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TRANSITION FROM KINDERGARTEN TO SCHOOL

– A Systematic Review

LILLEJORD, S., BØRTE, K., HALVORSRUD, K., RUUD, E. & FREYR, T.

KNOWLEDGE CENTRE FOR EDUCATION
VISITING ADDRESS: Drammensveien 288, 0283 Oslo

POSTAL ADDRESS: P.O. box 564, NO-1327 Lysaker

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RESEARCH GROUP: Professor Peder Haug, Volda University College. PhD Candidate Hilde Dehnæs Hogsnes, University College of Southeast Norway. Associate Professor Ellen Beate Hansen Sandseter, Queen Maud University College. Postdoctoral Fellow Imac Maria Zambrana, The Norwegian Center for Child Behavioral Development.

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SUMMARY

This systematic review includes studies on the transition from kindergarten to school published in peer-reviewed journals between 2010 and 2014. It examines measures reported in the studies and analyses how they can positively influence the transfer process. There is widespread political interest at the moment in early intervention in education, and a systematic review of the research will make a substantial contribution to policymakers and practitioners' knowledge foundation. Systematised research could support more knowledge-informed policies and practices, and consequently improve the quality of early childhood education and care (ECEC) provision.

A systematic review presupposes a sufficient number of high-quality studies that can answer the review's research question. Researchers are increasingly examining the transition from kindergarten to school from the perspectives of key actors involved in the process, providing new understanding that has implications for how measures should be designed, implemented and assessed.

In 2005, responsibility for Norwegian kindergartens was transferred from the Ministry of Children and Family Affairs to the Ministry of Education and Research. While kindergartens thereby became part of the formal education system, it was emphasised that they should remain an arena for play and social development, as well as being the first stage in children's education (White Paper no 24, 2012–2013, pp. 10-11).[1] The stated political ambition is that kindergarten staff should, on the one hand, prepare children for school, while supporting children's free, active and curiosity-driven learning processes through play and similar pedagogical approaches, on the other.

The debate on early childhood education and care in Norway is in this sense ambiguous. Kindergartens are expected to be an integrated part of the formal education system in terms of competence and knowledge. At the same time, kindergarten staff has a mandate to provide children with care and support, and to inspire and encourage their play activities in safe surroundings. This dual expectation gives rise to tensions and creates opportunities. Despite the fact that the transition from kindergarten to school is relatively smooth for many children, the shift from the kindergarten's emphasis on children's exploratory activities, to the more regulated and formal approaches to teaching and learning that characterise schools may be overwhelming for some children.

The systematic review consists of seven chapters. No previous systematic reviews on the topic of children's transition from kindergarten to school were identified, but Chapter 1 presents three recent literature reviews. Chapter 1 also provides a brief overview of Norwegian ECEC policy, where kindergarten is non-compulsory provision for children between the ages of 10 months and 6 years, before they enrol in compulsory school. Norway is one of the OECD countries with the highest kindergarten attendance rate, with around 80 per cent of one to two-year-olds and around 96 per cent of three to five-year-olds enrolled in kindergarten in 2015. In parallel with the expansion of kindergarten provision in Norway, questions about the quality of early childhood education and care have been raised, and the government has intensified the efforts to upgrade the skills and competence of kindergarten staff in Norway.

Chapter 2 describes the methodology used in the systematic review, how systematic searches were conducted and the studies sorted and processed. The aim of the review has been to identify studies that will most likely answer the review question: *What characterises measures that can have a positive impact on children's transition from kindergarten to*

1 Meld. St. 24 (2012-2013) *Framtidens barnehage (The future kindergarten)* https://www.regjeringen.no/no/dokumenter/meld-st-24-20122013/id720200/

school? Two search strings were developed and searches conducted in six electronic databases, identifying 4,273 studies of potential relevance. The sorting of studies follows systematic procedures and uses pre-defined criteria for inclusion and exclusion. Forty-two studies conducted in 13 different countries were considered to be of high quality and relevance and were included in the review. The studies were in English, Norwegian, Swedish and Danish, and they were published in peer-reviewed journals after 1 January 2010. Qualitative, quantitative and mixed methods studies were included. Ten of the 42 studies are from the Nordic countries. Four main themes were identified: 1) actors' perspective, 2) asymmetric relationships, 3) educational practices, and 4) school-preparatory activities. The studies included are synthesised using a configurative synthesis, where *core studies* are identified according to criteria for quality and relevance. The process of identifying similarities, nuances, patterns and themes across the included studies was facilitated by the identification of *key concepts* in the core studies.

Chapter 3 presents studies that have examined the transition from kindergarten to school from the actors' perspectives. The aim of this chapter is to extract data about how the four groups of actors involved in the process: children, parents, teachers in kindergartens and teachers in schools, experience the transition period. Studies show commonalities and differences in the actors' experiences, and reveal that most children cope relatively well with the transition from kindergarten to school. Some children, however, express anxiety and restlessness. It is crucial for continuity in children's learning that they experience school as a continuation of kindergarten or preschool. This implies that schools must take into consideration what the child has already learned in kindergarten and/or preschool. Cross-institutional collaboration and the exchange of information about the child's prior learning is vital to ensure continuity. Even though the studies were conducted in countries with different educational systems and traditions, the findings and conclusions in the included studies were surprisingly similar. Underlying tension was observed between the Anglo-American curriculum tradition emphasising school-readiness and the continental European Bildung tradition, which takes a more holistic approach to the child's development and aims to interweave care and knowledge.

One significant problem that was identified might be related to a weak professional knowledge base. Measures intended to facilitate children's transition from kindergarten to school were too often taken for granted. Teachers in both institutions knew the intentions behind the measures, but did not clarify them for children and parents. This lack of transparency contributes to confusion, and researchers argue that more transparency in the transition period might ease tensions. More detailed explanations of why certain activities are initiated, why children should participate, and what they have experienced will make the transition more comprehensible to children and parents.

Chapter 4 presents tensions between school and kindergarten staff in connection with children's transition period that can be traced back to traditional values and attitudes in a historically fragmented educational system. Two categories of tensions were identified: tensions related to asymmetric relationships between kindergarten and school staff, and tensions caused by different educational practices in the two institutions. The review illustrates how history and tradition impact cultural differences and practices in kindergarten, preschool and school. Tradition is not – in itself – necessarily a problem, but it can become problematic if it activates tensions between teachers who have to collaborate on facilitating children's transition to school. For instance, teachers in both institutions perceive their own educational practice as being best, and suggestions from kindergarten teachers, such as the importance of play activities, are frequently downplayed or side-lined. Both groups of teachers expect the other group to explain how *their* knowledge can benefit the collaboration. Studies also show that both groups maintain their fundamental attitudes and beliefs, and revert to their default positions as soon as projects end. Successful collaboration presupposes symmetric relations, which means that differences between the institutions must be made transparent and acknowledged before measures are initiated. Collaboration between kindergartens and schools requires staff from both institutions to acknowledge that their own practices are culturally and historically situated. Ideally, professionals should continually criticise their own practice – in order to improve it. With analytic distance, individual practitioners do not have to feel personally offended when their practices are questioned.

The second category of tensions is related to the different educational practices at the respective institutions. The traditional perspective on teaching supports teacher-led methods and instruction. The other two perspectives – cognitive-constructivist and social-constructivist – support children's or pupils' activities. Studies find that teachers and parents are concerned about children's ability to act independently in schools that use traditional teaching methods and limit children's opportunities for play and self-expression.

One finding from the analysis across the studies is that it is a fundamental difference between the two institutions that, while children are used to being told by kindergarten teachers how much they *know*, school-teachers show them how much they need to *learn*.

A third category of studies discuss school-preparatory activities, such as support from the home environment, early development of numeracy and reading comprehension, and the development of social skills that can facilitate the child's transition from kindergarten to school. In conjunction with the development of social skills, teachers should also pay attention to self-regulation and executive functions, such as children's impulse control and their ability to focus on a task over time. However, studies also stress that a successful transition to school also entails improving relationships between the children, their families, and kindergarten and school teachers by using appropriate transition practices. Transition is therefore not solely a matter of getting the individual child ready for school, but also concerns whether schools are prepared for the children.

Chapter 5 identifies common themes and patterns across the 42 studies, including a set of conditions that should be in place for measures to be successful. These conditions are related to the five key concepts used when synthesising data extracted from the included studies: *process, transparency, continuity, relationships (collaboration/partnership)* and *hybrid pedagogy*. Firstly, it is important to interpret the transition from kindergarten to school as a process and not as a single event. For the children, the transition is both a socioemotional and a physical move. When 'transforming' from kindergarten children to pupils in school, they adapt to the school's culture and pedagogy, while at the same time establishing new relationships in new surroundings. Secondly, transition activities must be transparent. Staff have to explain why specific measures are initiated, what will happen and how they will proceed. Children need to understand the rationale for what is going on. This is how they learn and develop. As key supporters in transition activities, parents must know why kindergartens provide schools with information about their child and how the information is used. Thirdly, children must experience continuity between activities in kindergarten and schools. This is closely linked to the fourth point, which concerns collaboration and good relationships. Studies show a need for a network of supportive relationships around the child, with the child as an active participant. Fifthly, collaborative initiatives uniting the pedagogical approaches in the two institutions must be initiated during the last months in kindergarten and the first months in school. Measures should be aimed at ensuring coherence and be based on fundamental similarities in Norwegian legislation relating to kindergartens and schools, in which children and young people are perceived as competent contributors to a democratic society.

Chapter 6 groups measures identified in the studies into three categories: 1) familiarising children with school, 2) the distribution of information, and 3) collaboration. While there are few recommendations on effective measures to facilitate children's transition from kindergarten to school, the majority of studies argue that it is important to implement a variety of transition activities over a longer period of time and that collaboration should build on relationships between children, parents and teachers. Based on the findings in this systematic review, the following recommended measures could facilitate children's transition from kindergarten to school:

1. Collaboration between kindergarten and school:
- Professional collaboration between kindergarten teachers and teachers in schools
- Exchange of information about the children
- Joint, collaborative projects

2. Collaboration between parents and school:
- Open and collaborative dialogue with parents before, during and after the transition

3. Measures that can be implemented by kindergartens:
- Familiarise the children with school
- Establish a joint platform for information and discussion
- Promote coherence during the transition period

4. Measures that can be implemented by schools:
- Welcome programmes
- Clearly stated goals and expectations
- Flexible and dynamic transition practices

Chapter 7 concludes and points out gaps in the research. Studies included in the systematic review do not recommend any measures that are seen as being more effective than others, but provide an overview of preconditions for measures to succeed in a fragmented education sector. In four reports (Starting Strong I-IV), the OECD mentions a policy trend of focusing on 'school readiness', and label a consequence of this trend 'schoolification', meaning that traditional school activities are introduced in kindergartens. An unintended result of this policy is a form of 'colonisation' of the kindergarten by traditional instructional practices, with more listening and less play. The systematic review indicates that one reason for this may be an asymmetrical relationship between kindergarten and school. Studies show that the school's pedagogical practices frequently dominate collaborative initiatives. When strengthening the competence of kindergarten staff, it must be taken into consideration what they need to know if they are to collaborate on an equal footing with schoolteachers. Kindergarten teachers' professional learning must be centred around characteristics of kindergartens in a system that increasingly focuses on academic outcomes. This can be achieved by asking what it means to teach children in a different manner in kindergartens than in schools. How is this different way of teaching and learning implemented – and when do kindergarten teachers know that they have succeeded? The importance of play activities is stressed as kindergartens' unique contribution to children's learning. Links between play and learning are largely tacit and taken for granted, however. There is a need for a more solid knowledge base on the characteristics of play-based approaches to children's learning in order to support play-based learning practices in an outcome-based system.

The systematic review has identified research gaps (areas for future studies). There is, for instance, little information about the number of children who experience problems during the transition from kindergarten to school, and how many children make a successful transition. We also have insufficient knowledge about the kinds of problems children and parents can encounter. There are few studies investigating how children experience classroom teaching as opposed to the teaching methods they have been used to in kindergarten. There is also a need for more studies investigating the transition from kindergarten to school from the perspective of the key actors.

1 INTRODUCTION

There is clearly a need for a systematic review of research on children's transition from kindergarten to school. Firstly, researchers agree on the importance of early intervention, and a systematic review is a substantial contribution to the educational knowledge foundation. How children cope with the transition from kindergarten to school has a bearing on their later success in school, society and the labour market. Secondly, research shows that, although the transition from kindergarten to school is unproblematic for most children, some children experience difficulties. We know little about what problems they encounter, the number of children affected, and how the challenges should be met. Researchers studying the transition from kindergarten to school from the actors' perspectives find that some children are unaware of the different practices in schools and kindergarten, and that a lack of transparency in the transition process may cause anxiety and nervousness. A third pattern that emerges in the research indicates that the transition period can be *both* positive *and* negative. Rather than perceiving the transition as a single event, it should be regarded as a series of critical events that children relate to with adult support. This perspective has implications for how measures are designed and implemented. In most cases, targeted measures are more appropriate than broad interventions. Quite a few problems identified by researchers seem to be related to the quality of cross-institutional collaboration. Studies indicate that tensions between kindergarten teachers and schoolteachers can be explained by historical traditions and different beliefs about how children acquire knowledge and learn. In order to be successful, measures implemented to facilitate the transition from kindergarten to school must take these factors into account.

The review reveals recurring themes in the studies. One theme is an increased tendency towards 'schoolification' of kindergartens. 'Schoolification' is used analytically to describe how schools' traditional instructional practices gradually 'trickle down' into kindergartens, marginalising play and other pedagogical approaches. One possible explanation for this trend is that 'schoolification' is a response to policymakers' requirement that children have to be 'ready for school'.

The studies included in this systematic review were conducted in 13 countries with different educational provision for the youngest children. In some countries, children go straight from kindergarten to school, while other countries have an intermediate preschool year. The systematic review therefore includes studies studying the transition from kindergarten to school, from kindergarten to preschool and from preschool to school. The aim is not to look for differences between the transition from kindergarten to school and the transition from preschool to school, but to describe the transition from ECEC – in the form of kindergarten and/or preschool (which in most countries is non-compulsory) – to compulsory schooling.

Children's transition from kindergarten to school is a key topic in a Norwegian white paper published in 2016,[2] and the topic is of high relevance in many other countries, also in the OECD Network on Early Childhood Education and Care (ECEC). The project *Transitions between ECEC and primary schooling*[3] has been approved by the OECD Education Committee and added to the ECEC network. The large-scale survey will be conducted in 2017/2018.[4] It will be the first broad-based, cross-national comparative study of kindergarten staff's skills and working conditions.

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2 Meld. St. 19 (2015-2016) *Tid for lek og læring – bedre innhold i barnehagen* (*Time to play and learn – improved educational provision in kindergartens*) https://www.regjeringen.no/no/dokumenter/meld.-st.-19-20152016/id2479078/

3 Litjens, I. & Taguma, M. (2014): Revised project proposal for 'Review of policies and practices for transition from early childhood to primary education'. OECD Network on Early Childhood Education and Care. EDU/EDPC/ECEC(2014)12/REV1.

4 According to the OECD (2014, op. cit., p. 8), the ECEC Staff Survey will be piloted in 2016, the main study will be conducted in 2017, and the first results are expected in 2018.

1.1 THE RESEARCH PROCESS

A systematic review presupposes the availability of a sufficient number of high quality studies that are also of relevance to the review question. A substantial number of high quality studies on the topic of the transition from kindergarten to school were detected. Electronic searches of databases identified 4245 studies of potential interest, and an additional 28 studies were identified through hand searches. After removing duplicates, three researchers independently read the title and abstract of the remaining 2685 studies, using predefined criteria for inclusion and exclusion (see Chapter 2). The relevance assessment is a continuous process. A total of 2541 studies were excluded during the first step of the screening process, while 144 studies of possible relevance to the review question were identified. These studies were in line with inclusion criteria 1-4.

1.1.1 Research Question

Having sorted (included and excluded) and evaluated the quality of the studies (see more about this process in Chapter 2, Methods), the following research question was formulated for this systematic review:

> *What characterises measures that can have a positive impact on children's transition from kindergarten to school?*

This research question assumes that data can be extracted from included studies that describe activities and actions in addition to contextual factors, i.e. studies have to show how activities unfold, ask why they unfold as they do and, consequently, describe or indicate certain conditions under which the various measures prove successful.

1.1.2 Research Team

The following researchers followed the project: Professor Peder Haug, Volda University College; PhD Hilde Dehnæs Hogsnes, Buskerud and Vestfold University College; Associate Professor Ellen Beate Hansen Sandseter, Queen Maud University College of Early Childhood Education; and Postdoctoral researcher Imac Maria Zambrana, the Norwegian Centre for Child Behavioural Development.

The Knowledge Centre held two seminars with the research team, on 1 October 2015 and 22 October 2015. The research team provided feedback on two draft versions of the report. An early draft version of the report was also read by policymakers at the Department of Early Childhood Education and Care at the Norwegian Ministry of Education and Research, and at the Norwegian Directorate for Education and Training.

1.1.3 Structure of the Systematic Review

The systematic review has seven chapters. Chapter 1 provides a brief overview of the current status of Norwegian ECEC policy as described in recent government legislation, documents and reports. Chapter 2 outlines the methodology and different stages of the systematic review, including the search process, the inclusion and exclusion of studies, as well as mapping, categorisation and synthesis of the included studies. Chapter 3 presents studies that have examined the transition from kindergarten to school from the perspectives of key actors. Chapter 4 presents two categories of tensions identified when teachers at the two institutions collaborate to facilitate children's transition from kindergarten to school: tensions caused by asymmetric relations between kindergarten and school, and tensions related to different educational practices in the two institutions. One explanation for the tensions is that increasingly younger children are expected to be 'ready for school' and that school readiness is synonymous with teaching them academic skills. The result is less play and outdoor activities in kindergartens and more traditional instruction. The OECD asks whether 'schoolification' entails that the school's traditional practices 'colonise' kindergartens.[5] In Chapter 5, common themes and patterns across the 42 included studies are identified, including a set of conditions that should be in place in order for measures to be successful. Chapter 6 presents categories of measures identified in the included studies, and Chapter 7 concludes and describes research gaps.

1.2 BRIEF OVERVIEW OF THE CURRENT STATUS OF ECEC POLICY IN NORWAY

Today, most children between the ages of 10 months and 6 years in Norway attend kindergarten before enrolling in compulsory school.[6] With around 80 per cent of one to two-year-olds and around 96 per cent

5 OECD (2006): *Starting Strong II: Early Childhood Education and Care.* Available from http://www.oecd.org/edu/school/startingstrongiiearly-childhoodeducationandcare.htm

6 White Paper no. 24 (2012-2013): *Framtidens barnehage* [The kindergarten of the future].

of three to five-year-olds enrolled in kindergarten in 2015,[7] Norway is one of the OECD countries where most children attend kindergarten.[8]

In Norway, the use of kindergartens has increased in the population as a whole, including for disadvantaged groups such as children with parents with low educational attainment and low income. Statistics Norway nevertheless finds ethnic and socioeconomic inequalities. Based on the OECD's definition of low-income families, 37 per cent of children from low-income families are at home with their parents instead of attending kindergarten, while the corresponding proportion among families on middle and high incomes is only 18 per cent. With regard to ethnic relations, the highest percentage of children cared for by their parents instead of attending kindergarten (18 per cent) is found among children of mothers born in Asia, Africa, Latin America, Oceania (except Australia and New Zealand), and Europe outside the EU/EEA. Most parents in Norway who do not apply for their child to enrol in kindergarten report that they feel it is in the child's best interest to be at home with their parents, or that a parent is, in any case, already staying at home.[9]

Approximately two-thirds of employees in Norwegian kindergartens are 'assistants', while the remaining third are trained kindergarten teachers.[10] Staff categorised as 'assistants' include unskilled workers and staff with a shorter formal education, such as a certificate in child care and youth work from upper secondary school.

The Norwegian Kindergarten Act of 2005, last amended in 2013, underlines kindergartens' responsibility for providing children with opportunities for play, self-expression and meaningful experiences and activities. In the 2006 *Framework Plan for the Content and Tasks of Kindergartens,* last amended in 2011, play is referred to as a basic form of learning through which children can fully express themselves.[11] The OECD has characterised the holistic Nordic approach to learning in kindergarten as positive.[12] While countries such as the UK and France have a stronger emphasis on 'readiness for school',[13] this is not the case in Norway and other Nordic countries, which emphasise life preparation in the broad sense.

A comparison of the Framework Plan for Kindergartens from 2006 and the Framework Plan for Kindergartens from 1996 reveals, however, that there are increasing academic expectations of kindergartens in Norway as well.[14] It is an express political aim that kindergartens should help children to learn *more*, although it is stressed that they should learn in a different way than in school. This dual expectation challenges the professionals in both kindergartens and lower primary schools.

This is the current status of the debate on early childhood education and care in Norway. Kindergarten staff is expected to safeguard the institution's uniqueness, provide care and support for children, facilitate and encourage their play activities in safe surroundings, while at the same time preparing children for school. Some express concern that the shift from the kindergarten's emphasis on curiosity-driven and exploratory activities to the school's more regulated approach to teaching and learning can be overwhelming for some children. While the transition from kindergarten to school is unproblematic for most children, surveys find that some children experience anxiety during the transition, and relate this to a lack of coherence between kindergarten and school.[15]

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7 Statistics Norway (SSB) https://www.ssb.no/utdanning/statistikker/barnehager/aar-endelige/2016-04-20

8 Engel et al. (2015, op. cit., p. 13).

9 Moafi, H. & Bjørkli, E. S. (2011): *Barnefamiliers tilsynsordninger, høsten 2010* [Families with children and their care arrangements, autumn 2010]. Report 34/2011, Statistics Norway.

10 Aspøy, T. M., Nicolaisen, H. & Nyen, T. (2013): *Vilkår for læring i kommunene. En kartlegging av fire arbeidsfelt* [Conditions for learning in the municipalities]. Fafo-report 2013:35 (pp. 65-66, 72).

11 *Forskrift om rammeplan for barnehagens innhold og oppgaver* [Framework Plan for the Content and Tasks of Kindergartens. http://www.udir.no/Upload/barnehage/Rammeplan/Framework_Plan_for_the_Content_and_Tasks_of_Kindergartens_2011_rammeplan_engelsk.pdf?epslanguage=no

12 OECD (2001): *Starting Strong I Early childhood education and care*; OECD (2006): *Starting Strong II Early childhood education and care*.

13 Official Norwegian Reports NOU 2010:8 (2010): *Med forskertrang og lekelyst. Systematisk pedagogisk tilbud til alle førskolebarn* [Scientific investigation and play. Systematic work in kindergartens] (p. 58). Available from https://www.regjeringen.no/globalassets/upload/kd/hoeringsdok/2010/201004890/nou_2010_8_med_forskertrang_og_lekelyst_systematisk_pedagogisk_tilbud_til_alle_foerskolebarn.pdf

14 Official Norwegian Reports NOU 2010:8 (op. cit., pp. 43-47).

15 Rambøll Management Consulting (2010): *Kartlegging av det pedagogiske innholdet i skoleforberedende aktiviteter i barnehager* [Mapping of the pedagogical content of school-preparatory activities in kindergartens]. Available from http://www.ramboll-management.no/news/publications/2010/~/media/Images/RM/RM%20NO/PDF/Publikasjoner/2010/Rapport%20Kartlegging%20av%20pedagogisk%20innhold%20i%20skoleforberedende%20aktiviteter%20i%20barnehagen_Ramb%F8ll.ashx

In a recently published OECD-report (2015), *Early childhood education and care policy review – Norway*, it is argued that the quality of research on the ECEC sector – including the transition to school – should be increased in Norway, as well as improving how research results inform policymaking and practice.[16]

1.2.1 Conclusion

This section has provided a brief overview of Norwegian ECEC policy. Today, most children in Norway attend kindergarten before they enrol in compulsory school at the age of six. Questions about the quality of early childhood education and care are being raised in parallel with a rapid expansion of kindergarten provision in Norway,

In 2005, responsibility for Norwegian kindergartens was transferred from the Ministry of Children and Family Affairs to the Ministry of Education and Research. This move brought kindergartens closer to the formal education system, while simultaneously emphasising the uniqueness of kindergarten provision. Kindergartens are perceived both as a social arena for learning and development and as a first stage in children's education. They should care for children, and facilitate and support play activities, while at the same time laying the foundation for lifelong learning and skills development. This dual expectation challenges teachers in kindergartens and primary schools, who are expected to facilitate the transition between the two institutions for all children.

