

CREATIVITY, ADAPTABILITY, STRESS MANAGEMENT, AND LIFELONG LEARNING: COMPETENCIES OF FUTURE VOCATIONAL SCHOOL TEACHERS IN THE CONTEXT OF PROFESSIONAL EXPECTATIONS

Lucie Smékalová, Radka Stolariková, Martin Calta

*Institute of Education and Counselling
Czech University of Life Sciences, Prague (Czech Republic)*

Abstract. Developing the soft competencies of pre-service vocational teachers is a crucial aspect of their professional preparation, especially in the context of individualisation, inclusion, and digitalisation. The study aimed to assess the development levels of four competencies: creativity, adaptability, stress management, and lifelong learning. The sample comprised pre-service vocational teachers. A chi-square test of independence indicated statistically significant differences between the development levels of the competencies. Creativity and adaptability were rated above average, whereas stress management was below average, potentially hindering professional adaptation and increasing the risk of burnout. The study highlights the need to systematically cultivate these competencies in teacher education curricula, especially stress management ability and the deliberate development of pupils' creativity. The results inform the professionalisation debate in teaching and suggest avenues for the methodology of researching pedagogical competencies.

Keywords: soft competencies; professional development; vocational education; pre-service teacher education; occupational requirements; quantitative research

Introduction

Pre-service teacher education faces technological challenges such as digitalisation, hybrid learning, and AI (Wang, 2025) alongside imperatives for inclusion, personalised learning, and safeguarding the wellbeing of both teachers and students. In the inclusion domain, Stárek and Klugerová (2025) underscore the importance of not only employing specialized didactic approaches but also cultivating soft competencies (particularly empathy and adaptability) when working with students with intellectual disabilities.

In the context of these challenges, including inclusion, it is evident that teachers need not only subject-matter expertise but also soft competencies. For example, the quality of professional preparation in vocational education should also encompass communication and presentation skills (Hrmo et al., 2016). The solution should be the integration of soft competencies into the education system to ensure that prospective teachers are prepared for life in a globalized and rapidly changing world (Chaiya & Ahmad, 2021, p. 24; Sipii et al., 2024, p. 118).

Although the need to develop soft competencies is widely acknowledged, there are risks associated with their implementation in educational programmes. Beraki et al. (2022, p. 9) point to a lack of the knowledge and skills required to integrate these competencies into traditional education systems. Brownlie, Burke, and Van Der Laan (2024, p. 39) further highlight the possibility of unequal access to opportunities for the development of soft competencies.

For the successful implementation of soft competencies in curricula, it is advisable to provide a clear definition and to focus on a specific domain of soft competencies at a time. Although numerous definitions and lists of soft competencies exist (Chanda, 2022, p. 404; Pachauri & Yadav, 2014, p. 22; Robles, 2012, p. 455; Sipii et al., 2024, p. 121), in relation to the teaching profession soft competencies can be defined as intra- and interpersonal skills that are essential for teachers' interactions with others and for their own personal development within the profession (Susilawati et al., 2020, p. 164). Bhatt (2020, pp. 6 – 7) even argues that soft competencies are personality traits that enhance teachers' skills, job performance, and career prospects.

Within the broad domain of soft competencies, the study focuses specifically on the following four personal competencies: creativity, adaptability, stress management, and lifelong learning. The competence for lifelong learning encompasses the ability for self-directed study and the critical appraisal of the relevance of information (Phillips et al., 2020, p. 11), as well as openness to new ideas and approaches (Pachauri & Yadav, 2014, p. 23; Bhatt, 2020, p. 4). The competence of adaptability relates to the ability to handle complex and changing situations (Phillips et al., 2020, p. 9), to generate innovations (Tang et al., 2015, p. 840), and to adapt to the dynamic environment of teaching, where teachers make as many as 1,200 – 1,500 decisions per day (States et al., 2018, pp. 8 – 9). Teachers' creativity encompasses the capacity to generate new ideas, develop innovative instructional methods, and tailor teaching processes to diverse student needs (Khodjaqulova, 2024, p. 10). According to Susilo et al. (2021, p. 2), creativity competence is among the most important skills teachers need, as it enables them to respond creatively to instructional situations. Setiono et al. (2024, p. 216) further note that creativity is regarded as one of the core competencies in teacher preparation. The competence of stress management is characterized as the ability to recognise sources of stress and act in ways that help maintain it at an appropriate level (Prabu, 2016, p. 3). Sasi (2020, pp. 23 – 24) elaborates this as a set of skills, tools, and techniques that assist in reducing, managing, and mitigating the negative effects of stress.

