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SPECIAL REPORT | RESEARCH | SCHOOL READINESS, CHILD DEVELOPMENT AND EARLY LEARNING

Research evidence

	The research section for this special report is based on a selection of academic studies that have been explored and summarised by Dr Jane Murray and Dr Rory McDowell Clark on behalf of TACTYC – The Association for Professional Development in the Early Years

Study 1

BERA/TACTYC Early Childhood Research Review 2003-2017

British Educational Research Association (BERA) Early Childhood Special Interest Group and TACTYC: Association for Professional Development (2017) https://www.bera.ac.uk/wp-content/uploads/2017/05/BERA-TACTYC-Full-Report.pdf

Led by Jane Payler and Elizabeth Wood, this wide-ranging review of extant ECEC research was a collaboration by over fifty UK academics. It revisits and updates the 2003 BERA research review to provide guidance for policymakers and early childhood professionals. The review's scope covers UK research since 2003 and encompasses children aged birth-7 years, their families, communities and adults who work with them. It emphasises integrated education and care for young children and is structured according to five themes, each authored by a different team.

Professionalism (by Jane Payler and Geraldine Davis)
Qualifications among the largely female young ECEC workforce have risen in recent years, yet policy requirements, status, pay, career pathways and conditions of service have not risen commensurately. The sector struggles to recruit enough qualified staff, although attrition has reduced. Settings employing well qualified staff tend to achieve higher Ofsted judgements but graduates' influence in settings is variable because inconsistent policy and leadership have limited the emergence of professionalism in the sector. Although research indicates that ECEC practice requires highly skilled workers with strong competences, policymakers have little regard for them. However, professional development among ECEC workers has been shaped by process-oriented communities accommodating and addressing the increasing complexities workers experience. Definitions of quality in early childhood are highly contested but tend to focus on children's experiences and outcomes, qualifications and roles, leadership and professional practice.

Parenting and the Family (by Pam Jarvis and Jan Georgeson)

Neo-liberal government policy requires parents on low incomes to work long hours for poor wages yet also requires them to be skilled parents. Women are affected particularly adversely by these expectations. Few policies have improved conditions for parenting, and parent-practitioner partnerships are often unequal, with practitioners sometimes stigmatising working parents (albeit they may be working parents themselves). Universal parenting programmes tend to be driven by middle class values and are poorly attended. Conversely, targeted parenting interventions addressing children's behavioural development have enjoyed some success. Targeted programmes addressing social inequalities seem particularly effectual, and programmes targeting early risk in child development seem most effective. Although small-scale interventions may lead to positive outcomes locally, large-scale programmes with clearly defined aims are more likely to result in measurable impact.

Play and Pedagogy (by Elizabeth Wood and Liz Chesworth)

ECEC research and literature often link play with learning and development and they provide evidence that children's natural inclination to play could inform curriculum and pedagogy. However, these established links between play, learning and development rarely emerge fully in curricula for young children because in practice, formal teaching and adult-led activity prevail, aligning with ECEC policies that interpret play as adults teaching through play. A disjunction exists between adult-led play and authentic child-initiated play. Children's agency in play affords them opportunities to communicate their complex cognitive processes and relationships in different ways and their content knowledge is often evident in such play. However, practitioners do not always recognise these factors or their value for teaching and policymakers do not understand progression in play, particularly for children older than five years.

Learning, Development and Curriculum (by Janet Rose and Louise Gilbert)

Rose and Gilbert highlight gaps in research and practice concerning learning, development and curriculum. They reiterate a confused landscape concerning adults' roles in young children's learning and development. Their paper suggests that research about early learning and development should account for ways local and international influences construct early childhood, early learning and pedagogy and advocates that tensions between 'pedagogical principles and the demands of performativity' should be challenged. Rose and Gilbert note the emergence of important messages for young children's learning from neuroscientific research concerning executive function, self-regulation and metacognition. They suggest that more research is required to understand the effects of social and emotional development on academic learning and the ways physical development and neuro-developmental factors might affect all learning domains. The paper also calls for further research about early learning and development that is focused on arts education, digital

technologies and health promotion in ECEC settings: it emphasises that ECEC practice might engage more with scientific enquiry and the wider aspects of mathematical learning.

Assessment and School Readiness (by Philip Hood and Helena Mitchell)

Although school readiness is often aligned with notions of quality in ECEC, neither is well defined: the Scottish Executive acknowledges 'school readiness' as highly contested. Research indicates that interactive pedagogic strategies that support children's self-regulation and agency afford children developing confidence and competence, but English government frames school readiness as young children's readiness to conform to formal academic expectations.

