ACCEPTED VERSION

Kelly-Ann Allen, Christopher Boyle, Fraser Lauchlan, and Heather Craig

Using social skills training to enhance inclusion for students with ASD in mainstream schools

Inclusive education: Global issues & controversies, 2020 / Boyle, C., Anderson, J., Page, A., Mavropoulou, S. (ed./s), Ch.10, pp.163-178

© 2020 by Koninklijke Brill NV, Leiden, The Netherlands.

Published version http://dx.doi.org/10.1163/9789004431171_012

PERMISSIONS

https://brill.com/page/RightsPermissions/rights-and-permissions#selfarchiving

Self Archiving Rights

It is Brill's ambition to be transparent and encourage the availability of our authors research results, while also maintaining the sustainability of the journals and book series that we publish together with, and on behalf of, their academic communities.

Brill allows authors to share their work in non-commercial online repositories and archives **without an embargo** under the following conditions.

Articles & Book Chapters

When?

Version	Stage	Share
First draft	Pre-peer review	At any point in the publication process
Author Manuscript	Post-peer review	Immediately after publication: 0 months
Published PDF	Post-publication	Personal use only

- Share the **pre-peer reviewed** manuscript at any point in the publication process.
- Share the **post-peer reviewed** manuscript **immediately after publication**. This version is often identified as the **Author Manuscript** (AM) or Author Accepted Manuscript (AAM).
- All authors receive the final published PDF of their publication for **personal use**. Please note Brill does **not** allow this version to be shared in archives or repositories.

Where?

- The **repository of the institution** you are affiliated to.
- A **not-for-profit subject repository** relevant to your discipline.
- A **funder repository** to comply with your funder's requirements for publishing.
- Your personal or company website.

Please note that Brill does **not support sharing on commercial platforms and networks** such as Academia.edu or Researchgate.

Monographs

- Authors or their institutions may post the accepted **manuscript version** 12 months after publication in a **closed** repository [intranet]. Such a repository is accessible to students and staff only.
- To discuss options to share the PDF version of the E-Book, please contact openaccess@brill.com.

6 May 2022

Allen, K., Boyle, C., & Lauchlan, F. (2020). Using social skills training to enhance inclusion for students with ASD in mainstream schools. In C. Boyle, J. Anderson, A. Page. & S. Mavropoulou, (Eds.), *Inclusive education: Global issues & controversies* (pp. 202-215). Brill. http://dx.doi.org/10.1163/9789004431171 012

CHAPTER TEN

USING SOCIAL SKILLS TRAINING TO ENHANCE INCLUSION FOR STUDENTS WITH ASD IN MAINSTREAM SCHOOLS

Kelly Allen Christopher Boyle Fraser Lauchlan

INTRODUCTION

It could be regarded as a necessary survival skill that individuals are able to display appropriate social skills within the rules of their culture. Conforming to the often-unspoken rules of sociability enables the formation and maintenance of relationships that will help individuals to be independent and successful. Social skills have been defined as a set of learned, identifiable behaviours that contribute to an individual's functioning in society (Johns, Crowley, & Guetzloe, 2005). Those who display inappropriate social behaviours may be less appealing to their peers and have problems throughout life, such as loneliness or a poor sense of belonging (Sha'ked & Rokach, 2015; Allen & Boyle, 2018). For example, without adequate social skills an individual may experience difficulties with employment, daily living skills, independent living, and connectedness to society.

Improving social skills is often an area of emphasis for those who work with students who have Autism Spectrum Disorders (ASD). Impaired social functioning in individuals with ASD is well documented as being a commonly recognised indicator of difficulties especially when children transition through the years of school including through adolescence and then ultimately adulthood (Matthews et al., 2015). Research has demonstrated that employers often believe social competency to be more important than actual experience in the workplace (Deloitte, 2017). Moreover, deficits in social skills have been linked to school dropout, juvenile deviancy, suicide, and police intervention (Merrell & Gimpel, 1998). Therefore, when considering a systemic approach to social competencies, the development of necessary social skills should be an essential part of the educational curriculum to support the functioning of all students within the school, family, and wider socio-ecological systems (AACTE, 2010). This chapter argues that current approaches to social skills training through schools is not sufficient for children with ASD and calls for a multi-systemic approach to address social skills intervention in order to drive authentic inclusive practices for all children and young people.

