Rethinking the Design of School Readiness Assessments

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ABSTRACT

This chapter looks at the current purposes and design of school readiness assessments and examines factors that affect their effectiveness, including the content and administration of the tests, how they relate to wider assessment practices, and the impact the practitioner can have on the process and outcomes. The chapter draws on a range of international approaches and practices to discuss the limitations of current processes and suggests that these need to be reconsidered, with school readiness being recognized as a process not a one-off event.

Keywords: Baseline Assessment, Reggio Emilia, PIPS, Te Whãriki, Value-added, Educational Outcomes, Child Development, Literacy, Numeracy, Personal and Social Development, Early Education Practitioners, Unconscious Bias, Reflective Practice, Performance Indicators in Primary Schools,

INTRODUCTION

The concept of school readiness and whether children should be ready for schools, or schools should be ready for children, relates directly to the wider discussion of whether the balance of provision at this age should be weighted towards delivering education or care and the contested issue of defining what attainment and achievement is for children in the early years. In every system the focus shifts solely to education at some point because many countries define the success of their education system by the educational qualifications outcomes achieved at the end. The challenges and limitations associated with accurately interpreting or measuring the progress made by children at the end of a period of schooling without knowing their starting skills are widely recognized. In order to try and address this issue school readiness assessments such as Performance Indicators in Primary Schools (PIPS) or other forms of baseline assessment have been introduced in a wide range of countries, including schemes such as the Bracken School Readiness Assessment in the USA (Bracken, 2007), the Reception Baseline Assessment in England (Department of Education, Training and Skills, 2021), and the Australian Early Development Index in Australia (Australian Government, 2021). These are used as a way of measuring the "value added" to a child's learning by educational experiences that can increase a child's future opportunities. The common assumption seems to be that assessments provide a start point from which subsequent progress can be tracked, giving a more accurate picture of the progress that a child has made in comparison to using "raw" end of phase test results, which assume everyone starts at the same level.

The robustness and usefulness of the data taken from PIPS or baseline assessments has been widely acknowledged and used to inform a range of studies including research into children's cognitive development and learning, effectiveness of assessments and early education pedagogy (Hawker, 2015). However, concerns have been raised about the narrow focus inherent in one-off school readiness assessments and the limited picture of the child that they present, with arguments being made to support development of fuller school readiness processes that allow a more holistic view to be presented. Over focus on an assessment point creates an unnatural jolt in the child development process, which promotes a deficit view of the child and introduces performance pressures, but there is a practice occurring that avoids this whilst still enabling practitioners to support children's educational

development and attainment. This chapter aims to suggest that a move away from school readiness assessments towards school processes is the way forward by:

- Presenting an overview of some the current trends and concerns related to school readiness assessments
- Exploring how school readiness is judged in different countries
- Considering how school readiness assessments could be changed

BACKGROUND

It may appear to be counterintuitive, but in order to explore the issues related to school readiness assessments it is necessary to start by recognizing the significance that is attached to subject-specific attainment at the very end of a child's education. In many education systems, particularly those in the global west, success is judged primarily by final exam results with limited recognition of the acquisition of more general skills and attributes such as positive attitudes to learning or resilience when faced with challenges (Rawding, 2018). There are many who argue that the "schoolification" of early education curricula, which introduces young children to formal academic content and pedagogies too early will have a detrimental effect on a child's overall academic attainment and could have serious implications for their mental health (Glazzard et al., 2019). Despite these concerns many governments and policy makers continue to equate an effective education system with high numbers of students achieving end-of-education qualifications.