These personal competencies were selected based on professional expectations derived from the requirements for performing the teaching profession. In the Czech Republic, job-performance requirements can be monitored via the National System of Occupations (NSP)¹, which has operated for nearly twenty years (since 2007). The NSP serves as a register of occupations on the Czech labour market, identifies the competencies required for specific occupations, and thereby supports educational institutions in aligning study programmes with current labour-market demands¹. This study examines the attainment levels of the teacher's personal competencies as defined in the NSP¹, which provides a detailed description of these competencies and their levels (see Materials and Methods).

Professional expectations for initial teacher education are also formulated by the Ministry of Education, which aims at the national level to contribute to the professionalisation of the teaching profession. For this purpose, it produced the document “*Competency Framework for Graduates of Teacher Education*”² (2023; hereafter the “competency framework”), which reflects the graduate profile of teacher-education programmes. The document was developed following the example of OECD countries – for instance, the *Reference Framework for Professional Competencies for Teachers*³, *Australian Professional Standards for Teachers*⁴, *The Tuning-CALOHEE Assessment Frameworks for Teacher Education*⁵, and the *Teachers' Standards*⁶.

The competency framework is binding as a general goal for teacher education, but it is not mandatory for all of its individual competencies to be fulfilled within programmes. The framework comprises 18 competencies divided into six domains: (1) subject-matter knowledge and its mediation to students; (2) planning, leading, and reflecting on instruction; (3) the learning environment; (4) feedback and assessment; (5) professional collaboration; (6) professional self-concept, development, ethics, and mental health².

However, the results of our content analysis of the competency framework indicate that two of the competencies under study (lifelong learning and stress management) are explicitly stated, whereas creativity and adaptability are rather cross-cutting in nature.

The competency framework is valuable both as a guide for structuring teacher-education curricula and as a springboard for research on professional teacher competencies, for instance, Bačová (2024) examines how teachers cultivate safe learning environments.

Although numerous studies focus on teachers' soft competencies, the Czech educational context lacks research that would systematically examine their attainment in relation to the requirements defined in the National System of Occupations¹.

The aim of the study is to analyse the attainment levels of four soft (personal) competencies among prospective vocational upper-secondary school teachers in relation to the requirements of the teaching profession. We examine whether these

attainment levels differ across the four competencies. The results can inform the design of teacher-education curricula (e.g., a practice-based course on stress management) and clarify which soft (personal) competencies warrant targeted development.

Materials and Methods

The study presents a quantitative research design, specifically a cross-sectional study, aimed at evaluating four soft (personal) competencies of prospective vocational upper-secondary school teachers, namely: (1) creativity, (2) adaptability, (3) stress management, and (4) lifelong learning.

The empirical study sought to ascertain: (1) the attainment level of each competency among prospective teachers, and (2) which competencies are perceived as the most and least developed. Hence, the guiding research question was: Are there statistically significant differences in the assessed attainment levels across competencies?

Hypotheses:

– **H0:** There are no differences between the competencies in the assessed attainment level.

– **H1:** There are differences between the competencies in the assessed attainment level (some are perceived as more developed, others as less developed).

As part of the operationalization of variables, each competency was defined by a descriptive characterization. The development of competencies was likewise expressed using a verbal descriptor across five levels (from the lowest to the highest level of development), detailed below. Data were collected via an online questionnaire, and the data were analysed using the chi-square test of independence at the 5% significance level.

The target group comprised prospective teachers of vocational subjects and prospective teachers of practical training enrolled in a professionally oriented bachelor's degree programme⁷. The sampling was purposive and encompassed all students across all cohorts (Years 1 – 3). Approximately 50 students were enrolled in each year, yielding a total of 154 invitees. The final sample consisted of 46 respondents (a 30% response rate). All data were complete (no missing values).

Participation was voluntary with assurances of data anonymization. By completing the questionnaire, respondents provided informed consent to take part in the study. Invitations were distributed via email containing a hyperlink to the online questionnaire. Data collection took place in February 2024.

The individual competencies and their levels were taken from the national system known as the National System of Occupations, hereafter NSP, which specifies soft competencies for individual professions. What follows is a list (paraphrase) of the competencies and levels with their descriptions.

(1) Lifelong learning competence: the ability and willingness to accept new information and to participate in short- and long-term education programmes.

1. Proficiency level 1: Willing to learn only when absolutely necessary; learning needs are driven by external pressures.