1.3 LITERATURE REVIEWS

Systemic searches did not identify any previous systematic review on the topic of the transition from kindergarten to school. However, three literature reviews published after 2010, which are considered to be methodologically robust and of high quality, are presented in this section.

Sally Peters (2010)[17] has examined how research describes successful transitions from kindergarten to school: which factors are crucial to how children cope with the transition and which support mechanisms should be in place to ensure a positive transition. Studies included in the literature review were from the Anglo-American countries with the emphasis on New Zealand. They include master's and doctoral theses. The searches were conducted systematically in electronic databases using keywords and a log of the results, limited to the period 2004-2009. Two previous literature reviews were also included in order to cover relevant research in the field prior to this period.[18]

The literature review finds that any child may experience difficulties during the transition period if they are not properly accommodated by the school. Even children who have acquired school readiness skills in kindergarten may find the transition a challenge if the psychosocial conditions, such as student-teacher relations in the school in question, are inadequate. Peters argues that the transition between kindergarten and school must be understood as a process – not as an event. From this perspective, broad-based transition activities – such as orientation programmes to help children get acquainted with the school – are not sufficient. In addition, all responsible adults should regularly monitor the children's well-being and progress. Teachers cannot take for granted that adjustment to school is unproblematic. Problems children experience during the transition period may persist over time even though the child appears to adapt to the new school environment.

There is no single recipe for a successful transition, and adults can support children's transition to school in many different ways. Peters emphasises certain preconditions that should be in place for measures to be successful, including the importance of

- relating teaching in school to what children already know
- emphasising culturally sensitive education practices
- employing appropriate assessment practices that take into account that learning is situated
- creating links between play and learning
- developing children's relationships and friendships
- allowing children to explore and develop knowledge and language through play

16 Engel et al. (2015, op. cit., p. 96).

17 Peters, S. (2010): *Literature review: Transition from early childhood education to school. Report to the Ministry of Education*. Ministry of Education (New Zealand): Wellington.

18 Fabian, H. & Dunlop, A-W. (2006): *Outcomes of good practice in transition processes for children entering primary school*. Paper commissioned for the EFA Global Monitoring Report 2007, Strong foundations: Early childhood care and education. Available from http://unesdoc.unesco.org/images/0014/001474/147463e.pdf ; Petriwskyj, A., Thorpe, K. & Tayler, C. (2005): Trends in construction of transition to school in three western regions, 1990–2004. *International Journal of Early Years Education*, 13(1), pp. 55-69.

- communicating the importance of rules to children
- taking the initiative for 'ice-breaker' activities (involving children's families)
- establishing home-school partnerships

Peters (2010) also identified knowledge gaps in research before 2009, for instance too little research on how children and parents experience the transition. Moreover, too few studies have explored how children experience the difference between classroom teaching and kindergartens' pedagogical approach. More research is also needed on children from minority groups, children who are non-native speakers, pupils with special educational needs and children from families with a low socioeconomic status.

Skouteris et al. (2012)[19] collected research and policy reports (mainly from Australia) that evaluated transition programmes that encouraged collaboration between kindergarten/preschool and primary schoolteachers, parents and children. They searched electronic databases using keywords and did not limit their searches by date. In their analysis, Skouteris et al. argue that teachers in kindergartens and schools should form alliances and integrate their different learning philosophies and practices to ensure the best possible continuity and support for children during the transition period. Teachers from the two institutions should meet frequently to develop mutual trust and respect. Themes for joint collaborative activities are: schools have to recognise children's previous learning, the teaching methods used in kindergarten or preschool, and that kindergartens provide schools with relevant information about the child's skills and development (i.e. whether the child has special educational needs that the school should take into account). Skouteris et al. concluded, however, that there are relatively few studies with robust and systematic research designs that have documented the specific learning effects of various transition practices emphasising collaboration between kindergarten/pre-school teachers and schoolteachers.

Fitzpatrick (2012)[20] has reviewed studies (mainly from the US) that argue for the importance of getting children 'school ready'. These studies recommend that children should be equipped with certain individual and generic skills to better tackle the transition from ECEC to school. Generic skills are, for instance, self-regulation skills such as creativity, responsibility for their own learning, and cognitive problem-solving. Fitzpatrick argues that children will benefit from learning to control impulsive behaviour and that measures aiming to facilitate children's self-regulation skills and competence can make them 'school ready' and thus support their academic progress. There are few studies, however, with longitudinal research designs that investigate whether the development of self-regulation skills has documented effects over a longer period of time.

1.3.1 Conclusion of the literature reviews

When analysed together, the three literature reviews provide a broad overview of the status of research on children's transition from kindergarten to school. Peters (2010) examines how successful transitions from kindergarten to school are described in the studies, which factors are crucial to how children handle the transition and which support mechanisms need to be in place for children to cope during the transition. Skouteris et al. (2012) and Fitzpatrick (2012) have somewhat contrasting, but complementary, perspectives on the transition. While Skouteris et al. (2012) evaluate research on collaboration between kindergarten/preschool teachers and schoolteachers; Fitzpatrick (2012) examines the evidence from research that focuses on certain individual skills that may prepare children for school. In sum, the three literature reviews provide an overview of the research field and strengthen the conclusions in this systematic review, which has analysed research on children's transition from kindergarten to school between 2010 and 2014.

19 Skouteris, H., Watson, B., & Lum, J. (2012): Preschool children's transition to formal schooling: The importance of collaboration between teachers, parents and children. *Australian Journal of Early Childhood*, 37(4), pp. 78-85.

20 Fitzpatrick, C. (2012): Ready or not: Kindergarten classroom engagement as an indicator of child school readiness. *South African Journal of Childhood Education*, 2(1), pp. 1-32.

2 METHOD

The Knowledge Centre for Education conducted several searches to establish whether the number of high quality studies on the theme 'transition from kindergarten to school' was sufficient for a systematic review. The following research question was formulated for the review:

> *What characterises measures that can have a positive impact on children's transition from kindergarten to school?*

Due to time restrictions, the Knowledge Centre chose the brief review format (*rapid evidence assessment,* also referred to as *Quick Review)*. Rapid reviews are considered particularly useful for policymaking (Thomas et al. 2013[21], Khangura et al. 2014[22]).

2.1 WHAT IS A SYSTEMATIC REVIEW?

Systematic reviews provide a comprehensive and non-biased overview of available research in a field, and they contribute to a more robust knowledge base. The work of conducting a systematic review begins by identifying available research on the topic of interest. Systematic reviews follow an established method describing how they are conducted. Conducting a systematic review is a transparent process that builds on non-subjective principles and procedures and that shows, step by step, how conclusions are reached. Systematic reviews include the number of studies that may answer the review question. The selection of relevant studies is open, and there are pre-defined criteria and clear mechanisms in place to assess reliability and validity and include or exclude studies (Chalmers et al. 2002,[23] Gough et al. 2012[24]). The quality of a systematic review depends on the quality of the studies included.

It normally takes around a year to develop a systematic review and conduct it in a manner that satisfies the criteria for systematic reviewing. Due to time restrictions, formats such as 'brief review' (Abrami et al. 2010)[25], 'rapid evidence assessment' (REA) (Thomas et al. 2013; Varker et al. 2015[26]) or 'rapid review' (Khangura et al. 2012[27]; Featherstone et al. 2015[28]) have been developed. In a review of 12 literature reviews of 'rapid reviews', Featherstone et al. (2015) concluded that there is no consensus among the authors on a definition of this format. There were variations in search strategies and how to synthesise findings. The timeframe also varied from one week to 12 months.

It is generally agreed that rapid reviews should not be regarded as a substitute for standard systematic reviews (Featherstone et al. 2015), but they are perceived as a valuable format because they are less resource-demanding and time-consuming.

21 Thomas, J., Newman, M. and Oliver, S. (2013): Rapid evidence assessment of research to inform social policy: taking stock and moving forward, Evidence & Policy vol. 9 no 1, pp. 5-27 http:// dx.doi.org/10.1332/174426413X662572

22 Khangura, S., Polisena, J., Clifford, T. J. and Kamel, C. (2014) Rapid review: An emerging approach to evidence synthesis in health technology assessment. *International Journal of Technology Assessment in Health Care, 30*(1), 20-27.

23 Chalmers, I., Hedges, L. and Cooper, H. (2002): A brief history of research synthesis, Education and the Health Professions, 25: 12-37.

24 Gough, D., Olivier, S. and Thomas, J. (2012): An introduction to systematic reviews. London: Sage publications.

25 Abrami, P.C., Borokhovski, E., Bernard, R.M, Wade, A. C., Tamim, R., Persson, T. Bethel, E. C., Hanz, K and Surkes, M. A. (2010): Issues in conducting and disseminating brief reviews of evidence, Evidence & Policy, 6 (3): 371-89.

26 Varker, T., Forbes, D., Dell, L., Weston, A., Merlin, T., Hodson, S. and O'Donnell, M. (2015): Rapid evidence assessment: Increasing the transparency of an emerging methodology. Journal of Evaluation in Clinical Practice, DOI: 10.1111/jep. 12405.

27 Khangura, S., Konnuy, K. Cushman, R., Grimshaw, J. and Moher, D. (2012): Evidence summaries and the evolution of a rapid review approach, Systematic Reviews, 1-10.

28 Featherstone, R. M., Michelle, D. M., Guise, J-M., Mitchell, M.D., Paynter, R. A., Robinson, K. A., Umscheid, C. A., and Hartling, L. (2015): Advancing knowledge of rapid reviews: An analysis of results, conclusions and recommendations from published review articles examining rapid reviews. Systematic reviews 4:50.

Rapid reviews follow the same procedures as a systematic review and are useful when a group of researchers collaborate on a report (Pope et al., 2000).[29] A rapid review is a compromise between the strict quality demands that apply to systematic reviews and the policymaker's wish to obtain knowledge as quickly as possible. Searches are systematic, and inclusion and exclusion processes are transparent, as are the criteria used for sorting the studies. The studies are assessed for reliability and validity during the selection and review process. In this rapid review, the following criteria were used in the searching and sorting process (Khangura et al., 2014 p. 3).[30] Studies included are published in peer-reviewed journals or international book chapters. Grey literature[31] is used as background information. The searches were limited to studies published after 1 January 2010, in English, Norwegian, Swedish or Danish.

2.2 SEARCH STRATEGY

Systematic reviewing can start with broad searches to obtain a picture of the status of research in a field. The aim of this review was to identify studies on measures that can positively influence children's transition from kindergarten to school, and studies reporting the effect of interventions. Qualitative, mixed-method and descriptive studies also had to be included in the review. The search was limited to children in kindergarten and/or school (levels 1-4). Several test searches were conducted of electronic databases in order to identify central concepts in the research literature on the transition from kindergarten to school.[32] Based on this, a list of search words was developed. Search words were used to develop a search string (Appendix 1). Only a few studies investigated the transition from the schools' perspective. It could be that fewer studies take this perspective on transition, or that the search string did not identify these studies. In order to compensate for possible bias, a separate search string was developed based on concepts from the studies, and hand searches were conducted of relevant journals and databases.

This is how the literature searches for peer-reviewed studies published after 1 January 2010 were conducted:

- Searches were conducted of six electronic databases on 5 June 2015: (ERIC, ASSIA, IBSS, PQEJ, PSYCINFO and SCOPUS).
- Hand searches of relevant journals were performed on 22 June 2015.
- Hand searches for authors with more than one publication identified in the electronic searches (June 2015).
- Hand searches based on suggestions from the Ministry of Education and Research (June 2015).
- Suggestions from the research group (August 2015).
- Five studies, identified in test searches on 23 April 2015 and 6 May 2015, were included for further assessment.

Hand searches included reading the table of contents of the most frequently published journals from the 4th quarter 2014 until the 2nd quarter 2015. Searches for the most quoted authors were also conducted in Google Scholar.

Appendix 2 provides an overview of sources used in this systematic review. After electronic searches of six databases and hand searches, 4273 studies were identified (see *Figure 1, result of screening)*.

2.3 SELECTION PROCESS

An important part of systematic reviewing is deciding how to limit the searches. Searches of research databases always result in many irrelevant or less relevant studies. Predefined criteria are developed to decide which studies to include in the systematic review. These criteria are used in several screening processes to exclude irrelevant studies and studies of low quality. Table 1 shows the criteria for inclusion and exclusion that were used:

Several thousand studies constitute a very large amount of data. In order to handle this large volume of information, the Knowledge Centre for Education used the software EPPI-Reviewer 4 developed for systematic reviews and research synthesis by the EPPI-Centre, University College London. All references (in total 4273) were imported to the EPPI-Reviewer 4.

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29 Pope, C., Ziebland, S. and Mays, N. (2000): Qualitative research in health care: analysing qualitative data, British Medical Journal, 320, 114-6.

30 Khangura, S., Polisena, J., Clifford, T. J. and Kamel, C. (2014) Rapid review: An emerging approach to evidence synthesis in health technology assessment. International Journal of Technology Assessment in Health Care. 30(1), 20-27.

31 Grey literature refers to non-published research (for instance reports, dissertations, policy documents etc.)

32 Search words were also identified in the OECD project proposal *Revised project proposal for 'Review of policies and practices for transition from early childhood to primary education' (EDU/EDPC/ECEC(2014)12/REV1).*

CRITERION		ELABORATION
1	Topic	Studies must address measures that can have a positive impact on children's transition from kindergarten to school
2	Participants	Studies must focus on children in kindergarten and/or primary school (grades 1-4)
3	Type of study	Studies must be published in peer-reviewed journals / book chapters after 1 January 2010.
4	Accessibility/ Language	Studies must be available, electronically or in other formats, within the project timeframe. The studies must be in English, Norwegian, Swedish or Danish
5	Plenary decision	Potentially relevant studies are evaluated by several researchers. In cases of doubts after assessment in full text, a plenary decision is made by the research group.

Table 1: Criteria for inclusion and exclusion

When all references were imported, the next step was to decide which studies should be included in the systematic review. All studies were sorted according to the criteria for inclusion and exclusion presented above. Studies were assessed for quality and relevance at different stages by two or more researchers independently of each other using an iterative process. The assessment of quality and relevance is conducted according to both generic standards and review-specific criteria (Gough et. al. 2012, p. 160)[33].

The selection process and preparation for synthesis follow four main steps. The first two steps comprise the selection process and the identification and screening of studies of potential interest for the review. During the first step, studies are screened and their relevance assessed based on the title and abstract according to the predefined criteria for exclusion and inclusion. In the second step, the quality and relevance of the remaining studies are assessed based on reading the studies in full text. The third and fourth steps consist of preparation for synthesis. In step three, the studies are mapped and categorised according to overarching categories. In step four, data extraction is conducted, core studies are selected and key concepts identified.

Figure 1 describes the first two steps in the screening process and shows the different exclusion criteria used.

2.3.1 Step 1: Screening and relevance assessment based on title and abstract

In the first step, studies were screened based on their title and abstract using the criteria listed in Table 1: 1) Topic, 2) Study participants, 3) Type of study, and 4) Accessibility/Language. The starting point for the screening process was the result from the systematic searches. A total of 4245 studies were identified in the electronic searches of databases and 28 studies were identified through hand searches, bringing the total number of studies to 4273. Having removed duplicates, three researchers (independently of each other) went through the titles and abstracts of the remaining 2685 studies and excluded studies based on the predefined exclusion criteria in Table 1. The relevance assessment is conducted continuously. A total of 2541 studies were excluded in the first step of the screening process, while 144 studies with possible relevance for the review satisfied inclusion criteria 1-4.

Screening is an iterative process and several researchers collaborate at every stage of the process. Assessments in the first step are mainly based on the title and abstract, but if the researchers disagreed, the abstract was unclear or there were doubts about the study, the full text was obtained in order to reach a decision.

2.3.2 Step 2: Screening, quality and relevance assessment based on full text

In the second step of the screening process, the studies were read in full text in order to identify the studies with the highest quality and the greatest relevance that are also most likely to answer the review question. At this stage, the quality of the study

33 Gough, D., Oliver, S., & Thomas, J. (Eds.). (2012). *An introduction to systematic reviews*. Sage.

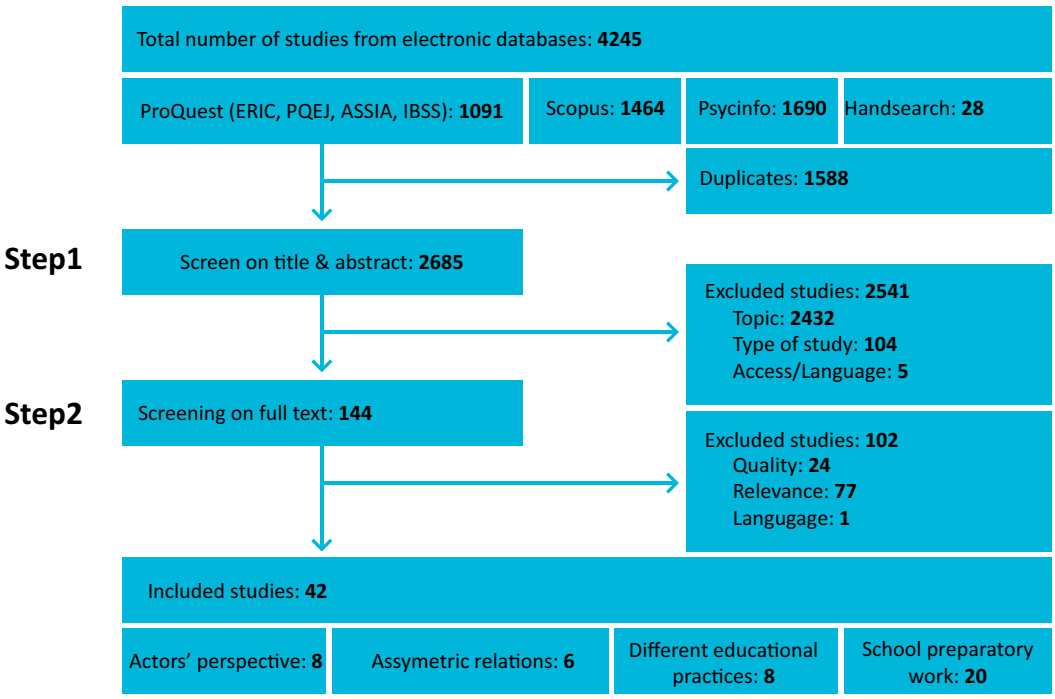

Figure 1: Screening result

was assessed on its own terms according to generic standards for the specific type of study (Gough et al., 2012). When studies are read in full text, there is sometimes a discrepancy between the description in the abstract and the content or conclusions of the study. Therefore, relevance assessment has to be continuous. Table 2 shows the predefined quality and relevance criteria, as well as what determines whether a study scores high, medium or low. In all, 144 full text studies were read and assessed for quality and relevance by three researchers according to the criteria listed in Table 2. At this stage, 102 studies were excluded based on quality and relevance, and 42 studies were included in the systematic review. Of the 42 included studies, 39 were of high quality and 3 of medium quality; 28 studies were of high relevance to the systematic review and 14 were of medium relevance (Appendix 3).

A full text reading of studies sometimes reveals that the abstract does not provide sufficient information about the study. Some studies were not in accordance with the quality criteria formulated for the review. Moreover, weak coherence between the research question, method or findings and a vague description of the data collection process, method or analysis of data could result in the study being excluded from the review.

2.4 PREPARATION FOR SYNTHESIS

An overview of the data material is needed when preparing for the synthesis in order to facilitate data

CRITERIA FOR ASSESSING QUALITY AND RELEVANCE	ASSESSMENT VALUE
• Validity • Reliability • Generalisation • Is the research question clearly formulated? • Are the research method and the research design specified? • Is there alignment between the research question and the study`s findings? • Is the study relevant to the review question in the systematic review?	High: Explicit and detailed description of method, data collection, analysis and results; the interpretations/analysis are clearly supported by the findings Medium: Satisfactory description of method, data collection, analysis and results; the interpretations/analysis are partially supported by the findings Low: Weak description of method, data collection, analysis and results; interpretations/analysis have little support in the findings

Table 2: Quality and relevance criteria

extraction and the identification of core studies. The next two steps (three and four) describe how the Knowledge Centre conducted this preparation process.

2.4.1 Step 3: Mapping and categorisation of included studies

The third main step in this systematic review is to map and categorise the included studies. This process provides an overview of the included studies. The aim is to ascertain that the review concentrates on areas of relevance to the users of the summarised research (Gough et al., 2012). There is also a connection between mapping and the identification of patterns in the data material. Mapping is thus the preparatory stage in a successful systematic review.

Figure 2 shows the geographical distribution of the 42 included studies. Countries in Asia and Europe are represented, as well as the USA and Canada. The Nordic countries are also strongly represented.

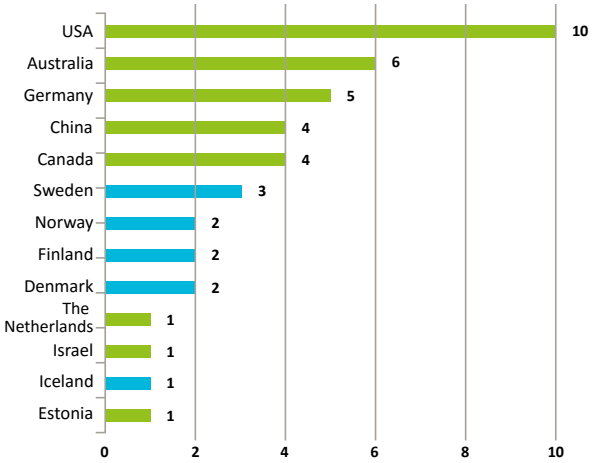

Figure 2: Publications distributed by country

Table 3 shows kindergarten, preschool and school entry age in the countries represented in the studies (school entry information from 2013, World Bank statistics). The organisation of kindergartens and preschools differs between different countries, with huge variation in, for instance, private or public providers. In most countries, kindergarten is voluntary, and partly paid for by the parents. The table is a simplification and interpretation of the different kinds of provision.

COUNTRY	KINDERGARTEN PROVISION[34]	PRE-SCHOOL	SCHOOL ENTRY AGE[35]
Australia	3-5		5
Canada	3-5	5-6	6
Denmark	0-5/6		6
Estonia	3-6		7
Finland	0-5	6	7
Iceland	1-5		6
Israel	2-4	5	6
China*	*2-5		6*/7
Netherlands	0-3	4-6	6
Norway	0-5		6
Sweden	1-6	6	7
Germany	2-6		6
USA	0-3	4-5	6

*Hong Kong

Table 3: Overview of kindergarten provision, preschool and school entry age in the countries represented in the included studies.

The studies were also mapped for method and research design. Of the 42 studies, 12 used qualitative methods, 22 quantitative and 7 mixed methods. One study, Diamond & Lee (2011), is a review. Of the 12 qualitative studies, three are case studies, four have an ethnographic design, two are based on interviews, one used action research and two studies are theoretical.

Of the 22 quantitative studies, nine have longitudinal designs, three use regression analysis, three are randomised controlled trials, two are secondary analyses, two use cohort design, two are based on surveys and one is quasi-experimental. Of the seven mixed methods studies, four use case studies, one is longitudinal, one uses survey methods and one interviews. Appendix 4 shows the mapping of methods and research designs.