This focus on end-of-education qualifications and outcomes leads to a trickle-down effect within education systems based upon the thinking that the earlier children are introduced to subject-specific skills and knowledge, the better the outcomes will ultimately be. Whilst this "industrial" view may appear logical, in order for it to work it would need to be accepted that children learn in a consistent and logical manner and that they can be taught to acquire skills and knowledge in a singular and reliable way. This is clearly not the case, as children learn and develop in unique, divergent, and complex ways, which are highly individual, and there are strong arguments that many long-established educational systems that are based on industrial models restrict creativity and need reform and revision in order to maximize the potential of all children (Robinson & Aronica, 2015). Likewise, the adults that support children's learning are individuals who will interact with them in diverse and varied ways, whether that be in home or school environments. The HighScope Perry project in the USA (Schweinhart & Weikart, 1993) and SureStart programs in the UK (Melhuish et al., 2007) showed the significant positive long-term impact of integrated multiagency interventions that support the child and their parents from birth. These projects show the huge number of variables that impact upon a child's learning, which make it impossible to identify a "right" way of developing the skills and knowledge they will need to pass exams or gain qualifications. Despite this knowledge, the idea that the earlier children are introduced to formal learning the better the outcomes will be still prevails in many education systems. This creates downward pressure to formalize early education curricula and to perform tests to try and measure children's ability to fit into the established systems. It must also be noted that whilst these innovative approaches were impactful, they were also unsustainable and subsequently discontinued in their original formats. This suggests that whilst the benefits of treating school readiness as a process rather than a one-off assessment have been proven, the complexity and cost of developing process-based systems are not appealing to policymakers in many countries.

Assessing preschool children is a relatively new concept within the field of education as a whole (Kelley & Surbeck, 2017), but the assessments used to ascertain school readiness tend to mirror the assessments seen higher up the education system, with value attached to summative tests that produce quantitative results. This is despite the recognition that early years curricula and pedagogy is a distinct area of education, with its own theoretical perspectives. The debates around the content and design of early years curricula, what should be assessed, how assessments should be undertaken, and the appropriateness and usefulness of school readiness assessments, is on going. Clearly, the outcome of a standardized, summative, or centrally administered assessment can only reflect the specific skill or

concept that is being looked at; it cannot capture the holistic development and idiosyncratic characteristics of the child (MacBlain et al, 2017; Nutbrown, 2001). Roberts-Holmes (2015) links the introduction of school readiness assessments to the division of children into ability groups based on narrow skills-based criteria at the very start of their education, resulting in the emergence of "educational triage" where data is used to identify specific groups of children who are operating at grade boundaries. Focused support and intervention is then given to these selected children in order to get them beyond the thresholds, but this intensive focus on a selected group can result in inequality of provision and the neglect of the individual needs and capabilities of every child. That said, the assessments can identify children who have additional learning needs and enable early interventions to support specific requirements, but it is also likely that process-based school readiness systems would also do this.

Regardless of these views and on-going debates the fact remains that currently assessment scores are used as evidence for the starting point of a child's educational journey. The scores can show the value added to a child's outcomes by early education provision (within the parameters of the areas being assessed), they can indicate potential areas of additional need and provide educators, researchers, and policy makers with data that they can base pedagogic decisions upon and, as such, they do have a value. Whilst it may not be possible to change the assumption that high levels of formal qualifications equate to a successful education system, there are challenges being about the idea that introducing formal learning earlier will achieve these higher qualification rates, and this relates directly to school readiness assessments. Despite the identification of "value-added" as a rational for school readiness assessments, there is little evidence of this being applied to outcomes at the end of schooling. A longitudinal study by Tymms, Merrell, and Bailey (2018) suggest that any correlation between a child's baseline assessment at the start of school at age 4 in England, and their later attainment in formal examinations at age 16, declined as children progressed through the education system, and the effectiveness of the teaching and learning the children experienced during their first years of school made a more significant impact on qualifications. This evidence challenges the significance of a one-off school readiness assessment and promotes the value of a school readiness process.

KEY ISSUES

School Readiness and Child Development Theories

In order for school readiness assessments to be used to make an objective decision about a child's level of skill or knowledge, there needs to be an agreed "norm" against which the judgement can be made. Whilst many baseline assessment schemes and PIPS have criteria that outline what a child needs to demonstrate in order to be awarded a particular grade, the role of child development theory in the creation of these criteria needs to be noted and reconsidered. Underpinning all child development theories is the idea of a developmental process, which is irregular and individual but, too often, educational assessment policy does not recognize this. These theoretical perspectives provide the framework that developmental norms are based upon and yet, throughout history, ideas about how children learn and develop have differed, and they continue to do so. These views range from Locke's view of children as blank sheets or empty vessels to Piaget's theory of children progressing through stages of development and Vygotsky's work focusing on the need for social interaction (Bates, 2019; Fleer, 2018). Colwell et al. (2021) notes that the one feature linking many of these theoretical perspectives is the notion of a deficit model of development that focuses on what the child cannot do or what they need to develop in order to become an effective learner; the notion of the child as becoming rather than as being. Rethinking assessment so that it is based on what the child is rather than what he or she is not would be an innovative way of approaching assessment that moves away from deficit models. This links to the wider debate in the field of early education and care about the deficit versus the capable and competent view of the child and the extent to which the pedagogies and associated assessments used in settings value the child's contribution in the present or focus on what needs to be added or developed to fulfil their future potential (Wragg, 2013). Children who receive low scores in their school readiness assessments could be seen as needing to "catch up," because the score suggests that they are starting from further back on their assessment profile, and this has

