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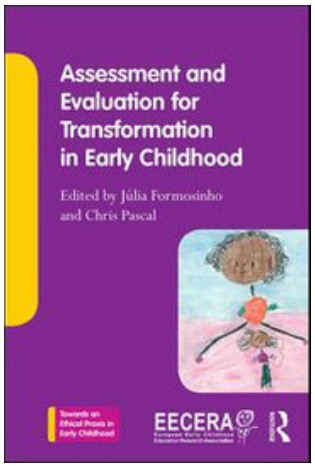

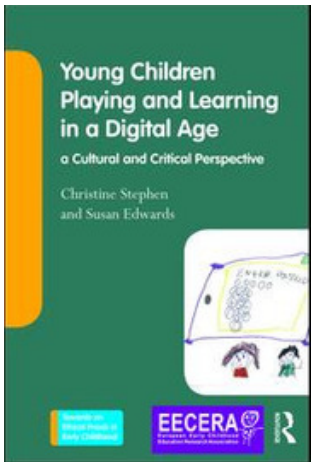

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Early childhood teachers' work and technology in an era of assessment

Koeun Kim

Department of Early Childhood Education, Sungshin Women's University, Seoul, Korea

ABSTRACT

This paper provides an empirical account of the complex nature of early childhood teachers' work with growing accountability demands for collecting, reporting, and using child assessment data in the U.S. context. Particularly, this paper focuses on preschool teachers' experience of changes in their roles and pedagogical work in implementing a criterion-referenced, commercial online child assessment system. In doing so, this paper draws on data from a qualitative research study conducted at four Head Start sites that included semi-structured, individual interviews with six teachers and five child development specialists during three different assessment checkpoint periods; multiple observations of four Head Start classrooms for five months; and an analysis of related documents. The findings from this paper highlight that the use of commercial online childhood assessment system increased and expanded teacher work with additional responsibilities and concomitant change in assessment, curriculum, and pedagogy, as well as their views of themselves as professionals.

KEYWORDS

Early Childhood Assessment; Early Child Curriculum; Teaching Strategies Gold; Technology; Work intensification; Head Start

Introduction

In the field of education, a great deal of scholarly attention has been given to the intensification of teachers' work in the current neoliberal educational reform context, including increased work demands, chronic lack of time, a reduction of teacher autonomy with standardized curricular, prescriptive pedagogy, and high-stakes testing regimes (Easthope and Easthope 2000; Lingard, Martino, and Rezai-Rashti 2013; Valli and Buese 2007).

Similarly, global discourses of quality, standards and performativity have come to dominate and reconfigure early childhood practice and teacher work in the United States (Brown and Weber 2016; Bullough et al. 2014) and other countries, such as Australia (Bown and Sumsion 2007; Kilderry 2015; Nuttall, Thomas, and Wood 2014) and UK (Bradbury 2012; 2014; Osgood 2006; Roberts-Holmes 2015). In particular, assessment requirements have been imposed as a way to create a system for data-driven accountability in the field of early childhood education (Goldstein and Flake 2016). It is notable in the findings from previous research studies in the England context that child assessment mandates profoundly increase teacher workload, change how teachers do their everyday work,

CONTACT Koeun Kim kekim@sungshin.ac.kr Department of Early Childhood Education, Sungshin Women's University, #C-1033, Soojung Bldg., 2, Bomun-ro 34 da-gil, Seongbuk-gu, Seoul 02844, Korea

and (re)shape their perceptions of themselves as professionals (Roberts-Holmes 2015; Roberts-Holmes and Bradbury 2016).

In response to the 'datafication' of early childhood education (Roberts-Holmes and Bradbury 2016, 600), more commercial publishers provide online assessment tools in addition to their original print versions (Balajthy 2007). An emerging critical body of literature addresses concerns about work-extending or managerial technologies (Towers et al. 2006), suggesting greater needs for recognizing the dynamics of technology use where technologies can potentially make teacher work more challenging and highly demanding (Selwyn, Nemorin, and Johnson 2017).

Based on a qualitative research study of four Head Start sites that serve low income preschool children in the USA, this paper provides an empirical account of how early childhood assessment policies play out in (re)shaping teachers' professional work by focusing on teachers' 'experience of [work] intensification' (Ballet and Kelchtermans 2009, 1151). In addressing the distinctive nature of early childhood teachers' work intensification, this paper specifically explores the everyday experiences of teachers in performing an observation based, ongoing assessment of children and the role of a commercial online assessment tool in this process.

Work intensification, assessment, and technology

Under growing external pressures, teachers are expected to accomplish an increasing number of tasks both inside and outside the classrooms, in less time and with fewer resources, to comply with multiplying policy changes and reforms. Apple (1986) elaborated the intensification thesis to explain significant changes in the nature and demands of the teaching job that are summed up as a 'degradation of labor' (p. 4). In Apple's account, teachers are ever more subject to externally imposed standards, in-class assessment/testing mandates, quality control and administrative and clerical tasks, with little or no room for teacher autonomy, creative thinking, and collegial relationships. As a response to chronic work overload, teachers often rely on simplified technological solutions such as prepackaged curriculum and assessment materials, leading to a process of 'deskilling' that involves a growing separation of planning from 'execution' in teachers' work (Apple 1986, 40). In other words, teachers are expected to execute the decisions made by others concerning curricular goals, process, outcomes and assessment criteria.

In this paper, I take a close look at the child assessment requirements as a potential source of intensification in early childhood teachers' work. Traditionally, teacher observations of children in natural settings have been considered the authentic early childhood assessment practice. However, it has currently taken on a new meaning, combined with externally imposed standards describing desired child outcomes. Child assessment is incorporated into the culture of 'performance management' or 'continuous quality improvement' of early childhood programs (Derrick-Mills 2015, 2). For example, Head Start, as the longest, publicly funded preschool program for low income children in the USA, is required to create a system of data-driven decision-making practices at both program-wide and individual classroom levels. Head Start must establish school readiness goals, plan for achieving those goals, measure individual children's progress, and report aggregate data at a program wide level multiple times per year. Head Start programs are also mandated to demonstrate their use of child outcome data 'in combination with

other program data … to direct continuous improvement related to curriculum, instruction, professional development, program design and other program decisions' (Office of Head Start 2011, 1307.3 (b)(2)(i)). Non-compliance with these requirements could result in a loss of its next five years of funding.

Limited evidence from existing literature, primarily based on a survey study of Head Start directors and follow-up site visits, implies that growing accountability demands for collecting, reporting, and using child assessment data have posed significant challenges to teachers' work (Derrick-Mills et al. 2015; Isaacs et al. 2015). Valli and Buese's (2007) concepts-role increase, role intensification, and role expansion- provide a useful framework for describing the changes in Head Start teachers' work. First, teacher's work has increased as they are primarily responsible for managing the day-to-day work of collecting ongoing assessment data in their classrooms. Second, the assessment mandate provides a framework for measuring teacher's performativity. Teacher's success or lack of it is not judged just by the final child assessment results reported as numerical data. Rather, the entire processes involved in the production of ongoing child assessment data are now under surveillance. This process entails concomitant change in various aspects of teacher work, including assessment, curriculum, and pedagogy. Third, the role of teachers as an assessor has expanded outside the classroom with added responsibilities. In the current high stakes inspection context, teachers are expected to take their assessment efforts more seriously than ever in order to produce the correct program-level, 'compliance data' (Selwyn, Henderson, and Chao 2015, 769). This creates greater needs for ongoing professional development (e.g. online training provided by commercial developers of the tools, coaching/mentoring, workshop, etc.), meetings (e.g. regular data review sessions, committee, teacher support group, etc.), and other collaborative work outside the classroom.

The shifting assessment policy demands promote an environment in which early childhood programs increasingly rely on the commercially available, technology-enhanced assessment tools to jump-starts their compliance with accountability requirements**.** One example most commonly used in the USA is the Teaching Strategies (TS) Gold assessment system. As being categorized into a 'computer-based observational recording keeping' system (Balajthy 2007, 243), TS Gold requires teachers to enter anecdotal records of children's learning and development online and score those against predetermined objectives and dimensions, using 0–9 rating scales, which is aligned with state early learning standards in the USA. The online systems use those scores to automatically generate reports and summaries. Gradually moving toward functioning as an online data-based decision making tool, TS Gold translates the information that has been entered in the system for a particular child into instruction/intervention recommendations that teachers can simply drop and drag into their daily and weekly plan online.

Previous research studies (Buzhardt et al. 2011; Ledoux, Yoder, and Hanes 2010; Tanyel and Knopf 2011) suggest that the integration of technology into existing daily early childhood practice is not a simple matter, but the technology serves as a vehicle through which pre-determined child assessment criteria work to initiate subtle and often substantial changes in teacher practice, including curriculum development, instructional decision making, and assessment focus. The existing literature on the changing landscape of a technology-rich, education system further addresses the need to rethink the place of teachers in this environment. For example, in their discussion of new professionalism required for teachers in the digital age, Shaffer, Nash, and Ruis (2015) argue that teachers move away

from being a central figure in the classroom to assuming a new role as 'coordinators, orchestrators, and interpreters of feedback' coming through digital technology (p. 18).

In addition, a body of critical scholarship on digital technologies in education (Fenwick and Edwards 2016; Selwyn 2011, 2015; Williamson 2015) suggests that technology often serves to support the bureaucratic interests and administrative concerns of the schools and thus sustain and strengthen managerial control of teachers' work. For example, Selwyn and his colleagues (Selwyn, Henderson, and Chao 2015; Selwyn, Nemorin, and Johnson 2017) provides a number of empirical accounts, in his case study schools in various contexts and settings, of how existing disciplinary concerns of schools continue to shape the nature of in-school use of technology that reinforces standardization of teachers' labor process, intensifies managerial control of curricula with mandated 'best' practice models, and imposes the data-driven audit culture. Therefore, it is important to note here that technology integration does not simply refer to changes in the skills and knowledge that teachers must develop to use those tools, but more importantly, it works to potentially change who they are as teachers as it also involves the process of instilling new values, norms and ways of thinking.

Methodology

Setting and participants

This paper draws on a qualitative research study conducted during academic year 2011–2012 at one U.S. Head Start grantee that serves over 1000 children from birth to five years of age with a variety of program options. At the time data collection began, this Head Start grantee made the switch from the paper version to a web-based child assessment system, 'Teaching Strategies Gold.' Four half-day, Head Start centers were selected as main research sites. All of the four Head Start centers were a single classroom site, but varied in terms of its location, racial/ethnic demographics, and teachers' years of teaching experience. All but one of the four Head Start centers provided double session classes with a co-teaching model where one leader teacher and one co-teacher work as a team for 17 children in the morning and a different group of 17 children in the afternoon. One teacher at each Head Start center fills the additional duties of the site director in addition to her teaching position. All of the lead teachers and co-teachers at the four Head Start sites ($n = 6$) agreed to participate in this study.

Data collection and analysis

To deepen insights into how teachers perceive and experience their work associated with the assessment mandate, this paper draws on data from multiple, semi-structured interviews with six teachers during three assessment checkpoint periods. During the first interview, teachers were asked to tell about their work and themselves as early childhood professionals in light of the recent policy changes. The second interview focused on the details of teachers' experiences concerning assessment practice and curriculum decision-making process. The final interview, at the end of school year, allowed teachers to explore their additional thoughts and feelings about a year-long experience with TS Gold. Having multiple interviews contributed to establishing some level of trust in ways to help teachers share often emotionally charged, intensification experiences of their

work. The multiple-interview approach was especially important because it allowed me to capture teachers' in-the-moment insights throughout the entire assessment process, as well as teachers' overall reflection after they finalized their end-of-year assessment data.

The triangulation process included using data from multiple observations of four Head Start sites for five months (twice per week at each site) to note the nature of teachers' work and responsibilities associated with child assessment in and outside the classroom, pedagogical practice, and curricular focus. I also analyzed a number of relevant documents, including copies of teachers' observation notes, TS Gold–generated reports, and materials. At the time of data collection, five child development specialists, as a management team in an organizational hierarchy, traveled to their assigned Head Start sites to monitor the compliance of each site with Head Start performance standards and provide support to teachers in the delivery of quality curriculum and instruction. Therefore, in order to understand how existing organizational structure, culture, and power relations interacted with a new online assessment system to shape and regulate teachers' work, I conducted one individual interview with five Head Start child development specialists.

In the first stage of data analysis, I examined all of the data from multiple data sources to identify the types of tasks that teachers involved or were encouraged to undertake as they strived for fulfilling the ongoing assessment mandate, especially when using TS Gold (see Table 1). I then analyzed interview data concerning temporal perceptions and

Table 1. Types of teacher work associated with ongoing child assessment mandate.

Learning	Data collection and online data entry	Data analysis, reporting, and use
Topics • Progression of child development and learning • TS Gold objectives, dimensions, indicators, and examples • TS Gold components, structure and online tools • Computer and online system • Factual anecdotal notes Methods • Self-directed: Website navigation and online tool exploration; Reference to guides in print & objectives classroom poster • Online training provided by TS Gold: Interrater reliability certification • Program wide training and professional development support • Coaching/mentoring sessions with supervisors (child development specialist) • Teacher support group	• Classroom observation • On the spot assessment • Testing • Guided play • Selection of assessment materials • Creation/Modification of checklists/ observation forms • Supervision of teacher assistants • Communication with colleagues • Coordination of the use of computer resources with colleagues • Collection of handwritten observation notes • Entering observation notes online • Tagging each piece of observation note with related objectives or dimensions • Translation of observation notes into scores • Checking (missing) documentation/completion rate of checkpoint data entry • Curriculum alignment • Curriculum pacing • Differentiated small group instruction • Grouping/Placement of children • Categorization/Classification of children • Instructional planning: Teacher directed activities	• Making informed decisions about children's levels • Generation of reports • Comparison of each child's knowledge, skills, and behaviors • Modification in child individualization goals • Parent teacher conference • Program wide data review session

experiences of teachers to perform the tasks identified in the initial analysis. Some examples of initial coding were time saving/consuming, time management, scarcity, and urgency that indicated an increase and expansion of teacher work; and the feeling of lack of time and the need to make, save, or manage their time. Using these codes, I reread data and linked the tasks identified in the initial analysis to develop thematic elements that accounted for how teachers made every effort to generate, save, and manage time or how they were pressured to do so. This process gave new meaning to the types of tasks I identified in the initial analysis. For example, I initially categorized the task of 'differentiated small group instruction' into teacher data use, but it was later understood as integral part of making/saving time to collect 'appropriate' child assessment data, with an overarching theme of 'teaching to the data collection' (Kim 2016, 98). In the subsequent analysis, I holistically examined all of the data several more times, and especially reread interview data, juxtaposing it with the document analysis of TS Gold materials (e.g. official guides, marketing materials, tips available through the web-site, etc.,). Through various stages of data analysis, the main theme and thematic elements were eventually identified from multiple data sources.

Findings

Intensification of teachers' learning role, data collection burden, and performativity

The child assessment mandate has generated an increasing number of tasks and added responsibilities as teachers are required to reskill themselves in learning a new online tool, documenting children's progress in ways to show evidence of teachers' performativity, and creating a data-driven decision making process (see Table 1).

In interviews, teachers frequently used words such as 'first time' and 'not knowing' to describe their experience with the new assessment technology, indicating the 'intensification of teachers' learning role' (Valli and Buese 2007, 542). Teachers expressed concerns about the pace of rapid changes with insufficient training and no additional technological resources. With little support, teachers felt they were held responsible for developing their own knowledge and skills, describing this process as 'learning by doing', 'trial and error', or a 'high learning curve.' 'Learning by doing' took a great deal of teacher time, motivation and effort. For example, one teacher, turning fifty at the time of this study, addressed her struggles with (re)learning how to do tasks in new ways, using a computer.

In focusing their efforts on learning the new system, teachers reported the need for taking a look at the TS Gold website and guidelines more often, especially learning about prescribed child assessment criteria. One teacher explained below:

> We take assessments, and then we put those assessments on the computer and then we click on the different areas that it goes for. And then you're rating what level the kids are at … . There is a book that explains it all … . I don't know what all those [assessment] areas are, so that takes me longer. I have to use the book and look up each thing and see where it can go. Once you have that memorized, if we keep doing this for years, which is what their plan is, it will get easier.

Some teachers took their learning further all by themselves, or at least they felt the necessity to explore additional online tools as indicated below:

> I learned different parts of it. There are reports you can run. Developmental summary reports are really helpful for [parent teacher] conferences … . It was neat because it has suggested next steps, and says this is where the child is, and this is what they're going to be doing next. And that links to activities that you can use for planning. So now that I'm more familiar with it, and know more about it, I think we'll use it more frequently in the next year, for planning purposes, and in communication with parents.

In theory, ongoing child observation is considered a natural part of what teachers do during the regular classroom activities and routine. However, one teacher described the nature of caring work that is always 'bound up with communal rhythms and needs' of others' (Bryson 2007, 134): 'Because I think at play time, you're always interrupted. You can work one-on-one, but there's somebody needing something, or there are kids arguing somewhere else. There are all those other things going on at the same time.' In addition, finding time for online data entry was noted in the teacher interview as one of the biggest challenges. TS Gold provides quick tips on how to save time (TS Gold online: Time-saving features n.d., 3): 'Enter documentation and preliminary levels each day instead of waiting until the end of a week or checkpoint period. Staying current with data entry will help make the end of each checkpoint period stress-free.' Although supposedly simple, the saving tips are based on the unspoken assumption that teachers should 'make' additional time daily, during a break, after class or at home. I learned from both classroom observations and teacher interviews that although teachers worked very hard to 'make' additional time by eating lunch while working on a computer and staying after school, it was not always successful, resulting in constant feelings of getting behind. Not successfully making time daily, teachers described the checkpoint deadline as 'panicking' or 'killing us' and felt a greater need for substitutes so that they could be out of their classroom to complete the assessment requirements.

Reliance on external expertise: technology as a solution to use or a problem to solve?

Teachers were naturally drawn to navigating built-in TS Gold online tools to learn how to 'save' their time in collecting assessment data during a typical school day. Time saving is the biggest promise that assessment technology claims to offer, saying 'spend less time at the computer and more time with children' (TS Gold online: Time-saving features n.d., 1). However, taking advantage of the supposedly time-saving features of technology means substantial investment of teacher time and effortful learning in (re)skilling themselves to do assessment in TS Gold ways. One teacher said, 'with the [TS] Gold assessment, we've been really changing how we observe or write the notes down.'

TS Gold was initially the reason teachers felt pressed for time as it created new demands that required enormous amount of time and energy being spent on learning about the tool, gathering overwhelming evidence, and online data entry. Ironically, teachers were asked or felt the need to use TS Gold more often as it supposedly promised to offer a quick solution to the problems that it actually created. As teachers turned to TS Gold as a solution, it entailed changes in assessment practice, curriculum and pedagogical decision, which could be summed up in the concept of 'teaching to the data collection', meaning that mounting pressure for data collection provided the main driving force for teachers to plan and organize classroom activities around TS Gold (Kim 2016, 98).

As the TS Gold demands a broad range of developmental and learning outcomes, teachers were rushed to cover an enormous amount of curriculum material with focus on breadth over depth. Most often, the greater pressure for successful data collection guided teachers' curriculum decision as one teacher explained:

> The way that we do the small group planning is we look at the [TS Gold] objectives to see which we're still needing to observe because we have to take the anecdotal notes on all the students to enter in the computer. So we look at where the needs are for that, and then we try to plan one objective for each small group.

In this way, small group activities are restricted to certain types, with little or no opportunities for aesthetic and creativity expression unless it is explicitly linked to or combined with TS Gold objectives and dimensions, especially in language, literacy and math. In addition, during free play time, teachers intentionally guided children one at a time to do certain activities with teacher-selected materials that could generate TS Gold data. One teacher described this change, 'I guess we do tend to lean more towards the academic stuff.'

Sources of intensification: working through teachers themselves and a local context

As teachers' temporal perceptions and experience with performing TS Gold tasks certainly indicated, TS Gold-imposed assessment burden was one of the biggest challenges in their work and major sources of some negative emotions such as anxiety, stress, and tiredness. In their 'performance of compliance' (Sims and Waniganayake 2015, 333), Head Start teachers were too vulnerable to resist it in a current high stake accountability environment (Bullough et al. 2014). Teachers corroborated: 'It has to be done. I mean it's not an option. It's required for performance standards … . It's required for a job. It's a required activity.'

TS Gold online tools such as 'login history for a user,' and 'assessment status report' allowed supervisors to monitor teachers' online activity and their progress in data entry as one child development specialist noted:

> It makes things easier because I don't have to wait until the checkpoint to get data about what's happening in the classrooms. At any time, I can jump on and kind check how many pieces of documentation have been entered, when is the last time the teacher actually logged on … . It's much easier in that aspect for monitoring and being able to get a feel.

Paradoxically, most participating teachers made optimistic comments about TS Gold itself as necessarily beneficial for children and teachers in the long run. In other words, assessment requirements intensify teachers' work, not just as external pressures and for compliance purposes only, but at the same time through creating a strong desire among teachers to be recognized as competent professionals with strong commitment to do the best for their children. With ongoing controversy over the impact of Head Start programs in the USA, Head Start children's learning outcomes have always been under public scrutiny, including the National Reporting System (NRS), the first nationwide, standardized tests of all 4- and 5-year-old Head Start children on a limited set of academic skills (Paulsell et al. 2006). In this context, the idea that teachers have multiple observations of children across all developmental and learning domains, following the natural flow of their daily routine is

considered best for providing a 'true' picture of children, which appears to be a sign for increased autonomy, flexibility, and empowerment for local programs and individual teachers. Therefore, while striving to streamline their data collection efforts, teachers concurrently showed their professional commitment to continue their ongoing observation until they collected the evidence to demonstrate children's progress to the next higher level. In establishing themselves as 'ongoing' assessors in their continuous search for 'right' observation, teachers were bound by a pre-determined TS Gold development and learning continuum.

It is worth noting here that teachers constantly placed themselves in an imaginary future that would be improved and necessarily better than their present work conditions, with great emphasis on the role of their learning. Below are several examples from teacher interviews: 'Once I learn, then I'll be able to be better at it'; 'I know more about it, I think it'll be really helpful next year for using those tools'; 'It's hard for me, but I understand it and I think it's going to be so much easier next year.' As Costas and Grey (2014) theorize the concept of the 'future temporality of disciplinary power' (p. 909), 'the present is inherently constructed as the basis for preparing and improving oneself towards this future' and thus 'sacrifices in the present are regarded as essential for and largely understood through their future prospect' (p. 910). Therefore, intensification of teachers' learning role is not only brought about by external mandates in the form of pressure, expectation, or encouragement from their supervisors, but it also works through teachers themselves as self- disciplined professionals.

In addition, Head Start teachers and child development specialists understood TS Gold, particularly its online data entry requirements, as an extension of a documentation that they had always been doing to provide evidence of their work, which then served to justify the work intensification. One child development specialist said: 'Because we need proof. You couldn't just score kids one day and say everybody is at a 5[level], [and say] my job is done. They need to be held accountable for that.' Similarly, teachers believed that it could serve their needs to get recognition for their work. Below was one typical response among teachers when asked about their experience with documentation in general, including online data entry:

> If you and I were talking, but I don't write it someplace …. Then, that conversation never happened. Even though you and I know we did it, if it's not written down on paper, there's no way to prove that we've done this, and since, for Head Start, we have to report back to the Federal government. If it isn't written down, it didn't happen because you don't have anything to show anybody … I want to get credit for the good things that I'm doing …. People need to know how much we are doing. Um, [it] drives me nuts on how much we have to do and how much that has increased over the years, but I also see how quality has increased because of this.

Discussion and limitation

The findings of this research study show that demands for the production of ongoing child assessment data intensifies early childhood teachers' work in the USA, indicating global trends of 'data-based accountability' that Roberts-Holmes and Bradbury (2016) described in the England context or 'paper warfare' that Australian teachers experience in the 'culture of new managerialism' (O'Brien and Down 2002, 123). As Ballet and his

colleagues (Ballet and Kelchtermans 2008, 2009) refined Apple's intensification thesis, teachers' experience of intensification does not just come from external accountability pressures only. Rather, the evidence from this research study suggests that internal sources such as individual teachers' commitment, a strong desire for recognition as competent professionals, and 'willingness to change' to do the very best for their children (Ballet and Kelchtermans 2008, 47) contribute to the work intensification. Most often, education reforms construct an increase in teacher responsibilities and work as inevitable for establishing teachers' professional status with production of knowledge about what a good teacher is/does, which then cultivates a 'passion for excellence' (Ball 2003, 2015) in teachers themselves to successfully complete new tasks.

In addition, the findings of this research study suggest that assessment technology further complicates the work intensification process. As a 'sociotechnical system', TS Gold is 'loaded with values, interests and assumptions that shape and limit' the images of young children, best practice, and teachers' roles (Selwyn 2015, 69). TS Gold limited the role of teachers to 'assessor as technician', or at the best, 'assessor as the interpreter of the law' in Davison (2004, 325)'s terms. Teachers repeated the 'effortful' process to understand TS Gold objectives, dimensions and indicators and collect the right data until 'effortful' eventually became 'automatic.' Greater emphasis was placed on the agreement with the 'master ratings' determined by external experts (e.g. TS Gold developers) for 'accuracy of teachers' judgments' (A guide to TS Gold: Interrater Reliability Certification 2012, 3). Therefore, TS Gold imposes the view of 'mechanistic, procedural, [and] seemingly universalized assessment process' in which inconsistencies are considered a 'threat to reliability' and thus needs to be resolved by appropriate training and practice (Davison 2004, 324). TS Gold seemingly grants teachers a high degree of trust and autonomy as the best person to know the children in their classrooms. However, professional judgement of teachers is seen to be 'trusted' or defensible only when teachers can provide written proof. More importantly, if it is not based on externally imposed, TS Gold criteria, teachers' personal/professional judgment is simply disregarded as 'guesswork.'

