to improve social interaction between students with ASD and typical developing peers (Day, 2011). This is because as Betts et al. (2007) claim that peer buddy strategy can prevent exclusion and/or bullying, and also the strategy strengthens companionship between students. Before starting the implementation, peer buddies should be informed and trained about ASD. Peer mentors and peer buddies have a similar duty. Peer mentors are assigned to support students in the playground. Even though it seems as a beneficial strategy, controlling peer buddies and peer mentors all the time might not be possible (Perepa, 2011). In other words, peer buddy and peer mentors might not understand the significance of the issue because they are not adult.

4) Family Involvement

It is well-known fact that families know the weaknesses and strengths of their children with SEN. Family-school staffs relationships and family involvement play critical role in order to reach successful inclusion for students with ASD (Garbacz et al., 2016; Benson, 2014). The relationship between teachers and families of the students with ASD is a very critical role in the success of mainstream education. Providing a quality education for students with ASD depends on the cooperation of families and teachers (Friend & Bursuck, 2006). Families help teachers to get to know about their children with ASD, interactions at home and outside of school, and learn about the students' learning styles. Thus, teachers can make adaptations in teaching according to the information received from the family (Mastropieri & Scruggs, 2004). Researches indicate that quality family-school staffs relationships can support students' academic and behavioral outcomes (Minke et al., 2019).

However, due to the problems caused by families of students with ASD, the education of these children can be negatively affected. Some of these problems arise from the families' lack of education, lack of knowledge and difficulty in accepting the situation of the child. Another problem is that some families do not want to participate actively in the education of their children. In addition, some families allow their children to spend time on television and computers without supervision.

In order to eliminate these barriers, autism spectrum conditions should explain in depth to all families who have children with ASD. Families of children with ASD need special knowledge and skills on autism and its treatment based on scientific foundations. Therefore, the families should be educated about these issues (Delmolino & Harris, 2012). Additionally, psychological support should be provided to families to cope with the process they are going through (Farmer & Reupert, 2013)

5) Physical and Social Environment

In mainstream schools, a well-organized classroom is crucial factor for students with ASD in order to meet their needs in a structured way (Kluth, 2010). However, several numbers of challenges are associated with disorganisation of learning environment in ordinary classroom (Costley, 2012). For this reason, students with ASD might feel uncomfortable because of physical environment of general school classroom.

There might be several obstacles in the classroom for students with ASD. Firstly, many students with ASD are visual learners (Kluth, 2010). Therefore, lack of written rules and/or pictorial sign in the classroom leads to increase anxiety (Wall, 2004). For instance, they might not understand and identify what to do in the classroom because of deprivation of visual clues. The situation might make students with ASD anxiety and uncomfortable in the classroom.

As mentioned before, there are lots of factors which prevent inclusion for students with ASD in mainstream schools. According to Mesibov and Shea (1996), many students with ASD find the noise of general classrooms distracting. In addition, the colour of classroom might be annoying for them. According to Attwood (2007), some students with ASD are oversensitive to light. In particular, fluorescent lighting, which is used generally in general education classroom, might influence student's learning, behaviour and the ease level (Kluth, 2010). Secondly, loud and multiple sounds might be distressed for students with ASD. For these reasons, young people with ASD tend to equilibrate in uncomfortable classroom rather than interacting with typically developing peers in order to handle over stimulating school environment (Hammel, 2012). This shows that physical environment may prevent students with ASD concentrating classroom environment.

Besides the barriers of physical environment in mainstream classroom, social environment is an essential factor for students with ASD. As Wilkerson (2014) states that many students with ASD have poor social skills which prevent positive peer engagement in inclusive classroom. This is because they might not easily advance social experiences and many students are often isolated in mainstream classrooms (Chamberlain et al., 2007). Moreover, they are often rejected and excluded socially by peers (Hammel, 2012). Lastly, Goodall (2015) mentions that unstructured and ambiguous social times such as lunch time or break time might be annoying for students with ASD as well. Without creating effective friendly school environment, these negative factors might increase anxiety of these students in the classroom.

