

# Student Teachers on Pedagogical Practice: A Third-Party Perspective

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## ABSTRACT

The aim of the study is to analyze the opinions of mentor teachers on the evaluation of professional competencies and specific skills of student teachers at Pavol Jozef Šafárik University in Košice. A self-developed scaled questionnaire was used for data collection. Its validation through exploratory factor analysis demonstrated the existence of four factors (didactic-methodological, developmental, diagnostic, and evaluation competence). The research sample consisted of 105 mentor teachers cooperating with the Department of Pedagogy at UPJŠ. A statistically significant difference was found in the evaluation of students' didactic-methodological and diagnostic competence during teaching practice by mentors in terms of location, as well as in the evaluation of students' diagnostic competence by mentors in terms of age (due to the application of multiple comparisons—where the significance level was made more stringent—effect size was given greater emphasis). In addition, although no statistically significant differences were found, substantive differences were observed in mentors' evaluation of students' didactic-methodological competence in terms of the method of acquiring teaching qualifications, and in mentors' evaluation of students' developmental competence in terms of performing the role of school leader. Within didactic-methodological competence, mentor teachers gave lower ratings to students' skills related to working with the curriculum content. Within developmental competence, lower ratings were given to students' skills related to performing professional reflection. Within diagnostic competence, mentor teachers rated students' skills in inclusive education lower. Finally, within evaluation competence, lower ratings were given to students' skills in applying multiple student assessment procedures.

**Keywords:** Competencies, Mentor Teacher, Teaching Practice, Student Teacher, University

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## 1. Introduction

The quality of teacher training faculties rests, on the one hand, on the scientific direction and elaboration of innovative theories in didactics, but on the other hand, a key factor is the outcomes of student teachers in pedagogical practice and their preparation for school reality. If there is an interest in improving the educational performance of students during practice, it is appropriate to request regular feedback and monitor its incorporation into university teacher training programs. The evaluation of pedagogical practice can be carried out through student self-assessment, but what should not be underestimated is the mentor teachers' perspective on how the development of students' professional competencies is perceived and on whether various teaching situations can be resolved, based on the specialized knowledge and skills acquired during their undergraduate studies.

That is why it is essential for teacher educators to maintain collaboration with mentor teachers, as they can provide relevant information about students' educational development, as well as the effectiveness of the trainees' preparation in terms of both initial and ongoing mastery of practical requirements. The importance of mentorship in teaching has been increasing. Research has focused on analyzing the reciprocal relationships between mentors and their mentees (Matsko et al., 2023), understanding mentors' roles in practice (Matsko et al., 2024), their self-efficacy (Tickell & Klassen, 2024), and taxonomies of mentors' activities (Carmi & Tamir, 2023). Their perspective on the pedagogical and didactic activities of student teachers is, alongside that of university instructors (academic didacticians), equally well-founded, as they familiarize them with school regulations and help interpret educational processes using the knowledge acquired during their studies.

Senior (2012, p. 4) emphasizes that the mentor examines and transforms practice into educational knowledge for the mentee teacher, maximizing opportunities for their learning in the classroom and the wider school environment. The study by Laker et al. (2008) notes that learning to teach is a constructivist activity in which novice teachers progress from peripheral participation in school experiences to full membership in the community of practice, transitioning from formal to informal sources of support. The study by Dreer (2021), based on longitudinal analysis, underlines the favorable effects of the mentor-mentee relationship in teacher education, as it significantly impacts the well-being and ability of student teachers to develop during the practical phases of training.

Detailed descriptions of the mentor teacher's competencies are found in the Professional Standard of the Mentor Pedagogical Employee (Ministerstvo školstva, vede, výskumu a športu Slovenskej republiky, 2017), which is composed of 3 areas. The first area emphasizes that the mentor teacher should identify the student's individual educational and personal needs and their learning style during pedagogical practice; the second area focuses on managing the practical training process (e.g., coordinating the process of pedagogical practice, assisting in adopting a new social role, guiding the student towards self-reflection, etc.); and the third area foregrounds planning and implementing professional growth, self-development, and identifying with the role of a specialist and the school.

A cooperating teacher in the role of a mentor is expected to observe the activities and behaviors of the student teacher in practice, provide teaching models, and help them develop one that aligns with their skills. This inevitably involves assessing educational performance and designing strategies to enhance student teachers' engagement. The mentor serves as a mediator between the academic discourse of formal theories and the discourse of school practice, which is grounded in personal practical theories.

Van Ginkel et al. (2018) note that successful mentor-mentee relationships are fundamental for novice teachers entering the profession, and the effectiveness of mentoring largely depends on the mentor's diagnostic skills. Ellis et al. (2020), in a systematic summation of elements characterizing progressive mentors in teacher training, draw attention, based on expert findings, that mentors should be open to new ideas, including those related to assessment procedures. Their role is not merely to oversee the performance of student teachers, fulfilling a perceived role of a custodian. This is supported by Orosova and Boberova (2016) and Novocký et al. (2021), who created diagnostic tools for the evaluation of student teaching by mentor teachers. Assessing the readiness of future teachers for school practice by mentors is already an established process for implementing changes at pedagogically oriented faculties (Hall et al., 2019a; Sedumedi & Mundalamo, 2014).

Compared to department didacticians, mentor teachers are in much more frequent contact with student teachers, especially during final continuous practices. They also demonstrate the

possibilities of using reflective methods during joint analyses of teaching units, facilitate students' professional reasoning, and support the incorporation of proposals emerging from their professional communication—a model that the Department of Pedagogy at the Faculty of Arts, UPJŠ, for instance, seeks to implement in its core mentoring activities (Orosova et al., 2023).

In line with Lacina et al. (2016), who present a three-phase model of mentoring, it is argued that a core teaching problem is identified by the mentor and mentee, their perspective on understanding it shifts, and resources are sought to address it. This process involves guided conversations and active listening, alongside the establishment of specific, time-bound, and achievable goals.

