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Taking an evaluative stance to decision-making in early childhood professional development

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Abstract

Internationally and nationally, the field of early childhood education and care (ECEC) is prioritising professional development as a vital component to support high quality programs for young children. Most of these professional development initiatives pay little attention to the decision-making skills of leaders who facilitate and manage program improvement. The purpose of this paper is to outline a conceptual framework for professional learning that considers how decisions are made about professional development that can contribute to not only professional learning but also program improvement. A new conceptual framework that positions evaluative mindsets as attitudes towards decision-making in professional development is introduced. Using semi-structured interviews, the mindsets of six experienced leaders in two long-established ECEC organisations in Australia were explored as well as the efficacy of the conceptual template. Implications for decision-making in early childhood professional development are discussed.

Keywords: Early years; early childhood education; evaluation capacity building; personal epistemology; professional learning and development

Taking an evaluative stance to decision-making early childhood professional development

Introduction

Internationally, the field of early childhood education and care (ECEC) is prioritising professional development as a vital component to support high quality programs for young children. Evidence from a range of countries is showing that high quality ECEC programs, with high quality staff development, yield improvements in young children's early learning and wellbeing and reduce the effects of disadvantage (Heckman and Masterov 2005; Organisation for Economic Co-operation and Development 2012). In Australia, governments, professional organisations and individual services are making significant financial investments in professional development in the ECEC sector. Most of these professional development initiatives, often referred to as professional learning (Mayer and Lloyd 2011) programs, focus on enhancing the knowledge and capacity of educators or those working directly with children, yet pay little attention to the decision-making skills of leaders who facilitate and manage program improvement. In this paper, we distinguish between *professional development* and *professional learning*. In line with the work of Knapp (2003, 112), we use 'professional development' in a broad sense 'to include the full range of activities, formal and informal, that engage teachers or administrators in new learning about their professional practice'. However, we have expanded the notion of 'professional learning' as not only the 'thinking, knowledge, skills, and approaches' that constitute teachers' or administrators' professional repertoires to also include changes in their attitudes, beliefs, and values (Sumsion et al. 2015).

The purpose of this paper is to outline a new conceptual framework for professional learning that considers how decisions are made about professional development that can contribute to not only professional learning but also program improvement. Specifically, we introduce to the field a new 'evaluative stance conceptual framework' that illuminates 'mindsets' and 'skillsets' for decision-making in professional development within the field of ECEC (Lunn Brownlee et al. 2014; Sumsion et al. 2015). We define an evaluative stance as comprising a mindset and skillset focussed on making evidence-informed decisions. In this article, we report on an empirical investigation aimed at ascertaining the utility of our conceptual framework by examining the mindsets of six experienced leaders in two long-established ECEC organisations, in Australia. Drawing on research and theorisations about attitudes and professional learning, this paper begins by explaining our

theory of an evaluative stance to decision-making before then reporting on the findings of the interview study.

Taking an evaluative stance: A focus on personal epistemology

Our conceptual framework is based on understandings of evaluation capacity building (ECB), that is, the processes and strategies to assist individuals, groups and organisations to develop an evaluative stance (Preskill and Boyle 2008). In models of ECB to date, there has been a strong focus on personal factors such as individual needs, motivations, attitudes and assumptions but, to our knowledge, no consideration of beliefs about knowledge and knowing which are, arguably, central to decision-making processes. The current framework theorises that developing an evaluative stance in decision-making for professional development is related to individuals' personal epistemologies or beliefs about knowing and knowledge (Sumsion et al. 2015). Evaluation is assessment of:

What teachers and others learn from participating in a learning opportunity and how the learning program might be improved. Instead of focusing research on the professional development program and its impacts, however, we are arguing here for a focus on cultivating the capacities of individuals in educational settings to take an evaluative stance towards choosing professional development opportunities, and investigating how they apply an evaluative stance to their professional learning (Sumsion et al. 2015, 422).