As mentioned before, students with ASD need a well-structured classroom to feel comfortable in mainstream school. As Morewood et al. (2011) mention that both physical and social environment should be considered to advance 'autism-friendly environment'. For this reason, students with ASD need a structured area, routine, low distractibility and verbal cues to feel comfortable in the classroom (Wall, 2004). It is an important point that while changing environment, students with ASD's needs should be considered in depth.

In order to access full inclusion for students with ASD, changing classroom environment might be beneficial. First of all, students with ASD have difficulties unwritten the classroom should be structured with obviously described parts which are demonstrated by written and/or pictorial sign. For instance, visual timetables and written schedules, which might reduce uncertainty, can be useful to understand the next activity (Wall, 2004). In other words, useful information should be visually clear. Secondly, Perepa (2011) mentions that a higher level of support in unstructured time such as lunchtime or break time might be provided. A quiet space might be created to go when a student with ASD want to stay alone, and also a quiet area for working and teaching may constitute when the student does not able to attend into mainstream classes. Lastly, prior to session, teachers or TAs should constitute good access to resources which is needed during the session (Wall, 2004). In this way, students with ASD is not anxiety to access resources. Moreover, it is significant to provide a quiet and distraction free learning place due to students with ASD's sensory motor difficulties (Perepa, 2011).

As it is seen that social environment is seen as important as physical environment for students with ASD. In order to improve social environment, teachers or TAs might encourage all students. When teaching social skills for students with ASD, social stories and circle of friends can be useful strategies (Perepa, 2011). In addition, teacher can also encourage and teach sharing and learning each other. Teachers and TAs are one of the important staffs to create opportunity for all students to interact and communicate each other (Kluth, 2010).

6) Curriculum

Another potential barrier in inclusive education is inappropriate curriculum for students with ASD. Curricula contains an extensive array of subjects of different context in school programme (Ashburner et al., 2010) and students with ASD might not comprehend and interpret the curriculum in the same way as same age classmates (Mesibov & Howley, 2003). Therefore, the curriculum might be changed in order to adapt to students with ASD. However, it should be noted that these arrangements and changes are frequently complicated for these students (Ashburner et al., 2010). As a result, students are likely to be disturbed by these changes.

Some barriers related to curriculum might lead to the characteristic features of students as well. As Ashburner et al. (2010) claim that many students with ASD are often perfectionists in terms of academic tasks. In addition, they might cope with beginning and completing tasks on time and also they are exceedingly self-critical and worried about being unsuccessful (Ashburner et al., 2010). In other words, they may spend time thinking small details unnecessarily. Another concern, they might not pay attention in lesson, thus, they might be unable to attend to the lesson properly (Mesibov & Howley, 2003). Many young people with ASD might have difficulty in applying their notion in different contents and generalising their learning because they are frequently strict in their behaviour, thinking style. This means that they might not access full attainment. In addition, their special interest or repetitive behaviour might predominate their thinking; therefore, they might not access to a broader curriculum (Mesibov & Howley, 2003). As a result, curriculum which is a critical factor in terms of academic performance should be considered. As mentioned above, students with ASD have different learning difficulties and styles. Therefore, accessing the curriculum in a meaningful way should be considered for students (Mesibov & Howley, 2003). Otherwise, inclusion of students with ASD in general classroom can be impossible.

There are some potential overcomes which might eliminate curriculum issues. If students with ASD need adaptation of the curriculum in mainstream setting, one of the educational provisions might be Individual Education Plans (IEPs) for every student with ASD (Toran et al., 2010). IEPs which are can be provided for students with ASD in mainstream schools. It is essential that IEPs should be realistic, achievable and child-specific. Before preparing IEPs, student's need should be identified and concern in depth (Wall, 2004).

Differentiating the National Curriculum can be another potential overcome. According to Wall (2004), providing work at sample level, using methods of teaching which match the student's method of learning, providing different lessons and activities, giving complex information step by step can assist students to fully access the curriculum. In other words, developing flexible curriculum plays key role for students with ASD.