Furthermore, TS Gold was integrated into the pre-existing hierarchical structure, culture of compliance, and documentation in Head Start. With 'permanent visibility' of online work, TS Gold tightened the 'managerial control' (Selwyn 2011, 473) of teachers' work, as teachers themselves internalized the norms associated with TS Gold and monitored themselves.

With a small sample of teachers, this study has not sought to generalize the findings beyond the experiences of research participants. However, in order to make the findings potentially transferable to other settings in understanding the pressures that teachers currently face with an online assessment tool, I provide the rich description of teachers' viewpoints. Although this research study was conducted in 2011–2012, the findings still provide insights into understanding the broader range of consequences of utilizing assessment technology and the implication for teacher work intensification as not much work has been published in regard to this topic in the field of early childhood education. According to 2017 Head Start Program Information Report (Office of Head Start 2018), more than half of all Head Start programs across the country (62.98%) still use TS Gold. In addition, most of the Head Start programs (99.25%) use online data management system provided by for-profit firms (Office of Head Start 2018). With increasing emphasis

on data-based performativity in the U.S. and internationally, it seems likely that the number of early childhood programs that rely on online assessment solutions will continue to grow. Therefore, longitudinal studies would be beneficial in tracing the ongoing effects of using commercial online assessment systems.

Disclosure statement

No potential conflict of interest was reported by the author.

References

A guide to TS Gold: Interrater Reliability Certification. 2012. Teaching Strategies Gold, Inc. https://www2.teachingstrategies.com/content/GOLD/helpitems/IRRGuide.pdf.

Apple, Michael W. 1986. *Teachers and Texts*. New York: Routledge.

Balajthy, E. 2007. "Technology and Current Reading/Literacy Assessment Strategies." *The Reading Teacher* 61 (3): 240–247.

Ball, S. J. 2003. "The Teacher's Soul and the Terrors of Performativity." *Journal of Education Policy* 18 (2): 215–228.

Ballet, K., and G. Kelchtermans. 2008. "Workload and Willingness to Change: Disentangling the Experience of Intensification." *Journal of Curriculum Studies* 40 (1): 47–67.

Ballet, K., and G. Kelchtermans. 2009. "Struggling with Workload: Primary Teachers' Experience of Intensification." *Teaching and Teacher Education* 25: 1150–1157.

Bown, K., and J. Sumsion. 2007. "Voices from the Other Side of the Fence: Early Childhood Teachers' Experiences with Mandatory Regulatory Requirements." *Contemporary Issues in Early Childhood* 8 (1): 30–49.

Bradbury, A. 2012. "'I Feel Absolutely Incompetent': Professionalism, Policy and Early Childhood Teachers." *Contemporary Issues in Early Childhood* 13 (3): 175–186.

Bradbury, A. 2014. "Early Childhood Assessment: Observation, Teacher 'Knowledge' and the Production of Attainment Data in Early Years Settings." *Comparative Education* 50 (3): 322–339.

Brown, C. P., and N. B. Weber. 2016. "Struggling to Overcome the State's Prescription for Practice: A Study of a Sample of Early Educators' Professional Development and Action Research Projects in a High-Stakes Teaching Context." *Journal of Teacher Education* 67 (3): 183–202.

Bryson, V. 2007. *Gender and the Politics of Time: Feminist Theory and Contemporary Debates*. Bristol, UK: Policy Press.

Bullough, R. V., K. M. Hall-Kenyon, K. L. MacKay, and E. Marshall. 2014. "Head Start and the Intensification of Teaching in Early Childhood Education." *Teaching and Teacher Education* 37: 55–63.

Buzhardt, J., C. R. Greenwood, D. Walker, R. Anderson, W. Howard, and J. J. Carta. 2011. "Effects of Web-Based Support on Early Head Start Home Visitors' Use of Evidence-Based Intervention Decision Making and Growth in Children's Expressive Communication." *NHSA Dialog* 14 (3): 121–146.

Costas, J., and C. Grey. 2014. "The Temporality of Power and the Power of Temporality: Imaginary Future Selves in Professional Service Firms." *Organization Studies* 35 (6): 909–937.

Davison, C. 2004. "The Contradictory Culture of Teacher-Based Assessment: ESL Teacher Assessment Practices in Australian and Hong Kong Secondary Schools." *Language Testing* 21 (3): 305–334.

Derrick-Mills, D. 2015. *Understanding Data Use for Continuous Quality Improvement in Head Start: Preliminary Findings*. Washington, DC: U.S. Department of Health and Human Services. http://www.urban.org/research/publication/understanding-data-use-continuous-quality-improvement-head-start.

Derrick-Mills, T., M. K. Winkler, O. Healy, and E. Greenberg. 2015. *A Resource Guide for Head Start Programs: Moving Beyond a Culture of Compliance to a Culture of Continuous*

Improvement. (OPRE Report 2015-02). Washington, DC: U.S. Department of Health and Human Services.
Easthope, C., and G. Easthope. 2000. "Intensification, Extension and Complexity of Teachers' Workload." *British Journal of Sociology of Education* 21: 43–58.
Fenwick, T., and R. Edwards. 2016. "Exploring the Impact of Digital Technologies on Professional Responsibilities and Education." *European Educational Research Journal* 15 (1): 117–131.
Goldstein, J., and J. K. Flake. 2016. "Towards a Framework for the Validation of Early Childhood Assessment Systems." *Educational Assessment, Evaluation and Accountability* 28 (3): 273–293.
Isaacs, J., H. Sandstrom, M. Rohacek, C. Lowenstein, O. Healy, and M. Gearing. 2015. *How Head Start Grantees Set and Use School Readiness Goals*. Washington, DC: U.S. Department of Health and Human Services.
Kilderry, A. 2015. "The Intensification of Performativity in Early Childhood Education." *Journal of Curriculum Studies* 47 (5): 633–652.
Kim, Koeun. 2016. "Teaching to the Data Collection? (Un)Intended Consequences of Online Child Assessment System, Teaching Strategies Gold." *Global Studies of Childhood* 6 (1): 98–112.
Ledoux, M. W., N. N. Yoder, and B. Hanes. 2010. "The Use of Personal Data Assistants in Early Childhood Assessment." *Computers in the Schools* 27 (2): 132–144.
Lingard, B., W. Martino, and G. Rezai-Rashti. 2013. "Testing Regimes, Accountabilities and Education Policy: Commensurate Global and National Developments." *Journal of Education Policy* 28 (5): 539–556.
Nuttall, J., L. Thomas, and E. Wood. 2014. "Travelling Policy Reforms Reconfiguring the Work of Early Childhood Educators in Australia." *Globalisation, Societies and Education* 12 (3): 358–372.
O'Brien, P., and B. Down. 2002. "What Are Teachers Saying About New Managerialism?" *Journal of Education Enquiry* 3 (1). https://www.ojs.unisa.edu.au/index.php/EDEQ/article/view/553/423.
Office of Head Start. 2011. *Head Start Performance Standards*. Washington, DC: U.S. Department of Health and Human Services. https://eclkc.ohs.acf.hhs.gov/policy.
Office of Head Start. 2018. *Head Start Program Information Report*. https://hses.ohs.acf.hhs.gov/pir/.
Osgood, J. 2006. "Deconstructing Professionalism in Early Childhood Education: Resisting the Regulatory Gaze." *Contemporary Issues in Early Childhood* 7 (1): 5–14.
Paulsell, D., A. Gordon, R. Nogales, P. Del Grosso, S. Sprachman, and L. Tarullo. 2006. *Implementation of the Head Start National Reporting System: Spring 2005 Update*. Mathematica Policy Research, Inc. http://files.eric.ed.gov/fulltext/ED498080.pdf.
Roberts-Holmes, G. 2015. "The 'Datafication' of Early Years Pedagogy: 'If the Teaching is Good, the Data should be Good and if there's Bad Teaching, there is Bad Data'." *Journal of Education Policy* 30 (3): 302–315.
Roberts-Holmes, G., and A. Bradbury. 2016. "Governance, Accountability and the Datafication of Early Years Education in England." *British Educational Research Journal* 42 (4): 600–613.
Selwyn, N. 2011. "It's All about Standardization: Exploring the Digital (Re)configuration of School Management and Administration." *Cambridge Journal of Education* 41 (4): 473–488.
Selwyn, N. 2015. "Data Entry: Towards the Critical Study of Digital Data and Education." *Learning, Media and Technology* 40 (1): 64–82.
Selwyn, N., M. Henderson, and S. H. Chao. 2015. "Exploring the Role of Digital Data in Contemporary Schools and Schooling—'200,000 Lines in an Excel Spreadsheet'." *British Educational Research Journal* 41 (5): 767–781.
Selwyn, N., S. Nemorin, and N. Johnson. 2017. "High-tech, Hard Work: An Investigation of Teachers' Work in the Digital Age." *Learning, Media and Technology* 42 (4): 390–405.
Shaffer, D. W., P. Nash, and A. R. Ruis. 2015. "Technology and the New Professionalization of Teaching." *Teachers College Record* 117 (12): 1–30.
Sims, M., and M. Waniganayake. 2015. "The Performance of Compliance in Early Childhood: Neoliberalism and Nice Ladies." *Global Studies of Childhood* 5 (3): 333–345.
Tanyel, N., and H. T. Knopf. 2011. "Does Using Digital Media in Assessment Affect Teacher Practices in Infant and Toddler Classrooms?" *International Journal of Early Years Education* 19 (3–4): 297–311.

Teaching Strategies Gold Online: Time-Saving Features. n.d. Teaching Strategies Gold, Inc. https://gold.teachingstrategies.com/content/GOLD/helpitems/GOLD_Time_Saving_Features.pdf.

Towers, I., L. Duxbury, C. Higgins, and J. Thomas. 2006. "Time Thieves and Space Invaders: Technology, Work and the Organization." *Journal of Organizational Change Management* 19 (5): 593–618.

Valli, L., and B. Buese. 2007. "The Changing Roles of Teachers in an Era of High-stakes Accountability." *American Educational Research Journal* 44: 519–558.

Williamson, B. 2015. "Governing Software: Networks, Databases and Algorithmic Power in the Digital Governance of Public Education." *Learning, Media and Technology* 40 (1): 83–105.

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Evaluating innovation and navigating unseen boundaries: systems, processes and people

Alma Fleet[a], Katey De Gioia[a], Lorraine Madden[b] and Anthony Semann[b]

[a]Department of Educational Studies, Macquarie University, Sydney, NSW, Australia; [b]Semann & Slattery, Newtown, NSW, Australia

ABSTRACT

This paper illustrates an evaluation model emerging from Australian research. With reference to a range of contexts, its usefulness is demonstrated through application to two professional development initiatives designed to improve continuity of learning in the context of the transition to school. The model reconceptualises approaches to considering and reporting educational change. Responding to an Australian state government's recognition that aspects of the transition to school process necessitated changed dialogue between teachers and educators in prior to school and the formal school sector, the research team facilitated two eight-month multi-site explorations of core concepts, philosophies and practices. Ethics protocols were followed throughout the collaborative project. While this research acknowledges Wenger's (2009. 'Social learning capability: Four essays on innovation and learning in social systems.' *Social Innovation, Sociedade e Trabalho*. Booklets 12 – separate supplement, MTSS/GEP & EQUAL Portugal, Lisbon.) claim that 'social learning capability' is 'the most fundamental aspect of the communities of practice approach' [Omidvar, O., and R. Kislov. 2014. 'The evolution of the communities of practice approach: Toward knowledgeability in a landscape of practice- An interview with Etienne Wenger-Trayner.' *Journal of Management Inquiry* 23: 266–275., p.268], experience in this cross-sector initiative suggests that the intersections of relationship, facilitative infrastructure and 'spirals of engagement' [Fleet, A., and C. Patterson. 2001. 'Professional growth reconceptualised: Early childhood staff searching for meaning.' *Early Childhood Research and Practice* 3 (2), ERIC Number: ED458042.] are also key in educational change, and should thus be visible in an evaluation model.

KEYWORDS

Educational change; innovation evaluation; communities of practice; professional development; transition to school

Introduction

This research reconceptualises approaches to evaluating and reporting educational change using the vehicle of a transition to school initiative. It proposes a multi-faceted model that was developed in a particular Australian circumstance but which can be seen to be applicable in multiple evaluation contexts. Responding to the Victorian state government's recognition that aspects of the transition process would benefit from enhanced dialogue

CONTACT Alma Fleet alma.fleet@mq.edu.au Macquarie University, Sydney, NSW, Australia

between teachers and educators in prior to school settings and the school sector, the research team facilitated an eight-month multi-site exploration of core concepts, philosophies and practices related to transition to school processes, with a focus on improving continuity of learning for the state's school entrants. Ethics protocols were followed throughout the collaborative project. The model which is the focus of this paper both emerged from the data in these studies and evolved to encapsulate the evaluation. The model evolved from the study as a way to represent the complexity of the field of study; its origins are grounded in the data (it emerges from the experience of the data), but simultaneously it became a vehicle for interpretation.

Philosophical underpinnings

The work in this paper is grounded within a philosophical paradigm which:

- Values the adult learner engaged in communities of learners over time
- Foregrounds the voices of children in issues that concern them (UN 1989)
- Prioritises relationships in educational endeavours
- Pursues outcomes in responsive, flexible and cyclical ways
- Seeks richly complex layers of interpretation rather than linear simplicity in educational evaluation.

This complexity may be seen as emerging from a range of sources, generally under the umbrella of 'social constructivism'. Informally, these approaches might be conceptualised as 'multi-faceted systemic interactionism'. For example, in an interview with Omidvar and Kislov (2014), Wenger-Traynor, coming from an intersection of computer science and anthropology and positioning himself as a social learning theorist, notes that social or learning theory alone does not account for the evolving conceptualisation he brings to the construct of 'communities of practice' (which he evolved in collaboration with Lave, 1991) under the rubric of 'situated learning' and 'social learning capability' (2009). Wenger-Traynor states that conceptions of his work have shifted to a focus more on 'multiple communities and systems of practice … there is also an emphasis on learning capability as a characterization of those systems and the relationships that exist within those systems' (Omidvar and Kislov 2014, 270).

Further, recognising Fullan's (1999, 2000, 2001, 2005, 2007, 2008) theories of change (e.g. the importance of time and recognition of multiple influences), change leadership and implications from related research, potential for an innovative conceptualisation of educational change processes has evolved. Experience in this cross-sector initiative suggests that the intersections of relationship, facilitative infrastructure and 'spirals of engagement' (Fleet and Patterson 2001) are key in educational change.

The Australian educational context

In schools and prior to school settings there are national systems that are overseen by a relevant authority in each state and territory. The National Quality Framework (ACECQA n.d.) is the national system for the regulation and quality assessment of prior to school services which is also accompanied by a regulatory authority in each

state and territory. Australian schools come under a national system which includes the requirement to implement the Australian Curriculum (Foundation – Year 10)(ACARA n.d.). Relevant authorities in each state and territory make decisions about the implementation of the Australian curriculum in their schools according to regional priorities.

The example: why focus on transition?

In Australia, transition to school has been afforded growing attention in the past 10 years due to the increasing body of evidence demonstrating the importance of this period in the lives of young children and their families. Research shows that children's transition to school experience can impact on their social connections and their academic adjustment in the new educational setting (Dockett and Perry 2007; Dunlop and Fabian 2007; Organisation for Economic Co-operation and Development 2006), thus impacting on children's wellbeing and longer-term school achievement.

Previously transition to school has been considered in the realm of readiness for school, with children deemed as more or less ready for school in relation to their age and development (Farra, Goldfield, and Moore 2007). Dockett and Perry (2009), however, describe school readiness as 'contested and controversial' (p.20). They argue readiness means different things to different people. More recently, the notion of readiness has been extended to include all key stakeholders. This includes children, families, teachers and educators in prior to school settings and in schools, as well as the broader community (Farra, Goldfield, and Moore 2007).

Rethinking transition to school within this broader context aligns with Bronfenbrenner's ecological systems model (1979 & 1986 as cited in Bronfenbrenner and Morris 2006). This model recognises the layers of influence impacting on a child, beginning with their immediate family and extending out to people and organisations within the child's immediate experience, as well as the interactions between them. This includes teachers and educators in prior to school settings and schools (Dunlop & Fabian, 2002, cited in Dockett and Perry 2006; Smith et al. 2010). The work of Rimm-Kaufman and Pianta (2000) builds on Bronfenbrenner's work and highlights the significance of relational factors that can positively and negatively impact transition to school. Further, the acknowledgement of context and the fluidity of relationships over time also come into play). These can impact on children's relationships in school (see for example Joerdens 2014). Understanding contexts enables recognising differences in the supports required for different communities. The Secretariat of Aboriginal and Islander Child Care (SNAICC) report (2013) identified the need for transition to school processes that would provide security, foster inclusion into school communities and increase opportunities for children's success at school. The report acknowledged,

> Evidence demonstrates that Aboriginal and Torres Strait Islander children and families can face particular challenges through the transition process, largely due to higher levels of disadvantage, lower participation in early childhood services, and a lack of cultural competence within many mainstream schools. (p.41)

Teacher knowledge and beliefs about processes for transitions and educational experiences in the opposite educational setting can impact on opportunities afforded to children in each of these spaces (Petriwskyj 2013). Myths and misconceptions about expectations

can create barriers to effective transition to school processes (Dockett and Perry 2007). Conversely, shared knowledge and shared understanding of pedagogy and curricula enables teachers to provide environments where a flow of learning is more likely to occur. Furthermore, ongoing, sustainable relationships allow for conversations about children's continuity of learning (Dockett and Perry 2014; Margetts and Kienig 2013).

Children's continuity of learning is bolstered through a shared understanding that the education afforded to children is built on their existing knowledge. In achieving this, teachers and educators across educational settings must commit to work outside of their traditional boundaries and work in collaboration with other professionals. A commitment to dialogue and a deeper understanding of sites of education (prior to school settings and schools) is critical. Prior to school teachers and educators must remain open and curious to understand the ways in which teaching and learning take place in school settings. Conversely, school teachers and leaders must remain committed to understanding the ways in which teaching and learning takes place in prior to school settings.

The role of professional growth in educational change: background for the initiative

Having set the Australian context and established the importance of the processes associated with transition to school, we turn to the role of professional development alongside two educational change initiatives. This information is provided to enable readers to visualise the locus of the subsequent situated model for evaluating educational change.

Ongoing professional learning across the education sector is recognised as a core component of professional practice (Edwards and Nuttall 2009; Groundwater-Smith and Campbell 2009). It is particularly valuable when supporting teachers and educators who are working with young children and their families across the potentially complex juncture between the prior to school and beginning to school experience – that period known as 'the transition to school'. Given the importance of the early years and the potential for either positive or negative transition to school experiences, scaffolded support for both families and teachers and educators can yield rich benefits for children and the adults responsible for them.

Desimone's conceptual paper (2009, 183) suggests that the *critical features* of Professional Development (PD), rather than the *type/structure* are core to effectiveness. While not definitive, there is clear evidence that the characteristics of PD that increase teacher knowledge and skills while assisting in improving practice and contributing to student outcomes relate to: content focus, active learning, coherence, duration, and collective participation. These key characteristics of effective professional development can be mapped against the components of the illustrative initiatives as follows:

Fuligni et al. (2009) also note the importance of each setting's context in exploring the associations between professional development and the beliefs and practices of teachers and educators. These findings reflect what is widely known about characteristics of adult learning. As Helterbarn and Fennimore stated (2004):

> It does not make sense to spend time and resources on professional educational opportunities unless they are viewed by the recipients as being important and helpful … professional development must help teachers to make sense of the increasing demands of accountability and to

> respond to those demands in ways that truly support the growth and learning of children. Such an effort is particularly important for those who teach very young children (p.267).

Foreshadowing Desimone's evidence-based recommendations (2009), they then continue: 'It would appear then that excellent professional development must recognize and strengthen authentic teacher voice while linking that voice to genuine opportunities to improve practice in areas of genuine importance and interest' (p.268). These areas would thus seem to be germane to any evaluation exercise.

Methodology

The following situated learning model of educational change was developed out of the first transition to school professional development initiative (Figure 1). It was then useful in conceptualising and interpreting the second professional development initiative designed to improve continuity of learning in the context of transition to school (Figure 2). Both initiatives were funded by the Victorian Department of Education and Training (DET) and conducted in Victoria, Australia. These initiatives built on previous work undertaken by the Victorian DET that identified the importance of reciprocal visits and joint professional learning in supporting a positive transition to school for children and families (Astbury 2009). The situated learning model of educational change (Fleet et al. 2015) was developed by the research team to be used as an evaluation framework, incorporating elements of the relational agency framework (Edwards 2012) as required by the state funding body. From these perspectives, professionals are viewed to possess relational agency when they are able to see others' perspectives, to work together to build common knowledge, develop shared goals, and to understand and subscribe to strategies to ensure effective implementation for achieving the goals.

A case study design was employed in both projects. Case study methodology allows for an in-depth study of the phenomenon (Yin 2009, 2011); in this instance the inter-

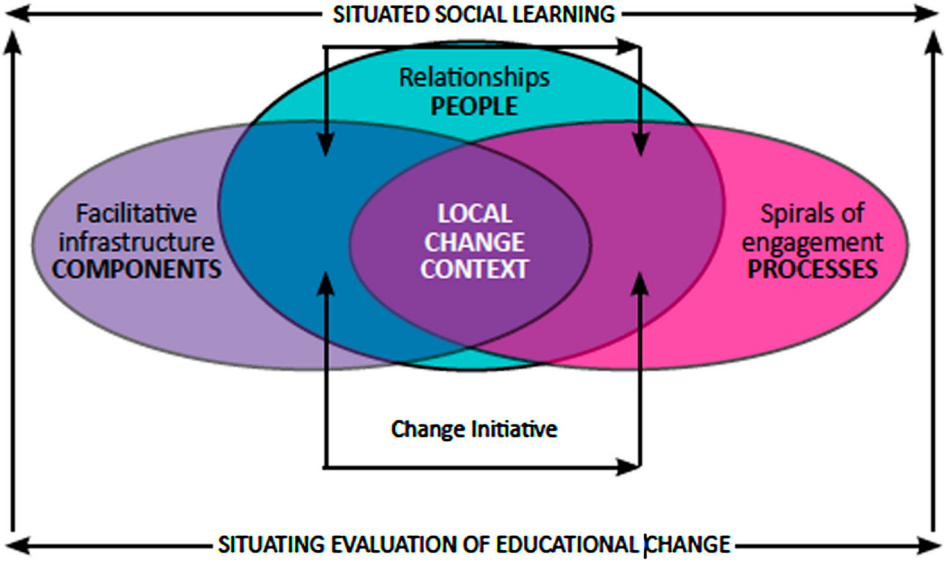

Figure 1. Situated model for evaluating educational change: General applicability (Fleet et al. 2015).

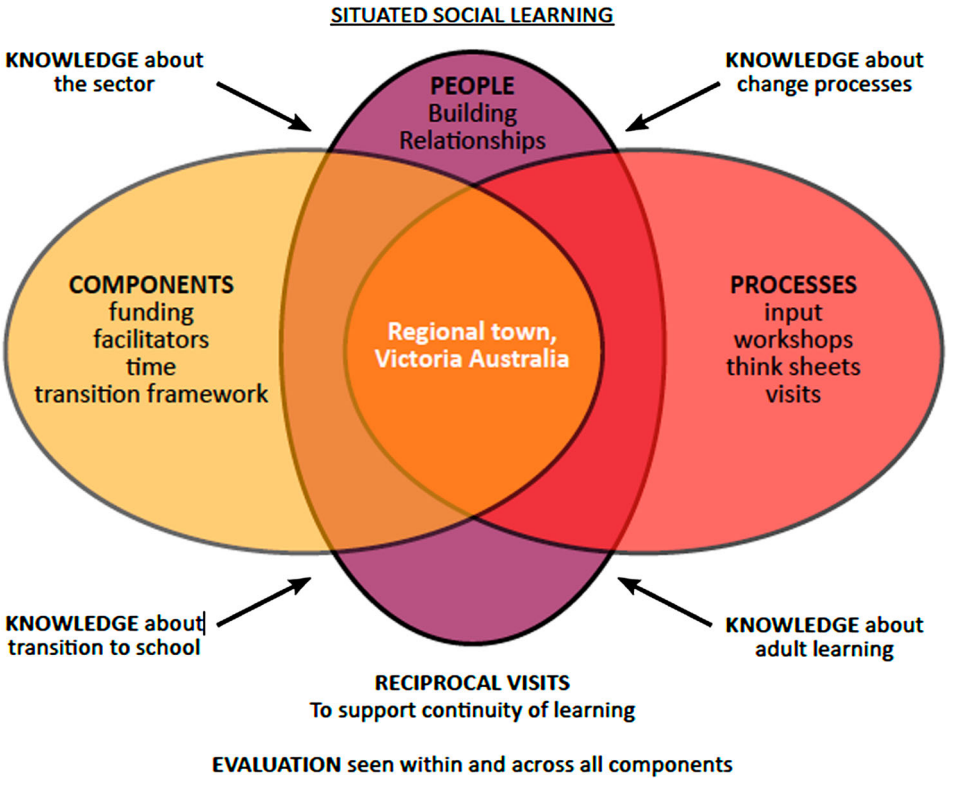

Figure 2. Situated learning model of educational change: Fostering reciprocal visits to support Koorie children and families entering school (Fleet et al. 2015).

relationships occurring during transition to school processes, within the specific community context. Ethics protocols were approved through Macquarie University and the Victorian DET. While there were institutional-based (school and prior to school settings) requirements for participating in the professional development and relationship-building components of the initiatives, participants could elect whether they chose to be involved in the associated research. All participants elected to be involved in both components.