We draw on research related to ECB and personal epistemology to theorise an evaluative stance in the context of decision-making about ECEC professional learning initiatives (Sumsion et al. 2015). An evaluative stance comprises two main interconnected dimensions: (i) a mindset which refers to evaluative attitudes and beliefs about the nature of knowledge and knowing; and (ii) a skillset which refers to critical and reflective thinking skills necessary for taking an evaluative stance (Sumsion et al. 2015). Critical thinking involves "reflecting on what is known and how that knowledge is justified" (Kuhn, 1999, 23). By critical reflection, we mean critical thinking that also attends to the broader social, cultural and political contexts in which those knowledge justifications are made and the take-for-granted, ideological assumptions that can underpin those justifications (Hatton and Smith, 1995; Thompson and Pascal, 2012). Taking an evaluative stance therefore involves leaders being able to judge the value of certain types of knowledge and learning opportunities in relation to the particular needs of the organization, the individuals involved with that organization and larger contexts (e.g., community, policy). Such an evaluative stance is essential in decision-making about how professional learning activities are chosen and enacted and whether those learning opportunities contribute to overall improvements to early childhood programs. In what follows we outline this theory in more depth.

ECB is a process by which strategies are designed and implemented to assist individuals, groups and organisations to develop an evaluative stance (Preskill and Boyle, 2008; Sumsion et al. 2015). Two theoretical models of ECB inform the new conceptual framework: the Multidisciplinary Model (Preskill and Boyle 2008) and an Integrated ECB model (Labin 2014; Labin et al. 2012). These models take account of: personal factors (individuals' needs, attitudes, motivations, and assumptions) and contextual factors (leadership, culture, communication, systems and structures) that influence how ECB strategies are implemented. While there is a clear focus on personal and contextual factors, what is missing from these ECB models is a robust theorisation of professional learning (Preskill and Boyle 2008). A key focus of the current study is how ECEC leaders can engage in decision-making about professional learning in their organisations.

Attitudes about decision-making: A focus on the cognitive dimension of attitudes

Following Lyrintzis and Crano (2014), we are working from a social psychological perspective that attitudes are part of interconnected belief systems. There is no singularly accepted definition of attitudes, but there is consensus that they are 'evaluative judgments' (Crano and Prislin 2006, 347) or 'summary evaluations' (Fazio 2007, 608) comprising and integrating individuals' cognitive and affective reactions to an 'object of thought' (Bohner and Dickel 2011, 392). An object of thought, also referred to as an 'attitude object' (Eagly and Chaiken 2007, 583) can encompass almost anything from the concrete to the abstract, and from the individual to the collective, including, for example, 'things, people, groups and ideas' (Bohner and Dickel 2011, 392). The notion of an object of thought, or an attitude object, is key to distinguishing attitudes from more diffuse evaluative responses and reactions, such as moods, that are not specifically directed towards a particular entity (Eagly and Chaiken 2007). In the study reported here, the attitude object is *professional development decision-making*.

In considering how the extensive literature about attitudes in the social psychology literature can inform the concept of an evaluative mindset, we turn to Eagly and Chaiken's (2007) conceptualisation, characterised by Bohner and Dickel (2011, 393) as occupying an 'intermediate position' in contemporary debates about attitudes. Eagly and Chaiken's conceptualisation emphasises three essential features - evaluation, attitude object, and tendency to evaluate the attitude object or entity positively or negatively, which they see as the attitude itself. As they explain, 'People can form attitudes experientially based on direct or indirect cognitive, affective, or behavioral responding to the attitude object' (p. 596). If we consider the attitude object, *professional development decision-making*, as a sophisticated attitude, it might comprise the following features of an evaluative mindset:

- a) Tendencies to evaluate competing claims or perspectives for professional development opportunities (i.e., cognition/beliefs);
- b) Positive emotional responses to accessing a range of viewpoints – research, parents, self and colleagues (i.e., affective responses); and
- c) Experiences of collaboratively working in teams to identify best practice based on evidence and/or practice wisdom (behaviours).

It is proposed that the cognitive component (mindset) of the attitude object (in this case, professional development decision-making) encompasses an individual's core beliefs about the nature of knowing and knowledge, otherwise known as 'personal epistemology'. This is an area of research which, to date, appears to be unexplored in the professional learning literature.

Personal epistemologies as mindsets: the cognitive dimension of attitudes

Personal epistemologies are the beliefs we hold about knowledge (certainty and stability) and knowing (how we justify knowledge, where knowledge is located – internal or external). This body of research provides a way in which to re-frame our understandings about learning, in general, (Kang 2008) and professional learning, specifically. Much is now known about how personal epistemology shapes learning strategies and learning outcomes in a range of contexts (secondary and tertiary education) and disciplines such as science and mathematics (for a review see Brownlee et al. 2011) but to date this research has not extended to ECB (Sumsion et al. 2015).

