Monika T. Wicki
Minna R. K. Törmänen
(Hrsg.)

Bildung für alle stärken – Improve Education for All

Ein Handbuch für die evidenzbasierte Entwicklung inklusiver Schulen - A Handbook for Evidence-Based Development of Inclusive Schools

k linkhardt

Wicki / Törmänen

Bildung für alle stärken –
Improve Education for All

Monika T. Wicki
Minna R. K. Törmänen
(Hrsg.)

Bildung für alle stärken – Improve Education for All

Ein Handbuch für die evidenzbasierte Entwicklung inklusiver Schulen – A Handbook for Evidence-Based Development of Inclusive Schools

k

Impressum

Inhaltsverzeichnis

4 Organizational development

5 Personnel and child development

6 Pedagogy and Didactics

Minna Törmänen

Students' academic achievements and developmental outcomes in inclusive education

Zusammenfassung

Das Kapitel „Akademische Leistungen und Entwicklungsergebnisse von Schülerinnen und Schülern in inklusiver Bildung" von Minna Törmänen untersucht die akademischen und entwicklungsbezogenen Auswirkungen der inklusiven Bildung auf Lernende mit und ohne sonderpädagogischen Förderbedarf (SEN). Ziel der inklusiven Bildung ist es, Schülerinnen und Schüler mit SEN in reguläre Klassen zu integrieren und Vielfalt sowie Chancengleichheit zu fördern. Das Kapitel überprüft empirische Belege, die gemischte Ergebnisse hinsichtlich akademischer Leistungen und sozio-emotionaler Entwicklung zeigen. Die Forschung weist darauf hin, dass inklusive Settings besonders bei jüngeren Kindern die akademischen Ergebnisse und die soziale Entwicklung verbessern können. Einige Studien heben jedoch Herausforderungen wie geringeres Selbstbewusstsein und Probleme bei der sozialen Integration für Schülerinnen und Schüler mit SEN hervor. Das Kapitel behandelt auch die Rolle der Lehrerausbildung bei der Förderung effektiver inklusiver Praktiken und die Bedeutung einer unterstützenden Lernumgebung. Insgesamt zeigt die inklusive Bildung zwar Potenzial zur Verbesserung akademischer und entwicklungsbezogener Ergebnisse, ihre Wirksamkeit variiert jedoch je nach Qualität der Umsetzung, Vorbereitung der Lehrkräfte und den spezifischen Bedürfnissen der Schülerinnen und Schüler. Weitere Forschung und gut gestaltete Lehrerausbildungsprogramme sind entscheidend, um die Vorteile der inklusiven Bildung für alle Schüler zu maximieren.

Abstract

The chapter "Students' Academic Achievements and Developmental Outcomes in Inclusive Education" by Minna Törmänen explores the academic and developmental impacts of inclusive education on students with and without special educational needs (SEN). Inclusive education aims to integrate students with SEN into regular classrooms, promoting diversity and equal opportunities. The chapter reviews empirical evidence, showing mixed results regarding academic achievements and socio-emotional development. Research indicates

that inclusive settings can enhance academic outcomes and social development, particularly for younger students. However, some studies highlight challenges such as lower self-confidence and social integration issues for students with SEN. The chapter also discusses the role of teacher education in fostering effective inclusive practices and the importance of a supportive learning environment. Overall, while inclusive education shows promise in improving academic and developmental outcomes, its effectiveness varies based on implementation quality, teacher preparedness, and the specific needs of students. Further research and well-designed teacher training programs are essential to maximize the benefits of inclusive education for all students.

Advance Organizer

Zielsetzung und Überblick:

Das Kapitel „Akademische Leistungen und Entwicklungsergebnisse von Schülerinnen und Schülern in inklusiver Bildung" von Minna Törmänen untersucht die Auswirkungen inklusiver Bildung auf die akademischen und entwicklungsbezogenen Ergebnisse von Lernenden mit und ohne sonderpädagogischem Förderbedarf (SEN). Inklusive Bildung zielt darauf ab, Schülerinnen und Schüler mit SEN in reguläre Klassen zu integrieren und somit Vielfalt und gleiche Chancen zu fördern. Der Text beleuchtet die gemischten empirischen Ergebnisse hinsichtlich akademischer Leistungen und sozio-emotionaler Entwicklung in inklusiven versus segregierten Bildungseinrichtungen.

Schlüsselthemen und Konzepte:

1. Inklusionskonzept und globale Zielsetzungen:
   a) Inklusive Bildung wird als Ansatz verstanden, der nicht nur die Unterstützung von Kindern mit Behinderungen in allgemeinen Bildungseinrichtungen bietet, sondern auch die Vielfalt aller Lernenden fördert. Dies basiert auf dem Prinzip, dass Bildung ein grundlegendes Menschenrecht und die Grundlage für eine gerechtere Gesellschaft ist.
2. Widersprüchliche empirische Belege:
   a) Studien zeigen sowohl positive als auch negative Effekte der inklusiven Bildung auf die akademischen Leistungen und die Entwicklung von Schülerinnen und Schülern mit SEN. Während einige Studien höhere akademische Leistungen und bessere soziale Entwicklungen in inklusiven Umgebungen feststellen, zeigen andere geringere Motivation und Selbstvertrauen bei den Lernenden mit SEN.

