BRIDGE OVER TROUBLED WATER: INDUCTION POINTERS FOR TEACHER LEADERSHIP

Puente Sobre Aguas Turbulentas: Inducción para el Liderazgo Docente
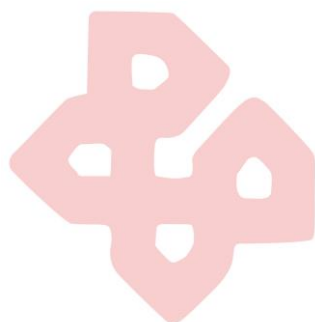
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Abstract

The first years of teaching are decisive to shape teachers' motivation and attitudes, as adaptive professionals that respond to fast changing contexts. This career stage should provide acculturation in collaborative professional communities that discuss and tackle growing challenges for learners' improvement. Induction support can be key for the personal, social, and professional development of beginning teachers, fostering their leadership to influence and initiate practice change. It needs to be flexible and sensitive to specific education contexts, but it benefits from transversal principles grounded on common European policies. Induction should be embedded in a continuum approach that links it to other career stages - relying on broad, common teacher requirements. The COVID 19 crisis has foregrounded the competences teachers require to ensure equitable learning. Among European Key Competences, the Personal, Social and Learning to Learn Competence and the Digital Competence can play a crucial role for teachers grappling with distance teaching and unpredictable professional conditions. While Digital competence is fully acknowledged to be key for teacher professionalism, Personal, Social and Learning to Learn is now becoming crucial for teachers' motivation, innovation, and distributed leadership, to face problematic scenarios.

Key words: *beginning teachers*; *professional training*; *teacher characteristics*; *teacher leadership*; *teacher supervision*

Resumen

Los primeros años de docencia son decisivos para moldear la motivación y las actitudes de los profesores, como profesionales adaptativos que responden a contextos que cambian rápidamente. Esta etapa profesional debe proporcionar aculturación en comunidades profesionales colaborativas que debaten y aborden los crecientes desafíos para la mejora de los alumnos. El apoyo de inducción puede ser clave para el desarrollo personal, social y profesional de los profesores principiantes, fomentando su liderazgo para influir e iniciar cambios en la práctica. Debe ser flexible y sensible a contextos educativos específicos, pero se beneficia de principios transversales basados en políticas europeas comunes. La inducción debe integrarse en un enfoque continuo que la vincule con otras etapas de la carrera, basándose en requisitos docentes comunes y amplios. La crisis de COVID 19 ha puesto en primer plano las competencias que los profesores necesitan para garantizar un aprendizaje equitativo. Entre las competencias clave europeas, la Competencia Personal, Social y de Aprender a aprender y la Competencia Digital pueden desempeñar un papel crucial para los profesores que se enfrentan a la enseñanza a distancia y condiciones profesionales impredecibles. Si bien se reconoce plenamente que la Competencia Digital es clave para la profesionalidad de los docentes, la Competencia Personal, Social y de Aprender a aprender se está volviendo crucial para la motivación, la innovación y el liderazgo distribuido de los docentes, que enfrentan escenarios problemáticos.

Palabras clave: características del docente; docentes principiantes; formación docente; liderazgo docente; supervisión del docente

1. Introduction

Induction is recognized in policy and research as critical for teacher retention and professional life, but often it is the weakest link in policy implementation - posed in an uncertain balance between the worlds of tertiary teacher education and school teaching (European Commission 2010; Feiman-Nemser 2012). In the latest decade, European policy discourse and peer learning have concentrated increasing attention on teachers: their competence requirements (European Commission, 2013a), as well as initial teacher preparation (Caena, 2014a), induction (European Commission, 2010), continuing professional development (Caena, 2011; European Commission, 2015), as well as education careers (European Commission, 2019, 2020), schools as learning organisations (European Commission, 2018), and teacher educator profiles (European Commission, 2013b). Policy implications in terms of effective education governance, across context variations, have also been teased out (European Commission, 2015, 2020). This concentrated attention is an evidence-based acknowledgement of the role of teachers as decisive agents for education quality and improvement (European Commission, 2012a, 2012b).