Categorising the included studies

Thematic categorisation of the included studies provides an overview of the content of the mapped studies, while at the same time showing the complexity of the research on the transition from kindergarten to school. Two researchers read the studies in full text, and central themes in the studies were identified and grouped in accordance with the categories. The overarching categories are not mutually exclusive, and one study can supplement or complete studies in other categories. In this systematic review, the studies were categorised according to four main themes:

34 The figures are from the OECD and the websites of the ministries in the respective countries.

35 The World Bank (2014) http://data.worldbank.org/indicator/SE.PRM.AGES

1. *Actors' perspective*: studies that primarily adopt an actor's perspective on the transition between kindergarten and school. The studies describe and investigate the transition from the perspective of four main actors: children, parents, teachers in kindergarten and school. These are the studies in this category: Ackesjö (2013a), Ackesjö (2013b), Arndt et al. (2013), Chan (2012), Chan (2010), Einarsdottir (2011), Malsch et al. (2011), Turunen (2012).

2. *Asymmetric relations:* this category contains the studies describing tensions relating to asymmetric relations between kindergarten and school. The following studies are in this category: Abry et al. (2015), Boyle & Petriwskyj (2014), Dockett & Perry (2014), Hogsnes & Moser (2014), Hopps (2014), Karila & Rantavuori (2014).

3. *Different educational practices:* the studies that have identified tensions relating to the transition between kindergarten and school and ascribe the tensions to different traditions in the two institutions: Alatalo et al. (2015), Broström (2013a), Broström (2013b), DeMarie (2010), Greve & Løndal (2012), Huf (2013), Schneider et al. (2014), Uibu et al. (2011).

4. *School preparatory work*: contains the studies that have investigated factors that matter for school readiness. Studies in this category are on themes such as self-regulation, executive functions, effects of the home environment and the effect of academic skills: Anders et al. (2013), Ahtola et al. (2011), Diamond & Lee (2011), Eggum-Wilkens et al. (2014), Fitzpatrick & Pagani (2013), Hindman et al. (2013), Jordan et al. (2012), Jung & Han (2013), Li et al. (2013), Lau, et al. (2011), Monette et al. (2011), Murray & Harrisson (2011), Niklas & Schneider (2013), Niklas & Schneider (2014), Petriwskyj et al. (2014), Puccioni (2015), Shaul & Swartz (2014), Schmitt et al. (2015/2014), White (2013), Yeniad et al. (2014).

2.4.2 Step 4: Data extraction, key concepts and core studies

Once the studies are categorised, they are translated and interpreted. At this stage, data are extracted and each study is briefly summarised. In the work of rewriting a study, there is always an element of interpretation, what Noblit and Hare (1988) label *idiomatic translations,* [36] which means that the goal is to elicit the meaning of the study. When data are extracted in brief versions of each study, they can be compared and analysed. This makes it possible to identify common patterns across the studies. Several researchers collaborate on this iterative process and prepare the data material (the studies) for analysis in order to identify similarities, differences and patterns across *key concepts* for further analysis of the included studies.[37] The key concepts can be regarded as nodes in a network between the studies, and they therefore serve as vital tools in the synthesis.

The key concepts are identified throughout the studies when reading them and writing brief texts presenting the studies in ways that address the review question. The process of identifying key concepts is adjusted in accordance with the analyses. The identification of key concepts and the analysis of them are an important configurative element in the interpretive synthesis, where comparisons are done repeatedly across the studies. These comparisons provide a foundation based on which conclusions can be drawn. Noblit & Hare (1988) characterise this as developing a 'lines-of-argument synthesis'. The goal is to find the inner logic of the text, and this inner logic supports the conclusions that might be reached. In this systematic review, the following core concepts were identified: *process*, *transparency*, *continuity*, *relations* (*collaboration/partnership*), and *hybrid pedagogy.* These key concepts are used to identify patterns across the included studies. When it is clarified how the key concepts are used in the various studies, they can be analysed to develop a line of argument. Table 4 shows key concepts identified in the two core studies.

Core studies as structuring elements in configurative synthesis

The initial categorisation of the studies shows huge variety and complexity in research on the transition from kindergarten to school. Different questions are asked – from different perspectives, and several actors are involved (children, parents, kindergarten teachers and schoolteachers). In addition, two

36 Noblit, G.W. & Hare, R.D. (1988) *Meta-ethnography: Synthesizing qualitative studies*. Sage`s university paper series on Qualitative research methods volume 11, California: Sage publications

37 Gough et al. (2012, p. 183) suggest beginning with a *topic-based summary* when synthesizing qualitative studies. The goal is to identify a *core* in each study.

KEY CONCEPTS	ACKESJÖ (2013A)	CHAN (2012)
Process	Transition from kindergarten to pre-school to primary school is referred to as a process, not an event.	Transition from kindergarten to school is a process.
Transparency	The transition process must be transparent and actively involve the children.	Teachers and parents must have a clear understanding of the policy and goals of the school (Chan 2010).
Continuity	If transition activities are based on the children's interests, motives and questions, continuity will be strengthened.	Continuity in children's experiences is key to a successful transition.
Relations (collaboration/partnership)	Collaboration must be based on regular personal contact.	Teachers, parents and children should work as equal partners
Hybrid pedagogy	The preschool class is a zone of transition with hybrid pedagogy.	Teachers should employ a variety of activities similar to those used in kindergarten to reduce pedagogical and curricular gaps.

Table 4: Identifying key concepts in the core studies

	QUALITY		RELEVANCE
1.	The research question must be clearly formulated and answered in the study. (Clear message).	1.	Discuss or identify core themes in the thematic area
2.	Methodologically sound data collection and consistently conducted, with good descriptions.	2.	'Clarifies' the research field
3.	Consistent argumentation, balanced interpretations.	3.	Must give context to the theme of the systematic review
4.	Provides arguments for how findings can be generalised or be valid for a larger population.	4.	Scandinavian/Nordic context if possible
5.	Thorough and thick descriptions	5.	Trustworthy presentation and analyses of data

Table 5: Quality and relevance assessment of core studies

different institutions are engaged in the transition from kindergarten to school. As this is a many-faceted field, two studies were selected as core studies (Ackesjö 2013a and Chan 2012) because they included all four actor groups and investigated the transition between institutions. The core studies were used to structure the configurative synthesis.

Core studies contribute to clarifying the complexity of the theme of the review (transition from kindergarten to school) and they contribute more directly than the other studies to answering the review question. Both core studies score high on relevance and quality, which means that they have a clear research question, a robust research design, and clear connections between the research question, the selection of data, discussion of findings, conclusions and recommendations. Core studies provide a good overview of previous research on the topic and show how the study contributes to further developing the knowledge field. They highlight central problems and point out the (current) biggest challenges. In other words, a core study is both historically anchored and has a perspective on the present and the future. It addresses the most central problems, and by doing so also makes an analytic and empirical contribution to the field's knowledge base. Table 5 shows how quality and relevance are balanced in the synthesis:

2.5 SYNTHESISING THE STUDIES USING CONFIGURATIVE SYNTHESIS

The research question in this systematic review warrants the inclusion of both qualitative and quantitative studies. When qualitative and quantitative studies are combined, the review format is termed mixed methods, and the synthesis is configurative.[38] To synthesise means to create something new from separate elements to form a coherent whole (Gough et. al. 2012, p. 261). Translation is central to configurative synthesis, and the ambition is to contribute to theory development and – to a certain degree – conceptual innovation. This explains why no

38 Gough et al. (2012 p. 182) point out that most syntheses are both configurative and aggregate.

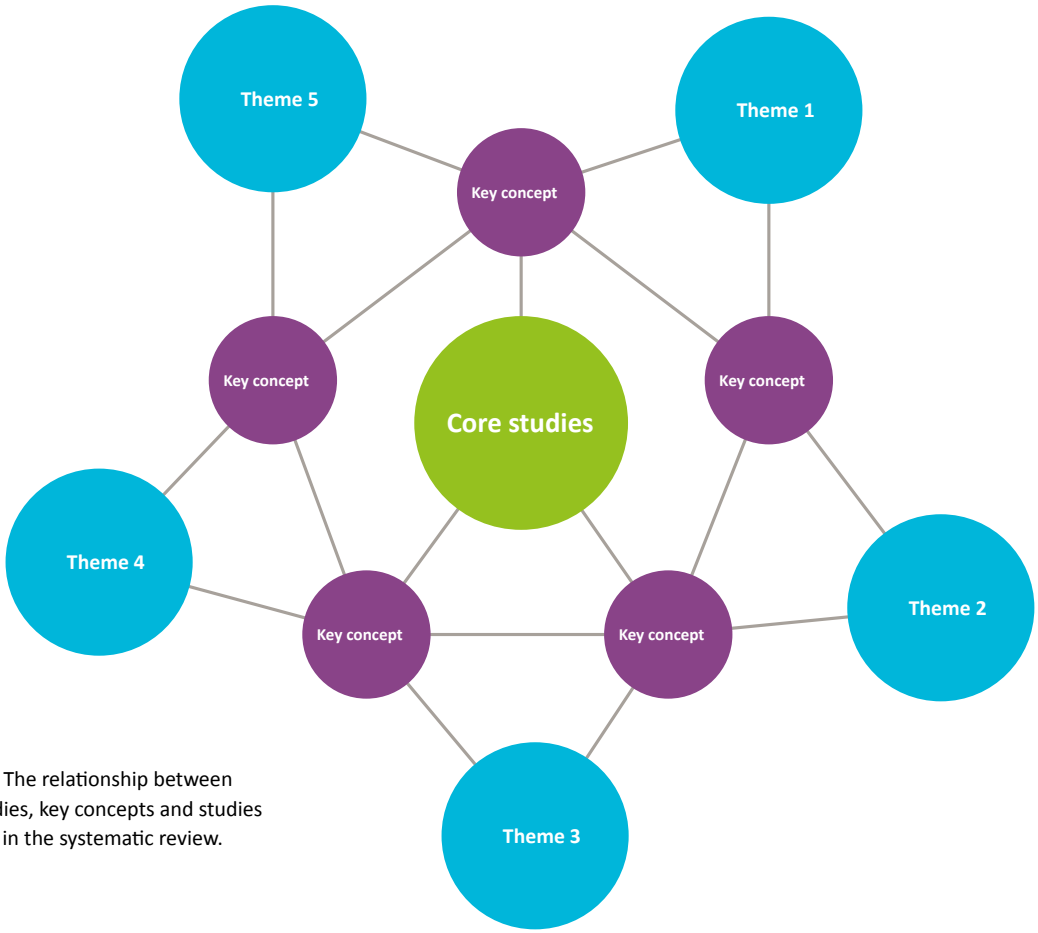

Figure 3: The relationship between core studies, key concepts and studies included in the systematic review.

systematic reviews are alike. The synthesis aims to find similarities between studies, even when they use a different vocabulary. It resembles making a mosaic, where central problem statements and findings from each study are brought together in ways that shed light on separate parts of a picture.[39]

While aggregate synthesis is well suited when studies are similar, configurative synthesis presupposes heterogeneous studies. In configurative synthesis, the goal is not to list findings from the studies, but to interpret them in a way that contributes to *new* knowledge. The synthesis results in a narrative that answers the review question in a trustworthy manner by identifying transcending themes in the included studies.[40]

The data sources in systematic reviews are the included studies. An important part of the work is to translate the studies 'into each other' (Noblit and Hare 1988)[41] in such a way that they give insight that transcends what the individual studies may say. The translation process is iterative. As new studies are read and added to the synthesis, the perspective on the topic under investigation broadens, and it becomes gradually clearer how the research question can be answered.

In the configurative synthesis conducted in this systematic review, core studies are used to structure the synthesis. Other included studies are placed in relation to the core studies and used to elaborate, supplement, complete or nuance perspectives. They may also specify topics or clarify themes addressed in the core studies or introduce supplementary findings and perspectives to the discussion. The key concepts are central configurative elements in the writing of the synthesis, where the ambition is to find relationships and connections between concepts and patterns in the core studies. Figure 3 illustrates how the core studies and key concepts form a network, with the key concepts acting as nodes in the relationship between core study and thematic category.

The next chapter presents studies that have investigated the transition from the actors' perspectives. Tensions between the institutions that can be explained by asymmetric relationships and different educational approaches are described.

39 Etymologically, *configure* means to piece together parts to form an overall picture.

40 Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., & Duffy, S. (2006). Guidance on the conduct of narrative synthesis in systematic reviews. *A product from the ESRC methods programme. Version*, *1*.

41 Gough et al. (2012) indicate that the findings in the separate studies should 'talk to each other' (p. 188).

3 THE ACTORS' PERSPECTIVES

Chapter three is structured around two core studies (Ackesjö 2013a and Chan 2012). They have both examined the transition from the perspective of four groups of actors: children, parents, teachers in kindergarten and teachers in school, and they provide an excellent overview of the complexity of transition activities. The chapter also presents studies identified by the systematic searches describing experiences of children, parents and/or teachers who participate in transition processes, showing aspects of the transition period from the involved actors' perspectives.

Table 6 shows which of the included studies takes which actor's perspective.

STUDIES	CHILDREN	PARENTS	KINDERGARTEN TEACHERS	TEACHERS IN SCHOOL
Ackesjö (2013a)	X	X	X	X
Ackesjö (2013b)	X		X	
Chan (2012)	X	X	X	X
Turunen (2012)		X	X	
Malsch et al. (2011)		X		
Arndt et al. (2013)		X	X	
Boyle & Petriwskyj (2014)			X	X
Karila & Rantavuori (2014)			X	X
Huf (2013)	X			
Uibu et al. (2011)			X	X
Einarsdottir (2011)	X			
Chan (2010)	X	X	X	X

Table 6: Various groups of actors represented in the different studies[42]

42 Boyle og Petriwskyj (2014), Karila og Rantavuori (2014), Huf (2013) and Uibu et al. (2011) are described in chapter four.

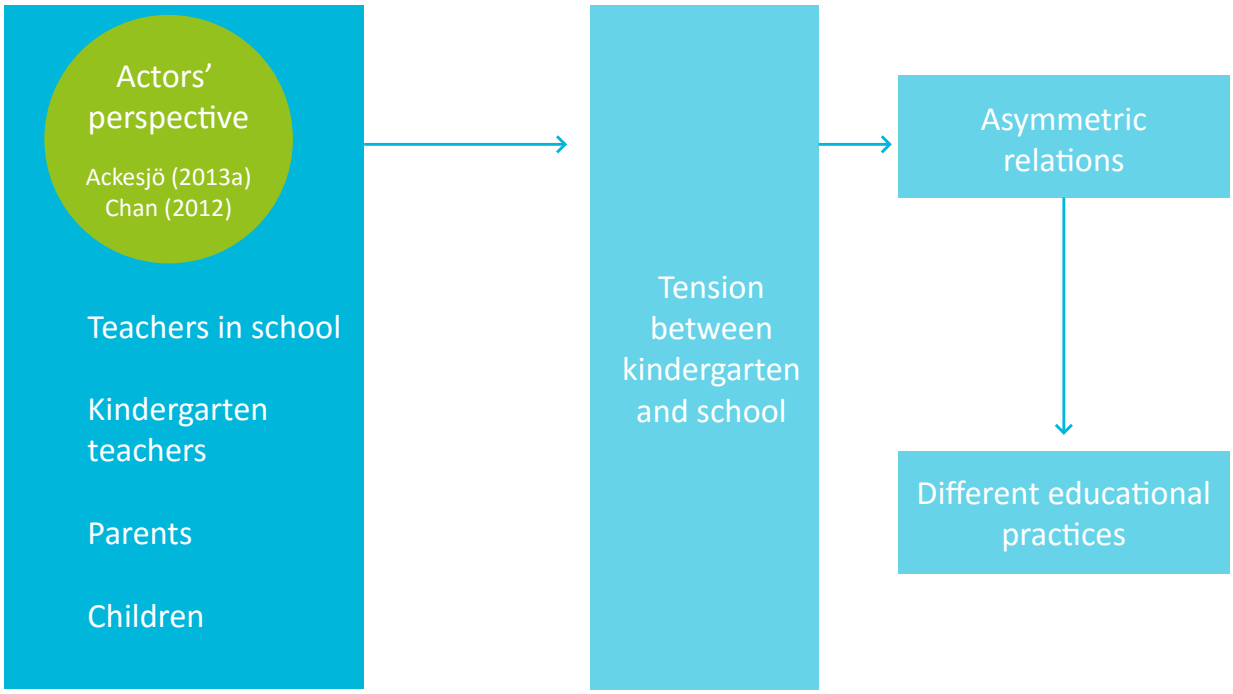

Figure 4: Categorisation of included studies by theme

The empirical studies included in this systematic review have investigated measures that are expected to facilitate the transition from kindergarten to school. They provide examples of how the actors experience situations they encounter during the transition processes. The examples provide an understanding of characteristics of the context of the implementation of measures and preconditions for their success.

Figure 4 illustrates how the various categories are placed in relation to each other.

Stig Broström was among the pioneers who described the transition from kindergarten to school from children's perspective (Chan 2012, s. 643).[43] Recent literature reviews (chapter 1.4) show that few studies have investigated the transition from the perspective of those directly involved in the process, including the parents' perspective. The Knowledge Centre for Education has chosen to give the actors' perspective primacy in this systematic review because knowledge about how the involved parties experience the transition from kindergarten to school is vital when the goal is to develop and implement effective measures.

The actors' perspective shows the complexity of the field and illuminates problems. The four groups of actors have both overlapping and differing perspectives on the transition. This should be analysed and understood before measures are planned. In addition, there are variations within each group. Nuanced analyses of how, for instance, various children experience the transition will contribute to the knowledge base and can assist in implementing effective measures and avoiding obvious pitfalls.

3.1 FROM ONE CONTEXT TO ANOTHER

The transition from kindergarten to school comprises the last period children are in kindergarten, the summer holidays and the first period the children are in school (Ackesjö 2013a). A frequently used definition is that of Fabian and Dunlop (2007),[44] who describe the transition between the levels as a change process the children go through from one stage to another.

43 To date, only a handful of researchers have asked children about how they experienced the transition from kindergarten to school and what contributes to a successful transition (e.g. Broström, 2003; Dockett & Perry, 2003a; Dockett & Simpson, 2003; Peters, 2000).

44 Following Fabian, H. & Dunlop, AW (2007). Outcomes of good practice in transition processes for children entering primary school. *Working paper 42 in Early Childhood Development*. Downloaded from http:// issuu. com/ bernardvanleerfo undation/ docs/outcomes_ of_ good_ practice_ in_ transition_ processes_ . 20141017.

The transition is physical because the children leave one institution and begin at another. The transition is more than just a physical move, however. The children are not simply walking from one building to another; they are leaving one context with certain social relations, familiar practices and characteristics in order to become part of a new context where they meet new children, new adults and encounter different expectations. When the included studies investigate this transition from the actors' perspective, they find that the children gradually become aware of the transition, and this awareness starts much earlier than the transition itself. Some children need more time than others to adjust after the transition. The mental and emotional work of leaving the kindergarten and starting school begins earlier and may last longer than the actual physical move. The children are not just becoming pupils – they also have to get used to no longer being kindergarten children.

When the transition is studied from the actors' perspective, distinctions are clarified and it is possible to see and compare when children and parents experience continuity and when they experience a lack of continuity during the transition from kindergarten to school.

Ackesjö (2013a) argues that, when transition is perceived as iterative, not linear, a new understanding of the process may develop. It can also be easier to achieve a sense of continuity when the transition between institutions is regarded as a series of critical incidents or as a gradual process. Ackesjö (2013a) further argues that, in order to understand children's perspective on the transition, it is important to listen attentively to their border markings, how they make sense of their own experiences, understand their surroundings and argue about themselves and activities they participate in. More in-depth knowledge is needed about how children and parents experience the last months the children spend in kindergarten – before the actual transition takes place. How children learn about what is going to happen, while at the same time detaching themselves from what has happened, has not been sufficiently researched. Ackesjö's research revealed that, during the transition period, the children orient themselves towards school and what will happen there, but just as important is the detachment from kindergarten and the process of creating an identity as *former* kindergarten child. This leads her to conclude that the transition starts long before the physical transition actually takes place (Ackesjö 2013a p. 407).

Transition is a change of both culture and status, accompanied by emotional upheavals. Having been the eldest and most experienced children in kindergarten, the children become the youngest when they start school. Changes in status can create confusion, and the children experience contradictory emotions, such as expectations and pride, insecurity, anxiety and nervousness. What teachers do during this phase and how they collaborate across institutions is therefore vitally important to how the children cope with the transition to school. Various educational practices represent different expectations and make different demands of children. In brief, transition is about getting used to a new culture, new grown-ups, new children, new routines and different expectations. Children have to unlearn old rules and regulations in order to successfully adapt to the new context. They are not just entering something new – they are also leaving the old behind.

Einarsdottir (2011) investigated how 40 children in two schools in Reykjavik experienced the differences between kindergarten and school. The study is based on interviews with three kindergarten teachers who interviewed children they had been responsible for when they attended kindergarten. During the interviews, the children were asked to draw what they remembered from kindergarten, what they enjoyed and did not enjoy. They talked while drawing. As they presented it, the biggest difference between kindergarten and school is how the institutions relate to the teaching material and use teaching methods, as well as their changed status and responsibility. The children emphasised play and physical activity as important characteristics of the time they spent in kindergarten, and said that they missed the opportunity to freely choose what to do and to make things on their own initiative. The children talked about what they had learned in kindergarten, but when they were asked about which learning experience was most useful in school, they mentioned learning subjects and rules. Einarsdottir stated that this gives a good indication of which aspects the school assigns the highest value.

According to Ackesjö (2013a), it is easy for a child to understand that she or he belongs to one context and not another. It may be more difficult, however, to understand that it is possible to belong to two

contexts simultaneously. The children need help to accept that the time in kindergarten is over and that something new is beginning. It is the teachers' responsibility to help the child understand and feel safe in the new context. During the transition from kindergarten to school, children have to be supported by carefully planned transition activities. This presupposes personal contact, collaboration on activities and the curriculum, and must be conducted in close collaboration between teachers in kindergarten and school. Teachers must show the children what they are aiming to achieve through these activities. A thoroughly planned transition practice that places the responsibility on the teachers in kindergarten and school may reduce the risk of children experiencing the transition as unclear and unpredictable. According to Ackesjö (2013a), current transition practices expect children to adapt to the school's practices and culture. A system for transitions based on the children's perspective, interests, motives and questions will make the transition transparent and give children and parents a sense of continuity.

Responsibility for children's transition from kindergarten to school rests with both the school and kindergarten. Ackesjö (2013a) found that teachers in kindergarten are not sufficiently engaged in the transition. They just 'let things happen' and do not explain and clarify for the children what the intentions behind the activities are, for instance, why the children visit school. Staff in kindergartens and schools should not just assume that the transition is unproblematic for the children, argues Ackesjö (2013a p. 408). For some children, the process is confusing, unclear and messy, and these children need help and support. Teachers in kindergarten and school must be more aware of their actions and activities during the children's transition between institutions. Activities must be carefully planned and meticulously structured. Pedagogical collaboration on questions related to the transition has to be manifested in *arguments* for why the two groups of professionals choose to act as they do. Children and parents should know that the activities they engage in have a reason and purpose. Consequently, transition has to be developed into a conscious process by marking the borders between the two institutions and making them visible to the children.

In line with Ackesjö (2013a), Chan (2012) argues for the importance of understanding the transition from the perspective of the key actors – parents, children, kindergarten teachers and primary school teachers.[45] She used surveys, semi-structured interviews, observation and follow-up-interviews in three kindergartens (5-6-year-olds) and three school classes (6-7-year-olds).[46] Using Bronfenbrenner's ecological theory about mutually dependent, mutually beneficial and mutually growing relationships between individuals and environments, Chan (2012) also built on the premise that a transition is not an event, but a process. Her research elicited the key actors' expectations of the transition process, and the study followed children during their last year in kindergarten and first year in school.

