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THE INNOVATIVE TEACHER WITHIN LEARNING ORGANISATIONS

A leadership perspective

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Introduction

In the field of Content and Language Integrated Learning (CLIL) and English for Academic Purposes (EAP), two areas in which the authors of this chapter work, the literature is peppered with recipes for good teaching based on criteria by which teachers are judged when evaluating or developing their in-service practice (BALEAP, 2016; Cambridge English, 2014). Generally developed in the interests of quality assurance, such criteria assume that teachers demonstrating such qualities over time are professionally excellent. However, does this assumption predicate that teachers demonstrating a high level of these criteria are innovative? Or should criteria by which an innovative teacher is defined be based on different premises? If so, what might the epithet 'innovative' be referring to when a teacher is said to be innovative, and would these qualities be inherent in an individual, or be determined by circumstances? The search for the innovative teacher undoubtedly reflects the desire of educational organisations for sustainability founded on practice which meets learner aspirations, responsive to their needs in a rapidly changing environment.

In this chapter, we examine how insights developed in previous chapters are apposite to the definition of the innovative teacher as seen from an organisational leadership perspective. The moot question for leaders is whether innovative practice is enshrined in an individual's dispositions, or whether the school community and its environment engender the innovative practitioner. Do professional learning and organisational learning go hand in hand? Are innovative dispositions dormant until an organisational tinderbox lights them, or do innovative teachers suit all contexts and organisational structures? Here, we also delve deeper into whether changes in the environmental conditions in which teaching and learning take place,

DOI: 10.4324/9781003216902-6

in particular the recent shifts in teaching and learning approaches in response to the global COVID-19 pandemic, change leadership perceptions of innovative teachers.

Review of literature

A dictionary definition of the features of innovative behaviour describes it as "introducing new ideas; original and creative in thinking" (OUP, 2021) extended when discussing innovative behaviour in education to include behaviour: "developed, applied, promoted, realized, and modified by employees to benefit role performance" (Thurlings et al., 2015, p. 430). Here, innovative behaviour encompasses seeing out the process of implementation, and its evaluation, in a work context. Literature suggests that an individual's readiness to adopt and diffuse innovations may be dependent on personal characteristics, shown through their willingness to innovate, illustrated in the terms early adopter or laggard coined by Rogers (2010). Innovative teachers' behaviour may relate to an individual's personality, such as "curiosity and openness" (Thurlings et al., 2015, p. 444); or, personal traits, "relatively constant personality dispositions" (Thurlings et al., 2015, p. 447), innate or learnt in early life (Altan & Lane, 2018); or competencies such as learning related to social, educational and technological competencies (Zhu et al., 2013). Self-efficacy is touted as a key individual predictor of innovative behaviour (Sackney et al., 1998), while "proximal factors, such as traits and motivation, are more closely related to behaviour" (Thurlings et al., 2015, p. 461). Research findings suggest that personal factors are the bedrock of innovative teacher practice and that distal factors, those relating to the environment and organisation, "are mediated by proximal variables" (Thurlings et al., 2015, p. 461). However, learnt competencies clearly play an important part in determining the professional toolkit of the innovative teacher (Zhu et al., 2013), which begs the question as to whether this toolkit can be further enhanced by distal factors, given innovation enhancing proximal factors. The answer appears to be related in part to the culture of the environment in which innovative teachers work.

Personal learning within organisations exerts a powerful influence on meeting organisational goals, without which "no organizational learning takes place" (Senge, 1990, p. 139). Individual learning is mediated by an organisation's approaches to learning. Single loop learning describes a process whereby simply fixing a problem is superseded by double loop learning, which embodies reflection on reasons for errors, leading to changes in "governing values and then the actions" (Argyris, 2002, p. 206). In other words, an organisation is learning to learn in a way similar to how individuals learn to learn, a combination of double loop and triple loop learning (Tosey et al., 2012), the latter involving reflection on the learning itself. Organisations can develop this learning capacity over time, creating smarter organisations through appropriate leadership practices (Leithwood et al., 2007). Organisational learning processes become embodied in ways of working, shared norms and beliefs, structures, strategy, and vision (Leithwood et al., 1998), which create internal commitment (Argyris, 1998). This capacity to learn grows and remains within an organisation, embodied within an organisation's intellectual capital (O'Dwyer, 2016).

Senge (1990, p. 14) recognised that "'adaptive learning' must be joined by 'generative learning', learning that enhances our capacity to create", achieved through the application of his five disciplines: systems thinking, personal mastery, mental models, building shared vision, and team learning, where systems thinking is an overarching concept integrating the others. The disciplines do not represent an enforced order but rather a developmental path. Senge's approach finds an echo in literature on school improvement (Sackney et al., 1998), school effectiveness (Reynolds et al., 2014), school climate (Thapa et al., 2013), and, in particular, sustainable professional learning communities where capacity building is paramount. In other words, a "complex blend of motivation, skill, positive learning, organisational conditions and culture, and infrastructure of support" (Stoll et al., 2006, p. 222). Innovative practice contributes to organisational development, hence the importance of the innovative teacher, since "systemic challenges [in schools] are best addressed by adaptive solutions, ideally driven by an innovation mindset" (Lynch et al., 2020, p. 17).