Qualitative methodology was used for data collection, incorporating reflection sheets completed by participants, final evaluation questionnaires and reflective journals maintained by the project team. Data were analysed to identify key themes and processes that would refine the development of the evaluation framework and thereby contribute findings for the study.

The initial project was undertaken by Semann and Slattery and the Institute of Early Childhood, Macquarie University from October 2014 through June 2015 (Semann et al. 2015). Focus sites included a regional Victorian city and a high growth area in an outer suburb of Melbourne, Victoria. The project was facilitated by two external facilitators in each site through eight half-day professional gatherings once a month over eight months, attended by the prior to school and school teachers and some executive and support staff. Each session provided opportunities for participants to develop an understanding of their counterparts' experiences,e.g. sharing of curriculum frameworks, documentation requirements, working with families, processes for transition to school and

children's voices in the transition to school. In addition, the 21 participants took part in reciprocal visits to different educational settings. Eleven people participated in one site, including five teachers from prior to school settings and six from schools. Participants in the other site included four teachers from prior to school settings and six from schools.

The second project was facilitated by Semann and Slattery, the Institute of Early Childhood Macquarie University and the Boon Wurrung Foundation between October 2015 and May 2016 (Semann et al. 2016). In this instance, two Victorian regional sites were selected due to the high numbers of Koorie children and families in these areas, one a regional town and one a regional city. The project team replicated the approach taken in the initial project, with some differences. In this instance, the project was facilitated by three external facilitators, including a senior Aboriginal leader, through six half-day professional gatherings held once a month over six months. Participants ($n = 44$) also took part in reciprocal visits to different educational settings. Twenty-one people attended in one site, including eight teachers from prior to school settings and eight from schools, as well as five Koorie Engagement Support Officers (KESOs) and Koorie Preschool Assistants (KPSAs). Twenty-three people attended in the other site, including three from prior to school settings and eight from schools, as well as five KESOs and KPSAs. In this site, seven people from two additional services were invited to join the project due to their significant role within the community in providing support, information and advice to Koorie people and their families.

The initiatives were found to strengthen relationships and resulted in more open communication between teachers and educators in prior to school settings and in schools. They also supported greater knowledge of and respect for pedagogical practice across educational settings, resulting in increased understanding of the continuity of children's learning.

An additional feature of the second project was the provision of joint professional development open to local communities as well as schools and prior to school services. Three professional development sessions were held in both sites and attended by a total of 159 people. Topic areas (e.g. Strengthening community connections; Embedding Aboriginal perspectives, Mathematical understandings for young children) were informed by participant responses to initial reflection sheets and conversations in early professional gatherings.

Internationally, professional development is being seen increasingly in the frame of 'Professional Learning' (Groundwater-Smith and Campbell 2009) and is often associated with generating educational change (Fleet and Patterson 2009; Semann et al. 2015). It is clear that single-session interventions have limited value in engaging hearts and minds in educational priorities or changing professional practices. The innovations described here moved beyond a single session model, strengthening possibilities for the state-funded programme to progress its goals and improve transition to school practices. The strategies used reflect principles of adult learning, including the importance of active engagement with personally valuable content over time. Opportunities to contribute to these processes encourages participant agency, which is crucial in effecting educational change. The accompanying evaluation component enabled the project team to provide the funding body with participant feedback on the degree of success of this strategy. Funding could be determined as a limitation to these initiatives. The availability of

funding ensures 'buy in' through releasing teachers to attend sessions. This factor is acknowledged in the model through the section on 'infrastructure components'.

Evaluating educational change

Evaluations of educational change initiatives lend themselves to a form of situated/integrated evaluation for several reasons. First, they allow those leading and participating in change to track the movement of such initiatives in order to identify successes and challenges. Secondly, the introduction of evaluation makes it possible for change agents to share with others not necessarily involved directly with the process of change, the lessons learned which others might draw from for their own benefits in order to inform localised change initiatives. In undertaking such evaluations, Wilkes and Bligh (1999) suggest that educational evaluation is 'a systematic appraisal of the quality of teaching and learning' (p.1269). Further, it is suggested that in undertaking the evaluation of educational change initiatives it is worthwhile differentiating between monitoring, evaluating and assessing such initiatives. Wilkes and Bligh (1999) suggest that monitoring is centred on the gathering and recording of data, assessment refers to the quality measures related to the determination of performance, and evaluation applies during the monitoring process 'to place a value on an activity' (p.1269).

Inherent in evaluating educational change is the cycle of:

(1) identifying the activity being evaluated
(2) collecting and assessing evaluation data
(3) reflecting on and analysing the data collected and
(4) planning and preparing for further action.

Much akin to the cycle of practitioner inquiry (see Fleet, DeGioia, and Patterson 2017), this process of evaluation ensures that evaluation leads to further action. Moreover, the tools by which the evaluation can take place are diverse and the choice of suitability will vary across educational sites. Such tools may include questionnaires, focus groups, self-assessment, peer assessment, practitioner inquiry projects, and qualitative assessments to name but a few.

As explained above, this model for evaluating educational change initiatives was developed following a transition to school consultancy (Semann et al. 2015), and subsequently shared with the international community (Fleet et al. 2015). A second study provided an opportunity to affirm the relevance of this conceptualisation through application to the evaluation of another change initiative. The focus for this second consultancy was the fostering of reciprocal visits across the prior to school/school border in order to support the effective transition to school (particularly) for Koorie children and their families. The situated learning model for evaluating educational change (see Figure 1) (Fleet et al. 2015) was deemed a useful vehicle for consolidating and discussing the findings from this study, as represented in Figure 2. Key elements are presented below, as an illustrative example of the model in use. The following link connects to a page on the Department's website that includes all of their research about transition to school, including both of the reciprocal visits projects. http://www.education.vic.gov.au/about/research/Pages/transitionresearch.aspx

Table 1. Application of Desimone (2009) to illustrative examples.

Core features for PD effectiveness (Desimone 2009)	Aspects reflected in these initiatives
Content focus	Children's effective transition to school is of interest/relevance to all participants
Active learning	Workshop structure included hands-on consideration of elements in transition resources
Coherence (with teacher knowledge and beliefs)	Designed to enable participants with diverse perspectives to engage with the processes offered
Duration	As departmental focus had been on transition, these two projects both had cyclical components over approximately eight months each
Collective participation	Linking of prior to school and prior to school teachers and educators enabled engagement from previously siloed sectors

The elements of the model can be seen to incorporate the key characteristics identified by Desimone (2009) as central to professional development as indicated in Table 1: i.e. Content is evidenced in the Knowledges, Active learning is evidenced in the Processes, Coherence is made visible through the intersection of elements. Duration is identified as a key Component, and Collective participation is a central feature of the Situated Learning Model.

As highlighted by Fullan (2012), ' … systems have gone overboard on assessment as a solution'. In contrast, this model has multiple pieces of key information to assist providers, funders, and participants, reminding all stakeholders that professional learning takes place in social contexts. In discussing Communities of Practice, Omidvar and Kislov (2014, 266) note that learning 'is seen as a collective, relational, and social process'. Relationships among the people involved become critical (Edwards 2005, 2012). The highlighting of processes enables recognition of cyclical responsive engagement (Fleet and Patterson 2001, 2009), with the ability to incorporate feedback from participants as the project unfolded rather than being dependent on a predetermined transmitted programme to achieve project goals. This participatory pedagogy and consequent approach to evaluation reflects the well-grounded work of Formosinho and Pascal (2016, pxxiv):

> local, situated participatory pedagogies in action require professional journeys on assessment and evaluation that allow the central actors (teachers, children, parents) to be empowered in the processes of quality development and pedagogic evaluation, giving them voice in matters that concern them … .

This expanded model incorporates the pieces specific to the second project context being used for illustration. It specifies the knowledges necessary for contributing to, learning from and evaluating the initiative, as well as particular items present in the contributing elements. This provides specific examples of the components and processes embedded in the Reciprocal Visits project. Should an initiative be seen as less than successful, lack of knowledge in one of the 'feeder areas' may well be identified as a contributing factor.

In a related context, the model has since been used by one of the authors to evaluate and report on a pilot project for a local council in Victoria (report not available to the public). In this example, the change initiative was building the capacity of educators to support the inclusion of children with complex needs in selected kindergartens through a targeted professional learning programme facilitated over five months, and some of the subsections of the model were adapted accordingly (i.e. the necessary Knowledges to be foundational in that project). The Situated Learning Model provided a useful evaluation and reporting

frame that was informative and valued by the client. Further use of this model would enable generalizability and strengthen the applicability of the model to different situations.

Incorporating the situated learning model

Following (Table 2) is a tabular representation of data collected for the evaluation reports as applicable to both initiatives, using the Situated Learning Model as the reference point. It offers a short-hand or summary of key elements. It is essential to acknowledge that no piece can be evaluated in isolation from each of the others as they intersect to represent the rich complexity of change initiatives. An evaluation report can deal with these elements in narrative form, using summative graphs and tables where appropriate, with illustrative cases and vignettes for layering depth and experiential learning. Details are available, for example, on the report's websites:

Supporting reciprocal visits for transition to school (Koorie focus) http://www.education.vic.gov.au/Documents/childhood/professionals/learning/Transition%20to%20School%20%20Supporting%20Reciprocal%20Visits%20Koorie%20focus.pdf

Supporting reciprocal visits for transition to school http://www.education.vic.gov.au/Documents/about/research/transpositivestarttoschool.PDF

These reports make visible the knowledges that were evidenced in these change initiatives (as indicated in Table 2), as well as the key elements, under the headings of Infrastructure, People, Processes, and the Situated social learning as enacted through reciprocal visits across settings.

The pieces in Table 2 provide building blocks for multi-layered evaluation applicable to each element, including assessment of the presence or absence of each. Given this frame, evaluation needs to address all pieces of the model through multiple modalities and methodologies as demonstrated (for example) through:

- Facilitator reflective journals
- Participant surveys
- Records of participation
- Participant learning presentations
- Facilitated website video of change

in order to demonstrate the:

Table 2. Representation of nature of knowledges and elements in the Situated Learning Model.

Knowledges		
	About the sector	Shared across areas of responsibility
	About change processes	Made explicit through project experiences
	About adult learning	Used to shape initiatives
	About transition to school	Exchanged between facilitators and participants
Elements		
Infrastructure components	Funding	Essential to enable participation
	Facilitators	To scaffold processes
	Time	Enabling processing of new ideas
	Resources	Supporting learning
People	Building relationships	Agency of participants and multiple stakeholders
Processes	Input	Participant feedback re content
	Workshops	Think sheets prompting learning
Situated social learning	Reciprocal visits	Contextualised pedagogy

- Nature of engagement of participants
- Benefits to children and their families
- Usefulness to sector, and
- Satisfaction to funding body

Through the lens of situated social learning, this multi-layered approach to evaluation enables complexity to become visible rather than being overly simplified through single or narrow measures (e.g. for school achievement).

Discussion and implications

In a consideration of current philosophies of education, Margonis (2012) referred to the 'orchestration of a dynamic intersubjective context' and called on the sector to view 'educational events as social' (rather than individual) events (p.5). This orientation led him to promote a relational philosophy of education, which is evidenced in this study. As we have known since last century (Fullan 1999, 59), 'Valuing reciprocity is of critical importance'; thus demonstrations of reciprocity should be evidenced in any evaluation report.

The Situated Learning model was designed as part of a reconceptualisation of evaluating and reporting educational change using the vehicle of transition to school initiatives. Consideration of this representation can also assist at the stage of project design, as key components and intersections are foregrounded. Findings that arise from the use of the model and a consideration of the points raised here include:

- the importance of professional learning/professional development (PD) and the key features / components of effective PD to promote positive change
- the importance of evaluation in designing educational change initiatives
- the interrelatedness and/or intersection of the key components of the model (as opposed to viewing them in isolation) and the impact on outcomes
- the voice/agency of the learner (participant) in evaluating educational change initiatives
- the potential application of the model across educational contexts.

Broadly, this Situated Model for Evaluating Educational Change ('Situated Learning Model') highlights the intersections of People, Processes, and Facilitative infrastructure components, considering situated social learning, potentially through spirals of engagement. Such intersections are dependent, however, on the foundational and/or incorporated knowledges related to the local context and focus of the change initiative, as well as knowledge regarding adult learning, and potentially, of change processes themselves.

> Things that are "certain" on paper mask a more complex reality, and higher standards and increased accountability simply generate more paper; they do not address the fact that we do not all do and see things in the same way. (Lubeck 1998, 290)

Some of these complexities can be seen as provocations throughout the processes of educational change which are made more visible through the interwoven elements of this model. These provocations can be demonstrated through this evaluation process to have practical applicability for both policy development and pedagogical initiatives.

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References

ACARA [Australian Curriculum, Assessment and Reporting Authority]. n.d. "Implementation of the Australian Curriculum." Accessed April 4, 2017. http://www.australiancurriculum.edu.au/overview/implementation-of-the-australian-curriculum.

ACECQA [Australian Children's Education & Care Quality Authority]. n.d. "National Quality Framework." Accessed April 4, 2107. http://www.acecqa.gov.au/national-quality-framework.

Astbury, B. 2009. *Evaluation of Transition: A Positive Start to Chool Ilots*. Centre for Program Evaluation, The University of Melbourne. Accessed May 19, 2016. http://www.education.vic.gov.au/Documents/about/research/transitionpilotevaluation.pdf.

Bronfenbrenner, U., and P. A. Morris. 2006. "The Bioecological Model of Human Development." In *Theoretical Models of Human Development (Volume 1 of Handbook of Child Psychology)*, 6th ed., edited by R. M. Lerner, 793–828. Hoboken, NJ: Wiley.

Desimone, L. M. 2009. "Improving Impact Studies of Teachers' Professional Development: Toward Better Conceptualizations and Measures." *Educational Researcher* 38 (3): 181–199. doi:10.3102/0013189X08331140.

Dockett, S., and B. Perry. 2006. *Starting School: A Handbook for Early Childhood Educators*. Baulkham Hills: Pademelon Press.

Dockett, S., and B. Perry. 2007. *Transitions to School: Perceptions, Expectations, Experiences*. Sydney: University of New South Wales Press Ltd.

Dockett, S., and B. Perry. 2009. "Readiness for School: A Relational Construct." *Australian Journal of Early Childhood* 34 (1): 20–26.

Dockett, S., and B. Perry. 2014. *Continuity of Learning: A Resource to Support Effective Transition to School and School age Care*. Canberra, ACT: Australian Government Department of Education.

Dunlop, A.-W., and H. Fabian, eds. 2007. *Informing Transitions in the Early Years: Research, Policy and Practice*. London: OUP/ McGraw Hill.

Edwards, A. 2005. "Relational Agency: Learning to be a Resourceful Practitioner." *International Journal of Educational Research* 43 (3): 168–182.

Edwards, A. 2012. "The Role of Common Knowledge in Achieving Collaboration Across Practices." *Learning, Culture and Social Interaction* 1: 22–32. doi:10.1016/j.lcsi.2012.03.003.

Edwards, S., and J. Nuttall, eds. 2009. *Professional Learning in Early Childhood Settings*. Rotterdam: Sense.

Farra, E., S. Goldfield, and T. Moore. 2007. *School Readiness*. Prepared for the Australian Research Alliance for Children and Youth. Accessed July 23, 2016. http://www.transitiontoschool.com.au/downloads/research/TOP_School_Readiness_2007.pdf.

Fleet, A., K. DeGioia, and C. Patterson. 2017. *Engaging with Educational Change: Voices of Practitioner Inquiry*. London: Bloomsbury.

Fleet, A., K. De Gioia, L. Madden, and A. Semann. 2015. "Educational Change at the Borders: Through the Lens of Situated Social Learning." Paper presented at the European early childhood education research association conference, Barcelona, Spain, September.

Fleet, A., and C. Patterson. 2001. "Professional Growth Reconceptualised: Early Childhood Staff Searching for Meaning." *Early Childhood Research and Practice* 3 (2), ERIC Number: ED458042.

Fleet, A., and C. Patterson. 2009. "A Timescape: Personal Narratives – Professional Spaces." In *Professional Learning in Early Childhood Settings*, edited by S. Edwards, and J. Nuttall, 9–25. Rotterdam: Sense.

Formosinho, J., and C. Pascal, eds. 2016. *Assessment and Evaluation for Transformation in Early Childhood*. Oxon: Routledge with the European Early Childhood Education Research Association.

Fuligni, A. S., C. Howes, S. Cinisomo, and L. Karoly. 2009. "Diverse Pathways in Early Childhood Professional Development: An Exploration of Early Educators in Public Preschools, Private

Preschools, and Family Child Care Homes." *Early Education and Development* 20 (3): 507–526. doi:10.1080/10409280902783483.
Fullan, M. 1999. *Change Forces: The Sequel*. London: Falmer Press.
Fullan, M. 2000. "The Three Stories of Education Reform." *Phi Delta Kappan* 81 (*April*): 581–584.
Fullan, M. 2001. *The New Meaning of Educational Change*. 3rd ed. New York: Teachers College Press.
Fullan, M. 2005. *Leadership and Sustainability: System Thinkers in Action*. Thousand Oaks, CA: Corwin.
Fullan, M. 2007. *The New Meaning of Educational Change*. 4th ed. New York: Teachers College Press.
Fullan, M. 2008. *The six Secrets of Change: What the Best Leaders do to Help Their Organizations Survive and Thrive*. San Francisco: Jossey Bass.
Fullan, M. 2012. "Breakthrough: Deepening Pedagogical Improvement." In *Personalisation of Education in Contexts Policy Critique and Theories of Personal Improvement*, edited by M. E. Mincu, 19–25. Rotterdam: Sense.
Groundwater-Smith, S., and A. Campbell. 2009. *Connecting Inquiry and Professional Learning in Education: International Perspectives and Practical Solutions*. London: Routledge.
Helterbran, V. R., and B. S. Fennimore. 2004. "Collaborative Early Childhood Professional Development: Building From a Base of Teacher Investigation." *Early Childhood Education Journal* 31 (4): 267–271.
Joerdens, S. H. 2014. "'Belonging Means You Can go in': Children's Perspectives and Experiences of Membership of Kindergarten." *Australasian Journal of Early Childhood* 39 (1): 12–21.
'Koorie' is the group name for the people of Aboriginal heritage in the region
Lubeck, S. 1998. "Is Developmentally Appropriate Practice for Everyone?" *Childhood Education* 74 (5): 283–292.
Margetts, K., and A. Kienig, eds. 2013. *International Perspectives on Transition to School. Reconceptualising Policy and Practice*. London: Routledge.
Margonis, F. 2012. "In Pursuit of Respectful Teaching and Intellectually-Dynamic Social Fields." In *Making Sense of Education: Fifteen Contemporary Educational Theorists in Their Own Words*, edited by G. J. J. Biesta, 5–12. Dordrecht: Springer.
Omidvar, O., and R. Kislov. 2014. "The Evolution of the Communities of Practice Approach: Toward Knowledgeability in a Landscape of Practice- An Interview with Etienne Wenger-Trayner." *Journal of Management Inquiry* 23: 266–275.
Organisation for Economic Co-operation and Development. 2006. *Starting Strong II: Early Childhood Education and Care*. Accessed April 29. http://www.oecd.org/newsroom/37425999.pdf.
Petriwskyj, A. 2013. "Inclusion and Transition to School in Australia." In *International Perspectives on Transition to School. Reconceptualising Beliefs, Policy and Practice*, edited by K. Margetts, and A. Kienig, 33–42. New York, NY: Routledge.
Rimm-Kaufman, S. E., and R. C. Pianta. 2000. "An Ecological Perspective on the Transition to Kindergarten: A Theoretical Framework to Guide Empirical Research." *Journal of Applied Developmental Psychology* 21 (5): 491–511.
Semann, A., L. Madden, A. Fleet, and K. De Gioia. 2015. *Transition: A Positive Start to School. Supporting Reciprocal Visits*. Report prepared for the Victorian Department of Education and Training (DET). (June).
Semann, A., L. Madden, H. Sukkar, C. Briggs, A. Fleet, and K. De Gioia. 2016. *Transition: A Positive Start to School. Supporting Reciprocal Visits (Koorie Focus)*. Report prepared for the Victorian Department of Education and Training.
Smith, K., C. Kotsanas, A. Farrelly, and K. Alexander. 2010. *Research into Practices to Support a Positive Start to School*. Report prepared for the Victorian Department of Education and Early Childhood Development. Accessed July 23, 2016. http://www.education.vic.gov.au/Documents/about/research/pospracmelbuni.pdf.
SNAICC. 2013. "Supporting Trasntion to School for Aboriginal and Torres Strait Islander Children: What it Means and What Works?" Canberra: Author. Accessed March 28, 2017.

http://www.snaicc.org.au/supporting-trasintion-to-school-for-aboriginal-and-torres-strait-islander-children-2013-report/.

United Nations. 1989. *The United Nations Convention on the Rights of the Child*. New York: UNICEF.

Wenger, E. 2009. "Social Learning Capability: Four Essays on Innovation and Learning in Social Systems." *Social Innovation, Sociedade e Trabalho*. Booklets 12 – separate supplement, MTSS/GEP & EQUAL Portugal, Lisbon.

Wilkes, M., and J. Bligh. 1999. "Evaluating Educational Interventions." *British Medical Journal* 318 (7193): 1269–1272.

Yin, R. K. 2009. *Case Study Research. Designs and Methods*. 4th ed. Thousand Oakes: Sage.

Yin, R. K. 2011. *Applications of Case Study Research*. Thousand Oakes, CA: Sage.

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Is validation always valid? Cross-cultural complexities of standard-based instruments migrating out of their context

Giulia Pastori and Valentina Pagani

Department of Human Sciences, University of Milano-Bicocca, Milan, Italy

ABSTRACT

The international application of standard-based measures to assess ECEC quality raises crucial questions concerning the cultural complexities and the problematic validity of instruments migrating out of their cultural cradle; nevertheless the topic has received only marginal attention in the literature. This paper, which aims to address this gap, presents the research design and first findings from the Italian data collected within the European study CARE and a national extension, developing a critical-cultural approach to the Classroom Assessment Scoring System (CLASS) – a standard-based instrument to evaluate teacher–child interactions in U.S. classrooms. ECEC experts and teachers have been involved in focused discussions of CLASS recognizing elements of continuity, differences and disagreements and key-features of the teacher–child relationship not captured by the tool. Results offer interesting insights into a methodological reflection on the international use of standardized evaluation tools and into a theoretical reflection on 'universal vs. culture-related' views on education and quality.

KEYWORDS

Cross-cultural research; early childhood education; quality assessment; standardized instruments; validation process; professional reflexivity

Introduction

An increasing body of research has documented the crucial role played by ECEC attendance in improving children's cognitive and language development, socio-emotional competencies and academic success (European Commission/EACEA/Eurydice/Eurostat 2014; OECD 2013a; Sylva et al. 2004). The extent to which ECEC can lead to these positive benefits is closely linked to the quality of the ECEC provision: early childhood education matters, but only high-quality ECEC makes a difference (Pianta et al. 2009; Sylva et al. 2004; Vandell and Wolfe 2000).

The central role of quality raises an inevitable question: how can quality be measured? This issue has attracted educational researchers' attention, resulting in the development of several measures to assess it (Grammatikopoulos, Gregoriadis, and Zachopoulou 2015; Ishimine and Tayler 2014). Most of these measures are standard-based tools, often developed in the U.S.A., widely used at the international level.

The international application of these above-mentioned evaluation measures, despite offering some advantages (Grammatikopoulos, Gregoriadis, and Zachopoulou 2015),

CONTACT Giulia Pastori giulia.pastori@unimib.it Department of Human Sciences, University of Milano-Bicocca, Milan, Italy

may also lead to pitfalls, especially if the cultural complexities in the cross-cultural use of these instruments are not taken into account. Quality is a 'value- and cultural-based concept' (OECD 2013b, 35) and its conceptualization may vary across different cultural contexts (Dahlberg, Moss, and Pence 2007; Tobin 2005; Vandenbroeck and Peeters 2014). Although we are witness to the *globalization* of evaluation tools, this topic has received only marginal attention in the literature. A few recent studies (Ishimine and Tayler 2014) discuss and debate the problematic validity of instruments migrating out of their cultural cradle since they have a *cultural matrix*, which refers to specific scientific and cultural worlds (pedagogical representations, structural characteristics of the settings, cultural images of children …).

As we argue in this paper, rigorous critical reflection on cultural consistency and ecological validity is an essential condition when applying these measures internationally, in ECEC services in cultural contexts that are different from the original ones. While it is appropriate – on a scientific and *political* level – to recognize the continuity and size of agreements between different countries and cultures regarding quality in ECEC, it is just as important to emphasize the variety of local children's education cultures and to question a rigid universalistic idea of *educational standards of quality*. Uncritical use of assessment tools across cultures might lead to negative repercussions, both theoretically and practically: for example, not taking into account and not enhancing local features regarding the concept of quality; applying instruments perceived as distant and unshared by local professionals; promoting a homogenizing concept of ECEC quality in the long term, which is blind to the idea that 'the diversity of cultural ways within a nation and around the world is a resource for creativity and the future of humanity' (Rogoff 2003, 18).

This paper, which aims to address this gap, presents the research design and first findings from the Italian data collected within the European study CARE and a national extension, developing a critical-cultural approach to the Classroom Assessment Scoring System (CLASS) – a standard-based instrument to evaluate teacher–child interactions in U.S. classrooms (CLASS Toddler and Pre-K versions – La Paro, Hamre, and Pianta 2012; Pianta, La Paro, and Hamre 2008).