2. Proficiency level 2: Learns mainly on the basis of short-term goals; prefers topics of personal interest; applies what is learned in practice; knows personal strengths and weaknesses but does not develop them in a targeted way.

3. Proficiency level 3: Curious, goal-oriented, and actively plans personal development. Applies new knowledge in practice, reflects on own mistakes, and consistently develops strengths.

4. Proficiency level 4: Plans learning purposefully, actively seeks out and applies new knowledge across disciplines. Capable of self-reflection and serves as an information resource for others.

5. Proficiency level 5: Systematically develops expertise, identifies the learning needs of others, and actively supports knowledge sharing and others' professional growth.

(2) Adaptability competence: the ability to think, act, and approach tasks and situations flexibly and on the fly as they arise in day-to-day practice. It is the capacity to change or adjust one's work habits and behaviour and to operate effectively in new or changing situations.

1. Proficiency level 1: Struggles to cope with change; needs examples and role models; depends on a stable work environment and established procedures.

2. Proficiency level 2: Prefers stable settings; accepts change gradually and integrates new inputs with a time lag.

3. Proficiency level 3: Adapts to change without difficulty; accepts new ideas and methods. Learns as needed, overcomes routines, and responds flexibly to new working conditions.

4. Proficiency level 4: Welcomes change and new stimuli, actively develops self, and can improvise in unexpected situations.

5. Proficiency level 5: Proactively initiates change, applies an innovative approach, and purposefully develops knowledge with regard to context and the needs of others.

(3) Creative thinking competence: the ability to create, think, perceive, and do things differently from convention, with the aim of generating new value while remaining aware of the risks associated with implementation in practice. Creativity is linked to an intrinsic motivation to respond creatively to inspiring stimuli from one's environment and to a desire to discover. It is also fostered by domain mastery and a positive mindset.

1. Proficiency level 1: Creativity is limited; prefers to think and act within usual conventions.

2. Proficiency level 2: Open to stimuli and to own ideas, but implementation is often incomplete due to difficulties with follow-through.

3. Proficiency level 3: Develops own ideas creatively on the basis of established knowledge and keeps up with trends.

4. Proficiency level 4: Integrates diverse bodies of knowledge into innovative solutions, remains open to new ideas, and actively minimises the risks associated with their implementation.

5. Proficiency level 5: Applies original thinking, successfully implements innovative ideas, and creates an inspiring, creative environment that connects knowledge across disciplines.

(4) Stress management competence: the ability to handle stressful situations, pressure, obstacles, setbacks, and frustration.

1. Proficiency level 1: Perceives change negatively; is demotivated by obstacles and needs strong support from others.

2. Proficiency level 2: Manages common stressors, especially when using positive coping strategies. Accepts change when it is understood. Setbacks weaken confidence; tends toward scepticism and needs support to overcome difficulties.

3. Proficiency level 3: Handles demanding situations with emotional stability; can ask for help and view pressure as a motivating factor. When facing obstacles, analyses the situation, seeks solutions, and adapts to change without losing focus or self-confidence.

4. Proficiency level 4: Delivers stable performance even under stress; persistently overcomes obstacles and responds effectively to both routine and challenging tasks.

5. Proficiency level 5: Exceptionally resilient; excels in crisis situations.

Proficiency levels were analysed in terms of absolute and relative frequencies. Competency rankings were derived using a weighted average, with levels scored from 1 (Proficiency level 1) to 5 (Proficiency level 5).

Results

The chi-square test confirmed statistical significance at the 5% level ($\chi^2 = 21.96$; $df = 12$; $p = 0.038$). Since $p < 0.05$, the null hypothesis (H_0) can be rejected, indicating that the distribution of development ratings differs significantly across the competencies. The results of the empirical inquiry are summarized in the tables and figures.

Table 1. Proficiency Level Distribution by Competence (n = 46)

Competence / Proficiency level	Proficiency level 1		Proficiency level 2		Proficiency level 3		Proficiency level 4		Proficiency level 5	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Lifelong Learning Competence	3	6.52	5	10.87	21	45.65	9	19.57	8	17.39
Adaptability Competence	0	0	9	19.57	14	30.43	18	39.13	5	10.87
Creative Thinking Competence	0	0	5	10.87	14	30.43	19	41.30	8	17.40
Stress Management Competence	2	4.35	13	28.26	17	36.96	12	26.08	2	4.35

Table 01 shows that the competence for lifelong learning and the competence for stress management reached their highest relative frequency of development at Proficiency level 3 (i.e., a medium rating). By contrast, adaptability and creativity reached their highest relative frequencies at Proficiency level 4 (i.e., above-average development). Notably, these two competencies have no cases at the lowest development level (Proficiency level 1) and share the same proportion (approximately 30%) at Proficiency level 3. It is also noteworthy that creativity shows the highest development (Proficiency level 5) in more than one sixth of prospective teachers. The competence for stress management has the second-highest representation at Proficiency level 2. The results are clearly visualized in Figure 1.