Evidence suggests that using assessment measures to establish attainment presents challenges, yet assessment systems inform curriculum and pedagogy. Diagnostic formative assessment, tailored to individual children's situated learning and agency tends to be the best predictor of later attainment, but such models are not always favoured by government. For example, the English government has pressed for baseline assessment predicated on scores for children aged five. Contradictory information concerning assessment makes it difficult for parents to understand how and what their children are learning. The English government's performativity policies have limited the types of learning valued in primary schools: the form and function of assessments have narrowed four-to-five year old children's learning in England, with restricted assessment focus on English and mathematics, opening a wide attainment gap between disadvantaged children and their peers. Narrowly defined assessments of school readiness may particularly disadvantage or marginalise certain groups, including children with disabilities, children who are young in the school year, boys and bilingual children.

Implications for practice

- Policymakers should recognise the value of ECEC workers' qualifications in terms of status, pay, career pathways and conditions of service.
- Targeted parenting programmes should focus on social inequalities and early risk in child development.
- Policymakers should reduce demands of performativity in ECEC provision and should focus policy on pedagogical principles based on research evidence.
- Executive function, self-regulation and metacognition should be the focus for the ECEC curriculum, mediated by play that is authentically child-led.
- ECEC assessment should be diagnostic and formative, tailored to individual children and able to accommodate their situated learning and agency.
- More research is required to provide evidence concerning the nature of ECEC quality in respect of lifetime outcomes.

Starting Strong V – Transitions for Early Childhood Education and Care to Primary Education.

Organisation for Economic Cooperation and Development (2017) http://www.keepeek.com/Digital-Asset-Management/oecd/education/starting-strong-v_9789264276253-en#.WVOYqmjyva8#page8

Starting Strong V (SSV) is the fifth international OECD report concerning early childhood education and care (ECEC). It was published two years after the first United Nations target for early childhood development, and further consolidates the importance of early childhood for global development and individuals' lifelong outcomes. SSV focuses on transition from ECEC to primary school, noting that children are experiencing this transition increasingly worldwide. SSV draws on data from a questionnaire and country reports to compare transition policies and practices across 30 countries.

The report opens with a rationale before considering challenges and strategies in respect of organisation and governance of transitions between ECEC and primary education and three sets of continuities: professional continuity, pedagogical continuity and developmental continuity. In conclusion, the report makes recommendations for improving transition from ECEC to primary school. Whilst the challenges presented in SSV indicate that the quality of children's transitions between ECEC and primary education is not universally high, the strategies present ways in which the 30 countries are addressing the issue. The recommendations signpost new ways to ensure the positive impact of ECEC continues into primary education and beyond.

The importance of the transition between ECEC and primary education

SSV revisits the crucial role of brain development in the first three years that is the template for lifelong outcomes. It emphasises that poor experiences of transition between ECEC and primary education can undermine and even reverse benefits of ECEC, whereas successful transition to primary school is foundational to lifelong learning. SSV identifies barriers that may prevent children from making this major transition successfully as well as features that characterise successful transition between ECEC and primary education.

Getting ready

SSV emphasises the value of 'age- and child-appropriate pedagogical practices' for children's cognitive and social gains. It is critical of schoolification practices introduced in ECEC that 'prepare' children for school, arguing that such practices detract from children's development and learning. The report also challenges school readiness models that attempt to prepare children for school, advocating instead that schools should prepare for each child joining them. Yet SSV notes that compulsory school starting ages have been lowering across the countries in the study, ostensibly 'to

give children a stronger start at primary school and to narrow socio-economic gaps'. The report notes that across the 30 countries, there is considerable variation in provision made for children as they transition from ECEC. 31% of the 30 countries provide pre-primary education for children aged 3 (7%), aged 4 (7%), aged 5 (17%) and aged 6 (10%); SSV describes the purpose of pre-primary education as preparation for school, identifying this as its distinguishing characteristic from ECDC. The report describes primary education as a 'sound basic education in reading, writing and mathematics, along with an elementary understanding of other subjects' (p.283). Among the SSV countries which do not offer pre-primary education, only UK children start primary education as young as age 5 (3%). 53% of children from the 30 SSV countries start primary education aged 6, and only Sweden's children (3%) start primary education at age 7.