THE PROBLEM

In an attempt to teach social competencies to all students in mainstream educational settings, many schools have implemented programs to compensate for curriculum shortcomings in this area (e.g., Stop, Think Do; Petersen & Adderley, 2002; Friends for Life, Kosters et al., 2012; Calmer Classrooms, Brodzeller, Ottley, Jung & Coogle, 2018), or when an identified need has emerged. The majority of these programs have focused on teaching a broad range of social skills including greetings and farewells, initiating and maintaining appropriate conversations, giving and receiving compliments, and sharing. Research on friendship and social skill-based programs have shown they help reduce anxiety (Moharreri & Yazdi, 2017), improve problem-solving skills

(da Silva et al., 2016), promote the use of self-regulation strategies (Blair and Raver, 2015), and increase social competence (Spence, 2003). Despite the success of these programs in the general school population, the efficacy of treatment for children with ASD attending mainstream school is limited (Barry et al., 2003; Zainal & Magiati, 2016).

In general, interventions that aim to increase the overall social competencies in the general classroom are not designed to specifically target children with ASD (Barry et al., 2003; Boyle, 2007). Further, in studies where improvements in social skills have been made, children with ASD still tend to have difficulty when adapting the skills to new or different environments and situations (Ooi et al., 2016). While social skills programs aim to address the deficits typically exhibited by children with ASD, these programs are usually implemented over short periods of time (Paul, 2008). Due to the brief nature of the interventions, children with ASD may not master the skill being taught before a new topic is introduced. Therefore, a more longitudinal approach may be more beneficial. Programmes should be properly evaluated using scientific principles so as to ensure their effectiveness in inclusive settings.

The difficulties that some children and young people with ASD have with social interactions result in atypical social development that may have a devastating effect on their ability to establish positive relationships at home, at school, and in other community settings. Deficits in cognitive functioning, negative perceptions by peers, and the engagement in obsessive interests and negative (or aberrant) behaviours may further contribute to social isolation (Barnhill, 2001). School safety issues are also of concern (The National Association of School Psychologists [NASP], 2007). Social skills that relate to school safety, such as anger management, conflict management, and peer negotiation, may affect both personal safety and the safety of the general school population. Given the many sociability issues faced by individuals with ASD especially when attending mainstream school settings, greater efforts are needed to improve the social skills of these children to create an inclusive environment where they can effectively interact with other children.

Hidden social rules and norms are manifest in every aspect of mainstream schools and daily life (e.g., classroom, playground, and bathroom) and create great difficulties for the child with ASD. Individuals with ASD may behave in ways that are reactive and do not conform to social or group norms within mainstream educational settings. Rules surrounding acceptable and non-acceptable behaviours often need to be taught, as do social cues that inform us when others may be disapproving of our behaviour (Adreon & Durocher, 2007; Holt, Lea, & Bowlby, 2012). For example, children with ASD not only need to be taught the appropriate distance at which to stand when talking to someone, but also the subtle cues that an interlocutor might display when that distance is breached. Once these protocols have been taught, further efforts must be made to generalise them. Behaviour that is acceptable in one setting may not be necessarily acceptable in another. And while explicitly stated norms (e.g., school starting time) are usually easier for the child with ASD to understand - partially due to their predictability and routine nature - non-explicit norms can be particularly challenging. Informal silent norms dominate all social settings and can be overlooked by children and adults with ASD. Howlin et al. (1999) state that, when these norms are transgressed, individuals can become socially excluded. It is not surprising,

therefore, that many children with ASD experience social isolation, a low sense of belonging, and bullying in the classroom and schoolyard (Erin, 2015).

ASD in Mainstream Settings

According to Baio et al., (2018), in 2014, the overall occurrence of ASD among the 11 Autism and Developmental Disabilities Monitoring (ADDM) locations was 16.8 per 1,000 (one in 59) children. Total ASD frequency estimates varied among locations, from 13.1–29.3 per 1,000 children. ASD prevalence estimates also varied by sex and race/ethnicity. Males were four times more likely than females to be identified with ASD and Hertz-Picciotto and Delwiche (2009) contend that the arguably inflated estimations of incidence in recent years can be attributed to the inclusion of milder cases. Current evidence also indicates that females are under identified in the population due to the misunderstanding of the manifestation of ASD in females (Fulton, Paynter & Trembath, 2017). The incidence and increase of ASD, however, appears to be equally represented in populations throughout the world. The Autism Society of America (2007) reports a 10 to 17 percent increase in the number of children with ASD every year. In Australia, the situation is similar where there are increasing numbers of children with ASD being included in mainstream-classrooms across the country. In the UK, 70% of children with ASD attend mainstream education (DfE, 2014). For all children with ASD, regardless of which country there are living, adequate social skills are vital to successful inclusion (Laushey & Heflin, 2000).