Chan (2012) explored the following five areas: a) pre-academic skills; b) social skills; c) self-sufficiency skills; d) personal qualities, and e) rules and regulations. She deliberately chose these areas based on previous research indicating that:

- Children's expectations of the transition (what it is and what will happen) differ.
- Parents have high expectations of the children's self-discipline and academic skills, but also worry about how their children will cope – parents are particularly concerned about how their children will adjust to new teaching methods and whether they will make new friends.
- Both primary school teachers and kindergarten parents ranked pre-academic skills as the most important area of development, whereas the kindergarten teachers considered it to be the least important.

A main finding in the study is that most of the adult participants (kindergarten teachers, schoolteachers and parents) experienced discontinuity relating to the curriculum and pedagogy during the transition from kindergarten to school. Chan (2012) also found that few of the kindergarten teachers and parents in Hong Kong would like to see the kindergarten curriculum become more structured, as this would reduce

45 In Hong Kong, children start school when they are 5 years and 8 months. Most children attend non-compulsory kindergarten. The Hong Kong Education Bureau has focused on the transition from kindergarten to school since 1993, and it published a Guide to the Pre-primary Curriculum in 2006.

46 The study had 892 participants: 26 kindergarten teachers, 12 schoolteachers, 259 parents of kindergarten children, 523 parents of school pupils, 40 kindergarten children and 32 pupils.

opportunities for play and explorative learning and development. Many of the parents and kindergarten teachers said that they would prefer primary schools to adapt their activity approach and include less rote learning and fewer handwriting drills, which are believed to be developmentally inappropriate for young children (p. 659).

Despite disagreements about educational approaches, the majority of adult respondents agreed that more collaboration between kindergarten and school will contribute to a smoother transition between the institutions.

The two core studies, Ackesjö (2013a) and Chan (2012), supplement and strengthen each other. The studies were conducted in two very different contexts: Sweden and Hong Kong. How different the contexts are is shown by quotations from parents interviewed by Chan (2012), expressing concern about the widespread use of rote learning, copying of homework lists, handwriting drills, weekly tests and dictation in Hong Kong schools. Chan found that teachers have exceedingly high expectations of the children, and explains this with reference to Confucian culture's emphasis on conformity, behaviour control and academic performance (p. 658). Hong Kong thus stands in stark contrast to the Swedish system described by Ackesjö (2013a), where preschool serves as a bridge between kindergarten and school and allows the children to get prepared at their own pace. Despite different traditions, there are structural similarities, however, between the problems identified by the researchers in Sweden and Hong Kong. Both Ackesjö (2013a) and Chan (2012) confirm that the most important measure is to establish close collaboration between parents, teachers and children. Taken together, these are the recommendations from the two researchers:

- Measures must take into consideration that the transition period is long and starts earlier than the actual physical change of institution.
- The transition period should be regarded and treated as a *process*, not as an event. Consequently, measures should be small scale, short and frequent.
- The border between the two institutions should be marked and clarified for the children. Measures must be accompanied by good arguments for why they are being implemented.
- The transition period must be more transparent. Teachers should not just let things happen and expect children and parents to automatically understand why they are participating in the various activities.

3.2 PARENTS' INVOLVEMENT IN AND EXPERIENCES OF THE TRANSITION

Parents are important actors in children's lives, and they may be directly and indirectly involved in the child's transition from kindergarten to school. Studies have investigated how parents experience their child's transition from kindergarten to school, and how they have participated in the process. Turunen (2012) discusses aspects of Finnish parents' contribution to the development of individual plans for children. Malsch et al. (2011) find that parent involvement and participation in transitional activities can ease the transition for children with socioemotional problems or behavioural issues. Arndt et al. (2013) show that parents and kindergarten teachers have different perspectives on how supportive the home environment is, and to what degree parents stimulate children's learning at home, in kindergarten or school.

Turunen (2012) studied how individual plans are used during the transition from kindergarten to preschool. The Finnish national curriculum states that kindergarten teachers and parents share responsibility for developing individual plans that address the child's strengths and needs. The individual plans contribute to the kindergarten's knowledge base on which teachers draw when they plan their work. Turunen (2012) interviewed 11 parents and 6 kindergarten teachers, analysed the forms kindergarten teachers used to develop the individual plans and government documents about individual planning.

The intensity of the collaboration depends on what the child needs and the parents want. Kindergarten teachers normally meet with the child's family (usually the mother) twice a year to discuss the content of the plan. In addition to developing individual plans, the kindergarten teachers prepare portfolios for each child, in which they collect drawings and other artefacts. To ensure continuity, this portfolio is later handed over to the preschool teacher. As this is not mandatory, the practice is dependent on each kindergarten teacher's initiative. Turunen (2012) found that, even though all parents did remember having talked to the kindergarten teacher, they did not connect this dialogue with the

development of the child's individual plan. Most parents agreed that the dialogue provided a solid foundation for the individual follow-up of the child and that the portfolios were excellent tools for the kindergarten teachers. Parental insight into how individual plans are used in the transition was rare, however. Moreover, they did not know how the kindergarten used the portfolios.

Turunen (2012) finds that the parents had too little knowledge about transition procedures. The study shows that the parents' influence was limited and Turunen (2012) concludes that kindergarten teachers should actively build more symmetric, respectful relations, where the parents have the time and opportunity to show interest in the discussions and ask any questions that they might have. The other important finding in the study is the taken-for-granted nature of kindergarten practices. They are so self-evident to the educators that they do not remember that the parents may not be familiar with them (p. 325).

Malsch et al. (2011) investigated parents' and teachers' experiences of transition activities in the Head Start programme,[47] which aimed to ease the transition for children with socio-emotional or behavioural challenges. Prior to the transition, telephone interviews were conducted with 50 'Head Start' teachers and families, 57 parents and 15 staff members in leadership positions. Malsch et al. (2011) find that transition activities tended to focus on three key dimensions, all of which played a role in fostering parent involvement. The first is about providing information to help parents understand similarities and differences between Head Start and kindergarten. The second is about emotional support in the Head Start programme, aimed at reducing children's worries and fears and alleviating their anxiety through visits to the school's playground and classrooms. The third is about actively empowering parents to act as advocates for their children in the school system, and encouraging them to participate in school activities.

Malsch et al. (2011) also identified lack of communication with or by schools, and problems related to work schedules as barriers to parents' involvement in transition activities. The study showed that transition activities under Head Start were conducive to parental involvement during children's transition. The parents mentioned information about logistics during the transition as being particularly valuable. When they understood more about what school would be like, it was easier for them to prepare their children. The parents found meetings with kindergarten teachers and Head Start staff to be fruitful, and the study concludes that good collaboration between parents, kindergarten and school is important to help children with socioemotional and behavioural challenges in transition processes.

In a longitudinal qualitative study, Arndt et al. (2013) examined how parents and kindergarten teachers perceive home support and parental stimulation of children's learning at home and in kindergarten in socioeconomically challenged families. The study shows that perceptions differ among teachers and parents. While parents describe how the family supports and contributes to developing the child's learning, the educators see little or no support of the children's learning from the family. While parents and teachers agree on certain aspects that are relevant to the children's learning, they disagree on others. According to Arndt et al. (2013), this is related to different perspectives on learning and development, and different ideas about what it means to be ready for school. The parents tend to favour academic goals they believe will make the transition to school easier for the child, while the teachers take a more holistic approach to learning.

Arndt et al. (2013) find that parents and teachers in kindergartens have different ideas about what it means to support children's learning. Too often the teacher's expertise dominates the discussions. Teachers give and parents receive advice. Even in situations when both parties talk, the voices of the kindergarten teachers are dominant. According to Arndt et al. (2013), this imbalance challenges the ideal of mutual acknowledgement and dialogue between parents and kindergarten teachers, and raises the following question: Do kindergarten teachers have sufficient knowledge about how children learn and develop if they do not recognise parents' competence?

47 http://eclkc.ohs.acf.hhs.gov/hslc/hs/about
Head Start was developed in the 1960s with the aim of levelling out inequalities and helping to prepare children for school. It is organised under the Department for Health and has a special focus on assisting children and families with low socioeconomic status during the transition to school.

3.3 SUMMARY 3.0

The studies show that, while most children have few problems during the transition from kindergarten to school, some children experience anxiety and fear, and teachers in kindergarten and school must know about these problems in order to facilitate adequate measures. When school practices build on familiar kindergarten practices, children experience continuity during the transition. To achieve continuity, the two institutions must exchange information about the children's prior learning.

One challenge seems to be that activities meant to ease the transition from kindergarten to school are taken for granted. Kindergarten teachers and school-teachers know what the intentions behind the activities are, but this knowledge is tacit and not explained to children and parents. Ackesjö (2013a) and Chan (2012) conclude that there is an apparent need for greater transparency, and Turunen (2012) shows that relations between teachers and parents are asymmetric and that parents do not necessarily understand all the information they are given by teachers in kindergarten.

Good arguments and explanations for why staff in kindergarten and school act as they do and why children should participate in the various activities might make the transition more transparent for parents and children. A lack of transparency blurs the context and some children struggle when the surroundings become unclear. When they have to guess why they are doing something, they feel anxious. Even though planning is not the solution to all problems – and too much planning in too great detail is not advisable – research shows that vagueness is not conducive to good transition practices for children and parents.

4 TENSIONS RELATED TO THE TRANSITION FROM KINDERGARTEN TO SCHOOL

Several studies uncovered tensions between teachers in the two institutions relating to children's transition from kindergarten to school. In this chapter, tensions identified by the researchers are grouped into two categories: tensions that can be explained by asymmetric relations between kindergartens and schools, and tensions that can be explained by different educational practices in the two institutions. Asymmetric relations can be attributed to real or perceived imbalances, and often revolve around traditions and historical circumstances, or lack of equality in relation to education, experience, knowledge and status. When studies identify tensions that can be attributed to different educational practices, this is often explained by the persisting gap between kindergartens' play-based pedagogy and schools' teacher-led instruction.

Having investigated children's transition from preschool to school in Finland, Karila and Rantavuori (2014) identify the following differences between institutions: The educational practices in preschool build upon collaboration and a division of labour between professions. The learning environment is characterised by children-led pedagogical methods, play and outdoor activities. In Finnish schools, on the other hand, teachers have sole responsibility for teaching and the pupils' learning. Therefore, the learning environment in school is teacher-led and connected to various subjects and national curricula, both when it comes to designing tasks and making decisions. In addition, students sit at their desks, and their learning is assessed. Between sessions, they have short outdoor breaks (Karila and Rantavuori 2014).

This chapter presents similarities and differences, as discussed in the studies. The intention is not to normatively position kindergarten or school as the better alternative, but to show that tensions between the institutions may stem from institutional traditions and different pedagogical practices that affect relationships between the two groups of teachers. Differences similar to those described by Karila and Rantavuori (2014) are reported in most of the studies included in this systematic review.

4.1 TENSIONS RELATED TO ASYMMETRIC RELATIONS BETWEEN KINDERGARTEN AND SCHOOL

This section presents findings from these studies:

STUDIES	THE IDENTIFIED TENSIONS DEAL WITH
Abry et al. (2015)	Teachers' beliefs
Boyle & Petriwskyj (2014)	Cross-sectoral professional relationships
Dockett & Perry (2014)	Approaches to integrating preschool with school
Hogsnes & Moser (2014)	Communication and continuity
Hopps (2014)	Intersetting communication
Karila & Rantavuori (2014)	Inter-professional collaboration

Table 7: Studies describing asymmetric relations

Several studies have identified tensions that arise when teachers in kindergartens and schools collaborate on children's transition from kindergarten to school. Some tensions can be explained by asymmetry in the relationship between the employees in the two institutions. Although studies have been carried out in different countries based on different research questions and designs, there are noticeable similarities in their conclusions. Abry et al. (2015) examined the relationship between pedagogical beliefs in preschool and kindergarten in the US and children's development of skills. Boyle and Petriwskyj (2014) examined how preschool teachers and schoolteachers in Australia think about professional relationships, continuity and factors that inhibit and promote collaboration across institutions and professions.

Dockett and Perry (2014) evaluated a measure that is intended to facilitate children's transition from preschool to school in Australia. Hogsnes and Moser (2014) investigated the importance of communication for continuity in the transition. Hopps (2014) questioned whether more communication between the institutions will improve collaboration. Karila and Rantavuori (2014) examined preschool teachers' and schoolteachers' collaboration in Finland in what they refer to as 'borderlands' between the two institutions.

Collaboration across institutions and professions is challenging, and it is not uncommon for tensions to arise in collaborative projects. The included studies show that the school's practices tend to dominate collaboration between kindergarten and school.

In a case study, Karila and Rantavuori (2014) followed two preschool-school dyads in Finland, studying the work at the 'borderland' between the two institutions from an institutional and professional perspective. The study analysed a local development project where teachers in both institutions were supposed to develop joint lessons for preschool and school pupils to make the children's transition as seamless as possible. The teachers were also expected to jointly develop a common practice. The study explored how teachers utilised available resources in preschool and school while designing joint activities.

Collaboration between the two groups of teachers followed three stages: 1) initiative, 2) consensus and 3) collaboration. The first stage, initiative, revolved around teachers' suggestions: For instance, how could they help children to concentrate in order to complete tasks? First, the teachers presented their own ideas with reference to ongoing activities, but they were open to considering other participants' ideas and collaborated on decisions. The second stage, consensus, revolved around the ways in which teachers develop a common understanding of their work, including using pedagogical concepts from their own institutional culture. The third stage was to establish common ground for understanding children and jointly developing and evaluating new practices.

The analysis of the data shows that preschool and school have different cultural and institutional roots and practices and different activity systems. Differences are reflected in priorities, practices and planning. The study showed that the generation of new knowledge and the development of new practices do not follow automatically from collaboration between different professions. Instead, relational work has to be learned during the process. Preschool teachers and schoolteachers must understand each other's background and be willing to think beyond established practices and habitual actions, in addition to analysing how their practices and habits may have arisen in the first place. In order to collaborate, the professions must recognise their own cultural and historical practices and respect the expertise that others bring to the partnership (Karila and Rantavuori 2014).

During the project, new measures were developed. For instance, preschoolers who demonstrated high reading comprehension were invited to join the first graders' reading groups. This was a new form of inter-professional collaboration that was embraced by both groups of teachers. The negotiations around this new practice were an inspiration for future work. At the end of the semester, an 'evaluating talk' concluded that the joint project had been successful. The evaluation highlighted that participants had managed to build non-hierarchical relationships, and thus reduced the asymmetric relations between the two teacher groups. Karila and Rantavuori (2014) concluded that the teachers had developed a relational agency[48] characterised by non-hierarchical and democratic decision-making.

The study illustrates how a systematic approach to conversations and focused work strengthened the collaboration between the two teachers groups. The importance of providing space for others' professional knowledge was highlighted as the most important aspect that the professionals claimed to have learned. Interestingly, however, pre-existing school practices were prioritised when new practices were developed. As the study describes it, the resources that the preschool teachers brought with them to the boundary space were left somewhat on the margins. For instance, the importance of play activities as a pedagogical resource inhabited a peripheral place in the discourse. Karila and Rantavuori (2014) point out that the professionals reproduced the same fundamental attitudes that they had had before the project had been initiated. This may indicate that, even

48 Edwards, A. (2011). Building Common Knowledge at the Boundaries Between Professional Practices: Relational Agency and Relational Expertise in Systems of Distributed Expertise. *International Journal of Educational Research* 50 (1): 33-39.

though a single measure or project appears to be successful, one measure or project alone may not necessarily affect the underlying presumptions, which are deeply rooted in the respective institutions' practices.

Boyle and Petriwskyj (2014) interviewed teachers in preschools and schools to investigate what concepts they use when they talk about cross-institutional professional relationships, which factors prevent or promote collaboration, and how cross-institutional professional relationships enable them to negotiate a common understanding that can support continuity in children's transition to school. The preschool and school that participated in the project were co-located, but with different managements and limited or no communication between them. Teachers from both institutions nevertheless wanted to develop a closer relationship, and they were particularly motivated to collaborate on children's transition from preschool to school.

As a result, Building Bridges Professional Learning Community (BBPLC) was established. This project followed a format in which protocols were set up to guide activities. Having negotiated the terms, all project participants signed the protocol. This established mutual respect. The project initially drew attention to cultural differences and potential tensions between the groups of participating teachers. The project was organised in action cycles comprising five steps: 1) *Intelligence*: identify the current situation and draw up a letter of intent stating future aims, 2) *Planning*: design action plans for each cycle and establish consensus on them. This included transition activities for children, professional development activities for teachers and data collection for documentation purposes; 3) *Implementation* of action plans between meetings, 4) *Critical reflection*: at meetings, participants discussed whether actions had generated new understandings and practices; 5) *New plan*: insights and experiences from the previous cycle were used to improve the action plan. Interviews were conducted in Cycle One and at the end of Cycle Four to obtain data on changes over time.

Boyle and Petriwskyj (2014) employed these categories to analyse collaboration: 1) the actor's function characterised by a one-way relationship, asymmetrical power, transmitter and receiver, 2) system, characterised by connections and adjustments, 3) partnerships, characterised by interpersonal communication and exchanges, and 4) dialogical interactions, characterised by negotiations, mutual understanding, symmetrical power dynamics, altered actions. The study showed that, at the end of the fourth cycle, all four collaboration concepts were used simultaneously, but dialogical concepts had precedence in both institutions. There was also a clear change in the use of concepts from Cycle One to Cycle Four, which consisted of a transition from system and function-oriented concepts to more dialogical concepts of collaboration. At the same time, this implied a shift from a desire to share professional reflections to raised awareness of
power differentials and insights into what it actually entails to agree on subject matter.

Data were analysed in the following categories: 1) *Structure*: physical and organisational, 2) *Attitudes*: assumptions and feelings, 3) *Education*: philosophy, curriculum and educational approaches, and 4) *Process*: management, organisation and procedures. At the end of Cycle Four, resistance revolved around structure, attitudes and pedagogical issues. There was, for example, a discrepancy between the school's reception routines and practices and a poor correlation between framework plans and educational approaches. The factors that most clearly promoted collaboration at the end of Cycle Four were related to increased respect and understanding of practical circumstances. This development was attributed to participation in the project and previous negotiations, especially the signing of a document setting out good practices for children's transition.

Process factors were the main drivers of professional collaboration. According to participants, the project had established a communicative space that allowed them to discuss, negotiate common understandings and work together to prepare procedures for the transition. Key factors in professional collaboration were increased educational understanding, positive attitudes and having participated in the project. Factors that inhibited professional collaboration had to do with different philosophical perspectives, and were attributed to historical differences in a fragmented system.

In the analysis of how cross-sectoral professional relationships can support continuity in the transition process, the following categories were developed: 1) *Development*: 'school ready', hierarchical, 2) *Organic*: contextual coherence, seamlessness, 3) *Sociocultural*:

interactions between the actors, reciprocity, and 4) *Critical*: transformative, negotiated and contextual. Towards the end of Cycle Four, critical, ecological and sociocultural perspectives dominated, and five out of six participants understood continuity as a gradual process of personal change. In order to establish a common understanding of continuity, teachers must acknowledge differences between the institutions and work together to develop appropriate strategies. Factors assumed to raise participants' awareness were: spending time in each other's learning environments, participating in debates and negotiating designs for a meaningful transition. While continuity at the outset of the project was almost synonymous with 'school readiness', few participants in Cycle Four associated continuity with being 'school ready'. Towards the end of the project, continuity was perceived as supporting children and families through a longer-term process that gradually facilitated their understanding of the new environment. Although participants still used the term 'school ready', the term 'continuity' was used to a greater extent to refer to mechanisms supporting children in processing their new experiences.

In a case study conducted in a Norwegian municipality (Hogsnes and Moser 2014), 21 educational supervisors in kindergarten, 15 first grade teachers and six supervisors in after-school care (SFO) answered questionnaires. Some of the informants also participated in focus group interviews. The study shows that asymmetric relations between participants may have spill-over effects in terms of experienced discontinuity in the children's transition from kindergarten to school. Hogsnes and Moser emphasise, in particular, the importance of continuity in communication, i.e. whether actors have knowledge about each other and exchange it. One conclusion is that employees at each institution must make an effort to learn about the other institution, so that what is 'known' about the other institution is based on knowledge, not just on prejudices.

Having conducted a survey of 104 preschool teachers and 79 schoolteachers in two states in Australia (New South Wales and Victoria), Hopps (2014) questions the assumption that increased communication – in itself – will strengthen relationships between employees in preschools and schools. She argues that one cannot merely promote more communication between the two institutions without also addressing the terms on which the conversation is conducted. Communication alone will not automatically turn asymmetrical relations into symmetrical ones. As long as the communication continues on one institution's terms, increased communication cannot restore the balance in asymmetrical power relations. Hopps also shows that communication between institutions is difficult because preschool (and kindergarten) teachers often assume – regardless of whether this assumption is grounded in fact or not – that collaboration might force them to change their pedagogical practices and bring them more into line with the school's pedagogical practices. Hopps therefore warns that any form of direct or indirect pressure on preschools (or kindergartens) from schools, and *vice versa*, may cause problems – especially if either of the institutions feel that collaboration would threaten their culture and pedagogical practices.

Abry et al. (2015) analysed data from a longitudinal dataset in the USA[49] to examine the extent to which preschool and kindergarten teachers were aligned in their beliefs about the importance of school competences upon kindergarten entry. The researchers also investigated whether misalignment between the teachers in the different institutions (preschool and kindergarten) can affect children's adaptation in kindergarten and the potential significance of the socioeconomic status of the home environment. The sample consisted of 2,650 pupils and their teachers. The researchers asked teachers from the two institutions to rank how they believed that children would cope during the transition in relation to three competence domains: academic, interpersonal and self-regulation. Then, children's academic and psychosocial adaptability in kindergarten was examined based on test results and teachers' assessments. The study showed that, on average, both preschool and kindergarten teachers found all three competence domains important for children entering kindergarten. However, both groups of teachers rated academic skills as the least important, and interpersonal skills as the most important of the three domains.

Dockett and Perry (2014) evaluated a measure aimed at improving the transition between preschool and school in Australia. The study, which included 128 participants (28 teachers and principals, 29 parents and 71 children), made some interesting findings.

49 Early Childhood Longitudinal-Birth Cohort.

Teachers were offered additional resources and guidance, and the measure required collaboration between preschool and school teachers to facilitate the transition and integrate children in school. The researchers identified five categories of integration: physical integration, integrated planning, curriculum integration, pedagogical integration and organisational integration. Activities sometimes overlapped within the different categories. *Physical integration* entailed spending time together in the same place and participating in the same activities (for instance when preschoolers visited school). It revolved around the children fitting into already-existing structures – i.e. participating in existing activities or adapting to existing practices. *Integrated planning* entailed teachers being allocated extra time to discuss children's development and working jointly to plan activities that were to be implemented. *Organisational integration* concerned finding time to collaborate – for example mixing groups of pupils to exempt a teacher from his or her teaching duties for a few hours. *Curriculum integration* dealt with whether teachers actually managed to collaborate on their teaching.

In this latter category, as well as in the category *pedagogical integration*, the school became the dominant actor in the collaboration, and the school's curriculum and pedagogical practices were regarded as 'superior'. Although there was a certain degree of understanding of the other institution's pedagogical practices, this was the exception rather than the rule. Nevertheless, new teaching methods were tested during the project, and increased awareness of the other institution's curriculum and pedagogical practices was reported.

Despite increased collaboration and understanding, there was still an attitude among both groups of teachers that their own practices and plans were superior. One consequence of this attitude is what can be characterised as a kind of relinquished responsibility. Many teachers expected the other teachers to explain how the knowledge from the 'other' institution's curriculum could benefit the integration of the different curricula and pedagogical practices from the two institutions.

4.1.1 Conclusion 4.1

The studies presented in this section show that history and tradition can explain cultural differences and different practices in kindergarten, preschool and school. Differences between institutions are not a problem in themselves. On the contrary, kindergartens and schools *should* differ. The differences only become an issue when tensions emerge between employees in the two institutions.