implications for the subsequent pedagogy and practice used in early years settings. It can put pressure on practitioners to focus on skill-specific activities that will improve assessment scores rather than promoting more child-led experiential learning approaches. The allocation of a "starting point" score to a child, which allows them to be ranked on a scale, aligns with the deficit model, suggesting that those with lower scores need additional and specific learning experiences to get them to the "norm." This does not provide any opportunity to recognize a child's individual skills, interests, or aptitudes, which might lie outside the requirements of the assessment.

Piaget's work is perhaps the easiest to link to the deficit model of assessment. Despite Piaget's assertion that children's reactions to learning differs according to the stage of cognitive development they are at rather than their age, and the focus of any teaching should be on the process of learning rather than the product, the link between age and stage has become embedded in the subsequent interpretation of his work (Bates, 2019). The age-defined stages identified by the theory lend themselves to the creation and use of development milestones and assessments that can be used as a measure of progression, and the skills used in many PIPS and baseline tests relate directly to the indicators and behaviors associated with each stage. This linear approach to development and learning lends itself to the creation of checklist forms of assessment that are straightforward to administer and allow the allocation of scores that can be used to compare children's achievements. However, Agbenyeya's (2009) discussion of the Australian Early Development Index preschool assessment (Australian Government, 2021), which is based on Piagetian stages, notes that the theory disregards the social aspects that affect a child's development and this weakens its usefulness and reliability as the basis on which to make judgements. Klibthong (2012) further developed this criticism of the Australian assessment, suggesting that it disregards the "new sociology of childhood" by not recognizing children as capable and curious individuals and capturing their uniqueness, and this criticism can be levelled at many other school readiness assessments that are based on "age and stage" norms. Reinforcing the fact that Piaget's work is not as stage driven, as it has become perceived, as again it points to the need to move to school readiness processes rather than assessments.

In contrast to the deficit model, there are pedagogic approaches and associated assessments that align more closely with socio-constructivist theoretical perspectives, such as the works of Vygotsky and Bruner (Bates, 2019), which put the child's abilities at the center of the learning and promote a benefit model as opposed to a deficit one. This suggests that whilst the idea of seeing school readiness as a process rather than a one-off event based on a summative snapshot, assessment might be seen as innovative; there are pockets of practice evident around of the world that use this approach. Perhaps it is best known in Malaguzzi's (1993) image of the preschool child as "rich in potential, strong, powerful, and competent," which underpins the renowned practice in Reggio Emilia, Italy. One of the underlying principles of this approach is that each child and each adult learn together, with reciprocity and dialogue being fundamental to the process. Mistakes are part of learning and so are seen as a positive and necessary part of the learning process rather than a deficit in skill or understanding that needs to be corrected. The school readiness assessment in Reggio Emilia is based upon an initial meeting with a child's parents or caregivers and the teacher, where the conversation is started by asking "who is this child?," starting a discussion that opens a mutual and on-going dialogue that contributes to the process of providing an environment and experiences that enable the child to develop agency (Stone, 2012). This approach also allows cultural factors to be recognized and valued, aspects which are impossible to capture in norm-based assessments.

