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CONCEPTUAL FOUNDATIONS FOR DEVELOPING PROFESSIONAL RESILIENCE IN PRE-SERVICE TEACHERS

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Abstract. Teacher resilience has become a central concern of teacher education research, yet most work addresses in-service teachers and treats resilience as a quality to be sustained rather than deliberately developed during initial preparation. This conceptual article synthesises psychological and educational literature in order to substantiate the conceptual foundations for developing professional resilience in pre-service teachers. Using theoretical analysis, comparison and conceptual modelling, the article (a) clarifies the notion of professional resilience of a pre-service teacher as a developable, context-dependent integrative capacity; (b) identifies the theoretical sources on which its development can be grounded; (c) proposes a five-component structure (motivational-value, cognitive, emotional-volitional, social-communicative and reflexive-regulatory); and (d) formulates the principles and pedagogical conditions that make its development possible within teacher education programmes. The proposed framework is theoretical and requires empirical validation; its intended contribution is to offer teacher educators a coherent basis for designing resilience-oriented preparation.

Keywords: professional resilience, teacher resilience, pre-service teachers, teacher education, conceptual framework, self-efficacy, reflection, pedagogical conditions.

1. Introduction

Teaching is widely recognised as an emotionally and cognitively demanding

profession. High workload, the complexity of classroom relationships, accountability pressures and constant curricular change make the first years of work a period of particular vulnerability, and teacher turnover has long been explained by organisational conditions as much as by individual characteristics (Ingersoll, 2001). Against this background, research attention has gradually shifted from the question of why teachers leave to the question of what enables them to stay committed and effective. The concept of teacher resilience emerged as an answer to the latter question (Bobek, 2002; Gu & Day, 2007).

International policy documents reinforce this shift. The Incheon Declaration links the quality of education to teachers who are empowered, adequately recruited, well trained, professionally qualified, motivated and supported (UNESCO, 2015). In Uzbekistan, the legal status, rights and professional guarantees of teachers have recently been consolidated in the Law “On the Status of the Teacher” (Republic of Uzbekistan, 2024). Such documents define what teachers should be provided with; they say less about the inner professional capacities that allow a teacher to act effectively when conditions are difficult. The rapid digitalisation of education, which intensified during school closures, added new sources of strain for beginning teachers and showed that competence in using technology and the capacity to adapt are closely related (König et al., 2020).

Two limitations of the existing literature motivate this article. First, the majority of studies concern in-service and early career teachers (Beltman et al., 2011; Johnson et al., 2014), whereas the stage of initial teacher education, when professional identity and coping repertoires are first formed, is examined less often. Second, resilience is frequently described through lists of risk and protective factors, while the pedagogical question of how it can be purposefully developed is left without a unified conceptual basis. In Uzbek-language pedagogical research in particular, the construct of



professional resilience has so far received limited attention, and adjacent notions such as professional competence and stress tolerance are more commonly used.

The aim of this article is therefore to substantiate the conceptual foundations for developing professional resilience in pre-service teachers. The following questions guide the analysis: (1) How should the professional resilience of a pre-service teacher be understood? (2) On what theoretical sources can its development be grounded? (3) What components, principles and pedagogical conditions constitute a conceptual framework for its development?

2. Method

The study is conceptual in nature. It employed theoretical analysis and synthesis of scholarly literature, comparative analysis of definitions and models of resilience, and conceptual modelling. Sources were selected purposively according to three criteria: seminal works that shaped the general theory of resilience; peer-reviewed studies and reviews devoted specifically to teacher resilience; and established theories of learning and professional development that explain the mechanisms through which resilience-related capacities are formed. The analysis proceeded in three steps: clarifying the concept, relating it to explanatory theories, and deriving the components, principles and conditions of a framework. No empirical data were collected; consequently the results should be read as a theoretically grounded proposal rather than as tested findings.

3. Results

3.1. Professional resilience of a pre-service teacher: clarifying the concept

The general theory of resilience developed in three broad steps that are important for pedagogy. Early work moved the focus from invulnerability to protective mechanisms that operate in interaction with risk (Rutter, 1987). Subsequent research defined resilience as a dynamic process of positive adaptation in the context of significant adversity rather than a fixed personal trait (Luthar et al., 2000) and showed

that it arises from ordinary adaptive systems, such as supportive relationships and self-regulation, rather than from exceptional qualities (Masten, 2001). Finally, the social-ecological perspective emphasised that resilience depends on a person's capacity to navigate towards resources and on the capacity of the environment to provide them in meaningful ways (Ungar, 2008). Together these positions lead to a conclusion of principle: if resilience is a process that depends on ordinary systems and available resources, it can be influenced by education.