Consequently, demands are naturally placed on the aforementioned competencies of the mentor teacher to recognize the potential of the student teacher in practice, through the lens of expected professional competences in relation to students, the educational process, and professional development. It is considered especially important to understand mentors' perspectives on the educational performance of teacher-training students, since the structure of teacher-education programs is not continuous but divided into subject-specific (disciplinary) and pedagogical (teacher-training) components. For this reason, mentors can be viewed as a key source of feedback that supports the pedagogical growth of future teachers and informs changes in university education.

Our aim was to analyze which factors show a potential influence on the evaluation of student teachers' professional competencies by mentors and how they evaluate specific skills of student teachers within the given competencies.

## 2. Literature Review

Our study investigates the professional competencies of student teachers from the crucial perspective of mentor teachers. This focus on practical training aligns with the broader consensus that field experience is a fundamental component of Initial Teacher Education (ITE) (Scorțescu & Sava, 2024). However, this third-party perspective reveals that mentors often lack the specific, consistent training necessary to guide future teachers effectively, which may influence their evaluations (Scorțescu et al., 2024).

Findings suggest specific areas of weakness in student teacher development, particularly concerning Didactic-Methodological Competence (orienting in curricular content), Developmental competence (using reflective methods), Diagnostic Competence (identifying needs of diverse students), and Evaluation competence (assessment using multiple procedures). The struggle with reflective practices is a common theme in educational research. Reflection is recognized as a vital tool for pre-service teachers, enhancing self-awareness and critical thinking (Almutawa & Alfahid, 2024). To foster this, strategies such as examining peer group mentoring and joint reflection have been proposed to better equip students for becoming reflective practitioners (Tiainen & Lutovac, 2024).

Ultimately, the quality of the practical training experience is closely linked to the mentor-mentee relationship. Research suggests a connection between the quality of mentoring (which includes the use of functional relationship styles) and the well-being and professional growth of both the mentor and the student (Dreer-Goethe, 2023). This provides context for the main study's recommendations, which propose strengthening skills through active practice, exposure to diverse school environments, and structured opportunities for reflection supported by the mentor. The collective body of work underscores that improving student

competencies requires not only targeted academic preparation but also a concerted effort to support and professionalize the mentors who provide the third-party evaluation.

### 3. Research Methodology

To monitor the assessment of professional competencies of student teachers by mentors, a self-developed Likert-scale questionnaire consisting of 40 items was used, identifying the expected competencies that student teachers should demonstrate during their teaching practicum in relation to students, management of the educational process, and professional development.

The conceptual definition of competencies adhered to the professional teacher standard for primary and secondary education. However, its content is challenged by the perspectives of cooperating teachers at the Department of Pedagogy, Faculty of Arts, UPJŠ, regarding how teaching practice actually takes place in training schools and what they consider most important when observing and assessing the professional skills and qualifications of their mentees.

Each semester, as part of ongoing research projects at the Department of Pedagogy, a workshop is conducted where mentors have the opportunity to reflect on the strengths and limitations of teaching practicum experiences, propose meaningful improvements for their optimization, exchange experiences with one another and with faculty members, and learn new insights regarding the implementation of changes in teacher education programs.

The research instrument and the structuring of its items were therefore based not only on normative standards but also on a critical and constructive perspective regarding the extent to which they corresponded less or not at all with actual school practice in relation to student teachers. Mentor teachers evaluated individual skills by selecting options on a Likert scale formatted as a grading scale (1 – excellent, 2 – very good, 3 – good, 4 – satisfactory, 5 – insufficient), where lower values indicated a higher level of student teachers' skills.

Before its implementation, the questionnaire was piloted ( $n = 10$ ) with mentors and was also reviewed several times by members of the Department of Pedagogy in light of the needs identified by student teachers in the department's core courses, including pedagogy and didactics for teachers and experiential pedagogy, as well as in other courses developed to respond to the latest educational trends (e.g., classroom management, teacher self-help groups, educational diagnostics, foundations of special education).

Subsequently, for initial validation purposes, an exploratory factor analysis was conducted on the data. Given that this involved a preliminary assessment of the instrument's internal structure in relation to the defined conceptual framework of the monitored professional competencies, the principal components method with oblique promax rotation was preferred, as teacher competencies are relatively interconnected and more complex (e.g., changing a teacher's educational strategy simultaneously alters their perspective on student diagnostic methods and approaches to professional self-evaluation)—though this does not imply they form a single unified professional characteristic and they can also be viewed individually. The minimum cut-off for item factor saturation was set at 0.40.

First, a seven-factor solution was analyzed, considering eigenvalues greater than 1. However, this solution posed challenges in interpreting the resulting factors. Therefore, the proposed structure of 4 domains was subsequently worked with, taking into account eigenvalues greater than 1.5. According to Szeliga (2010), the Kaiser criterion is not always decisive; rather, it is more important to obtain an interpretable factor composition. Based on the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy (0.911) and Bartlett's test of

sphericity (approx. chi-square = 3276.242;  $p = 0.000$ ), the factor analysis proved feasible for the obtained data. The correlations of factor scores ranged from 0.54 to 0.62.

Four items had factor saturation below 0.40 (*orient themselves in mandatory curricular documents and other pedagogical documentation; assess students using multiple standards—comparing the student with themselves over time, comparing the student with predefined criteria; apply rules of verbal and nonverbal communication when working with students; adapt educational programs according to students' educational needs, or the class*). Additionally, three other items exhibited cross-loadings (they load significantly on more than one factor: *use multiple methods and forms of student assessment; identify students' learning styles; identify philosophical and psychological aspects of student assessment—justify why they assess students as they do; what impact it will have on them*).