School Readiness and Early Years Curriculum Design

One purpose of school readiness assessments is to make a judgement about the extent to which a child will be able to access and operate within the curriculum used in their country's education system. The range and diversity of international approaches to the design of early years curricula is one of the reasons for the differences in the types of school readiness assessments used. Tymms, Merrell, and Jones (2004) argued that a baseline assessment could be designed that would enable comparison of the cognitive development of children entering school across different countries and cultures, and this work could help to identify best practices in education systems. They make the point that without this

data analysis of large-scale data sets, such as the Programme for International Student Assessment (PISA) studies have limited value. Despite these claims that a universal assessment is possible, the practicalities of doing this would be challenging to achieve. One of the reasons that it is difficult to undertake effective international comparisons is the difference in age that children start compulsory schooling in different countries. Even within the UK, which is often viewed as one country, the four nations have different processes, with children in Northern Ireland starting school when they are four, whilst children in England and Wales start when they are five. OECD (2010) data shows that the age at which national early education curricula are available to children around the world ranges from birth to five, and the starting age for compulsory education ranges from two to six. The removal of skills-specific baseline assessments linked to development norms and milestones would negate this issue, and other associated factors related to age-based milestones such as the debate around summer born children being identified as having to catch up with those children who were born at the start of the school year. Balestra et al. (2020) explore these issues in detail, highlighting the inherent unfairness in a system that requires all children in a class to be assessed at the same point in time without acknowledging the fact that the oldest child there could be up to one year older than their youngest classmates, and would possess an additional year of cognitive development and learning experiences.

The current focus on school readiness assessments also suggests that curricula have a neat start point, an ideal set of skills and knowledge that child should have, but this is clearly not the case. Children start school regardless of whether they are "ready" for the curriculum or not; some will have skill and knowledge that does not match the curriculum expectations, some will be operating at higher levels of ability, and some at lower levels. This range further supports the need for school readiness to be seen as a process rather than a one-off, measurable event. There is evidence of countries making changes to curriculum design that enable children to start at the level they are at and progress through a bespoke program of teaching and learning. A new curriculum will be introduced in Wales in 2022 based on individual schools' interpretations of key principles within set areas of learning. This curriculum sets out a series of "what matters" statements, and each school decides what these will look like to the children in their specific location, allowing learning to be relevant and personalized (Welsh Government, 2021). For example, in the Humanities area of learning one of the 'what matters' statements states that, 'developing an understanding of how human actions in the past and present can affect interrelationships between the natural world and people will heighten learners' awareness of how the future sustainability of our world and climate change is influenced by the impact of those actions' (Welsh Government, 2021). A school in a former coal mining area would be able to use the sites and landscape of that industry to explore these relationships, whereas a school located in a rural community could look at how farming practices relate to the statement. In both of these situations, children would be developing the same understandings, but the materials and stimulus being used would be directly related to their locality and lived experiences.

There is inevitably a conflict between approaches that are recognized as best practices in early education, usually based around experiential learning and play, and adherence to a curriculum that sets out required skills and activities often linked to sequential progress. In England, the impact of the downward pressure through education systems, related to the desire to improve examination scores at the end of a child's schooling, has resulted in the emergence of a heavily criticized skills-focused curriculum and a school readiness assessment linked directly to it (Jenkins et al., 2018; Department of Education, Training and Skills, 2021).

Not all early education approaches are based on a linear and hierarchical skills and outcomes-based approach. There are a number of countries that use cultural and social factors to construct a curriculum located within the child's social situation, with an associated embedded assessment approach, which often takes the form of an individual child's narrative learning story, sometimes referred to as learning stories. These are co-constructed with a range of adults in the setting, which can often include people from First Nation or Aboriginal communities. Examples of this are found in the First Nations approaches used in Canada (Tunison, 2007), the Te Whãriki curriculum in New Zealand (Lee et al., 2013) and the Sámi curriculum used in Norway and Finland (Keskitalo et al.,

2011). In Denmark, the concept of a prescribed preschool curriculum goes against the ethos underpinning the country's approach to early education, which is based upon valuing the child's experience of the present rather than preparation for future education (Hevey, 2014). An example of this approach can be found in the New Zealand Government's (2021) Kaupapa Māori Assessment for Learning document, which shows how a tribal poetic chant linked to creation stories (tauparapara) is used as a starting point to introduce the idea of everyone having a backstory. The subsequent assessment is based on the practitioner exploring questions such as, "Who are you?" "From whom are you?" "Where have you come from?" with the children, to allow them to build the next parts of the story together. This way of working seems very alien to the government set-curriculum approaches that we are perhaps more familiar within the global west.

The examples from Wales and New Zealand show a link between the principles underpinning curriculum design and the associated assessment approaches used to ascertain a child's ability to engage with the curriculum, but also illustrate how diverse the definitions of curriculum and assessment are. The differing priorities apparent across the curricula presented illustrate the difficulties that would be related to trying to create a universal school readiness assessment.