The European project CARE and the Italian study: a critical cultural study on CLASS

The European research project CARE – *Curriculum Quality Analysis and Impact Review of European ECEC* (January 2014–December 2016) is a collaborative project, involving 11 countries and addressing issues related to ECEC quality and curriculums in Europe. The central goal of this project is to develop an evidence-based and culture-sensitive European framework of quality indicators[1]. One of the main research actions of the CARE project is a multiple case-study of 0–3 and 3–6 ECEC centres in eight European countries[2], collecting video-data from four '*good practice*' ECEC centres in each country (Reggio Emilia and Milan in Italy). The CLASS tool is being applied to the European video-clips to carry out a quantitative analysis of the encodings[3].

The authors of this paper are leading a qualitative and cultural ethnographic study[4] (Gillen et al. 2007; Rogoff 2003; Tobin, Hsueh, and Karasawa 2009) of the selected ECEC settings and the CLASS tool[5] aimed at:

a. questioning the international application of CLASS, developing a cultural-sensitive and critical approach;
b. realizing a *multi-voice* discussion on CLASS in three countries (Italy, Portugal and the Netherlands), in order to elicit different cultural viewpoints on quality and pedagogy in ECEC settings, and to compare and contrast local theories with the values and the cultural models embedded in the instrument.

The theoretical part of the study encompasses a thorough overview of the studies regarding the instrument, its psychometrical properties, and the main findings emerging from its application and validation to different cultural contexts (see section 3).

In the empirical part, we involved teachers and pedagogical coordinators from the four selected ECEC centres and national experts in ECE in reflective dialogues to critically discuss the CLASS tool and the video-clips realized. This reflective approach to assessment measures has been already experimented with in Italian ECEC services (Bondioli and Ferrari 2004; Ferrari 2002; Savio 2008). It consists in regarding tools not merely as means of assessing quality or as standards to conform to, but rather as opportunities to activate a process of comparison, by analogy or by contrast, that lets emerge in a clearer and more precise way practitioners' latent pedagogies and quality assumptions. Specifically, in the current case, CLASS dimensions, indicators and behavioural markers were used as a topic-map for extensive and in-depth exploration of the pedagogical approaches and choices in interacting with children, highlighting the local-cultural pedagogical traits and, concurrently, the cultural values embedded in the tool itself. The CLASS tool was assumed to be a powerful highlighter of different cultural perspectives and a stimulus to activate 'intercultural dialogue' *supported by* and *with* the instrument itself. The value inherent in consulting these different groups of stakeholders, at various levels involved in the service life, was that they could offer an *insider perspective*, informing us about service underpinning principles, values and goals, and, accordingly, about a conceptualization of quality that characterizes the Italian EC educational culture.

In order to discuss the CLASS tool, research participants were involved in focus groups and reflective seminars organized according to the following steps:

1. introduction to the CLASS tool (Toddler or Pre-K version): presentation of the theoretical framework, detailed description of the dimensions, viewing of sample video-clips;
2. observation of a video-clip from a national centre and encoding using CLASS: the teachers, divided into groups, focus on 3–4 dimensions to encode, with one dimension common across the groups. This made it possible to cover all the dimensions, to have a common dimension and to give teachers an easier task than asking them to encode all the dimensions;
3. comparison between the codes assigned by a certified observer (CLASS perspective) and by teachers (pedagogical-cultural perspective);
4. observation of video-clips from the centre they are employed in, sharing the feedback provided by CLASS.

A reflective seminar was organized for each participating centre, involving its teachers and pedagogical coordinators in focus groups to elicit their opinion of the CLASS tool and discuss its framework. In Reggio Emilia a mixed group of infant–toddler centres and

preschool teachers, pedagogical coordinators and national experts participated in the discussion, as is typical of formative and research experiences in some Italian municipal realities and, in particular, in the municipal ECEC services of Reggio Emilia (Bondioli and Ferrari 2004; Musatti and Picchio M 2010). The set of questions that guided these discussions is presented in Box 1.

Box 1. A cultural analysis of the CLASS tool: guiding questions.

Continuities	Do any dimensions and indicators in the instrument seem familiar? Which ones?
Disagreements	What dimensions/indicators you would eliminate and why?
Missing elements	What dimension/indicator would you add (i.e. what dimensions/indicators are missing regarding the teacher–child relationship that you consider key)?
Differences	What dimensions/indicators do you perceive as more exposed to a different cultural interpretation, if any?

At the national level, an extension of the study adopting the same methodology involved a larger number of teachers from 0–3 and 3–6 services (*nidi* and *scuole d'infanzia*), to broaden the cultural analysis of CLASS[6]. Table 1 offers an overall overview of the participants involved in the qualitative analysis of the tool initiated within the CARE project and then extended at national level.

Due to the potential sensitivity of this investigation, particular care was taken to uphold research ethics. The procedures and the purpose of the research were explained in detail to all participants and their informed consent was obtained.

Results from the literature review and first tentative results from the data analysis, realized through a *thematic analysis* approach (Boyatzis 1998; Braun and Clarke 2006) of focus-group interviews and discussions with Italian teachers, pedagogical coordinators and national experts, are presented in the following sections.

The theoretical study: conceptual framework of CLASS and validity issues in cross-cultural applications

CLASS is a standardized observation system, based on developmental theory and focused on *process quality*, analysing teacher–child interactions and what teachers do with the materials they have (La Paro, Pianta, and Stuhlman 2004; Pianta, La Paro, and Hamre 2008). As the authors point out, daily interactions between teachers and children are among the most accessible aspects of teachers' jobs that can be reliably observed and assessed (Hamre et al. 2013) and process quality provides powerful predictors of children's

Table 1. Participants involved in the critical-cultural discussion on the CLASS tool.

	Preschool	Infant–toddler centre
Services involved	9	7
Care project	2	2
National extension	7	5
Teachers	65	36
Care project	24	12
National extension	41	24
Pedagogical coordinators	8	
Care project	5	
National extension	3	
National experts	3	

outcomes (Hamre et al. 2013; Howes et al. 2008; Mashburn et al. 2008; Montie, Xiang, and Schweinhart 2006).

An innovative aspect of the tool, highlighted by the authors, is to provide a common metric and vocabulary across age levels. Many versions of the tool are currently available (Infant, Toddler, Pre-K, K–3, Upper Elementary, Secondary) and *heterotypic continuity* accounts for variation across grades and ages in the dimensions of teacher–child relationships and their specific behavioural indicators, but the assumption is that effective teacher–child interactions share commonalities across age levels, mirroring an *invariant latent structure* (Hamre et al. 2007; La Paro, Hamre, and Pianta 2012).

Furthermore, regarding both emotional and instructional features of the classroom, CLASS provides a more comprehensive and systematic framework than most other models of classroom practice (Hamre et al. 2007). For instance, the Pre-K version organizes effective teacher–child interactions into three broad domains, embracing 10 dimensions overall (see Table 2) hypothesized to be relevant in promoting student learning and social development (Pianta, La Paro, and Hamre 2008).

Results from several studies show that classroom quality, as assessed by CLASS, is linked to various academic, social, and behavioural outcomes during children's early years, as well as at the end of preschool and first grade (Hamre et al. 2013; Howes et al. 2008; Mashburn et al. 2008; Pianta, La Paro, and Hamre 2008). The growing popularity of CLASS is therefore not surprising: it has been vastly used in evaluation and research in over 4000 preschool to sixth-grade classrooms across the U.S.A., covering a broad range of classroom contexts (Hamre et al. 2013), as well as at the international level to evaluate the efficacy of teacher–child interactions and children's outcomes in Australia (Tayler et al. 2013), Canada (Bouchard et al. 2014), Chile (Treviño, Toledo, and Gempp 2013), Belgium (Buyse et al. 2008; Declercq and Laevers 2015), Israel (Ziv and Aviezer 2014), Ecuador (Araujo et al. 2014), Finland (Pakarinen et al. 2010; Salminen et al. 2012), France (Dessus, Cosnefroy, and Joët 2014), Germany (von Suchodoletz et al. 2014), Portugal (Cadima, Leal, and Burchinal 2010), and the Netherlands (Slot 2014).

Table 2. Domains and dimensions of the CLASS Pre-K (Pianta, La Paro, and Hamre 2008).

Domain	Dimension	Description
Emotional Support	Positive Climate	Reflects the overall emotional tone of the classroom and the connection between teacher and students
	Negative Climate	Reflects the overall level of expressed negativity in the classroom
	Teacher Sensitivity	Encompasses the teacher's awareness and responsiveness to students' academic and emotional needs
	Regard for Student Perspective	Reflects the degree to which the teacher's interactions with students and classroom activities place emphasis on student interests, motivations and autonomy
Classroom Organization	Behaviour Management	Captures the teacher's ability to anticipate problem behaviour and use effective methods to prevent and redirect misbehaviour
	Productivity	Reflects how well the teacher manages instructional time and routines, and offers students opportunities to be involved in learning activities
	Instructional Learning Formats	Considers how well the teacher maximizes student interest, engagement and ability to learn from activities
Instructional Support	Concept Development	Focuses on the teacher's use of instructional discussions and activities to promote student high-order thinking skills and cognition
	Quality of Feedback	Reflects the degree to which the teacher provides effective feedback to expand student learning, understanding and persistence
	Language Modelling	Assesses the quality and amount of the teacher's use of language-stimulation and language-facilitation techniques

However, recent studies (Ishimine and Tayler 2014; Sandilos and DiPerna 2014) have discussed some issues that question the validity of this tool when applied in cultural contexts different from the original one:

1. *reliability testing*: in order to use this tool, it is necessary to attend observation training and then pass a reliability test that relies on an online format, providing each applicant with five videos to be watched and coded. At least 80% reliability with the master codes is required to be certified as a reliable observer and annual recertification is required to maintain the licence. As long as the videos provided depict U.S. classrooms, the soundness of this procedure is questionable when the tool is applied at international level. As Ishimine and Tayler (2014) have clearly pointed out: *Is it still a valid process to become a reliable observer using U.S.-based classroom videos and then apply the skills in international contexts?*
2. *structural validity of CLASS in international contexts* (Sandilos and DiPerna 2014): several researchers have investigated psychometric properties and structural validity of CLASS in different cultural contexts (Bouchard et al. 2014; Cadima, Leal, and Burchinal 2010; Declercq and Laevers 2015; Dessus, Cosnefroy, and Joët 2014; Pakarinen et al. 2010; Slot 2014; Treviño, Toledo, and Gempp 2013; von Suchodoletz et al. 2014; Ziv and Aviezer 2014). Some studies have suggested that the factorial model does not always sufficiently describe classroom quality when applied to international contexts. For instance, Pakarinen et al. (2010), using data from 49 Finnish kindergarten classrooms, indicated that the three-domain model (i.e. the Teaching through Interaction framework, Hamre et al. 2013) did not fit the data well: the Negative Climate dimension showed poor discriminatory validity in the CFA. The authors decided to remove the Negative Climate item from the model and allow the residual of the Quality of Feedback item to correlate with the Concept Development item. The resulting final model fitted the data well. This pattern is not peculiar to Finnish classrooms. Similar psychometric inconsistencies with the original model have been reported also in other countries (Bouchard et al. 2014; Declercq and Laevers 2015; Dessus, Cosnefroy, and Joët 2014; Treviño, Toledo, and Gempp 2013; von Suchodoletz et al. 2014). These findings suggest that more research is needed to clarify potential differences in the structure and function of classroom interactions at the international level and raise questions about applicability of the CLASS outside the U.S.A.: *Beyond statistics, what is the meaning of these inconsistencies? Might they mirror cultural features of effective teacher–child relationships not captured by the tool? Is it still a valid process to remove dimensions from a structured instrument that should include them? What are the consequences?*
3. *cultural sensitivity*: the CLASS framework recognizes that teacher–child interactions can be affected by cultural variability and that behavioural markers can be culturally bound (Hamre, Goffin, and Kraft-Sayre 2009; Pianta and Hamre 2009; Vitiello 2013). For instance, one of the indicators analysed within the Positive Climate dimension is the respect that teachers show to children. According to the CLASS manual, eye contact is one of the behavioural markers that conveys respect. However, in some cultures this behaviour is not a display of respect and cultural norms discourage eye contact between adults and children. Therefore, in these situations, the CLASS manual suggests not to consider eye contact within evidence of respect, relying on

other behavioural markers to assess Positive Climate (Hamre, Goffin, and Kraft-Sayre 2009; Pianta and Hamre 2009). However, the acknowledgement of cultural differences seems to be limited to the behavioural level, without affecting the overall structure and the dimensions. The authors suggest that the dimensions of classroom quality assessed by CLASS are relevant across cultures (Hamre et al. 2013; Hamre, Goffin, and Kraft-Sayre 2009; Pianta and Hamre 2009; Vitiello 2013):

> The Teaching through Interactions framework offers only one window into teacher effectiveness. However, we argue that interactions among teachers and students are among the most important aspects of teachers' jobs. There is also initial evidence that this model for understanding classroom interactions is consistent across other cultures. (Hamre et al. 2013, 482)

Studies drawing on the field of cross-cultural and anthropological research (Rogoff 2003; Tobin 2005) advise caution in assuming conceptualizations of quality (both structure and process quality) to be universal: ECEC quality, early childhood pedagogies and teacher–child relational patterns 'are not universal or culture free but instead are reflections of values and concerns of particular people in a particular time and place' (Tobin 2005, 426). In fact, they might have both a universal and a cultural-related nature (Rogoff 2003). Hence, *is it enough to take cultural variability and complexity into account only at the behavioural-marker level? Can the conceptualization of effective teacher–child interactions proposed by CLASS transcend cultural differences?*

Discussing CLASS with Italian teachers, pedagogical coordinators and national experts

CLASS provided the research participants with a common lens and framework for observation and comparison, recognizing *continuities* between their local-cultural perspective and that offered by the tool, and key features in teacher–child relationships not captured by CLASS (*missing elements*) or interpreted differently from the local cultural, scientific, pedagogical background (*differences*). Some *disagreements* were expressed as well. At these four levels, some main recurring themes highlighted by the participants can be pointed out and reviewed as follows, in light of the existing national ECEC literature.

Continuities: the centrality of the teacher–child relationship

Pedagogia delle relazioni (pedagogy of relationships) is a pedagogy where interpersonal relationships are considered to be a fundamental means for supporting children's socio-emotional and cognitive development. It is one of the keywords in describing the pedagogy of early childhood education in Italy (Cochran 2011; Mantovani 2007). Therefore, the emphasis placed on the key role of teacher–child interactions in defining classroom quality was welcomed by the Italian teachers, who consider it a crucial factor in defining ECEC quality. They judge the observational lens provided by CLASS as interesting and valuable, especially for the dual and comprehensive concept of relationships that this tool considers, addressing both emotional and instructional features of the classroom.

Specifically, the most appreciated dimensions of CLASS Pre-K and Toddler have been:

- Positive Climate, due to the importance given to some emotional aspects (warmth, enjoyment, respect …) also considered crucial by Italian practitioners;
- Regard for Student/Child Perspective, recognizing the valuable contribution that children's interests and ideas can provide in classroom activities;
- Concept development (Facilitation of Learning and Development in the Toddler version) and Quality of feedback, because they underline that high-quality teaching is focused on the process of learning and on stimulating children's reasoning and thinking rather than on rote instruction.

Differences: the methodological framework and learning concepts

Italian teachers have expressed their different perspectives at several levels:

1. at the methodological level, the difference concerns the CLASS observational procedure: Italian teachers – at all school levels – are not familiar with standardized instruments and with observational approaches that assign codes rapidly (CLASS requires attribution of numerical ratings in 10 minutes), without 'injecting external explanations for what the observer sees taking place' (Pianta, La Paro, and Hamre 2008, 12) and without taking into account the pre-existing relational histories with children. They are not used to focusing exclusively on visible behaviour, regardless of the peculiarities of their local context, the shared pedagogical principles of the service underpinning their choices, or the significance of the activities proposed for the children. Overall, the participatory approach typical of Italian ECEC services promotes evaluation with teachers rather than of teachers, implementing research projects that involve practitioners in reflective self-observation and self-evaluation processes: evaluation data are co-constructed by observers and teachers in order to acquire real meaning (Bondioli and Savio 2015).
2. at the content level, a relevant difference regards the concept of children's learning. Both the CLASS Toddler and Pre-K versions feature a specific domain (Engaged Support for Learning and Instructional Support, respectively) that takes into account children's learning within the relational context, focusing solely on the cognitive and linguistic declinations. Conversely, the research participants share a broader vision of what learning is. It also embraces children's socio-emotional development and the role of teachers in fostering it (Mantovani 2007):

> What do we want to promote? … Learning cannot just be cognitive and linguistic! (Pedagogical coordinator)

Mirroring holistic Italian pedagogical tradition, research participants consider it crucial for a high-quality ECEC service to provide children with opportunities to learn to cooperate, to be part of a group or a community, to be responsible for others, to regulate their emotions and to understand and recognize those of others, to acquire basic life skills. None of these aspects are included in the CLASS definition of learning; even the emotional support provided by teachers, although well developed by the authors and considered a crucial feature for analysing classroom interactions, is never conceived of as a learning theme.

Missing elements: spaces and materials, the peer group, the child as a resource and intercultural and inclusive competence

The four most recurring features of teacher–child relationships not included in CLASS and mentioned by Italian practitioners are:

1. the lack of attention paid to the physical classroom environment. According to Italian pedagogical tradition (Cochran 2011; Mantovani 2007; Musatti 2007), the organization and aesthetics of the space is a crucial dimension (the core concepts of 'regia educativa' – Montessori 1950 – and 'space as third teacher' – Malaguzzi 1993 are well known). It plays a key role in *scaffolding* children's learning, self-confidence, independence and socialization, creating the condition to construct significant, supportive relationships. In other words, the relationships teachers want to promote are part of the space and materials:

   > I have a doubt about the basic choice, that is observing the relationship notwithstanding the context, the creation of the context. In my opinion those things go hand in hand and I don't know if it's correct to separate them. (Preschool teacher)

2. the marginal role assigned to peer relationships: CLASS, focusing mainly on one-to-one interactions between the teacher and the child (Pianta and Hamre 2009), considers peer relationships almost exclusively from a socio-emotional point of view and not as a key factor in promoting children's learning and socio-cognitive development. Therefore it does not give due emphasis to the crucial role played by teachers in fostering peer interactions, socialization, reciprocal support and learning as a quality indicator of teacher–child/children interactions. Conversely, peer relationships are a central aspect in Italian pedagogy (Malaguzzi 1993; Musatti 2007). Not featuring a low teacher–child ratio, Italy has developed significant reflections on sociability among peers, learning through peer interaction and on the teachers' double focus on both the individual and the group:

   > I didn't see the social dimension among children, how the adult supports cooperation among children … . Prosociality is missing even in terms of learning. (Preschool teacher)

3. a not active enough role assigned to children as resource. This third, cross-dimensional issue, closely linked to the previous one, concerns the reciprocal roles of teachers and children. CLASS assesses what teachers do when interacting with children; therefore the teacher is the *protagonist* of the observation. According to Italian practitioners, the excessive emphasis placed on the adult results in underestimating the children, who are not fully seen as resources and often seem passive receivers of the teacher's interventions. This perspective leads, for instance, to a reductive concept of learning as a top-down process from teachers to children, or to an idea of behaviour management conceived of as only the teacher's responsibility:

   > It is probably in the exchange and in what children already know that the most interesting learning occurs … . Some theories can be shared and generate new suggestions in the other children, perhaps producing new ideas, something that can be built together. (Infant-toddler centre teacher)

   > Rules are not given, they are discussed and co-established with children. (Preschool teacher).

4. the absence of intercultural and inclusive education. As Vitiello points out, 'although CLASS scores are correlated with teachers' acceptance of diversity, the CLASS measure does not specifically assess cultural competence, cultural sensitivity, or teaching strategies specific to dual language learners' (2013, 7–8). However, according to Italian teachers, fostering intercultural and inclusive competencies should be considered an essential aspect of classroom quality. Teachers should promote inclusion and encourage children to be aware of and respect all forms of diversity and difference between individuals and groups. They recognize that early childhood education plays a pivotal role in establishing this foundation (Barrett, Huber, and Reynolds 2014; Gay 2002; Perry and Southwell 2011). This perspective is also rooted in the long-standing Italian tradition of inclusiveness: Italian ECEC services – well before Italy became a multicultural country – were conceived of as inclusive and universal environments, for all children, regardless of their conditions and origins (Canevaro 2007).

Disagreements: productivity ('Where is the hurry?) and when non-intervention is effective as well

Two aspects raised several perplexities among teachers:

1. the first is the dimension Productivity – a feature in CLASS Pre-K, that encompasses how efficiently teachers deal with disruptions and managerial tasks and keep children *busy*, offering them something to do throughout observation. As a result, 'in this classroom, it would be difficult to imagine more instructional time being squeezed out of the day' (Pianta, La Paro, and Hamre 2008, 52). Italian teachers from both preschool and infant–toddler centres criticized this idea and questioned the educational value of having children constantly being engaged in doing something. In Italy early childhood years are considered 'a very precious time in one's life, a time that should be tasted, explored, and experienced without haste. "Where is the hurry?" is a question posed in early childhood pedagogy in Italy today' (Mantovani 2007, 1118):

> Productivity. Maybe I'd think twice about that. I mean, it's true that you have to maximize the time and everything … it's also true that you have to be very relaxed … . Even doing nothing for the children is still doing something. (Preschool teacher)

This attitude is supported by peculiar characteristics of Italian ECEC services: in Italy children spend on average six to nine hours per day, five days a week in the service and teachers can rely on an extended amount of time (especially compared with other countries where ECEC programmes are generally part-time – e.g. the Netherlands or the UK) to interact and work with children. The service is conceived as a shared 'daily life context', a place to live in for teachers and children. Thus, teachers' attention is focused on providing a high-quality 'life in the service', ensuring a holistic rich experience, free from pressure, rather than on 'the program of the service' (Mantovani 2007).

2. a second point of disagreement is cross-dimensional and regards the definition of what strategies can be considered effective in interacting with children, and specifically when *non-intervention* can be considered a good practice. According to the

> CLASS manual, in high-quality classrooms teachers intervene in an effective and timely manner in dealing with children's misbehaviour or in providing support when students send behavioural signals indicating a need for help or attention.

Italian teachers challenge this conceptualization. They agree that a good teacher has to be aware of children's needs, concerns, conflicts and unacceptable behaviours; nevertheless, they think that this awareness should not necessarily result in timely intervention by the adult. They would introduce a new dimension – 'Effective strategies of non-intervention' – that, echoing Malaguzzi's pedagogy (1993), recognizes the value of and encompasses the possibility for the teacher to take time to observe the child and peer reaction before deciding if and how to intervene:

> We keep coming back to the idea of teachers, children and their relationship. Conflict: how do I manage it? If I think that children are a resource for each other, I would never consider promptness as a quality indicator … that doesn't mean that I'm not aware, or that I don't care at all. It means that I allow time for children's autonomy, to let them find their own solution. (National expert)

> Dealing with some children you have to adopt this strategy [non-intervention] because they constantly request your help, therefore at that point you have to ignore them because they have to learn to do things by themselves. I mean, the adult has to progressively step aside and leave more room to the child. (Preschool teacher)

CLASS, assuming that its framework can be applied to other cultures, does not capture – or would even give low scores to – these differences in the meanings and interpretations assigned to teacher behaviours and choices.

As Tobin (2005) argues, though, these alternative approaches in interacting with children and managing their behaviour invite reflection on what effective strategies are, and question taken-for-granted assumptions about *good practices* and their supposed *universality*.

Discussion

In this paper we have discussed, through a literature review and the voices of some Italian teachers, the potential limits in accepting the framework provided by the CLASS tool as valid across cultures without due care. This qualitative study is still ongoing; the international project is going to include a cross-country analysis of the tool also involving groups of teachers from Portugal and the Netherlands. In Italy the extension is developing a quantitative phase, involving a large enough sample of teachers and video-clips to validate the factorial model in the Italian context and see how far the qualitative analysis of the instrument might find correspondences in the quantitative one.

As the Italian teachers have pointed out, CLASS is an interesting and insightful instrument, but there are also many dissonant elements that do not seem to fully mirror the meanings assigned to *effective teacher–child relationships* in the Italian context.

Although our reflection has focused solely on the CLASS tool and has involved a limited number of participants, the tentative results presented can lead to broader reflection on the international use of standard-based assessment instruments.

We recognize that their cross-cultural application can be a valuable resource and can offer undeniable advantages (such as common ground and a shared language to

compare ECEC services and to elicit continuities across countries). However, we also argue for the importance and the need to develop critical reflection on their cultural consistency and ecological validity when applied in cultural contexts different from the original ones.

As showed referring to CLASS, it is not possible to assume that assessment instruments are culture-free: they are *children* of the contexts in which they were developed and, migrating to other countries, they still unavoidably reflect pedagogical and organizational features of their native cultural cradle. Quality is a value-laden construct, it is 'neither neutral nor self-evident, but saturated with values and assumptions. It is not essential, but a constructed concept' (Moss and Dahlberg 2008, 5). Therefore, different groups in different places can have different views of what quality is or different interpretations of the same defining criteria. We think it is not necessary to assume an extreme relativistic position: some universal criteria may have different local interpretations and implementations (Rogoff 2003).