The studies describe tensions attributed to asymmetric relations between the staff of the two institutions. For example, Karila and Rantavuori (2014) observe that the resources that preschool teachers bring to the collaboration are played down or side-lined, for instance by giving little attention to play in the collaborative project. As long as the communication takes place on one of the institution's terms, increased communication cannot weigh up for asymmetric power relations (Hopps 2014). Dockett and Perry (2014) found that teachers in both institutions believed that their own ways of working were superior. They also felt that teachers from the other institution had a responsibility to explain how the knowledge from their curriculum could benefit the integration of different curricula and pedagogical practices.

Cross-institutional collaboration is both time-consuming and resource-intensive and makes great demands of participants. Even when a collaborative project has been deemed successful, project participants often return to their default positions as soon as the project ends (Karila and Rantavuori 2014). The two groups of teachers seem to mirror each other's attitudes. The suspicion that collaboration might put them in a coercive situation is enough to make the collaboration falter, for instance if they suspect that that they must change their pedagogical practices as a result of the collaboration. Dockett and Perry (2014) show that systematic work promotes collaboration. Problems stem from different philosophical principles and attitudes arising from historical differences in a fragmented system (Abry et al. 2015). Good teamwork presupposes that existing differences between the institutions are recognised before the collaboration starts. To illustrate this, Hogsnes and Moser (2014) talk about continuity in communication and stress that actors should know about each other's institutions and that this knowledge should not be based on suppositions and prejudices.

In order to understand other practices, it has to be acknowledged that practices (one's own and others') are both culturally and historically situated. Collaboration between professional groups presupposes that

the participants develop an analytical distance to their own practices and avoid making the collaborative efforts personal. Analytical distance to one's own work is not the same as not caring about pedagogical practices. It just means that it should be possible to criticise practices. With analytic distance, there is no need to feel personally offended if someone questions your practices. We can even view our own practices through a critical lens in order to improve them.

4.2 TENSIONS CAUSED BY DIFFERENT EDUCATIONAL PRACTICES IN KINDERGARTENS AND SCHOOLS

STUDIES	THE IDENTIFIED TENSIONS CONCERN
Alatalo et al. (2015)	Care – knowledge
DeMarie (2010)	Schools from children's perspective
Huf (2013)	Different educational traditions
Schneider et al. (2014)	The competent child
Uibu m. fl. (2011)	Instructional approaches and teaching practices

Table 8: Studies describing tensions relating to different educational practices

Several of the included studies that identified tensions relating to children's transition from kindergarten to school explained these tensions with reference to different educational practices in kindergarten and school. How great the differences between the respective institutions' practices are varies between the 13 nations represented in the included studies. There are also divergences in the extent to which children and parents experience differences between the institutions. Even though the degree of dissimilarity between kindergarten and school teachers' pedagogical methods varies, there are also surprisingly many similarities in the researchers' descriptions from countries as diverse as Sweden, Estonia and Hong Kong.

Many studies describe the problems at an overarching level and often only briefly. However, one of the included articles (Uibu et al., 2011) explained in greater detail the characteristics of the different educational practices (pp. 92-94) and delineated three different assumptions about knowledge and learning that are encompassed by different instructional approaches and teaching practices.

The first approach is referred to as the traditional perspective. According to this approach to teaching and learning, the teachers build on teacher-led or subject-specific principles when they plan their lessons and organise the pupils' learning activities in the classroom. By emphasising the basic academic skills that the curriculum prescribes children should acquire, the teaching is closely aligned with the current curriculum. The traditional perspective is reflected in didactic teaching practices, such as instructions from the teacher that children must follow; the presentation of teaching material and lectures, and rote learning and memorisation. One purpose of such teaching practices is that children should remember the specific subject matter that is presented to them in the classroom and be able to reproduce it in written and oral tests and dictations – which is similar to how Chan (2012) described school life in Hong Kong.

The second instructional approach is referred to as the cognitive-constructivist perspective. It differs from the traditional perspective in that it puts more emphasis on *active* forms of learning and knowledge development. Teachers employ activities that allow students to solve various problems and actively develop their own opinions through discussion and critical thinking, as well as acquiring a deeper understanding of the learning material. Thus, attention is directed more towards how children can build on the prior knowledge they have previously acquired, rather that expecting them to reproduce the learning material by heart. The principle underpinning these practices is that children can gradually develop a more sophisticated mindset where they do not focus solely on what they already know, but also develop curiosity and interest in new and previously unfamiliar areas of knowledge. In the cognitive-constructivist perspective, the aim is that the teacher should develop knowledge of children's individual needs and challenges, and adapt their teaching methods according to these insights.

The third approach is called the social-constructivist perspective (Uibu et al. 2011). It has many similarities with the cognitive-constructivist perspective, but one difference is that this perspective builds on the assumption that there is a close relationship and interaction between the individual child and his or her context or social environment. One consequence of this approach to learning and development is that teaching must be organised in such a manner that it

encourages children to interact and develop knowledge collaboratively with others. Thus, it is not merely pupils' individual (or cognitive) learning skills that should be developed – social skills are also emphasised. The individual child learns and develops skills through active participation in peer groups. The idea is that the teacher, for example by accommodating group activities, can motivate children to learn from each other and relate abstract concepts to practical or concrete everyday issues that are discussed and resolved in the group.

Huf (2013) found that the transition from kindergarten to school might represent a regression as much as a progression when it comes to children's agency. She based this claim on the insight that children's agency is potentially compromised in schools that adopt a traditional perspective on teaching in line with the different instructional practices outlined above (Uibu et al. 2011). Huf believed that it is important to examine how children 'do' the transition from kindergarten to school, that is, what they do and how they develop a practical understanding of their room for manoeuvre in the transition process. This analysis of how children 'do' transition complements studies on children's perspectives on the transition. Few studies have looked at how children adapt and how their actions might diverge from the expectations of adults. In order to further investigate these processes, Huf (2013) conducted a comparative ethnographic study in England and Germany to explore how children's involvement and participation (agency) can change in the transition process and whether the context (England or Germany) of the transition has any significance. The data material is based on field observations made over 3-5 days every month over two years. The two countries were deliberately selected to examine dissimilar contexts. While England practises the early childhood education approach, Germany is situated in the social pedagogy tradition. Huf analysed how messages were explicitly and implicitly communicated to children by adults, how the children collaborated in peer groups and how the children's responses to the adults' messages might have changed as a consequence of the transition and depending on its context.

In England, the transition from kindergarten to school usually occurs in two phases: when children are four years old, they leave the nursery and enrol in reception class (preschool), which is located on the school campus. When they transfer from the reception class to school, they are kept in a group with the same children as in reception class. Reception class is supposed to have a mediating function, but increasing emphasis on results and academic skills in England in the last few decades has made it more like school. Although Germany has 16 federal states (Bundesländer) and these states may have different practices, Huf adds that Germany maintains a traditional distinction whereby kindergarten is part of the welfare system and school is part of the education system. Concerns about a possibly abrupt transition from the play-oriented kindergarten to the more academically-oriented school have led Germany to develop a school-entry phase in the early school years. The measure, which has been piloted in some schools, consists of mixed age groups in first and second grade. Some children can spend three years in the school-preparatory phase, which is intended to support each child's individual development needs.

The study found that children in Germany followed the teacher's instructions and adapted to the new school environment. Children's strategies were aimed at developing a new identity as schoolchildren. However, the children in England established practices that did not quite match the teacher's expectations and instructions. In collaboration, and without them opposing the teachers' messages, the children managed to modify the teacher-led tasks to make them more consistent with the children's own ideas and interests. Huf (2013) believed that this difference in patterns of behaviour may be due to the fact that children in Germany are split up and placed in different groups in the school-entry phase, while children in England remain in the same group of children. During reception class, the children in England developed routines within the peer group, including the ability to integrate and modify teacher-led tasks to make them more consistent with their own ideas and interests. Huf suggested that this gives children room for manoeuvre, and concluded that structures that keep children together may strengthen their involvement and participation (agency). Although transition to school also means transition to a more structured and teacher-led learning environment than the children have been accustomed to, it is easier for them to build on their own ideas and interests when they know the other children in the group.

Alatalo et al. (2015) used questionnaires and interviews to investigate how 36 teachers in Swedish

kindergartens and 38 teachers in Swedish preschools experienced children's transition from kindergarten to preschool. The study aimed to uncover the factors that teachers believe can contribute to continuity in the transition and long-term learning for children. One finding is that teachers in both institutions believe that there should be restrictions on the information exchanged about the individual child. Unwillingness to share information about children's academic development may be related to kindergartens traditionally having been concerned with children's welfare, safety and social development, as an opposite pole to the knowledge-based preschool or school. The kindergarten teachers asserted that, if any information was to be transferred to schools, this had to be information that clearly worked to the child's benefit. The teachers' reservations had to do with their beliefs that the individual child should be met without the prejudices that too much information about them could foster, a fear that kindergarten information about the children can be abused by schools and that it is time-consuming to fill in forms on each child's development-specific challenges.

Based on the analysis of the data, Alatalo et al. (2015) asked whether kindergarten teachers are so deeply rooted in the idea that kindergartens should provide children with care that they ignore the fact that they also have a responsibility to contribute to children's lifelong learning and development. Furthermore, Alatalo et al. (2015) pointed out that kindergartens have not traditionally prioritised the child's individual learning, but have been committed to facilitating process-oriented learning for the group of children as a whole. They conclude that it should nonetheless be possible to interweave care and knowledge.

DeMarie (2010) asked whether it may be more conducive to children's long-term development if they feel welcomed and find their classes interesting and engaging, rather than being exposed to 'top-down' indicators such as measures of student-teacher ratios and rankings of the quality of schools based on standardised test results. To examine how children view the quality of their schools, DeMarie (2010) conducted a study of children's perspectives on two elementary schools in the American state of Florida. Based on pupils' results on standardised state tests, one school was rated as 'successful', while the other was classified as 'unsuccessful'. A total of 156 children participated in the study, 123 from the 'successful' school, and 33 from the 'unsuccessful' school. Children's perspectives were obtained through interviews, as well as through a task in which children selected pictures they had taken of school areas that were considered important to them and that they believed were representative of the school they attended. These data collection techniques were chosen deliberately in an attempt to create a comprehensive picture of what the school looked like through the eyes of the children themselves.

A main finding is that the children at the 'unsuccessful' school felt that their school had an academic focus, including testing children's academic skills, and to a lesser degree involved having fun and engaging in play activities. The children at the 'successful' school, on the other hand, described the school as being more about fun and play activities and less about academic subjects. The younger the children were, the stronger was this distinction in perception between the pupils at the two schools. DeMarie considered it noteworthy that the school that, according to the children, had the most academic focus (the 'unsuccessful' school), actually had the lowest scores on standardised state tests. When talking about the two schools, children used different concepts. Children at the 'successful' school talked about what they had learned (for example that they had learned to divide numbers). Children at the 'unsuccessful' school, however, referred solely to the subject (i.e. that they had learnt maths), or just stated that they were working or doing 'stuff'. Awareness of the school as a larger community (including what other classes were doing) was greater among children at the 'successful' school. They considered school to be a 'larger' place in contrast to how students at the 'unsuccessful' school talked about their school. They seemed to be most concerned with their own classroom, their own teachers and their immediate surroundings.

DeMarie concluded that there are school-based differences in how children relate to the content and processes in schools, including the extent to which they feel that they have opportunities to play, experience learning as a meaningful activity, feel supported and have fun in the learning process. She warns about jumping to conclusions, however. It is not just the focus on play and fun in itself that can lead to better academic results in the 'successful' school. DeMarie asked whether the fact that more students performed at a lower level in the 'unsuccessful' school put more pressure on teachers who, in an effort to raise the students' achievement level, are

forced to limit the opportunities for play and fun in favour of traditional instruction.

4.2.1 Conclusion 4.2

In the studies outlined in this section, the researchers identify tensions that they associate with different educational practices. Uibu et al. (2011) outlined three instructional approaches – one of which, the traditional perspective on teaching, supports teacher-led methods. The other two approaches, the cognitive-constructivist and social-constructivist perspectives, support the children's or pupils' activities. Huf (2013) believed that the child's agency is curtailed in schools that adopt a traditional perspective on teaching, and DeMarie (2010) wondered whether schools that underperform on standardised tests concentrate on traditional teaching to raise students' achievement level and limit children's opportunities to play and express themselves. Alatalo et al. (2015) identified an attitude among kindergarten teachers that information about children should not be shared with schools. This is partly about caring for the children, partly about a distrust of schools and partly because teachers do not want to fill in additional forms. This made Alatalo et al. wonder whether preschools (kindergartens) overlook the fact that they should also contribute to children's lifelong learning.

4.3 SCHOOL-PREPARATORY ACTIVITIES

Schneider et al. (2014) claimed that they had have observed a significant increase in the expectation that children should be focused, direct their attention towards the teaching material, sit quietly at their desks and engage in cognitively demanding activities for several hours a day in order to be adequately prepared for school. Several of the included studies touch upon the same theme, and the OECD report Starting Strong II from 2006[50] asked whether early childhood education and care provision in various OECD countries is being 'schoolified'. The report indicated that this form of 'colonisation' of kindergartens was not necessarily intentional, but that the school's institutionalised structures and practices are reproduced because of history and tradition.

Research showing the importance of early intervention and how the early development of academic skills can provide a foundation for children's adaptation to school (Murray and Harrison 2011) is another factor increasing attention on the youngest children's learning and development. Early intervention can help children to cope with the transition from kindergarten to school and enhance their school achievement. The aim is that children, from an early age, should acquire cognitive and academic skills to prepare them for the role as pupils in school, or be 'school ready'.

School readiness is a vague term, and it is not clearly defined what characterises a child who is 'ready' for school. It is unclear which skills should be emphasised and what should be the benchmark for a 'school ready' child. Geographically, the driving force for the school readiness movement can be located in the Anglo-American area, which relies on early childhood education.[51] According to Murray and Harrison (2011), a child in the United States can be kept back for one year before he or she is allowed to enrol in compulsory school if he or she does not perform well enough on tests that are designed to measure whether they are ready for school (a process referred to as 'redshirting'). Researchers point out, therefore, that whether children are ready for school depends not only on the child's competences and skills, but also on the support they receive during the transition (Abry et al. 2015). This includes not just academic, but also socioemotional support – which has a great impact on children's school achievements.

The Nordic kindergarten is based on a social pedagogy approach to early childhood education and care that is child-centred and more holistic, but this tradition is now also facing increased expectations of getting children ready for school.[52] This chapter presents studies that have examined various forms of school-preparatory activities and the development of academic skills. This means transition practices, home and parent support, and the importance of self-regulation skills and executive functions:[53]

50 OECD (2006): *Starting Strong II: Early Childhood Education and Care*. Retrieved 31 October 2015 from http://www.oecd.org/edu/school/startingstrongiiearlychildhoodeducationandcare.htm

51 Broström, S. (2012). Curriculum in preschool. Adjustment or possible liberation? *Nordisk barnehageforskning (Nordic Kindergarten Research)*,Vol 5 (11) 1-14.

52 Broström (2012, op. cit.).

53 *Store Norske Leksikon* [Great Norwegian Encyclopedia, our translation]: 'executive functions, in psychology and psychiatry, refer to a person's ability to solve problems, plan and implement tasks (cognitive functions). Executive functions are a prerequisite for satisfactory conduct in relation to other people and in the workplace'. Retrieved from https://snl.no/eksekutive_funksjoner

STUDIES	MAIN FOCUS
THE HOME LEARNING ENVIRONMENT	
Lau et al. (2013)	Parental involvement and children's readiness for school
Niklas & Schneider (2013)	Home Literacy Environment and children's reading and spelling
Niklas & Schneider (2014)	The importance of the home numeracy environment for children's maths skills
Hindman et al. (2013)	Teacher outreach to families and children's early academic outcomes
Puccioni (2015)	Parents' conceptions of school readiness, transition practices, and children's academic achievement trajectories
ACADEMIC SKILLS	
Ahtola et al. (2011)	Transition practices and academic performance
Anders et al. (2013)	Preschool and primary school influences on the development of children's early numeracy skills
Eggum-Wilkens et al. (2014)	Peer play and its relations with kindergarten school competence
Jung & Han (2013)	Teacher outreach efforts and reading achievement
Jordan et al. (2012)	Building children's number sense and maths achievement in school
Li et al. (2012)	Effectiveness of a play-integrated primary one preparatory programme to enhance a smooth transition for children
Murray & Harrison (2011)	The influence of being ready to learn on children's early school literacy and numeracy achievement
Petriwskyj et al. (2014)	Provision for diversity in the transition to school and scholastic achievement
White 2013	Associations between teacher–child relationships and children's writing
SELF-REGULATION AND EXECUTIVE FUNCTIONS	
Diamond & Lee (2011)	Review of interventions shown to aid executive function development in children 4–12 years old
Fitzpatrick & Pagani (2013)	Associations between early classroom engagement skills, reflecting self-regulation and the ability to remain on task, and later academic adjustment in emerging adolescence
Monette et al. (2011)	Associations between measures of executive functions (inhibition, flexibility, and working memory) and academic achievement and socioaffective functioning
Shaul & Swartz (2014)	The extent to which executive functions are related to pre-academics skills in general or related to specific pre-academic skills
Schmitt et al. (2015)	Evaluation of a self-regulation intervention
Yeniad et al. (2014)	The speed-accuracy pattern in cognitive flexibility performance in children across the transition to formal education

Table 9: Studies investigating school-preparatory activities

4.3.1 The importance of the home environment

Parents and the home environment are important to children's upbringing. Many parents encourage learning at home, for example by supporting children's reading, writing and maths skills. This may involve reading aloud and singing for the children, teaching them how to count and playing various forms of games. Some of the included studies have explored how children's learning is supported and stimulated at home by their parents, and what effect this can have on children's academic achievement and how prepared they are for school (Lau et al. 2013, Niklas and Schneider 2013, Niklas and Schneider 2014, Hindman et al. 2013, Puccioni 2015).

Lau et al. (2011) studied how parents' involvement in children's learning processes is significant in relation to whether they are ready for school. The results showed that parents mainly supported children's learning at home more than in kindergarten and that instruction, language, cognitive activities and homework were significant predictors of how ready the children were for school. Niklas and Schneider (2013, 2014) investigated whether parental support and stimulation in relation to reading and maths, respectively, is significant to children's later reading and writing skills, and numeracy skills. The results showed that children's home environment was important for reading and writing skills, especially vocabulary and phonological awareness (Niklas and Schneider 2013) and for numeracy skills (Niklas and Schneider 2014). It was further indicated that families with children who have special educational needs in maths provide a less favourable learning environment for children with regard to their development of numeracy skills.

Puccioni (2015) investigated whether parents' educational values and emphasis on school readiness affect parental support for transition activities and whether this, in turn, affects children's academic performance and development. The study shows that parents who mentioned it as being important that children are ready for school engaged in most transition activities, and that the parents who engaged in most transition activities also had children who performed better than average in school.

Hindman et al. (2013) examined outreach efforts that teachers in preschool, kindergarten and school establish with parents/families and the impact these efforts may have on children's academic skills. The study showed that there were considerable variations in teachers' outreach contact with parents/families, in terms of both frequency and method. When teachers invited parents to participate as volunteers in the classroom, this was associated with improvements in children's ability to solve mathematical problems. Inviting parents to workshops was positively associated with the development of children's vocabulary. The study showed, however, that outreach contact by teachers could only explain slight variations in the measurement of academic skills (Hindman et al. 2013).

4.3.2 Academic skills and the importance of the school environment

The systematic searches identified several studies that investigated school-preparatory activities that may facilitate children's transition from kindergarten to school (Ahtola et al. 2011, Anders et al. 2013, Jordan et al. 2012, Jung & Han 2013, Li et al. 2012, Petriwskyj et. al. 2014, White 2013). These studies looked at children's development of numeracy skills (Anders et al. 2013, Jordan et al. 2012), reading and writing skills (Jung & Han 2013, White 2013), and the school's learning environment (Li et. al. 2012). They are briefly outlined below.

In a longitudinal study, Ahtola et al. (2011) examined whether there are variations in Finnish preschool-school dyads in terms of implementing various transition practices and whether the number of transition practices (or activities) can affect children's academic skills in school. Ahtola et al. (2011) defined transition practices as vertical, mutually binding activities where one of the main aims is to establish horizontal connections with the children's families. The Finnish language has an expression for 'collaboration in the transition period'. It emphasises reciprocity in the transition from preschool to school and stresses the importance of mutual trust and respect in the vertical relationships, as well as shared responsibility between preschool and school teachers.

In the study, seven different types of transition practices were investigated: 1) The preschool group familiarised themselves with school activities by visiting the school, or pupils/teachers from the school visited the preschool group. 2) Preschool teachers and schoolteachers collaborated at joint meetings, planned their teaching or taught together. 3) Preschool teachers and schoolteachers organised gatherings for parents of children starting school. 4) Children, parents and teachers in first grade met before the children's school entry. 5) Preschool

teachers, teachers in first grade and special teachers engaged in conversations about children who were enrolling in school (skills, peer relationships). 6) The child's preschool portfolio was handed over to teachers in school. 7) Teachers in preschool and teachers in school jointly wrote and revised preschool and first and second grade curricula. The results from the study showed that children from preschool-school dyads in which many supportive transition activities were implemented during the preschool year developed academic skills faster during the transitional period than children who had participated in preschool-school dyads implementing fewer transition activities (Ahtola et al. 2011). The activities that particularly manifested themselves in positive outcomes for children's transition were: a) collaboration on curricula between preschool and school, b) that the preschool handed over information about the child to the school, c) personal meetings between families and teachers in school before children's school entry, and d) concrete collaboration between preschool teachers and schoolteachers at school.

Furthermore, Ahtola et al. (2011) found that academic collaboration on teaching practices and learning was the strongest predictor of children's later academic skills. That the preschool distributed information to the school about children in the form of plans and portfolios was also a strong predictor of academic development. Parents are sometimes reluctant to provide information about their child. However, the study shows that it is useful to transfer information, especially when it is detailed. Adequate information about a pupil can help a teacher to adapt the teaching methods to pupils' individual needs. The least used transition activities in preschool-school dyads appeared to be curriculum collaboration and written information, while the most used were conversations about children who were enrolling in school. Teachers in schools regarded these conversations as the most important transition activity.

One conclusion in Ahtola et al. (2011) was that a good transition presupposes transition practices that strengthen relationships between children, families, preschool and school. It is not just a matter of the child being ready for school, but also a matter of the school being ready for the child. In line with Schneider et al. (2014), Ahtola et al. (2011) concluded that the child must be surrounded by a 'web of relationships' that facilitate continuity and ease the transition between the different learning cultures in preschool and school.

Murray and Harrison (2011) used regression analysis to examine the extent to which children's 'learning readiness', school-preparatory activities, and demographic and socioeconomic conditions at home affect children's reading, writing and maths achievement during the first school year. A total of 104 children participated in the study, which was conducted in New South Wales in Australia. At the beginning of the school year, parents provided information about their children's school-preparatory activities, while teachers rated children's ability to work individually and in groups. At the end of the school year, children's reading, writing and numeracy skills were measured. The study showed that children's 'learning readiness' upon school entry is a strong predictor of their reading, writing and numeracy skills at the end of the first school year.

In a longitudinal study, Anders et al. (2013) investigated the development of numeracy and mathematical skills in children from three to seven years old.[54] First, the influence of the kindergarten environment was measured.[55] Then the researchers assessed how the quality of education in primary schools and the collaboration between kindergarten and primary school affects children's numeracy skills. The study showed that children's school entry can be facilitated when kindergartens promote the development of their numeracy skills. In a randomised controlled trial from the US, Jordan et al. (2012) tested how early development of numeracy can affect mathematical performance in school among children from low-income communities. The intervention group (42 children) received intensive training in numeracy through teachers' use of consistent representations, such as chips, black dots and fingers, to illustrate associations between numbers.[56] The study showed that the intervention increased children's numeracy skills and affected children's general skills in maths over time (measured after eight weeks).[57]

54 547 children in 97 German kindergartens.

