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Shaping Agency through Theorizing and Practising Teaching in Teacher Education

The construct of agency has a long and rich history, having been explored from a range of disciplinary perspectives. Agency as the capacity to produce effects is a critical idea in understanding human activity. Within teaching, agency as the capacity to make principled choices, take action and make that action happen will be argued here as being our most important pedagogical resource. The teacher's sense of promoting others' learning, as distinct from 'delivering the curriculum' places upon teachers both a great honour and a great responsibility: both to help, and to be clear about how we help, others to take charge of their own learning. The demand for teachers to be agentic is extensive in the teacher-education literature, though for Pantić (2015) there is a lack of conceptual clarity about the nature and function of teacher agency. For the purposes of this chapter, teachers' and teacher-educators' personal agency is stipulatively defined as their:

- capacity to effect real change (in other words to have at their disposal means of reforming and transforming educational practice for the benefit of learners);
- knowledge that they themselves wittingly caused change in others' learning (in other words a conscious understanding of their precise contribution to change);
- awareness of their *own* influences and powers to navigate within the milieu of institutional, political and societal structures

and is derived from a psychological perspective of people as a reflexive and self-conscious individuals who operate in a social world and interact with others (Kögler, 2012). This definition involves not only self's implementation of actions but self's awareness of detailed contributions; and self's identification of 'reach' and salience in specified social contexts. It also implies that teachers' and teacher-educators' intellectual and affective capacities to act in problem-solving situations can change or grow over time, thereby enabling experiences of intellectual professional satisfaction. The exercise of agency is complex and while its relationship to educational practice has been characterised variously, this chapter privileges agency in relation to learner achievement, structuring the content under 5 headings: agency as enacted behaviour; agency as implicit theorising; self-efficacy; epistemic agency; and agency as autonomy.

Agency as Enacted Behaviour

Teachers' capacity to effect improved learning was systematically studied in the process-product studies which were carried out between the 1950s and the 1980s and described in detail (Brophy & Good, 1986; Rosenshine & Stevens, 1986). These studies sought to identify the instructional procedures which differentiated between teachers whose learners made the highest gains versus those whose learners made the lowest gains on standardised tests. Alongside this, classroom observations were made of the types and frequencies of teacher behaviour. The studies had high ecological validity because they occurred in real classrooms; were replicated over successive years; and controlled for socioeconomic status, subject matter, and grade levels. The teaching functions derived from the many process-product studies (Rosenshine & Stevens, 1986) demonstrated robustly that teaching behaviours were key to improved achievement on standardised tests. To the extent that teachers were able to enact prescribed procedures, they effected improvement in learner achievement; and could therefore be said to have agency. However, the extent to which they understood why their actions affected learner outcomes was not considered, and so agency as enacted behaviour has limited utility in learner achievement. Nevertheless, the corpus of process-product research was significant; and continues to have a place in teacher-education today because of its influence on current conceptualisations of "direct instruction" and the need for teachers to provide optimal guidance to support the development of learners' thinking (Doabler et al., 2015; Lucariello et al., 2016). However, while the process-product studies continue to inform our understandings of teaching factors (Kyriakides, Christoforou, & Charalambous, 2013), they could not help teachers to address the teaching of important but ill-structured tasks like reading (Dole, Duffy, Roehler, & Pearson, 1991) or mathematical problem solving (Mayer, 1998). The dominance of the process-product approach to teaching and its concomitant emphasis in teacher-education created little space for either teachers' role in influencing others, or for the ideas that they themselves had. But the acknowledged limitations of the process-product approach in response to complex learning confirmed that teaching is more than the passive employment of teaching skills; and further demands teachers' cognitive constructions of the teaching and learning milieu within which they are working (National Institute of Education, 1975). Thus research on the importance of teacher thinking (Clark & Peterson, 1986; Winne, 1987) began to unpack considerable variation, so setting some seeds for the importance of the construct of agency in teacher education.