The first factor captured how mentor teachers evaluate student teachers' didactic-methodological competence during pedagogical practice. It included items reflecting abilities related to lesson preparation and implementation (setting educational objectives and using resources). After removing items, the factor explained 46.88% of the total variance in variables, with factor saturations ranging from 0.42 to 0.83 and a Cronbach's alpha of 0.941.

The second factor captured how mentor teachers evaluate student teachers' developmental competence during pedagogical practice. It included items reflecting abilities related to self-diagnosis, reflection, and professional development. After removing items, the factor explained 6.26% of the total variance in variables, with factor saturations ranging from 0.57 to 0.87 and a Cronbach's alpha of 0.899.

The third factor captured how mentor teachers evaluate student teachers' diagnostic competence during pedagogical practice. It included items reflecting abilities related to knowing students and their individual characteristics. After removing items, the factor explained 4.73% of the total variance in variables, with factor saturations ranging from 0.55 to 0.82 and a Cronbach's alpha of 0.875.

The fourth factor captured how mentor teachers evaluate student teachers' evaluation competence during pedagogical practice. It included items reflecting abilities related to assessing students' cognitive and affective performance, along with items highlighting the complexity of applying student assessment, which likely depends on prevailing school philosophies and teachers' professional identities. After removing items, the factor explained 4.30% of the total variance in variables, with factor saturations ranging from 0.57 to 0.79 and a Cronbach's alpha of 0.877.

The entire research instrument exhibited a Cronbach's alpha of 0.964. Based on this finding, along with the reported range of factor score correlations and the total explained variance across individual factors, it can be argued that didactic-methodological competence emerges as the core competency and therefore warrants closer examination in order to explore its internal structure more explicitly. Items corresponding to the aforementioned factors (dimensions) are presented in Tables 3, 4, 5, and 6.

In light of the aforementioned objective, the following research questions have been formulated:

- *RQ1: Is there a statistically significant difference in mentor teachers' evaluation of student teachers' didactic-methodological competence in terms of selected factors?*
- *RQ2: Is there a statistically significant difference in mentor teachers' evaluation of student teachers' developmental competence in terms of selected factors?*
- *RQ3: Is there a statistically significant difference in mentor teachers' evaluation of student teachers' diagnostic competence in terms of selected factors?*

- *RQ4: Is there a statistically significant difference in mentor teachers' evaluation of student teachers' evaluation competence in terms of selected factors?*
- *RQ5: How do mentor teachers evaluate the didactic-methodological skills of student teachers in pedagogical practice?*
- *RQ6: How do mentor teachers evaluate the developmental skills of student teachers in pedagogical practice?*
- *RQ7: How do mentor teachers evaluate the diagnostic skills of student teachers in pedagogical practice?*
- *RQ8: How do mentor teachers evaluate the evaluation skills of student teachers in pedagogical practice?*

### 3.1. Research Sample

A purposive convenience sampling method was used to assemble the research sample. Mentor teachers working with the Department of Pedagogy at the Faculty of Arts, Pavol Jozef Šafárik University in Košice, were contacted via email addresses provided through a database managed by the coordinator of teaching practicum organization (2023/2024). The research was therefore conducted using an anonymous online questionnaire and did not collect any identifying data. Respondents were informed prior to participation about the purpose of the research, the voluntary nature of participation, and the procedures for data processing. The results will be provided to them in aggregated form without compromising their privacy.

Upon reviewing the data collected from respondents, no duplicates were found, and only teachers currently serving as mentors were included in the study (as confirmed by a positive response to an item in the questionnaire section characterizing the research sample). There were no missing data. The response rate could not be determined due to the use of convenience sampling. Clustering by school was not applied because the sample was obtained through convenience sampling and the number of respondents per school could not be controlled. In total, 105 respondents participated in the study. A full description of the sample is presented in Table 1.

*Table 1: Characteristics of the research sample*

<b>Demographic characteristics of the research sample</b>	<b>N</b>	<b>%</b>
Gender		
<i>Female</i>	89	84.76
<i>Male</i>	16	15.24
Location		
<i>Regions outside Eastern Slovakia</i>	29	27.62
<i>Prešov and Košice regions</i>	76	72.38
School type		
<i>Primary school</i>	40	38.10
<i>Secondary vocational schools</i>	17	16.19
<i>Grammar schools</i>	44	41.90
<i>Combined schools</i>	4	3.81
Age		
<i>26–35 years, 36–45 years</i>	32	30.48
<i>46–55 years</i>	37	35.24
<i>over 56 years</i>	36	34.29
Length of teaching experience		
<i>6–10 years, 11–15 years</i>	18	17.14
<i>16–20 years, 21–25 years</i>	40	38.10

<b>Demographic characteristics of the research sample</b>	<b>N</b>	<b>%</b>
<i>26–30 years, 31 and more years</i>	47	44.76
Length of experience as a mentor teacher		
<i>0–2 years, 3–5 years</i>	23	21.90
<i>6–10 years, 11–15 years</i>	46	43.81
<i>16 and more years</i>	36	34.29
Acquisition of teacher qualification		
<i>University study in a teacher specialization</i>	95	90.48
<i>University study in a non-teacher specialization and supplementary pedagogical study (+ teacher qualification was not required)</i>	10	9.52
Position of induction teacher		
<i>Yes</i>	43	40.95
<i>No</i>	62	59.05
Position of school leader		
<i>Yes</i>	11	10.48
<i>No</i>	94	89.52
Highest achieved career level		
<i>Independent pedagogical employee</i>	14	13.33
<i>Pedagogical employee with 1st attestation</i>	38	36.19
<i>Pedagogical employee with 2nd attestation</i>	53	50.48
Teaching subjects		
<i>Humanities subjects</i>	44	41.90
<i>Science subjects</i>	41	39.05
<i>Subject combination</i>	16	15.24
<i>Specialized subjects</i>	4	3.81
Coverage of practice types		
<i>Demonstration pedagogical practice, Observation-assistant pedagogical practice</i>	5	4.76
Demographic characteristics of the research sample	N	%
<i>Demonstration pedagogical practice, Observation-assistant pedagogical practice, Continuous practice</i>	20	19.05
<i>Continuous and final comprehensive practice simultaneously (+ also the first two types of practice)</i>	50	47.62
<i>Only comprehensive practice</i>	30	28.57
Completion of training to develop mentor competence		
<i>Yes</i>	12	11.43
<i>No</i>	93	88.57