3. Vergleich zwischen inklusiver und segregierter Bildung:

   a) Studien haben gezeigt, dass Schülerinnen und Schüler mit SEN, die in inklusiven Klassen unterrichtet werden, oft bessere kognitive und akademische Ergebnisse erzielen als jene in speziellen Bildungseinrichtungen. Dies umfasst Verbesserungen in Bereichen wie Mathematik, Lesen und soziale Integration.

4. Sozio-emotionale Auswirkungen:

   a) Die soziale Position von Lernenden mit SEN in inklusiven Bildungseinrichtungen ist oft weniger günstig, mit Herausforderungen wie weniger Freundschaften und größerer Isolation. Dennoch können inklusive Schulen die soziale Entwicklung durch verstärkte Interaktion mit Gleichaltrigen fördern.

5. Rolle der Lehrkräfte und der Lehrerausbildung:

   a) Die Vorbereitung und Ausbildung von Lehrkräften spielen eine entscheidende Rolle für den Erfolg inklusiver Bildung. Lehrkräfte müssen über das Wissen und die Fähigkeiten verfügen, um diversifizierte Lernumgebungen zu unterstützen und alle Lernenden effektiv zu fördern.

6. Anpassungsfähige pädagogische Praktiken:

   a) Effektive inklusive Bildung erfordert unterschiedliche pädagogische Ansätze, wie Co-Teaching, Peer-Tutoring und differenzierte Instruktion. Diese Praktiken können die kognitiven und sozialen Fähigkeiten aller Schüler unterstützen.

Verbindung zu Vorwissen und Kontext:

Dieser Text baut auf bestehendem Wissen über inklusive Bildung, Bildungsreformen und pädagogische Praktiken auf. Pädagoginnen und Pädagogen sowie Entscheidungstragende, die mit diesen Themen vertraut sind, können durch die Analyse der vorgestellten empirischen Studien und pädagogischen Ansätze tiefere Einblicke in die Herausforderungen und Chancen inklusiver Bildung gewinnen. Die Betonung der Lehrpersonenbildung und der adaptiven Unterrichtspraktiken bietet wertvolle Perspektiven für die Gestaltung und Implementierung effektiver inklusiver Bildungsstrategien.

The realization of inclusion is a major challenge for school systems throughout the world

Inclusive settings should offer diverse education, considering every child's unique developmental and educational challenges. Inclusive education is often thought of as an approach to serve children with disabilities within general education settings (Ainscow, 2005). However, inclusion does not only refer to providing an educational support system for children with SEN; it is increasingly seen as a reform that supports and welcomes diversity amongst all learners, based on the notion that education is a basic human right and the foundation of a more equal society (e.g., Ainscow and Miles, 2009). Thus, inclusive schools are not established primarily for improving the learning and development of children with SEN. Inclusive education requires learning environments to ensure the growth and development of all learners. Specifically, inclusion aims to benefit children through improvements in their learning outcomes, including their social skills, academic achievements, and personal development. To meet all learning needs of the children, inclusion dictates a restructuring of educational settings and practices. As such, it can be understood as a transformative approach to education, which reforms educational processes and organization (e.g. Ainscow & Cesar, 2006; Giangreco & Suter, 2015). These changes should be introduced both at the school level and at the classroom level, and it will be important to involve the participants at all levels, also at community levels and policy makers.

Still today, there is no consistent empirical evidence regarding the effects of inclusion when considering it from the perspective of student's learning and development. In many countries, education policies are shifting towards inclusive education. However, there are differences between countries in their policies on inclusive education. Human rights have always been an important argument for development of inclusion, but the effects on students should be an important factor when designing policies.

Taken together, the empirical evidence concerning the advantages and disadvantages of educating children with SEN in inclusive education is still inconsistent. Understanding this issue is important for developing evidence-based practices. In schools, children who don't meet age-appropriate expectations for behavioral, emotional and/or cognitive self-regulation generate concern (Gilliam & Shahar, 2006).

This chapter discusses student's academic achievements and developmental outcomes, like cognitive and socio-emotional development, and reflects differences between inclusive education and segregated special needs educational settings. The perspectives from both students with and without SEN will be emphasized. Placement decisions for students with SEN often based less on the students' unique learning needs but more on beliefs and presumptions about student learning,

entrenched school district policies that restrict program delivery options, and other variables unrelated to student needs (e.g. Agran et al., 2020). However, it is known that evaluating and conceptualizing differences between children related to special needs and disability is a complex educational challenge. Thus, teacher education has a key role when developing competent teachers with the necessary knowledge and skills for inclusive education.