Agency as Implicit Theorising

Attention to teachers' own reasoning as to *why* particular practices and attitudes prevailed acquired greater potency when teachers' thinking processes were studied as causal in teacher behaviour (Clark & Yinger, 1977). Planning in preparation for teaching and decision-making during teaching were both viewed as mechanisms for accessing teacher thinking and while not well understood 30 years ago (Clark & Peterson, 1986), continue to be important topics for us to learn about (Long et al., 2016; Lui & Bonner, 2016). The early literature explained teachers' practice as deriving from their personal knowledge which was informed by their experiences of being learners and of being teachers (Clandinin & Connelly, 1987; Connelly, Clandinin, & Ming Fang, 1997): knowledge which was not always made explicit by teachers (Cornett, Yeotis, & Terwilliger, 1990). But teachers, in reasoning about practice, draw not only from their implicit or automated knowledge but also from their codified knowledge of formal theory and research; and these two forms of knowledge interact in complex ways that we do not fully understand (Grosemans, Boon, Verclairen, Dochy, & Kyndt, 2015; Kissling, 2014). However, by acknowledging that teachers learn informally *and* formally, teacher-education offers an important site to allow teachers and wider society to understand that professional learning is not just a matter of acquiring professional skills and knowledge but also a conduit through which teachers can shape their practice and thinking. We know that teachers with an enhanced understanding of practice (Carrillo & Climent, 2011) perceive significant features of the situation, and have the knowledge that enables them to choose actions that are appropriate in these circumstances for producing desired consequences. These teachers appear to develop a rich seam of principled practical knowledge (know-how plus know-why) which they use and modify 'on the fly'; but which we cannot yet explain. Nevertheless, it is teachers' interpretations of, and professional responses to, a particular situation that can be understood as agentic. Indeed it is teachers' agency which inhibits unfettered application of prescribed curricular and pedagogical changes because teachers filter what they read/are told through their implicit theorisation. Only if proposed changes are considered to be effective and feasible by teachers themselves (Reeve & Cheon, 2016), will they entertain changing extant practices.

Key to the development of teachers' theorisation is reflection: a thinking process in which what is experienced as perplexing is transformed into that which is coherent and meaningful to the person. Although reflection, as a mechanism for supporting teacher agency, is crucial in teacher-education, teachers find the process difficult (Gelfuso & Dennis, 2014), especially if they do not have a sophisticated grasp of learning. Moreover the idea of reflection is ambiguous with conceptual confusions about its focus, implementation and justification (Beauchamp, 2015; Zeichner & Liu, 2010). Supporting others' reflection, requires teacher-educators to have deep understanding of reflection as an intellectual achievement on a continuum of epistemological sophistication. Broadly, this continuum traverses description and personal response to a practice issue; through referencing theory and research to explain practice; to interrogating and ultimately transforming the practice. Such transformative reflection is a monological or dialogical interaction in which people "define and clarify their beliefs, attitudes and goals, evaluate social circumstances and define projects based on their main concerns" (Caetano, 2015, p. 62). It is this reflexivity that teachers need to be agentic, because it is this very deep level of reasoning which allows teachers to discard previous practices when these are understood to be less effective than others that can be morally and theoretically justified.

Self-efficacy

The premise that teachers can knowingly effect change (and so demonstrate agency) finds support in the construct of efficacy. Efficacy for teaching refers to teachers' convictions in effecting context-specific pedagogical tasks at a specified level of quality (Dellinger, Bobbett, Olivier, & Ellett, 2008) and involves the extent to which teachers believe that they can:

- Exercise instructional strategies (design and implement activities, tasks, and assessments) to facilitate student learning;
- Provide support (attend to emerging difficulties, structure calibrated support, respect learner autonomy and integrity) to keep learners engaged and motivated
- Manage the classroom to ensure sufficient learning time, minimise interruptions, create and maintain structure and order in the classroom.

Perceptions of self-efficacy stem from experiences of completing tasks on mastery criteria determined by ourselves; emulating the practices of models we respect; following the advice of those who persuade us; and our physiological/emotional state of readiness (Usher & Pajares, 2008). Our own enactive experience is the most potent source of efficacy but others' feedback, either directly or vicariously, can be helpful if the task is novel or the criteria for mastery are ambiguous. Teachers' self-efficacy influences the classroom ecology in complex ways, predisposing them to be more or less agentic. For example teacher's efficacy interacts with the effects of stress (Helms-Lorenz & Maulana, 2015; Khani & Mirzaee, 2014; Stephanou, Gkavras, & Doukeridou, 2013). Low self-efficacy will intensify teachers' feelings of stress while high levels protect their well-being (Fernet, Guay, Senécal, & Austin, 2012; Martin, Sass, & Schmitt, 2012; Pas, Bradshaw, & Hershfeldt, 2012). This in turn is a factor in job satisfaction and teachers' decisions to leave the profession (Aldridge & Fraser, 2015; Collie, Shapka, & Perry, 2012; Helms-Lorenz & Maulana, 2015; Klassen & Chiu, 2011; Skaalvik & Skaalvik, 2014).