### 3.2. Data Analysis

To evaluate statistically significant differences between the variables, parametric tests (independent t-test, ANOVA, Bonferroni post hoc test) were applied, because normality of distribution for the subsamples was shown by the dependent variables, as tested using the Kolmogorov-Smirnov and Shapiro-Wilk tests ( $p > 0.05$ ). In one case, due to a violation of the assumption of homogeneity of variances, the Welch test was preferred instead of ANOVA. Non-parametric alternatives to these tests were also performed, but they yielded similar results. Subsamples with fewer than 10 respondents were not included in the comparisons. Because 52 tests were conducted across four research questions—thus performing multiple comparisons—the Bonferroni correction was applied, resulting in a significance level of  $p \leq 0.00096$ .

To evaluate effect size, Hedges'  $g$  was used for the independent samples t-test (Glass' delta in cases where the homogeneity of variances condition was not met), and omega-squared fixed-effect for ANOVA and the Welch test. The confidence interval for the effect size was set at 95% (CI95). From descriptive statistics, the arithmetic mean (AM) and standard deviation

(SD) were used (confidence intervals for the mean at the 95% level are also reported for the evaluation of specific skills of student teachers). Statistical data processing was performed using the SPSS 27.0.1.0 program.

#### 4. Research Results

In the following tables, a summary of the results according to the research questions mentioned is presented. Within Table 2, factors influencing the evaluation of student teachers' professional competencies by the mentors supervising them during their teaching practice are commented on. Within the remaining tables (3, 4, 5, 6), the assessment of the skills corresponding to the respective competencies of the student teachers by the mentors is commented on (starting with those that received better ratings and ending with those that received poorer ratings).

*Table 2: Differences in the evaluation of the level of student teachers' professional competencies by mentor teachers in terms of selected variables*

Variables	Dependent variables							
	Didactic-methodological competence		Developmental competence		Diagnostic competence		Evaluation competence	
Gender	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	0.043	0.965	-0.001	1.000	0.516	0.607	0.099	0.921
	Hedges' g correction		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	0.012		0.000		0.139		0.027	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.517 – 0.540		-0.528 – 0.528		-0.390 – 0.668		-0.502 – 0.555	
Location	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	2.377	0.019	1.964	0.052	2.328	0.022	1.068	0.288
	Hedges' g correction		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	0.515		0.426		0.504		0.231	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	0.083 – 0.944		-0.004 – 0.853		0.073 – 0.933		-0.195 – 0.657	
School type	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	0.325	0.724	0.671	0.513	1.079	0.344	1.642	0.199
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	-0.014		-0.007		0.002		0.013	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	

Variables	Dependent variables							
<i>Independent variables</i>	<i>Didactic-methodological competence</i>		<i>Developmental competence</i>		<i>Diagnostic competence</i>		<i>Evaluation competence</i>	
	-0.020 – 0.033		-0.020 – 0.054		-0.020 – 0.073		-0.020 – 0.094	
Age	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	2.388	0.097	1.747	0.179	4.311	0.016	1.142	0.323
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	0.026		0.014		0.059		0.003	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.019 – 0.114		-0.019 – 0.094		-0.017 – 0.162		-0.019 – 0.073	
Variables	Dependent variables							
Length of experience – teacher	Welch's test	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	0.733	0.485	0.345	0.709	1.361	0.261	0.201	0.818
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	-0.009		-0.013		0.007		-0.015	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.019 – 0.044		-0.019 – 0.033		-0.019 – 0.081		-0.019 – 0.021	
Length of experience – mentor teacher	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	0.438	0.647	0.188	0.829	1.561	0.215	0.583	0.560
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	-0.011		-0.016		0.011		-0.008	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.019 – 0.040		-0.019 – 0.020		-0.019 – 0.088		-0.019 – 0.048	
Teacher qualification	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	-1.560	0.122	-0.591	0.556	-0.083	0.934	-1.169	0.245
	Hedges' g correction		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	-0.515		-0.195		-0.027		-0.386	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-1.164 – 0.137		-0.842 – 0.453		-0.674 – 0.619		-1.034 – 0.264	

Variables	Dependent variables							
	<i>Didactic-methodological competence</i>		<i>Developmental competence</i>		<i>Diagnostic competence</i>		<i>Evaluation competence</i>	
Independent variables	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	-0.042	0.966	-0.259	0.796	0.010	0.992	-0.350	0.727
	Glass's delta		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	-0.010		-0.051		0.002		-0.069	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.399 – 0.379		-0.437 – 0.335		-0.384 – 0.388		-0.455 – 0.317	
Position of induction teacher	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	0.226	0.821	1.769	0.080	0.590	0.556	0.083	0.934
	Hedges' g correction		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	0.072		0.560		0.187		0.026	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.549 – 0.692		-0.066 – 1.183		-0.434 – 0.807		-0.594 – 0.646	
Position of school leader	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	0.209	0.812	0.007	0.993	1.233	0.296	0.319	0.728
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	-0.015		-0.019		0.004		-0.013	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.019 – 0.022		-0.019 – -0.019		-0.019 – 0.076		-0.019 – 0.032	
Career level	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	0.044	0.957	0.443	0.643	0.937	0.395	0.529	0.591
	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
Teaching subjects	-0.019		-0.011		-0.001		-0.009	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.020 – -0.009		-0.020 – 0.042		-0.020 – 0.067		-0.020 – 0.047	
Types of practice	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value	ANOVA (F)	p-value
	1.072	0.347	0.650	0.525	1.790	0.172	0.735	0.482