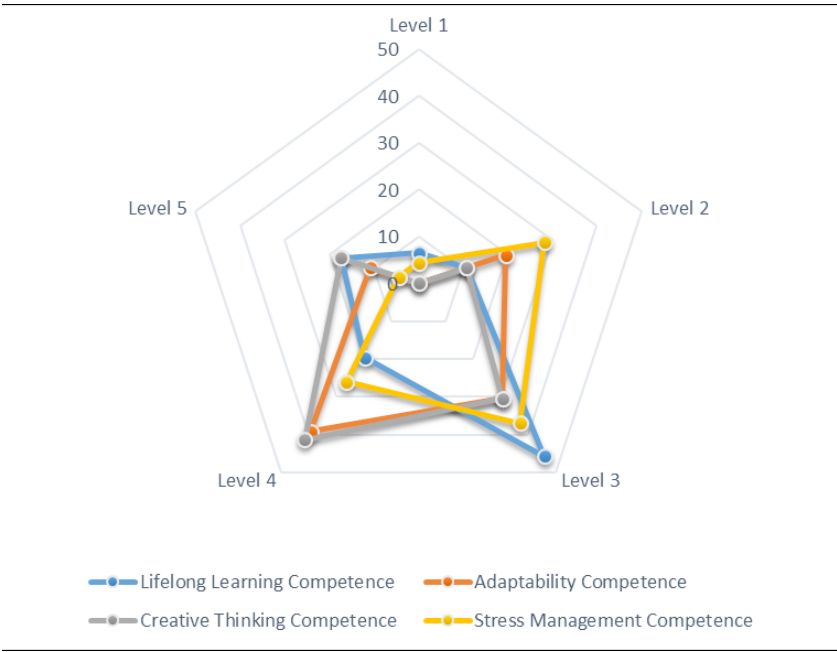


Figure 1. Radar Chart of Proficiency by Competence (%)

Table 2. Weighted Mean Proficiency by Competence (Points)

Competence/ Proficiency level	Proficiency level 1	Proficiency level 2	Proficiency level 3	Proficiency level 4	Proficiency level 5	S	M _w
Lifelong Learning Competence	3	10	63	36	40	152	3.30
Adaptability Competence	0	18	42	72	25	157	3.41
Creative Thinking Competence	0	10	42	76	40	168	3.65
Stress Management Competence	2	26	51	48	10	137	2.98

The distribution of development levels across competencies is statistically significant. We further report, using a weighted mean, the ranking of the development of individual competencies. The average rating (the theoretical midpoint of the scale) is 3.0. Stress management has the lowest mean score of the four competencies and is rated as the least developed. By contrast, creativity is rated the highest and ranks first; adaptability follows in second place, and lifelong learning ranks third.

Specific visualizations are provided by the charts for the individual competencies.

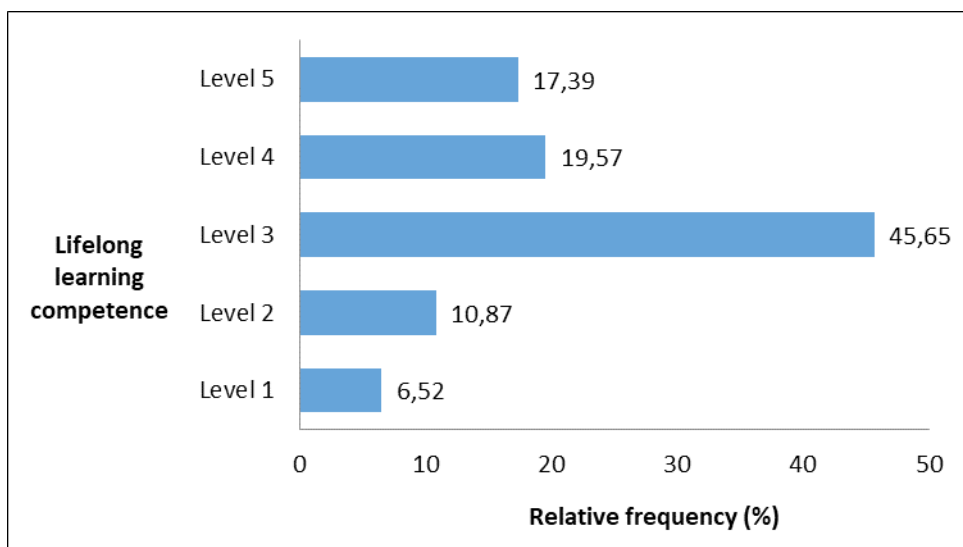


Figure 2. Relative Frequencies of Proficiency Levels in Lifelong Learning Competence (%)