This article presents a review – and argues the related rationale - endeavouring to connect the dots in a wider picture of European policy relatable to the induction topic and underpinned by relevant research, with a focus on key nodes in the education ecosystem. Considering effective induction features in the light of teacher learning and COVID-19 education challenges, it singles out transversal competences as the red thread that can hold the system together in a coherent fabric - beyond fragmented views of teacher education, induction and professional development. Then it traces ties between transversal Key Competences and teacher leadership - whose ever more

crucial role stands out in emergency times, for teachers as adaptive co-agents of change.

The COVID 19 crisis has created additional hurdles for schooling and teacher education, with fallout effects on induction. At the same time, it has foregrounded what really matters for the preparation, development and retention of teachers, levelling policymaker and stakeholder focus on relevant teacher competences and characteristics. Those most likely to steer education professionals across present and future troubled waters are bound to be teacher leadership and European Key Competences – Digital and Personal, Social and Learning to Learn in particular. Such competences can stand teachers in good stead, building up their resilience to adapt, support their peers and thrive amid unprecedented turbulence.

Following up these perspectives, the COVID 19 crisis has highlighted ever more sharply prior areas of teacher support in the make-or-break career stage of induction, to fit changeable context needs and unpredictable pandemic-induced scenarios.

2. Aligning induction to teacher learning

The first years of teaching represent a turning point for the whole professional trajectory of teachers. Feiman-Nemser uses Lortie's comparison of the new teacher to Robinson Crusoe, to underline their isolation in tackling everyday issues of survival in an unfamiliar, hostile environment (Feiman-Nemser, 2012).

The entry into teaching triggers a reality check and stress test, which are decisive for beginning teachers to discover if they have it in them: if they are suitable for the profession, and if they can develop and keep up the motivation for ongoing learning, with the flexibility and problem solving required for everyday changes of environments and conditions (Caena, 2014a; European Commission, 2015). Beginning teachers recurrently perceive sink-or-swim situations when they plunge into teaching (Glazzard and Coverdale, 2018). If they are left on their own, this can significantly hamper their learning, professional identity and action in the short and long term, or even drive them to quit - wasting the efforts, time and resources invested in teacher preparation (Ibidem).

Feiman-Nemser outlines four aspects in teacher preparation: *learning to think, to know, to feel and to act as teachers* (Feiman-Nemser, 2008). *Learning to think* entails pedagogical and metacognitive awareness; *learning to know* regards knowledge generated from practice, and sound frameworks of subject, epistemological, pedagogical and technical knowledge. *Learning to feel* concerns cognitive and emotional aspects of professional identity. *Learning to act* integrates knowledge, skills and attitudes in practice – with teacher judgement in situation, against criteria from different sources (research, professional evidence and experience) (Ibidem; Hagger and McIntyre, 2006).

Therefore, teachers' learning is a complex process involving what they think (cognition), feel (affect) and want (motivation); it is mediated by their experiential system of needs, values and preferences (Clarke and Hollingworth, 2002; Sleegers and Van Veen, 2006). Enabling or hindering context factors then interplay with teachers' personality, cognition and motivation (Beijaard et al., 2015; Caena, 2011). There is increasing research and policy focus on teachers' attitudes and capabilities as lifelong, reflective co-learners, who can effectively mediate and sustain pupil learning (e.g. Cabrera Cuadros and Soto García, 2020). Self-regulation and self-directed learning – setting goals, monitoring and controlling cognition, motivation and behaviour – are flagged as key for quality professional learning and practice – especially in stressful contexts that can drive to conservative approaches (Beijaard et al., 2015).

In Korthagen's multi-layered professional model (which spans personal core qualities, values, beliefs, competences, behaviour and context), teacher learning is described as the process of aligning these layers (Korthagen 2017). Korthagen's holistic view spans the whole person of teachers, in the context of their work (Darling-Hammond and Richardson, 2009; Korthagen, 2017). It underlines the importance of teachers' personal qualities (commitment, flexibility, decisiveness) for teacher development (Korthagen, 2017; Korthagen and Vasalos, 2005; Park et al., 2004; Tickle, 1999).

Teachers learn in context through experimentation, use of external sources, and systematic assessment of their choices against practice and research (Hagger and McIntyre, 2006). Therefore, practice change following teacher learning is best nested in professional collaborative communities that enable teachers' dialogue and problem-solving (Imants and van Veen, 2010). If this complexity of teachers' learning is acknowledged and addressed, there are positive effects on their self-efficacy and practice, school climate and education outcomes (Attema-Noordewier et al., 2011).