Variables	Dependent variables							
	Didactic-methodological competence		Developmental competence		Diagnostic competence		Evaluation competence	
Independent variables	Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect		Omega-squared Fixed-effect	
	0.001		-0.007		0.016		-0.005	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.020 – 0.073		-0.020 – 0.054		-0.020 – 0.100		-0.020 – 0.058	
Completion of training	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value	independent t-test	p-value
	-0.234	0.815	-0.700	0.486	-0.092	0.927	-0.714	0.477
	Hedges' g correction		Hedges' g correction		Hedges' g correction		Hedges' g correction	
	-0.071		-0.213		-0.028		-0.218	
	CI range of effect size		CI range of effect size		CI range of effect size		CI range of effect size	
	-0.668 – 0.526		-0.810 – 0.385		-0.625 – 0.569		-0.815 – 0.381	

Analysis of the results presented in Table 2 showed that school location was significant in mentors' evaluations of student teachers' didactic-methodological (t-test = 2.377; p = 0.019; Hedges' g = 0.515) and diagnostic competence (t-test = 2.328; p = 0.022; Hedges' g = 0.504). However, after applying the Bonferroni correction to adjust the significance level ( $\alpha = 0.05/52 \approx 0.00096$ ), these differences no longer reached statistical significance, but a medium-sized effect was observed here. The confidence intervals did not include zero, indicating a relatively stable but not entirely precise estimate of the effect. Respondents working in schools outside the Prešov and Košice regions scored higher (indicating a lower perceived level of competence) in didactic-methodological (AM = 2.77; SD = 0.61) and diagnostic (AM = 3.01; SD = 0.67) competence compared to those working in the regions of Eastern Slovakia (AM = 2.45; SD = 0.61; AM = 2.68; SD = 0.64).

Teachers' age was significant in mentors' evaluations of student teachers' diagnostic competence (ANOVA = 4.311; p = 0.016;  $\omega^2 = 0.059$ ). However, after applying the Bonferroni correction to adjust the significance level ( $\alpha = 0.05/52 \approx 0.00096$ ), these differences no longer reached statistical significance, but a medium-sized effect was observed here. The confidence interval included zero, was relatively wide, and indicated some uncertainty in the estimated effect. This difference was identified between the last two groups of mentor teachers (p = 0.013; after the correction, it was no longer statistically significant). Respondents aged 46–55 years scored higher (indicating a lower perceived level of competence) in this competence (AM = 2.97; SD = 0.72) compared to those aged over 56 years (AM = 2.53; SD = 0.56).

Differences based on teaching qualification were not statistically significant, although a medium-sized effect was observed for didactic-methodological competence (Hedges' g = -0.515), with the confidence interval including zero and being quite wide. Respondents who obtained their teaching qualification through supplementary pedagogical studies scored higher (indicating a lower perceived level of student teachers' competence) in this

competence (AM = 2.83; SD = 0.65) than those who obtained it through a teacher education program (AM = 2.51; SD = 0.62).

Differences based on holding a leader position were not statistically significant, although a medium-sized effect was observed for developmental competence (Hedges'  $g = 0.560$ ), with the confidence interval including zero and being quite wide. Respondents holding a leader position scored higher (indicating a lower perceived level of student teachers' competence) in this competence (AM = 2.99; SD = 0.55) than those not in leadership roles (AM = 2.61; SD = 0.68).

Other variables, such as gender, school type, length of teacher experience, length of mentor teacher experience, position of induction teacher, career level, teaching subjects, type of supervised teaching practice, and completed mentor teacher training, did not show any meaningful effects.

*Table 3: Evaluation of the level of didactic-methodological skills of student teachers by mentor teachers*

Skills	N	AM	SD	CI for mean
use material and technical resources in teaching	105	1.90	0.80	1.74 – 2.05
apply principles of pedagogical (or didactic) communication when working with students	105	2.39	0.67	2.26 – 2.52
carry out a didactic analysis of the curriculum by identifying its core elements (facts, concepts, relationships, procedures)	105	2.53	0.76	2.39 – 2.68
plan classroom teaching with consideration of both the theoretical and practical aspects of subject-specific didactics (relevant specialization)	105	2.53	0.77	2.38 – 2.68
organize individual and group activities in the educational process	105	2.53	0.82	2.37 – 2.69
define teaching objectives as clear learning requirements for students	105	2.54	0.84	2.38 – 2.71
apply teaching methods that promote students' cognitive engagement (encouraging them to actively participate in the learning process)	105	2.55	0.87	2.38 – 2.72
apply contemporary models of cognitive activation to promote students' active engagement in the learning process	105	2.58	0.83	2.42 – 2.74
transform the scientific framework of a discipline into the didactic system of a subject (clarifying the more complex parts of the curriculum to students in the simplest way possible)	105	2.63	0.87	2.46 – 2.80
select specific tasks and activities for students	105	2.64	0.93	2.46 – 2.82
when formulating teaching objectives. consider the development of students' key competencies	105	2.65	0.82	2.49 – 2.81
define core and extended curriculum content in the context of educational objectives and students' individual needs	105	2.73	0.75	2.59 – 2.88
apply strategies to develop students' literacies (e.g., reading, financial, informational, etc.)	105	2.81	0.84	2.65 – 2.97

Based on the data shown in Table 3, it is stated that a lower level of development is attributed by mentor teachers to student teachers in transforming the scientific framework of a discipline into the didactic system of a subject (AM = 2.63; SD = 0.87) in selecting specific tasks and activities for students (AM = 2.64; SD = 0.93), when formulating teaching objectives with consideration for the development of students' key competencies (AM = 2.65;

SD = 0.82), defining core and extended curriculum content in the context of educational objectives and students' individual needs (AM = 2.73; SD = 0.75), and applying strategies to develop students' literacies (e.g., reading, financial, informational, etc.) (AM = 2.81; SD = 0.84).