If we apply the tools uncritically, without taking into account the underlying cultural complexities, we risk assessing the services on the basis of criteria that do not belong to them, and cannot fully encompass and capture their quality. This reduces the assessment tool and the overall evaluation process to a sort of screen that obscures the meanings that emerge from contexts, silencing the different interpretations and conceptualizations of quality and pedagogy in ECEC settings. The tools, instead of being a means to measure quality, become the main criterion for defining what quality is: 'quality is de facto predefined as what is measured by quality rating scales' (Vandenbroeck and Peeters 2014, 155).

A critical cultural approach questions the rigid universalistic idea of educational standards of quality and recognizes the value of cultural differences.

It is also an invitation to overcome a reductive idea of *adapting* standard-based assessment instruments to different cultural contexts as mere translation of the instruments and as statistical confirmation of their underpinning factorial model – sometimes obtained with shortcuts and tricks (such as eliminating 'disobedient' dimensions that do not fit in the model) – an idea that undermines the ecological validity of the instruments themselves.

Promoting a critical cultural approach to evaluation tools means above all ceasing to consider the relationship between the tools and the services they evaluate only in a top-down, unidirectional way. We suggest that both assessment and validation-adaptation processes can benefit from a reversed perspective that involves professionals in a reflective experience and an intercultural dialogue *supported by* and *with* the instruments. It offers teachers an enriching opportunity to express the definitions of quality underlying their practices; to acquire a deeper awareness of them; and to compare and even intentionally *contaminate* their local theories with values embedded in the instrument. It can therefore foster professional development and reflection and, consequently, improve quality. This should undoubtedly be the main, ultimate goal of every evaluation process.

Notes

1. 7th Framework Programme SSH-2013, Project coordinator Paul Leseman (Utrecht University). The Italian research team, supervised by Professor Susanna Mantovani, consists of researchers from University of Milan-Bicocca – Department of Human Sciences (G.

Pastori, C. Bove, P. Braga, F. Zaninelli, S. Cescato, V. Pagani, G. Banzi e T. Morgandi) and from Reggio Children (C. Giudici, C. Rinaldi, P. Cagliari, M. Castagnetti, S. Bonilauri, L. Colla, M. Ruozzi, M. Nicolosi – till November 2014). Besides Italy, Belgium, Denmark, Finland, Germany, Greece, the Netherlands, Norway, Poland, Portugal and England are also taking part in the CARE project.

2. England, Finland, Germany, Italy, the Netherlands, Poland, and Portugal.
3. M.K. Lekkanen (Jyvaskyla University) is the international leader of the WP2 (Curriculum, Pedagogy, and Classrooom quality: promoting effectiveness of ECEC, Task 2.3); P. Slot (Utrecht University), J. Cadima (Instituto Universitário de Lisboa) and J. Salminen (Jyvaskyla University) are responsible for the quantitative analysis. J. Salminen is also conducting a qualitative discourse analysis on educational dialogues.
4. Our greatest gratitude to professor Susanna Mantovani, who inspired the research and gave her support and insights.
5. The same methodology will be applied also in Portugal and the Netherlands, furthering the discussion to other countries and enabling broader cross-cultural comparison.
6. The national extension (Pagani, doctoral thesis, in progress/forthcoming), besides extending the qualitative critical-cultural analysis started within the CARE project, is complementing/has complemented the qualitative exploration with a quantitative analysis of the tool adopting a mixed-methods research design (Creswell and Plano Clark 2011). Quantitative data (i.e. preschool and infant–toddler centres classroom observations coded using, respectively, the CLASS Pre-K and Toddler) were used to test even at statistical level the applicability and generalizability of the CLASS framework to the Italian ECEC context.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

Araujo, M. C., P. Carneiro, Y. Cruz-Aguayo, and N. Shady. 2014. *A Helping Hand? Teacher Quality and Learning Outcomes in Kindergarten*. Working paper, version: October 4, 2014. Accessed July 10, 2015. http://economics.yale.edu/sites/default/files/carneiropedroahelpinghand_final.pdf.

Barrett, M. D., J. Huber, and C. Reynolds. 2014. *Developing Intercultural Competence Through Education*. Strasbourg: Council of Europe Publishing.

Bondioli, A., and M. Ferrari, eds. 2004. *Verso un modello di valutazione formativa. Ragioni, strumenti e percorsi* [Towards a Formative Evaluation Model. Reasons, Instruments, and Paths]. Bergamo: Edizioni Junior.

Bondioli, A., and D. Savio. 2015. *La valutazione di contesto nei servizi per l'infanzia: riflessioni ed esperienze* [Context Evaluation in ECEC services: Reflections and Experiences]. Parma: Edizioni Junior-Spaggiari.

Bouchard, C., G. Cantin, A. Charron, H. Crépeau, and J. Lemire. 2014. "*Validation du Classroom Assessment Scoring System (CLASS) en maternelle 4 ans à mi-temps au Québec*." [Validation of the Classroom Assessment Scoring System (CLASS) in Part-time 4ys Old Preschool in Quebec]. Paper presented at the 82th Congres de l'Acfas, Colloque 519, in Montréal, Canada, May 15.

Boyatzis, R. E. 1998. *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks, CA: Sage.

Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101.

Buyse, E., K. Verschueren, S. Doumen, J. Van Damme, and F. Maes. 2008. "Classroom Problem Behavior and Teacher-Child Relationships in Kindergarten: The Moderating Role of Classroom Climate." *Journal of School Psychology* 46 (4): 367–391.

Cadima, J., T. Leal, and M. Burchinal. 2010. "The Quality of Teacher–Student Interactions: Associations with First Graders' Academic and Behavioral Outcomes." *Journal of School Psychology* 48 (6): 457–482.

Canevaro, A., ed. 2007. *L'integrazione scolastica degli alunni con disabilità. Trent'anni di inclusione nella scuola italiana* [School Integration of Special Needs Pupils. Thirty years of Inclusion in the Italian School]. Trento: Erickson.

Cochran, M. 2011. "International Perspectives on Early Childhood Education." *Educational Policy* 25 (1): 65–91.

Creswell, J. W., and V. L. Plano Clark. 2011. *Designing and Conducting Mixed Methods Research*. 2nd ed. Thousand Oaks, CA: Sage.

Dahlberg, G., P. Moss, and A. Pence. 2007. *Beyond Quality in Early Childhood Education and Care: Languages of Evaluation*. 2nd ed. London: Falmer Press.

Declercq, B., and F. Laevers. 2015. "*Measuring 'Pedagogical' Quality with an Observation Tool: Insights From the Pilot Study*." Paper presented at the 25th EECERA conference, in Barcelona, Spain, September 7-10.

Dessus, P., O. Cosnefroy, and G. Joët. 2014. "*Evaluer la qualité des interactions enseignant-élèves en début de scolarité: Qualités psychométriques d'une adaptation française du CLASS*." [Evaluating Teacher - Child Interaction Quality at the beginning of the School: Psychometric Quality of a French Adaptation of CLASS]. Paper presented at the 82th Congres de l'Acfas, Colloque 519, in Montréal, Canada, May 15.

European Commission/EACEA/Eurydice/Eurostat. 2014. *Key Data on Early Childhood Education and Care in Europe*. 2014 ed. Luxembourg: Publications Office of the European Union.

Ferrari, M. 2002. "La qualità negoziata: il percorso di elaborazione delle Idee guida del nido d'infanzia." [The Negotiated Quality: Elaborating Key Concepts and Guidelines for Infant-Toddler Centers]. In *Il progetto pedagogico del nido e la sua valutazione. La qualità negoziata*, [The Infant-Toddler Center Pedagogical Project and its Evaluation. The Negotiated Quality] edited by E. Becchi, A. Bondioli and M. Ferrari, 27–40. Bergamo: Edizioni Junior.

Gay, G. 2002. "Preparing for Culturally Responsive Teaching." *Journal of Teacher Education* 53: 106–116.

Gillen, J., C. A. Cameron, C. Sombat Tapanya, G. D. Pinto, R. A. Hancock, S. Young, and B. Accorti Gamannossi. 2007. "'A day in the Life': Advancing a Methodology for the Cultural Study of Development and Learning in Early Childhood." *Early Child Development and Care* 177 (2): 207–218.

Grammatikopoulos, V., A. Gregoriadis, and E. Zachopoulou. 2015. "Evaluation of Early Childhood Evaluation Environments and Professional Development: Current Practices and Implications." In *Contemporary Perspectives on Research in Testing and Evaluation in Early Childhood Education*, edited by O. N. Saracho, 153–172. Maryland: Information Age Publishing.

Hamre, B. K., S. Goffin, and M. Kraft-Sayre. 2009. *Classroom Assessment Scoring System (CLASS) Implementation Guide: Measuring and Improving Classroom Interactions in Early Childhood Settings*. Charlottesville: Teachstone.

Hamre, B. K., R. C. Pianta, J. T. Downer, J. DeCoster, A. J. Mashburn, S. M. Jones, J. L. Brown, et al. 2013. "Teaching Through Interactions." *The Elementary School Journal* 113 (4): 461–487.

Hamre, B. K., R. C. Pianta, A. J. Mashburn, and J. T. Downer. 2007. *Building a Science of Classrooms: Application of the CLASS Framework in Over 4,000 U.S. Early Childhood and Elementary Classrooms*. New York: Foundation for Child Development.

Howes, C., M. Burchinal, R. C. Pianta, D. Bryant, D. Early, R. Clifford, and O. Barbarin. 2008. "Ready to Learn? Children's pre-Academic Achievement in pre-Kindergarten Programs." *Early Childhood Research Quarterly* 23: 27–50.

Ishimine, K., and C. Tayler. 2014. "Assessing Quality in Early Childhood Education and Care." *European Journal of Education* 49 (2): 272–290.

La Paro, K. M., B. K. Hamre, and R. C. Pianta. 2012. *Classroom Assessment Scoring System Toddler Manual*. Charlottesville: Teachstone.

La Paro, K. M., R. C. Pianta, and M. Stuhlman. 2004. "The Classroom Assessment Scoring System: Findings From the Pre-Kindergarten Year." *The Elementary School Journal* 104: 409–426.

Malaguzzi, L. 1993. "For an Education Based on Relationships." *Young Children* 49: 9–12.
Mantovani, S. 2007. "Pedagogy in Italian Early Childhood Education." In *Early Childhood Education: An International Encyclopedia*. vol. 4, edited by R. S. New and M. Cochran, 1115–1118. Westport: Praeger.
Mashburn, A. J., R. C. Pianta, B. K. Hamre, J. T. Downer, O. A. Barbarin, D. Bryant, M. Burchinal, D. Early, and C. Howes. 2008. "Measures of Classroom Quality in Prekindergarten and Children's Development of Academic, Language, and Social Skills." *Child Development* 79: 732–749.
Montessori, M. 1950. *La scoperta del bambino* [The Discovery of Child]. Milano: Garzanti.
Montie, J. E., Z. Xiang, and L. J. Schweinhart. 2006. "Preschool Experience in 10 Countries: Cognitive and Language Performance at age 7." *Early Childhood Research Quarterly* 21: 313–331.
Moss, P., and G. Dahlberg. 2008. "Beyond Quality in Early Childhood Education and Care – Languages of Evaluation." *New Zealand Journal of Teachers' Work* 5 (1): 3–12.
Musatti, T. 2007. "Socioemotional Development in Italian Early Childhood Education." In *Early Childhood Education: An International Encyclopedia*. vol. 4, edited by R. S. New and M. Cochran, 1133–1136. Westport: Praeger.
Musatti, T., and M. Picchio M. 2010. "Early Education in Italy: Research and Practice." *International Journal of Early Childhood* 42 (2): 141–153.
OECD. 2013a. "How Do Early Childhood Education and Care (ECEC) Policies, Systems and Quality Vary Across OECD Countries?" *Education Indicators in Focus (EDIF)*, No. 11. Paris: OECD Publishing. Accessed October 15, 2015. http://www.oecd.org/edu/skills-beyond-school/EDIF11.pdf.
OECD. 2013b. *Literature Review on Monitoring Quality in Early Childhood Education and Care (ECEC)*. Accessed July 16, 2015. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/EDPC/ECEC(2013)3anddoclanguage=en.
Pakarinen, E., M. K. Lerkkanen, A. M. Poikkeus, N. Kiuru, M. Siekkinen, H. Rasku-Puttonen, and J. E. Nurmi. 2010. "A Validation of the Classroom Assessment Scoring System in Finnish Kindergartens." *Early Education and Development* 21 (1): 95–124.
Perry, L. B., and L. Southwell. 2011. "Developing Intercultural Understanding and Skills: Models and Approaches." *Intercultural Education* 22 (6): 453–466.
Pianta, R. C., W. S. Barnett, M. Burchinal, and K. R. Thornburg. 2009. "The Effects of Preschool Education." *Psychological Science in the Public Interest* 10 (2): 49–88.
Pianta, R. C., and B. K. Hamre. 2009. "A Lot of Students and Their Teachers Need Support: Using a Common Framework to Observe Teacher Practices Might Help." *Educational Researcher* 38 (7): 546–548.
Pianta, R. C., K. M. La Paro, and B. K. Hamre. 2008. *Classroom Assessment Scoring System Pre-K Manual*. Baltimore: Brookes Publishing.
Rogoff, B. 2003. *The Cultural Nature of Human Development*. Oxford: University Press.
Salminen, J., M. K. Lerkkanen, A. M. Poikkeus, E. Pakarinen, M. Siekkinen, M. Hännikäinen, P. Poikonen, and H. Rasku-Puttonen. 2012. "Observed Classroom Quality Profiles of Kindergarten Classrooms in Finland." *Early Education and Development* 23 (5): 654–677.
Sandilos, L. E., J. C. DiPerna, and The Family Life Project Key Investigators. 2014. "Measuring Quality in Kindergarten Classrooms: Structural Analysis of the Classroom Assessment Scoring System (CLASS K–3)." *Early Education and Development* 25 (6): 894–914.
Savio, D. 2008. "Promuovere autovalutazione formativa: il percorso degli Asili Nido della Valle d'Aosta per la definizione di linee guida." [Promoting Formative Self-Evaluation: the Process of Defining Guidelines in the Infant -Toddler Centers of Valle d'Aosta]. In *Infanzia: tempi di vita, tempi di relazione: Bambini e servizi educativi 0/6 tra continuità e cambiamento* [Infancy: Times of Life, Times of Relation: Children and ECEC Services in Between Continuity and Change], edited by R. Zerbato, 202–211. Bergamo: Edizioni Junior.
Slot, P. L. 2014. "Early Childhood Education and Care in the Netherlands: Quality, Curriculum, and Relations with Child Development." PhD diss., Universiteit Utrecht.
Sylva, K., E. Melhuish, P. Sammons, I. Siraj-Blatchford, and B. Taggart. 2004. *The Effective Provision of Pre-School Education (EPPE) Project: The Final Report: Effective Pre-School Education*. London: Institute of Education.

Tayler, C., K. Ishimine, D. Cloney, G. Cleveland, and K. Thorpe. 2013. "The Quality of Early Childhood Education and Care Services in Australia." *Australasian Journal of Early Childhood* 38 (2): 13–21.

Tobin, J. 2005. "Quality in Early Childhood Education: An Anthropologist's Perspective." *Early Education and Development* 16 (4): 421–434.

Tobin, J., Y. Hsueh, and M. Karasawa. 2009. *Preschool in Three Cultures Revisited. China, Japan and the United States*. Chicago: The University of Chicago Press.

Treviño, E., G. Toledo, and R. Gempp. 2013. "Calidad de la educación parvularia: las prácticas de clase y el camino a la mejora." [Early Childhood Education Quality: Classroom Practice and How to Improve]. *Pensamiento Educativo. Revista de Investigación Educacional Latinoamericana* 50 (1): 40–62.

Vandell, D., and B. Wolfe. 2000. *Child Care Quality: Does it Matter and Does it Need to be Improved? Madison*. WI: Institute for Research on Poverty.

Vandenbroeck, M., and J. Peeters. 2014. "Democratic Experimentation in Early Childhood Education." In *Civic Learning, Democratic Citizenship and the Public Sphere*, edited by G. Biesta, M. De Bie and D. Wildemeersch, 151–165. Dordrecht: Springer.

Vitiello, V. E. 2013. *Dual Language Learners and the CLASS Measure: Research and Recommendations*. Charlottesville, VA: Teachstone.

von Suchodoletz, A., A. Fäsche, C. Gunzenhauser, and B. K. Hamre. 2014. "A Typical Morning in Preschool: Observations of Teacher–Child Interactions in German Preschools." *Early Childhood Research Quarterly* 29 (4): 509–519.

Ziv, Y., and O. Aviezer. 2014. "Using the Classroom Assessment Scoring System (CLASS) in Israeli Kindergarten for Evaluating and Shaping Classroom Climate." *Hed Hagan* 78 (3): 22–29.

3

THE NATURE AND PURPOSE OF ASSESSMENT AND EVALUATION WITHIN A PARTICIPATORY PEDAGOGY

Christine Pascal and Tony Bertram

Introduction

This chapter aims to critically explore the nature, purposes and value of assessment and evaluation processes within a participatory pedagogy. It will begin with a clarification of the contribution of assessment and evaluation to developing and ensuring the quality of early childhood education and supporting sector accountability. It will then explore the nature and focus of participatory assessment and evaluation processes.

In a participatory paradigm, pedagogic approaches are favoured which are co-constructed, where the learners (practitioners, parents and children) actively lead their own learning and development, and are seen as active and equal partners in the construction of the curriculum and the learning environment and processes adopted. Learning and development are seen as a socio-cultural processes (Vygotsky, 1978; Bruner, 1996; Rogoff, 2003) in which those who are within the context (teacher, child, parent) are viewed as citizens, or subjects with democratic rights to have a voice in its realisation (Pascal and Bertram, 2009, 2012). In this paradigm pedagogic and andragogic (Knowles, 1973; Mezirow, 2006) learning approaches for both children and practitioners are favoured which are dynamic, co-constructed and socially situated, viewing the child's and the adult's overall developmental outcomes holistically. Learning and development are thus seen as complex, non-linear processes, and learning experiences are not compartmentalised into rigidly defined areas with linear, pre-programmed steps through which learners progress but rather as a set of 'affordances' (Gibson, 1977) or opportunities from which the learner constructs their own meanings and developmental journey. Assessment and evaluation processes are therefore required which match this complex, democratic, dynamic and multi-dimensional educational reality. Participatory assessment and evaluation processes in early childhood settings are fundamentally characterised by

those involved within an educational context systemically gathering evidence to gain greater knowledge, understanding and confidence to make constructive changes for the better. It is an internally led, subjective and deeply attached process rather than an externally driven, objective, detached process.

A further quality of participatory assessment and evaluation is that it is based on a strong ethical code of action with the express aim of actively encouraging the participation of those involved in the early years context, including children and parents, giving them voice and power in the evaluation process.

Through our work for the Effective Early Learning (EEL) Programme and the Accounting Early for Life Long Learning (AcE) Programme we have learned a lot about the challenges of listening well and operating to enhance child and parent participation in assessment and evaluation processes. This work has revealed that:

- there is a strong demand for more open dialogues from parents, practitioners and children in all communities;
- there is a clear awareness by parents, practitioners and children of the inequity in the relationships in many early childhood settings and a desire to challenge this through more dialogue and training.

These findings, which are derived from our analysis of the views expressed in our evaluative focus group dialogues, have challenged us to develop a strategy for opening and deepening equitable and respectful dialogues in early childhood settings. We have taken these messages into the next phase of work which offers training materials and activities that aim to change practice by encouraging more open interaction and equitable dialogues between the children, parents, practitioners and researchers in our richly diverse communities. The idea of 'Opening Windows' comes from a quote by Mahatma Ghandi (speech given 1 June 1921):

> I do not want my house to be walled in on all sides, and my windows to be closed. Instead, I want the cultures of all lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any.
>
> (Gandhi, 1981, p. 170)

We were inspired by the idea of opening our early childhood institutions and practices to feel and breathe the diversity of cultures and world views that prevail in twenty-first century communities, and how this openness to difference and diversity might actually strengthen community cohesion and identity for all. This is the intention of the participatory paradigm which we hope to embed in early childhood research and practice.

Our work has also been inspired by Freire's dialogic and reflexive action in a *Pedagogy of the Oppressed* (1972) where he promotes the challenge of working with those who are *domesticated* or *silenced* with the clear aim of *liberation*. His work of course was with adults but we have applied these radical ideas to our work as researchers and practitioners with children. The first step in this process of liberation

is 'consciousness raising' and the development of selfhood in the oppressed (practitioners and children) with the intention of helping them to name their world and to begin to shape it, that is, it is an empowerment approach. The capacity of young children to adopt and participate actively in such encounters has been shown in the popularity of 'circle time' which has become a predominant activity in early childhood settings. The key difference is that we are aiming to create listening circles in which children are given the floor to initiate and generate their own ideas and where dialogues are symmetrical in terms of power distribution.

In these projects we have trained researchers and practitioners to use a variety of techniques/approaches which encourage the voices, dialogues and narratives from children and parents to be listened to, given status and acted upon. This model of symmetrical dialogue was initially modelled by the research team, but increasingly practitioners and parents have been encouraged and empowered to take over this role and embed it into their daily ways of working and being with children. The development process has been fully documented, and participants were encouraged to keep journals, so that the impact of the project intervention could be fully evaluated. A key finding was that practitioners and parents needed to develop new confidence, competences and commitment before symmetrical dialogues could begin. The process of redistributing power was harder than we had anticipated. This difficulty was expressed in many ways, with many practitioners and parents resisting the opportunities to allow children to 'name their world' and shape their dialogue with it (Freire, 1970). Many showed a reluctance to 'take the lid off' the existing status quo in the fear that they would not be able to control or handle what followed. We have found this resistance or internalised oppression (Freire, 1970) has to be acknowledged and worked through respectfully and compassionately.

Our experimentation and innovations in this project have led to a programme with the express aim of developing strategies and practices which support democratic, equalising and participative encounters within early childhood settings and also primary schools for researchers, practitioners, parents and children. This has meant initial work to enhance the skills of participants, both researchers and practitioners, in understanding diversity, clarifying values, supporting open dialogues, handling conflict and developing active listening approaches.

At the heart of this work is a process of critical self-evaluation, reflection and action (praxis) with the guiding purpose of advancing practice and supporting practitioners to develop a more profound understanding of their work and, therefore, a more effective delivery of services to children and families. In short, it is action based and transformational for the settings and the people involved in the delivery and receipt of services. As J. McNiff points out, it involves,

> a strategy that helps you to live in the way you feel is a good way. It helps you to live out the things you believe in (your values); and it enables you to give reasons every step of the way.
>
> (McNiff, 2010, p. 6)

This culturally and socially located, insider led, participatory approach has a number of strengths. It is fundamentally focused on finding out more about practice and exploring what works and why from the front line, and using this knowledge to transform realities. To date, much of the evaluation evidence that has informed practice in early childhood education has been generated from external sources but this alternative approach radically shifts this perspective and attempts to gain from evidence that originates within the real world of practice, through the active and authentic participation of those involved generating their own agendas and data for further exploration, enquiry and change. Key strengths in this approach are that those involved in practice themselves identify ways to improve their world and take responsibility for this action, inspiring and generating collaborative learning and action. It is able to give a close account of what works, how and why, thus ensuring credibility and utility in the real world of practice. And finally, and critically for those who work with young children and families, it has an ethical and values transparent stance.

The purpose of participatory assessment and evaluation

The fundamental purpose of assessment and evaluation in early childhood educational settings is to interrogate, document and make informed judgements about the quality and effectiveness of early learning experiences offered to young children. The intention is to provide those involved in the creation of learning opportunities with rigorous evidence which can be used to direct and further develop the pedagogic offer to ensure all children have access to a continuously improving, high quality educational programme. The organisational aspiration is that responsibility for self-directed and continuous development, through established assessment and evaluation processes, resides with those inside, rather than outside of the organisation, as this will ensure that the education offered is appropriate, challenging and fit for purpose. Within a participatory pedagogy, assessment and evaluation are viewed as two, mutually interdependent processes which together ensure that the co-constructed learning experiences offered to, and experienced by, children within early education contexts have value and impact for the child, the family and the wider social community or society in which they are located i.e. they are of quality. In this sense, assessment and evaluation are essential pedagogic tools for ensuring that the education offered is culturally situated, empowering and transformational for all those involved.

Assessment and evaluation are also the key means by which accountability for educational inputs are realised. Accountability is another key aim of assessment and evaluation processes and this is seen as having three aspects or facets. Firstly, assessment and evaluation evidence can feed accountability by providing a narrative or 'account' of the educational process and its outcomes. Secondly, the evidence can provide an explanation or 'account' of why and how learning occurred. Thirdly, the evidence can provide a quantitative or qualitative 'measure' or 'count' of what has been achieved. In a participatory paradigm, all three senses of accountability

are achieved through the adoption of rigorous assessment and evaluation processes and are seen as desirable and necessary responsibilities towards those involved for ensuring high quality educational experiences are available for all.

In this approach, it is also argued that to realise these intentions of accountability for, and improvement of, quality fully, it is essential that those involved in creating, experiencing and benefiting from the education offered are viewed as active partners and participants in all assessment and evaluation processes (Bertram and Pascal, 2006, 2009, 2012). This movement is part of a slow but growing acknowledgement of the centrality of the rights of children as citizens and recognition of Articles 12 and 13 of the UNCRC (1989; ratified by UK in 1991) which state that:

> *Article 12*: The Governments of all countries should ensure that a child who is capable of forming his or her own views should have the right to express those views freely in all matters affecting that child, and that the views of that child should be given due weight in accordance with the age and maturity of the child;
>
> *Article 13*: (which includes the right to freedom of expression): This right shall include freedom to seek, receive and impart ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.