More than 45 % of prospective teachers are curious, actively seek new knowledge, and apply it in practice (see Level 3). Nearly one fifth engage in lifelong learning, are self-motivated, and serve as information resources (see Level 4). More than one sixth are able to anticipate developments and support others' learning (see Level 5). Some prospective teachers pursue learning only within short-term goals (see Level 2), while others learn only out of necessity (Level 1).

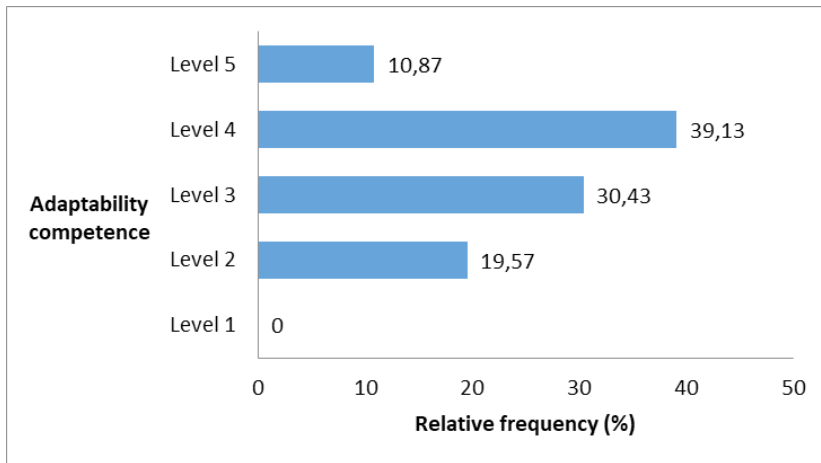


Figure 3. Relative Frequencies of Proficiency Levels in Adaptability Competence (%)

Nearly 40 % of prospective teachers are proactive, seek out change, take initiative, and engage in continuous self-development (see Level 4). More than 30 % are flexible, willing to learn new things, and adapt to change (see Level 3). The highest development level is reached by 10 % of prospective teachers, who are innovative, enact changes, and display creative thinking (see Level 5). By contrast, nearly one fifth reach only Level 2, that is, they adapt gradually and require time to accommodate new ideas.

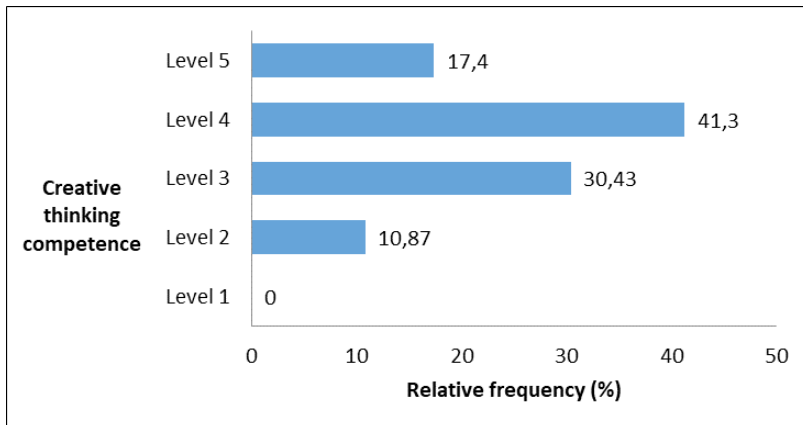


Figure 4. Relative Frequencies of Proficiency Levels in Creative Thinking Competence (%)

The majority of prospective teachers (41%) are innovative, integrate diverse ideas, and actively seek solutions (see Level 4). Nearly another third are creative within familiar contexts and generate their own ideas (see Level 3). More than one sixth reach the highest development level (Level 5), that is, they are visionaries who set new trends and inspire others. However, 10 % are open to new stimuli but require support with implementation (Level 2).