*Table 4: Evaluation of the level of developmental skills of student teachers by mentor teachers*

Skills	N	AM	SD	CI for mean
carry out self-assessment of educational activities (evaluate feedback)	105	2.53	0.96	2.35 – 2.72
when planning professional development, base it on the needs of the school where they work	105	2.54	0.76	2.40 – 2.69
identify their own teaching style	105	2.56	0.82	2.40 – 2.72
when planning professional development accordingly to applicable criteria (e.g., professional standards)	105	2.65	0.77	2.50 – 2.80
identify their educational philosophy (justify why and how they teach)	105	2.67	0.86	2.50 – 2.83
carry out purposeful professional reflection (structured according to predetermined questions)	105	2.70	0.88	2.54 – 2.87
use reflective methods (various questionnaires, self-observation sheets, etc.)	105	2.90	0.88	2.73 – 3.08

Based on the data shown in Table 4, it is stated that a lower level of development of developmental skills is attributed by mentor teachers to student teachers when planning professional development accordingly to applicable criteria (e.g., professional standards) (AM = 2.65; SD = 0.77), identifying their educational philosophy (justifying why and how they teach) (AM = 2.67; SD = 0.86), carrying out purposeful professional reflection (structured according to predetermined questions) (AM = 2.70; SD = 0.88), and using reflective methods (various questionnaires, self-observation sheets, etc.) (AM = 2.90; SD = 0.88).

*Table 5: Evaluation of the level of diagnostic skills of student teachers by mentor teachers*

Skills	N	AM	SD	CI for mean
identify the biological aspects of student development (age-related characteristics, current physical condition)	105	2.48	0.80	2.32 – 2.63
identify individual student characteristics (motivation, interests, creativity)	105	2.60	0.85	2.44 – 2.76
identify the psychological aspects of student development (abilities, skills, habits)	105	2.66	0.76	2.51 – 2.80
apply pedagogical assessment of students (understand the characteristics of the class and individual learners)	105	2.81	0.87	2.64 – 2.98
identify the educational needs of integrated (inclusive) students	105	3.00	0.93	2.82 – 3.18
identify the educational needs of students from diverse sociocultural backgrounds (e.g., Roma students, Ukrainian students)	105	3.06	0.86	2.89 – 3.22

Based on the data shown in Table 5, it is stated that a lower level of development of diagnostic skills is attributed by mentor teachers to student teachers in applying pedagogical assessment of students (understanding the characteristics of the class and individual learners) (AM = 2.81; SD = 0.87), identifying the educational needs of integrated (inclusive) students

(AM = 3.00; SD = 0.93), and identifying the educational needs of students from diverse sociocultural backgrounds (e.g., Roma students, Ukrainian students) (AM = 3.06; SD = 0.86).

*Table 6: Evaluation of the level of evaluation skills of student teachers by mentor teachers*

Skills	N	AM	SD	CI for mean
carry out student assessment within the context of methodological guidelines (follow established principles)	105	2.37	0.85	2.21 – 2.54
motivate students to follow school rules and maintain discipline in the classroom	105	2.49	0.88	2.32 – 2.66
carry out student assessment in a way that supports the development of their individual potential	105	2.60	0.85	2.44 – 2.76
monitor and influence the classroom climate	105	2.60	0.84	2.44 – 2.76
identify the school culture (its vision, plans, values, etc.).	105	2.60	0.87	2.43 – 2.77
identify with the teaching profession (including activities and responsibilities beyond classroom teaching)	105	2.61	0.95	2.43 – 2.79
carry out student assessment appropriately, considering individual characteristics (focus on performance and use descriptive language)	105	2.71	0.84	2.55 – 2.88

Based on the data shown in Table 6, it is stated that a lower level of development of evaluation skills is attributed by mentor teachers to student teachers in carrying out student assessment in a way that supports the development of their individual potential (AM = 2.60; SD = 0.85), monitoring and influencing the classroom climate (AM = 2.60; SD = 0.84), identifying the school culture (its vision, plans, values, etc.) (AM = 2.60; SD = 0.87), identifying with the teaching profession (including activities and responsibilities beyond classroom teaching) (AM = 2.61; SD = 0.95), and carrying out student assessment appropriately, considering individual characteristics (focusing on performance and using descriptive language) (AM = 2.71; SD = 0.84).

## 5. Discussion

Mentor teachers make it easier for student teachers to assess their professional experiences and identify needs, the fulfillment of which helps them align themselves with the role of a teacher. The conclusion of the study by Damoah and Kkalo (2024) is that mentors support student teachers in developing confidence and skills by providing them with feedback and guidance. This is precisely one of the reasons why it is justified to form an understanding of the effectiveness of teacher preparation through an analysis of mentors' perspectives on the students' competency growth.

It was found that the location of practice schools acts as an antecedent influencing how mentor teachers assess the didactic-methodological and diagnostic competence of teaching students during their internships (respondents working at schools outside the Prešov and Košice regions reported, on average, higher ratings, indicating worse perceived competence). The location of practice schools may also underlie mentors' prioritization of student teachers (Mbhiza et al., 2024), but this is likely related to the criteria mentors encounter when being evaluated by academics. Mentors do not necessarily provide their services exclusively to a single faculty of education, and by comparing internship requirements across different teacher education programs, they can more adequately assess the competency development of

beginning teachers. The quality of teaching and learning in schools is also influenced by their geographic location, which affects the availability of resources that support student motivation and professional exchange of experience (Chand & Mohan, 2019). In Boman's (2023) study, a small but statistically significant negative relationship was found between distance from Stockholm and the intake ratings of selected secondary school programs, primarily due to other latent factors, which are discussed later in the text.