Progress towards embedding these rights continues, but the deeper changes in values and attitudes required to realise this commitment for all children in all early childhood settings are hard to make a reality. In many settings these hard fought for rights of children are not yet evident in practice. Many children are not listened to in their daily lives, whether at home or in schools, and the development of their capacity to participate effectively as citizens is thus restricted. This situation particularly characterises the reality of our youngest children, who can remain 'silenced' and often excluded from the decisions which shape their lives with the rationale that they are 'too young' to express their rights and voice and that we, as adults, have to act on their behalf. We have also found that in 'crossing the border' from home to school, children from migrant, travelling, asylum-seeking and refugee families across a range of diverse communities and backgrounds are even less likely to be heard (Bertram and Pascal, 2006, 2008). It is our view that if all our children are to enjoy the rights enshrined in the UNCRC then research and practice needs to fundamentally reshape its paradigm to become more inclusive and participatory.

Our own work, and that of many other researchers and practitioners in the field, has documented the challenges to making this paradigm shift happen (Woodhead, 1999; Lloyd-Smith and Tarr, 2000; Lewis and Lindsay, 2000; Clark and Moss, 2001; Oliveira-Formosinho and Barros, 2006; Dahlberg et al., 2006). These initiatives reflect a growing acceptance of the view of young children as

citizens with rights and voice in our services, with the underpinning notion, well expressed by Lloyd-Smith and Tarr (2000), that 'reality experienced by children and young people in educational settings cannot be fully comprehended by inference and assumption'. At the heart of this view is that the actual experiences perceived by the child cannot be inferred by others and so practitioners must include their voices as they speak and not as we infer or interpret. It is our belief that our task as practitioners is to meet this challenge and open our eyes and ears and minds to these voices; to become expert and active listeners to children and to recognise the many ways in which children skilfully communicate their realities to us (Malaguzzi, 1998).

Perhaps in response to this body of work which promotes children's perspectives, we can also trace a growing recognition in the early years' sector of the importance of listening to young children's perspectives within assessment and evaluation processes. This collective participation in assessment and evaluation processes ensures shared responsibility and ownership, and helps to ensure that the evidence gathered has relevance and utility for quality improvement, another essential goal in creating high quality education for all. In this sense assessment and evaluation become highly attached, embedded and culturally located within the educational context and are viewed as an ongoing, internally driven and continuous process, rather than as an externally owned, detached, objective event. This approach also acknowledges that children, parents and practitioners have agency, capacity and the democratic right to shape, name and influence their world for the better. In this sense, assessment and evaluation processes can be seen as highly political, liberating and transforming forces for those involved (Freire, 1970; Bertram and Pascal, 2006; Pascal and Bertram, 2009, 2012; Formosinho and Oliveira-Formosinho, 2012). Finally, in this account of participatory assessment and evaluation practices, we are seeking to offer a means of establishing robust and practice based evidence which may be used for critical reflection and action (praxis) which we believe is at the heart of quality early education.

In summary, participatory assessment and evaluation has two key objectives. Firstly, it aims to produce relevant and practical knowledge and actions which are directly useful for improving the quality of early education offered within an early education setting. Secondly, assessment and evaluation seeks to empower those within an early education setting to seek social transformation through a process of constructing and using their own knowledge.

The generation of knowledge

Participatory assessment and evaluation is always situated within a specific context and so embraces localism but it is also democratic and participatory in the wider sense of society. Wenger's (1998) ideas on *communities of practice*, for example, can be seen to underpin and support this social and collaborative approach to knowledge generation. But philosophically and politically, individual liberty as set against the greater good of universalism and the power of the State carries political dangers

on the right of neo-liberalism, and on the left of anarchy. A participatory approach therefore takes the middle ground and foregrounds participation, voice and democracy, in which individuals are acknowledged but as members of a wider community. Because there is nothing as culturally and individually located, nothing as central to our concept of identity and belonging as how we rear our young children, early educational settings must recognise and be sensitive to these core and localised significances and cultural diversities. Participatory assessment and evaluation is careful of generalisations and universals and of reducing these complexities to numerical representations which deny people's plurality. In this approach, knowledge is viewed as soundest and most trustworthy when it is co-constructed and validated by those who are in the field of inquiry. It purports that knowledge can be localised and yet still be authentic, genuine and meaningful and have transferability.

Liberation and transformation

Freire's (1970) concept of 'praxis' is essentially political in that it seeks to explore 'the study of practice' with all its concomitants of avoiding 'domesticity' in thinking by establishing a critical stance of self-awareness and self-critique. This allows the creation of highly relevant but personalised and individualised libraries of the world's knowledge and thinking. Participatory assessment and evaluation embraces this emphasis on the importance of inclusionary paradigms and methodologies which recognise the value of the polyphonic, multi-perspective approach which leads to perceiving practitioners, parents and children as co-constructors of knowledge about the services and their development. Like McNiff's (2010) action researchers, this approach involves an intellectual story of adventurers, encouraging leaders, explorers and risk takers working at the cutting edge of understanding and knowledge creation in a Vygotskyian *zone of development*, embedded in a culture of transformation, which is forged by new integrated and cross-cultural, cross-paradigm and cross-disciplinary collaborations. The wider understandings which grow from these fertile participatory conditions is often messy but this 'chaos', as Gladwell (2006) suggests, permits the creative emergence of new methodologies and concepts. Much of this road has been travelled before but Reason and Bradbury (2008) suggest an added resonance recently, claiming we are witnessing,

> an emerging worldview, more holistic, pluralist and egalitarian that is eventually participative. This worldview sees human beings as co-creating their reality through participation, through their experience, their imagination and intuition, their thinking and their action. This participative worldview is at the heart of inquiry methodologies that emphasise participation as a core strategy.
>
> (Reason and Bradbury, 2008, p. 324)

In many countries we can see a new concern for grounded early childhood evaluation practices emerging from the 'bottom-up, not top-down'. As Martha Zaslow, Director of the Office of Policy and Communications for the Society for Research in Child Development stated,

> We're in the middle of a conceptual shift. We've had a very long-standing assumption that knowledge-focused professional development – meaning coursework and training – would suffice to yield changes in practice and quality. We're standing it on its head now, and beginning to say: if you want to change practice and quality, you need to begin by directly intervening with practice.
>
> (Zaslow et al., 2010, p. 6)

We suggest that there are many possibilities for 'intervening with practice' in order to transform and improve people's lives but we feel that profound change should and does grow from experience to conceptualisation and not the other way round. For example, Barnett's (2011) work examining what had and had not worked in state-funded early intervention programmes in the USA which aimed to transform children's life chances suggests that the nature of professional development offered to early childhood practitioners was a key factor in the success of an intervention. His work showed that initiatives which focused on developing practitioner knowledge, within a participatory approach, led to specific shifts in practice and these had the greatest impact in enhancing children's life chances. The potential role and power of participatory evidence generation is being to be realised.

The nature of participatory assessment and evaluation

The nature of participatory assessment and evaluation practice is shaped by three key concepts, which were central to the approach taken in the Effective Early Learning Programme (Bertram and Pascal, 2006):

1. *A democratic approach*: the assessment and evaluation process adopts a 'democratic approach', in which quality evaluation is viewed as a value laden enterprise, which is best achieved through the active involvement of participants in the process.
2. *An inclusionary approach*: this approach adopts an 'inclusionary model', in which the evaluation process is viewed as something 'done with' participants and not 'done to' them.
3. *Multiple perceptions and voices*: the subjectivity of the definition is thus acknowledged and the shared perceptions of quality are celebrated as central to the debate about quality in each particular setting. Quality is defined by the shared reflections and agreement of experienced practitioners, parents/carers and children within the framework of the programme. It is validated and scrutinised for accuracy by those closest to the learning experiences being evaluated.

This approach is therefore firmly founded on democratic principles and proponents have to work hard to establish a feeling of partnership and shared ownership of the whole process and must keep reflecting on the distribution of power within these relationships. A philosophical commitment to this approach is reinforced with the hope that it will also help the assessment and evaluation process become a major vehicle for the professional development of the practitioners involved. It aims to ensure that the individual settings become more responsive, better fit for purpose and that those within them would be empowered by the process. The process of review and implementation thus becomes part of the definition.

This approach to quality assessment and evaluation is not static or finite but is locally situated and responsive to time, culture and place. We make no attempt to give it a fixed definition but rather to provide a framework of reflective questions which encourage the individuals within each setting, including the parents/carers and children, to document and review how they experience the quality and effectiveness of the learning process. The aim is to support practitioners to improve on 'previous best' through gradual, incremental change and development, not through revolution. This approach has an underpinning philosophy which accepts that:

- judgements about quality need to be made;
- evaluation should emerge from an open, honest and collaborative dialogue using a shared vocabulary;
- this dialogue should be generated over an extended period of time;
- the dialogue should have a clear, systematic and agreed framework and format;
- the evidence for evaluation is gathered together and questioned together;
- the evaluation process should lead to action plans;
- the action should be followed through, supported and monitored;
- the settings should take ownership of the process and its outcomes;
- all participants in the process should be encouraged to make a contribution which is acknowledged and valued;
- collaboration and participation are more effective than compulsion and hierarchies.

Participatory assessment and evaluation processes adheres to the following principles of operation:

- Evaluation and Improvement are viewed as inseparable.
- The process of Evaluation and Improvement is participatory, democratic and collaborative.
- The process promotes equality of opportunity and acknowledges cultural diversity.
- The process is opted into and not imposed.
- The framework for evaluation is rigorous but flexible.
- The action plans are followed through and supported.
- The process is intended to empower and develop practitioners, parents/carers and children.

The focus of assessment and evaluation

To achieve this deeply transformational agenda, the focus of the assessment and evaluation process has to go beyond assessing and evaluating educational or learning outcomes, and adopt a wider, three-dimensional focus. It has to scrutinise critically and in detail, (1) the pedagogic context, (2) the pedagogic processes and (3) the

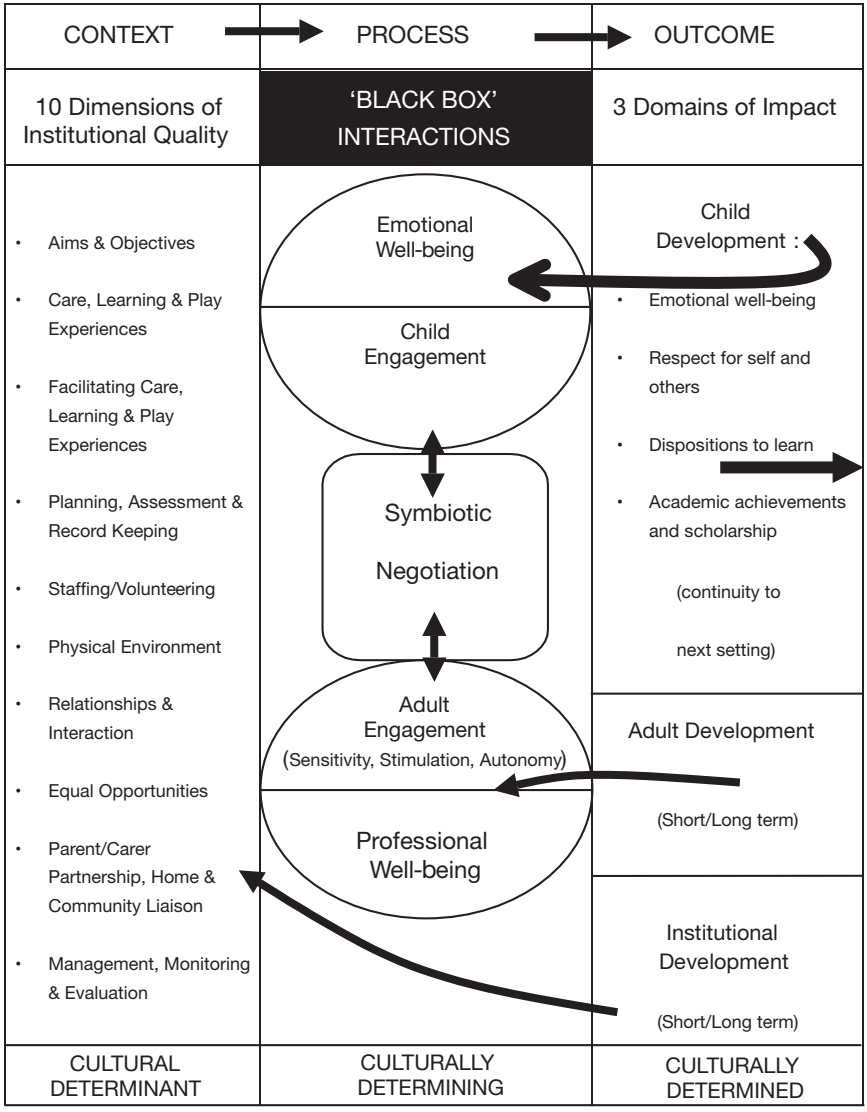

FIGURE 3.1 EEL conceptual framework for evaluating and developing quality in early childhood settings

Source: reproduced from Effective Early Learning Programme, Bertram and Pascal, 2006

pedagogic outcomes, to discern their contribution to the value, power and impact (transformational potential) of the education offered to, and experienced by, the children. This wider evaluative focus has been realised in the Effective Early Learning Programme (Bertram and Pascal, 2006), an established assessment and evaluation strategy in many early childhood contexts in the UK and Portugal Oliveira-Formosinho, 2009; Oliveira-Formosinho, Costa and Azevedo, 2009), which has set out a three-dimensional focus to quality improvement in early childhood settings as set out in Figure 3.1.

In this approach, the focus for assessment and evaluation has three strands:

1. *Pedagogic Context* evidence focuses on aspects of the setting that define the environment in which early learning takes place. This includes such things as:

    - Pedagogic Aims and Objectives
    - Learning Experiences/Curriculum
    - Learning and Teaching Strategies
    - Planning, Assessment & Record Keeping
    - Staffing
    - Relationships and Interactions
    - Inclusion, Equality and Diversity
    - Parent, Family and Community Partnerships
    - Physical Environment
    - Leadership, Monitoring and Evaluation.

2. *Pedagogic Process* evidence focuses on quality and nature of the pedagogic interactions between adults and children within a setting. This will involve evidence gathering about such things as:

    - Child Engagement and Involvement
    - Adult Engagement
    - Child Well-being
    - Professional Well-being.

3. *Pedagogic Outcomes* evidence focuses on the consequent developmental impact of the learning offered by a setting and is assessed at three levels of impact; the children's development, the adults' development and the institutional setting's development. This will involve evidence gathering about:

    - Children's Development – in such areas as communication and language development; attitudes and dispositions to learning; social-emotional competence; physical development
    - Practitioner and Parent Development
    - Setting Development and Improvement.

In this conception of participatory assessment and evaluation, it is fully acknowledged that any measures of Pedagogic Context, Process and Outcomes will be embedded in, and dependent on, the wider socio-cultural environment. Each early

childhood setting exists in an environment that is determined by the cultural norms and values of that society or sub group within that society. Evaluation of the quality of a setting will therefore be influenced by how far its values are shared and agreed by all the setting's participants and how far the setting agrees with the values of the wider groups beyond, for example, its local community, the regional authority, the government and other public opinions. This view of individual settings nested in wider circles of influence is called an 'ecological perspective' (Bronfenbrenner, 1979).

This wider, three-dimensional focus for assessment and evaluation in early childhood ensures that the pedagogic quality of a setting is viewed holistically, and that each element of pedagogic practice is assessed and evaluated as a significant constituent part of a dynamic, complex and interrelated system of relationships and interactions.

The process of assessment and evaluation

The process of participatory assessment and evaluation has four distinct phases of cyclical action, which flow into each other and encourage an ongoing process of reflection and action, as exemplified in the EEL programme diagram in Figure 3.2. Each Phase has a set of participatory and ethically agreed methods and strategies that will support settings in implementing the process successfully and democratically. Each stage of the process is also documented rigorously and reflected upon by all those who have participated in the evidence gathering process. The intention is to ensure all feel ownership at each stage of the development process and also a real sense of shared responsibility in the evaluative outcomes and their implications for the further improvement of the quality of practice.

Phase 1: Assessment and evaluation

In this first phase practitioners work together with colleagues, parents/carers and children to document and assess the quality of early learning within the setting. Evidence is gathered collaboratively about all aspects of the setting context and processes. The resultant data are used by practitioners to facilitate a critical assessment of the quality of early learning and care within their setting. All data collected from the quality documentation and assessment are collated into a detailed and carefully structured *Evaluation Report* of the quality of early learning within each setting. The Evaluation Report is then shared with the practitioners in the study setting for validation.

Phase 2: Action planning

The practitioners meet with all participants to identify the priorities for action. This plan will be individual to the needs of each setting. A structured and achievable **action plan** for the development of care, learning and development should emerge which has clearly articulated targets within an identified time scale.

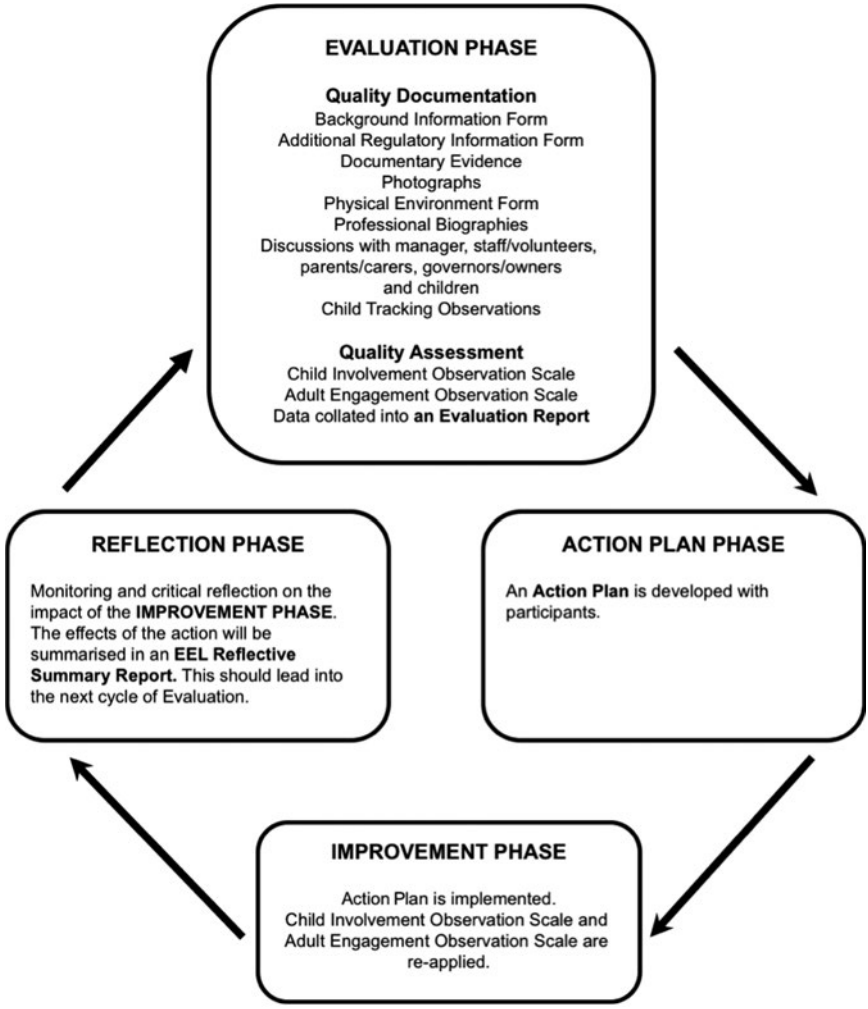

FIGURE 3.2 EEL assessment and evaluation cycle

Phase 3: Improvement

A programme of individual and/or setting development which relates closely to the agreed targets of the action plan is implemented. Throughout this phase, progress should be monitored and the practitioners are encouraged to gather evidence upon the effect of the action on the quality of the children's care, learning and development experiences within the setting (impact measures).

Phase 4: Reflection

Practitioners are encouraged to reflect upon the evaluation and improvement process, and to review the evidence of the impact of their action plan upon the quality of the children's learning within their setting. The practitioners collate their findings in a *Reflective Summary Report* which includes the results of the final data gathering and the participants' views on further improvement, leading into another cycle of evaluation and improvement.

References

Barnett, W.S. (2011) Effectiveness of early educational intervention, *Science*, 333: 975–978.

Bertram, T. and Pascal, C. (2006) *Effective Early Learning (EEL) A Handbook for Evaluating, Assuring and Improving Quality in Early Childhood Settings*. Amber Publishing and TV Junction: Birmingham.

Bertram, T. and Pascal, C. (2008) *Accounting Early for Life Long Learning (AcE), A Handbook for Assessing Young Children*. Amber Publishing and TV Junction: Birmingham.

Bronfenbrenner, U. (1979) *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press: Cambridge, MA.

Bruner, J. (1996) *The Culture of Education*. Harvard University Press: Cambridge, Mass.

Clark, A. and Moss, P. (2001) *Listening to Children: The Mosaic Approach*. National Children's Bureau and Joseph Rowntree Foundation: London.

Dahlberg, G., Moss, P. and Pence, A. (2006) *Beyond Quality in Early Childhood Education and Care: Postmodern Perspectives*, 2nd edn. Falmer Press: London.

Formosinho, J. and Oliveira-Formosinho J. (2012) Towards a social science of the social: the contribution of praxeological research. *European Early Childhood Education Research Journa*l, 20, 4: 591–606.

Freire, P. (1970) *Pedagogy of the Oppressed*. Herder and Herder: New York.

Gandhi, M.K. (1981) *Young India* Vol. 1: *1919*. Navjivan Publication House: Ahmedabad.

Gibson, J.J. (1977) The theory of affordances. In R.E. Shaw and J. Bransford (eds), *Perceiving, Acting, and Knowing*. Lawrence Erlbaum Associates: Hillsdale, NJ.

Gladwell, M. (2006*) Blink: the Power of Thinking Without Thinking*. Penguin: Harmondsworth.

Knowles, M.S. (1973) *The Adult Learner. A Neglected Species*. Gulf Publishing: Houston.

Lewis, A. and Lindsay, G. (eds) (2000) *Researching Children's Perspectives*. Open University Press: Buckingham.

Lloyd-Smith, M. and Tarr, J. (2000) Researching children's perspectives: a sociological perspective. In A. Lewis and G. Lindsay (eds), *Researching Children's Perspectives*, Open University Press: Buckingham.

Malaguzzi, L. (1998) *The Hundred Languages of Children: The Reggio Emilia Approach*. Ablex Publishing: CA, Greenwich.

Mezirow, J. (2006) An overview of transformative learning. In P. Sutherland and J. Crowther (eds), *Lifelong learning: Concepts and Contexts,* pp. 24–38. Routledge: New York.

McNiff, J. (2010) *Action Research for Professional Development*. September Books: Dorset.

Oliveira-Formosinho, J. (org.) (2009) *Desenvolvendo a qualidade em parcerias: Estudos de caso*. Colecção Aprender em Companhia, da Direcção-Geral de Inovação e de Desenvolvimento Curricular (DGIDC). Lisbon: Ministério da Educação.

Oliveira-Formosinho, J. and Barros Araújo, S. (2006) Listening to children as a way to reconstruct knowledge about children: some methodological implications. *European Early Childhood Education Research Journal,* 14, 1: 21–31.

Oliveira-Formosinho, J., Costa, H. and Azevedo, A. (2009) A minha árvore. In J. Oliveira-Formosinho (org.), *Limoeiros e laranjeiras: Revelando as aprendizagens*, pp. 15–27. Colecção Aprender em Companhia, da Direcção-Geral de Inovação e de Desenvolvimento Curricular (DGIDC). Lisbon: Ministério da Educação.

Pascal, C. and Bertram, T. (2009) Listening to young citizens: the struggle to make real a participatory paradigm in research with young children. *European Early Childhood Education Research Journal,* 17, 2: 249–262(14).

Pascal, C. and Bertram, T. (2012) Praxis, ethics and power: developing praxeology as a participatory paradigm for early childhood research. *European Early Childhood Education Research Journal,* 20, 4: 477–492.

Reason, P. and Bradbury, H. (eds) (2008) *Sage Handbook of Action Research: Participative Inquiry and Practice* (2nd edn). Sage Publications: London.

Rogoff, B. (2003) *The Cultural Nature of Human Development*. Oxford University Press: New York.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning, and Identity*. Cambridge University Press: Cambridge.

Woodhead, M. (1999) Towards a global paradigm for research into early childhood education. *European Early Childhood Education Research Journal,* 7, 1: 5–22.

Vygotsky, L.S. (1978) *Mind in Society*. Harvard University Press: Cambridge, MA.

Zaslow, M., Tout, K. and Martinez-Beck, I. (2010) *Measuring the Quality of Early Care and Education Programs at the Intersection of Research, Policy, and Practice*. OPRE Research-to-Policy, Research-to-Practice Brief OPRE 2011–10a. Office of Planning, Research and Evaluation, Administration: Washington, DC.

5

THE SEARCH FOR A HOLISTIC APPROACH TO EVALUATION

João Formosinho and Júlia Formosinho

This chapter presents our own holistic approach to evaluation which embodies an ethically principled and democratic perspective incorporating the active contribution of children, practitioners and families. This approach is interested in all aspects of children's learning with an intention to see the whole child, rather than fragmented elements of her/his identity, learning processes and progression in learning.

It is known that assessment and evaluation procedures may foster or hinder the full development of the foundational pedagogic approach. This holistic pedagogic approach is congruent with childhood participatory pedagogies and co-constructivist epistemologies.

This holistic pedagogic approach to evaluation sets out to conceptualise and use a standpoint to assessment that is situated in place, time and cultures serving primarily children and families, but also professionals, early childhood centres and the wider community, research and the educational system.