Perceptions in Educational Settings

Perceptions differ when discussing the social skill deficits of children with ASD. Some educators perceive the teaching of social skills to be the role for parents and the community (Anderson, 2000). Many think social competency is readily acquired.

The notion of inclusion as applied to children with ASD in a mainstream setting has been marked by controversy. Many parents in the UK have reported that school leaders in mainstream schools claim that limited resources render them unable to accommodate the additional needs of a child with ASD (Macbeath et al., 2006). Alternatively, Barnard, Broach, Potter, and Prior (2002) found strong support for the policy of inclusion in the UK, with 65 percent of the mainstream schools surveyed reporting that the inclusion of children with ASD into their student populations had been successful. Interestingly the one third (32 percent) of schools that reported negative feelings about inclusion also admitted to having insufficient training in ASD. This specific finding has been identified as being a general issue in mainstream schools with some teaching staff in the UK not even being sure if they had received any training on inclusion (Boyle, Topping, Jindal-Snape, 2013; Boyle, Topping, Jindal-Snape & Norwich, 2012), which is a damning indictment of the support that teachers received to facilitate inclusion in mainstream schools. Without adequate training and knowledge of ASD, the formation of incorrect stereotypes is more likely. Mainstream schools that have never catered for a child with ASD may have preconceived ideas as to how these children think, behave, and impact on the school curriculum (Roberts & Simpson, 2016; Symes & Humphrey, 2011). It can also be argued that there is an over-reach of measuring whether schools are inclusive or not (Boyle & Anderson,

Under Review). However, the real issue is about systems (Anderson, Boyle & Deppeler, 2014; Anderson & Boyle, 2019) and resources (Kraska & Boyle, 2014). Schools are not operating in an environment with unlimited resources and the focus on schools is almost pointless as it is the local authority, and by the extension the government, where the real success or otherwise of inclusion has to be measured.

Curriculum Priorities

Most of the skills required for successful navigation through school systems are academically related. Therefore, teachers, educators, and educational departments regard academic competence as a high priority. Teaching social and interpersonal skills, on the other hand, tends not to be the focus for most teachers, including those with special education backgrounds. Further, social skills are often not included in individualised education or integration plans or in the basic school curriculum (UNESCO, 2001). Anderson (2000) reported that only 37 percent of students who required social skills training had it written into their education plans. Alberta Teachers' Association (2015), however, revealed that teachers consider the teaching of social skills such as following directions, completing tasks, and dealing with emergencies and ethics to be very important. Nevertheless, these skills continue not to be addressed by the school curriculum in a way that is meaningful and achievable for a child with ASD. Kebapci and Erkal (2009) suggest that all systems are resistant to change and, when a need arises, tend to resort back to the status quo. In addition, teachers may not recognise that they too can contribute to students' problems. This can lead to a failure to grasp their role in helping students achieve greater social competencies. Social skills are necessary for students to become successful and independent in the world outside the school system and need to be incorporated into the curriculum for all children (Alberta Teachers' Association, 2015).

Resource Issues

For funding and educational reasons, modern schools tend to focus on interventions that result in tangible outcomes (Corey, 2005). Thus, schools usually favour short-term programs relating to cognitive skills rather than the development of affective skills. Educational systems also place a greater value on diagnosis and formal psychological testing than on the operation of long-term interventions, professional development for staff, and ongoing teacher training (Boyle, 2007; Boyle & Lauchlan, 2009). The National Autistic Society (2007) reports that 80 percent of parents of children with ASD in mainstream schools believe that their child's teachers have undergone some training in ASD. Despite this, only 35 percent are satisfied with the understanding of issues related to ASD within the school system. Without an understanding of ASD, teachers are unable to adjust the curriculum and school environment for students with ASD, helping them cope more successfully and improving their wellbeing. In schools where teachers have had training in ASD awareness, the impact on the child, their family and the school system has been positive. The lack of adequate training seems to be an ongoing issue in inclusive education (Boyle, Topping & Jindal-Snape, 2013).

POSSIBLE RESOLUTIONS

The notion that individuals with ASD lack an interest in social interactions is often inaccurate. Many individuals with ASD do indeed desire social involvement however these individuals typically lack the necessary skills to interact effectively (White, Keonig, & Scahill, 2007; Watkins, Leadbetter-Cho, O'Reilly, Bernard-Brak & Garcia-Grau, 2019). Further research is also suggesting that there exists significant differences between gender in people diagnosed with ASD, with females demonstrating greater competencies in social skills than males, which also may have implications for intervention (Head, McGillivray & Stokes, 2014). Some progress in teaching social skills to children with ASD has been made through behaviour modification techniques such as those influenced by the early work of B. F. Skinner and more recently, Applied Behavioural Analysis (ABA) and the related Functional Behaviour Analysis (FBA). While behaviourist interventions have been found to be empirically validated and valuable in school systems, they are often criticised for creating short-term solutions that emphasise extrinsic controls (Plas, 1986) and can be at the mercy of pervasive negative attitudes (Allen & Bowles, 2013).