The evidence whether inclusive education is effective is still contradictory

Inclusive education has both positive and negative effects on the academic achievement and developmental outcomes of children with special educational needs (SEN). Inclusive education can lead to better results and increased motivation for achievement due to the focus on academic progress in general education. However, children with SEN may become less motivated and self-confident when compared to their peers, as they may achieve less well. Additionally, there may be less knowledge about teaching children with SEN in inclusive settings, which could negatively affect the quality of their education and achievement. (e.g. Myklebust, 2007) Overall, understanding the effects of inclusive education on SEN children is crucial for determining its desirability.

Positive findings for inclusion related to academic achievements have been reported in some studies (e.g. Katz, Sokal & Wu, 2021). Inclusion in early education has been shown to positively affect social development (Buysse, Goldman and Skinner, 2002). In a study of pre-school children with SEN receiving education either in segregated or inclusive settings, the children in inclusive classes demonstrated higher levels of cognitive functioning (Rafferty, Piscitelli and Boettcher, 2003). Rea, McLaughlin, and Walther-Thomas (2002) compared children with learning disabilities. They found that the group receiving inclusive education showed significantly higher academic achievements. A positive finding for inclusion was also reported by Markussen (2004), who compared children with SEN in different settings: the children with SEN in special education classes achieved a lower level of academic success compared with those in general education classes. Eckhart et al., (2011) found that students with learning and behavioural problems who have been educated in an inclusive education have higher chance of a promising career.

Students with psychosocial or emotional problems and learning difficulties are less likely to succeed in upper secondary education. However, higher grades from lower secondary school increase the chances of success (Markussen, 2004). Inclusive education in upper secondary education increases formal qualifications by 76% compared to special classes. Students with better grades at the start also achieve more. (Myklebust, 2007) A Dutch study (Karsten et al., 2001) reported

differences in academic and psychosocial development of at-risk students in special and general education. It was found that students in special education classes did less well in academic performances and that these differences increased as the students got older. In psychosocial development, variables such as social behavior and attitudes to work also favor students in regular classes.

A longitudinal Swiss study (Törmänen & Roebers, 2018) investigated differences in cognitive development, academic achievement and socio-emotional skills between children educated in two different educational settings. There were two measurement points for the children: in kindergarten at the age of 5 before the start of school and their assignment to either special or inclusive education, and after 2 years of schooling. One aim of the study was to assess whether children in special education classes benefit from school setting and were able to catch up in their development as intended. After 2 years of schooling, however, children differed significantly in terms of academic achievement. Students in special education classes performed substantially poorer in mathematics (equations, sequences, additions/subtractions) and literacy (reading speed, reading comprehension, spelling). They were also poorer in measurements of executive functions (EF), academic self-concept and as rated by the teachers, in their cognitive self-regulatory skills. Thus, assigning children to special education classrooms hindered more pronounced cognitive improvements within a predictable range, in contrast to the comparable group of children attending inclusive education. The only exceptions were in academic self-concept and teachers' ratings of social integration, which special education classes seemed to support during this 2-year period. Thus, special education classes improved children's academic self-concept, whereas their peers in inclusive education remained at the same level for 2 years. Notably, both groups of children underwent approximately the same developmental course in the two different learning contexts. (Törmänen & Roebers, 2018)

There were similar findings in Peetsma et al. (2001) large-scale longitudinal study on differences in students' cognitive and psychosocial development in various types of special needs and general education schools. The study focuses on comparing the development of matched pairs of primary-aged students in two different educational settings over periods of 2 and 4 years. After 2 years, students made more progress in mathematics in inclusive education than in special schools for children with learning and behavioral difficulties. School motivation developed more favorably in special schools for students with mild intellectual disability (ID). After 4 years, students in inclusive education had made more progress in academic performance than their matched pairs in segregated educational setting.

Jepma's study (2003) compared the development of children with learning and behavioral difficulties or mild ID in different educational settings. Results showed that students in inclusive education made more progress in language and maths, regardless of their ID. No differences were found in behavioral development or

nonverbal IQ scores between special and inclusive education. The study from Cole et al. (2004) compared the progress of students with mild disabilities in general education classrooms and those in pull-out resource programs. They found no significant difference in reading and mathematics progress over a school year. The study also highlighted the importance of developing adaptive skills for the independence and community participation of individuals with disabilities.

Dessemontet Sermier et al. study (2012) of children with intellectual disability (ID) they found that students in inclusive education made slightly more progress in literacy skills than peers in special schools. This result corresponds to the findings of previous studies which highlighted an advantage of inclusion for the development of academic skills (e.g., Freeman & Alkin 2000) and, more precisely, academic language skills (Peetsma et al. 2001) and reading skills (e.g., Törmänen & Roebers, 2018). Nine studies reviewed by Freeman & Alkin (2000) compared the academic achievement of children with ID in special schools or classrooms to those in inclusive education. The studies found no significant difference or that general education classrooms performed better than separated settings. The study also found that a greater amount of time spent in the general education classroom, ranging from 25% to 100% of school time, was associated with more positive results.