Governance and Organisation

SSV reveals four challenges encountered by countries in respect of governance and organisation for children's transitions from ECEC to primary education: (i) regions lack coherence in transition approaches, (ii) lack of engagement (iii) poor stakeholder collaboration and (iv) lack of equity. SSV also indicates strategies that have been implemented to respond to these challenges. These include national policies to enhance coherence, statutory curricular frameworks that address transitions, guidance about transitions for stakeholders and targeted financial support to enhance equity in transitions.

Professional Continuity

SSV presents three challenges in respect of supporting professional continuity for children's transitions from ECEC to primary education: (i) primary school teachers enjoy higher status than ECEC practitioners, (ii) paucity of training in both sectors concerning transitions and (iii) barriers to co-ordination and co-operation between the sectors. Policies that have been implemented by SSV countries to deal with these challenges include equal pay for ECEC staff and primary teachers, provision of training about transition and a legal requirement on professionals to share information across the two sectors.

Pedagogical Continuity

Three challenges are identified in SSV in respect of enhancing pedagogical continuity to support children's transitions: (i) different curricular approaches in each sector, (ii) poor understanding between the two sectors concerning pedagogy and (iii) children's experiences of unfamiliar pedagogical approaches as they move to primary school. SSV countries have adopted strategies to tackle these challenges that include integrated curriculum frameworks, similar pedagogical approaches across ECEC and primary education and greater collaboration between the two sectors to secure consistency.

Developmental Continuity

SSV presents five challenges concerning children's developmental continuity between ECEC and primary school: (i) transition policies and practices are not informed by children's perspectives, (ii) parents do not understand the importance of transition to primary school, (iii) primary schools and ECEC settings find it difficult to engage parents of disadvantaged children, (iv) inequalities and lack of understanding between ECEC and primary school staff and (v) limited co-operation with other children's services. SSV countries have introduced strategies to deal with these challenges, including new laws that enshrine children's right to participate, parent support programmes and materials focused on transition, joint training for ECEC and primary school staff and team work across children's services.

Implications for practice

To secure positive experiences of transition for children moving from ECEC to primary schools, OECD (2017) draws on the evidence presented in SSV to recommend that:

- Schools should focus more on being ready for children.
- Transition should be treated as a process of ongoing change for which responsibility should be shared equally across the two sectors.
- Structural barriers should be addressed in policy and practice to encourage continuity and cooperation.
- National policy frameworks should encourage high quality local leadership.
- Transition considerations should be included in policies and practices that target support for disadvantaged children.
- Transition issues should continue to be researched and monitored.

Study 3

School Readiness and Self-regulation: a developmental psychobiological approach.

C. Blair and C.C. Raver (2015) *Annual Review of Psychology,* Vol 66: 711-731.

In this review, Blair and Raver survey research that indicates how self-regulation, and consequently school readiness, are products of integrated developmental processes shaped by the contexts in which development occurs. Self-regulation – becoming aware of and in control of one's thoughts, emotions and behaviour – has a crucial role in successful learning so the development of self-regulation in young children is essential for 'school readiness'. Self-regulation enables children to engage personally in learning activities so is the foundation to acquiring other abilities such as reading and writing. They make apparent how the review highlights research on self-regulation that

reveals how gaps in school readiness and later achievement are linked to poverty and disadvantage, pointing the way to effective approaches to counteract these conditions.

Children's Experiences of Early Learning

Blair and Raver address five key aspects which are summarised in this report: executive functions, motivation, self-regulation and language, interventions and early disadvantage. Arguably, Blair and Raver's neurobiological perspective narrows debates on 'readiness' to a focus on individual children's biology, yet their reframing of school readiness as self-regulation is helpful. Self-regulation as a framework for teaching literacy and numeracy – in other words regarding academic activities as a means rather than an end – offers a more promising approach to narrowing the achievement gap. They maintain that the evidence base concerning brain maturation and the abilities required to pay sustained attention to learning activities, makes it logical for children to begin formal schooling at about six years of age. In the UK however, formal expectations of children begin much earlier. Academic content is often presented that is too complex for children to make their own meanings, thus overwhelming executive functions such as working memory and inhibitory control. Therefore, what is absent from this account is the importance of incorporating the foundations of literacy and numeracy in open-ended play experiences to enable children to make sense of experiences and consolidate their own learning. When policy promotes school readiness in formal terms, teachers can feel pressured to emphasise academic goals above opportunities for children's own active learning and the development of individual autonomy and personal motivation.