Research suggests that new teachers may require from three to seven years to develop full mastery and maximize pupil outcomes; therefore, comprehensive induction programmes are necessary to scaffold the complex, nested processes of teacher learning outlined so far (Krasnoff, 2014). Comprehensive induction needs to be structured and backed by research – to combine mentoring, support, professional development and competence assessment (Ibidem).

In accordance with these perspectives on teacher learning and scaffolding, the 2010 European Commission Staff Working Document on induction recommends support addressing three interconnected dimensions: the personal, social and professional development of beginning teachers (European Commission, 2010).

Table 1

Four interlocking systems of induction support

System	Mentor	Peer	Self-Reflection	Expert
Support	Personal, Social, Professional		Personal, Professional	Professional
Aims	Create safe environment for learning.		Promote reflection on own learning. Promote professionalism. Develop attitude of lifelong learning. Link ITE and CPD.	Ensure professional development. Expand content knowledge & teaching competences.
	Stimulate professional learning. Socialise into school community.	Share responses to common challenges.		
Key Actors	Experienced teachers.	Other beginning teachers, colleagues, experienced teachers.	Beginning teacher.	Experts in teaching (e.g. from ITE/CPD providers).
Activities	Coaching, training, discussion, counselling, coordinating school arrangements.	Networking in/between schools. Presence/virtual meetings. Team-teaching & feedback.	Observation & feedback on teaching. Peer review. Recording system for experience, learning & reflection (portfolio, diary..).	Seminars, courses, support materials, resources, guidelines.
Conditions for success	Reduced workload, allowing time for support, dialogue, sharing, cooperation, feedback, reflection			Easy access to external expertise & advice.
	Training of mentors. Coordination in school. Careful matching of mentor & new teacher. Shared vision of induction.		Established standards of performance/competence frameworks.	

Source: European Commission (2010). *Developing coherent and system-wide induction programmes for beginning teachers: a handbook for policymakers*. EC Staff Working Document SEC (2010) 538 final. Brussels: European Commission.

Personal support is concerned with the build-up of identity in the beginning teacher, whose multiple challenges to survive in the new work environment can generate feelings of anxiety, stress, and low self-efficacy. Social support is needed to overcome new teachers' loneliness, easing participation in collaborative school communities, and interaction with stakeholders. Professional support aims to develop new teachers' competences and pave the way for a lifelong learning journey - laying down the crucial link between initial teacher education and continuing professional development (Ibidem).

To scaffold the personal, social and professional development of beginning teachers, induction should be structured in four interlocking sub-systems that provide mentoring, peer support, expert inputs and self-reflection (European Commission, 2010). For an overview of induction system components, interconnections, and conditions to be in place, see Table 1.

Mentoring means experienced teachers (one or more) taking responsibility for beginners' support. This entails familiarising new teachers with school organisation and culture, addressing perceptions and emotional issues, and scaffolding professional learning (both general and subject-specific knowledge). This can translate into a range of actions: coaching, training, and counselling; professional dialogue and reflection. Peer support is intertwined with mentoring; importantly, it can bring new teachers together - meeting face-to-face or in virtual communities, within and across schools - to provide a safe environment for sharing similar problems. Like mentoring, peer networks provide personal, social, and professional support – offering opportunities to exchange experiences and discuss practice (Ibidem).

Self-reflection can help beginning teachers focus on their own professional identity and development through a variety of tools and processes – e.g., observation, portfolios and diaries, co-teaching, practice standards, competence frameworks - fostering dispositions to ongoing learning throughout the career. Finally, expert support should give access to external advice and resources, with a focus on in-depth content knowledge and teaching tailored to beginning teachers' needs, characteristics and learning (Ibidem). The combination of personal, social and professional support provided by structured induction systems has good potential to boost positive personal characteristics such as commitment, flexibility and optimism, which can be decisive for teacher professionalism and leadership, as suggested by Korthagen (2017), above.

Induction support should be flexible and sensitive to individual and context features, across system levels - considering education, administration and governance variables (European Commission, 2015). There is indeed wide diversity of governance, administration, and education cultures across Europe – due to historical, theoretical/conceptual and quality assurance aspects; education systems can also display vulnerability or resistance to increasing global drives to convergence (European Commission, 2010, 2015; Caena, 2014b).