In conclusion, several studies have shown that children with SEN who were receiving their education in special education classes did not experience similar cognitive development or reached academic achievements at the same level as their peers in inclusive education. This appears to indicate that students with SEN achieve better in inclusive settings than in segregated settings. Notably, social participation among children with SEN offers another, less positive view on inclusion and it should be kept in mind that social behavior is very important for social inclusion.

Socio-emotional effects on children with SEN

An important line of argument is the social effects on children. Special schools may negatively affect self-confidence, as students may feel rejected or fail. Inclusive schools may also lead to increased self-comparison with peers without SEN, negatively impacting self-confidence (Bakker et al. 2007). Additionally, longer travel distances to special schools may negatively affect social contacts in the neighborhood. Inclusive education can enhance children's social development by increasing their interaction with local children.

The social position of children with SEN in inclusive education has been investigated quite often. Regarding acceptance by classmates, several studies showed that children with SEN felt less socially integrated and were more often segregated.

Children with SEN also had fewer friends, were less well liked, displayed more loneliness and they tend to hold this position, or it becomes even more negative. In addition, the long-term perspective of social participation for children with SEN is not as positive as it is for children without SEN (e.g., Schwab, Gebhardt, Krammera, et al., 2014). Huber (2006) summarized international studies and concluded that social competences, social withdrawal, aggressiveness, and cognitive abilities are important factors for social inclusion in school classes for both students with and without SEN. Findings from several studies indicated that SEN students showed less pro-social and more negative social behavior compared to their peers (e.g., Gasteiger-Klicpera et. al. 2001; Huber 2006; Schwab et al., 2014).

Problems at home seemed to have a negative effect on some students but had a stimulating effect on others. However, students with both psychosocial problems and cognitive problems seemed to develop less well in inclusive education than students with cognitive problems only. Students with problems in both domains developed somewhat better in segregated educational settings. (Peetsma et al., 2001)

Importantly, there might be variation between different kinds of inclusion and inclusive practices. It is important, therefore, to keep the design of the studies in mind, when drawing conclusions for policy or practice.

Effects of inclusion on students without Special Educational Needs

Inclusive education is often criticized for potentially negatively impacting students without Special Education Needs (SEN) by causing them to take up more teacher attention and potentially lower the overall standard of education. However, proponents argue that inclusive classes provide more adaptive education, which may benefit all students. (Dyson et al., 2004) Additionally, the special educators, additional teachers or teacher assistants often appointed in inclusive schools may have a positive effect on children without SEN. Overall, the impact of inclusive education on other children in the class is a crucial consideration for educators and parents.

Academic effects of inclusion on students without SEN are mixed, and the levels of schooling may have a differential impact on the achievement (e.g. Kart & Kart, 2021). The literature indicates mostly positive or neutral effects of inclusion on the academic achievement of typically developing students in the lower grades, whereas neutral or negative influence is indicated for later grades. In general, academic achievement of students with and without SEN seems to be comparable to non-inclusive classes or even better in inclusive classes. Results from Cole et al. study (2004) reveals that students without SEN educated in inclusive settings

made significantly greater academic progress in mathematics and reading. Interestingly, positive effects were more common in classes where general education teachers had positive attitudes toward inclusive practices and used adaptive instruction and cooperative teaching with special education teachers (e.g. Savolainen, Malinen, & Schwab, 2020). Additionally, students without SEN have socially benefited from being in inclusive classrooms with students with SEN. Mainly, the social effects of inclusion are reduction of fear, hostility, prejudice, and discrimination as well as increase of tolerance, acceptance, and understanding. Regarding social effects, children with SEN seem to have a less favorable social position than children without SEN. (e.g. Hehir et al., 2016; Kalambouka et al., 2007; Ruijs & Peetsma, 2009)

Teacher's role

Defining children with SEN requires analytic evaluation, which needs to cover measurements of cognitive processes and behavioral evaluations. Defining SEN in developing children is a challenge. Early identification has been a major issue in educational research targeting early interventions and the prevention of future problems. When categorizing children with SEN, Norwich (2006, p. 56) found different factors for determination: (1) patterns of exceptional child functioning relevant to education, (2) underlying disabilities or impairments relevant to child functioning in education, (3) kinds of replacement and general provision and (4) kinds of curriculum design and content and teaching strategies. Successful education should create a learning environment that supports not only the cognitive abilities of all children but also their academic skills and socio-emotional development.