This approach requires from the professionals a conscious engagement of their integrated thinking, doing and feeling to achieve a deeply contextualised understanding of children's learning, thus slowly creating an antidote for resilience to the generalised pressure for using abstract and decontextualised assessment and evaluation instruments.

The epistemological stance – inadequacy of the applicationist view on educational assessment and evaluation

Education has been seen for decades by researchers and policy makers as the application of positivist science, just as technology is seen as a mere application of natural sciences achievements. Scientists like psychologists, sociologists and economists conduct research, develop theory, create knowledge; practitioners and

policy makers apply in the field the knowledge thus produced. This sums up this applicationist view of social professional practice.

Thus the identity of the field of education was compartmentalised by the scientific domains that came to be more influential in its development. The very essence of education developed as cumulative processes of the various natures of the central scientific domains: psychology of education (educational psychology and developmental psychology), sociology of education, economy of education and also history of education, anthropology of education and others. But education as a field of action is much more that this accumulation of compartmentalised knowledge. It is a field per se, in its own right (Dewey, 1938; Malaguzzi, 1998). Over the last twenty years, in the field of early years pedagogy, we have also seen a call for attention to pedagogy as a field in its own right (Freire, 1996; Oliveira-Formosinho, 2007; Formosinho and Oliveira-Formosinho, 2012).

The applicationist perspective of the positivist paradigm in educational assessment and evaluation

Rejection of complexity

As Morin (1986) says, classical science rejected complexity in virtue of the *principle of reduction* that consists in knowing any composite from the knowledge of its basic elements. It also embraced the *principle of disjunction* that consists in separating cognitive difficulties, leading to the separation of disciplines. As you isolate the object, the complexity disappears: in a closed discipline this decontextualised object is not a scientific problem.

The rejection of complexity does not serve social sciences nor education and childhood pedagogy. Childhood pedagogy as praxis sits in complexity because it serves multidimensional holistic children in interaction with peers and educators.

Absence of contextualisation

Flyberg (1998, 2010) comments that knowledge mode characteristic of disciplinary science isolates objects one from another and isolates them from their environment. The principle of scientific experimentation allows taking a body in nature, isolating it in a controlled laboratory environment and studying this object in reaction to the variations that one makes it undergo. It is possible to know a certain number of its qualities and properties,[1] but it does not serve either educational action as praxis or educational research as transformation (Oliveira-Formosinho and Formosinho, 2012). According to Formosinho and Oliveira-Formosinho (2012) we need to jointly undertake a search for a *social science of the social* and for an *educational science of praxis*.

Control of subjectivism

The objective knowledge which is the ideal of positivistic science resulted in the need of eliminating subjectivity, i.e. the emotional part inherent to each observer, to each researcher, but it also comprised the elimination of the subject, i.e. the being which conceives and knows.

As Giddens writes:

> The technical language and theoretical propositions of the natural sciences are insulated from the world with which they are concerned because that world does not answer back. But social theory cannot be insulated from its 'object-world,' which is a subject-world.
>
> (Giddens, 1982, p. 13)

The applicationist perspective in early childhood education as reductionism

As early years assessment has been conducted in the psychological tradition within a positivist research paradigm, it is important to elaborate on this to best understand early years evaluation.

Psychological reductionisms

Childhood pedagogy developed in the times where psychology (behavioural psychology and later developmental psychology) was striving to adopt the positivistic research paradigm. The positivistic paradigm of psychological research developed measuring instruments for the purposes of research which were then transferred to early years assessment – we have been seeing the adoption of these research instruments for the pedagogic evaluation of children's learning. The dominance of psychology in the development of childhood pedagogy has been constant throughout the twentieth century – it has been often seen mainly at the level of assessment as mere application either of behavioural psychology or of developmental psychology.[2]

The imperialistic view of psychology over education, as Lawrence Kohlberg (1987) put it, is very clear in what concerns assessment of learning. Childhood pedagogy traditions of assessment mirror practices imported from the field of psychology without the needed contextualisation.

The positivist paradigm of classical science in education transforms childhood pedagogy on a mere applied field for the major disciplines. Education is perceived and conceptualised as a linear and simple application of other major sciences. This is the process of reduction and simplification typical of the positivist paradigm (Morin, 1986).

The *reductionism of behavioural psychology* is the belief that behaviour is the best indicator of capacities and students' learning. Kozulin (1998) says:

> Recently a number of attempts have been made to venture beyond both the total rejection and the complete acceptance of the psychometric paradigm. These alternative approaches have been developed in the context of different research and evaluation traditions and in some instances reflected conflicting goals and objectives. Against such a background, it is useful to inquire into those tacit assumptions that constitute the paradigm of standard intellectual testing:
>
> - The manifest level of functioning reveals the child's inner abilities more or less accurately.
> - Unaided performance is the best format for assessment.
> - The goal of testing is to predict the future functioning and to classify the child according to his or her level of abilities.
>
> (Kozulin, 1998, pp. 88–89)

The belief that the visible functioning is the best way to measure learning and the privileged way to measure capacities is a simplification, which is made untrue by the sheer complexity of human living and learning where cognition and emotion are of paramount importance.

The *reductionism of developmental psychology* that influenced early years curricula (developmental appropriate practices and other similar curricula) gave rise to practices of early childhood education highly centred on psychological stages of different developmental domains. With Malaguzzi (1998) we can say that Piaget presents an image of an interactive child that negotiates with the environment and is a participant in his learning processes; but if his predefined stage sequence is viewed as identical for everyone this may conceal individual processes. This simplification is made fictitious by the fact that the contextual nature of human development and the equal influence of nurture and nature in children's growth generate a diversity of individual paths.

Transmissive pedagogy reductionism

The *reductionism of transmissive pedagogy* is the belief, so well deconstructed by Paulo Freire (1996), that the exact reproduction of learned knowledge is the best indicator to measure learning and to evaluate individual capacities. The devaluing of discovery learning and project work, of creativity and problem solving competences, had been a constant characteristic of transmissive pedagogy. Even when a teacher experiences more participative methods in their classrooms, evaluation is often marked by the transmissive syndrome.

Transmissive pedagogy ignores or minimises the complexity of each child's living experiences, ignores or minimises the complexity of knowledge itself (the interaction between the different scientific disciplines and the inevitable interaction between curricular subjects, the need for interdisciplinary studies and transdisciplinary topics), ignores or minimises the sheer complexity of the educational

act. In short, it ignores or minimises the complexity of human living and learning in a complex world. For this purpose the school creates a closed environment, ignoring all that children learn outside its walls (Dewey, 1938; Freire, 1996).

Education being essentially the preparation of the younger generations for the future, we must recognise the principle of *rational uncertainty* (Morin, 1986, 2008). Education cannot rely solely on the transmission of past knowledge minimising the apprenticeship of the essential competencies of learning how to learn, of searching and organising new information, of problem solving competencies and devaluing educational imagination and human creativity.

Nowadays we experience an acceleration of history (Hargreaves and Fink, 2006) which makes this transmissive emphasis more inadequate. The complexity of learning and knowing and of knowledge development in a complex world cannot be understood only by the reproduction of the different separate disciplinary segments of human knowledge.

Dimensions of the applicationist view of educational assessment and evaluation

As seen in the first chapter, this process of simplification begins in the *organisational dimension*, through the building of an educational assembly line which reduces the complexity of any work to a sequence of very simple mechanical tasks. The shaping of the mass education assembly line makes final assessment and evaluation the equivalent of quality control of the finished product in the industrial world.

This process of simplification pervades the *curricular dimension* through the systematic and sequential explicitation of the prescribed contents for each subject (coupled often with the prescribed didactics), to be transmitted irrespective of the interests, needs and projects of the learning group and independently of the individual progress of each learner. The curriculum is built as an accumulation of the syllabus of the different disciplines. The general curricular aims are to be obtained through the summing up of the specific objectives for each subject. This is the essence of the reductionist simplification process – *uniformity* and *abstractness*.

This process of simplification permeates the *pedagogical dimension*, through standardisation of processes and outcomes in teaching. All this process is based on abstract concepts of schools and classrooms, content and process, teacher and learner. That is, the pedagogical process is designed for abstract schools, abstract teachers and abstract learners in a detached process. This is the essence of the reductionist simplification process – *abstractness and detachedness*.

Finally, this process of simplification ends up in the *evaluative dimension*, through standardisation of processes and outcomes in teaching. Evaluation is nearly reduced to the assessment meaning by the application of measurement instruments. What is valued in this simplistic evaluation process? The exact reproduction of the content transmitted by the teacher that is the devolution of the knowledge deposited by the teacher (Freire, 1996) or presented in textbooks, workbooks, worksheets.

This simplistic mode of evaluation is a consequence of a reductionist process at organisational, curricular and pedagogical levels. It is a consequence of a specific world vision that devalues human agency and rights.

The inadequacy of the applicationist view of educational assessment and evaluation

Education as an application of the positivist science has not been very useful for transforming educational praxis, since it does not generate pertinent knowledge about praxis, about the human condition and the integrated contextual identity of children, or about the processes involved in the transformation processes. These very processes are those which depend fundamentally on the contextual human action and interaction.

The reason why the natural sciences paradigm is not adequate to conduct educational action (or research in social sciences) is that the object of the research is not an inert raw material; it is a subject with cognition, sentiments and will; it is a social actor with agency; it is a person with a specific life story and singular projects. Many of the variables which influence the cause-effect relationship described above are process variables dependent on the agency of the persons involved and their life learning stories (Giddens, 1982; Formosinho and Oliveira-Formosinho, 2012; Pascal and Bertram, 2012).

The predictions and explanations of the context-independent truths of natural sciences do not apply to context dependent action which is a characteristic of human activity as social theory cannot be insulated from its 'object-world', which is a subject-world (Giddens, 1982).

The epistemological stance – a co-constructive view on educational assessment and evaluation

A characterisation of holistic evaluation using comparison

One of the obstacles for learning is our own limited means for learning. In the community of early childhood education, the applicationist view of assessment and evaluation established some fixed ideas about rigour and objectivity. These fixed ideas need to be confronted with other ideas because generation after generation of professionals had been formed in dialogue with them. The only way to challenge the imperialism of some ideas is to counter use other ideas. So, in summary, we are sharing with the readers two tables that helped us in developing an understanding of the aims and the processes of evaluation, Table 5.1 and Table 5.2.[3]

Assessment and evaluation should acknowledge the complexity of children's experience and of the educational act

The first important characteristic of a holistic assessment and evaluation in early years is the *respect towards the complexity* of children's identities and learning

TABLE 5.1 The characteristics of holistic evaluation: the aims of evaluation in early childhood

	Reductionist evaluation	*Holistic evaluation*
Intentionality of the evaluation	• Seeks just measuring learning	• Seeks to understand learning and contribute to further learning
Main characteristic of the evaluation	• Traditional, compartmentalised, transmissive, selective	• Participatory, holistic, ecological, inclusive
Assessment vs evaluation	• Evaluation is centred on assessment of limited areas thus narrowing the teaching and learning	• Evaluation encompasses integrated learning in all areas
Orientation of the evaluation	• Outcomes oriented	• Oriented towards contexts, processes and outcomes
Actors involved in the evaluation process	• It is a closed non-interactive process, involving only the teachers and/or the evaluators	• It is a participatory process, involving the contribution of the professionals, the children and the families
Orientation of the evaluation	• It is a process in closed circuit, closed in itself	• It is an ecological process open to various contexts
Focus of the evaluation process	• The evaluation process focuses on what the learner does not yet know – deficit approach – to overcome that deficit	• The evaluation process focuses on what the learner knows to enlarge and enrich it
Selection versus inclusiveness	• The selective dimension is strong	• The inclusive dimension is of paramount importance

Source: adapted from Formosinho and Oliveira-Formosinho (1996)

experience of the world and of themselves, the respect of the complexity of knowledge and the respect of the complexity of the educational act. We propose a complex holistic evaluation – holistic is not another concept to reduce and simplify reality, rather it is a concept to uncover the complexity of learning, of knowledge, of knowing about knowledge, and of being. In what concerns this last aspect, neurosciences have made very clear the relationship between cognition and emotion (Damásio, 1994, 1999).

The notion of holism has been developed by many, in different disciplines and methodologies, for instance in Goethe's scientific method. The essence of Goethean science is that of being holistic in two planes: firstly, at the level of process putting forward the engagement of the researcher doing, feeling and thinking and, secondly, at the level of the outcomes by trying to reach a deeply contextualised

TABLE 5.2 The characteristics of holistic evaluation: the processes of evaluation in early childhood

	Reductionist evaluation	*Holistic evaluation*
Mode of evaluation	• Abstract processes	• Concrete and situated processes
Mode of evaluation simple vs complex	• Follows the simplifying logic of the transmissive pedagogy (such as tick box tasks)	• Acknowledges the complexity of the educational act through documentation
Comprehensiveness	• Compartmentalised fragmented	• Holistic and integrated
Time of evaluation	• Periodic	• Continuous and systematic
Type of effects	• Immediate effects	• Immediate, medium and long term effects
Connectedness with learning	• The evaluation is independent from the learning process, is self-sufficient	• The evaluation is connected with the learning process
Rigour in evaluation	• Rigour is obtained by distance	• Rigour is obtained by attachment and triangulation

understanding of phenomena understudy. It is recognised that to fully understand the nature of Goethe's method requires sustained engagement. Bortoft (1996, 1998) and Steiner (1984) are helpful in the elucidation of Goethe's method and assert that throughout the course of life we forget that we learned our way of looking at the world around us. He says that our ordinary way of seeing takes it for granted that everything, including our bodies and minds, can be understood as manipulated objects that can be taken apart and described in terms of their parts to then be artificially put together.

So we learn separateness to see everything separated from us. In Lehrs' (1951, p. 73) terms we become *permanent onlookers*. Everything is separated from everything thus we think of wholes as more or less well-organised collections of separate objects, separate parts. There are many consequences of this, one is a poor understanding of wholes *as wholes* decomposed in parts later recombined into the whole. The whole is nothing in itself, as it is only a collection of parts.

Bortoft (1996, 1998) continues by saying that the merits of this method have proven themselves beyond doubt in science and technology – the 'inorganic' world. He doubts about its merits to understand the living world and uses the example of a plant.

> Of course we can see a plant as built up of root, stem and leaf and this may be useful for practical purposes, such as food, or medicine. However, the living and growing plant as it is, is not actually built up from a root, stem and leaf. At no point in the plant's growth and development are these three parts put together to form the whole plant. Root, stem and leaf gradually form the process of growth in which they are continuous with each other and the plant as a whole. The plant as a whole cannot therefore be fully understood by explaining it in terms of its parts only.
>
> (Bortoft, 1996, p. 77)

The problem is our learned way of seeing. The solution is to relearn our way of seeing. Our learned way of seeing taught us to separate things that are not separated, so after separating we recreate an artificial whole. The essential whole is lost. The gap produces a dualistic thinking that then needs bridging and sometimes we discover artificial bridges. Why do we not go upstream and explore another world view and another scientific paradigm? Why not explore complexity?

The whole is larger than the parts, meaning that the whole is not merely the sum of the parts. The whole is more significant than the sum of the parts – any evaluation of a part (a subject, a competence, a performance, etc.) is less revealing than the evaluation of the whole and can only be properly understood in the appreciation of the whole.

The whole does not assimilate the parts and the addition of parts does not substitute the whole. The group of children is not just the sum of the individual children; the classroom is not just the addition of all the children plus the educators. Similarly the professional community of a centre is not just the sum of the individual educators; likewise an early childhood centre is not the mere juxtaposition of the different classrooms.

There is a dynamic character among the different parts that is an intrinsic part of the whole. The relationship between the different parts is characterised by interactivity, bi-directionality and re-cursivity (Morin, 1986, 2008). This means that there is complexity in this dynamic. This holistic perspective does not represent a reductionist simplification of the reality.

This means that a holistic perspective of assessment and evaluation cannot be based on the summative appreciation of the different parts – the individual children, the individual teachers and the individual classes. We have to set up mechanisms to evaluate also the dynamics of the whole, that is, the recursive interaction among the parts as will be seen in Chapter 6 when presenting the documentation of learning.

The child is a holistic entity, a holistic identity. This identity should be characterised as an interactive (and recursive) integration of all the psychological dimensions (cognitive and emotional, social and civic, aesthetic and physical) and also of the social, historic and cultural dimension. Both the whole and the parts should be considered (and evaluated) within their contexts and their interactions (Bronfenbrenner, 1979, 2006). At the level of rigour, a participatory intercultural

pedagogy should take into account the interactive and recursive integration of all the constituting dimensions of children's identity. At the level of ethics this is a pre-requisite for equity for all. Indeed it is known that children's capacities and intelligences are plural as well as the cultures they belong to. A participatory intercultural pedagogy cannot ignore either the cultural difference or the individual differences.

Since a paradigm of simplification controls classical science, by imposing a principle of reduction and a principle of disjunction to any knowledge, the paradigm of complexity put forward a principle of distinction and a principle of conjunction (Morin, 1986).

Assessment and evaluation should acknowledge that human action is contextual and culturally situated

Bronfenbrenner (2004, 2006) and other ecological approaches help the understanding of learning as developing in context. Learning of each individual child and the group develops in their plural, social contexts and its interactions. Learning is then ecological. Contexts are socially constructed, located in time, space and culture. Evaluation is to be referred to children's experiential learning in socio-cultural contexts in specific pedagogic situations. Then assessment and evaluation should follow an ecological approach.

As learning is contextual, there is a methodological[4] (and ethical) stand on the part of the professionals to conduct a reflexive analysis about the context of learning – the educational environment. To assess and evaluate with thoroughness children's learning, professionals have to evaluate beforehand the quality of the learning contexts, of the educational environments, and of the educational opportunities provided for all children and for each individual child.[5]

Assessment and evaluation should acknowledge that human action is not completely predictable

Assessment and evaluation should acknowledge that human action is not completely predictable, meaning children's learning and progress has a degree of uncertainty. A certain degree of (apparent) failure is the price for human freedom. Education is an action of persons with persons through persons. Persons have a will – this mean that one cannot predict exactly the outcome of any given educational process. This non predictability is inherent to human freedom (Formosinho, 2009).

Evaluation has consequences in the educational system since it facilitates or hinders the progress in school, and has consequences for employment since it leads to certification of educational and professional credentials. But evaluation is done against a background of expected behaviour, expectations from society, professionals, parents and the teacher. Hence the evaluative judgement depends not only on compliance with the standards achieved but also on the standards

expected. Since evaluation impinges on a current child's self image influencing her current and even later life, it should be conducted within ethical principles as presented in Chapter 7.

Assessment and evaluation should acknowledge that easily observable short term outcomes are not the most important results in education

The easily observable outcomes are not the only important results in education. The most significant and relevant results of the educational action are not easily observed only by the learner's behaviour and/or by scales. The comprehensive outcomes involve a blend of cognition, emotion, morality, social and civic education, affective and empathetic education, values – not easily reachable by measurement instruments.

The most significant and relevant outcomes of the educational processes can only be evaluated in the medium and long term as seen in many longitudinal studies (Araújo, 2015), since they are related with school success, job success and success in personal life and other dimensions like wisdom and happiness.

Assessment and evaluation should acknowledge the isomorphic nature of a co-constructive participatory pedagogy

A co-constructive participatory pedagogy is always embedded in the isomorphic mode. *Pedagogical isomorphism* is a metaphor borrowed from natural sciences[6] to express the same equivalence of mode of development between adult learning mode and children learning mode. Assessment and evaluation should acknowledge the isomorphic nature of a co-constructive participatory pedagogy.

In a co-constructive pedagogy, when professionals promote children's learning journeys they are also encouraging their own learning journeys. Isomorphic pedagogy acknowledges children and adults as persons and implies a pedagogy of involvement which recognises the previous knowledge and experience of participants and actively involves them in the processes of their own change (Formosinho and Oliveira-Formosinho, 2005).

As all human beings (adults and children alike) learn through homologous processes, interpersonal interaction is an important scaffold for the intrapersonal learning of both of them. There is interdependence between the *intrapersonal dimension* of the learning process – the building of individual learning journeys – and the *interpersonal dimension* – this building of individual learning journeys within a learning community.

Assessment and evaluation are also subject to the same isomorphic mode, thus the evaluation of children's learning is always an instance to evaluate the professionals' learning.

There are different levels of isomorphism that are of significance for holistic evaluation. Through the ontological isomorphic level between children and adults

we call attention to the parallelism of both deserving respect and the exercise of rights; through the psychological isomorphism level we call attention to the homologous mode of children and adult learning, both deserving involvement and participation; through the pedagogic isomorphism stance we call attention to children and adults having the need of liberating educational situations that grant them voice and answers.

Assessment and evaluation should acknowledge the connectedness in early years' development

Another important characteristic of holistic evaluation is *connectedness* – as all parts of the whole are connected, interrelated, all partial appreciation is incomplete or even misleading.

In opposition to reduction, complexity requires that one tries to comprehend the relations between the whole and the parts. The knowledge of the parts is not enough, the knowledge of the whole as a whole is not enough, if one ignores its parts; one is thus brought to move in loops to gather the knowledge of the whole and its parts. Thus, the principle of reduction is substituted by a principle that conceives the relation of whole-part mutual implication.

The principle of disjunction, of separation (between objects, between disciplines, between notions, between subject and object of knowledge), should be substituted by a principle that maintains the distinction, but that tries to establish the relation.

As Morin (1986) says, since we have been domesticated by our education which taught us much more to separate than to connect, our aptitude for connecting is underdeveloped and our aptitude for separating is overdeveloped. Holistic pedagogic evaluation of children's learning needs sustained praxis both of deconstructing separateness and of constructing connectedness to honour all children's right to participate in learning with their individual and social idiosyncrasies.

Assessment and evaluation should acknowledge the intersubjectivity in early years assessment and evaluation

All authentic evaluation has a degree of *subjectivity* – the self-proclaimed objective evaluation is necessarily partial and incomplete since it does not include the self-awareness of the subject evaluator. All our appreciation of reality has a degree of subjectivity. In holistic complex evaluation intersubjectivity is the criterion. This means that triangulation of voices (teachers, children, parents) and triangulation of instruments over time are of paramount importance to achieve a more authentic appreciation (Bertram and Pascal, 2004, 2006). All authentic appreciation is obtained not through distance but through reflexive critical close proximity.

Professionals have the civic right and the civic duty to monitor the daily development of childhood pedagogy and to document children's learning. They use daily documentation as a tool for the pedagogic evaluation of learning aiming

at the understanding of the holistic learners' identities as dynamic and modifiable through solidary teaching[7] that brings about children's learning possibilities through the creation of cooperation and communication in learning situations and in its narration.

Notes

1. But, as Morin (2008) said, one can also say that this principle of decontextualisation was ill-fated, as soon as it was ported to the living. The observation since 1960 by Jane Goodall of a tribe of chimpanzees in their natural environment showed the supremacy of observation in a natural environment over experimentation in a laboratory for knowledge. The idea of knowing the living in their environment became capital. The autonomy of the living needs to be known in its environment, within context and culture. The identity of the learner should to be developed and assessed in its context.
2. We note that psychology has been and is of paramount importance as one of the dialogues of pedagogy.
3. Reductionist and holistic evaluation are presented as ideal types (pure types) using Max Weber concept – it is a description and interpretation which stresses elements common to most case of the given phenomenon, a synthesis of many diffuse individual phenomena arranged according to a specific viewpoint built into a unified analytical construct. This specific viewpoint is presented in the tables provided.
4. There is also an ethical stand to evaluate the contexts to better evaluate the child's learning.
5. Assessment and evaluation based on documentation needs to make visible the relationship between teaching and learning as has been seen in Chapter 2 and will be seen in Chapter 6.
6. *Isomorphism* means in *chemistry* and *mineralogy* the property of crystallising in the same or closely related forms, as exhibited by substances of analogous composition. In *mathematics* means identity of form and operations between two sets or an exact correspondence as regards the number of constituent elements and the relations between them.
7. To understand the concept of solidary teaching and solidary learning see Chapter 6.

References

Araújo, S.B. In press. Impacto da experiência em contexto de creche: Contributos do estudo de programas longitudinais de intervenção. *RELAdEI (Revista Latinoamericana de Educación Infantil)*.

Bertram, T. and C. Pascal. (2004). *The effective early learning programme*. Birmingham: Centre for Research in Early Childhood.

Bertram, T. and C. Pascal. (2006). *The baby effective early learning programme: Improving quality in early childhood settings for children from birth to three years*. Birmingham: Centre for Research in Early Childhood.

Bortoft, H. (1996) *The wholeness of nature*. Edinburgh: Floris Books.

Bortoft, H. (1998) Conterfeit and authentic wholes. In *Goethe's way of science*, eds D. Seamon and A. Zajons. New York: Suny.

Bronfenbrenner, U. (1979) *The ecology of human development*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2004) *Making human beings human: bioecological perspectives on human development*. Thousand Oaks, CA: Sage Publications.

Bronfenbrenner, U. (2006) *The ecology of human development: experiments by nature and design*. Englewood Cliffs, NJ: Harvard University Press.

Damásio, A. (1994) *Descartes' error: emotion, reason, and the human brain*. New York: Putnam Publishing.

Damásio, A. (1999) *The feeling of what happens: body and emotion in the making of consciousness*. New York: Harcourt Brace & Company.

Dewey, J. (1938) *Experience and education*. Indiana: Kappa Delta Pi.

Flyvbjerg, B. (1998) *Rationality & power: democracy in practice*. Chicago, IL: The University of Chicago Press.

Flyvbjerg, B. (2010) *Making social science matter: why social inquiry fails and how it can succeed again*, 12th edn. Cambridge: Cambridge University Press.

Formosinho, J. (2009) *Dilemas e tensões da universidade frente à formação de profissionais de desenvolvimento humano*. São Paulo. Cadernos Pedagogia Universitária. Pró-Reitoria de Graduação.