While teachers' self-efficacy reliably predicts their instruction, learner engagement and classroom management over time (Künsting, Neuber, & Lipowsky, 2016) and is widespread in its agentic effects (Zee, Koomen, Jellesma, Geerlings, & De Jong, 2016), there are questions as to the influence of teacher efficacy on learner achievement (Klassen, Tze, Betts, & Gordon, 2011). Recent studies suggest that highly efficacious teachers enable learner achievement through their substantive domain knowledge: in mathematics (Ekmekci, Corkin, & Papakonstantinou, 2015; Lui & Bonner, 2016; Riconscente, 2014; Skaalvik, Federici, & Klassen, 2015; Tsamir, Tirosh, Levenson, Tabach, & Barkai, 2015); in science (Demir & Ellett, 2014; Kazempour & Sadler, 2015; Knaggs & Sondergeld, 2015; Velthuis, Fisser, & Pieters, 2015; Wang, Tsai, & Wei, 2015); and in literacy (Martinussen, Ferrari, Aitken, & Willows, 2015; Taboada Barber et al., 2014; Tschannen-Moran & Johnson, 2011).

These studies exemplify a current awareness that:

- Interest is necessary for understanding content
- Learner interest is an important element of achieving domain proficiency
- Learner interest is stimulated by clear and pertinent explanations from teachers

- The coherence and clarity of teacher's developmentally-appropriate explanations depends on teachers' own conceptual knowledge

It is the depth and detail of the teacher's conceptual knowledge which lets them provide apt and learner-centred explanations, notwithstanding their pedagogical knowledge of how to support learners generally. Teachers with robust conceptual knowledge believe that they can teach particular curriculum content such that the learners engage cognitively. Such teachers are not afraid to be innovative in devising tasks and activities for learners which challenge learners to invoke prior knowledge and use basic concepts. These teachers consider it appropriate to trigger in learners the cognitive conflict that positions learners to compare similarities and differences and to reflect on their own learning. These teachers routinely require learners to justify answers and solutions by encouraging content-rich classroom discourse. In other words the learners are cognitively activated by teachers who have mastery-oriented goals and high self-efficacy to extend their teaching. As such they seek to engage their learners in the complex processes of understanding, reflection and critical reflection, whilst monitoring learners' difficulties and providing calibrated support. On the other hand, teachers who have limited conceptual grasp of content are likely to avoid inquiry and learner-centred approaches to teaching because they themselves do not have the cognitive resource to deal with the unpredictability and 'messiness' of supporting learners as they struggle to revise and constructing their understanding (Phan, 2011; Schiefele & Schaffner, 2015; Schiefele, Strebblow, & Retelsdorf, 2013). All of this implies that teacher educators must continue to be bold in promoting a constructivist perspective on learning. How teachers think, feel and act and is central to their professional agency. The construct of self-efficacy has much to offer in helping teachers believe that they are capable of producing requisite behaviours; a necessary part of teacher agency.

Epistemic Agency

The acknowledged importance of teachers' conceptual understanding to support their agency brings into focus the extent of their epistemic cognition: the process of thinking that draws on beliefs and knowledge to reason, to problem solve, or to make decisions. We invoke epistemic cognition whenever we need to do more than just memorise information; but seek to think critically, argue tightly and understand deeply (Greene & Yu, 2016).

When we seek to acquire and/or apply new knowledge in response to course curriculum requirements (achieve learning intentions), we pursue epistemic goals: we have a 'need to know' (Litman, Hutchins, & Russon, 2005). In satisfying our 'need to know' we vary in the extent to which we appreciate the effortful thinking involved in solving puzzles, in extensive deliberation, and in thinking abstractly. Some of us relish effortful thinking and others avoid it. Those who engage in more effortful thinking (and so develop more complex cognition) are better able to direct attention to what is salient or significant in a particular situation (Yang, Huang, & Tsai, 2014). It is this epistemic cognition which is at play if/when we (i) reason and argue a point of view; (ii) question the source of evidence presented; (iii) revise our knowledge and thinking. Our epistemic cognition develops over three major stages: viewing knowledge as incontrovertible facts; as equally valid but alternative opinions; or as judgements derived from evidence. The gradual realisation that knowledge is construed rather than given grows out of advanced education. Because our knowledge arises from the choices that we make individually to engage or not in effortful thinking, we are responsible for what we know and do not know (Greene & Yu, 2016). This responsibility marks our epistemic agency.