The 2010 European Commission document on induction reports a wide variety of actions and regulations, target groups, structure, and length across countries - with

the key variable of governance along the centralised/decentralised continuum (Caena, 2014b; European Commission, 2010). The full range of induction variations can go from a minority of coherent, system-wide induction programmes (e.g., in Cyprus, Estonia, Ireland and Scotland) to different-scale measures for the support and assistance of new teachers (e.g., in the Netherlands and Norway) (European Commission, 2010).

The 2015 European Commission report on policies for the continuum of the teaching profession states that the importance of induction in national reforms is growing (e.g., in Austria and Luxembourg) – but with significant variations of induction length and intensity within and across countries. It traces the crucial links between pedagogical, instrumental, professional, cultural and career perspectives for a continuum approach.

These perspectives focus on teacher learning needs (pedagogical), support structures (instrumental), competence levels (professional), school contexts (cultural) and pathways (career), respectively (European Commission, 2015). For an overview of the five interconnected continuum perspectives, see Figure 1. A common reference landmark for all five perspectives, beyond the diversity of European education and governance cultures, can be found in European Key Competences - which are increasingly embedded in school curricula across countries, with implications affecting teacher requirements, preparation, induction, and professional environments (European Council, 2018; Caena, 2019).
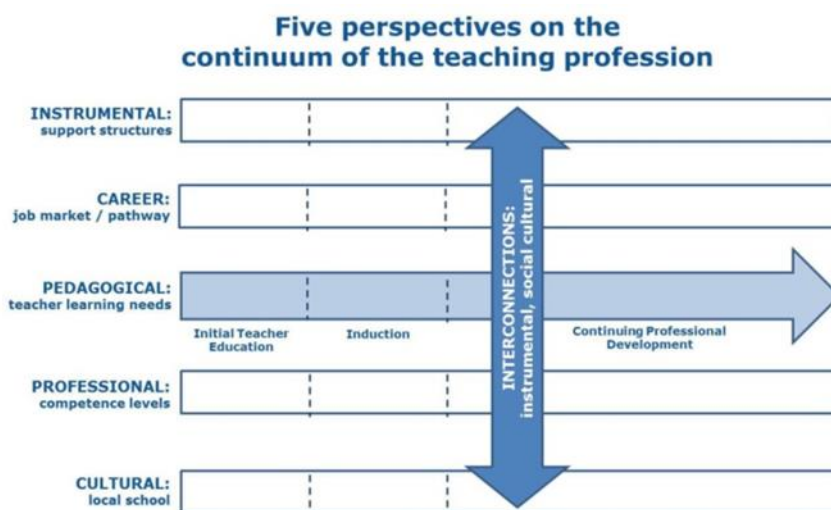

Figure 1. Perspectives on the continuum of the teaching profession.
Source: European Commission (2015). Shaping career-long perspectives on teaching. A guide on policies to improve Initial Teacher Education. ET2020 Working Group on Schools Policy (2014/15). Brussels: European Commission.

To sum up, comprehensive induction programmes are required for a continuum approach to teacher development, addressing the complexity of teacher learning and professionalism (cognition, affect and motivation) described in research – e.g., by Korthagen (2017), Feiman-Nemser (2008), and Hagger and McIntyre (2006), above.

Induction should therefore provide personal, social and professional support in enabling contexts (professional collaborative communities), to foster teacher learning through critical dialogue, experimentation and reflection.

3. Teacher requirements in times of crisis

The Covid 19 crisis has exacerbated existing issues in education, foregrounding those competences that are indispensable for teachers to ensure equity and effective pupil development, in unprecedented conditions jeopardizing learning. Beyond the variety of theoretical, professional and cultural views on teachers' competences across contexts, a common denominator can be found in the description of a competent teacher as someone able to act professionally and appropriately in situation, mobilising pedagogical subject knowledge, cognitive and practical skills, and attitudes or dispositions (motivation, beliefs, and orientations to action). Such a professional action should be effective (achieving its aim) and efficient (optimising resources and efforts) and may reflect a degree of competence along a continuum (Conway et al., 2009; European Commission, 2013a; González & Wagenaar, 2005; Koster and Dengerink, 2008; Rychen and Salganik, 2003).