Executive functions

The evidence base connecting self-regulation and school readiness is strong. Particularly crucial is the importance of executive functions to school success, with studies showing socio-emotional competence as the best predictor for later mathematics and reading success. Executive functions encompass cognitive flexibility, inhibition (i.e. self-control and mastery of one's own behaviour) and working memory and they are central to the diverse activities children encounter when they begin school. Working memory and flexible shifting of attention are needed to recognise units of meaning and sound – for instance learning to spell in English requires holding multiple representations of letter-sound correspondences in mind and inhibiting one, such as learning letters C and K.

Motivation

Executive functions are also affected by motivation and engagement, both necessary to make sense of complex information. Skills including working memory and inhibitory control can be overwhelmed when information is too complex, particularly for young children who are just developing these skills. Successful learning requires appropriate levels of complexity and support: when information is too complex and the environment too stressful, executive functions shut down; whereas if information is

too simple and the environment uninteresting, they are not called upon. This relationship between executive cognitive ability and complexity of information is the basis for Vygotsky's notion of Zone of Proximal Development (ZPD). Meaningful activities consistent with children's prior knowledge make executive functions more likely to be utilised, but as complexity increases and tasks are no longer achievable, confusion and lack of motivation can occur.

Self-regulation and Language

Self-regulation develops through recursive feed-forward and feedback processes, adjusting in response to experience. Sensitive, language-rich care supports its development, whereas low quality care puts at risk children's social and emotional well-being. Children in poverty are less likely to experience conditions that support language development and foster optimal self-regulatory ability. Consequently they are less likely than higher-income peers to enter school ready to cope with demands made upon them. This major source of long-term social, economic and educational inequality may be magnified for children for whom English is a second language.

Interventions

This review advocates decreasing inequality by structuring classroom practices to foster self-regulation. It highlights evidence from longitudinal studies indicating the effects of high quality early care and projects specifically designed to enhance self-regulatory ability. Intervention has resulted in fewer behavioural problems and increases in attention, impulse and inhibitory control and working memory. Although not intended as self-regulatory measures, interventions such as encouraging children to talk about stories, or maths activities building on everyday experience, affect multiple aspects of development so may be particularly important for disadvantaged children. These approaches, formulating structured learning activities within a child's ZPD, are effective because they introduce appropriate levels of complexity and support children's reasoning and executive functions.

Early Disadvantage

Blair and Raver recognise that ideas about school readiness challenge our understanding of – and commitment to – equal opportunities and the ability of every child to succeed despite initial disadvantage. Framing school readiness as self-regulation reveals that the effects of poverty on children's life chances begin early and may persist for years. Blair and Raver suggest that early learning provision should focus jointly and recursively on self-regulation and academic content to help reduce disadvantage.

Implications for practice

- Teacher training should include the role of executive functions in learning and development.
- Framing school readiness in terms of self-regulation rather than academic goals may be

helpful.

- Evidence concerning brain maturation indicates that formal schooling should be delayed until six years of age.
- For children up to six years, academic goals should be subordinate to children's own active learning, individual autonomy and personal motivation.
- For children up to six years, learning experiences should be characterised by open-ended play that enables children to make their own meanings and consolidate their own learning.

Study 4

Study of Early Education and Development (SEED): Good Practice in Early Education

Meg Callanan, Margaret Anderson, Sarah Haywood, Ruth Hudson and Svetlana Speight – NatCen Social Research (2017) https://www.gov.uk/government/collections/study-of-early-education-and-development-seed

The 'Good Practice in Early Education' research report is part of a large-scale UK study running from 2013-2020 that builds on the EPPE/EPPSE study led by Professor Kathy Sylva (1997-2014). The SEED study is an evaluation of 'the effect of early education on children's outcomes, the quality of provision and value for money of providing funded early years education to (6,000) 2-year-olds from lower income families'. The component study that informs this report 'explored how good quality early years settings articulate, establish and sustain good practice that has the potential to improve child outcomes' (p.8). It captured 'good practice' in ECEC for children aged two-four years across five key aspects: (i) curriculum planning, (ii) assessment and monitoring, (iii) staffing, (iv) managing transitions and (v) communication with parents and supporting home learning'. Given the challenges established in other studies in respect of defining quality, the methodology adopted for securing this claim is important. Sixteen case study examples of 'good practice' were selected for this report from a wider sample of ECEC settings for which provision quality was judged 'good' or 'excellent', according to adapted versions of the Early Childhood Environmental Rating Scale (ECERS-R) (Harms, Clifford and Cryer, 1998). Nursery classes, private and voluntary settings were included and 103 interviews were conducted with settings' managers, ECEC staff members, parents and local authority workers. The findings are structured according to four key themes.