Teachers are having a key role in process of finding the most efficient and suitable educational setting for children with SEN. In Törmänen & Roebers study (2018) the placement for educational setting happened according to teachers' evaluation based on the children's overall performance in kindergarten. The placement in segregated setting was intended to support the students' individual learning with an adapted curriculum and special needs education. The study (Törmänen & Roebers, 2018) revealed interesting results in terms of which characteristics were important for early educators to assign children to either in inclusive education or special schools or classes. Children assigned to special education classes had poorer language (receptive and active language skills) and fine motor skills and lower pre-academic self-concept before school starts. Teachers rated these children as having disadvantages in their cognitive self-regulatory skills and social integration. In Schwab et al., study (2014) it was found that teachers rated the social

competences of students without SEN students more positively than those of students with SEN.

In Törmänen & Roebers study (2018) almost every fourth child in the special education classes was an immigrant, thus having another mother tongue, but only 9% of the children in this sample who later attended general education were immigrants. Surprisingly, before the transition to school, no differences between children were found in Executive Functions (EF) such as cognitive flexibility, working memory and inhibition. Research suggests a central role of EF for children's cognitive and social development. It is known that EF plays a central role in promoting school readiness and predicting later academic outcomes and school success. These results can be interpreted as showing that the children assigned to special education classes were underachieving; they were functioning less than optimally in group settings, although their cognitive development was normal. The study raises the question of what background factors should be considered when planning the educational setting placement for children with SEN. An evaluation of EF can be suggested being a central part of such processes, as they are known to be an important aspect of school readiness. (Törmänen & Roebers, 2018). In addition, early identification is important when targeting early interventions and preventing future problems.

Ainscow & Miles have stated (2008) that inclusive education depends on educators at all levels of the system being committed to its underlying philosophy and being willing to implement it. This means that education systems and schools should articulate an inclusive culture in which "there is some degree of consensus … around values of respect for difference and a commitment to offering all pupils access to learning opportunities" (Ainscow & Miles, 2008, p. 27).

Teacher education and preparations for inclusive education

Without proper education teachers are unprepared to support the inclusion of all students. Szumski et al. (2017) highlight the importance of teacher preparation in inclusive classrooms for school achievement, even for students without SEN. Teachers make crucial instructional decisions and hold a dominant position in inclusive education in relation to special educators. There are significant differences internationally in the availability of inclusive education courses in teacher education programs.

Gagnon et al. (2023) have described research-based approach to pre-service teacher education, which is used in teacher education for example in Finland. A research-based approach to pre-service teacher education is found to be crucial for future teaching in the complex and dynamic field of education. (Kansanen, 2014; Toom et al., 2010). This approach consists of two overlapping levels: basic and conceptual. The basic level deals with everyday teaching practices, subject matter studies, and pedagogical content knowledge, along with pedagogical content knowledge and practicum. The conceptual level focuses on theoretical approaches

to educational phenomena and research studies, focusing on research skills and developing a research-based professional identity. (Kansanen, 2014)

The goal is not to develop professional researchers but autonomous and reflective teachers who can use research knowledge to meet classroom challenges with evidence-based instructional and behavioral approaches. (Toom et al., 2010) Pre-service teachers should be analytical, open-minded, critical, independent, scientifically literate, and question phenomena and knowledge. (Kansanen, 2014). Pre-service teachers' research consumption and production skills can prepare them for inclusive education by preparing them to develop teaching and learning environments, curriculum development, and student assessment. (Lavonen, 2018) Mandatory coursework in pre-service teacher training can provide expertise in curriculum development, content knowledge, assessment, differentiation, evidence-based instructions, behavioral support, and co-teaching. (Gagnon et al., 2023)

One approach to understanding pre-service and active teacher views of inclusion is to identify their feelings of preparedness, as uncommitted teachers have a reduced chance of success. Pre-service teachers often feel unprepared to support students with SEN in an inclusive approach. Key aspects impact teachers' preparedness for inclusive classrooms includes considering not only methodical skills, but also beliefs, values and self-efficacy on the value of diversity in the classroom. (Savolainen, Malinen, & Schwab, 2020; Szumski et al., 2017). Preparation should not solely focus on disabilities, but also on teaching effective strategies for diversified groups. Universal design for learning, which can be beneficial for both students with and without SEN, should be taught instead of adjusting tasks to individual needs. (Szumski et al., 2017; Theoharis & Causton-Theoharis, 2011).

Pedagogical practices

Successful inclusive education is a transformative approach that improves social and academic outcomes for all students by utilizing different pedagogical approaches, teaching instructions, and classroom management. It supports cognitive abilities and social and emotional development, and is aimed at reforming educational processes at both school and classroom levels. The equity approach to education focuses on pedagogical practices that facilitate inclusion by adapting class structures or applying differentiative education. This approach aims to provide for all by differentiating for some (Florian & Black-Hawkins, 2011). Key concept is also the diversity, teachers must have willingness to teach heterogenous groups of students.