Epistemic agency comprises two-dimensions: knowledge-related actions (collecting information; sharing ideas and knowledge; structuring ideas to create the basis for further epistemic endeavour; participating in collective discourse) and process-related actions (setting goals and agreeing plans; monitoring progress of the collective activities and addressing the problems that emerge; being interpersonally aware, proactive and sensitive to others less academically skilled). While the epistemic (knowledge-related) dimension leads to the creation of the knowledge object or conceptual artefact, agentic conduct through regulative (process-related) action is necessary to bring the desired outcome to fruition (Damşa, Kirschner, Andriessen, Erkens, & Sins, 2010). Because teachers not only learn themselves but also design learning contexts for others, their epistemic cognition is very relevant. If we as teachers and teacher educators accept the charge that we help learners to learn, we need both to be able to think and talk about the content and pedagogical knowledge for teaching others and the ways(s) in which our own beliefs, conceptions and assumptions can be altered to improve our agency.

Teacher education's support of enabling teachers to see the connections between their epistemic cognition and their pedagogical practices remains critically important.

Historically, teachers have been credited as the epistemic agents - who set the learning goals, monitor learner progress and evaluate the outcomes (Stroupe, 2014). That learners might be epistemic agents has not been a widely-held consideration; but is evident in the idea of 'knowledge-building' (Bereiter, 2002): a process of creating new conceptual artefacts as a result of common goals, group discussions, and synthesis of ideas. These artefacts can be theories, product designs, explanations, marketing plans or other such mental knowledge objects; which can be described, compared, discussed, critiqued and modified. Bereiter and Scardamalia (2014) view knowledge building as a key pedagogical approach involving learners taking collective responsibility for improving their ideas rather than leaving this task for the teacher. Through working collaboratively on problematic tasks that demand novel solutions learners realise, progressively, that new advances in knowledge open up new problems and new possibilities for further advancement, thereby extending potential epistemic agency. Those teachers who are epistemically agentic take responsibility for their own and their learners' cognitive advancement and when they recognise gaps, they take steps to address them.

Supporting learners to develop epistemic agency necessitates teachers' familiarity with, and knowledge of, epistemic cognition (Greene & Yu, 2016) since it is heavily implicated in teaching for conceptual change (Mason, Boscolo, Tornatora, & Ronconi, 2013) and enables us to *do* more than regurgitate knowledge but instead think critically or construct an argument (Sinatra, Kienhues, & Hofer, 2014). Pre-service teachers have been found low in epistemic agency because of their own limited knowledge sharing; their lack of engagement with peers to monitor and progress respective understandings; and their derogation of responsibility for maintaining the cognitive centrality and integrity of the task (Erkunt, 2010). And in-service teachers do not respond well to managerially mandated changes which pay lip service to, but do not understand the nature of, teachers' ability to change their professional situation (Wierenga, Kamsteeg, Simons, & Veenswijk, 2015). Teacher educators thus need to ensure that their own pedagogy is congruent with a knowledge-building approach (Jao, 2016; Kárpáti & Dorner, 2012).

Agency as Autonomy

To exercise our agency, we need to experience ourselves as having choice in how to act. It is not therefore surprising that teachers' agency can be enabled by autonomy. But teachers' autonomy is a nuanced concept. Autonomy in teaching can be thought of as situational (Eneau, 2012). Teachers engage in practices which engender autonomy: they arrange organisational, procedural and cognitive aspects of the learning environment to give learners more choice and freedom to take ownership of their own thinking (Reeve & Tseng, 2011; Rogat, Witham, & Chinn, 2014). Autonomy supportive teaching improves learner motivation (Ruzek et al., 2016), enhances learners' emotional engagement (Hospel & Galand, 2016) and increases conceptual learning (Jang, Reeve, & Halusic, 2016). Teachers' pedagogy is therefore driven by the desire to have learners become intentional, intrinsically motivated learners. But, as Eneau (2012) points out, there is another form of autonomy.