Much of the early research on personal epistemology took a developmental perspective (see Sumsion et al. 2015, for a review), with many studies showing that individuals, often in academic contexts, ranged in beliefs from knowledge as absolute and transferable through to an understanding of knowledge as contextual, constructed and evaluated (see Perry 1970). More recent research also shows similar trajectories such that personal epistemologies can range from absolutist (i.e., knowledge is right or wrong), to subjectivist (i.e., personal opinions count as knowledge) to evaluativist (i.e., perspectives are evaluated against evidence) (see Table 1 adapted from Kuhn, 1999).

Kuhn (1999) made interesting connections between personal epistemology and critical thinking skills. She argued that the focus on critical thinking involves meta-knowing which includes procedural (What strategies can I use - meta-strategic), declarative (What do I know - metacognitive) and epistemological knowledge and skills. Personal epistemology influences critical thinking because of its impact on both the meta-strategic and metacognitive dimensions of meta-knowing. Table 1 highlights the links between the different levels of personal epistemology and critical

thinking. An evaluative personal epistemology is associated with critical thinking because such thinking ‘promotes sound assertions and enhances understanding’ (Kuhn 1999, 23).

Insert Table 1 here

Another tradition in personal epistemology builds on epistemological theories advanced by Barbara Hofer (2004; Hofer and Pintrich 1997). This tradition acknowledges that individuals can hold personal epistemologies based on both their beliefs about the nature of knowledge and the process of knowing. Beliefs about the nature of knowledge include beliefs about the certainty (Is knowledge stable or evolving?) and the structure of knowledge (Is knowledge complex / integrated or simple?). Beliefs about the process of knowing refer to those beliefs about how knowledge is justified (Do I rely on my personal opinion or an evaluation of multiple perspectives to justify knowledge?) and the source of such knowledge (Is there an ultimate authority who I can trust to provide knowledge or do I construct it myself?).

Another strand of research suggests that an individual’s beliefs about the nature of knowledge and the process of knowing are important in learning (for a review see Brownlee et al. 2011). Such beliefs are likely to mediate the meaning-making process and the extent to which we engage in processes which reflect complex knowledge and problem solving (Hofer 2002). In a study of Australian ECEC educators, Brownlee, Berthelsen, and Boulton-Lewis (2004) used Hofer’s framework to understand educators’ approaches to learning. The educators who described the nature of knowledge as uncertain and evolving and the process of knowing as based on evaluating multiple perspectives, tended to use deep approaches to learning that were about understanding rather than rote learning.

In terms of the attitude object, evaluating competing claims / perspectives for professional development opportunities (cognition dimension of an attitude) is likely to be influenced by one’s personal epistemologies for decision-making. This cognitive dimension of attitudes is likely to filter the way in which ECEC educators make decisions related to professional development (cf. Many, Howard, and Hoge 2002; Muis 2004; Peng and Fitzgerald 2006; Yadav and Koehler 2007). In this paper, we argue that ECEC leaders who hold evaluativist personal epistemologies as part of the attitude object towards decision-making in professional development are likely to reflect critically on a range of potential choices in order to develop evidence informed decisions (Sumsion et al. 2015).

Personal epistemology and professional learning

Working from the premise that effective professional learning is linked to the improvement of academic and social outcomes for children, Doecke et al. (2008) reviewed professional learning

activities across Australian government and non-government school contexts. Their review acknowledged the significance of teachers developing skills in reflection and inquiry and this is also equally important for early years educators in prior to school ECEC services. Doecke et al. used interview and questionnaire data to derive six principles for effective professional learning experiences. These can be interpreted as the “6-Cs” of professional learning. They comprise complex, collaborative, and contextual knowledge, as well as critical thinking, commitment to inquiry, and communities of learning.

The first three principles involve what we describe as a focus on the nature of knowledge, which is the dimension of personal epistemology proposed by Hofer (2004; Hofer and Pintrich, 1997). Applying these principles to the ECEC context, these are collaborative educator knowledge, contextual knowledge, and complex knowledge (Doecke et al. 2008).