The adaptive and reflective expertise of teachers have been tested by the COVID 19 education crisis – to analyse, monitor and tailor professional action, support pupil development and minimise learning hurdles (Hatano & Oura, 2003; Vogt & Rogalla, 2009). Pandemic-induced education measures have affected pupil learning in direct and indirect ways, with negative consequences for the development of cognitive and non-cognitive skills in the short and long term (Di Pietro et al., 2020). Teachers' challenges have multiplied – pushing them to take initiatives and find creative solutions to keep up support for pupil learning, as well as effective professional cooperation and development. Loneliness is inherent to educators' work (Kodkanon et al., 2018); it has deepened with pandemic measures and distance teaching, which have taken away vital opportunities for face-to-face social and professional exchanges.

This has entailed teachers' efforts not only to adjust to change, but motivate themselves and others as well, to discuss and work together – that is, exercise leadership. The importance of teachers' cooperation and ongoing dialogue on practice, experimentation and innovation in professional communities is widely acknowledged (Caena, 2011; European Commission, 2015); soft, non-cognitive skills such as empathy, communication and collaboration can also be crucial, to sustain pupils, stakeholders, and educators in times of crisis and distance learning (Sala et al., 2020).

That is where the core importance of the Personal, Social and Learning to Learn European Key Competence stands out – as it is concerned with teachers' personal characteristics and attitudes, their agency and capability to change, develop, interact and solve problems. The LifeComp European framework describes the Personal, Social and Learning to Learn Key Competence as made up of nine components: self-regulation, flexibility, wellbeing (personal); empathy, communication and

collaboration (social); growth mindset, critical thinking and managing learning (learning to learn) (Caena, 2019; Sala et al., 2020).

Digital competence and PTCK (Professional Technical Content Knowledge) are widely acknowledged to be staple assets for teachers, as multipliers of digital competences for personal development, inclusion, and citizenship (Caena and Redecker, 2019; Mishra and Koehler, 2006). The role of digital competences and technologies in education has stepped up even further in the wake of the COVID-19 pandemic. The focus has shifted towards technologies as integrated components of the whole teaching-learning process – along the stages of planning, action, monitoring, evaluation of teaching, and learner assessment (Fullan and Langworthy, 2014). Such digital competences and awareness are demanded of teachers, to empower 21st-century learners that are hardwired to technologies, but need to learn to use them responsibly, critically and reflectively (Caena and Redecker, 2019; Schleicher, 2019).

Digital technologies' ongoing development (including emergent technologies such as Artificial Intelligence) requires teachers to learn, re-learn and unlearn continuously, becoming co-creators of technologies and services (Vuorikari et al., 2020). Emergent technologies such as AI are flagged as useful tools to ease teachers' work and support learners but have raised new pedagogical issues. These are related to the danger of hindering pupils' creativity, agency and socio-emotional competences, reflecting mechanical perspectives on teaching and learning (Vuorikari et al., 2020).

This complex scene requires rethinking digital pedagogies that can catalyze motivation and transversal key competences - by partnerships that engage pupils and teachers in meaningful learning, tied to real-world problems (Fullan and Langworthy, 2014). Teachers should develop and model themselves the competences they aim to foster and be first of all excellent lifelong learners - individually and collectively (Caena and Redecker, 2019; Redecker, 2017).

Personal, Social and Learning to Learn could be seen as a meta-competence, which aids the effective organization and coordination of other competences, such as the digital competence. Personal, Social and Learning to Learn, in fact, empowers individuals to be resilient, self-motivate, identify goals, cope with stress, and handle obstacles - working in autonomy and cooperation, and interacting with respect for the diversity of others. It is sustained by positive attitudes to wellbeing and lifelong learning, curiosity about new learning experiences and the desire to apply them (Sala et al., 2020).

Since the very essence of Personal, Social and Learning to Learn embraces psychological, interpersonal, cognitive and meta-cognitive domains (Caena, 2019; Sala et al., 2020), this Key Competence stands out as key for all teaching professionals, whose personal, social and professional dimensions are interdependent. The matrix of this interwoven professional fabric is laid out in the crucial induction stage – when beginning teachers are actually learning to think, know, feel and act as educators in everyday practice. When teachers' professional learning addresses the cognitive,

social and emotional dimensions teased out so far, it is bound to nurture teacher motivation and agency – the will and capacity to initiate and steer action, for practice improvement (Bandura, 2008; Caena, 2019). Teacher agency and leadership are inextricably intertwined; they should not be seen as a given, but as achievable over time - through a combination of individual efforts, available resources and context factors (Biesta et al, 2015).