Teachers' epistemological autonomy is their capability to make informed judgments about the contexts and situations that influence their teaching. In exercising their epistemological autonomy teachers appreciate that their individual autonomy to determine teaching materials and pedagogy within the classroom interacts with the curricular and pedagogical policies within the school and is ultimately informed by the governance of the teaching profession in terms of fitness-to-teach (Frostenson, 2015). So autonomy is not some rampant expression of self; independent of authority, the environment, society or peers. Rather it is a balance of individual freedom and the external constraints of other persons and particular situations. This balance may well be difficult for teachers to achieve. On the one hand there are influences, pressures and mandates to act in particular ways (to which the professionally responsible teacher attends) and on the other we strive to be self-directed by self-generated or freely internalised rules which act as an inner compass when choice is available. Being a teacher with agency recognises professional responsibilities, but teachers are still autonomous even when complying with external demands, *provided the reasoning for an action is consistent with their beliefs* (Chirkov, 2014). The nuance of teachers' authorship of reasoning-to-act is important. Without critical reflection to check that they fully concur with the reasons for so acting, teachers may act independently or intentionally, but not with autonomy.

Indeed, without an explicit teacher-education focus on teachers' autonomy, teachers' conceptions of their autonomy will continue to be limited (Šteh & Marentič Požarnik, 2005; Wermke & Forsberg, 2016). Epistemological autonomy, like situational autonomy, can be learned but requires deep reflection over extended time (Dworkin, 2015; Eneau, 2012) to achieve the intellectual maturity that enables the teacher not only to think about what improved practice might be but also the capacity to accept or attempt to change practice in light of higher-order preferences and values. Sophisticated epistemological autonomy is therefore desirable in the achievement of agency.

At the more prosaic level of situational autonomy teachers, like the rest of the human race, have a basic psychological need for autonomy (Ryan & Deci, 2011). Our psychological health depends on the satisfactions of our needs to make volitional choice, to feel competent and capable, and to socially engage with others. Our need for autonomy is experienced regardless of cultural differences (Chirkov, 2014). Very recent research is beginning to show that professional development in which teachers feel committed to promoting situational autonomy (Aelterman, Vansteenkiste, Van Keer, & Haerens, 2016; Ng, Liu, & Wang, 2015 ; Reeve & Cheon, 2016) can enable their epistemological autonomy because at the very least the professional development draws teachers' attention to the effects of their behaviour on that of their learners. Another potential seam to explore is how teacher-educators structure novice teacher learning to take account of the role of the cooperating teacher in field experience (Tannebaum, 2015). There is still much to learn about refining teachers' conception of epistemological autonomy.

Ways forward

Teachers' agency in promoting learning is shaped by their enactment of instruction, their theorisation (of learning and teaching), their own efficacious behaviour, their personal epistemology and their autonomy. Because these influences are disparate and incomplete in themselves, they merit further attention in teacher-education. If teachers are to develop their professional agency, elaborations in respect of the factors shaping agency invite further work on:

- ✚ The role of direct or explicit instruction: the demise of the process-product studies gave rise to discovery learning; quickly judged as pedagogically inadequate. Much of what is required to be taught in formal education (literacy, science, mathematics and the other curricular topic) is secondary knowledge which we need for cultural reasons but which (unlike primary knowledge such as speech, face-recognition and general problem solving) we are not biologically primed to acquire. To acquire secondary knowledge effectively, we need explicit instruction which takes account of the limitations of our cognitive architecture. How teachers provide authentic tasks, relevant practice, and the learner-specific bridging information to support learning are all aspects of teacher's agency which merit attention in teacher-education.

- ✚ Teachers' theorisation: the nexus of educational reform and classroom practice is a troubled one in which 'others' view teachers as obtuse in their alleged failure to adopt proposed innovations. Such recalcitrance merely underpins teachers' agency. Teachers' perceptions of an innovation's practicality in the context of *their* classroom and *their* group of learners is the actual criterion. This may render the innovation, as manifest in a particular classroom, to be far removed from its original design and conception. Working with teachers to explore the instrumental efficiency of the innovation, the congruence of the innovation in the ecology of their particular classroom, and the cost-benefit effects of the innovation would be a window through which to better understand teachers' theorisation; and hence their agency.

- ✚ Teachers' efficacy: extant studies cumulatively emphasise that improved instructional practices, learner support and classroom management positively predict increased efficacy but the long-standing need to know how teacher efficacy predicts learner attainment is less well understood. We know that teachers' rich conceptual content knowledge is significant. But how teacher-education helps teachers ensure that their domain knowledge is matched to the demands of constructivist pedagogy such that teachers support both grade increases and refined understanding is still work in progress. Enabling teachers to make their self-efficacy explicit might help our understanding of how teachers use their practical and

personal knowledge dynamically to clarify their thinking, and to act on the basis of their reasoning.