The literature underlines the strong influence that distal factors have on enhancing innovative teaching behaviour within schools, and the innovative practitioner. A positive climate, in which a culture of communication and feedback exists, coupled with a transformational and supportive leadership style (Thurlings et al., 2015), facilitates the development and growth of innovative teaching behaviour. A controlling environment in which the "tyranny of the curriculum" holds sway stymies innovative teaching (Eteokleous, 2008, cited in Thurlings et al., 2015, p. 457). Interaction between teacher colleagues and other members of the educational community, bolstered by supervisor and co-worker support, is a key contributor to innovative teaching behaviour (Thurlings et al., 2015). Promoting the alignment of organisational and teachers' personal goals within schools supports this (Gilbert et al., 2021), as do policies which are focused on promoting an innovation mindset, adaptive solutions, local problem-solving, and "creating a practitioner-initiated community that engages leadership and expertise within networks that support professional learning" (Lynch et al., 2020, p. 19). However, negative perceptions of working conditions and organisational policies on the part of teachers may influence their willingness to engage in innovative teaching behaviour (Baskaran & Rajarathinam, 2018).

Innovative teaching, in many instances in the literature, conflates innovative teaching behaviour and the innovative teacher on the assumption that the former assumes the latter. The focus in this chapter is on innovative teachers and their impact in creating innovative capacity as part of organisational learning. Unique proximal factors define the innovative teacher, but how far do distal factors transform those exhibiting innovative teaching behaviours into fully fledged innovative teachers? How might learning organisations incentivise "secondary diffusion" (Lane et al., 2020, p. 22665) to meet sustainability challenges?

Research purpose

This chapter analyses school leaders' perspectives on innovative teachers across several countries prior to the COVID-19 pandemic and in one country post-pandemic. It targets a deeper understanding of factors that shape the development of innovative teacher characteristics and practices to contribute to a developing model stemming from collaborative reflection and previous research. Findings aim to enhance the model with contextually situated triangulated perceptions from different leaders and contexts with implications for professional learning for the development of innovative teaching within schools.

Theoretical and conceptual frameworks

The theoretical framework uses Senge's (1990) five disciplines to organise insights into a coherent analytical base. Senge's theoretical framework is linked with two elements of the overall conceptual framework (see Chapter 1), namely the characteristics of innovative teachers (proximal factors) and the conditions to support innovative teachers (distal factors). Figure 6.1 relates these five disciplines with the distal and proximal factors: proximal approximates to the inner three circles, with the outer three more concerned with distal factors. Four disciplines are weighted towards specific areas, whereas the fifth discipline, Systems Thinking, connects all elements in a school environment.

Personal Mastery links to

- personal and professional development;
- personal characteristics (dispositions, competencies, self-efficacy);
- capacity to learn, innovate, and implement; beliefs, attitudes, and identity.

Mental Models focusses mainly on

- aligning understandings and goals; innovation mindsets; adaptive behaviour.

Building Shared Vision centres around

- leadership, culture, autonomy, learning climate, and constructivist approaches.

Team Learning incorporates

- collaboration, communication, interaction, professional learning, coaching, supportive feedback, and secondary diffusion.

Systems Thinking encapsulates

- interconnectedness, policies, resources, climate, incentives, learning community, and combinations of the above four disciplines.

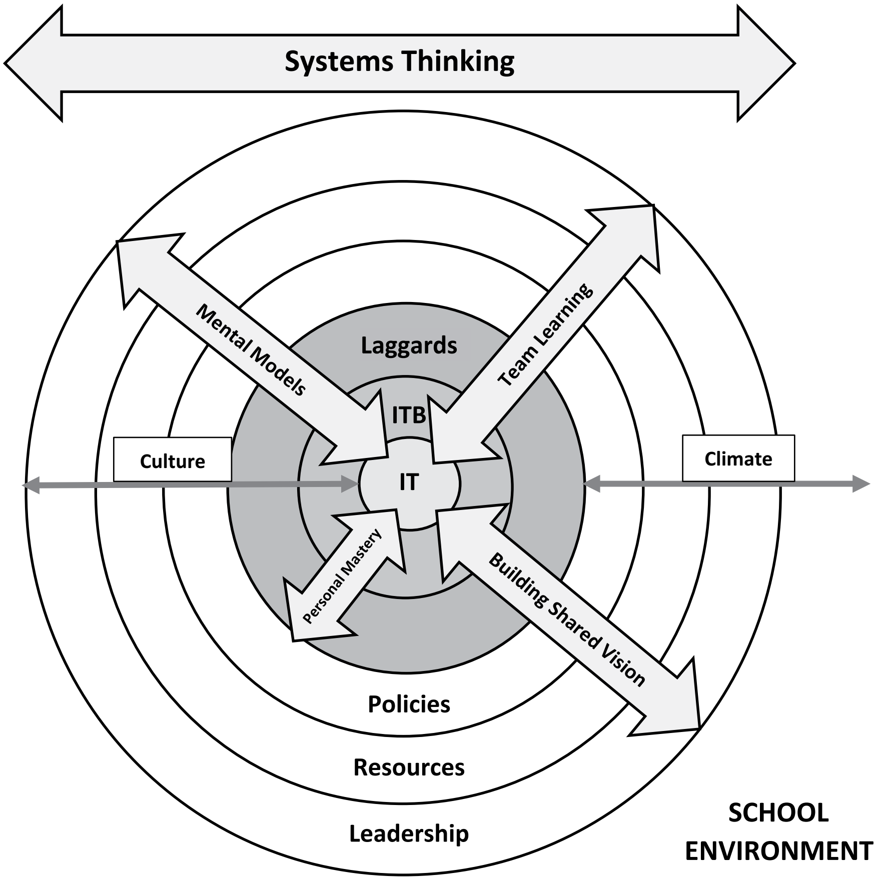

FIGURE 6.1 Theoretical and analytical framework (IT in centre ring = Innovative Teacher; ITB = innovative teacher behaviour)

Figure 6.2 provides a conceptual map of the study discussed in this chapter. Data collection is grounded in the experiences of those working in leadership positions in schools, synthesised with available literature, Senge's theoretical framework, and the developing conceptual model presented in Chapter 1.