4. The added value of teacher leadership

As UNESCO pointed out in the 2020 Global Education Meeting,[1] the emergence of teacher leadership has really made a difference ever since the first lockdown months of the pandemic. Mobilising the teacher characteristics and competences outlined before, it has spun a strong and flexible thread weaving education communities together, scaffolding their existence and agency.

In turbulent environments, agency means recognising patterns of change, and seizing windows of opportunity – a key feature of entrepreneurship (Bacigalupo et al., 2016). Individuals need to be able to take the lead - managing collaboration or conflict, maximising shared endeavours, advocating strategies for solving problems, as well as coaching, influencing or inspiring others. Every individual agent can be required to shift these roles in different tasks and contexts, deploying leadership.

In this perspective, leadership is conceptualized as distributed - a shared and collaborative process, based on common principles and values (Spillane, 2006). It can be defined as a thinking and learning dialogue of individuals that come together to achieve common objectives and bring about change – with the readiness and ability to act as leaders or followers, according to the situation (Sydänmaanlakka, 2003). When those engaged display competence, commitment, responsibility and autonomy (that is to say, agency), they are ready to take the lead, empowering others to action (Ibidem). Effective leadership needs interpersonal competences, including those for dialogue in digital environments; effective communication is key for listening, discussing and giving feedback (Sydänmaanlakka, 2003). It is based on relationships of influence - using persuasion to have impact on others.

Sydänmaanlakka's multi-level view of leadership includes self-mastery (individual), social synergy (teamwork), organisational learning (institutional), and sustainable development (societal) (Sydänmaanlakka, 2003). Self-mastery (the starting point) is described as wellbeing – physical, psychological, emotional and professional balance (Csikszentmihalyi, 1992). It has the potential to boost internal resources, giving the drive for modelling, influencing, persuading, coaching, mentoring others (Sydänmaanlakka, 2002). This leadership model views self-efficacy - grounded on personal qualities, principles and values - as a pre-requisite for other competences. At the interpersonal level, networking - the ability to build and maintain friendly

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[1] https://en.unesco.org/news/education-post-covid-19-extraordinary-session-global-education-meeting-2020-gem

networks - is flagged as key in a chaotic world, to provide knowledge and support for action (Sydänmaanlakka, 2002, 2003).

Teacher leadership - understood as the process by which teachers take responsibility and exert influence over colleagues, principals, school communities to improve curricula, practice and student outcomes - highlights the role of teachers as innovators, action researchers, team workers and coaches. This broader professional role has been flagged as key for modernizing the profile and competences of teachers, to empower responsible, resilient and cooperative future citizens (Snoek, 2014; European Commission, 2015). Teacher leadership can be central to help teachers stay motivated throughout their careers, become better teachers, and be able to use all their expertise in the best interst of pupils (European Commission, 2019). Leadership as distributed, within and beyond schools, can include a combination of actors and processes to encourage, inspire and influence teachers – peers, school leaders, mentors, teacher educators, researchers, experts, coordinators (European Commission, 2019).

Distributed leadership - relying on personal, social and professional balance, and entailing constructive communication, dialogue and collaboration - can be contagious. It can thus be argued that distributed teacher leadership - tied to effective practice, interaction and learning across organisations, communities, and networks – has high potential as a catalyst of teacher improvement and innovation, with powerful rippling effects in education systems (Frost, 2008). A recent review of empirical literature on teacher leadership confirms its positive impact on teacher self-efficacy, professional development and practice change, collaboration in professional communities and organisational commitment, with indirect effects on student learning (Nguyen et al., 2019).

Professional learning communities and networks based on collaboration, peer coaching and reflection on practice are ideal breeding grounds of teacher leadership for system improvement. With a domino effect, teacher leadership nested in those environments can trigger long-term capacity building and deep learning - for pupil, teacher, organisation, and system development (Ibidem). In the induction stage, the leadership of teacher educators and mentors has a vital role to play as boundary spanners between the different worlds of tertiary teacher education and school realities - to inspire and empower beginning teachers, sowing the seeds of future leadership (Snoek, 2014).

Following up on the views of teacher professional learning and requirements teased out so far, teacher leadership can be said to tap on the core personal qualities at the heart of Korthagen's professional model, reaching out to involve all its layers – ideals and values, beliefs, competences, behaviour, and context (Korthagen, 2017).