1. Complex knowledge: Doecke et al. (2008) described how the findings of current research about the knowledge of educators are neither simple nor certain. While this refers to the complexity of the research findings, we argue also that educators also need to have an understanding that knowledge is often complex and uncertain.
2. Collaborative knowledge: It is important that educators’ knowledge and learning is the outcome of collaborative efforts. The focus here can be on both the community and individual educators who are working within smaller groups.
3. Contextual knowledge: Educators’ professional knowledge is specific to their local, and thus changeable as educators move between education contexts.

The next three principles focus on the process of knowing, which is the final dimension of personal epistemology described by Hofer (2004; Hofer and Pintrich 1997). These principles are the processes of critical thinking, commitment to inquiry, and communities of learning (adapted Doecke et al, 2008).

4. Critical reflection: This principle is similar to what Kuhn (1999) described as critical thinking. Critical thinking involves a process of evaluating a range of evidence in order to reflect on practices.
5. Commitment to inquiry: The final principle involves the notion of the educator-as-researcher. Knowledge is constructed through a process of inquiry that educators enact.
6. Communities of learning. Professional learning requires educators to work together in communities of learning that involve not only educators but children, parents and the broader communities.

These six principles of professional learning align well to the beliefs about the nature of knowledge and the process of knowing highlighted in Hofer's extensive program of research into personal epistemologies.

ECB research advocates for the importance of focused professional learning and we propose that a new way to theorise professional learning is through the theoretical lens of personal epistemology (Sumsion et al. 2015). We have argued that the six principles of professional learning proposed by Doecke et al. (2008) are indicative of the beliefs about knowledge and knowing that are evident in the conceptualisation of personal epistemology proposed by Hofer (2004) and Hofer and Pintrich (1997). By using the research and theorisation about attitudes, we argue that personal epistemology forms the cognitive component of attitudes towards decision-making for professional learning experiences.

The current study

This research study investigates decision-making processes for professional learning by early childhood educators. The research questions are:

1. What cognitive dimensions and mindsets are evident in the way in which participants describe how they make choices about professional learning?
2. Does the proposed model of professional learning principles capture an evaluativist stance in decision-making on professional development options?

Participants and research procedure

Interviews were conducted with six staff recruited from two large ECEC organisations in two state jurisdictions in Australia. The organisations approached, with respect to staff participation, have a strong tradition of providing professional development programs for educators working in ECEC services prior to school. The study targeted leaders at different systems levels of the organisations involved in making decisions about professional development for either themselves or other colleagues. The six participants included managers, centre directors for ECEC centres, and group leaders of class groups within centres.

Each participant participated in a 60-minute, audio-recorded, semi-structured interview to investigate their understanding of what constitutes an evaluativist stance in decision-making for professional development experiences. The interview schedule comprised 10 key questions which focussed on organisational decisions about professional development (e.g., who makes decisions?); decision-making processes and influences; sources of knowledge; drivers for professional development; perceptions of what might constitute an evaluative stance for evaluation capacity

building; skillsets required; mindsets required; and managing competing imperatives. Interview transcripts were returned to interviewees for member checking prior to analysis. Ethical clearance for the research was obtained from the ethics committee of the university in which some members of the research team are employed.

Data analysis

The method of analysis chosen for this study was a hybrid approach of qualitative methods to engage in thematic analysis. It incorporated both a data-driven inductive approach of Boyatzis (1998) and the deductive, *a priori* template of codes approach outlined by Crabtree and Miller (1999). This approach complemented the research questions to allow for a process of a deductive thematic analysis while allowing themes also to emerge directly from the data using inductive coding. This approach is in line with the inductive-deductive approach proposed by King (2004, 2013). In the first step of the analyses, a coding template was developed to reflect the study's conceptual model of the six principles of professional learning derived from the work of Doেকে et al. (2008), the *a priori* categories were applied to the content of the interview transcripts. The second step of the analyses employed an inductive process that drew out other categories from the content of the interviews not captured by the model of six principles of professional learning.

The analyses involved three members of the research team and a research project officer. The lead author and the research project officer completed the first set of analyses with the transcripts. Two other members of the research team then reviewed the transcripts and data tables in a confirmatory process, so that the dependability and consistency of the analyses of the research was verified through examination of the raw data and data analyses products (Campbell, 1996).