Plas (1986) argues for a systemic approach to mainstream education whereby a *focus group*, such as a group of students experiencing social skill deficits, is recognized in terms of its position in a larger system. For example, a group of students may be part of a classroom that in turn is geographically and culturally contained within an even larger system such as the school. A student also belongs to a family system; the family system and school system both belong to larger units of state, country, and culture (Fish & Jain, 1988; Whitchurch & Constantine, 2009). For interventions to be effective, systems theory guide practitioners and educators to understand that schools are organisations, where influential members of the system (e.g., principals, teachers, and parents) are jointly responsible for issues faced by students (Hong, Al-Khatib, Magagna, McLoughlin, & Coe, 1997). A systemic approach to addressing social skills training in students with ASD may use a focus group based around developing necessary social skills. Results may then be applied to the classroom and related participants of the wider system, that is, peers, parents, teachers, and principals.

BELONGING

The psychological concept of belonging, and in particular, the concept of 'school belonging' is particularly relevant to the current discussion. The concept of school belonging can be viewed as having strong links with inclusion, since it regards the notion that students, and one might argue especially those with additional support needs (ASNs), should feel accepted and valued by others in the school, not only by their fellow students and their teachers, but by everyone connected to the school: parents, ancillary staff and anyone else who might be considered part of the wider school community. Promoting a sense of belonging places much responsibility on the teaching staff to foster a supportive environment of trust, fairness, and security within the school (Hattie, 2018). Creating such a climate in a school is challenging, and an important aspect of belonging is not only to have positive relations between teachers and students, but also amongst the students themselves. Developing these positive relationships requires carefully planned intervention work and the importance of social skills training is clear.

Laursen and Yazdgerdi (2012) outline the intervention approach they use in trying to foster a sense of belonging to students with ASD. Their work centres on helping students to

develop their social skills in relationships with adults and peers. Some of the interpersonal interactions they describe might be considered simple but, as they outline in their article it is essential that the students remain in their 'comfort zone'. Some examples they provide are the following: a consistent greeting and a few friendly words each day, offering to help another student, sharing a success and offering praise to another. The key thing is for staff to acknowledge any attempts that a young person may make to connect with another person. Attempts to connect by a young person with ASD requires courage; courage to trust others and courage in the face of potential rejection. Laursen and Yazdgerdi emphasise that the importance of relationships in promoting personal growth and development as well as serving as "catalysts for change and success" (p.46).

The importance of fostering strong relationships for children with ASNs in school is also underlined by a recent study by Pollock (2019), albeit that the research investigated the school experiences of learners identified as having literacy difficulties rather than ASD. The research used an exploratory case study methodology using several case studies. The original aspect to this research was the use of the participatory method of photovoice, whereby the students were asked to take photographs that were illustrative of their school experience. The findings showed that there were very few photos taken by the participants that were explicitly about literacy and learning 'tools'. Instead the students' photographs highlighted the importance they placed on relationships with peers and key staff. This indicated an important connection between their social and learning experiences. In other words it is the importance placed on an atmosphere of belonging and the development of social relationships that was significant for these learners, rather than the provision of specific 'learning tools'. The same argument can be made for children with ASD regarding the value of promoting strong relationships, and fostering a sense of belonging within the school environment. Thus, the significance of developing and teaching social skills to children with ASD in mainstream settings cannot be over-emphasised.

A MULTI-SYSTEMIC APPROACH TO TEACHING SOCIAL SKILLS

A multi-systematic approach to teaching social skills provides a way for children with ASD to learn appropriate social skills in a small group that facilitates cohesive and comfortable interactions with their peers, but also recruits the resources within the broader systems that surround the child in order to teach, consolidate, and master new skills (Simpson, Smith-Mykes, Sasso, & Kamps, 1991). In order for this to be successful in mainstream schools appropriate resources, including staffing, need to be provided.

Anderson et al., (2018) carried out a literature review in which the connection between social-ecological features and transition in youth with ASD. They systematised variables used in studies through five influence levels: interpersonal, community, family, policy and institutional level factors. Their results showed that both the breadth and depth of social-ecological factors that are used in autism research is inadequate because of the overreliance on an inadequate amount of national data sets, the slender addition of variables across social-ecological levels, and the general absence of variation in research design.