It was shown that the age of mentor teachers is a factor that plays a role in how they evaluate the diagnostic competence of student teachers in practice (respondents of older age reported lower average values here, indicating better perceived competence). Based on Poliach's findings, presented by Kariková (2011), as teachers' age increases, the values of a restrictive approach to colleagues decrease (this applied to teachers aged over 45, but it is not excluded that this finding is also transferable to older colleagues who have gone through the stabilization phase in the profession and are gradually reaching the phase where they leave it). They tend to evaluate colleagues most leniently, while younger teachers are more critical. With increasing age, the preference for an approach characterized by seeking help also grows. This would point to the need for reverse mentoring (Raberger et al., 2024).

Pedagogical diagnosis, the identification of individual student characteristics that support their learning processes, serves as a foundation for any changes in educational practice, including guidance for professional development. It is not limited to testing and examination methods but involves the design of learning situations that allow teachers to understand students across various aspects of their personality. This is not achievable without the application of active, engaging strategies, with which older teachers may lack experience (while the primary purpose of a didactic method may differ, it is assumed to complement information about students for a more comprehensive assessment).

The research findings also suggest that determinants such as how mentor teachers evaluate the didactic-methodological competence of student teachers based on their qualifications, and how mentor teachers evaluate the developmental competence of student teachers based on their performance in the role of school leader, should not be underestimated. The more favorable evaluations of didactic-methodological competence by mentors who completed a teacher education program indicate a more sensitive approach based on their own practical experiences, in which they value flexibility and innovations in the classroom. It can be considered that the stricter evaluations of developmental competence (self-diagnosis, professional reflection) by school leaders as mentors reflect their leadership role, which emphasizes strategic self-reflection and readiness for managerial tasks in the school. Supporting arguments for the first case can be found, for example, in the *Analysis of Findings on the State of Education in Slovakia* (Hall et al., 2019b), where the significance and justification of supplementary pedagogical studies are discussed, and for the second case in the study by Berhanu (2025) or Schott et al. (2020).

Among the skills belonging to didactic-methodological competence, those related to working with the curriculum are considered the least developed in students according to mentor teachers. The analysis of findings on the state of education in Slovakia "To dá rozum" (Hall et al., 2019b) showed that the basic structure of teacher education here does not differ significantly compared to abroad, however, the preparation for the teaching profession inadequately covers the area of inclusive education, and the development of theoretical knowledge prevails over practical skills (even how to teach is mostly mediated to students, which is probably due to the fact that subject didactics are taught by experts in another field, but not directly in education). There is considerable discussion about what teaching students should teach, but far less attention is given to how they should teach it, meaning finding

alignment between objectives, content, and instructional strategies. A comprehensive understanding of the curriculum is lacking, which, following Petlák (2016) and his reliance on Glatthorn's definition, results in problems with managing learning in schools at the level of grade, year, and individual classes.

There is considerable discussion about what student teachers should teach, but less consideration is given to how to implement it. The development of various types of student literacy is aided by confronting cross-cutting themes, which are an integral part of state educational programs, and the possibilities of their implementation in teaching subjects, which Kremnická (2021) comments on in more detail.

From Rovňanová's research (2017), it emerged that among the activities students do not encounter in practice at all during their studies, besides the distribution of curriculum for a specific time period and working with students with special educational needs, is the maintenance of pedagogical documentation. This could also guide them in working with curricular content. The primary role model for student teachers in this case could be university teachers, regardless of the field. The research results of Kremnická and Rovňanová (2024) indicate that, out of the three competency dimensions, the dimension of the educational process received the highest rating from students for university teachers, meaning that competencies focused on the planning, implementation, and evaluation of the educational process were attributed the highest importance.

Among the skills belonging to the developmental competence, those related to the implementation of professional reflection (reflective methods) are the least developed among students, according to the opinion of mentor teachers. Although it is emphasized that professional reflection represents the starting point for the professional development of student teachers in practice (Nekoda, 2018), it is also true that it is not an entirely natural process and must be, so to speak, learned (knowing its levels, purpose, and not perceiving it only from the position of automatic reaction to changes taking place in classrooms) (Stavroula & Pyrgiotakis, 2009; Svojanovsky, 2017).

This essentially presents a challenge for university faculties of education to structure teaching students' internships in a way that allows them not only to practice selected activities but, more importantly, to focus on reviewing and developing their educational knowledge (for more details, see Slavík, Müllerová, Soukupová et al., 2020). For an adequate approach to reflective teaching, the mentor's engagement is also necessary, as their guidance in analyzing instruction facilitates the learning process.

One of the results of Tillema's research (2009), which also focused on the perception of the role of assessors when evaluating student teachers' practical lessons, is that those who are more connected to the teacher education program (supervisors and students) favor a reflective role and responding in the form of a critical friend, while mentors prioritize a managerial and performance-oriented role.

Findings from the study by Sempowicz and Hudson (2011) showed that teachers' reflective thinking during the internship phase was more evident when the mentor did not dominate the conversation but instead asked the mentee inventive questions related to pedagogical knowledge, thereby helping to facilitate reflection. Osvaldová (2016) argues that it is necessary to clarify to the student what is expected of them in terms of outcomes, but it is preferable that this is not done through a monologue with ready-made instructions, but rather through a dialogue enriched with feedback. It often happens that interns focus too much on what comes next and what they are required to accomplish during the internship while paying insufficient attention to what is actually happening in the classroom.

In a qualitative study conducted by Orsdemir and Yildirim (2020), which focused on analyzing mentoring practices and areas of development from the perspective of teaching students, it was found that while modeling teaching and the mentor's personal attributes represented the most common mentoring practices, practices related to feedback, educational knowledge, and systemic requirements were used only rarely. The study responds to the fact that most teacher education programs tend to assign mentors to students without special preparation for this role.