Methodology

The methodology adopts the interpretative paradigm (Cohen et al., 2009), using personal interviews with individuals in key leadership positions about their perceptions of innovative teachers. Requisite ethical approval was obtained and individual consent was documented.

The research is founded on two data sets. The first predates the COVID-19 pandemic using vignettes gathered from school leaders during the ATEE RDC PDT

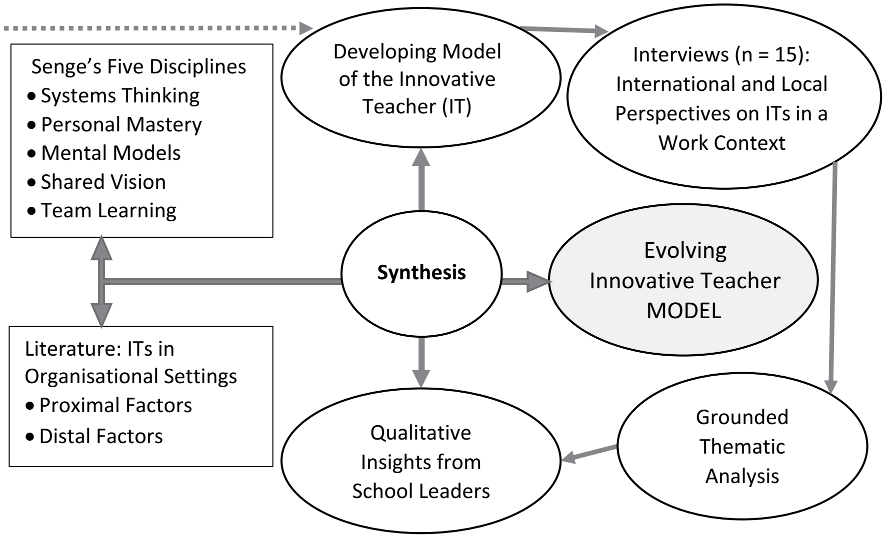

FIGURE 6.2 Conceptual map of the study (discussed in this chapter)

Developing and Supporting Innovative Teachers Study, across the countries involved, as outlined in Chapter 1. The second, collected in Turkey in schools opening for face-to-face learning at the end of a year and a half of lock-down due to the pandemic, explores the perceptions of leaders in three schools: primary, middle, and high.

Semi-structured interviews prior to the pandemic explored participants' views on innovative teacher characteristics and qualities (see Chapter 1). Six pre-COVID vignettes were analysed, (see Table 6.1).

TABLE 6.1 Data providers, roles, leadership experience, and contexts (pre-Covid)

Interviews	*Role*	*Av. Years Leadership*	*Contexts*
6 pre-COVID Interviews	2 Principals (P1, P2) 2 Vice-principals (VP1, VP2) 2 Teacher educators (TE1, TE2)	8+ years No data 20+ years	University teacher educators, primary and secondary school leaders in a range of countries involved in the ATEE RDC research study
9 post-COVID interviews	3 Principals (P3, P4, P5) 3 Vice-principals (VP3, VP4, VP5) 3 Curriculum Leaders (CL1, CL2, CL3)	14 years 12 years 10 years	Leaders in 3 primary, middle, high not-for-profit foundation schools in Turkey

Interviews in the post-COVID lockdown followed a similar pattern with an emphasis on organisational conditions supporting the innovative teacher, the contribution of teacher education to their development, and their response to online education during the pandemic. Nine interviews were carried out, five face-to-face and four online, with three principals, vice-principals, and curriculum leaders from three schools teaching the Turkish national curriculum integrated with an International Baccalaureate curriculum. In each school, two leaders had visited all teachers at least once a year, and seven teachers at least twice, both before and during the pandemic, the former face-to-face, the latter online.

Interviews typically lasted 45 minutes each, were transcribed and analysed using HyperResearch™, independently at first, then collaboratively to validate categorisations and link them thematically.

Findings

In this section, we use Senge's (1990) five disciplines as headings to bring together findings from informant insights.

Personal Mastery

Our findings suggest that both nature and nurture, pre-conditions such as personal dispositions married with previous education and experience, play a part in the attribution of innovative teacher. Pre-conditions were expressed by informants differently as: "not afraid to collaborate … to share their ideas", "willing to break out of the mould" (CL2, + [1]VP1); "open to learning" (P3 + P1, VP2, VP4); "able to identify … needs of the learners, colleagues and school system" (VP4, + P1, P3, VP1); feeling "the need to change and improve" (P3); and "having passion for the job" (P1).