Some practices, such as using co-teachers and peer tutoring have been found to positively impact students with SEN. Similarly, instructional strategies like frequent feedback, cooperative learning, focus on concepts, positive classroom climates, and sensitive teachers have been proven effective, as confirmed by several

studies. (e.g., Hattie, 2009; Mitchell, 2014; Szumski et al. 2017). However, not all studies have shown a positive effect of these practices (e.g., Ruijs & Peetsma, 2009). The practice of inclusive education in Nordic countries aims to remove special and general education divisions, embracing the ‚one school for all‘ concept. (Keles et al., 2024) The three-tier model: general support, intensified support, or special support, implemented in Finland since 2010, and introduced in Norway in 2019, is recommended. (please find more information on chapter 4.4 Multiprofessional collaboration, a review)

Implementing inclusive education is more challenging than formulating legislation. Practitioners, such as teachers, must translate the goals into practice, often facing obstacles such as lack of resources, competence, and negative attitudes. (Keles et al., 2024)

Conclusions

From student‘s perspective

- Inclusive education enhances child‘s developmental outcomes and academic achievements, however there are contradictory results on socio-emotional effects on children with SEN.

- There is evidence that inclusive education is beneficial for both student with and without SEN.

- Students without SEN have socially benefited from being in inclusive classrooms with students with SEN. Mainly, the social effects of inclusion are reduction of fear, hostility, prejudice, and discrimination as well as increase of tolerance, acceptance, and understanding.

- Defining Special Educational Needs (SEN) in developing children is a challenge. Definitions require analytic evaluation, which needs to cover measurements of cognitive processes, behavioral and socio-emotional evaluations.

- Identifying relevant developmental milestones and outcomes is crusial. There is still a need to clarify perspectives of inclusion and who needs support.

- Inclusive education should use many interventions, as early as possible, to enhance children's academic achievement, socio-emotional and cognitive abilities. There are findings of negative effects of inclusive education on student's socio-emotional development. Thus, interventions should try to improve the social behaviour of all students.

From perspectives of educational settings and/or system

- The quality of inclusive education is a key aspect. Inclusive education is a complex and controversial approach to educating learners with and without SEN: If it is properly implemented, it can bring about academic and social benefits to all learners. The major risk is that inclusive education is implemented only in a partial form. Lindsay (2007) reviewed the effect of inclusive education and decided that it is difficult to draw conclusions about inclusive education, because there are many different forms of inclusion and many ways of researching it. Scholars have argued that a "lack of clarity about definitions of inclusion has contributed to confusion about inclusive education and practice, as well as to debates about whether or not inclusion is an educationally sound practice for students with SEN." (Florian & Black-Hawkins, 2011, p. 826). Studies with high methodological rigour, as well as quantitative, qualitative, and mixed-method studies on actual practice and student outcomes– including students' voices– are needed.

- Inclusive education is a process: It should be emphasized that the assessment of the success should be based not only on the analysis of the individual components of the process, but also on its final result, the high quality of which is possible only if inclusive education is seen as a continuous process starting from early childhood. Ultimately, education should provide and ensure the best quality of life for all learners.

- Giangreco & Suter (2015) have stated that in educational reality schools tend to reactively adapt to the increasing number of students with SEN rather than proactively plan and re-organize a school in such a way as to make it ready for the effective education of heterogeneous groups.

- Developing an effective school for all students requires cooperation with other schools and the broader community, team decision making, flexible use of resources, and a new system for the preparation of teachers and special educators (e.g. Ainscow et al., 2012; Giangreco & Suter, 2015; Szumski et al. 2017; Wicki & Rauber, 2024). Fortunately, there are several promising examples of how inclusive education has been benefitting all learners' academic achievement and developmental outcomes.

- Szumski et al (2017) stated that segregated educational system are based, often implicitly, on three premises: (a) academic achievement is more important than other values, like egalitarianism or community; (b) students should learn in homogeneous groups; (c) decisions are made based on the medical model of disability (Pfahl & Powell, 20011; Powell, 2009). These premises conflict with inclusion understood as a principal approach to education (Ainscow et al., 2006).

- There is importance of improving the quality of inclusion and for using inclusive education as a way to transform the school system.

References

Agran, M., Jackson, L., Kurth, J.A., Ryndak, D., Burnette, K., Jameson, M., Zagona, A., Fitzpatrick, H., & Wehmeyer, M. (2020). Why Aren't Students with Severe Disabilities Being Placed in General Education Classrooms: Examining the Relations Among Classroom Placement, Learner Outcomes, and Other Factors, *Research and Practice for Persons with Severe Disabilities, 45(1),* 4-13.

Ainscow, M., & Miles, S. (2009). *Developing Inclusive Education Systems: How Can We Move Policies Forward?* Mancester: University of Manchester.