Some autism-specific interventions can be used in order to access the curriculum for students. One of the common and well-known interventions is the Treatment and Education of Autistic and Communication Handicapped Children (TEACCH) which purposes to teach students with ASD to work independently (Jones, 2002). The intervention provides predictability, structure, familiarity and security in routines and can be tailored to the different learning need of the individuals with ASD (Bowen & Plimbey, 2008). There are certain key principles which are physical environment, daily schedule, work system and visual structure (Jones, 2002). The structure given these students offers them a more predictable life in the knowledge of the next steps, and also daily schedule and visual structure are useful to make greater progress independently (Wall, 2004). According to O'Neill (2012), Social Communication, Emotional Regulation and Transactional Support (SCERTS) is a model to designed to reduce the difficulties which students with ASD face in mainstream school. The model aims assisting students to increase their competent, confident and social life in schools. In addition, the model can provide students adapting changing to teaching style, coping with stress and making friends (O'Neill, 2012). In a nutshell, these interventions can enhance adaptations of the students in mainstream classroom.

7) Transitions

Another concern is transition in mainstream schools which might be challenging process for students with ASD. Changes can be challenges for individuals with ASD. This is because lack of planning in transitions leads to confusion, anxiety and distress which individuals with ASD might face (Broderick & Mason-Williams, 2008). In other words, without appropriate supports and planning, these transitions might be properly overwhelming. In particular, the transition from primary school to high school might be challenge for students with ASD due to the increased complexity of the classroom environment (Costley, 2012).

The daily changes from home to school, from classmates to canteen might be difficult for some students with ASD. They also have a difficulty when they have to change a task in the classroom. Students with ASD are consulted about their choices when it comes to transition and it would be hard to make their own decisions. It should be considered that students with ASD can handle changes if those changes are expressed clearly (Broderick & Mason-Williams, 2008). For these reasons, micro and macro transitions must plan carefully during the process.

In order to support students' transitions process, there are some essential strategies which can be provided in mainstream school. As Bowen and Plimley (2008) mention that many transition obstacles can be eliminated with careful planning. Firstly, if a student with ASD is new in a general school, 'personal booklet for new information' which contains information about key places and school staffs in school should be provided (Broderick & Mason-Williams, 2008). In this way, the student might adopt the school environment easily.

As mentioned before, visual supports play significant role for students with ASD. As Broderick and Mason-Williams (2008) mention that visual information about new school might be given the student and the family before starting school. In addition, if a student with ASD has a communication difficulty, a student passport or student profile which includes up-to-date information about the student should be prepared for school staffs. Thus, all school staffs should be aware of the students' profile. Transition team who are families, school staffs and professionals should plan, share and exchange information such as IEPs, Behaviour Support Plans (BSPs), support strategies (Broderick & Mason-Williams, 2008).

Typical developing peers can also support students with ASD during the transition process. As mentioned before, the strategies 'buddy system' and 'circle of friends' can assist the students to interact and communicate with peers in the transition process (Broderick and Mason-Williams, 2008). All Families can also involve the transition process. In the transition periods, meeting with the transition team to exchange concern, visiting school with the child and establishing a homework routine are some recommendations for families of the students (Hume, 2008).

CONCLUSION

This study addressed the barriers of inclusion to working students with ASD and the potential strategies and methods to overcome the barriers. It is obvious that there are several components of inclusion which are essential to access fully inclusive education for students with ASD in mainstream setting (Humphrey & Symes, 2010). As it seen that creating an inclusive education is a complex process for students with ASD.

Even though there are several barriers which prevent to access inclusion, it is possible to overcome all of them. If policy makers, school staffs and families of the students are aware of their responsibilities towards students with ASD, removing the barriers and fostering the conditions might be easier. This is because students with ASD need to supports and appropriate environment to have an education as same as same age classmates. Moreover, it might not enough to be aware of responsibility. Policy makers, school staffs, and families should collaborate for these students.

It is well-known fact that, there are several students with ASD who can participate in mainstream settings. Furthermore, some famous musicians, scholars, politicians and authors have ASD. If typical developing individuals who are responsible of inclusion of students with ASD can look at the world from their side, it is possible to overcome all barriers and present full inclusion for these special individuals.

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