The majority of those recognised as innovative teachers evidenced personal mastery, a key attribute in Senge's framework (commitment to a personal mission or philosophy underlying their approach to practice and life):

> committed, with this flame in the heart … he's brilliant … It's just him. He's been like that ever since he came;
>
> *(TE2)*

> what is … innate … is that drive to keep going, to keep questioning, to keep trying, to keep reflecting and … not let the other factors in your life dominate.
>
> *(CL2)*

> [they are] creative, having a vision, … doing things meaningfully not for the sake of doing it, … keeping the students on task, engaged … they try something original, something fun, something focused.
>
> *(CL1)*

> [They are] open to additional organizational tasks in order to maximize learning experiences.
>
> *(VP2)*

> They have good networking skills with teachers from other schools or people from different professions … [they are] good at articulating what they want. They have an innate curiosity, and they are jealous of their colleagues who use creative ideas in their teaching.
>
> *(VP4)*

Attributing innovative teacher status depended on the leadership role of the person making the attribution. Senior managers in primary school considered 30% of teachers as innovative teachers, increasing to 60% in middle school. Amongst curriculum leaders, the proportion was between 7% and 13% across the middle and high schools (CL1, CL2), rising to 25% in the primary school (CL3). A number of factors contributed to this, the first of which was proximity. Those closer to teachers on a day-to-day basis, involved in collaborative planning and frequent classroom observation with feedback cycles, were more sparing in their attributions. Those more removed in the hierarchy saw a larger number of innovative teachers in their responsibility areas. Curriculum leaders focused more on classroom experience and nurtured elements when assessing innovative teachers, shaped by their role as professional educators in planning and monitoring curriculum delivery with individuals and groups.

A second factor relates to the nature side of innovative teacher characteristics. It takes time to acquire a level of expertise necessary to implement a philosophy effectively and align practice to a school's philosophy and aspirations. Those with a closer daily relationship to innovative teachers recognised previous education and life experience as important, but they did not

> think it [innovativeness] comes from birth …environmental factors [nurture], educational background, what we have been exposed to develops it … those teachers who come from traditional educational backgrounds hardly become innovative.
>
> *(CL3)*

> I can see innovative characters among young teachers who graduated from [certain] departments.
>
> *(CL3)*

One in-service educator (TE1) acknowledged that some early career teachers displayed promising personal dispositions and philosophy but lacked the skills and ability to translate their vision (or the organisation's) into effective classroom practice. It was unclear whether this linking of nature with required nurture would ever happen. Different views regarding early career teachers were expressed: being doubtful about their willingness to be innovative believing they choose the easy route (VP5); or their focus was on getting things right rather than trying something new (VP2). "They don't all develop" (CL1). "Others have got what it takes, but they're too busy, or they can't get out of bed in the morning" (TE2). Unravelling the potential of a promising innovative teacher early in a career is challenging.

> They can become trained to take more risks … to look at things from different perspectives; you can go over literature and look at ideas that will stimulate them. But does that mean that they become innovative? Not necessarily … innovative is something more than learned knowledge.
>
> *(CL2)*

A third factor affecting recognition of innovative teachers was the lack of firm criterial features to judge them. Informants witnessed teachers who engaged in innovative teaching behaviours, but not exhibiting the full gamut of innovative teacher characteristics. According to curriculum leaders, innovative teaching behaviour teachers would most probably never cross into the innovative teachers' category in most cases, as they lacked the level of personal vision and life skills attributed to fully innovative teachers, being considered followers rather than leaders in contributing to a school's creative future. However, the line of demarcation is fuzzy between fully fledged innovative teachers and those displaying innovative teaching behaviours:

> The next group are willing to watch what happens, and if it works well, they join in - and they're also willing to collaborate and share ideas … maybe give it a try, but they're a little bit more conservative … But I do think that that second group deserves credit for being willing to try new things as well.
>
> *(CL2)*

In organisational learning terms, followers have some of the characteristics of the innovative teacher, and are critical to expanding the reach of innovation, but may be less willing to put themselves out front, to take risks:

> even if you see something not working, but you're willing to break out of your mould and give it a chance … that is also being innovative, not necessarily a leader, though … But does it make the other people who adopt what they've seen any less innovative? I'm not sure, I mean, maybe a degree less.
>
> *(CL2)*

A fourth factor impacting attribution of innovative teacher status revolved around whether those recognised as innovative teachers taught in a primary, middle, or high school. Senior administrators saw higher number in the first two years of primary education, 30% in the case of the pre-school vice-principal (VP4), rising to 50% during the pandemic, explained in part to the constant need to engage young learners who have shorter attention spans. The yearly cohort of new students presents a challenge in terms of creativity on the part of teaching staff. One informant considered most pre-school teachers innovative (P3) as students arrive as unknown quantities, requiring a rethink of approaches to capture learners' attention. Society is evolving and what attracts a young learner one year may be old hat in subsequent years.