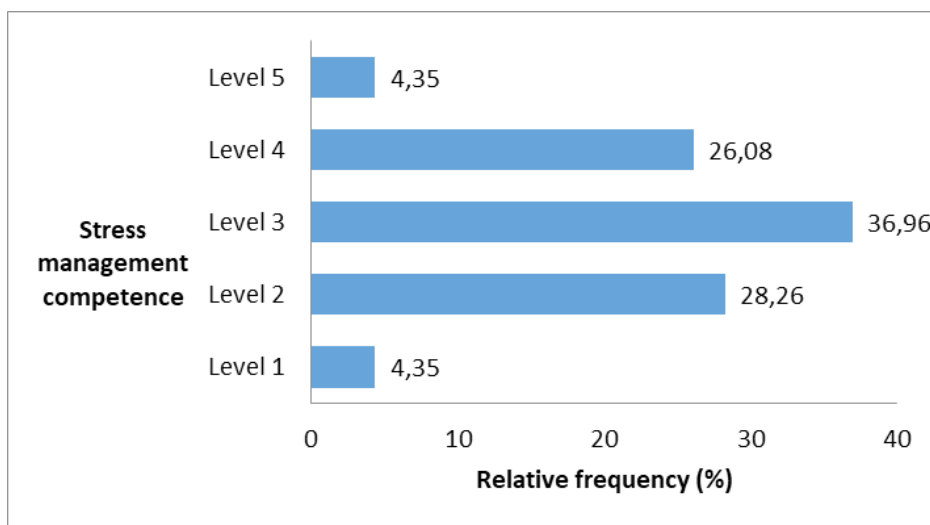


Figure 5. Relative Frequencies of Proficiency Levels in Stress Management Competence (%)

The largest share of prospective teachers (36 %) reach Level 3, that is, they show good stress resilience, take an active approach to problems, and remain composed. There is also a group (26 %) with high stress resilience who are persistent, proactive, and welcome change (see Level 4). Conversely, a larger share (28 %) manage only routine stress, seek solutions, and adapt to change gradually (see Level 2). Approximately 4 % are extremely resilient and excel in crisis situations (Level 5), while another 4 % have low stress resilience, fear change, and require strong support (Level 1).

Discussion

The examined competencies exhibited varying degrees of development across levels. Differences in teachers' ability to effectively leverage soft (personal) competencies may constitute an important factor influencing students' academic outcomes (Bhatt, 2020, p. 5; States et al., 2018).

In the study, the competence for lifelong learning reached a medium development level ($Mw = 3.30$), which can be interpreted as a possible consequence of the long-term effects of the previous curricular reform that has shaped the educational environment over the past two decades. As a result, this competence has become a routine part of pedagogical practice and a culturally embedded element of professional development. The finding aligns with the literature, which underscores its importance for maintaining professional qualifications and adapting to changing demands in education. For example, Balcar and Šimek (2011, p. 27) note that a teacher with a well-developed competence for lifelong learning is able to identify personal learning needs, learn actively, and apply acquired knowledge in practice.

The best-developed competency was creativity. The most frequent development level was Level 4 (41.30%), and the combined share at Levels 3 – 5 indicates that approximately 89 % of respondents have this competency sufficiently developed. This finding corresponds with Setiono et al. (2024, p. 216), who identify creativity as one of the core competencies of teachers.

Adaptability was likewise assessed as sufficiently developed ($Mw = 3.41$), albeit with more pronounced individual differences (Level 2 = 19.57%; Level 3 = 30.43%; Level 4 = 39.13%; Level 5 = 10.87%). While some respondents exhibited a high degree of adaptability, others had difficulty adjusting to new situations. This confirms that the ability to respond flexibly is not evenly developed. States et al. (2018, pp. 8 – 9) note that, given the dynamic nature of the teaching profession, adaptability is an essential competency for managing frequent changes in working conditions.

The relatively strong development of creativity and adaptability competencies may be related to the respondents' personal maturation and prior work experience, as they are enrolled in the combined (part-time) mode of study and are typically older than full-time students.

In line with current trends in education, teachers should not only possess creativity but also enact behaviours that foster the development of creativity in their students (Soh, 2000). With the growth of digital technologies, the expansion of distance and hybrid instruction, the use of activating methods (e.g., the flipped classroom), and personalised learning, it is likewise desirable to systematically support the competence of adaptability.

By contrast, stress management has the lowest mean score of the four competencies ($Mw = 2.98$). This finding points to the need for more intensive support for prospective teachers in the area of emotional resilience. Prabu (2016, p. 3) underscores the importance of recognizing stressors and regulating their impact. Although this competence forms part of professional expectations, its implementation in practice requires a comprehensive approach (e.g., stress management courses, supervised practicums, wellbeing support). Systematic support in this area is crucial for professional adaptation and the prevention of burnout.