The study by Fernández-Morante et al. (2024) showed discrepancies in the activities carried out by university and school mentors. From the moment student teachers begin their practice, mentors are asked to agree on the activities that will form the basis of their learning and on the mechanisms of cooperation before, during, and after the internship. The study also encounters the existence of statistically significant differences in the intensity with which school mentors address fundamental topics (elements) in the process of guiding students according to educational levels.

Among the skills belonging to diagnostic competence, those connected with inclusive education are considered the least developed by mentor teachers in students. Although student teachers are familiar with the philosophy of inclusive education, its conceptual framework, and legislative documents defining the principles on which it should be based in schools, inclusive approaches are viewed differently in practice. There is no dominant model for working with diverse students (Vorlíček, 2019). In the beginning, it is probably more appropriate to start with students' attitudes towards students with limitations. According to the study by Steinert and Jurkowski (2024), teachers are required to demonstrate competence in the area of individualized student support in inclusive classrooms.

Students in their quasi-experimental design research, who completed continuous co-teaching (by university lecturers in special education and general pedagogy), had more positive attitudes towards the inclusion of students with emotional and behavioral problems after the semester ended than those who participated in discontinuous co-teaching. No changes in knowledge occurred. In the study by Lambe and Bones (2006), it is found that while many student teachers claim to support inclusive policies, they advocate that a lack of adequate preparation, concerns about class size, or managing the increasing number of students with special educational needs are issues that need to be addressed before adopting more inclusive practices.

Among the skills belonging to the evaluation competence, the skill to apply multiple student assessment procedures is the least developed among students, according to the opinions of mentor teachers. Schneider and Bodensohn (2017), who also focused on analyzing the development of assessment competence in student teachers in their study, express the conviction that, from the students' perspective, the mentioned competence is important and develops over time. They also perceived it as a contextual entity (dependent on circumstances). The authors state at the beginning of their study that a complex area is being discussed, including the skill of summative and formative assessment.

Rovňanová and Zolyomiová (2016) present in their study the order of difficulty of pedagogical activities, stemming from Rovňanová's original research, where the competence to diagnose the student's personality was ranked second-to-last for student teachers, and teachers were no exception. The question is therefore whether it is even possible to implement other assessment procedures or concepts in teaching (not just varying the forms of summative assessment) without knowing the students' personality characteristics.

## 6. Limitations

The first limitation of the study that should be noted is the method used to create our research sample, which restricts the generalizability of the results to mentor teachers collaborating with the Faculty of Arts at UPJŠ. The second limitation is the number of respondents participating in the study, which complicated the validation of the scale used, because applying factor analysis, according to Gavora (2012), who cites Kline, requires having more than 100 respondents (in our case, the number was 105, which is still too few). Simply put, the data should have a stable structure. For these reasons, the study has an exploratory scope, and replication with a larger sample of respondents is recommended.

## 7. Conclusion

For faculties of education, it could be beneficial to assign student teachers to mentor teachers who simultaneously supervise students from other teacher education programs during their internships, so that they can provide feedback on the requirements placed on beginning teachers, including those outside their own region (for the extension of quality criteria to teaching practice outcomes). It appears important that when assigning student teachers to internships, the mutual benefits of mentoring are taken into account. This ensures that older and more experienced teachers not only guide students in teaching but also develop professionally in collaboration with them, for example, through the creative use of educational resources aimed at understanding students better. This would also apply to younger colleagues, who, on the other hand, likely have different expectations from students, expecting the lessons they conduct to be both exemplary and, at the same time, to provide a current model of teaching.

Based on further key findings, it is appropriate to strengthen reflection in mentoring through workshops led by school leaders and to involve mentors with supplementary pedagogical studies in training to share didactic experiences. In this regard, it is possible to consider the gradual introduction of standardized evaluation scales along with elements of hybrid mentoring, which would contribute to greater balance in evaluations and more effective preparation of future teaching personnel.

When preparing for teaching, student teachers should pay more attention to working with curricular content towards the formulation of objectives, the choice of teaching methods, and classroom conditions. Awareness of this fact concerns both mentors and subject didacticians, who are the first to confront students with the target and competency program of the schools. Teacher preparation faculties should implement structured curriculum seminars both prior to and during teaching practice stages, complemented by subject didacticians' supervision throughout the pedagogical practice phases.

The development of reflective skills requires the mentor's regular analysis of the student teacher's educational activities, the use of adequate reflective methods, but much more essential for its support is for mentor teachers and students to adhere to a firm concept of reflecting on the educational event, which also depends on the partnership between didacticians, students, and mentors (on the triangulation of sources of knowledge and drawing conclusions from pedagogical practice). Mentors should be trained to use reflective questions instead of directive feedback (e.g., "What did you notice about student engagement during the first 15 minutes?"), while guiding student teachers to conduct systematic lesson analysis using templates alongside maintaining a self-reflective portfolio.

The development of students' skills in the area of inclusion in education can be ensured in the first year of master's study through observation practice concentrated in standard primary schools where there are classes with students who have special educational needs and require more frequent assistance from school special educators and psychologists. In the higher year, an alternative is offered for student teachers to teach in classes where there are students with specific learning disabilities, and mentor teachers and pedagogical assistants can help them implement differentiated instruction with regard to the individual educational program (to become familiar with its creation corresponding to the school educational program, taking into account the student's limitations).

In connection with this, didacticians are expected to work with students on exercises involving the design of student assessment (setting it up in a form corresponding to the teaching in subject didactics and parallel refinement in pedagogical diagnostics), and mentor teachers should proceed similarly. They may introduce the applied assessment concept and subsequently the possibilities of its varied implementation using assessment procedures adapted to educational goals and school culture.

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