✚ Teachers' epistemic cognition: the topic of epistemic cognition has only recently been recognised as important in teacher-education and so studies are currently limited. But in the current policy climate of demands to prepare learners for our knowledge-infused world, we can no longer teach as though knowledge were certain or given (an assumption unchallenged in entrenched transmission pedagogies). Instead we must value the necessity of engaging in argumentation and reasoning from evidence. Building an epistemically justified pedagogy requires research to gain insights into teachers' understandings of:

- Their own epistemology;
- The epistemic messages embedded in the espoused and enacted curricula, in the resources deployed and in the teaching approaches adopted;
- The epistemic cognition of their learners.

Teacher agency cannot now be helpful to the education enterprise unless it is epistemically sensitive.

✚ Teachers' autonomy is inherent as a potentiality but to become an actuality requires teacher action, research and staff development. Being agentic means that teachers seek to enable learner competence, encourage learners' self-motivations and enhance learner capacity for critical thinking. For this teachers need to be able to infer learners' goals and intentions and use this knowledge to make rational, value-driven decisions of how to proceed pedagogically: factors that are worthy of clearer delineation. At the same time teachers must be personally mindful of, and understand, what provokes the expectations, demands, and constraints of their role; so that they can make rational decisions as to whether to follow, ignore, or actively resist accountability requirements. The social, moral and political implications of teacher's agency must therefore be brought into focus through reflection.

The influences on teachers' agency reported here, together with suggestions for further avenues of investigation derive from self-report measures such as interviews, written protocols, participant observation, and questionnaires (many of which have been psychometrically developed). The objectivity of the resultant findings and the validity of the underpinning constructs have been matters of concern to those of a positivist persuasion but to understand human action and complex phenomena such as teaching, we must recognise that teachers not only respond and react but that they interpret and create; and act on the basis of their interpretations. It is therefore necessary for teacher-educators to have insight into how teachers construe their experiences of teaching, rather than to assume knowledge of what teaching means to individual teachers. This is not to deny that there should be rigorous analyses of self-report data, since it is analysis of raw data that yields meaning and significance. Rather, it suggests that student-teachers, teachers, teacher-educators and researchers work collaboratively to benefit from the experiences and perspectives of each to improve and generate evidence-based claims about the effects of teachers' agency on learner achievement.

Closing Comments

Notwithstanding the psychological processing that underpins teachers' agency, it is the interaction of theorising and practising teaching that enables teachers to understand what agency means for them in their classrooms. The ways in which knowledge and practice of 'teaching about teaching' are developed and refined is the work of Teacher Education. These developments and refinements are best supported in coherent, formal Teacher Education Programmes which, provide space, iteratively, to revisit agency in relation to learner achievement. The recognition that teaching is problematic because it is an uncertain yet dynamic activity means that decisions are being made by learners and teachers in real-time and it is within this real-time that learners and teachers negotiate ways forward. The key demand on teachers is to enable learners to transform extant skills and understandings into more sophisticated skills and understandings. Teaching is not bound by a script delivered by an automaton but requires teachers to make informed responses to the varied learning demands of any particular lesson.

It is against this complex and uncertain background that teachers do their work: experiencing the demands of competing claims of the curriculum; acutely aware of the limitations of pedagogic technology to guarantee classroom success; and being held accountable for unpredictable learner achievement. But these 'constraints' will always be the subject of ongoing debate and contestation: what the curriculum should be is a matter of interest to our politicians, to the general public and to our professionals; how pedagogy is enacted is informed by teachers' thinking and the impact of research findings on how humans learn; and how learner achievement is defined - given that we know that learning as an internal cognitive event cannot be equated with observable behaviour – is influenced by the intellectual, cultural, and economic views that are dominant in particular contexts. In short, teacher education is the crucible for debating, developing and designing ways in which teachers can do the job with which society has charged them to do. Availed of teachers' and teacher-educators' sense of agency as outlined in this chapter, the teachers and the teacher-educators have pedagogical resources to support them in their educational practice. Supporting teachers to be agentic remains a challenge for teacher-education but a useful start has been made in that teacher-education research has been central in examining and exposing the many ways in which teaching requires sustained thinking, reading and scholarship. Teachers' and Teacher-Educators' sense of agency is central to this endeavour.

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