The content analysis of the competency framework indicates that the competencies for lifelong learning and for stress management are explicitly codified within the domain “professional self-concept, development, ethics, and mental health.” By contrast, creativity and adaptability are not listed as stand-alone competencies but have a cross-cutting character. They manifest, for example, in a teacher’s ability to apply diverse instructional methods, to conduct instruction effectively, and to respond flexibly to students’ needs.

Based on the research findings, it is recommended that the competencies of adaptability, creativity, and stress management be duly emphasised in education policy, professional standards, curricular reforms, and in study programmes preparing teachers for vocational education.

Conclusion

The study demonstrated statistically significant differences in development levels across competencies among prospective teachers. Based on the weighted-mean calculation, the ranking of development was: (1) creativity, (2) adaptability, (3) lifelong learning, and (4) stress management (i.e., creativity 3.65 > adaptability 3.41 > lifelong learning 3.30 > stress management 2.98; Table 02).

Prospective vocational upper-secondary school teachers exhibit a relatively higher development level in the competencies of creativity and adaptability, which aligns with the requirements of modern instruction. The unexpectedly high development may suggest that these competencies are related to personal maturation or prior work experience. Within professional preparation for teaching, it is desirable to continuously cultivate both competencies and to implement the teacher’s competence aimed at fostering students’ creativity, which – amid ongoing changes in the educational environment, is increasingly moving to the centre of scholarly discourse.

Stress management emerged as the least developed of the competencies examined, with its overall development level below average. Systematic support is essential, as this competency can substantially affect prospective teachers’ professional adaptation and their risk of burnout. In teacher education, it is therefore necessary to increase the number of wellbeing workshops, ideally including practical techniques led by field experts.

It was further found that the individual competencies meet the professional expectations of the labour market. However, there are partial discrepancies in these requirements within initial preparation for the profession, particularly for creativity and adaptability, which tend to have a cross-cutting character.

The above conclusions are limited to the investigated sample, a single study programme, and the part-time (combined) mode of study. The empirical research constitutes a pilot inquiry that serves as an indicator for further methodological elaboration of the topic. Subsequent research will draw on more robust data and on subject-area differentiation within vocational teacher education.

Based on the findings, it is recommended that education policy explicitly emphasise the aforementioned competencies in codified documents and, at the same time, set out concrete methods for their systematic development within teacher education, i.e., in alignment with the National System of Occupations and the Competency Framework for Graduates of Teacher Education.

NOTES

1. National System of Occupations (NSP, 2025).
2. Competency Framework for Graduates of Teacher Education (2023).
3. Reference Framework for Professional Competencies for Teachers (Gouvernement du Québec, 2021).
4. Australian Professional Standards for Teachers (Australian Institute for Teaching and School Leadership, 2017).
5. The Tuning-CALOHEE Assessment Frameworks for Teacher Education (CALOHEE, 2018).
6. Teachers' Standards (Department for Education, United Kingdom, 2021).
7. ISCED 6.

REFERENCES

- Báčová, V. (2024). Developing a safe learning environment in primary-level innovative schools in the Czech Republic. *Education 3 – 13*, 1 – 11. <https://doi.org/10.1080/03004279.2024.2410482>.
- Balcar, J. & Šimek, M. (2011). Are teachers competent to teach? *Lifelong Learning – celoživotní vzdělávání*, 1(2), 14 – 37.
- Beraki, M. T., Tessema, M. T., Plecka, M. & Abdourrahmane, M. (2022). Factors affecting the implementation of total quality management (TQM) in small and medium-sized enterprises (SMEs): The case of South Africa, *Journal of Organizational Culture, Communications and Conflict*, 26(3), 1 – 14.
- Bhatt, T. (2020). Soft skill training in teacher's education: Provocation and opportunities, *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(15), 1 – 7.
- Brownlie, N., Burke, K., & Van Der Laan, L. (2024). Quality indicators of effective teacher-created summative assessment, *Quality Assurance in Education*, 32(1), 30 – 45. <https://doi.org/10.1108/QAE-04-2023-0062>.
- Hrmo, R., Miština, J., & Křištofiaková, L. (2016). Improving the quality of technical and vocational education in Slovakia for European labour market needs, *International Journal of Engineering Pedagogy (iJEP)*, 6(2), 14 – 22. <https://doi.org/10.3991/ijep.v6i2.5369>