Research on teachers specified this general understanding. Gu and Day (2007) described resilience as a necessary condition for teacher effectiveness, and later argued that it is best understood as the capacity to maintain equilibrium and a sense of commitment and agency in the everyday worlds in which teachers work, a capacity that fluctuates with personal, relational and organisational conditions (Gu & Day, 2013). The review by Beltman et al. (2011) similarly concluded that teacher resilience is the outcome of a dynamic interplay between individual and contextual risk and protective factors. Mansfield et al. (2012) identified profession-related, emotional, motivational and social dimensions in how teachers themselves describe a resilient teacher. A more recent review confirms that the field has moved from trait-oriented to process- and context-oriented conceptions (Zhang & Luo, 2023).

The position of a pre-service teacher differs from that of a practising teacher in three respects. Professional adversity is encountered mainly during school practicum and in simulated situations, that is, in limited and supervised form. Professional identity is still being formed. And the student is located within an educational programme that can be purposefully designed. On this basis the following working definition is proposed: *the professional resilience of a pre-service teacher is an integrative, developable capacity to maintain professional commitment, emotional balance and effective pedagogical action when facing professionally significant difficulties, to recover after setbacks, and to use such experience as a resource for*

professional growth by mobilising personal and environmental resources. The definition deliberately combines three functions: maintenance, recovery and growth.

Professional resilience should be distinguished from related notions. Stress tolerance describes the ability to withstand strain, but not the recovery and growth that follow. Hardiness refers to a relatively stable pattern of attitudes of commitment, control and challenge (Maddi, 2004), whereas resilience is situated and relational. Coping denotes specific efforts to manage demands appraised as taxing (Lazarus & Folkman, 1984) and can be regarded as one of the mechanisms of resilience rather than its equivalent.

3.2. Theoretical sources of the framework

A distinction is drawn here between theoretical foundations, which explain what resilience is, and conceptual foundations, which explain how its development should be organised. The latter require theories of learning and development. Six such sources were identified; their contribution to the framework is summarised in Table 1.

Table 1. Theoretical sources and their contribution to the framework

Theoretical source	Key idea	Implication for developing resilience
Social cognitive theory (Bandura, 1997)	Self-efficacy is built mainly through mastery experiences, vicarious experience, social persuasion and interpretation of emotional states	Graduated, successfully resolved professional difficulties; observation of resilient models
Ecological systems theory (Bronfenbrenner, 1979); social ecology of resilience (Ungar, 2008)	Development occurs within nested, interacting environments that supply or withhold resources	Resilience is developed by designing a supportive environment, not only by training the

		individual
Sociocultural theory (Vygotsky, 1978)	Higher capacities are formed first in collaboration, within the zone of proximal development	Difficulty of tasks slightly above current capacity, with mentor and peer support that is gradually withdrawn
Experiential learning (Kolb, 1984)	Learning is a cycle of experience, reflection, conceptualisation and experimentation	Experience of difficulty becomes a resource only when it is reflected upon and tried again
Reflective practice (Schön, 1983; Korthagen, 2004)	Professionals learn by reflecting in and on action, including on identity and mission	Systematic reflection on difficult situations and on one's professional self
Self-regulated learning (Zimmerman, 2002)	Forethought, performance control and self-reflection form a regulatory cycle	Goal setting, self-monitoring and self-evaluation of one's responses to difficulty

These sources are complementary. Social cognitive theory explains why experience of overcoming matters: the belief in one's capability to organise and execute teaching tasks is among the most consequential beliefs for teachers' persistence (Tschannen-Moran & Woolfolk Hoy, 2001). The ecological and sociocultural perspectives explain why such experience must be embedded in

relationships; empirical work on early career teachers shows that relationships with mentors, peers and pupils are central to their resilience (Le Cornu, 2013), and that learning to be a professional takes place through participation in a community of practice (Wenger, 1998). Experiential, reflective and self-regulatory theories explain how a single episode of difficulty is transformed into a stable capacity. Evidence-informed frameworks for building resilience in teacher education draw on the same combination of personal resources, contextual resources and strategies (Mansfield et al., 2016).

3.3. Structure of professional resilience

Synthesising the dimensions reported in the literature (Mansfield et al., 2012; Beltman et al., 2011) with the mechanisms described above, five interrelated components of the professional resilience of a pre-service teacher are distinguished (Table 2).

Table 2. Components of the professional resilience of a pre-service teacher

Component	Content	Observable indicators
Motivational-value	Commitment to the profession, sense of vocation, optimism about professional future	Persistence in practicum tasks; stable intention to enter teaching
Cognitive	Knowledge of typical professional difficulties and resources; flexible appraisal of problem situations	Ability to analyse a difficult case and name several possible responses
Emotional-volitional	Emotion regulation, self-efficacy, perseverance	Maintaining composure and task focus under pressure; recovery after failure
Social-	Help-seeking, building supportive	Use of mentor and peer support; constructive

communicative	relationships, collaboration	communication in conflict
Reflexive-regulatory	Reflection on experience, goal setting, self-monitoring, adaptation of strategies	Reflective writing that moves from description to analysis and planning

The motivational-value component functions as the system-forming one: it gives meaning to the effort required to overcome difficulty. The cognitive and emotional-volitional components determine how a situation is appraised and endured; the social-communicative component connects the individual with environmental resources; and the reflexive-regulatory component ensures that experience is converted into growth. Weakness in one component cannot be fully compensated by the others. For example, strong emotional control without help-seeking leads to isolation, and strong motivation without reflection leads to the repetition of ineffective strategies.