The Structure and Content of Assessments

What type of assessment is used?

It must be remembered that assessment is an umbrella term, and when considering school readiness, it is easy to over focus on the use of summative, diagnostic baseline tests and the limits associated with them. Nutbrown (2012) identifies three purposes of assessment (Table 1) and locates school readiness assessments in the "management and accountability" category, as opposed to assessments that support learning and teaching or research. All the categories of assessment have a value and a purpose, and overuse or overreliance on any one type will result in an unbalanced educational experience. The characteristics associated with assessment for management and accountability show that these assessments have specific and valid purposes and uses, but they cannot and do not allow for the capture of data or information that gives a holistic view of the child.

Table 1. Characteristics of assessment types used in early education

Assessment for Management and Accountability	Assessment for Teaching and Learning	Assessment for Research
Focuses on age cohort	Focuses on individuals	Focuses on samples
Concerned with a sample of group performance	Concerned with details about each individual learner	Concerned with performance of the sample
Occurs within a specific time frame	Is on-going	Takes place at planned points in a study
Is briefly administered	Takes as long as it takes	Can be brief, depends on assessment and ages
Numerical outcomes provide meaning	Needs no numerical outcome to be meaningful	Numerical outcomes often essential
Often consists of closed list of questions	Is open-ended	Often consists of closed items
Informs management strategy and policy	Informs next teaching steps	Informs research decisions and findings measure outcomes
Information relates primarily to classes, groups, settings, or areas	Information relates primarily to individuals	Information relates to the sample, not to individuals or schools
Main purpose is accountability	Main purpose is teaching	Purpose is to add knowledge
Only useful when compared to other outcomes	Only useful if information is used to guide teaching	Only useful as evidence of effectiveness of research study
Requires competence in the administration of the test	Requires professional insight into children's learning	Requires competence in administration of the test
Can draw on information derived through interaction with	Depends on established relationship with individual children to be effective	Often requires no previous relationship, but the ability to

individual children, but not dependent on relationship		establish a rapport with the child at the time of the assessment
Requires short training session, learning the test and practice	Requires on-going professional development and experience	Requires short training session, learning the test and practice

Source: (Nutbrown, 2012)

Assessments are often defined as formative or summative, and many school readiness assessments, such as those used in the UK and Australia, would appear to align with the summative approach as they take a snapshot of a child's skills and knowledge at a given point in time. However, systems that use a school readiness process, such as those in Scandinavian countries like Denmark, use more formative approaches that promote a benefit rather than deficit view of the child. These processes allow for the production of an individual overview of the child, giving opportunities to capture their holistic development. They also include ipsative processes, which measure a child's progress against their own previous performance rather than against a norm or their peers (Broadfoot, 2015).

What is being assessed?

It seems obvious that the purpose of a school readiness assessment is to make a judgement about how ready a child is to engage with a formal education system, but this assumption is emerging as a contested issue. Government reviews in England identified the establishment of school readiness as a key function of early education practice, with a firm focus on specific skills such as writing and paying attention (Allen, 2011; Tickell, 2011). There have been challenges to this narrow focus that aim to highlight the complex and untidy way in which children learn, develop, and broaden the definition of school readiness to include a range of other factors.

The identification of the family's role in school readiness, as evidenced in the Reggio Emilia approach used in Italy and New Zealand's Te Whãriki system, is apparent in UNICEF's (2012) framework, which explores the concept of school readiness from three perspectives: the child's readiness for school, the school's readiness for the child, and the family's and community's readiness for school. Bingham and Whitebread (2012) note that often the term "school readiness" is conflated with "learning readiness," and this merging of concepts is unhelpful because children are always ready to learn something, but that something may not be what the adult is trying to teach, so a more accurate interpretation would be *what* is the child ready to learn. This definition also puts the onus for "readiness" onto the child, disregarding the role of the school to be ready. They suggest that differentiating the terms into "readiness for school" and "readiness of school" provides a clearer focus on the different issues and requirements and makes it clearer that schools have a proactive role in the process to needing to be flexible and to accommodate children who may not be ready for some of the traditional requirements such as sitting for a prolonged period of time. Glazzard et al. (2019) believes that self-regulation is more important than any academic skills in the development of school readiness, and assessments are unhelpful in enabling children to develop this. However, despite the push for a wider definition of school readiness, the majority of assessments continue to focus on specific skills and outcomes. As mentioned previously, one reason given for undertaking school readiness assessments is to provide a baseline score that can then be used to track the progress made by a child and show the "value-added" by their educational experiences; to do this, a clearly defined initial score or start point is needed. Using school readiness processes that incorporate formative and ipsative approaches enables more "value" to be captured.