Formosinho, J. and Oliveira-Formosinho, J. (1996) *The search for participatory curricular approaches for early childhood education*. Research Report, Aga Khan Foundation, Lisbon.

Formosinho, J. and Oliveira-Formosinho, J. (2005) *Developing learning communities: the final report on the evaluation of the impact of the National Professional Qualification in Integrated Centre Leadership (NPQICL) leadership programme*. National College for School Leadership.

Formosinho, J. and Oliveira-Formosinho, J. (2012) Towards a social science of the social: The contribution of praxeological research. *European Early Childhood Education Research Journal* 20, 4: 591–606.

Freire, P. (1996) *Pedagogy of the oppressed*. London: Penguin Books.

Giddens, A. (1982) *Hermeneutics and social theory. Profiles and critiques in social theory*. Berkeley, CA: University of California Press.

Hargreaves, A. and Fink, D. (2006) *Sustainable leadership*. San Francisco: Jossey-Bass.

Kohlberg, L. (1987) Democratic moral education. *Psicologia (Revista da Associação Portuguesa de Psicologia* V, 3: 335–341.

Kozulin, A. (1998) *Psychological tools: a sociocultural approach to education*. Cambridge, Mass.: Harvard University Press.

Lehrs, E. (1951) *Man or matter*. London: Rudolf Steiner Press.

Malaguzzi, L. (1998) History, ideas, and basic philosophy: an interview with Lella Gandini. In *The hundred languages of children: the Reggio Emilia approach – advanced reflection*, eds C. Edwards, L. Gandini and G. Forman, pp. 49–97. Greenwich, CT: Ablex.

Morin, E. (1986) *O Método 3 – O Conhecimento do Conhecimento*. Lisbon: Europa América.

Morin, E. (2008) *On complexity*. Cresskill, NJ: Hampton Press, Inc.

Oliveira-Formosinho, J. (2007) Pedagogia(s) da infância: reconstruindo uma práxis de participação. In *Pedagogias(s) da Infância. Dialogando com o passado, construindo o futuro*, eds J. Oliveira-Formosinho, T.M. Kishimoto and M. Pinazza, pp. 13–36. São Paulo: Artmed Editora.

Oliveira-Formosinho, J. and Formosinho, J. (2012) Special issue. Praxeological research in early childhood: a contribution to a social science of the social. *European Early Childhood Education Research Journal* 20, 4.

Pascal, C. and Bertram, T. (2012) Praxis, ethics and power: developing praxeology as a participatory paradigm for early childhood research. *European Early Childhood Education Research Journal* 20, 4: 477–492.

Steiner, R. (1984). *The philosophy of freedom*. London: Rudolf Steiner Press.

7

MORAL PANIC – SOCIAL AND CULTURAL VALUES

Introduction

As we have outlined in the first two chapters of this book digital technologies have a history of evolution located in the knowledge practices and cultural determinants of their time. Technological change is not a new phenomenon. Digital technology has evolved to its present state through a process of knowledge application about solid state physics through to the invention of the internet and World Wide Web to the ready availability of internet-enabled touchscreen technologies. Most recently tablet and mobile technologies have made digital resources ubiquitous in daily life, including the everyday experiences of young children. But the ubiquity of digital technologies and the continuing evolution of knowledge applications does not mean that the digital age is welcomed by everyone, and especially in so far as it relates to the experiences of younger children. Reactions to technological innovations appear to be shaped by the three theories of technology we outlined in Chapter 4: technological determinism, substantive and critical. While for many people the substantive contribution of digital technologies to everyday life is welcomed or even taken for granted, for others these technological innovations are associated with new play and learning practices which they view more negatively. From a critical perspective it is the degree of coherence between values and expectations and the purposes, behaviours and practices around technological innovation that influence the ways in which individuals and social groups react. When there is a mismatch between values and expectations and changing practices, accompanied by an assumption of technological determinism, then concerns, such as the possible social isolation of children or stunted social development, are likely to be more keenly expressed.

Reporting on the digital era

Newspaper articles and blogs across the world frequently raise alarms about young children spending many hours each week playing games online and being more familiar with virtual worlds than they are with face-to-face communications and relationships. For example, in the UK one headline referred to giving 'babies' an iPad as like playing Russian roulette with their developmental prospects (Harris, 2015). In the previous year an article reporting the un-evidenced claims made on behalf of a teachers' union was headlined 'Infants unable to use toy building blocks due to iPad addiction' (Paton, 2014). In Australia a headline linked screen time and the risk of harm to oral language development (Forwood, 2014). *Huffington Post* (2014) too linked use of digital technologies to negative outcomes for children's development and in Kenya and Singapore newspapers reported potential dangers ranging from obesity, damage to eyesight, challenges to social and emotional development, cyber-bullying and online abuse (Ondieki, 2016; Teng, 2013).

Concern with the digital experiences of infants and children appears to reflect a continuing surprise (or alarm) that they wish to and are able to make use of digital technologies. This interest in age per se suggests an implicit expectation that such resources might be considered to be the preserve of adults or adolescents. Whether this sentiment arises from assumptions that adults and children inhabit different worlds or that new technologies should be first adopted by adults is unclear. However, what is clear is that the ways in which digital technologies have spread through all aspects of contemporary life (especially with the evolution of the IoT and the semantic web) mean that adults and children are routine participants in the digital age.

An example of the kind of moral panic to be found among social commentators and in the traditional press around the digital experiences of preschool-age children in particular is to be found in an article which followed the publication of the UK Ofcom media use survey data for 2016. The article in the *Daily Mail* (Lambert, 2016) began with the headline 'The under-5s glued to screens for four hours each day', before going on to explain that the latest survey data revealed that more than half of three and four year olds now 'used' a tablet and that they now spent 13 minutes more online daily than in 2015. These headline points were followed in the article by statements from groups and individuals campaigning on a range of issues such as 'better parenting', spending time in nature and 'values in education'. In their expressions of concern about the extent of children's engagement with technologies these campaigners employed such terms as 'digital addiction' and 'catastrophic consequences'. That parents reported satisfaction with the balance between technological and other activities in their children's lives, and that they continue with traditional practices such as reading stories at bedtime and watching family television programmes together was mentioned but was heavily outweighed by the reporting of negative reactions. The article does not suggest that adults should forego the use of tablets or that they may be at risk. The focus of attention is on the apparent tension between particular expectations about how young

children should spend their time and how adults should parent and the assumed 'power' of technological resources to impact children's health and wellbeing.

Some press reports raise alarm from the findings of single studies, suggesting direct associations between technology use and socially or developmentally undesirable (or occasionally desirable) behaviours, often without taking account of the age of the users or the context or any apparent awareness of alternatives to their position of technological determinism. An example from an article in a UK newspaper illustrates this tendency. The article was headlined 'How digital technology and TV can inhibit children socially' (*Telegraph Reporter*, 2014). The details of the article revealed that this headline was based on a comparison of 11 and 12 year olds who had no access to digital technologies for five days while at a nature and science camp and others who accessed the media as usual. The findings suggested that the children who had been at the camp and denied access to digital technologies were better able to identify emotions expressed in photographs of faces than the other participants. It is of course a considerable jump from this contextually specific and narrowly defined evidence to the generalised headline claim that spending time with digital resources inhibits the social development of all children. The tendency to over-claim from individual studies is particularly problematic when attending to the implications for young children because, as we described in Chapter 6, they are the least likely age to be represented in the research. Only 20 per cent of research studies about the outcomes of engaging with digital technologies include any children under nine years old. Strikingly, despite children now being born into a digital age, only 4 per cent of research studies look specifically at the effects on children up to four years old (Holloway, Green, & Livingstone, 2013).

Research publications are not immune either from expressions of concern that appear to be based on an untheorised position on technology. For instance, Dinleyici, Carman, Ozturk, and Sahin-Dagli, (2016) surveyed children's use of specific forms of digital media by parents' report and explored parents' perspectives on their children's digital activities. The researchers went on to conclude that their findings suggest that parents were ill informed about what was appropriate access to digital media 'especially in the age group where electronic media use should be discouraged' and that 'Therefore, physicians, especially paediatricians, should make parents and teachers media-literate' (online publication – no page numbers, see Conclusion). It is important to ask if reflections of this type on children's engagement with digital technologies can be seen as a contemporary manifestation of an anxious reaction to change that has occurred over many innovations which have followed since the invention of the transistor, through microprocessors, computing, the internet, World Wide Web and the advent of tablet computing. Wartella and Jennings (2000) point out that research about new forms of media typically begins by examining who is engaging with the innovations and in what circumstances, then moves to focus on the implications of exposure to the novel technology. They conclude that debates about children's use of computers 'echo those surrounding the introduction of other new media throughout the past century' (p. 32). It seems that researchers too may have a tendency to focus on potential negative outcomes.

Reactions to innovations in media

Early studies on children and radio listening attended to questions about what children were listening to and how much time they spent listening to the radio. By the 1940s this had shifted to examining the effects of listening to radio on children's lives and behaviours, such as their performance in school, emotional reactions and ability to distinguish between fantasy and reality. Listening to radio was found to be a 'powerful force' on children's development, but was considered one mediated by other elements of the ecology of children's lives such as stage of development and family background (Wartella & Jennings, 2000). Later in the 20th century television was widely written about as a threat to book reading and to social life. This valorising of book reading seems commonplace now, however, at the time when technological developments began to reduce the cost of printing and make books accessible to more of the population, this was not greeted by all as a positive development. Pearson (1999) suggests that in the mid-18th to mid-19th centuries reading was considered as a potentially 'dangerous recreation' by some members of society who were concerned about the impact that ready access to novels could have on young women who may begin to develop new ambitions and neglect their domestic duties. Even earlier writing by Plato (2005) suggested that writing was challenging memory skills as it removed the need to memorise.

During the period of predominately broadcast media (the 1960s and into the 1990s) there is an extensive research literature on the impact of young children watching television that echoes forward into 21st-century reactions to digital technology use by young children in both the popular media and research literature. For example, Singer and Singer (1984) argued:

> The television set has become so intrinsic a feature of the American household that studies of the development and socialization of children must consider it as much a potential source of influence as the home environment, the parents' behavioural style and their socioeconomic milieu.
>
> *(p. 73)*

Nevertheless, much of the potential influence that was studied focused on the ways in which television watching could have negative outcomes on children's development and behaviour rather than the ways in which engagement with this particular technology might enhance children's participation in the world, support their learning or enhance their capacity to participate in the culture or practice of broadcast media in which they were growing up (see for instance Zuckerman & Zuckerman, 1985). There were, and indeed continue to be, concerns expressed about the influence of television on the amount of time children spend sleeping, exposure to social stereotypes, advertising and inappropriate sexual behaviour, and attitudes to alcohol and substance abuse. For example, each of these topics, along with concerns about children becoming inactive, and consequentially obese, as a result of the time they spend watching television is listed on a current website giving advice to parents

on children's development and behaviour (University of Michigan, 2017). The title of an investigation by Dietz Jr and Gortmaker (1985) gives a clear flavour of the direction of their work – 'Do we fatten our children at the television set?' They present findings headlined as showing that there were significant associations between the time children spent watching television and obesity but the authors go on to temper this by concluding that their analysis shows a less definitive picture of television viewing as an activity which may cause obesity in some children.

Perhaps the most researched potential impact was the relationship between watching television programmes that contained images of violent actions and subsequent measurement of aggressive behaviour by the young viewer. However, it is important to note the age of the children involved in the studies, the nuanced nature of the findings and that the conclusions are often based on correlations not causal associations. For instance, Eron, Hussman, Lefkowitz and Walder (1972) found that male and female 3rd grade children in the USA who preferred watching violent television programmes were rated by their peers as more aggressive in school. Following up both male and female participants 10 years later the researchers found that among boys (but not girls) a preference for violent television in 3rd grade was related to aggression in later years. The authors go on to suggest that, while it was not the only cause of aggressive behaviour, watching violent television in the early years was a probable causal influence.

Josephson (1987) offers data that presents an even more confounded picture. This study focused on boys in 2nd and 3rd grade. The children watched violent and non-violent television programmes together in groups and their teachers rated each participant on an aggression scale before and after watching the television programmes. Josephson found that boys rated as typically aggressive behaved more aggressively during a follow-up activity when they had watched a violent programme rather than a non-violent programme. For typically aggressive children aggression in the follow-up activity was heightened by being given a violence-related cue at the beginning of that phase. However, for boys rated as typically low in aggressiveness the findings were different. The evidence suggested that for these participants watching a violent programme and experiencing a violence-related cue suppressed aggression in the follow-up activity.

These historically presented research findings alert us to over-simplified claims about cause and effect when considering the impact of new technologies on young children's play and learning in a digital age, based on technological determinist expectations that innovations in technology will in themselves shape specific outcomes. Such over-simplified claims can be found in studies that appear to herald the end of childhood due to the increasing presence of digital technologies in family life through to the plethora of recent research about the implications for children's learning from the use of iPads in early childhood education settings. Yet gender, personality factors and the priming effect of the behaviour of others are all suggested by these historical studies alone as factors which intervene to make a difference to outcomes in a way that is not yet evidenced in all contemporary discussions about young children's engagement with digital technologies. As Wartella and

Jennings (2000) pointed out, 'the relationship is always between a kind of television and a kind of child in a kind of situation' (p. 36).

Furthermore, it is noteworthy that such 'effects' studies do not typically compare the influence of television with other activities, such as playing outside or imaginative play, likely to be experienced by children in the relevant age group. Such activities appear to be taken for granted as appropriate and supportive of development and historically it is what is seen as the 'innovation', particularly when it is a technological innovation, that is the subject of study when monitoring effects. However, when researchers do examine children's contemporary play experiences from a more holistic perspective, digital technologies appear to augment rather than replace more traditional forms of play and learning. For example, using the American Academy of Pediatrics guidelines as a measure of the extent of engagement with digital resources, Vanderwater *et al.* (2007) found no differences in the length of time that children spent being read to or in outdoor play, regardless of whether they spent only the length of time recommended for digital activities or exceeded the guideline figure. Research in Australia by Moore (2015) attests to the cultural adaptiveness of play rather than the power of technological innovations to shape play. Moore (2015) investigated the imaginative play practices of children over four generations. She found that seven play practices (e.g. playing in trees, bedrooms and with popular-culture) remained stable over 40 years with three new play practices (e.g. accessibility to private play places and using toys in private and public play) emerging in the last 10 years.

Proper childhood – proper parenting

Just as television in the 20th century was seen by some social commentators as a threat to their understanding of traditional constructions of a 'good childhood', in the early 21st century technological innovations may once again be being treated as epitomising the threats and opportunities of contemporary society, especially for children and their families. Among writers concerned primarily with current and past parenting practices and the behaviour and educational outcomes of children and young people, digital technologies and online activities can be perceived as a symptom or driver of change for the worse, or at least a change that challenges their expectations about appropriate childhood activities (e.g. Goddard Blythe, 2011; House, 2011; Louv, 2010). Such commentators have an historically based understanding of the values and culture that they see as central to the macrosystem of their society and therefore representative of the 'correct' or 'normal' experiences supporting children's development. As such, digital technologies and engagement with the World Wide Web can be characterised as a site of tension in which a society's culture is being recreated and disputed. In this context, attention is often focused on the apparently singular relationship between technology and/or outcomes or behaviours that are or have been highly valued in a society such as outdoor play or reading books. Such an essentially conservative and deterministic perspective contrasts with a more critically aware approach concerned with the play and learning

of young children growing up during the digital age and now with the reach of the IoT and the semantic web in young children's knowledge economy.

In *Toxic Childhood* Palmer (2006) places children's engagement with digital technologies alongside other apparent ills of contemporary life, writing about the damaging potential for children of a 'competitive, consumer-driven, screen-based lifestyle' (p. xiii) and placing encounters with technology alongside chapters on the decline in outdoor play, family mealtimes and other societal changes in family practices. She expresses concern about the amount of time that children spend on screen-based activities and contrasts that with what she describes as interacting with real people in real play rather than in junk or screen-based play. Elsewhere, Palmer (2010) argues that what she sees as children's screen-saturated lives are linked to the reported rise in attention deficit hyperactivity syndrome, dyslexia and autism. In his writing advocating 'slow parenting' Honoré (2008) too includes time spent on computers as one of the negative characteristics of contemporary life. Other areas of concern for Honoré include a lack of time and opportunity for outdoor play, an excess of extracurricular activities, and parental efforts to ensure that their child makes ideal developmental and educational progress. However, unlike Palmer who advocates limiting digital technology experiences, Honoré suggests that there are 'no one size fits all' rules about the right number of hours to spend on the computer. His approach is concerned with what feels right for individual families, while also ensuring that children spend time outdoors and have opportunities to explore and take risks.

Beyond a concern with lifestyle changes and the use of particular resources for play and learning the content of digital media and its impact on young children raises anxieties for some commentators and policy-makers. Although we can agree that what children see, experience or hear will affect their development, it seems that it is the potential negative influences that attract more attention in terms of guidance for parenting and education. In 2013, the American Academy of Pediatrics (AAP) argued that children under two years of age should not be exposed to screen time in any medium but went on to advise that children older than two years can engage with 'entertainment media' with 'high quality content' for one to two hours per day. By 2016, the updated AAP guidelines recognised the pervasiveness of digital technologies in young children's lives. The new recommendations place an emphasis on high-quality programming and avoiding 'fast-paced' or 'distracting' content. High-quality content is a phrase which raises questions about the definition of 'quality' and the kind of debate we are already familiar with around high culture and popular-culture in music, films and art (e.g. Gans, 1999). Furthermore, the substantive content of a story or game will be important regardless of the medium. Stories can be moral, aggressive, instructive, fun, scary and educative whether told, read, played in a game or accessed via digital media.

Kaufman (2013) argues that it is what children do when interacting with screen-based technologies that is influential for learning. He points out that on-screen time can be used to learn science, communicate with grandparents, watch educational videos or create works of art. On the other hand, children may spend time playing

inappropriate traditional games or passively watching entertainment videos. Given these nuanced possibilities, Holloway *et al.* (2013) argue for more understanding about the impact of different screen-based activities rather than quantifying time on-screen or imposing a total ban on encounters with digital technologies. Interestingly, in its revised advice in 2016 even the AAP (2016) has set aside their strong position on screen-avoidance for the youngest children in the case of video-chatting. Writing about the AAP's review of evidence about children's encounters with digital media, Brown, Shifrin, and Hill (2015) point out that research and the policy statements that are derived from empirical studies 'lag behind' digital innovation and that the Academy's previous position statements pre-dated the proliferation of iPads and apps. They go on to suggest that the ubiquity of digital encounters in contemporary life means that 'screen time' is 'becoming simply time' (p. 1, online).

Conclusion

Moral panic is a barometer for adult perceptions of what childhood should be like in any given age and is not necessarily an effective response to the developmental niche in which children are growing up. With social media and IoT digital mediation sinking into daily life moral panic can be seen as an even less appropriate or constructive response for equipping children for life in the 21st century. How can teachers, researchers, administrators, policy-makers respond? We have begun to answer this question already by identifying the transformative developments in knowledge that have contributed to changing patterns of communication in the digital age. We have shown how the shift from point-to-point telephony engendered new ways of thinking about communication and how new forms of communication have embedded digitalised forms of knowledge and practices into daily activity. So far in this book we have tried to illustrate how the transformative capacity of cultural knowledge continuously shapes and reshapes the developmental niche for each generation of children – necessitating new respondent forms of play and learning. In the next chapter we turn our attention to exploring the digital age from the perspectives and experiences of children and their families.

References

AAP Council on Communications and Media (2013). Children, adolescents, and the media: policy statement. *Pediatrics*, *132*(5), 958–961. doi: 10.1542/peds.2013-2656.

AAP Council on Communications and Media (2016). Media and young minds. *Pediatrics*, *138*(5), 1–6. doi: 10.1542/peds.2016-2591.

Brown, A., Shifrin, D. L., & Hill, D. L. (2015). Beyond 'turn it off': how to advise families on media use. *AAP News*, *36*(10). Retrieved from www.yaldatuhls.com/wp-content/uploads/2016/03/AAP-Publication.pdf.

Dietz, W. H., Jr, & Gortmaker, S. L. (1985). Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. *Pediatrics*, *75*(5), 807–812.

Dinleyici, M., Carman, K. B., Ozturk, E., & Sahin-Dagli, F. (2016). Media use by children,

and parents' views on children's media usage. *Interact Journal of Medical Research*, *5*(2), e18. doi: 10.2196/ijmr.5668.

Eron, L. D., Hussman, L. R., Lefkowitz, M. M., & Walder, L. O. (1972). Does television violence cause aggression? *American Psychologist*, *27*(4), 253–263.

Forwood, C. (2014, 1 December). Too much screen time may harm children's oral skills, research suggests. *Sydney Morning Herald*. Retrieved from www.smh.com.au/national/education/too-much-screen-time-may-harm-childrens-oral-skills-research-suggests-20141114-11mvo1.html.

Gans, H. (1999). *Popular culture and high culture: an analysis and evaluation of taste*. New York: Basic Books.

Goddard Blythe, S. (2011). *The genius of natural childhood: secrets of thriving children*. Stroud: Hawthorn Press.

Harris, S. (2015, 22 September). Giving babies iPads is playing 'Russian roulette with their development', says leading psychologist. *Daily Mail*. Retrieved from www.dailymail.co.uk/news/article-3244062/Giving-babies-iPads-playing-Russian-roulette-development-says-leading-psychologist.html.

Holloway, D., Green, L., & Livingstone, S. (2013). Zero to eight: young children and their internet use. LSE, London: EU Kids Online. Retrieved from http://eprints.lse.ac.uk/52630/.

Honoré, C. (2008). *Under pressure: rescuing our children from the culture of hyper-parenting*. London: Orion.

House, R. (2011). The inappropriateness of ICT in early childhood: arguments from philosophy, pedagogy and developmental research. In S. Suggate and E. Reese (Eds.), *Contemporary debates in childhood education and development* (pp. 105–121). New York, NY: Routledge.

Huffington Post (2014, 15 September). How technology is having a serious impact on your child's development. *Huffington Post*. Retrieved from www.huffingtonpost.co.uk/2014/09/15/children-technology-impact-addiction_n_5821492.html.

Josephson, W. L. (1987). Television violence and children's aggression: testing the priming, social script and disinhibition predictions. *Journal of Personality and Social Psychology*, *53*(5), 882–896.

Kaufman, J. (2013, 24 April). Touch-screen technology and children. *Child*. Retrieved from www.childmags.com.au/child/development/5453-touch-screen-technology-and-children.

Lambert, L. (2016, 16 November). The under-5s glued to screens for four hours each day: fears 'very worrying' figures are showing that children are becoming online addicts. *Daily Mail*. Retrieved from www.dailymail.co.uk/news/article-3940134/The-5s-glued-screens-four-hours-day-Fears-worrying-figures-showing-children-online-addicts.html.

Louv, R. (2010). *Last child in the woods: saving our children from nature-deficit disorder*. London: Atlantic Books.

Moore, D. (2015). *A place within a place: toward new understandings on the enactment of contemporary imaginative play practices and places* (Doctoral dissertation). Australian Catholic University. Retrieved from http://researchbank.acu.edu.au/theses/538/.

Ondieki, E. (2016, 9 October). Rise of the digital kids and what that means for parents. *Daily Nation*. Retrieved from www.nation.co.ke/lifestyle/lifestyle/Rise-of-the-digital-kids-and-what-that-means-for-parents/1214-3409652-mdm31xz/.

Palmer, S. (2006). *Toxic childhood: how the modern world is damaging our children and what we can do about it*. London: Orion.

Palmer, S. (2010). Modern childhood. *SuePalmer.co.uk*. Retrieved from www.suepalmer.co.uk/modern_childhood_info_the_effects.php.

Paton, G. (2014, 15 April). Infants 'unable to use toy building blocks' due to iPad addiction. *Telegraph*. Retrieved from www.telegraph.co.uk/education/educationnews/10767878/Infants-unable-to-use-toy-building-blocks-due-to-iPad-addiction.html.

Pearson, J. (1999). *Women's reading in Britain, 1750–1835: a dangerous recreation*. Cambridge, MA: Cambridge University Press.

Plato (2005). Translated by C. J. Rowe. *Phaedrus*. London, UK: Penguin Classics.

Singer, J. L., & Singer, D. G. (1984). Family patterns and television viewing as predictors of children's beliefs and aggression. *Journal of Communication*, *34*(2), 73–89.

Telegraph Reporter (2014, 25 August). How digital technology and TV can inhibit children socially. *Telegraph*. Retrieved from www.telegraph.co.uk/news/science/science-news/11054305/How-digital-technology-and-TV-can-inhibit-children-socially.html.

Teng, A. (2013, 5 June). Kids 'using gadgets at earlier age being exposed to risks': study. *Strait Times*. Retrieved from www.straitstimes.com/singapore/kids-using-gadgets-at-earlier-age-being-exposed-to-risks-study.

University of Michigan (2017). Your child development and behavior resources – television and children (last updated 2010). Retrieved from www.med.umich.edu/yourchild/topics/tv.htm.

Vanderwater, E. A., Rideout, V. J., Wartella, E. A., Huang, X., Lee, J. H., & Shim, M. (2007). Digital childhood: electronic media and technology use among infants, toddlers, and preschoolers. *Pediatrics*, *119*(5), 1006–1015.

Wartella, E. A., & Jennings, N. (2000). Children and computers: new technology old concerns. *Future of Children*, *10*(2), 31–43.

Zuckerman, D. M., & Zuckerman, B. S. (1985). Television's impact on children. *Pediatrics*, *75*(2), 233–240.