55 Controlled for family background and the learning environment at home.

56 The study had two control groups. Control group one consisted of 44 children who did not receive the intensive training. Control group two received the intensive training, but in vocabulary and language development instead of numeracy in order to verify whether the conditions for the intensive training (in small groups) produced the effects on children's maths performance rather than the actual content of the intervention.

57 The intervention group performed significantly better than the control groups both in the post-test and the delayed post-test (after eight weeks).

Petriwskyj et al. (2014) presented two Australian studies that examined the importance of taking children's diverse backgrounds and skills into account in the transition from preschool to school. The first study investigated whether inclusive practices can predict children's academic performance and adaptation to school.[58] The study showed that both programme quality and the number of measures implemented had an impact on children's academic performance. The second study examined various teaching methods at three schools and found that teachers' knowledge of inclusive practices had an impact on teaching quality.

In a quasi-experimental study, White (2013) examined the extent to which the quality of the relationship between teachers and children can affect children's later writing skills in school.[59] The relationship between teachers and children was measured using a rating scale,[60] and controls were included for the children's grade level, reading skills, language comprehension and teachers' interactive and didactic teaching. The results showed a significant association between the level of conflict in the relationship and children's writing skills, but the effect size was small. In another study from the US, Jung & Han (2013) examined the relationship between kindergarten teachers' outreach efforts with parents and preschool, such as sending information to the home in the form of newsletters and ideas for activities, proposing that preschool children spend time in the classroom before kindergarten entry, making school days shorter early in the year, and inviting parents to attend pre-enrolment orientation – and monitoring children's reading achievement. The study showed that those who benefited most from teachers' outreach efforts were (1) pupils who read frequently outside school hours, and (2) pupils who demonstrated low initial reading ability. However, the study showed that pupils with low initial reading ability and who, *additionally*, were from minority families, did not benefit from the outreach efforts.

In a randomised controlled trial, Li et al. (2012) tested the effect of a play-integrated preparatory programme intended to facilitate children's transition to school in Hong Kong.[61] The play-integrated preparatory programme consisted of activities that would help the children who received the intervention with practical preparations for school, as well as play activities promoting the following skills: 1) problem solving, 2) emotional expression, 3) interpersonal communication, and 4) how to cope with stress. The results showed that the intervention group performed moderately better than the control group in both the post-test and delayed post-test (after six weeks and three months, respectively). The study showed that the intervention increased the children's experience of happiness and decreased their experience of anxiety and difficulties in psychosocial adjustment during the transition.

Through time-sampled observations,[62] Eggum-Wilkens et al. (2014) examined the relationship between children's peer play in preschool and their kindergarten school competence in the US. Situations classified as peer play were those in which a child was involved in verbal or physical activity with at least one other child (including interactions that were classified as either positive or conflicted), or where the child was in close proximity to and engaged in the same task as at least one other child. The children's kindergarten school competences[63] were measured by teachers using a rating scale[64]. The study showed that children who most frequently participated in peer play in preschool achieved a higher level of kindergarten school competence. This result indicated that peer play promotes skills that may help children during their transition to formal schooling.

4.3.3 Self-regulation and executive functions

In Norwegian kindergartens, the concept of *self-regulation* is relatively new.[65] Children develop executive

58 In a sample of 1,831 children at 39 schools.

59 20 teachers and 127 children participated in the study and the children were divided into groups based on whether they were classified as 'struggling' or 'non-struggling' readers.

60 A rating scale was completed by teachers on the basis of their perceived feeling of closeness and conflict with their pupils. The pupils completed a similar rating scale where their relationship with teachers was rated.

61 142 families participated in the experiment, including 73 families in the intervention group and 69 families in the control group. The intervention took place in groups of eight to twelve children, and extended over four weeks, consisting of four group meetings that lasted for two hours each.

62 264 children from different schools in a Southwestern metropolitan area of the United States were observed. All children participated in the Head Start programme.

63 Competences were measured for 181 of the 264 children who participated in the study.

64 Teachers were asked to rate each child in relation to a range of variables, which were used by the researchers to form a comprehensive picture of children's kindergarten school competence.

65 University of Stavanger – *Pedagogiske prinsipper i Agderprosjektet* [Pedagogical principles in The Agder Project]. (2015, January 30). Retrieved 23 October 2015 from https://www.uis.no/forskning/skole-og-barnehage/agderprosjektet/pedagogiske-prinsipperi-agderprosjektet-article88714-14131.html

functions and the ability to self-regulate[66] when they are around 3-5 years old (Schmitt et al. 2015). Self-regulation is an overarching and multidimensional concept that refers to people's ability to regulate their thoughts, feelings and behaviour.[67] Self-regulation is closely related to cognitive control functions, or *executive functions.*[68] These are functions that we need, for example, when we have to think before we act impulsively (Diamond and Lee 2011). Executive functions is an umbrella term for cognitive processes that help us to control and coordinate thoughts and actions so that our behaviour can be rectified and directed towards a future goal (Monette et al. 2011, Shaul and Swartz 2014). It concerns being able to prevent and hold back potentially detrimental responses and behaviours. Some executive functions are seen as particularly important, such as attentional flexibility, working memory (remembering and processing information) and impulse control (Monette et al. 2011, Schmitt et al. 2015). Executive functions also comprise more complex skills, such as problem solving, reasoning and planning (Diamond and Lee 2011). Being able to think through consequences and adapt their emotions, attention and behaviour depending on the situation and what is expected of them, is seen as particularly important for children's transition to more structured forms of learning situations in schools.

We have outlined studies that examine self-regulation and executive functions below. Yeniad et al. (2014) examined the development or modification of a form of executive function at preschool age. Fitzpatrick and Pagani (2013), Monette et al. (2011) and Shaul and Swartz (2014) assessed how self-regulation and executive functions are associated with achievement in school, and Diamond and Lee (2011) and Schmitt et al. (2015) analysed the importance of broad-based or specific interventions to children's self-regulation or executive functions. The studies covered issues such as the nature of self-regulation and executive functions, what is expected of children in schools with regard to the regulation of attention and behaviour, the importance that self-regulation and executive functions can have for school achievement and what interventions have shown so far.

Self-regulation, executive functions and school achievement

In a longitudinal study, Yeniad et al. (2014) examined the development of children's cognitive flexibility in the transition from kindergarten to school in the Netherlands. Eighty-seven children with Turkish mothers participated in the study. Cognitive flexibility involves self-regulation and is regarded as an executive function that is measured by testing children's precision, reaction and achievements. More specifically, researchers examined children's reaction speed and accuracy under time constraints by giving them ambiguous and constantly changing tasks. The researchers found that children who initially scored low on accuracy became significantly more accurate after the transition to school, while children who already scored high on accuracy in kindergarten only increased their speed-accuracy.

Monette et al. (2011) examined the association between children's development of inhibition, flexibility and working memory, and their maths and reading/writing skills a year later, in first grade. Eighty-five children participated in the study. The researchers found that only working memory was associated with maths skills. In addition, both working memory and inhibition had an indirect effect on reading/writing skills via anger-aggression, indicating that there may be a significant relationship between socio-affective functioning (including anger-aggression) and skills related to social cognition, which in turn affects learning.

Fitzpatrick and Pagani (2013) examined the relationship between the development of children's early classroom engagement skills, or task-oriented kindergarten behaviour, and later academic outcomes in fourth grade at school in the US. They found that self-regulation (the ability to persevere with a task) was associated with higher scores on maths tests in fourth grade, and teachers' assessments of children's reading, writing and math skills. They also found that low self-regulation was associated with teacher-student conflict, inattention, low status amongst peers, aggression and anti-social behaviour in the fourth grade.

Shaul and Schwartz (2014) investigated executive functions' unique contribution to reading, writing and

66 Executive functions is a loosely defined description of brain processes that are considered to be part of self-regulation (Monette et al. 2011, p. 159).

67 McClelland, M. M., Ponitz, C. C., Messersmith, E. E., & Tominey, S. (2010). *Self-regulation. The handbook of life-span development*; Backer-Grøndahl, A. & Nærde, A. (2015). Den viktige og vanskelige selvreguleringen hos barn [The important and difficult self-regulation in children]. *Tidsskrift for Norsk Psykologforening*, 52(6), 497-502.

68 Rueda M. R., Posner, M. I., & Rothbart, M. K. (2005). The development of executive attention: Contributions to the emergence of self-regulation. *Developmental neuropsychology*, 28(2), 573-594.

maths skills. Fifty-four preschool-age children in Israel aged between 5 and 6 years participated in the study. The researchers used the *Head-Toes-Knees-Shoulders*[69] and *Statue*[70] tests, both of which require working memory, inhibition and attentional flexibility. The researchers found that executive functions contributed to children's development of reading, writing and numeracy skills, but questioned whether it was appropriate to study the unique effects of overlapping cognitive skills (such as analysing working memory controlled for short-term memory).

Self-regulation and executive functions

Diamond and Lee (2011) reviewed various intervention programmes targeting children's development of executive functions, and distinguished between (a) computerised training, (b) hybrids of computer and non-computer games, (c) aerobic exercise and sports, (d) martial arts and mindfulness practices, (e) classroom curricula, (f) Montessori pedagogy and (g) add-ons to classroom curriculum.

In sum, Diamond and Lee (2011) concluded that those children who scored lowest before the intervention benefited most from it. These were children with low socioeconomic status, a low span in their working memory and ADHD. The authors argued that practising executive functions could possibly help to reduce inequalities between children from disadvantaged and more privileged backgrounds.

Diamond and Lee (2011) also found that the measures with the most demanding targets for executive functions were those that improved executive functions the most. It appears that (e) classroom curricula and (g) add-ons to classroom curriculum contribute positively already when children are 4-5 years old, while (a) computerised training and (d) martial arts and mindfulness practices contribute positively for somewhat older children (8-12 years). It is argued that the most important aspect that executive function measures need to promote is a gradually higher difficulty level. The more general measures (martial arts and classroom curricula) appear to have a broader effect. This may be because they are aimed at several executive functions simultaneously (Diamond and Lee 2011). The frequency of activities also seems to matter. Computerised training usually only involved short-term measures, and children's interest in computer-based exercises decreased when they reached the highest difficulty level of the game.

In a randomised controlled trial, Schmitt et al. (2015) investigated the importance of an eight-week, group-based self-regulation intervention in a Head Start classroom in the United States, and compared self-regulation before and after the intervention with a group of children who did not receive the intervention; 276 children from families with low socioeconomic status participated in the study. Over the preschool year, the intervention group scored higher on both self-regulation and academic achievement than the control group. In addition, researchers found that, for children who have English as a second language, part of the intervention effect on maths results was achieved through developing self-regulation skills. This indicates that some children may benefit more from such interventions and that fun play tasks aimed at self-regulation are cheap and can also effectively reduce inequalities.

4.3.4 Conclusion 4.3

In this section, we have presented studies exploring various forms of school-preparatory activities. The studies show that there are several aspects of school-preparatory activities that may be important for the child in the transition from kindergarten to school. They can be home support and early development of, for instance, numeracy skills and reading comprehension, as well as the development of social skills. Ahtola et al. (2011) demonstrated that a successful transition to school is about improving relationships between children, families, preschool and school. It is not merely a matter of the child being ready for school, but also a matter of the school being ready for the child. Jung and Han (2013) showed that teachers' outreach efforts with families and preschool were particularly important for children with low initial reading ability. The studies by Lau et al. (2013), Niklas and Schneider (2013), Niklas and Schneider (2014), Hindman et al. (2013) and Puccioni (2015) showed that the home learning environment and parental support and stimulation of learning are important factors for early development of academic skills. Jordan et al. (2012) and Anders et al. (2013) showed that early developed numeracy skills affect later academic achievement in maths.

69 Ponitz, C. C., McClelland, M. M., Matthews, J. S., & Morrison, F. J. (2009). A structured observation of behavioral self-regulation and its contribution to kindergarten outcomes. *Developmental psychology*, 45(3), 605-619.

70 Korkman, M., Kirk, U. & Kemp, S. (1998). *NEPSY: A developmental neuropsychological assessment*. San Antonio, TX: Psychological Corporation.

Eggum-Wilkens et al. (2014) and Li et al. (2012) showed that play-based activities can help to prepare children for school as they learn social skills that help them during the transition. In conjunction with the development of social skills, it is also pertinent that teachers are knowledgeable about self-regulation and executive functions, such as inhibition and the ability to maintain attention on a task over time.

4.4 A HYBRID PEDAGOGY – THE BEST OF TWO WORLDS?

So far, this chapter has presented research from different countries and education systems. Researchers have asked various research questions and examined aspects of children's transition from kindergarten to school. Despite the differences, they reach surprisingly similar conclusions. The problems they uncover are frequently related to asymmetric relations between kindergarten and school, reflected in the fact that schools' educational practices often take precedence. That the school is the most powerful party in the relationship is reflected in studies that have examined the institutions' educational practices. A preliminary conclusion is that, for measures to be successful, different practices should be investigated in order to minimise asymmetry between kindergarten and school. Power structures, traditions and cultures must be made transparent, explained and discussed. In particular, it appears to be necessary to discuss how staff in kindergartens and schools view children's learning and development. They should reconcile their views of the child and pupil, of knowledge and learning. Tensions are difficult to overcome as long as these fundamental questions remain unsettled. Perceiving the child as a competent actor is central to the Nordic kindergarten tradition. This fundamental principle has consequences for how employees facilitate children's learning and development. The following overarching aim for collaboration between kindergartens and schools on children's transition can therefore be formulated:

> *The aim of the collaboration is to organise transition activities that ensure that the competent child also becomes a competent pupil.*

Below, the studies are examined in light of three underlying tensions touched upon, but not clearly stated, in the included studies:

- Tensions between the Anglo-American early childhood education approach and the continental European social pedagogy tradition.
- Tensions between education policy which, before 1990 (when management by objectives was introduced), built on preconditions (input), but is now geared towards results (output).
- Tensions between educational practices in kindergarten and school that can be explained by unresolved views on how children and pupils acquire knowledge and learn.

In 2012, Broström[71] discussed how kindergartens are increasingly adopting schools' educational practices because they are expected to make children ready for school. He points out that, since the early 2000s, several countries, including Denmark, have seen an increase in educational standards, indicators and language tests, quality reports and evaluations of children's learning in kindergarten. According to Ackesjö (2013a), Swedish researchers also found that the Swedish preschool class is now more like a first school year than a transition based on hybrid pedagogy.[72] In Norway, Peder Haug asserted that the room for play in kindergartens has gradually shrunk[73] and Hogsnes and Moser (2014) found less collaboration between kindergarten and school.

Two OECD reports[74] described two different approaches to curriculum design. One is the social pedagogy approach, which is child-centred and holistic, while the second is the early childhood education and care approach, which is more focused on teaching, academic content and methods. An argument in Broström's study is that increased emphasis on adult-led activities in kindergarten (common in the early childhood education approach) reduces children's opportunities to learn democratic participation and develop self-respect through participatory processes. Nordic kindergarten teachers have been used to supporting and encouraging children's own initiatives through play activities, and they use words such as 'care' and 'development', but they have gradually introduced more academic tools in the form of teaching materials, methods and tests.

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71 Broström (2012, op. cit.).

72 Karlsson, M., Melander, H., Pérez Prieto, H. & Sahlström, F. (2006). *Förskoleklassen – ett tionde skolår?* [The preschool class – a tenth school year?]. Stockholm: Liber; Markström, A-M. (2005). *Förskolan som normaliseringspraktik - en ethnografisk studie* [The preschool as normalising practice – an ethnographic study]. Dissertation. Linköping: University of Linköping.

73 Haug, P. (2013). From indifference to invasion: The relationship from a Norwegian perspective. In Moss, P. (Ed.). *Early childhood and compulsory education. Reconceptualising the relationship* (pp. 112-129). London & New York: Routledge.

74 OECD (2001). *Starting Strong: Early Childhood Education and Care*. Paris: OECD; OECD (2006): *Starting Strong II. Early Childhood Education and Care*. Paris: OECD.

When new monitoring systems were introduced aimed at measuring and improving results, the different foundations of the two traditions became visible. While the early education approach had an academic orientation, more aligned with policymakers' goal-oriented emphasis, this was less central to the social pedagogy tradition. Increased attention on pupils' learning outcomes after 2000,[75] coupled with the introduction of a human capital paradigm in educational policymaking[76] and research, which showed the importance of early interventions, have tempted policymakers to ask whether we can really 'afford' to allow children to engage in play activities longer than necessary.[77] Therefore, there is a tendency for the school's educational practices to be increasingly introduced in kindergartens, even in countries with a strong tradition for social pedagogy. This is occurring while politicians simultaneously acknowledge the uniqueness of kindergartens and argue that children should be allowed to learn on their own terms.

In 1997, Norway decided to enrol six-year-old children in school. At the time, there was debate about how to develop common practices between kindergartens and schools. The ideal was to create something new – a kind of hybrid pedagogy – integrating the best of kindergartens and schools.[78] In the last period of kindergarten, children were supposed to gradually learn about school, so that when they started school they would recognise familiar educational practices from kindergarten. During the design of Reform 97, policy documents referred to kindergarten and school traditions. When the Knowledge Promotion (*Kunnskapsløftet*) reform was introduced in 2006, government reports and practice guides for teachers used words like 'collaboration' and 'coherence'.[79] While children in Norway go straight from kindergarten to school the year they turn six, children in Sweden enrol in school the year they turn seven.

However, most Swedish children have already spent a year in a non-compulsory preschool class located on the school's premises, where they prepare for school. Ackesjö (2013a) asserted that the original idea was to develop a third institution where children could partake of the best of two worlds by participating in both kindergarten and school activities. Preschool class was supposed to be a transition zone with mixed or hybrid pedagogy. In the preschool class, children were supposed to become familiar with the school at their own pace. The activities should neither be oriented towards school nor kindergarten, but help children prepare for school in a 'playful' way. She concluded, however, that this ambition has yet to be realised.

A recurring argument in the included studies is that it is difficult to unite 'the best of both worlds' in mixed or hybrid pedagogy. Studies reported that, even when institutions have succeeded with collaborative measures, this does not necessarily lead to long-lasting or permanent changes. When projects are completed, participants return to their respective default positions. The studies reported that tensions arise between kindergarten and school staff during collaborative activities on transition, and in most cases the school's educational practices prevail. To comprehend the tensions and 'stubbornness' in the system, it may be useful to look at what unites and divides the two institutions.

4.4.1 Preconditions for collaboration

A comparison of the Norwegian Kindergarten Act[80] and the Education Act[81] shows that the foundation for collaboration between the two institutions is in place. The two laws are, so to speak, identical, except that kindergartens are expected to recognise the value of childhood and safeguard children's need for care and play. Table 10 shows extracts from the Kindergarten Act and the Education Act, respectively. To illustrate overlaps between the two laws, similar words are highlighted in blue italics.

75 This is particularly due to the 'PISA-shock' which affected Norway in 2001 when the results from PISA 2000 were published.

76 Spring, J. (2011). *The politics of American education*. New York, NY: Routledge.

77 Qvortrup, J. (2009). Are children human beings or human becomings? A critical assessment of outcome thinking. *Rivista Internazionale di Scienze Sociali*. Vol. CXVII (3-4).

78 Germeten, S. (2003). Hva innebærer tradisjonene fra barnehage og skole? En diskusjon om læreplanformuleringer og innholdet i 1. klasse [What do the traditions from kindergarten and school entail? A discussion about curriculum formulations and content in first grade]. *Barn*, 4, pp. 25-40. Norsk senter for barneforskning.

79 http://www.udir.no/globalassets/upload/brosjyrer/5/fra_eldst_til_yngst_veileder_fra_kd.pdf (in Norwegian).

80 Act no. 64 of 17 June 2005 relating to Kindergartens [*Barnehageloven*], as last amended by Act no 99 of 21 June 2013 (in force as of 1 August 2013). English version retrieved 23 November 2015 from https://www.regjeringen.no/globalassets/upload/kd/vedlegg/barnehager/engelsk/act_no_64_of_june_2005_web.pdf

81 Act no. 61 of 17 July 1998 relating to Primary and Secondary Education and Training [*Opplæringslova*], as last amended by Act no 76 of 19 June 2015 (in force as of 1 August 2015) and Act no 65 of 19 June 2015 (in force as of 1 October 2015). English version retrieved 23 November 2015 from https://www.regjeringen.no/contentassets/b3b9e92cce6742c39581b661a019e504/education-act-norway-with-amendments-entered-2014-2.pdf

KINDERGARTEN ACT: SECTION 1. PURPOSE	EDUCATION ACT: SECTION 1-1. THE OBJECTIVES OF EDUCATION AND TRAINING
The Kindergarten shall, *in collaboration and close understanding with the home*, safeguard the children's need for care and play, and promote learning and *formation* as a basis for an all-round development. *The Kindergarten shall be based on fundamental values in the Christian and humanist heritage and tradition, such as respect for human dignity and nature, on intellectual freedom, charity, forgiveness, equality and solidarity, values that also appear in different religions and beliefs and are rooted in human rights*. The children shall be able to develop their *creative zest*, sense of wonder and *need to investigate*. They shall learn to take care of themselves, each other and nature. The children shall develop basic *knowledge* and *skills*. They shall have the right to *participate* in accordance with their age and abilities. The Kindergartens shall meet the children with *trust* and *respect*, and acknowledge the intrinsic value of childhood. They shall contribute to well-being and joy in play and learning, and shall be a *challenging* and safe place for community life and friendship. The Kindergarten shall promote *democracy* and *equality* and *counteract all forms of discrimination*.	Education and training in schools and training establishments shall, *in collaboration and agreement with the home*, open doors to the world and give the pupils and apprentices historical and cultural insight and anchorage. *Education and training shall be based on fundamental values in Christian and humanist heritage and traditions, such as respect for human dignity and nature, on intellectual freedom, charity, forgiveness, equality and solidarity, values that also appear in different religions and beliefs and are rooted in human rights*. Education and training shall help increase the knowledge and understanding of the national cultural heritage and our common international cultural traditions. Education and training shall provide insight into cultural diversity and show respect for the individual's convictions. They are to promote *democracy*, *equality* and scientific thinking. The pupils and apprentices shall develop *knowledge*, *skills* and attitudes so that they can master their lives and can take part in working life and society. They shall have *the opportunity to be creative*, committed and *inquisitive*. The pupils and apprentices shall learn to think critically and act ethically and with environmental awareness. They shall have joint responsibility and *the right to participate*. Schools and training establishments shall meet the pupils and apprentices with *trust*, *respect* and demands, and give them *challenges* that promote *formation* and the desire to learn. *All forms of discrimination shall be combated*.

Table 10: Kindergarten Act: Section 1 and Education Act: Section 1-1.

There are many similarities between the Kindergarten Act and the Education Act. Both institutions are supposed to promote children's learning and education and facilitate children's and young people's well-being, happiness and democratic participation. A unique aspect of the kindergarten is that it should recognise the intrinsic value of childhood and safeguard children's needs for care and play. Play can be considered as an educational activity that has a value in itself. Since pupils in schools – according to the Education Act – are supposed to develop creative enthusiasm, commitment and a desire to explore, it would seem natural to build on the kindergarten's knowledge of how play activities can support such learning processes. In a time when politicians are concerned about early interventions and want kindergartens to promote learning, the challenge is to strike the right balance between children's self-initiated free play and adults' need to use play as a method to promote children's learning. How to do this is a form of knowledge that institutions can develop jointly and adapt according to the needs of different age groups.