A few leaders saw an increase in the number of innovative teachers crossing the fuzzy divide during the pandemic, pushing "some… from the second group [innovative teaching behaviours] to become more innovative" (CL2). Some were seen to

> shine during that period … willing to … investigate, find new things … share both their experiences … and how … they could improve.
>
> *(CL2)*

> teachers used their networks to bring … real-world situations to their online classes, and parents volunteered to give support.
>
> *(VP4)*

Mental models

Senge's second discipline highlights the adherence to mindsets, which may negatively shape the ability of organisations to see and react for the future. Organisational learning requires the "capacity to test and surface mental models" (Senge, 2006, p. 232). Innovative teachers' mindsets manifest themselves in several ways. Firstly, informants saw innovative teachers as able to question assumptions: "able to evaluate … newly acquired knowledge from a broader perspective" (VP4, +P1); possessing "a wider ranging mind", to relate teaching to "overarching" themes and "jump from one to the other" (TE2).

They showed a willingness to experiment,

> constantly trying new things and reflecting on those new things,
>
> *(CL2, +P1)*

> making constant additions to their knowledge base … being adaptive to new ideas … [knowing] how long it takes to accommodate change.
>
> *(VP4 +VP2)*

> They exhibit self-confidence, not cowed by fear of error and willing to take risks,
>
> *(VP4, +VP1)*

> leaders, who are really creative … trying new things.
>
> *(CL2)*

They displayed adaptive behaviour, able to evaluate outcomes impartially and open in discussing success and failure, showing themselves "willing to fail … to reflect" and "do it better the next time" (CL2, + P1), with a commitment to truth. They were led by a broader personal, normative vision guiding their practice (P2). "They are not within that straight-jacket of the curriculum" (TE2), "are brave and courageous" (P2), and "show international awareness and give examples of things done in other countries" (P4). An innovative teacher exhibits mindfulness (CL2), and respects students' opinions (CL3).

A key issue within organisational learning is how contagious innovative teachers' mental models are in an organisational context. Some leaders referred to previous experiences in which they witnessed exceptional innovative teachers labouring in hierarchically managed schools where innovative teacher impact was limited to their immediate classes (CL1, + P3).

> In such schools, teachers are not given the opportunity to be innovative because the courses are prepared centrally, distributed to all branches, and teachers have to apply them in their lessons … teachers do not have any freedom to teach the way they want.
>
> *(P4 + P3, P5, VP5)*

The same informants saw innovative teachers as a force for positive change outside their immediate classroom, within a school structure that gave voice to their talents and mental models.

> They were actually the leaders in their groups … doing things that were different than the others. And they were well recognised.
>
> *(CL2)*

> But I don't really categorize … innovative teachers being only in the classroom … it can be the staffroom … about how they behave, how they model behaviour, how they help students' social skills.
>
> *(VP3)*

School leaders witnessed the innovative teacher mindset in the collaborative development of units of inquiry (P3).

> In weekly department meetings teachers share what they have experienced in their classes … these platforms inspire and motivate other teachers to join, try out new things and share their experiences with colleagues … teachers want to become part of the innovative group.
>
> *(VP4, +CL3)*

> [Teachers] voice their opinion and the most valid opinion is taken into consideration … it is possible to notice from their language, books read, examples given, the materials they bring to the meetings project how much the teacher wants to improve and be innovative.
>
> *(P3)*

If the decision-making infrastructure provides opportunities for innovative teachers to share experiences and exercise their mental models collaboratively, "involving different group of teachers in the planning and exchange of ideas" (P4 +P1, VP2), they make key contributions to organisational learning, either from personal mastery, or mindsets capable of enthusing those less willing to take risks.

> The first thing that comes to people's mind is innovative teachers can use technology effectively … however, being innovative is not all about technology. It includes connecting to the mindset of other people and using this skill effectively.
>
> *(VP4)*

This implies a recognisable synergy between the innovative teacher and organisational learning when a commitment to openness within the school culture exists, along with infrastructures which allow this. Planning meetings, centred around evaluation and curriculum development during and post-pandemic, were used to bring teachers together and confront mental models with practice, espoused theory versus theory-in-use (Argyris & Schon, 1974).

> We plan together, they have all the freedom to say and plan the way they want, but it's more like group work … what's applied in the classroom is more or less the same, but it's a result of all … conclusions … in the meeting … the idea was already shared in the meeting, so they all had the opportunity to … try it in the classroom …
>
> *(VP3)*

Building shared vision

Senge's shared vision refers to a sense of commonality permeating an organisation, giving coherence to its diverse activities, reflected in common aspirations, common caring, and connectedness. Shared vision is less about the individual teacher and more about leadership climate and environmental culture permitting innovative teachers to contribute their personal mastery and mental models to generating creative responses to school challenges. However, personal vision of members needs to find expression within the larger vision, which requires individuals to have space to pursue their personal vision within a shared organisational purpose.

Those teachers identified as innovative expressed coherence with the vision of their schools.

> There were senior teachers who adopted the new educational philosophy [International Baccalaureate Curriculum] very easily. These teachers are very flexible and can easily adapt to changes, contribute to change.
>
> *(P4)*

Viewed from a leadership perspective, a clear sense of commitment was seen in their willingness to take risks and experiment, with the resilience to see things through (P2), which allowed them space to pursue their personal interests within the whole.

> Those who researched different online teaching techniques and methods … were the ones who really wanted to prove themselves to us … These were the teachers who like and respect this school very much, who want to show their commitment by putting maximum effort into their work.
>
> *(P4)*

Those who displayed innovative teaching behaviours were seen to comply with the vision but did not champion it. A set of grudgingly compliant or non-compliant teachers also existed, who presented a dilemma for leadership.