Teacher leadership stands out as ever more pivotal in times of crisis - for its crucial fallout on the personal, social and professional development of beginning teachers. These three dimensions need to be addressed in induction support, as they are intertwined in teaching professionals – just like the three dimensions of the

Personal, Social and Learning to Learn Key Competence are interwoven in all individuals (Caena, 2019; Sala et al, 2020).

5. Induction pointers for teacher leadership

European policy perspectives for a continuum approach to the teaching profession (the pedagogical, professional, instrumental, cultural, career dimensions teased out in section two) can consistently embed the interlocking induction subsystems outlined above (mentoring, peer support, self-reflection and expert support), within schools as learning organisations (European Commission, 2010, 2015, 2018, 2019, 2020).

Such policy perspectives are aligned with relevant research on teacher learning and competence requirements outlined in sections two, three and four. The continuum approach described above can indeed offer landmarks for a system view of induction, which considers the multi-level nature of teacher learning and professionalism (European Commission, 2015; Korthagen, 2017). In fact, teachers' action (micro level) is perforce nested in professional environments and school organisations (meso level), within education subsystems (macro level) (Adolfsson and Alvunger, 2017).

At the micro level, the pedagogical dimension focuses on induction processes that address beginning teachers' needs and learning. It mainly revolves around their interactions with mentors and peers, concerned with practice - as outlined in section two. The professional perspective is tied to the pedagogical, with a focus on self-reflection and expert support for the development of teacher competence requirements and leadership, which are described in sections three and four.

Straddling the micro and meso levels, suitable induction scaffolding provided by knowledgeable actors is pivotal. Trained teacher educators and mentors, endowed with transversal competences and leadership, can work as professional mirrors, motivation catalysts and reflective models for beginning teachers (European Commission, 2013a, 2013b).

At the meso and macro levels, the instrumental dimension is concerned with induction structures – spanning the whole range of pedagogical, financial, organizational, cultural, and quality assurance aspects (European Commission, 2010). At the macro level of policy and governance, induction support regards regulations, funding, incentives and resources. They should entail the following arrangements: defining clear roles and responsibilities for all actors; time and space for structured reflection on praxis by beginning teachers; professional profiles, competence frameworks, training and career options for teachers, teacher educators and mentors; resources and tools for communication, collaboration and reflection in physical and digital contexts (European Commission, 2013a, 2013b; European Commission, 2015).

Regular monitoring and evaluation of induction policy and provision, across the macro and meso levels, is also essential for its quality – with the shared commitment

of all stakeholders to review system effectiveness for improvement (European Commission, 2010, 2015).

At the meso level of school institutions, communities of practice and professional networks, effective induction support means setting up, facilitating, and sustaining physical as well as virtual environments that foster collaborative professional learning and dialogue, as well as action research (European Commission, 2015, 2018). The build-up of such environments needs to be allowed adequate time for deep cultural changes that reach out across system levels (Fitzgerald and Whitehead, 2007). In schools' contexts, the competences and commitment of school leaders are crucial for sensitive induction support to beginning teachers – promoting a professional culture of collaboration and inquiry (European Commission, 2010).

Policy support for teachers in schools as learning organisations should rely on a series of shared principles and values across education system levels – acknowledging and promoting teachers' contributions to reforms and innovation. This implies empowering teachers' autonomy and responsibility, for them to become co-agents of change in professional teams (European Commission, 2018, 2019, 2020). Teachers and school leaders should be given opportunities to develop leadership competences for strategic thinking and planning – setting priorities for themselves and others, as well as leading others in reflective practice for change (European Commission, 2018, 2019, 2020).

Induction support needs to be coherent across the macro, meso and micro levels of policymaking and governance, schools and training institutions, education professionals, as well as along the continuum of teacher career. To be so, it can benefit from relying on common ground concepts of teacher competences, learning and development – to share a common language for communication, coordination and quality across system levels (Caena, 2011b; European Commission, 2010). It also requires strong communication and trust between providers of initial teacher education, induction and continuing professional development (European Commission, 2010).