Bellini (2004) suggests that social skills are acquired through observation, modelling, coaching, and social problem solving as well as rehearsal, feedback, and reinforcement-based strategies. Moreover, social skills groups that are most successful tend to focus on one social skill

at a time and involve a systemically orientated approach as opposed to a *stand-alone* or pull-out intervention (McMahon, Vismara, & Solomon, 2014).

CONCLUSION

Social ineffectiveness translates into an inability to relate to others and interact appropriately within the various systems and groups that constitute society. Applying systems perspectives to students with ASD gives students and educators in whole school systems and sub-systems (e.g., classrooms and groups) responsibility for teaching and learning appropriate behaviours relating to social expectations and acceptable social behaviour. A systems approach increases the understanding of relationships between systems by creating a shared, ongoing responsibility towards the problem. Children, adolescents, and adults must be able to deal with a wide range of societal situations to be successful in life and in order to do this, knowledge of social skills and competencies is essential. Social competency is correlated with academic success, positive peer relationships, and greater satisfaction in adulthood. For typical students, these skills are learnt through natural experience and interaction, however students with ASD tend to have less opportunity for such interactions. To address this growing problem in schools, systemic interventions must be considered to provide increased teaching opportunities for the development of necessary social skills. All students benefit from social skill interventions as a way of creating more successful interactions in the schools, families, and wider cultural systems of which society is comprised. The difficult question as to whether pupils with ASD are able to receive the required resourcing in a mainstream environment is a moot point and is unlikely to be concluded soon.

REFERENCES

- AACTE (2010). 21st Century Knowledge and Skills in Educator Preparation. Retrieved from https://files.eric.ed.gov/fulltext/ED519336.pdf
- Adreon, D., & Durocher, J. S. (2007). Evaluating the college transition needs of individuals with high-functioning autism spectrum disorders. *Intervention in School and Clinic*, 42(5), 271-279.
- Alberta Teachers' Association (2015). Teachers and Educational Assistants: Roles and Responsibilities. The Alberta Teachers' Association (ATA).
- Allen, K. & Bowles, T. (2013). Belonging as a Guiding Principle in the Education of Adolescents. *Australian Journal of Educational and Developmental Psychology*, 12, 108-119
- Allen, K., Bowles, T., & Weber, L. (2013). Mothers' and Fathers' Stress Associated with Parenting a Child with Autism Spectrum Disorder. *Journal of Autism Insights*, 5, 1-11.
- Allen, K, & Boyle, C. (2018). The Varied pathways to belonging. In K. Allen & C. Boyle *Pathways to school belonging* (pp. 1-6.). Leiden: Brill Publishing.
- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub.
- Anderson, K. A., Roux, A. M., Kuo, A., & Shattuck T. (2018). Social-Ecological Correlates in Adult Autism Outcome Studies: A Scoping Review. *The American Academy of Pediatrics*, 141(4). S306-S317.
- Anderson, J., Boyle, C., & Deppeler, J. (2014). The ecology of inclusive education: Reconceptualising Bronfenbrenner, In Z. Zhang, P. W. K. Chan, & C. Boyle (Eds.) *Equality in education: Fairness and inclusion* (pp. 23-34). Rotterdam: Sense Publishers.
- Anderson, J., & Boyle, C., (2015). Inclusive education in Australia: Rhetoric, reality, and the road ahead. *British Journal of Support for Learning*, 30(1), 4-22. doi: 10.1111/1467-9604.12074