Discussion of findings

The findings are discussed in two main sections. The first section reflects the deductive analysis using the model comprising the six principles of professional learning described above. The second section reflects the inductive process of the analysis. It comprises responses that relate to influences on decision-making about professional learning that did not relate to the six principles of professional learning.

Principles of professional learning for decision-making

The nature of knowledge: Complex, collaborative, and contextual knowledge

Table 2 is a summary of the principles of professional learning and sub-categories that emerged from the interview analysis. All participants described views about decision-making that

suggested the nature of knowledge for decision-making was *complex* (not certain and evolving). Some also viewed knowledge as *collaborative* ($n = 3$). In addition some participants ($n = 4$) talked about knowledge constructed in specific contexts (*contextual knowledge*). These three principles of professional learning also reflected the nature of knowledge described by Hofer and Pintrich (1997). They argued that the nature of knowledge (as one dimension of personal epistemology) included beliefs about the certainty (Is knowledge stable or evolving?) and the structure of knowledge (Is knowledge complex/ integrated or simple?).

The addition of *collaborative knowledge* to beliefs about knowledge is important and potentially reflects Hofer and Pintrich's notion of integrated knowledge. An understanding that knowledge is not stable, universal, or simple lays the foundation for participants to view knowledge for decision-making as constructed and reasoned, rather than something that is absolute and unchanging. Such views about the nature of knowledge form part of evaluativistic personal epistemological beliefs (cf. Kuhn and Weinstock 2002). While the participants in this study seemed to understand knowledge to be personally constructed and based on context, there was also an understanding that personal opinions alone did not count as knowledge. From this perspective, knowledge can be better or worse, depending on the extent to which individuals have engaged in processes of seeking a range of multiple perspectives, including current research, and analysing such perspectives to establish an informed knowledge base. Hence knowledge is not certain, is context based and collaborative in nature and is inextricably linked to ones' beliefs about the process of knowing, which is described next.

The process of knowing: Critical thinking, commitment to inquiry and communities of learning

The final three categories in Table 2 included *critical thinking, commitment to inquiry and communities of learning* (adapted from Doেকে et al. 2008). We argue that these principles are closely aligned with epistemological beliefs about the process of knowing. Hofer and Pintrich (1997) referred to the process of knowing as involving both beliefs about how knowledge is justified (e.g., Do I rely on my personal opinion or an evaluation of multiple perspectives to justify knowledge?) and the source of such knowledge (Is there an ultimate authority who I can trust to provide knowledge or is it constructed?).

The first category, *critical reflection*, refers to the process of evaluating and reflecting upon a range of evidence, including educators' perspectives and research (Doেকে et al. 2008). Kuhn (1999) described this as critical thinking skills. This demonstrates a view of the processes of knowing in terms of how knowledge is justified through evaluation of multiple perspectives in making decisions about professional development. Two participants clearly articulated a focus on the sub-category

evaluating evidence, suggesting a focus upon critical thinking. The remaining four educators described processes of *engaging with and using a range of evidence*, rather than explicitly articulating a process of evaluating evidence and so it was not clear if the participants were referring to critical thinking in their responses. In this sub-category, they often discussed processes of reflection or identified the need to access a range of perspectives, including research (see sub-category *using research*), however we were unable to discern if such processes involved analysis and evaluation of evidence. For example Participant 1's response that "I would go on the website and I would check out any readings that you had done" (Table 2: Participant 1) suggests that research was accessed but does not elaborate on the extent to which a process of evaluation of such perspectives might take place.

Insert Table 2 here

This is not suggesting, based on these data that the educators do not engage in evaluations of evidence (i.e., critical thinking). There are two reasons for being circumspect here. First if we examine the final sub-category of critical thinking in Table 2, *sources of knowledge*, all participants articulated a view that the source of knowledge was not an omniscient authority which delivered information and solutions about professional development to educators, but involved a shared decision-making process. Second, if we return to the educator's responses about the nature of knowledge, most described knowledge as tentative and evolving (*complex knowledge*) and collaborative (*collaborative knowledge*). These data suggest that the participants may indeed hold some evaluativistic beliefs about knowledge and knowing, even though many ($n = 4$) were unable to articulate a process of knowing as evaluating evidence. One possible reason may be that we have not yet established effective probes for helping educators to talk about how they process knowledge. Reflecting on the nature of knowledge and the sources of knowledge may prove to be a more concrete task because it refers to an object or an outcome rather than a process. It is possible that using interview probes such as, "Can you tell me more about how you process those competing points of view?" or "What is going on inside your head as you consider those different opinions?" may provide concrete scaffolds for participants to reflect on these processes.