Ainscow, M., & Cesar, M. (2006). Inclusive education ten years after Salamanca: Setting the agenda, *European Journal of Psychology of Education, 21, 231*

Ainscow, M. (2005). Developing inclusive education systems: what are the levers for change?, *Journal of Educational Change, 6,* 109–24.

Bakker, J. T. A., Denessen, E., Bosman, A. M. T., Krijger, E.-M., & Bouts, L. (2007). Sociometric Status and Self-Image of Children with Specific and General Learning Disabilities in Dutch General and Special Education Classes. *Learning Disability Quarterly, 30(1),* 47-62. https://doi.org/10.2307/30035515

Buysse, V., Goldman, B. D., & Skinner, M. (2002). Setting effects on friendship formation among young children with and without disabilities, *Exceptional Children, 68,* 503–17.

Cole, C.M., Waldron, N., Majd, M., & Hasazi, S. (2004). Academic Progress of Students Across Inclusive and Traditional Settings, *Mental Retardation*, *42, 2,* 136–144.

Dessemontet Sermier R., Bless, G., & Morin, D. (2012). Effects of inclusion on the academic achievement and adaptive behaviour of children with intellectual disabilities, *Journal of Intellectual Disability Research, 56, 6,* 579–587, doi: 10.1111/j.1365-2788.2011.01497.x

Dyson, A., Farrell, P., Polat, F., & Hutcheson, G. (2004). Inclusion and pupil achievement, Research Report RR578, University of Newcastle, ISBN 1 84478 319 7

Eckhart, M., Haeberlin, U., Sahli Lozano, C., & Blanc, P. (2011). Langzeitwirkungen der schulischen Integration: Eine empirische Studie zur Bedeutung von Integrationserfarungen in der Schulzeit für die soziale und berufliche Situation im jungen Erwachsenenalter. Bern: Haupt Verlag.

Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy, *British Educational Research Journal, 37, 5*, 813–828

Freeman, S. F. N., & Alkin, M. C. (2000). Academic and social attainments of children with mental retardation in general education and special education settings. *Remedial and Special Education, 21,* 3e18.

Gagnon, J. C., Honkasilta, J., & Jahnukainen, M. (2023). Teacher education in Finland: Progress on preparing teachers for the inclusion of students with learning and behavior difficulties. In: Teacher Education Around the World: Challenges and Opportunities. de Oliveira Brito, R. & Anselmo Guilherme, A. (eds.). Brasilia, Portugal: Unesco, p. 197-221.

Giangreco, M.F., & Suter, J.C. (2015). Precarious or purposeful? Proactively building inclusive special education service delivery on solid ground, *Inclusion, 3,* 112-131.

Gilliam W., & Shahar G. (2006). Preschool and child care expulsion and suspension: Rates and predictors in one state. *Infants & Young Children,* 19:228–245.

Hattie, J. (2009). Visible learning. Routledge, London, New York 2009, ISBN 978-0-415-47618-8.

Hehir, T., Grindal, T., Freeman, B., Lamoreau, R., Borquaye, Y., & Burke, S. (2016). A Summary of the Evidence on Inclusive Education; Abt Associates: Cambridge, MA, USA.

Huber, C. 2006. Soziale Integration in der Schule?! Eine empirische Untersuchung zur sozialen Integration von Schülern mit sonderpädagogischem Förderbedarf im gemeinsamen Unterricht. Marburg: Tectum.

Jepma, I.J. (2003). De schoolloopbaan van risicoleerlingen in het primair onderwijs [The school career of pupils at risk in primary education]. Amsterdam: Thela Thesis.

Kalambouka, A., Farrell, P., Dyson, A., & Kaplan, I. (2007). The impact of placing pupils with special educational needs in mainstream schools on the achievement of their peers. *Educational Research Review, 49,* 365–382.

Kansanen P. (2014). *Teaching as a master's level profession in Finland: Theoretical reflections and practical solutions.* In O. McNamara, J. Murray, & M. Jones (Eds.), Workplace learning in teacher education: Professional learning and development in schools and higher education (volume 10, pp. 279-292). Springer. https://doi.org/10.1007/978-94-007-7826-9_16

Kart, A., & Kart, M. (2021). Academic and Social Effects of Inclusion on Students without Disabilities: A Review of the Literature. *Education Sciences, 11, 16*. https://doi.org/10.3390/educsci11010016

Karsten, S., Peetsma, T., Roeleveld, J., & Vergeer, M. (2001). The Dutch policy of integration put to the test: Differences in academic and psychosocial development of pupils in special and mainstream education, *European Journal of Special Needs Education, 16(3),* 193–205.