- Anderson, J., & Boyle, C. (2019). Looking in the mirror: Reflecting on 25 years of Inclusive Education in Australia. The International Journal of Inclusive Education, 23(7-8), 796-810. doi: 10.1080/13603116.2019.1622802
- Anderson, P. L. (2000). Using literature to teach social skills to adolescents with Learning Disabilities. Intervention in School and Clinic, 35(5), 271-279.
- Baio, J., Wiggins, L., Christensen, D. L., Maenner, M. J., Daniels, J., Warren, Z., ... & Durkin, M. S. (2018). Prevalence of autism spectrum disorder among children aged 8 years—Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2014. MMWR Surveillance Summaries, 67(6), 1.
- Barnard, J., Broach, S., Potter, D., & Prior, A. (2002). *Autism in schools, crisis or challenge*. London: The National Autistic Society.
- Barnhill, G. (2001). Social attribution and depression in adolescents with Asperger syndrome. *Focus on Autism and Other Developmental Disabilities*, 16, 46-53.
- Barry, T. D., Klinger, L. G., Lee, J. M., Palardy, N., Gilmore, T., & Bodin, S. D. (2003). Examining the Effectiveness of an Outpatient Clinic-Based Social Skills Group for High-Functioning Children with Autism. *Journal of Autism and Developmental Disorders*, 33, 685-701.
- Bellini, S. (2004). Social skill deficits and anxiety in high functioning adolescents with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 19, 78-86.
- Blair, C., & Raver, C. C. (2015). School Readiness and Self-Regulation: A Developmental Psychobiological Approach. *Annual Rev Psychol*, 66, 711–731. doi: 10.1146/annurev-psych-010814-015221.
- Blankenship, K., & Minshawi, N. F. (2010). Behavioral Therapy with an Individual with Asperger's Disorder. *Psychiatry (Edgmont)*, 7(8), 38–41.
- Boyle, C. M. (2007). An analysis of the efficacy of a motor skills training programme for young people with moderate learning difficulties. *International Journal of Special Education*, 22(1), 11-24.
- Boyle, C., & Anderson, J. (Under Review). Inclusive Education at a crossroads: Where to from here? *The Oxford Research Encyclopedia of Education*.
- Boyle C., Topping, K., & Jindal-Snape, D. (2013). Teachers' Attitudes Towards Inclusion in High Schools. *Teachers and Teaching: Theory and Practice*, 19(5), 527-542. Doi: 10.1080/13540602.2013.827361
- Boyle C., Topping, K., Jindal-Snape, D., & Norwich, B. (2012) The importance of peer-support for teaching staff when including children with special educational needs. *School Psychology International*. *33*(2), 167-184. Doi: 10.1177/0143034311415783
- Brodzeller, K.L., Ottley, J.R., Jung, J., & Coogle, C. J. (2018). Early Childhood Education Journal, 46(3), 277–286. Doi: 10.1007/s10643-017-0859-5
- Brumariu, L. E., & Kerns, K. A. (2008). Mother-Child Attachment and Social Anxiety Symptoms in Middle Childhood. *J Appl Dev Psychol*, 29(5), 393–402. doi: 10.1016/j.appdev.2008.06.002.
- Corey, G. (2005). *Theory and Practice of Counseling and Psychotherapy* (7th ed.). Belmont, CA: Brooks/Cole-Thomson Learning.
- da Silva, J. L., de Oliveira, W. A., Braga, I. F., Farias, M. S., da Silva Lizzi, E. A., Gonçalves, M. F. C., ... & Silva, M. A. I. (2016). The effects of a skill-based intervention for victims of bullying in Brazil. *International journal of environmental research and public health*, 13(11), 1042. doi: 10.3390/ijerph13111042
- Deloitte (2017). What key competencies are needed in the digital age? The impact of automation on employees, companies and education. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/innovation/ch-en-innovation-automation-competencies.pdf
- Dukpa, D. (2015). A Critical Perspective on Inclusion of Children with Autism Spectrum Disorder in a Mainstream Classroom: Lessons for Bhutan. Rabsel: the CERD Educational Journal, XVI(I)
- Erin, O. (2015). Perceptions about Bullying of Students with Autism Spectrum Disorder: A Survey of School-Based Speech-Language Pathologists (Master's thesis). Graduate Faculty of Auburn University.
- Fish, M., & Jain, S. (1988). Using systems theory in school assessment and intervention: A structural model for school psychologists. *Professional School Psychology*, 3(4), 291-300. doi: 10.1037/h0090569