Whilst different school readiness assessment schemes may focus on slightly different developmental areas and utilize different measurement techniques, most of them include an assessment of children's literacy, numeracy, and personal and social skills, usually in the form of a checklist of criteria associated with each skill, as shown in Table 2.

Table 2. Example of a baseline assessment criteria for counting

Counting

Score	Observed Activity
0	Unable or unwilling
1	Recites numbers, some in sequence, random start point
2	Recites numbers 1-10
3	Touch counts objects to 5 (Objects placed in line)
4	Can count 10 objects accurately (Objects placed randomly)

Adapted from: (Department for Education, 2020)

This can be seen as a reductive approach, which focuses on what a child can and cannot do and prioritizes specific skills, such as counting or naming shapes, rather than wider fundamental principles, such as problem solving or pattern recognition. The criteria being assessed and how these are organized and presented can clearly affect the score that a child achieves. For example, an assessment used in Wales is organized into four categories: language, literacy and communication, mathematical development, personal and social development, wellbeing and cultural diversity, and physical development (Welsh Government, 2017). However, these categories are not weighted equally. There are 17 elements assessed in the mathematical development category compared to only 6 within the personal and social development, well-being, and cultural diversity category. This means that children who have well-developed mathematical skills are advantaged over children who have well-developed personal and social skills, as there are more points available to score in that area.

Alongside the potential skewing of results related to the prioritization of particular skills or subject areas, the nature of what is assessed must also be taken into consideration. The criteria for the personal and social element of the Welsh assessment mentioned above focuses on how children play with each other and interact with their environment, skills which could be seen as innate rather than dependent on specific knowledge. Conversely, the language, literacy, and mathematical development criteria have more knowledge-based or task-specific focus, such as counting or reciting nursery rhymes. These skills are more dependent on the learning experiences and opportunities the child has had prior to starting school, and link to the impact of the "living and working conditions" and "social and community networks" identified by Camacho et al. (2019) as being significant factors affecting school readiness. This means that children who have had "richer" experiences associated with traditional educational or cultural norms prior to starting school will score more highly on the readiness tests. On the other hand, the experiences of children outside these norms cannot be captured and valued, whereas formative and ipsative processes-based approaches would allow these to be recognized and appreciated.

The Role of the Practitioner

Administration of the Assessment

The word "assessment" comes from the Latin term "assidere," which means, "to sit beside," which illustrates the concept that assessment involves a connection between two (or more) people. It suggests that there is a process happening where one person is taking notice of the actions of another in order to try and understand what it happening, and this highlights the critical role that the adult has in the assessment process. It is widely accepted that play is fundamental to learning and teaching in early childhood education and, as such, its role in demonstrating a child's level of skill or knowledge is important. Linked to this is the issue of how adults interpret and understand child's play and the impact of the presence of an adult upon play, an issue that relates to how practitioners administer school readiness assessments.

There is a difference between judgements made on observations of children playing and those based upon responses to practitioner questions or the completion of set tasks. McInnes et al. (2013) note that practitioners' interventions into children's activities can affect the child's understanding of the purpose of the activity, notably whether the activity is "play" or not, suggesting that children tend to perceive an activity as "work" if an adult is present. This means that proactively developing strategies that facilitate mutual understanding and shared control based on open questions is key to achieving an effective co-constructed learning environment that maximizes learning. They suggest that co-

constructed pedagogies result in more long-term learning benefits, but there are limited opportunities to develop these approaches when the assessment is based on specific pre-defined tasks.