Katz, J., Sokal, L. & Wu, A. (2021) Academic achievement of diverse K-12 students in inclusive three-block model classrooms, *International Journal of Inclusive Education, 25:12,* 1391-1409, DOI: 10.1080/13603116.2019.1613450

Keles, S., ten Braak, D., & Munthe, E. (2024) Inclusion of students with special education needs in Nordic countries: a systematic scoping review, *Scandinavian Journal of Educational Research, 68, 3,* 431–446. https://doi.org/10.1080/00313831.2022.2148277

Lavonen, J. (2018). *Educating professional teachers in Finland through the continuous improvement of teacher education programmes.* In Y. Weinberger, & Z. Libman (Eds.), Contemporary pedagogies in teacher education and development (pp. 3-22). IntechOpen. https://doi.org/10.5772/intechopen.77979

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education / mainstreaming. *British Journal of Educational Psychology, 77,* 1e24.

Markussen, E. (2004) Special education: does it help? A study of special education in Norwegian upper secondary schools, *European Journal of Special Needs Education, 19, 33–48.*

Mitchell, D. (2014). Inclusive education is a multi-faceted concept, *CEPS Journal 5, 1,* 9-30, URN: urn:nbn:de:0111-pedocs-106113 – DOI: 10.25656/01:10611

Myklebust, J.O. (2007). Diverging paths in upper secondary education: Competence attainment among students with special educational needs, *International Journal of Inclusive Education, 11, 215-231*

Norwich, B. (2006) *Categories of special education needs.* In L. Florian (ed), The SAGE Handbook of Special Education, pp. 55–66. London: Sage.

Peetsma, T., Vergeer, M., Roeleveld, J., & Karsten, S. (2001). Inclusion in Education: Comparing pupils' development in special and regular education, *Educational Review, 53*(2) 125–135.

Pfahl, L., & Powell, J.J.W. (2011) Legitimating school segregation. The special education profession and the discourse of learning disability in Germany, *Disability & Society 26*(4), 449–462

Powell, J.J.W. (2009). To Segregate or to Separate? Special Education Expansion and Divergence in the United States and Germany, *Comparative Education Review, 53*(2), 161-187. doi:10.1086/597816

Rafferty, Y., Piscitelli, V. ,& Boettcher, C. (2003). The impact of inclusion on language development and social competence among preschoolers with disabilities, *Exceptional Children, 69,* 467–79.

Rea, P., McLaughlin, V., & Walther-Thomas, C. (2002). Outcomes for students with learning disabilities in inclusive and pull-out programs, *Exceptional Children, 72,* 203–22.

Ruijs, N.M., & Peetsma, T.T.D. (2009). Effects of inclusion on students with and without special educational needs reviewed, *Educational Research Review, 4*(2) 67-79, https://doi.org/10.1016/j.edurev.2009.02.002.

Savolainen, H., Malinen, O. P., & Schwab, S. (2020). Teacher efficacy predicts teachers' attitudes towards inclusion – a longitudinal cross-lagged analysis. *International Journal of Inclusive Education, 26*(9), 958–972. https://doi.org/10.1080/13603116.2020.1752826

Schwab, S., Gebhardt, M., Krammera, M., & Gasteiger-Klicpera, B. (2014). Linking self-rated social inclusion to social behaviour. An empirical study of students with and without special education needs in secondary schools, *European Journal of Special Needs Education, 30*(1), 1–14.

Szumski, G., Smogorzewska, J., & Karwowski, M. (2017). Academic achievement of students without special educational needs in inclusive classrooms: A meta-analysis, *Educational Research Review, 21, 33-54,* https://doi.org/10.1016/j.edurev.2017.02.004.

Theoharis, G., & Causton-Theoharis, J. (2011). Preparing pre-service teachers for inclusive classrooms: Revising lesson-planning expectations. *International Journal of Inclusive Education, 15*, 743e761.

Toom, A., Kynäslahti, H., Krokfors, L., Jyrhämä, R., Byman, R., Stenberg, K., Maaranen, K., & Kansanen, P. (2010). Experiences of a research-based approach to teacher education: Suggestions for future policies. *European Journal of Education, 45(2, Part II),* 331-344. https://doi.org/10.1111/j.1465-3435.2010.01432.x

Törmänen, M.R.K., & Roebers, C.M. (2018). Developmental outcomes of children in classes for special educational needs: Results from a longitudinal study. *Journal of Research in Special Educational Needs, 18*(2), 83-93, DOI: 10.1111/1471-3802.12395

UNESCO (1994) *The Salamanca Statement and Framework for Action on Special Needs Education*, Articles 2.4 and 2.5. Paris: UNESCO.

Wicki, M., T., & Rauber, J. (2024). Tätigkeitsprofile von Förderlehrpersonen: Eine explorative Studie zur Erhebung des Einsatzes von Ressourcen für sonderpädagogische Angebote, *Zeitschrift für Bildungsforschung, 14*, 2, https://doi.org/10.1007/s35834-024-00416-x

Author

Törmänen, Minna R.K. is Professor and Senior Researcher at the University of Teacher Education in Special Needs, Zurich, Switzerland. She also act as Associate Professor at Åbo Akademi University and Research Fellow at University of Helsinki in Finland.