- Fulton, A. M., Paynter, J. M., Trembath, D. (2017). Gender comparisons in children with ASD entering early intervention. Research in Developmental Disabilities, 68(1), 27-34. Doi: 10.1016/j.ridd.2017.07.009.
- Gus, L. (2000). Autism: promoting peer understanding. Educational Psychology in Practice, 16, 4, 461-468.
- Hattie, J. (2018). Foreword. In Pathways to Belonging: Contemporary Research in School Belonging, K.A Allen and C. Boyle (Eds.). Leiden: Brill Publishing.
- Head, A. M, McGillivray, J. A., & Stokes, M. A. (2014). Gender differences in emotionality and sociability in children with autism spectrum disorders. *Mol Autism*, 5(1), 19. doi: 10.1186/2040-2392-5-19.
- Hertz-Picciotto I., & Delwiche L. (2009). The Rise in Autism and the Role of Age at Diagnosis. *Epidemiology*, 20(1), 84–90. doi: 10.1097/EDE.0b013e3181902d15
- Holt, L., Lea, J., & Bowlby, S. (2012). Special units for young people on the autistic spectrum in mainstream schools: sites of normalisation, abnormalisation, inclusion, and exclusion. *Environment and Planning* A, 44(9), 2191-2206.
- Hong, N., Al-Khatib, W., Magagna, B.C, McLoughlin, A., & Coe, B., (1997). Summary of Systems Theory. Pennsylvania, PA: Pennsylvania State University.
- Howlin, P., Baron-Cohen, S., & Hadwin, J. (1999). *Teaching Children with Autism to Mind-Read*. New York, NY: Wiley.
- Johns, B. H., Crowley, E. P., & Guetzloe E. (2005). The Central Role of Teaching Social Skills. Focus on Exceptional Children, 37(8)
- Kaiser, A. P., & Hancock, T. B. (2003). Teaching Parents New Skills to Support Their Young Children's Development. *Infants & Young Children* (Vol. 16, No. 1, pp. 9–21). Philadelphia, PA: Lippincott Williams & Wilkins.
- Kebapci, S., & Erkal, H. (2009). Resistance to Change A Constructive Approach for Managing Resistant Behaviors. Baltic Business School. Master Thesis, Baltic Business School, University of Kalmar: Kalmar, Sweden.
- Koegel, L., Matos-Fredeen, R., Lang, R., & Koegel, R. (2011). Interventions for Children with Autism Spectrum Disorders in Inclusive School Settings. *Cognitive and Behavioral Practice*, 19(3), 401-412.
- Kösters, M. P., Chinapaw, M. J., Zwaanswijk, M., van der Wal, M. F., Utens, E. M., & Koot, H. M.. Study design of 'FRIENDS for Life': process and effect evaluation of an indicated school-based prevention programme for childhood anxiety and depression. *BMC Public Health*, *12*(1), 86. Doi: 10.1186/1471-2458-12-86
- Kraska, J., & Boyle, C. (2014). Attitudes of pre-school and primary school pre-service teachers towards inclusive education. *Asia-Pacific Journal of Teacher Education*, 42(3), 228-246. Doi: 10.1080/1359866X.2014.926307
- Laursen, E.K. & Yazdgerdi, S. (2012). Autism and belonging. Reclaiming Children and Youth, 21(2), 44-47.
- Laushey, K. M., & Heflin, L. J. (2000). Enhancing social skills of kindergarten children with autism through the training of multiple peers as tutors. *Journal of Autism and Developmental Disorders*, 30, 183-193.
- Leaf, R., & McEachin, J. (1999). A work in progress: Behavior management strategies and a curriculum for intensive behavioral treatment of autism. New York, NY: DRL Books.
- Macbeath, J., Galton, M., Steward, S., Macbeath, A., & Page, C. (2006). The costs of inclusion Report prepared for the National Union of Teachers. Retrieved from http://www.teachers.org.uk/resources/pdf/CostsofInclusion.pdf
- Matthews, N. L., Smith, C. J., Pollard, E., Ober-Reynolds, S., Kirwan, J., & Malligo, A. (2015). Adaptive Functioning in Autism Spectrum Disorder During the Transition to Adulthood. *Journal of Autism and Developmental Disorders*, 45(8), 2349–2360. https://doi.org/10.1007/s10803-015-2400-2
- McMahon, C. M., Vismara, L. A., & Solomon, M. (2014). Measuring Changes in Social Behavior during a Social Skills Intervention for Higher-Functioning Children and Adolescents with Autism Spectrum Disorder. J Autism Dev Disord, 43(8), 1843–1856. doi: 10.1007/s10803-012-1733-3
- Merrell, K., & Gimpel, G. (1998). *Social Skills of Children and Adolescents*. New York, NY: Psychology Press. Moharreri, F., & Yazdi, A. S. H. (2017). Evaluation of the Effectiveness of the Friends for Life Program on

Children's Anxiety and Depression. Iran J Psychiatry, 12(4), 272–280.

Ooi, K. L., Ong, Y. S., Jacob S.A., & Khan, T. M. (2016). A meta-synthesis on parenting a child with autism. Neuropsychiatr Dis Treat, 12, 745-762. doi: 10.2147/NDT.S100634