The issue of the timing of the assessment is another factor that that has been identified as potentially affecting results. Most assessments have to be administered within a set period of time following the child's start date in the setting. Some of these can be done across the whole period; others are in form of one 20-minute session. It must be remembered that these assessments take place during the child's first sessions in the setting, when they are not familiar with the practitioner, the routine, or the environment. In order to respond to questions, the child needs to be comfortable and confident to enter this new situation and to interact with the practitioner, and they need to understand the context and the reason for the request in order to complete the activities (Jarvis 2017). These disparities could affect the evidence that judgements are based upon. Other factors, such as time of day that the assessment happens, could also have an effect (Dorrian, 2021). With this in mind, it could be suggested that the scores linked to activity-based criteria are more reflective of the child's ability to settle into the new environment rather than their specific knowledge or skills, which again is dependent on the child's prior experiences.

The type of situations used to administer school readiness assessments (i.e. free play activities or set tasks) raise other issues related to objectivity and fairness, namely the extent to which all children receive the same direction, support, and guidance. In a set task scenario, do practitioners use exactly the same questions, and offer exactly the same amount of clarification or support for every child? How can two children observed in two different free play situations have the same skills assessed equally? The assessment situations can also create ethical dilemmas that need to be considered, for example, what should the practitioner record on the assessment record if a child that they have seen accurately count five objects when playing with their friends refuses to count when given the task by the adult undertaking the assessment? Is this an indicator of personal and social development rather than mathematical skill? These questions illustrate the limitations of the summative "snapshot" assessment format; they show what a child wanted to do at a particular moment rather than what they are capable of doing.

Unconscious Bias

For the results of a school readiness assessment to be meaningful the assessment needs to have been conducted objectively. Pollard and Filer (2001) claim that objectivity in assessments is a myth and, as a result, the outcomes of assessments are an "insecure foundation" on which to base measurements or comparisons. Whilst this view negates the important role that assessment plays within education, it does help us to reflect on how practitioners make judgements and how accurate these are, which links to the training and support they receive.

Kowalski et al. (2018) highlight a range of factors that result in early years practitioners demonstrating unconscious bias when assessing young children. On a professional level these included a tendency to conflate social and cognitive development skills, with many practitioners associating fluency in speech with higher cognitive function and assuming that children who express themselves less clearly have lower levels of understanding. Biases may be more apparent if there is a perceived "right" answer or outcome, and so baseline assessments that use set criteria can magnify this issue. Biases were also apparent with regard to the practitioners' personal and professional attitudes to the assessment process and the amount of time they had worked in the field. Some practitioners will consciously or unconsciously perceive their class's scores as reflection of their practice, despite the purpose of school readiness assessments being to get a picture of skills before having received any compulsory schooling. Conversely, some practitioners could mark harshly in the initial assessment and less harshly in subsequent assessments, which would allow them to show their practice has resulted in significant progress and development. This was evident in the author's own experience when working as an advisory teacher for early years in Wales, she noticed that almost all the children in one setting had been awarded the highest possible score in their baseline assessment. On investigation, it became apparent that the assessment had been administered by a newly qualified practitioner who thought that a low score could be equated to poor teaching. Blömeke et al. (2017)

suggest that some of these biases are evident before practitioners start their training programs, an idea borne out by this example. A simplistic solution would be to remove the practitioner from the process, for example, by using technology-based assessments that the children engage with independently. Whilst this would remove bias, it does not provide equity of access, as it is dependent on children's knowledge and experience of using technology and, as such, advantages children who have had access to this.

The issue of unconscious bias is also associated with a range of other characteristics. Research by Auwarter and Aruguete (2008) showed that practitioners make judgements based on perceptions related to socio-economic factors, and these can impact negatively upon scores awarded to children who come from areas with a low socio-economic profile. Practitioners' previous knowledge of siblings or family background affects their perceptions of the ability of the "new" child they are teaching, with a tendency to assume the skills and behaviors shown by older siblings will be the same in younger ones. Practitioners have gendered expectations of skills and aptitude in different developmental areas, with a belief that girls will have better communication and interaction skills and boys will excel at physical tasks (Kreitz-Sandberg, 2016; Prioletta, 2018). The impact of these preconceptions and stereotypes is significant, as they can result in a child being labelled as below the "norm" of the assessment results, and these results are important, as they are used to make judgements about children's future potential (Roberts-Holmes & Bradbury, 2016).