- Chaiya, C., & Ahmad, M. M. (2021). Success or failure of the Thai higher education development – Critical factors in the policy process of quality assurance. *Sustainability*, 13(17), 9486. <https://doi.org/10.3390/su13179486>.
- Chanda, P. (2022). Teacher concerns regarding the adoption of continuous assessment: The case of Kwekwe District secondary schools. *Journal of Research Innovation and Implications in Education*, 6(1), 401 – 410.
- Khodjaqulova, N. (2024). The role of teacher creativity while dealing with challenges in developing EFL students' critical listening skills. *International scientific-practical conference materials*, 1 – 12.
- Pachauri, D., & Yadav, A. (2014). Importance of soft skills in teacher education programme. *International Journal of Educational Research and Technology*, 5(1), 22 – 25.
- Phillips, P. P., Phillips, J. J., & Ray, R. (2020). *Proving the value of soft skills: Measuring impact and calculating ROI*. ATD Press.
- Prabu, M. (2016). Life skill and soft skill through teacher education program. *International Multidisciplinary Research Journal*, 3(11), 1 – 6.
- Robles, M. (2012). Executive perceptions of the top 10 soft skills needed in today's workplace. *Business Communication Quarterly*, 75(4), 453 – 465. <https://doi.org/10.1177/1080569912460400>.
- Sasi, P. (2020). *Influence of soft skills on teaching competency of secondary teacher education students*. Manonmaniam Sundaranar University.
- Setiono, S., Windyariani, S., & Agustiani, N. (2024). Creativity profile of biology teacher candidates: An exploratory study. *Biosfer: Jurnal Pendidikan Biologi*, 17(1), 215 – 222. <https://doi.org/10.21009/biosferj-pb.38636>.
- Sipii, V., Deshchenko, O., Honcharova, N., Hrytsenko, A., & Hrytsiuk, O. (2024). Analysis of the prospects for the development of soft skills in future education: Trends and risks. *Conhecimento & Diversidade*, 16(44), 107 – 128. <https://doi.org/10.18316/rcd.v16i44.12035>.
- Soh, K.-C. (2000). Indexing creativity fostering teacher behavior: A preliminary validation study. *The Journal of Creative Behavior*, 34(2), 118 – 134. <https://doi.org/10.1002/j.2162-6057.2000.tb01205.x>.
- Stárek, L., & Klugerová, J. (2025). The usage of information and communication technologies in education of children and pupils with mental disability. *Education*, 97(2), 250 – 267. <https://doi.org/10.53656/ped2025-2.07>.
- States, J., Detrich, R. & Keyworth, R. (2018). *Teacher soft skills overview*. The Wing Institute.
- Susilawati, Aznam, N., Paidi, & Irwanto. (2020). Socio-scientific issues as a vehicle to promote soft skills and environmental awareness. *Eu-*

- ropean Journal of Educational Research*, 10(1), 161 – 174. <https://doi.org/10.12973/eu-jer.10.1.161>.
- Susilo, H., Sudrajat, A. K., & Rohman, F. (2021). The importance of developing creativity and communication skills for teacher: Prospective teacher students perspective, *AIP Conference Proceedings*, 2330(1), 020021. <https://doi.org/10.1063/5.0043157>.
- Tang, K. N., Mohd Yunus, H., & Hashim, N. H. (2015). Soft skills integration in teaching professional training: Novice teachers' perspectives, *Procedia – Social and Behavioral Sciences*, 186, 835 – 840. <https://doi.org/10.1016/j.sbspro.2015.04.204>.
- Wang, Q. (2025). Research on excellent cases of “artificial intelligence + higher education” application scenarios in Chinese universities. *World Journal of Education*, 15(2), 78 – 91. <https://doi.org/10.5430/wje.v15n2p78>.

✉ **Dr. Lucie Smékalová**

ORCID iD: 0000-0002-9137-9954

Department of Pedagogy

Institute of Education and Counselling

Czech University of Life Sciences Prague
Prague, Czech Republic

E-mail: smekaloval@ivp.czu.cz

✉ **Dr. Radka Stolariková**

ORCID iD: 0009-0005-4244-2389

Department of Professional and Personal Development

Institute of Education and Counselling

Czech University of Life Sciences Prague
Prague, Czech Republic

E-mail: stolarikova@ivp.czu.cz

✉ **Mr. Martin Calta**

Institute of Education and Counselling

Czech University of Life Sciences Prague
Prague, Czech Republic

E-mail: xcalm002@studenti.czu.cz