- Paul, R. (2008). Interventions to Improve Communication. Child Adolesc Psychiatr Clin N Am, 17(4), 835–843. doi: 10.1016/j.chc.2008.06.011
- Petersen, L., & Adderley, A. (2002). Stop Think Do Social Skills Training: Primary Years of Schooling Ages 8-12. Melbourne: Nelson.
- Pisula, E., Kawa, R., Danielewicz, D., & Pisula, W. (2015) The Relationship between Temperament and Autistic Traits in a Non-Clinical Students Sample. *PLoS ONE 10*(4): e0124364. https://doi.org/10.1371/journal.pone.0124364
- Plas, J. M. (1986). Systems psychology in the schools. New York, NY: Pergamon.
- Pollock, S. (2019, in press). Literacy difficulties: What are learners' experiences? *Educational and Child Psychology*, 36(1).
- Rimland, B., & Edelson, S. M. (1999). *Autism Treatment Evaluation Checklist (ATEC)*. Retrieved from http://www.autismeval.com/ari-atec/
- Roberts, J., & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in mainstream schools. *International Journal of Inclusive Education*, 20(10), 1084-1096.
- Sayorwan, W., Phianchana, N., Permpoonputtana, K., & Siripornpanich, V. (2018). A Study of the Correlation between VEP and Clinical Severity in Children with Autism Spectrum Disorder. *Autism research and treatment*. doi: https://doi.org/10.1155/2018/5093016
- Simpson, R. L., Smith Myles, B., Sasso, G. M., & Kamps, D. M. (1991). Social skills for Students with autism. Reston, VA: The Council for Exceptional Children.
- Sha'ked, A., & Rokach, A. (2015). Addressing Loneliness: Coping, Prevention and Clinical Interventions (3rd ed.). New York, NY: Routledge.
- Soorya, L. V., Arnstein, L. M., Gillis, J., & Romanczyk, R. G. (2003). An overview of imitation skills in autism: Implications for practice. *The Behavior Analyst Today*, 4(2), 114-123. http://dx.doi.org/10.1037/h0100108
- Spence, S. H. (2003). Social Skills Training with Children and Young People: Theory, Evidence and Practice. *Child and Adolescent Mental Health*, 8(2), 84–96.
- Symes, W., & Humphrey, N. (2011). School factors that facilitate or hinder the ability of teaching assistants to effectively support pupils with autism spectrum disorders (ASDs) in mainstream secondary schools. *Journal of Research in Special Educational Needs*, 11(3), 153-161.
- The Autism Society of America (2007). *Improving the lives of all affected by autism*. Retrieved from http://www.autism-society.org.
- The National Association of School Psychologists (NASP) (2007). Social Skills: Promoting Positive Behavior, Academic Success, and School Safety. Retrieved from http://www.nasponline.org/resources/factsheets/socialskills fs.aspx
- The National Autistic Society, (2007). The right training for every teacher. Retrieved from http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=1120.
- Tomanik, S., Harris, G. E., & Hawkins, J. (2004). The relationship between behaviours exhibited by children with autism and maternal stress. *Journal of Intellectual & Developmental Disability*, 29, 16-26.
- UNESCO (2001): Understanding and Responding to Children's Needs in Inclusive Classrooms: A Guide for Teachers. Inclusive Education, Division of Basic Education; United Nations Educational, Scientific and Cultural Organization.
- Watkins, L., Ledbetter-Cho, K., O'Reilly, M., Barnard-Brak, L., & Garcia-Grau, P. (2019). Interventions for students with autism in inclusive settings: A best-evidence synthesis and meta-analysis. *Psychological Bulletin*, 145(5), 490-507. doi:10.1037/bul0000190
- White, S. W., Keonig, K., & Scahill, L. (2007). Social skills development in children with autism spectrum disorders: A review of the intervention research. *Journal of autism and developmental disorders*, 37(10), 1858-1868. doi: 10.1007/s10803-006-0320-x.
- Whitchurch G.G., Constantine L.L. (2009). Systems Theory. In: Boss P., Doherty W.J., LaRossa R., Schumm W.R., Steinmetz S.K. (Eds.) *Sourcebook of Family Theories and Methods* (pp. 325-355). , Boston, MA: Springer.

Xiao, Z., Qiu, T., Ke, X., Xiao, X., Xiao, T., Liang, F., ... & Zhang, J. (2014). Autism spectrum disorder as early neurodevelopmental disorder: evidence from the brain imaging abnormalities in 2–3 years old toddlers. *Journal of autism and developmental disorders*, 44(7), 1633-1640.doi: 10.1007/s10803-014-2033-x

Zainal, H., & Magiati, I. (2016). A Comparison Between Caregiver-Reported Anxiety and Other Emotional and Behavioral Difficulties in Children and Adolescents with Autism Spectrum Disorders Attending Specialist or Mainstream Schools. *Journal of Autism and Developmental Disorders*. Advance online publication. Doi: 10.1007/s10803-016-2792-7

AFFILIATIONS

Kelly Allen Melbourne Graduate School of Education, The University of Melbourne, Australia

Christopher Boyle Graduate School of Education, University of Exeter, UK

Fraser Lauchlan Department of Psychology, University of Strathclyde, UK