Finally, the last two categories in Table 2 involve *commitment to inquiry* and *communities of learning*. These also reflect the process of knowing, particularly Hofer and Pintrich's justification of knowledge dimension. The category, *commitment to inquiry*, exemplified the importance of educators as researchers ($n = 3$). This specifically described the use of research as a way of knowing and further supports the idea that knowledge is justified by evaluation of multiple perspectives, including research. The final category, *communities of learning* was described by all participants and

reflected the idea that everyone has a role to play in learning. While this does not form part of Hofer and Pintrich's beliefs about knowing (justification and source dimensions), we argue that communities of learning support the justification of knowledge by enabling educators to access multiple perspectives in the process of making decisions about professional development.

Influences on decision-making for professional development

The next part of the analysis, presented in Table 3, resulted in the identification of three categories of influence, which have been labelled: intrapersonal influences, leadership style and skills and contextual influences. These categories formed the inductive component of the analysis.

Intrapersonal influences

These included the decision-maker's personal sense of self-efficacy, their professional identity and beliefs about professional practice in ECEC, factors generally associated with effective leadership in ECEC (Siraj-Blatchford and Manni 2007). There was also a shared emphasis on the role of educator motivation in professional development, on a personal level (what motivates these leaders to engage in professional development) and extending to ways to motivate others (e.g., enabling educators to have input into their professional development; linking professional development to enhanced career pathways). We are particularly interested in this factor because motivation to participate in professional development and to apply learning has been posited as a key yet under-researched area in education (Angeline 2014; Schieb and Karabenick 2011).

Leadership style and skills

Closely linked to intrapersonal influences, was the impact of the decision-maker's leadership style and skills, described by one leader as her 'human skillset'. This included the leader's capacity to work collaboratively with educators to identify and prioritise shared goals for professional development and to guide and support ongoing learning.

Contextual influences

These included the influence of local context (i.e., families and communities), organisational context (e.g., vision, priorities, budget and accountability requirements) and an ever-changing ECEC public policy context. Of particular interest here is the interrelationship and, sometimes, tension between these factors. For example, participants frequently spoke of seeking to balance individual and organisational goals and priorities, alongside the need to work within budget, maximise investment and demonstrate professional accountability for expenditure. While less visible, the impact of professional development on families was a consideration for some participants

(e.g., selecting topics; measuring impact and success; timing of delivery). Adding further complexity to the decision-making process appears to be the challenge of taking a longer-term view of individual and organisational development within an unstable policy climate, where changes to operational requirements and funding may impact on an organisation's professional development priorities and/or capacity to finance these.

Insert Table 3 here

Conclusions

The six principles of professional learning proposed by Doecke et al (2008) have been used in this research to investigate views about decision-making for professional development held by six leaders in ECEC. The data showed that two leaders described the importance of complex, collaborative knowledge and critical thinking which suggests an evaluativist personal epistemology and, we would argue, an evaluativist mindset. The remaining four educators described views that were suggestive of an evaluativist personal epistemology and evaluativist mindset, although the nature of critical thinking was not as clearly articulated. Using personal epistemology as a lens for understanding the six professional learning principles enabled us to understand more about attitudes about decision-making for professional development. We have argued that personal epistemologies actually reflect the cognitive dimension of an attitude object (in this case, professional development decision-making). Given that attitudes may play a role in how educators process knowledge, make decisions and enact such decisions (cf. Bohner and Dickel 2011; Eagly and Chaiken 2007), the focus on how professional learning and personal epistemology form part of an attitude towards decision-making provides an interesting new way of thinking about the enactment of decision-making about professional development choices in ECEC.