> A group of senior teachers … were not willing to adapt to be part of this new approach to teaching … they preferred to continue their teaching career following more traditional approaches and therefore had to leave the school … those who cannot cope with our expectations, despite the support given … if we can't see any progress, we have to say good bye to them.
>
> *(P4)*

Those who cannot adapt to the context are in some way eliminated by the system (CL3). One leader expressed a caveat, however; "not all new ideas are good, in education one has to be very careful" (P3).

The attitude of the leadership appears important in nurturing the governing ideas in the school. Instigating processes which favour collaborative sharing, giving support and exhibiting trust within a smooth, open, fair, and honest system, provide a secure feeling (P1, P2, P3). Such contextual characteristics provide the prerequisites for innovative teachers to be impactful. Existing school systems reflect school leaders' personality and characteristics:

> if you have a good system, good curriculum leaders, pedagogical leaders, managers, then it works together.
>
> *(CL2, + CL3)*

Additionally,

> honesty and a sense of justice are important.
>
> *(P3)*

> Give them room, give them information, give them commitment and support, and resources, and room to innovate,
>
> *(TE2, + P1, P2, P3)*

> innovation can be infectious … in a supportive environment.
>
> *(P1)*

This requires

> the school … being tolerant and letting them try new things … [with the] curriculum that the teachers are working with as well.
>
> *(CL2, +P1, P2)*

School leaders set an innovative role model for the teachers, for example, by making observation cycles a non-threatening, supportive process, so teachers do not feel under pressure (VP4). One school leader, when implementing a new system, discusses with teachers, teaches the class herself to test its feasibility, while the class teacher observes and gives feedback on her teaching. This sets a good model for teachers, as the school leader is seen to do team teaching to give support (VP4). However, it is also essential for teachers to feel the freedom to display their skills without fear;

> if you don't give teachers initiative … freedom, it's not possible to achieve anything … schools should give them support and guidance to help them further develop.
>
> *(P4)*

Situations may exist, in which the sharing of personal visions do not always create harmony.

> There is a balance … between highlighting efforts and innovative projects and at the same time not giving others the feeling that what they are doing is not good enough. I see that at times we have had to tell this innovative teacher … to "slow down" a bit, otherwise she might burn out, and maybe exhaust colleagues and also pupils. In the staff we need to have both innovation and stability, in a good balance.
>
> *(VP1)*

Team learning

In Senge's model, team relationships and alignment, defined as a commonalty of direction, appear necessary conditions before individuals can empower the whole team and stimulate learning throughout an organisation. Dialogue which gets colleagues to suspend but communicate assumptions and critically explore complex and sometimes conflictual issues without defensive routines (Senge, 2006) is a cornerstone of creative thinking in this model, underpinned by a commitment to learning and truth. This discipline requires practice: mature teams will be capable of inquiry and reflection, building on shared vision and personal mastery, and their skills may propagate, although there is no guarantee of this. Individual talent does not automatically lead to organisational learning; a catalyst is necessary.

Data point to the importance of mechanisms for bringing teachers together to create the conditions for team learning. Innovative teachers' openness to learning manifested itself in keeping abreast of: "recent developments in their field", "reading the literature and sharing … with … colleagues" (P3, +VP4).

> Innovative teachers have the role of a learner and educator at the same time by sharing what they have learnt with others.
>
> *(VP4)*

> The teacher may be innovative at personal level but if she can't share/teach other colleagues, she may need more time to be innovative in a group.
>
> *(VP3)*

The innovative teacher has a critical role in fostering innovative practices which are then espoused by those willing to adapt their practice in the wake of changes experimented with or championed by innovative teachers. From a teacher educator perspective, "communication, and coordination, and collaboration, maybe … a characteristic of an innovative person" (TE2, +VP4). Hence, their importance in developing new practices which contribute to creative futures.

This openness needs to be fostered through structures in an organisation, without which the voices of begrudging compliance might gain the upper hand. School leaders in the primary and middle schools created an integrated system for bringing teachers together regularly to analyse the delivery of the taught curriculum in order to critique its success, share perspectives, and plan responses to areas needing revision. The leader was the catalyst, using their authority to get ideas to flow, yet not dictating to the extent of curtailing creative responses;

> the management needs … not only respect it but encourage it … otherwise we stagnate.
>
> *(CL2)*

> When I saw effective teaching practice during classroom observation, with the consent of that teacher I shared these with other colleagues.
>
> *(CL3)*

Teachers took more responsibility,

> volunteered to research … regarding online education … and presented … new ideas to their colleagues.
>
> *(VP4)*

The pandemic confronted everyone with a new situation, which transmogrified educators' relationships with teachers. Innovative teachers' abilities to innovate was "an asset", but the conditions need to enable them to innovate.

> If … stifled … they may continue to be innovative in other areas of their life, but not necessarily here, or they may leave.
>
> *(CL2)*

Showing innovative teachers that "the school appreciates what they're doing so that they keep doing it" (P4) was imperative. School leaders arranged online workshops sharing problems encountered and solutions, with reflection and discussion.