3.4. Principles of the framework

The following principles follow from the analysis. *Developability:* resilience is treated as a result of education and not as a prerequisite for admission to the profession. *Contextuality:* resilience is developed in situations that reproduce the real difficulties of teaching, since a capacity formed outside context is unlikely to transfer. *Graduated challenge with support:* difficulties are dosed so that they remain within reach when support is available, and support is reduced as capacity grows. *Unity of personal and environmental resources:* the programme simultaneously strengthens the student and enriches the environment. *Reflexivity:* each experience of difficulty is completed by structured reflection. *Subjectivity (agency):* the student is an active agent who sets goals and chooses strategies, not an object of protective influence.

The second and third principles deserve emphasis because they guard against two opposite errors. Shielding students from difficulty deprives them of mastery

experiences, while exposing them to unsupported difficulty risks producing discouragement rather than resilience. Conditions, as Gu and Day (2013) put it, count.

3.5. Pedagogical conditions

The principles are realised through five pedagogical conditions. The first is the inclusion of problem-based and uncertain professional situations (case analysis, role play, simulations, micro-teaching) in the content of pedagogical courses and practicum. The second is the individualisation of developmental trajectories on the basis of initial diagnostics of each component. The third is the systematic organisation of reflection through reflective journals, portfolios and supervised discussion of practicum experience. The fourth is the creation of a supportive professional community that includes mentoring by experienced teachers and peer support groups. The fifth is regular formative feedback and monitoring that allow both student and teacher educator to see change over time.

Digital educational environments can serve each of these conditions, for example through branching scenarios, electronic portfolios and online professional communities, and frameworks of educators' digital competence explicitly include reflective practice and professional collaboration (Redecker, 2017). At the same time, technology is not a neutral resource. Research on technostress shows that technology-related overload and complexity can themselves generate role stress and reduce productivity (Tarafdar et al., 2007). The digital environment should therefore be regarded as a means whose effect depends on pedagogical design, not as a factor that develops resilience automatically.

The process of development can be described in three stages. At the diagnostic-motivational stage, students become aware of typical professional difficulties and of their own resources. At the activity stage, they act in increasingly complex situations with decreasing support. At the reflexive-evaluative stage, they analyse the experience gained, assess changes in each component and plan further self-development. The

expected result is a transition from a situational, externally supported level of resilience to a stable, self-regulated one.

4. Discussion

The framework proposed here is consistent with the international consensus that teacher resilience is processual and context-dependent (Beltman et al., 2011; Gu & Day, 2013; Zhang & Luo, 2023) and with evidence-informed proposals for building resilience in teacher education (Mansfield et al., 2016). Its contribution lies in three points. First, it addresses the pre-service stage directly and specifies what distinguishes it from in-service work. Second, it separates explanatory theories of resilience from theories that explain how it can be developed and shows how the latter generate concrete design decisions. Third, it links the components of resilience with principles and conditions, so that each component has a corresponding pedagogical means.

The framework also takes a position on a frequently voiced criticism, namely that the discourse of resilience may place responsibility for coping on individual teachers and divert attention from poor working conditions (Johnson et al., 2014). The principle of unity of personal and environmental resources is intended as a safeguard: developing resilience in future teachers does not replace the obligation of institutions and policy to provide reasonable conditions of work.

Several limitations should be acknowledged. The framework is derived from literature and has not been tested empirically. The literature on which it rests originates largely from English-speaking and European contexts, and the cultural meanings of difficulty, support and help-seeking differ across societies (Ungar, 2008); adaptation to the context of teacher education in Uzbekistan therefore requires separate study. The indicators in Table 2 are preliminary and need to be operationalised with validated instruments, for example by adapting established resilience scales (Connor & Davidson, 2003) alongside teacher-specific measures. Future research should examine

the framework through a pedagogical experiment with control and experimental groups and through longitudinal follow-up into the first years of teaching.

5. Conclusion

The professional resilience of a pre-service teacher can be understood as an integrative and developable capacity that combines the maintenance of commitment and effective action, recovery after setbacks and growth through experience. Its development can be grounded in social cognitive, ecological, sociocultural, experiential, reflective and self-regulatory theories, which together explain why supported experience of overcoming difficulty, followed by reflection, is the central mechanism. The conceptual framework presented in this article comprises five components, six principles and five pedagogical conditions realised in three stages. It offers teacher educators a basis for designing resilience-oriented preparation and offers researchers a set of propositions open to empirical testing.

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