The findings also support the efficacy of the initial coding template in identifying participants' attitudes or mindsets towards decision-making for professional development in ECEC. However, the use of an inductive-deductive approach enabled us to go beyond the *a priori* codes, revealing the limitations of the template and the influence of other individual and contextual factors on decision-making. Reminiscent of Bronfenbrenner's (1979) ecological systems theory, these included the influence of local context (i.e., educators, families and communities), organisational context (e.g., vision, priorities, budget and accountability requirements) and an ever-changing ECEC public policy context.

Building evaluative capacity requires strategies to help educators and their communities to take an evaluative stance (Preskill and Boyle 2008; Sumsion et al. 2015). Despite professional learning being central to the improvement of organisational practices, most of the research on ECB

has not focused on how an evaluative stance can be applied to the planning and enactment of professional development (Preskill and Boyle 2008). A key focus of this study was on how and whether ECEC leaders use an evaluative mindset to make decisions about professional learning in their organisations. By examining how ECEC leaders think through professional learning for their organisation, and the personal epistemologies used to make decisions, it might be possible to strengthen the capacity of ECEC leaders to enact an evaluative mindset to professional learning in their programs. With the current policy focus on the ongoing professional learning of early childhood educators, and significant investment in this area, it is vital that those leading such efforts can engage in the kind of high level thinking and decision-making that ensure professional learning leads to improvement of ECEC services and programs. Although limited to the perspectives of six ECEC leaders in Australia, this study offers a conceptual tool for helping with this important leadership development work.

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References

- Angeline, V. R. 2014. "Motivation, professional development, and the experienced music teacher." *Music Educators Journal* 101(1): 50-55.
- Bohner, G. and N. Dickel. 2011. "Attitudes and Attitude Change". *Annual Review of Psychology* 62: 391-417. DOI 10.1146/annurev.psych.121208.131609
- Boyatzis, R. 1998. *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks, CA: Sage.
- Bronfenbrenner, U. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Cambridge, MA: Harvard University Press.
- Brownlee, J., D. Berthelsen, and G. Boulton-Lewis, 2004. "Caregivers' personal epistemologies and practice: Implications for working with toddlers in long day care." *European Early Childhood Education Research Journal* 4(1): 55 -70. doi: 10.1080/13502930485209311
- Brownlee, J., G. Schraw, and D. Berthelsen, eds. 2011. *Personal Epistemology and Teacher Education*. New York: Routledge.
- Campbell, T. (1996). "Technology, multimedia, and qualitative research in education." *Journal of Research on Computing in Education* 30(9): 122-133.
- Crabtree, B., and W. Miller, 1999. "A template approach to text analysis: Developing and using codebooks." In *Doing Qualitative Research*, edited by B. Crabtree and W. Miller, 163-177. Newbury Park, CA: Sage.
- Doecke, B., and G. Parr, S. North, T. Gale, M. Long, J. Mitchell, J. Rennie, J. and J. Williams. 2008. *National Mapping of Teacher Professional Learning Project: Final Report*. Canberra, ACT: Department of Education, Employment and Workplace Relations..
- Eagly, A. H. and S. Chaiken. 2007. "The advantages of an inclusive definition of attitude". *Social Cognition* 25(5): 582-602.
- Hatton, N., and D. Smith. 1995. "Reflection in teacher education: Towards definition and implementation." *Teaching and Teacher Education*, 11(1): 33-49.
- Heckman, J. J. and D. V. Masterov. 2005. *The Productivity Argument for Investing in Young Children*. Retrieved from <http://jenni.uchicago.edu/Invest/>
- Hofer, B. 2002. "Personal epistemology as a psychological and educational construct: An introduction". In *Personal epistemology: The psychological beliefs about knowledge and knowing*, edited by B. Hofer and P. Pintrich, 3-14. Mahwah, NJ: Lawrence Erlbaum.
- Hofer, B. 2004. "Epistemological understanding as a metacognitive process: Thinking aloud during online searching." *Educational Psychologist* 39(1): 43-55. doi: 10.1207/s15326985ep3901_5