> It does not necessarily mean that there has to be an educator who trains, teachers learn from these exchanges of ideas.
>
> *(P4)*

> In the pandemic more opportunities to provide training existed compared to previous times and teachers were often on Zoom™ until 10 p.m.
>
> *(P4)*

School leaders reported that the pandemic contributed a lot to collaboration and team learning, led by innovative teachers in many cases (P4 + VP3). Their familiarity with digital technology helped increase the quality of education and their energy inspired other teachers in the school (P3). Many of those more comfortable with digital technology became innovators for their departments, or even the whole programme (CL2). Some joined the innovative teacher category, finding "using technology a more comfortable area for innovation" (CL2).

> We were not aware of the potential but with the outbreak of the pandemic some … with good ICT skills revealed themselves as innovative teachers.
>
> *(CL3)*

However, some innovative teachers experienced difficulty "[as] they recognized the gap in their teacher identity and tried to learn how they could effectively make use of technology" (P3). Not all innovative teachers were comfortable in the new normal due to:

> losing their classroom walls, [not being able to] keep students focused on their progress … where they were going … They really missed that aspect of sharing the learning journey … with their students.
>
> *(CL2)*

> [Pandemic conditions] … exhausted [them] at times … The top group [innovative teachers] felt burnt out… more comfortable with face-to-face interaction and being more hands on. But … still they used different techniques … different strategies … encouraging the students to be more enquirers rather than knowledge seekers.
>
> *(CL2)*

As one school leader put it when distinguishing true innovative teachers during the pandemic, the other "teachers were either volunteers of innovation or victims of it" (VP3). The newness of the situation forced teachers into positions in which they had to innovate. Some were more comfortable in their response. Those recognised as being innovative teachers continued to adapt successfully to the new circumstances, despite the hardships, and were a positive force in procuring a positive response to the challenges.

> It was amazing to see … how they really struggled … trying new things … social things with students, such as movie nights at 08:00 pm after school hours, in pyjamas with popcorn.
>
> *(VP3)*

Discussion

This case-study assesses the contribution of innovative teachers to organisational learning through the lens of Senge's seminal work from a school leader perspective. Evidence suggests that, in line with literature, personal *pre*-dispositions and mindsets are a defining feature of teachers identified as innovative but nurturing also plays a key role when attributing the epithet 'innovative'. This was recognised across the different cultural contexts in which data were collected.

However, nurturing may not always create innovative teachers, especially for early career teachers, emphasising the potential value of in-service teacher education to bridge gaps between personal dispositions, mental models, and the organisation's vision. This fits Senge's proposal that personal mastery grows over time, where learning and innovation are shaped by personal dispositions as part of a never-ending search by people "acutely aware of their ignorance" (Senge, 2006, p. 180). The format of early in-service teacher education requires careful consideration of a teacher profile, institutional strengths, and awareness of organisational learning.

Mastery appears ongoing, but the data show that innovative teacher status does not easily change, with membership varying only slightly, even when circumstances changed substantially during the pandemic. However, the percentage of innovative teachers in a teaching population varied according to school, the nature of students, and a leader's proximity to teachers within the pedagogical system. Curriculum leaders were more sparing in the number of innovative teachers detected compared to school principals. If innovative teachers are seen as key contributors to organisational learning, then recognising them would facilitate creativity and responsiveness in a changing environment, contributing to sustainability. The challenges of identifying criteria to use to attribute innovative teacher status are discussed in the concluding chapter of this book.

Most leaders opined that few teachers adopting innovative teaching behaviours transited to the innovative teacher category (mainly under the exceptional circumstances of the pandemic). Non-transiting teachers lacked some or all of the personal characteristics defining an innovative teacher, such as willingness to take risks, revaluate the consequences of their actions, or make mistakes without fear of organisational reprisals. Nonetheless, these teachers were seen to adopt innovative teaching behaviours when collaborating with recognised innovative teacher colleagues. The existence of such quasi-status teachers signals that innovative teacher impact goes beyond their immediate circle in which leadership vision, shared through structures and system, encourages team and organisational learning. Data give credence to the positive effect that innovative teachers have in spurring innovative behaviour amongst peers who might otherwise not possess risk-taking demeanours or skills to realise innovation without courage or guidance. The evidence is persuasive in suggesting that innovative teachers promote secondary diffusion of innovations by influencing espoused action within an organisation. However, innovative teachers only affect their immediate classrooms if school conditions are not conducive to diffusion of ideas and influence. When their mastery and mental models interact with responsive leadership, their impact on organisational learning takes on a new significance. With the catalyst provided by a leadership versed in the ways of learning organisations, their impact then becomes contagious and benefits outweigh their relative scarcity in schools. Leaders' mental models and corporate vision are essential to liberating the influence of innovative teachers by ensuring a match between individual mental models and institutional vision. Team learning plays a key role in ensuring alignment and commonality of direction in pursuit of personal and institutional vision. Culture, climate, and leadership are synergetic factors facilitating the contribution of innovative teachers to organisational learning and sustainability.

Going forward, are organisational learning and teacher learning different things? The pandemic reimagined teacher learning within schools, and, if school ecology is seen as integrated and interdependent, a Gaia-like hypothesis for schools, the expert teacher educator may be an anachronism in in-service contexts. The pandemic evidenced new skills and saw teachers able to respond fluidly and creatively, supported by systems thinking and leadership roles. An organisation learns in different ways, potentially representing a multiverse of learning, dethroning to a degree earlier realities of hierarchical, knower relationships in teacher education. A case can be made for redefining teacher learning in an organisational model (Figure 6.3) centred around leadership roles and systems with a strong focus on curriculum delivery and its implementation in the classroom. The latter needs to be coupled with the opportunity to make tacit/implicit knowledge explicit through information processing inherent in team learning in Senge's Systems Thinking.