4.4.2 Play and learning

Broström (2013a) pointed out that play can be an important source of new knowledge, stimulate the development of new skills in children and contribute to improved learning outcomes. He illustrated this by showing how dialogical reading, combined with play, enhances learning (Broström 2013b). The method is based on Vygotsky's theories showing that children acquire language skills through practice, feedback and scaffolding. In this method, motivation is a keyword. Children are in control of the situation, and through play they explore and become aware of their creative abilities. Teachers' assistance *after* the play activities is of the utmost importance, as they help children to analyse and understand what they have learned.

It is not obvious that play invariably leads to learning outcomes. How teachers in kindergarten and school structure play activities has an impact on how children learn. Therefore, aspects of play activities that contribute to children's learning outcomes must be identified and integrated into a play-oriented learning concept that is developmentally appropriate and tailored to how kindergarten children learn. At the same time, the work should contribute to children's skills development in such a manner as to render them 'ready' for school and provide them with the best possible preconditions for adjustment to the school environment. Broström points out three principles that must be adhered to when the aim is to support learning though play activities:

- Learning occurs through *social interactions* between children or between children and adults, for instance during play activities. When children participate in social communities of practice, they observe how older and presumably more 'competent' children or adults act, and replicate their actions. This gradually contributes to new knowledge and new skills.
- Because learning is a *meaningful process*, play activities must also be experienced as meaningful. This is ensured when the child experiences a correlation between aims and purposes. More specifically, the child needs to be aware of its actions, in addition to how and why it acts in certain ways and not in other ways.[82] Moreover, the child must have influence on its own learning, i.e. be considered a full participant in learning activities.
- Learning should be *innovative* and *creative* – not just a reproduction of knowledge. During play activities, children's imagination is opened up for experimentation and innovation. In their peer groups, children digest experiences and accumulate impressions and knowledge in a new way. Through play, new and creative forms are produced that contribute to new insights and learning.

Such processes are described by Greve and Løndal (2012). They found that children observed in Norwegian kindergartens and after-school care (SFO) were often involved in spontaneous play activities with their immediate surroundings. They argued that play can enable learning in the broadest sense, provided that children are regarded as subjects capable of influencing their surroundings, not just being influenced by their surroundings.

The competent child who is not only shaped by, but also contributes to shaping its surroundings, has been central to Norwegian kindergarten provision. This is, for instance, how the national core curriculum describes the relationship between the teacher and the students: 'The most important of all pedagogical tasks is to convey to children and young that they are continuously making headway so that they gain trust in their own abilities (...) A teacher is therefore initiator, guide, initiator, interlocutor and director' (p. 22).[83] This view of the relationship between adults and children and young people has several sources of inspiration, including the Italian Reggio-Emilia tradition.

4.4.3 The competent child

According to Italian law, all schools must develop measures to make the transition from kindergarten easier for children, and it is the schools that decide which measures to implement. Schneider et al. (2014) followed 288 pupils through the transition from kindergarten to school and studied the effects of different transition practices on learning outcomes, school liking, teamwork ability and behaviour. The study found that high implementation of Reggio-Emilia transition practices was related to significantly higher school satisfaction and significantly less problem behaviour after the transition. A follow-up measure-

82 Self-regulation and metacognition.

83 Core Curriculum (1993) English version (downloaded 24.11.2015) http://www.udir.no/upload/larerplaner/generell_del/Core_Curriculum_English.pdf

ment towards the end of the year after the transition showed that schools with a high implementation level of Reggio-Emilia practices still had fewer problem behaviours. Schneider et al. (2014) concluded that these studies indicate that the facilitation of school transitions in the Reggio-Emilia tradition is associated with successful post-transition adjustment.

The Reggio-Emilia tradition dates back to the aftermath of World War II. As a reaction to Fascism and practices in Catholic kindergartens, parent-run kindergartens were established in Reggio-Emilia in Italy. The basic assumption in the Reggio-Emilia approach is that children are curious and social by nature (Schneider et al. 2014). As active learners, children interpret their surroundings, and adults must guide them and help them to see the opportunities they have in life.[84] This view of children is optimistic (children are interested and capable actors), they are constantly developing and they create, along with others, knowledge and culture. In order to develop self-esteem and confidence, children must be seen, heard and understood, feel safe and recognised. Architecture and design should encourage creativity and the learning environment should support learning processes characterised by independence and community.

The teachers' main task is to engage with the child in a knowledge field. Adults should listen (not talk), ask questions (not provide answers), share ideas (instead of teaching) and observe (instead of transferring knowledge). Research underpins all activities in the Reggio-Emilia pedagogy, more in the sense of innovation rather than as the testing of hypotheses.[85] Research is regarded as a way to relate to knowledge and understand the world. Innovations arise through systematic examination of a variety of perspectives. Reggio-Emilia pedagogy draws on several sources – Schneider et al. (2014) linked it to development theorists such as Piaget and Vygotsky (p. 449), while others point to pragmatism and John Dewey's perspective on teaching and learning.[86]

Reggio-Emilia pedagogy builds on extended projects, driven by problem-solving tasks that trigger children's desire to explore and search for answers. Investigations can be *general* (how something appears), *analytical* (how something is structured), *instrumental* (how it can be used), or *psychological* (reactions, interactions). Documentation plays a key role in Reggio-Emilia kindergartens and includes drawings, something the children have found, texts, pictures, video etc. – in order to make children's work visible to their parents and society. Documentation increases children's awareness of and the consequences of their own actions. Because the teachers' task is to guide children's activities and learn with them, the transition to school is integral to Reggio-Emilia pedagogy.

4.4.4 How does the competent child become a competent learner?

Having analysed and synthesised the data, one unresolved issue remains: When the child has left kindergarten and is in school, he or she is still a child. It is unclear, however, whether the school's institutional framework regards him or her as a *competent* pupil, capable of figuring out things on his/her own with adult guidance. The question is whether the tensions identified between the two institutions may be based on divergent views of the child? While the studies describe differences between kindergarten and school, there are cross-national structural similarities – both in terms of design and educational practices. Einarsdottir (2011) found that, according to the children, school emphasises subjects and different methods of teaching. This is experienced as a change from the independence they felt in kindergarten. In school, others decide what they ought to do.

As illustrated in the comparison between the two laws (Table 10), there is no gap between kindergarten policy and school policy in Norway. Both laws describe the child and the pupil as competent. Already in the Normal Plan for the City School (*Normalplanen for byfolkeskolen*) of 1939,[87] the competent pupil was described as follows:

> Old-fashioned classroom teaching with homework checks, questions and answers etc. in the classroom setting (...) does not ignite the students' interest (p. 12, our translation).

84 http://prismen.kanvas.no/files/2013/01/En-kort-innforing-i-Reggio-Emilia-filosofi.pdf

85 Edwards, C. P. & Gandini, L. (2015). Teacher research in Reggio Emilia, Italy: Essence of a dynamic, evolving role. *Faculty Publications, Department of Child, Youth, and Family Studies*. Paper 105, p. 92. http://digitalcommons.unl.edu/famconfacpub/105

86 Faini Saab, J. & Stack, S. F. (2013). John Dewey and Reggio Emilia: Using the arts to build a learning community. *Learning across the early childhood curriculum. Advances in early education and day care*, 17, pp. 115-133.

87 http://ub-fmserver.uio.no/minuskel/viewRecord.php?recid=209

And furthermore:

> Pupils must be involved in planning tasks and procedures. They get to speak for themselves, not just listen. They learn to explore an issue and go directly to the sources. They ask at home, visit libraries, museums, places where they can figure out how things are. This is the natural approach to learning. When seeking knowledge later in life, one has to proceed in the same manner: investigate, ask, engage in dialogue and read (p. 13, our translation).

The investigative method of learning is viewed as natural. It has a natural place in the kindergarten and in working life – and must also be the normal standard in schools. The Normal Plan's intentions have not been dispensed with, but perpetuated in later education reforms in Norway. Nevertheless, when children – even today – go to school, they may still in some places[88] face conditions similar to that described in the Normal Plan of 1939 as 'old-fashioned classroom teaching'.

A relevant question is what it means to learn. Einarsdottir (2011, p. 746) found it remarkable that the children interviewed for her research said that they had *not* had PE sessions or learned to read and do maths in kindergarten – despite the fact that they had participated for years in various literacy and numeracy activities and had continuously engaged in outdoor activities. This mismatch may be due to the fact that they associate learning with teaching, and teaching takes place in schools. They assume that they do not learn until they are taught.

According to Ackesjö (2013a), 'schoolification' is about adult-led activities, placing more responsibility on children and expectations that they should not only do things *correctly,* but also in the correct *manner* (p. 389). According to Ackesjö, some children experience this as a radical redefinition of what it means to acquire knowledge and learn. They have been accustomed to being the oldest and most competent children in kindergarten, and are suddenly the youngest, less competent newcomers in school (Einarsdottir 2011). Ackesjö illustrated this with a quote from Elsa, one of the children she interviewed, who says: 'Here [in preschool] I feel like a little ant, but in kindergarten I felt like a giant. Here we are so small' (Ackesjö 2013b, p. 13, our translation). Elsa is not merely referring to physical size, but also to the change of status associated with different expectations and teaching methods. Elsa puts into words an experience of *abruption* – not continuity. It is almost as though she feels that she has been moved back to her original starting point and must start all over again.

4.5 CONCLUSION 4.0

In this chapter, tensions that emerge between kindergarten teachers and teachers in schools when collaborating on children's transitions were presented and discussed. They stem from different historical traditions, educational practices and conceptions of knowledge and learning.

The chapter has also evidenced the increasing expectation that kindergarten should help to prepare children for school. This often results in kindergartens introducing schools' traditional, less social and creative, instructional practices. One consequence is that play is marginalised as a pedagogical method. This potentially threatens the kindergarten's uniqueness as it loses its perhaps most important – and unique – contribution to children's learning and development. The studies show that tensions originating in taken-for-granted practices and sometimes diffuse controversies make it difficult to collaborate across institutional boundaries.

One possible interpretation of the studies that have examined the transition from the actors' perspectives is that, while children are accustomed to kindergartens showing them how much they already know, schools show them how much they still have to learn.

88 Olsen, R. V., Hopfenbeck, T. N., Lillejord, S. & Roe, A. (2012). Elevenes læringssituasjon etter innføringen av en ny reform [Pupils' learning situation after the introduction of a new reform], Acta Didactica Oslo, 1/2012.

5 PRECONDITIONS FOR MEASURES THAT ENSURE A SMOOTH TRANSITION FROM KINDERGARTEN TO SCHOOL

In the synthesising process (Chapter 2), key concepts were identified and employed as analytic tools. The key concepts throughout the studies are: *process*, *transparency*, *continuity*, *relationships* (*collaboration*/*partnership*) and *hybrid pedagogy*. These concepts were used to identify patterns across the studies, showing preconditions for successful transition measures.

Firstly, the transition from kindergarten to school should be perceived as a process and not as a single event. The transition is both a socioemotional and a physical process. The children establish new relationships in new surroundings, while they simultaneously shift from being kindergarten children to being pupils who are expected to develop social and cognitive skills that are appropriate to the school's learning environment and teaching methods. Secondly, it is important that the transition activities are transparent. The adults must clarify why different measures are initiated, and how they work, in ways that the children comprehend. The studies also indicate that too many practices and activities are tacit – the researchers observe that teachers tend to take for granted that children understand why they participate in the different activities. As a consequence, teachers miss many opportunities that might support the children's learning process. Parents and guardians are perhaps the most stable elements in the children's lives, and they are key supporters in transition activities. It is particularly important that kindergarten and school teachers explain to parents why the kindergarten hands over information about their children to schools, and how it will be utilised.

Thirdly, the children need to experience that there is a connection between kindergarten and school activities. This is closely related to the fourth point, which is collaboration and good relations. The studies show a need for a network of relations surrounding the children, where the children participate both directly and indirectly. This requires close collaboration between the teachers in the kindergarten and school, also involving the children and their parents. Fifthly, there is a need to develop collaborative measures that connect the last period of kindergarten with school start, and unite the educational practices of the two institutions. These measures should be based on the common foundation for kindergarten and school, for instance the statutory objectives stating that children and young people are competent contributors in a democratic society.

5.1 A PROCESS, NOT AN EVENT

One conclusion in a literature review from New Zealand (Peters 2010)[89] that was also confirmed by Ackesjö (2013a) and Chan (2012) is that the transition from kindergarten to school should be treated as a process, not a single event. When the transition is perceived as a series of critical events, the assumption is that they may have both positive and negative outcomes. How the adults deal with these critical events consequently influences how the child manages them. The adults can help the children by making critical events visible. They can, for example, show the children that there are opportunities even in difficult experiences. The aim is to empower the children and give them a sense of agency. The distinctive features of the process have to be verbalised if the children's transition from kindergarten to school is to be treated as a process consisting of a series of critical events. Staff in kindergarten and school need a research and practice-oriented knowledge base that they can draw on to better help the children through the transition phase.

A consequence of understanding the transition as a process is that one-off measures are inadequate. If they are to contribute to a sense of coherence and continuity, measures should be regular, i.e. small-

89 Cf. Section 1.4.

scale and frequent. The measures have to follow the process.

5.2 TRANSPARENCY

The studies use the term *transparency* when discussing the importance of visible processes. Several researchers find that too much of the institutions' pedagogical work is tacit and that too many activities are not properly explained. With respect to children's transition from kindergarten to school, it is important that both children and parents know *why* staff in kindergartens and schools act as they do. Children need to see the wider picture surrounding a particular activity (Ackesjö 2013a). Predictability is important during the transition process. It helps children to develop meta-competence that will support the subsequent development of basic skills.

The studies indicate that some children are not sufficiently prepared for the fact that the transition to school also entails that they will be treated differently than they were used to in kindergarten. For some, this is a positive change and they are ready to assume a new identity and look forward to abandoning the old one. Others experience the change as confusing and unpredictable. The researchers maintain that it is important to counter anxiety and fear of the unknown as far as possible. Transparency presupposes that actions are based on well-founded arguments and more exact information.

Put simply, transparency implies that staff have competence that enables them to explain why they act as they do. Each measure has a professional justification, which needs to be made explicit to children, parents, teachers and staff (kindergarten teachers should be able to justify their practices to teachers in schools, and *vice versa*). The research shows that children need to know why things happen. Activities should not just happen, and teachers cannot assume that the way things are done is self-evident to everyone involved. Transparency in the organisation is the responsibility of the organisation's leaders.

5.3 CONTINUITY IN THE KINDERGARTEN-SCHOOL TRANSITION

Research and policy documents presented in this systematic review point out that children should experience continuity in the transition from kindergarten to school. However, neither research nor policy documents explain what 'continuity' actually is, or what characterises it.

The Great Norwegian Encyclopaedia [*Store norske leksikon*] defines continuity as an uninterrupted coherence or a prolonged development. The interesting aspect of this definition is that, in parallel with uninterrupted coherence, prolonged development is also supposed to happen. In children's relationships with other people, this is precisely what typically occurs. When engaging with their peer groups or local communities, children learn and develop and should, ideally, find a balance between, on the one hand, certainty and stability and, on the other, the unexpected and new. Continuity therefore has to revolve around *certain* stable and recognisable aspects – even if other aspects are constantly changing.

An example of stability may be that children are kept together in kindergarten and school in order to ensure stable relationships, as Huf (2013) pointed out. Another example is that educational practices are the same, or at least recognisable. Ackesjö (2013b) examined what happens when children go through *two* transitions, from kindergarten to preschool class and from preschool class to school in Sweden. She followed four children over 18 months, the last months in kindergarten, throughout the entire year in preschool class and for two months into the first grade.[90] She discovered that the children experienced an unnecessarily high level of stress resulting from the two different transitions. It was unclear to them whether they were school pupils or preschool children during the year in preschool class, and this year therefore did not serve its purpose of bridging the transition to school for these children.

In Norway, it is a stated political aim that kindergartens and schools should preserve their uniqueness and distinctive characteristics. Measures taken to create better continuity between the two institutions should not make kindergartens and schools identical, but should, on the contrary, acknowledge and celebrate the respective strengths of the two institutions. Ackesjö (2013a) claimed that the best argument for continuity is that children are supposed to become lifelong learners. When the school builds upon and improves what the children have already learnt in kindergarten, this contributes to continuity in their learning experiences. Kindergartens and schools have

90 Ackesjö conducted 16 visits to two groups for five-year-olds in the last months of preschool, 24 visits to the preschool class and 6 visits during the first two months of the first grade. Each observation lasted 2-3 hours.

different historical traditions and mandates. The transition from kindergarten to school therefore necessarily entails disruptions, but these disruptions need not be problematic per se. The most important thing is to understand *when* and *how* a lack of continuity between kindergarten and school is problematic for children (Hogsnes and Moser 2014).

In the studies reviewed, children seem to encounter different educational practices both when they prepare for school in kindergarten and when they enrol in school. Schneider et al. (2014 p. 449) referred to Luciano Cecconi,[91] who had studied the transition from kindergarten to school in Reggio-Emilia settings. He observed that the transition experience occurs throughout one's lifetime, with biology providing natural mechanisms for adjusting at times of transition. Schools, however, require sudden, discrete and drastic transitions at different school levels that are not coordinated with the natural processes of human development. Therefore, it is the responsibility of the schools and not of the child to reduce the unnatural shifts that are required, and schools must approach the transition in a highly systemic way.

5.4 RELATIONS IN THE FORM OF PARTNERSHIPS AND/OR COLLABORATIVE ALLIANCES

Skouteris et al. (2012)[92] argued that the transition from preschool (kindergarten) to school can be improved if staff in preschools (kindergartens) and schools engage in professional alliances where they discuss and align their different teaching practices and philosophies. This argument is supported by studies in this systematic review, which show that good relationships between kindergarten teachers, teachers in schools and parents are essential to facilitate the transition from kindergarten to school (Abry et al. 2015; Arndt et al. 2013; Ahtola et al. 2010; Schneider et al. 2014; Turunen 2012). Moreover, Abry et al. (2015) highlighted that the socioemotional support children receive is vital because it can affect the child's well-being and adjustment to school.

Professional collaboration is challenging and requires initiative from both institutions. Boyle and Petriwskyj (2014), and Karila and Rantavuori (2014) stressed that, when professional groups such as kindergarten teachers and teachers in school collaborate, they have to recognise their own cultural and historical practices and respect the expertise that others bring to the partnership. In other words, collaboration requires a common understanding of goals and aims, but also respect for the other's expertise, background and institutional culture. In the included studies, this is referred to using terms such as 'communities of practice' (Ackesjö 2013a), 'community of learners' (DeMarie 2010), 'professional learning community' (Boyle and Petriwskyj 2014) and 'professional boundary work' (Karila and Rantavuori 2014).

In addition to professional collaboration, it is emphasised that collaborative practices with parents must be initiated (Turunen 2012, Arndt et al. 2013). The term 'partnership' is often used to describe an ideal form of collaboration between kindergarten teachers and parents. The main principle of a partnership structure is collaborative relations based on mutual understanding and respect for the skills of parents and teachers, two-way communication and continuous interaction. The studies show that this ideal is difficult to achieve, however. Asymmetrical relationships between parents and kindergarten teachers often arise, because the teacher is seen as the expert of the two parties.

Measures to ensure a smooth transition between kindergarten and school must consider the network of relationships surrounding children as a potential resource that can enable continuity and coherence in the transition process.

5.5 THE STAFF'S COMPETENCE

The studies show that the methods that are used to advance the staff's competence are of considerable importance. When staff in schools and kindergartens work collaboratively to ensure that the transition process supports children's lifelong learning, they need professional knowledge about how play activities can support children's learning and promote their learning outcomes. It is unclear what 'play-oriented pedagogy' is, what characterises play-based teaching methods and why children ought to learn maths and numeracy in kindergarten in a 'different way' than in school. It is ambiguous what the difference between the two approaches is. Practice guides produced by external parties, often in the form of toolkits or as selected samples of best practices, can appear helpful at first glance, but too little knowledge is available about the long-term effects of such teaching aids. It is

91 Cecconi, L. (Ed.) (2012). *Le rapprezentazioni degli insegnant: Un'indagine sulla continuita nelle scuole di Reggio Emilia*. Milan: Franco Angeli.

92 See also Section 1.4 of this systematic review.

also uncertain whether or to what extent they contribute to professional learning.

If children are supposed to experience a smooth transition from kindergarten to school, teachers in kindergartens and schools need to collaborate. Children may intuitively sense tensions and disagreements between adults. The collaboration between adults must therefore be open and mutually respectful. Respect is difficult to establish if both groups of teachers think that their own knowledge is superior and that it is the other group's responsibility to justify their educational practices.

The studies demonstrate that measures have to be carefully planned and clearly explained. A professional plan for the transition must be drawn up and implemented. It must be based on findings from research as well as on recognised good practices, and should consist of a series of small-scale measures starting a few months before the summer holiday. The children themselves should be invited to talk about their experiences, and it must be accepted that some aspects of the transition are perceived as more problematic than others. As with all other plans, this plan needs to be adjusted and improved based on experiences gained during the transition process and in line with recent research findings.

The studies show that transition activities must be systematic and targeted (everyone does not need all the activities). When something needs to be done, all involved parties know beforehand what to do, how they should do it and why they do it.

5.6 CONCLUSION 5.0

The studies show that the transition from kindergarten to school is better understood as a process, not a single event. Since the transition starts before it actually happens, it is not just a physical move, but also involves cognitive and emotional impressions that the children need to process. While the children are about to become pupils, they are also simultaneously about to become *former* kindergarten children. It therefore benefits the children if they are allowed to move back and forth between the institutions and to process experiences and impressions along with adults and the other children.

The studies also show that it is important for the children that the adults are explicit about the transition process. Several studies reveal a lack of transparency due to limited or poor communication. Too many activities remain tacit and not properly explained. A conclusion is that transition activities need to be explained to the children in a manner that they comprehend, and that the parents must participate in the process.

Vertical and horizontal networks are expected to facilitate continuity in the transition. Institutions must initiate collaborative activities involving children and parents. Efforts must be directed towards clarifying what unites kindergarten and school and not only where they differ. In-service training and staff competence development should be based on what unites kindergarten children and school pupils, play and education, as well as knowledge and learning.

Leaders in kindergartens and schools share responsibility for establishing a good transition from kindergarten to school. This systematic review has identified tensions between kindergarten and school staff. In such circumstances, teachers cannot just be encouraged to collaborate and communicate. Root causes of the tensions must be addressed. Joint efforts in the municipalities (in Norway) on good transition practices for children must be guided by relevant insight and expertise.

6 CATEGORIES OF MEASURES

This systematic review is based on 42 empirical studies that have examined the transition from kindergarten to school from different perspectives. The studies explore aspects of the transition process, either from the actors' perspective or by examining different ways to prepare children for school. The Knowledge Centre for Education has made the actors' perspective a focal point of this systematic review, because insight into how the actors experience the transition processes is crucial knowledge when designing good and targeted measures.

In Section 3.1, recommendations from two key studies (Ackesjö 2013a and Chan 2012) are summarised. They stress that measures should take into account that the transition begins before the physical transfer from one institution to the other. They also stress that the transition should be viewed as a process, and that the borderland between the two institutions should be marked and made visible to the children. The consequence of these insights is that several small-scale measures have to be initiated, and that children must be informed about the purpose of the various transition activities.

Specific categories of measures that have been identified in the included studies concern:
1. Familiarising children with the school and staff
2. Distribution of information
3. Collaboration

Familiarising children with the school and staff comprises activities that can take place in the kindergarten, at a school, or in collaboration between kindergarten and school. They can involve dialogues between teachers in kindergarten and children about the transition to school, where teachers answer the children's questions about school, address misconceptions and clarify expectations. Teachers in kindergarten can also replicate a school day and demonstrate examples of typical school activities.

At school, activities can revolve around visits by kindergarten children. The schools can, for example, design a welcome programme for the children. Other measures can be schoolteachers visiting kindergartens to talk to children who are about to enrol in school. In addition, school pupils can visit kindergartens and talk about their school day. Another measure could entail developing a buddy scheme that links school pupils with children who are about to enrol in school.