- Hofer, B., and P. Pintrich. 1997. "The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning." *Review of Educational Research* 67(1): 88–140.
- Kang, N., 2008. "Learning to teach science: Personal epistemologies, teaching goals, and practices of teaching." *Teaching and Teacher Education* 24: 478-498.
- King, F., 2013. "Evaluating the impact of teacher professional development: An evidence-based framework." *Professional Development in Education* 40: 89-111.
- King, N. 2004. "Using templates in the thematic analysis of text". In *Essential Guide to Qualitative Methods in Organizational Research*, edited by C. Cassell and G. Symon, 256-270. London: Sage.
- Knapp, M. S. 2003. "Professional development as a policy pathway." In *Review of Research in Education*, edited by R. E. Floden, 109-158. Washington DC: American Educational Research Association.
- Kuhn, D. 1999. "A developmental model of critical thinking." *Educational Researcher* 28: 16-25.
- Kuhn, D., and M. Weinstock. 2002. "What is epistemological thinking and why does it matter?" In *Personal Epistemology: The Psychological Beliefs about Knowledge and Knowing*, edited by B. Hofer and P. Pintrich, 123-146. Mahwah, NJ: Lawrence Erlbaum.
- Labin, S.N., 2014. "Developing common measures in evaluation capacity building: An iterative science and practice process." *American Journal of Evaluation*, 35: 107-115.
- Labin, S. N., J. Duffy, D.C. Meyers, A. Wandersman, and C. A. Lesesne. 2012. "A research synthesis of the evaluation capacity building literature." *American Journal of Evaluation*, 33: 307-338.
- Lunn Brownlee, J., J. Sumsion, K. Walsh, A. Farrell, S. Irvine, G. Mulhearn, d. Berthelsen, and S. Ryan, S. (2014). "Evaluative capacity building in professional development programs: A conceptual framework for engaging decision-makers and program participants in new ways." Presentation at Second Biennial Australian Implementation Conference, Sydney, 17-18th September.
- Lyrantzis, E., and W. D. Crano. 2014. "Structure and change of complex political attitudes". Paper presented at the Sydney Symposium of Social Psychology, Sydney.
<http://www.sydneysymposium.unsw.edu.au/2014/chapters/CranoSSSP2014.pdf>
- Many, J., F. Howard, and P. Hoge. 2002. "Epistemology and preservice teacher education: How do beliefs about knowledge affect our students' experiences?" *English Education* 34: 302-322.
- Mayer, D., and M. Lloyd. 2011. "Professional Learning: An introduction to the research literature." Melbourne: The Australian Institute for Teaching and School Leadership Retrieved from

http://www.aitsl.edu.au/docs/default-source/default-document-library/professional_learning_an_introduction_to_research_literature.

- Muis, K. 2004. "Personal epistemology and mathematics: A critical review and synthesis of research." *Review of Educational Research* 74: 317-377.
- Organisation for Economic Co-operation and Development (OECD). 2012. *Starting Strong III*. Paris: OECD.
- Peng, H., and G. Fitzgerald, G. 2006. "Relationships between teacher education students' epistemological beliefs and their learning outcomes in a case-based hypermedia learning environment." *Journal of Technology and Teacher Education* 14: 255-285.
- Perry, W. G., 1970. *Forms of Intellectual and Ethical Development in the College Years*. New York: Holt, Rinehart and Winston.
- Preskill, H. and S. Boyle. 2008. "A multidisciplinary model of evaluation capacity building." *American Journal of Evaluation* 29: 443-459.
- Schieb, L. J. and S. A. Karabenick. 2011. *Teacher Motivation and Professional Development: A Guide to Resources. Math and Science Partnership – Motivation Assessment Program*. University of Michigan, Ann Arbor, MI.
- Siraj-Blatchford, I. and L. Manni. 2007. *Effective Leadership in the Early Years Sector: The ELEYS Study*. London: Institute of Education, University of London.
- Sumsion, J., J. Lunn Brownlee, S. Ryan., K. Walsh., A. Farrell., S. Irvine, G. Mulhearn, and D. Berthelsen, D. (2015). "Effective decision-making for high quality professional development: Cultivating an evaluative stance." *Professional Development in Education* 41 (2): 419-432, doi: 10.1080/19415257.2014.989257
- Thompson, N. and Pascal, J. (2012). "Developing critically reflective practice." *Reflective Practice* 13(2): 311-325, doi: 10.1080/14623943.2012.657795
- Yadav, A., and M. Koehler. 2007. "The role of epistemological beliefs in preservice teachers' interpretation of video cases of early-grade literacy instruction." *Journal of Technology and Teacher Education* 15: 335-361.