In the induction stage, a consistent continuum approach that spans all five dimensions can best be achieved through offering innovative professional development opportunities, embedded in collaborative communities of practice - which are bound to foster and feed on those transversal competences that are essential to beginning teachers for their career journeys (Vuorikari, 2019). Effective teacher professional development is found to include sustained duration, active learning, collaborative approaches, coaching and expert support, modelling effective practice, and opportunities for feedback and reflection – which are all central aspects in induction (Darling-Hammond et al, 2017; Teacher Development Trust, 2015). Innovative professional development entails flexibility of participation and novelty of structures - rethinking time, space and delivery, with close attention to context (Vuorikari, 2018). It taps on the potential of digital environments and professional networks, to promote experimentation and discussion on practice, as well as teacher competence development (Vuorikari, 2019).

In turn, such innovative learning processes, nested in professional networks and organizations, are ideal to nurture teacher leadership - a key resource for education professionals that face increasingly volatile, unpredictable, changeable and ambiguous (VUCA) worlds (OECD, 2019).

5. Conclusions

Like Janus - the Roman god of transitions – induction looks backwards to initial teacher education, as well as forwards to continuing professional development. A coherent system approach that links all three stages in a continuum is necessary to fit the trajectory stages of the personal, social and professional development of teachers, providing individualized scaffolding and support, together with learning experiences that are suitable and new, throughout their career journeys.

For coherent and flexible induction support, European Key Competence frameworks can be helpful reference landmarks - addressing the professional and pedagogical dimensions mentioned above, with a focus on teacher learning and competence development. Examples of kind are the LifeComp, EntreComp and DigComp Key Competence frameworks (Bacigalupo et al, 2016; Carretero et al, 2016, 2017; Sala et al., 2020); the interconnectedness, complementarity and interdependence of these frameworks can further professionally learning and practice improvement. For instance, the DigCompEdu and DigCompOrg/SELFIE frameworks can integrate the digital competence development of teachers and education institutions, for digitally savvy education professionals in schools as learning organizations (Redecker, 2017; Kampylis et al., 2015). The proficiency levels in the DigCompEdu framework, and the related self-assessment tool, can support teacher self-awareness and reflection, for professional improvement.

Teacher leadership as described above – grounded on transversal competences such as the Personal, Social and Learning to Learn and Digital Key Competences - is pivotal for the personal, social and professional development of teachers, with the foundations laid down in initial teacher education and built up in the decisive induction bridge, leading to practice in school contexts. If 21st-century scenarios demand flexibility and positive attitudes to chaos and uncertainty in teachers as change agents, the comprehensive induction systems outlined so far represent favourable breeding grounds for teacher leadership in schools as learning organisations. Teacher leadership in action has been associated to mentoring and modelling, peer collaboration, innovative practice and professional development, as well as a variety of formal and informal professional interactions (Nguyen et al., 2020). If beginning teachers are exposed to powerful leadership models through induction support (mentors, peer networks and experts), they can dare to initiate or bring forward practice improvement – to set up and sustain collaborative, reflective professional school communities grounded on mutual trust and respect.

Teacher leadership is also key for their resilience and well-being – buffering stress as well as boosting motivation and self-efficacy, in the crucial transition stage of induction in particular. Resilience entails the capability to respond to crises and challenges not only bouncing back, but forward – coming out the better despite all difficulties (Caena, 2019). The resilience and wellbeing of learners, educators and education systems is under the spotlight in 2021 global policy, following up the COVID-19 crisis (UNICEF, 2020). The resilience of all actors, at all levels in the global pandemic arena is demanded - of educators.

Therefore, teacher educators and mentors are the induction actors that should receive pride of place in policy and practice – for their role as boundary spanners linking different worlds and career stages in a meaningful continuum, through inspiring leadership. Their crucial support to the personal, social and professional development and resilience of beginning teachers needs to be adequately and formally acknowledged in terms of incentives, training and support.

If induction builds a bridge over troubled waters, it should be like the bridges depicted in Hokusai's landscapes, where they span mountain and valley, waterfall, stream and river in a variety of structures and shapes, but all fitting in seamless harmony with the features of each landscape. Like those bridges require skilful workers and painstaking planning to erect structures that can withstand the elements, so do induction systems – which cannot fulfil their functions properly unless they are built with a coordinated effort and a careful eye to context features. Only then can induction really be there for teachers - borrowing a line from Simon and Garfunkel's *Bridge over Troubled Water,* 'when times get rough/ and friends just can't be found'.

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Bridge over Troubled Water: Induction pointers for teacher leadership
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