In kindergarten, activities could, for example, involve kindergarten children and school pupils attending joint activities prior to school start. Friendship relationships between children who will attend the same school can also be established across kindergartens. Another measure is that the prospective schoolteacher meets the children and parents prior to school start.

Distribution of information is about kindergartens giving schools information about the children, for instance by entrusting schoolteachers with the children's portfolio or their individual plan. Other examples are that the parents give the kindergarten or school information about their child, or that the kindergarten holds orientation meetings for the parents in connection with school start.

Collaboration is about kindergarten and school teachers jointly formulating and revising the curriculum for both kindergarten/preschool and first grade; developing individual plans; teachers at both institutions planning lessons together or teaching together; kindergarten teachers, schoolteachers, and special needs teachers discussing the children who are about to start school, or coordinating joint teaching sessions for kindergarten/preschool children and first grade students. Table 11 (below) shows the various measures that have been identified, what categories they belong to, and which actors are directly and indirectly involved.

TRANSITION PRACTICES	DIRECTLY INVOLVED ACTORS	INDIRECTLY INVOLVED ACTORS
FAMILIARISING CHILDREN WITH SCHOOL AND STAFF		
Primary school pupils visit kindergarten and talk about their school day	Children	Kindergarten teachers Schoolteachers
Kindergartens visit a school	Children	Kindergarten teachers Schoolteachers
Schoolteachers visit kindergartens and the children who are about to start school	Children Schoolteachers	Kindergarten teachers
Kindergarten teachers talk with the children about the transition from kindergarten to school, addressing expectations and answering questions about attending school	Children Kindergarten teachers	Schoolteachers
Simulating a school day/school activities in kindergarten	Children Kindergarten teachers	Schoolteachers
Initiating specific programmes for the oldest children in kindergarten regarding the transition to school	Children Kindergarten teachers	Schoolteachers
Kindergarten children and students attend common activities prior to school start	Children	Kindergarten teachers Schoolteachers
Establish friendship relations between children across kindergartens who are about to attend the same school	Children	Kindergarten teachers
'Buddy Programme' between pupils and children who are about to attend that school.	Children	Kindergarten teachers Schoolteachers
The child, the parents and the first grade teacher meet prior to school start	Children Parents Schoolteachers	Kindergarten teachers
Welcome programme at school	Children Schoolteachers	
DISTRIBUTION OF INFORMATION		
The kindergarten gives information to schools. The kindergarten gives children's individual subject plans or portfolios to the schoolteacher	Kindergarten teachers Schoolteachers	Children
Parents give information to the kindergarten	Parents Kindergarten teachers	Children
Parents give information to the school	Parents Schoolteachers	Children
The kindergarten organises orientation meetings for parents in connection with school start	Parents Kindergarten teachers	Children
COLLABORATION		
Kindergarten and school teachers formulate and revise the curriculum for both kindergarten/preschool and first grade together.	Kindergarten teachers Schoolteachers	Children
Developing individual subject plans	Parents Kindergarten teachers	Children
Kindergarten and schoolteachers plan lessons together, or teach together	Kindergarten teachers Schoolteachers	Children
Kindergarten teachers, schoolteachers, and special needs teachers engage in discussions about children who are about to start school	Kindergarten teachers Schoolteachers	Children
Shared teaching hours for kindergarten children and first grade pupils	Children	Kindergarten teachers Schoolteachers

Table 11: Summary of transition activities mentioned in the included studies

The synthesis of the included studies shows that the studies do not recommend particular measures above others. One exception is Schneider et al. (2014), who stated that well-known and widely used measures, for instance welcome letters, orientation programmes for parents and students, and home visits (p. 448), can promote good transition practices. They also noted that teachers tend to adopt practices that minimise the time they need to spend on them; for example, they curtail meetings, and have limited contact with the children's parents. Most studies show that it is important to initiate several small-scale transition activities and that collaboration between parents, kindergarten teachers, and schoolteachers is important in order to ensure a smooth transition for the children.

Chan (2010) reviewed research that recommended measures that can facilitate children's transition from kindergarten to school. There is general agreement between these recommendations and the conclusions of this systematic review. Below, we outline what the institutions can do to enhance the success rate of measures:

Collaboration between kindergartens and schools:

- *Professional collaboration between kindergarten and school teachers*: It is imperative that kindergarten and school teachers align their understanding of each other's curricula and educational practices. Professional collaboration between kindergarten and school must be based on the fundamentally similar characteristics of the two institutions, while aiming to reconcile their differences in educational practices. This can materialise if the teachers jointly plan activities and complete them together and, for example, collaborate on plans for the next group of first graders. This can help kindergarten teachers to prepare children for school, and help schoolteachers to plan their education in such a manner as to accommodate the children's individual interests and needs when they start school.
- *Distribution of information about the children*: Information collected in kindergarten can be useful for schools in order to organise the education according to the children's individual needs. This can involve the development and transfer of individual subject plans and portfolios that show how children progress over time.
- *Facilitating collaborative projects between kindergarten and school*: Collaborative projects between kindergartens and schools can bring the two institutions closer together by promoting common objectives, as well as rules and regulations for good transition practices. This can, for example, involve organising and planning transition programmes and curricula specifically designed for the transition period from kindergarten to school.

Parent-school collaboration:

- *An open two-way dialogue with the parents before, during and after the transition*: There should be an open two-way dialogue with the parents about the transition to school. The parents must be invited to provide input about their child's individual development in kindergarten, and they have to participate in orientation meetings to better understand what their children will encounter during the transition to school. In addition, teachers must initiate parent-teacher conferences about starting school. In parent-school collaboration, it is important that parents are recognised as authorities on their children, and that kindergarten and schoolteachers take the parents' views seriously.

Measures that kindergartens can implement:

- *Familiarise the children with school*: Kindergarten teachers should make use of opportunities for school visits when the children approach school age. During these visits, the kindergarten children and pupils in the lower grades at school can attend joint activities. In between school visits, it is important that the children have time to process thoughts and experiences through familiar activities, such as play, drawing and role play.
- *Establish a joint forum for information and discussion*: Since both parents and children need information about what the transition involves, kindergarten and school staff should invite parents and children to open sessions aimed at discussing problems relating to the transition. Here, school pupils can also contribute by reporting their experiences of the transition, and parents and children can be given an opportunity to ask questions.

- *Promote better coherence during the transition*: Continuity in the transition from kindergarten to school is important, and kindergarten staff should be more explicit about the educational objectives and the importance of the educational practices in kindergarten. This will contribute to collaboration on more equal terms between the two institutions.

Measures that schools can implement:

- *Welcome Programmes*: In order for the children to feel welcomed, schools should invite children on guided tours, where they also get to observe first grade lessons. The first week of school can be organised as a 'transition week' for the children. It is also possible to initiate mentor programmes, where older children take responsibility for first graders.
- *Clearly formulated targets and expectations*: Children can develop feelings of anxiety and stress if they experience conflicting norms and regulations. To create a sense of security, it is important that the children are shown what connects what they have previously done and learnt in kindergarten and school activities.
- *Flexible and dynamic transition practices*: Understanding and acceptance of the fact that children may require time to cope with the transition must be developed, and the transition should therefore be a topic when the children start school.

7 CONCLUSIONS, FINDINGS AND RESEARCH GAPS

This systematic review has presented findings from 42 international studies, published in peer-reviewed journals from 2010 to 2015. While the research makes no direct recommendations about which transition practices are more effective than others, it reveals preconditions for measures that will facilitate successful transition practices. The most fundamental precondition seems to be that institutions establish good collaboration procedures aimed at enabling a smooth transition process for the children. The studies show that the actors experience transparent processes as positive. When children and parents are told why things are done, they more readily understand why the transition activities are initiated, and engage in them. Tensions between teachers in kindergartens and teachers in schools are negative and can contribute to feelings of anxiety among some children during the transition process.

The education sector is fragmented, and better transition processes presuppose mobilisation at all system levels. If there are expectations of more alignment and coherence among practitioners, this should also be reflected in white papers and official reports. It is therefore striking that NOU 2015: 8 *Fremtidens skole* [*The School of the Future*] makes no mention of ongoing work in kindergartens or of White Paper 24 (2012-2013): *Framtidens barnehage* [*The Kindergarten of the Future*].

Since 1998, the OECD has collected data from OECD-countries, including Norway, to inform decision-making. In 2001, the thematic review *Starting Strong I*[93] was published. Its sequel, *Starting Strong II*,[94] from 2006, asks whether kindergartens and preschool are being increasingly 'schoolified', and points out that, although this is probably unintended, 'schoolification' connotes a kind of colonisation.[95] As the school is the older and stronger institution, with institutionalised structures and practices, it seems that the school's status is being reproduced, more or less inadvertently. By comparison, kindergartens are a relatively recent educational provision. The report also shows that politicians now hope that children get 'ready' for school, by kindergartens teaching them school preparatory skills, such as reading and writing, in addition to how to behave in a classroom.

Starting Strong III[96] does not discuss 'schoolification', but argues that older children need concrete skills in connection with the transition to school.[97] Starting Strong III proposes a Quality Toolbox for those responsible for quality in kindergartens. While the recently published Starting Strong IV[98] does not argue for a toolbox, it positively emphasises that tools should be developed for quality assurance and evaluation of the kindergarten sector. Moreover, the concept of 'schoolification' from Starting Strong II is reintroduced. Starting Strong IV emphasises that kindergarten practices should not be overly influenced by school practices. Simply adapting these practices could negatively affect the pedagogy that is better suited to kindergartens and children's active participation. Starting Strong IV emphasises that inspection of the children's activity in kindergarten should take into account children's age and that

93 OECD (2001). *Starting Strong: Early Childhood Education and Care*. Paris: OECD.

94 OECD (2006). *Starting Strong II: Early Childhood Education and Care*. Paris: OECD.

95 'Schoolification' has connotations of taking over early childhood institutions in a colonizing manner (OECD, 2006, op. cit., s. 62).

96 OECD (2012). *Starting Strong III: A Quality Toolbox for Early Childhood Education and Care*. OECD Publishing. http://dx.doi.org/10.1787/9789264123564-en

97 It is generally agreed that more general goals (for well-being and socialisation) are appropriate for younger children, while specific cognitive aims are particularly useful for older preschoolers (Eurydice, 2009). A focus on skills rather than activities can help to make social and emotional goals more concrete (NIEER, 2004b), (OECD, 2012, op. cit., s. 26).

98 OECD (2015). *Starting Strong IV: Monitoring Quality in Early Childhood Education and Care*. Paris: OECD Publishing. DOI: http://dx.doi.org/10.1787/9789264233515-en

kindergartens must maintain a holistic approach. Kindergarten activities should not be reduced to practicing specific cognitive skills.[99]

The tension described in the four Starting Strong reports between the Early Childhood Education and Care tradition and the socio-pedagogical tradition is also reported in studies included in this systematic review. In the Norwegian educational tradition, Bildung [education in the broadest sense] is central, and the shift from an input-driven steering system to an output-driven system disturbs the very foundation of this tradition. *Regulations concerning the framework plan for day care institutions* (2006) and White Paper 24 (2012–2013) *Fremtidens barnehage* [*the kindergarten of the future]* state that pedagogical activities in kindergarten should treat care, play, learning and Bildung, as interconnected, so that children develop cultural identity, autonomy and self-confidence. It is difficult to see how this can be harmonised with school readiness and school preparatory activities.

The studies are also concerned with what is required to prepare children for school. Among the 42 included studies, 20 are categorised under school preparatory activities. These studies are only indirectly about the transition processes, however, and their contribution to the research question is therefore limited. They nonetheless provide important insights into the importance of self-regulation which is also relevant to the transition from kindergarten to school.

One recurring source of tension in the studies is the difference in educational practices between kindergartens and schools. This systematic review has shown that the root cause of this is not due to different principles, since the statutory objectives of both institutions are more or less identical. The research reports an attitude in the two institutions that can be described as a kind of hesitant disclaiming of responsibility. Teachers in both groups perceive their own practice as the best, and both groups feel that it is the responsibility of the *other* teachers to convince them why or how their practice is good or relevant. One solution to this problem is for kindergarten and school leaders to initiate larger collaborative projects where their respective practices and learning principles are highlighted and investigated. At this point, it is also relevant to bring in the notion of transparency. Tensions and the reasons for them must be made explicit, as well as the historical basis for them and how they can be mitigated. In order to appreciate the practices of the other institution, it is necessary to analyse the practices of one's own institution from a historical perspective. Such exercises can contribute to establishing a foundation for collaboration.

One measure that might support improved collaboration between teachers in kindergarten and school is that pre-service teacher students take their practicum in both kindergarten and school. They would thus acquire a comparative perspective on the two educational institutions that could enable them to understand and better appreciate similarities and distinctions. This might also reduce the need for large collaborative projects to better understand one another at a later stage. Another idea is to institutionalise staff exchanges between kindergartens and schools for shorter or longer periods.

The studies explicitly state that a network of supportive relations around the children is a precondition for successful transition. These relations should be both vertical (between institutions) and horizontal (between children and their families). All actors should be regarded as assets in children's transition from kindergarten to school.

In-service training can draw on the findings in this systematic review. Research indicates that too much institutional knowledge is tacit and recommends that the unique contribution of kindergarten practices to children's learning ought to be more clearly stated in a system that emphasises results. The research also affirms that kindergarten staff should to a greater extent help children to understand what they have learned. It must be clarified what it really means that children learn in a different way in kindergarten than in school. In particular, the professional understanding of the connections between play and learning needs to be strengthened.

More equal collaboration between teachers in the two institutions is necessary. More knowledge about

99 Another concern about the focus on child outcomes and their measurement at an early age is 'schoolification'. If ECEC settings and practices, including monitoring, become similar to those at higher levels of schooling, the focus could shift away from children's participation and specific pedagogical approaches for young children (Alcock and Haggerty, 2014; Bennett, 2005; Lazzari and Vandenbroeck, 2013). Such considerations emphasise the importance of ensuring age-appropriate monitoring practices and the need to consider holistic assessments that are not limited to measuring narrow cognitive domains (see also Barnett et al., forthcoming) (OECD, 2015, op. cit., s. 169).

the other institution is suggested to remedy this, and there is a need to clarify how and why kindergarten activities are relevant to school practices. Responsibility for this work should not rest on the teachers alone.

Research gaps

- While there is research on how children and parents experience the transition from kindergarten to school, the actor perspective still requires further research.
- There is little research on how children experience the differences between classroom instruction and the way they used to learn in kindergarten.
- We have little information about how many children experience a successful transition from kindergarten to school, and how many experience difficulties.
- We also have insufficient knowledge about what kinds of problems they experience.
- It is also argued that more research is needed on how minority children, children with different language backgrounds, children with special education needs, and children from families with low socioeconomic status approach the transition from kindergarten to school.
- How do children attending outdoor kindergarten experience the transition to school?
- What does it mean to be ready for school from the perspectives of kindergarten and school?
- There is little research on after-school (recreational) programmes (SFO).

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APPENDIX 1: SEARCH STRING TRANSITION

(TI,AB("child care" OR "child care center*" OR "child care centre*" OR "child development center*" OR "child development centre*" OR "child* academic development" OR "day care" OR "daycare" OR "day-care" OR "early child* care" OR "early child* care and education" OR "early child* education" OR "early child* education and care" OR "early childhood intervention*" OR "early childhood program*" OR "early childhood services" OR "early education* provision" OR "early intervention*" OR "ecc" OR "ecce" OR "ece" OR "ecec" OR "kindergarten" OR "learning environment" OR "nursery school" OR "pedagogical provision*" OR "pedagogical setting*" OR "pre K" OR "pre kindergarten" OR "pre school" OR "pre-K" OR "pre-kindergarten" OR "pre-primary education" OR "pre-school" OR "pre-school education")) AND (TI,AB("adaption" OR "alignment" OR "assessment" OR "child* expectation*" OR "coherence" OR "collaboration" OR "communication" OR "competenc*" OR "continuity" OR "cooperation" OR "co-operation" OR "coping" OR "curricul*" OR "design" OR "famil*" OR "health service*" OR "home environment" OR "impact" OR "implement*" OR "integrat*" OR "leadership" OR "management" OR "mentor*" OR "monitor*" OR "motivation" OR "parent*" OR "parent* expectation*" OR "pedagog*" OR "polic*" OR "practice*" OR "preparat*" OR "prepare" OR "professional" OR "psyco-social competenc*" OR "qualification*" OR "readiness" OR "socio-emotional" OR "stress" OR "support" OR "teacher expectation*" OR "training" OR "transition*" OR "well-being")) AND (TI,AB("early childhood development" OR "early years" OR "elementary school*" OR "first grade" OR "formal school*" OR "fourth grade" OR "grade 1" OR "grade 1-4" OR "grade 2" OR "grade 3" OR "grade 4" OR "primary education" OR "primary school*" OR "second grade" OR "third grade"))

Search string ProQuest – transition from the school's perspective

(TI,AB("early year*" OR "elementary school*" OR "elementary education" OR "first grade" OR "formal school*" OR "grade 1" OR "1st grade" OR "primary education" OR "primary school*")) AND (TI,AB("receiv* NEAR child*" OR "facilitat* NEAR transition*" OR "school adjust*" OR "outreach*" OR "teacher-child*" OR "school engagement"))

APPENDIX 2 – ELECTRONIC DATABASES

Electronic databases accessible through the ProQuest-portal:

- Education Resources Information Centre (ERIC)
- Applied Social Sciences Index and Abstracts (ASSIA)
- International Bibliography of the Social Sciences (IBSS)
- ProQuest Education Journals (PQEJ)

Other electronic databases:

- Scopus (accessible through Elsevier BV)
- Psycinfo (accessible through the Ovid-portal)

Hand searches:

- Hand searches in journals identified through the electronic searches (June 2015)
- Hand searches for researchers identified through the electronic searches (June 2015).
- Hand searches after suggestions[100] from the Ministry of Education and Research (June 2015).
- Suggestions from the research group (August 2015).

Other knowledge centres:
EPPI-Centre, Danish Clearinghouse, Campbell Collaboration, Education Counts.

100 Hand searches in the reference list: Kløveager Nilsen mfl. Forsknings-kortlægning og forskervurdering af skandinavisk forskning i året 2012 i institutioner for de 0-6-årige. Dansk Clearinghouse forskningsserien. 2014 nr. 19.

APPENDIX 3 - ASSESSMENT OF QUALITY AND RELEVANCE

REFERENCE	QUALITY	RELEVANCE
Abry et al. 2015	High	High
Ackesjo (2013a)	High	High
Ackesjo (2013b)	High	High
Ahtola et al. (2011)	High	High
Alatalo et al. (2015)	High	High
Anders et al.(2013)	High	High
Arndt et al. (2013)	High	High
Boyle & Petriwskyj (2014)	High	High
Broström 2013a	High	High
Broström 2013b	High	High
Chan (2010)	High	High
Chan (2012)	High	High
DeMarie (2010)	High	High
Diamond & Lee 2011	High	Medium
Dockett & Perry (2014)	High	High
Eggum-Wilkens et al. (2014)	High	High
Einarsdottir (2011)	High	High
Fitzpatrick & Pagani (2013)	High	Medium
Greve & Løndal (2012)	Medium	Medium
Hindman et al. (2013)	Medium	Medium
Hogsnes & Moser (2014)	High	High
Hopps (2014)	High	High
Huf (2013)	High	High
Jordan et al. (2012)	High	High
Jung & Han (2013)	High	Medium
Karila & Rantavuori (2014)	High	High
Lau et al. (2011)	High	Medium
Li et al. (2013)	High	High
Malsch et al. (2011)	High	Medium
Monette et al. (2011)	High	Medium
Murray & Harrison (2011)	High	High
Niklas & Schneider (2013)	High	Medium
Niklas & Schneider (2014)	High	Medium
Petriwskyj et al. (2014)	High	High
Puccioni (2015)	High	Medium
Schmitt et al. 2015	High	Medium
Schneider et al. (2014)	High	High
Shaul & Schwartz (2014)	High	Medium
Turunen (2012)	Medium	High
Uibu et al. (2011)	High	High
White (2013)	High	High
Yeniad et al. (2014)	High	Middels

APPENDIX 4 – METHODS AND RESEARCH DESIGNS

QUALITATIVE METHOD (12)	METHOD	RESEARCH DESIGN
Ackesjö (2013a)	Qualitative	Ethnographic
Ackesjö (2013b)	Qualitative	Ethnographic
Arndt et al. (2013)	Qualitative	Interview
Boyle & Petriwskyj (2014)	Qualitative	Action research
Broström (2013a)	Qualitative	Theoretical
Broström (2013b)	Qualitative	Theoretical
Einarsdottir (2011)	Qualitative	Case study
Greve & Løndal (2012)	Qualitative	Ethnographic
Huf (2013)	Qualitative	Ethnographic
Karila & Rantavuori (2014)	Qualitative	Case study
Malsch et al. (2011)	Qualitative	Interview
Turunen (2012)	Qualitative	Case study
QUANTITATIVE METHOD (22)	**METHOD**	**RESEARCH DESIGN**
Abry et al. (2015)	Qualitative	Longitudinal study
Ahtola et al. (2011)	Qualitative	Longitudinal study
Anders et al. (2013)	Qualitative	Longitudinal study
Eggum-Wilkens et al. (2014)	Qualitative	Longitudinal study
Fitzpatrick & Pagani (2013)	Qualitative	Regression analysis
Hindman et al. (2013)	Qualitative	Survey
Jordan et al. (2012)	Qualitative	RCT
Jung & Han (2013)	Qualitative	Multilevel modelling
Lau et al. (2011)	Qualitative	Regression analysis
Li et al.(2013)	Qualitative	RCT
Monette et al. (2011)	Qualitative	Cohort study
Murray & Harrison (2011)	Qualitative	Regression analysis
Niklas & Schneider (2013)	Qualitative	Longitudinal study
Niklas & Schneider (2014)	Qualitative	Longitudinal study
Petriwskyj et al. (2014)	Qualitative	Longitudinal study
Puccioni (2015)	Qualitative	Multilevel modelling
Schmitt et al. (2015)	Qualitative	RCT
Schneider et al. (2014)	Qualitative	Longitudinal study
Shaul & Schwartz (2014)	Qualitative	Cohort study
Uibu et al. (2011)	Qualitative	Survey
White (2013)	Qualitative	Quasi experimental
Yeniad et al. (2014)	Qualitative	Longitudinal study
MIXED METHODS (7)	**METHOD**	**RESEARCH DESIGN**
Alatalo et al. (2015)	Mixed methods	Case study
Chan (2010)	Mixed methods	Case study
Chan (2012)	Mixed methods	Case study
DeMarie (2010)	Mixed methods	Interview
Dockett & Perry (2014)	Mixed methods	Longitudinal study
Hogsnes & Moser (2014)	Mixed methods	Case study
Hopps (2014)	Mixed methods	Survey
REVIEW (1)	**METHOD**	**RESEARCH DESIGN**
Diamond & Lee (2011)	Review	-

PREVIOUS PUBLICATIONS FROM THE KNOWLEDGE CENTRE FOR EDUCATION

Lillejord, S. & Børte, K. (2017). *Lærerutdanning som profesjonsutdanning - forutsetninger og prinsipper fra forskning. Et kunnskapsgrunnlag*. Oslo. Kunnskapssenter for Utdanning, www.kunnskapssenter.no

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Børte, K., Lillejord, S. & Johansson, L. (2016). *Evnerike elever og elever med stort læringspotensial: En forskningsoppsummering.* Oslo: Kunnskapssenter for Utdanning, www.kunnskapssenter.no.

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Lillejord, S., Børte, K., Ruud, E., Hauge, T. E., Hopfenbeck, T. N., Tolo, A., Fischer-Griffiths, P. & Smeby, J.-C. (2014). *Former for lærervurdering som kan ha positiv innvirkning på skolens kvalitet: En systematisk kunnskapsoversikt*. Oslo: Kunnskapssenter for utdanning, www.kunnskapssenter.no