Linked to the concept of unconscious bias are issues related to early labelling of potential difficulties with associated self-fulfilling prophecy concerns and the impact these can have on a child's sense of identity. Colwell et al. (2021) highlights the impact that the mind-set of the practitioner has on these issues, suggesting that children whose teachers have a growth mind-set and value "having a go" at an activity or question more than getting a correct answer or doing it "right" are more likely to see themselves as learners and be proactive and experimental. Conversely, practitioners with a fixed mind-set tend to view and label a child's abilities as being at a fixed level, and then provide experiences to match this belief, limiting the child's chances to explore and challenge. This shows how the practitioner's views and ideas about assessment can have a profound and long-lasting impact on a child's self-identity as a learner.

One way of counter-acting the potential impact of practitioner bias is to embed reflective practice into early education systems; it is widely recognized as an important element that can impact on the effectiveness of school readiness assessments and processes. Cowell (2015) believes that it is evidence-based reflective practice that will increase the quality of education and care globally, improving outcomes for children and raising the professional standing of the early education workforce. Engaging in systematic reflective activities, both individually and within teams, allows practitioners to identify aspects of their work, such as unconscious biases that could be negatively affecting the children they are working with (Lindon & Trodd, 2016). There is also potential to involve children and parents in the reflection and subsequent assessment approaches. As mentioned previously, in some systems, such as Reggio Emilia, this involvement is an essential element of the school readiness process. In order to achieve this, relevant training and on-going professional development would need to be embedded with the qualification requirements for practitioners, but different countries have differing approaches to these requirements. The make-up of the early education workforce and the qualifications required to work in an early education setting varies widely across the world. In the UK, this has resulted in a push for greater professionalism underpinned by relevant qualifications that are often linked to nationally set standards and skills. In other countries, such as Sweden and Denmark, the tradition of the "social pedagogue," who has a graduate-level education covering a broad range of aspects related to human development and learning, is well established. The reflective approaches clearly lend themselves to the social pedagogue model, which encourages practitioners to look at the individual progress and abilities of children, but does not fit as neatly into a training model based on assessing children against set outcomes.

FUTURE RESEARCH DIRECTIONS

Throughout the field of education, from preschool to postgrad, the use of learner analytics to predict outcomes, personalize learning, and develop effective pedagogies is increasing, and data from school readiness assessments plays a part in this. However, it can be easy to lose the child in the data and forget that the outcomes of an assessment give us a snapshot of what one practitioner believed that a child could do at a particular point in time. The issues presented within this chapter illustrate the complexities of trying to produce a "one size fits all" approach to school readiness and show that cultural and political factors play an important role in deciding what readiness looks like in a specific context. This means there is little chance of, or need for, a common approach to school readiness assessments. So, it seems clear that another direction is needed and a move to a school readiness process based on formative and ipsative approaches would enable us to move away from the current tendency to rely on deficit models. There are some underlying principles that should inform the process, recognizing that:

- "Assessment" is an umbrella term, and the full range of appropriate assessment types need to be utilized.
- School readiness is a process, and one aspect cannot give a holistic picture of a child or predict their future success or failure within the education system.
- Assessments should capture the individuality of the child and recognize their potential.
- Assessments need to be structured and administered appropriately by trained practitioners.

CONCLUSION

The data that is provided by school readiness assessments can be useful and provides practitioners, parents, and governments with information that provides for effective interventions and approaches to be implemented that will allow young children to flourish and achieve their potential. However, they do not give us the full picture or an accurate indicator of how ready a child is for school or how ready the school is for the child. There are many other factors and issues that need to be considered in order to make a balanced and objective judgement, and over-reliance on the results of one test is too limiting. Results need to be used as one element of the mosaic of information that provides a holistic picture of the child, identifying what they can do and what their potential is, rather than focusing on what they need to catch up. The focus should be on the process of school readiness and all the factors associated with this, rather than trying to reduce the concept to a single assessment result.

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KEY TERMS AND DEFINITIONS

Baseline Assessment: A test administered to children when they start their first phase of education.

Early Years: The first years of a child's education, including statutory and non-statutory provision.

Formative Assessment: A one-off assessment that measures skills or knowledge at a particular point in time.

Ipsative Assessment: Measuring an individual's progress against their own previous achievements.

Practitioners: Any educational professionals working with young children including, but not limited to, teachers, teaching assistants, and classroom support staff.

Preschool: The period of education before statutory school age.

Summative Assessment: An on-going process using feedback to improve subsequent work.