Creative and adaptive teacher learning can eschew the more traditional teacher educator role by allowing teachers, aided by innovative teachers and innovative teaching behaviours, more involvement in their own learning through collaboration, experimentation, sharing, and dissemination as the mainstream approach. The teacher educator role needs melding into a leadership role tasked with encouraging the integration of teacher learning into the learning system, focussing on shaping the philosophy, planning, delivery, and assessment of the curriculum through shared vision and team learning. Teacher learning would then be an element of all leadership roles with clarity established as to the working relationship with teachers who

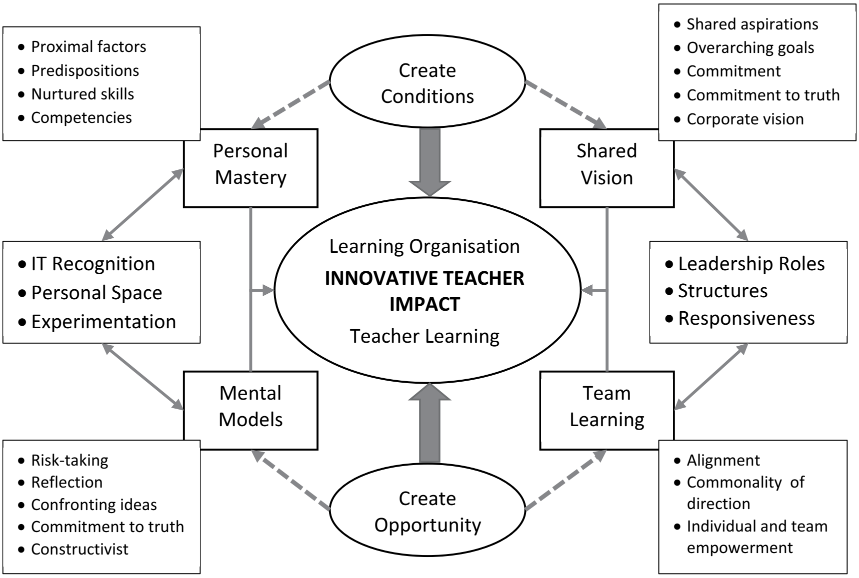

FIGURE 6.3 Reimagining in-service teacher education as organisational learning

are now co-determiners of good teaching practice, supported by a creative and adaptive approach to organisational learning.

Implication for the developing model

The conceptual model presented in Chapter 1 may be amended when looking at the role of innovative teachers within a dynamic work context (see Figure 6.4). The findings from the analysis of data discussed in this chapter place the innovative teacher as a key instrument in contributing to innovativeness by positing conditions necessary for maximising their impact on creativity, organisational learning, and sustainability. Innovative teachers (A) may exist independently but, in conjunction with the right contextual variables (D), their characteristics contribute to extending innovativeness widely within their context through interaction. In-service teacher education (C) has benefits across the teaching population (A and B), but in this model should be integrated into the leadership roles of the school, for example into pedagogical leadership roles. As mentioned earlier, in organisational learning models, the expert teacher educator may be an anachronism.

Conclusion

Detecting, servicing, and supporting the innovative teacher is a complex task. Our findings provide evidence that innovative teachers contribute to the development

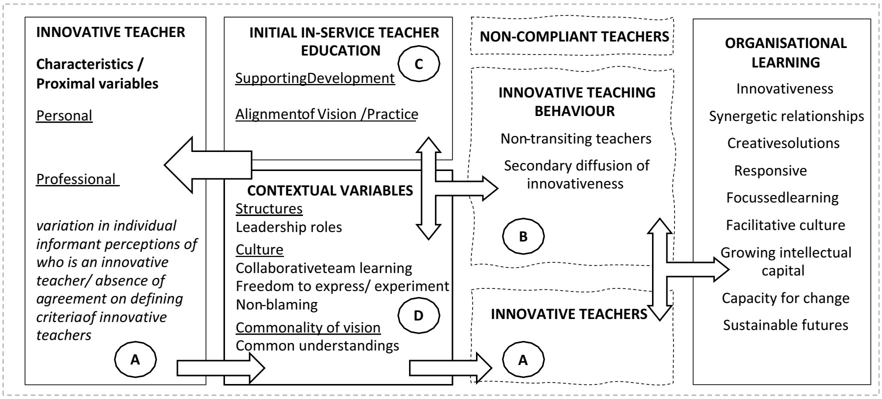

FIGURE 6.4 Reworked conceptual model of innovative teacher in school settings

and sustainability of schools as learning organisations. Their characteristics require further research given the variability amongst leaders and schools in attributing innovative teacher status. Innovative teachers can exist in isolation, but school systems and leadership qualities enhance their impact. Clarity as to who they are, along with establishing the characteristics of a learning organisation, would add to innovative capacity within schools and foster sustainability in responding to a changing environment and knowledge-scape. Organisational learning requires a sea change in approach to innovative teachers and teacher learning for many schools, but with integrated systems creating common understandings, vision, and commonality of direction, such challenges can be overcome.

Note

1 The '+' sign following the quoted informant indicates those after the '+' expressed similar views.

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