Learning and development

Respondents suggested 'good practice' in **curriculum planning** features flexible planning according to children's individual needs and interests. They only considered **assessment, monitoring and tracking children's progress** 'good practice' when it is used diagnostically to inform children's learning and development. Settings' staff made suggestions for **'what works' when supporting children's learning and development** and identified supporting children's personal, social and

emotional development as paramount for 'good practice', for example by encouraging children's self-regulation, provision of 'language rich' environments and well-trained staff. Respondents identified several features of 'good practice' in **supporting transitions** into settings, including taking the lead from individual children, sharing information with parents and other settings, and allocating the key person according to children's preferences.

Management and Leadership

Respondents regarded **effective leadership** as essential to ECEC 'good practice', characterised by clear vision, encouraging team working, secure professional knowledge in all staff, positive relationships, consistently seeking improvement and good organisation. **Communication** between staff was also considered important as a foundation for other elements of 'good practice'. Continuous **evaluation of practice** was viewed as 'good practice' because it results in constant improvement and **partnership working and sources of advice** including local authority support, Ofsted, specialist children's services, partnership working with Children's Centres and early years specialist teachers.

Staff recruitment, retention and development.

Recruitment of high quality staff was considered vital for 'good practice', but was acknowledged to be difficult to achieve because of poor pay. Respondents regarded 'high quality staff' as practitioners who understand child development and the EYFS, are well qualified, interact well with children, are enthusiastic about ECEC and engage effectively with parents. Soft skills were regarded as characteristic of high quality staff, mixing staff with different levels of experience was considered 'good practice' and the highest possible staff:child rations were viewed as desirable. **Staff retention** and **Continuing Professional Development** (CPD) were attributed as 'good practice' but settings reported challenges in respect of maintaining these aspects, largely due to financial constraints.

Engaging with parents and home learning

Parents defined high quality provision in early years settings according to several factors, including 'word-of-mouth' reputation, interactions between staff and children, high staff:child ratios, good staff retention, facilities and equipment, adequate space and safety, location and cost. Parents were less concerned about staff qualifications: some just assumed all staff would have relevant qualifications, while other parents emphasised experience and the quality of interactions. Settings staff highlighted a range of strategies they use for effective **communication with parents**, including trust, building individual relationships with parents, adjusting how they communicate with each parent, avoiding judging parents and sharing information with colleagues so all staff can support parents. Many parents were positive about digital communication with settings staff although some were concerned about data protection issues and some preferred other forms of communication.

Some settings fostered equal communication by using parent feedback books and inviting parents to volunteer in the setting. Settings held parents' evenings and shared children's progress records with parents. Some settings shared online assessment and monitoring systems with parents, which some liked and some did not.

Settings said they **supported home learning** strategies to encourage high quality interactions between parents and children, to help children to experience smooth transitions between home and the setting, to encourage learning for pleasure and to help older children to get ready for school. Respondents thought 'good practice' for home learning included good staff relationships with parents, making home learning manageable for parents and giving children choice and control about their home learning activities.

Implications for practice

Drawing on the findings, three cross-cutting themes for 'good practice' in ECEC emerge in this report and these constitute implications for practice:

- 'Good practice' in ECEC is tailored to children's needs.
- Skilled and experienced staff support 'good practice' in ECEC.
- An open and reflective culture supports 'good practice' in ECEC.

FURTHER READING

An indicative list of further reading on school readiness, child development and early learning:

Crawford, C., Dearden, L. and Meghir, C. (2010) *When You Are Born Matters: The Impact of Date of Birth on Educational Outcomes in England.* London: Institute for Fiscal Studies.

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UNICEF (2016) *The State for the World's Children 2016: A fair chance for every child.* New York: UNICEF.

Whitebread, D., Basilio, M., Kuvalja, M. and Verma, M. (2012) *The Importance of Play.* Brussels: Toy Industries of Europe.

Some TACTYC Publications concerned with school readiness, child development and early learning:
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Osgood, J. Elwick, A., Robertson, L., Sakr, M. and Wilson, D. (2017) *Early Years Teacher and Early Years Educator: a scoping study of the impact, experiences and associated issues of recent early years qualifications and training in England*: (Online) Available at: http://tactyc.org.uk/research/ Accessed: 2.7.17

Roberts-Holmes, G. and Bradbury, A. (2016) *Reception Baseline Assessment*. (Online) Available at: http://tactyc.org.uk/wp-content/uploads/2016/06/Occ-Paper-8-Roberts-Holmes-PDF.pdf Accessed: 2.7.17