

Teachers' professional competence and their evaluation

Zdenka Gadušová¹, Alena Hašková², Lubica Predanocytová³

All three authors are at Constantine the Philosopher University, 949 74, Nitra, Slovakia, Tr A Hlinku 1.

¹ E-mail: zgadusova@ukf.sk

ORCID: <https://orcid.org/0000-0002-8954-659X>

² E-mail: aHaskova@ukf.sk

ORCID: <https://orcid.org/0000-0001-8592-7451>

³ E-mail: lpredanocytova@ukf.sk

ORCID: <https://orcid.org/0000-0003-0045-446X>

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Abstract

The reform process of Slovak system of education requires a professional discussion aimed at enhancing the quality of the teacher's professional performance in the context of the pupil's needs and overall optimization of the education system, including qualitative changes in the content and organization of education as well as a change in the social status of teacher. One of the topics discussed was the possibility of increasing the quality of the teacher's performance by mapping them to the requirements of the teacher's professional competency profile. A team of experts from Constantine the Philosopher University in Nitra (Slovakia) has been addressing this issue in the form of a research project *Evaluation of Teacher Competences*, which focuses on the development and design of a comprehensive evaluation model and tools for evaluating different teaching competences.

The research team has developed special evaluation tools – a set of assessment sheets aimed at assessment (Assessment Sheets for evaluators), self-assessment (Self-Assessment Sheets for the observed and evaluated teachers), and a tool to correlate the assessment positions of the evaluator and the evaluated teacher. In developing the tools, the specific focus of each professional competence and the content and performance requirements on teacher's work have been taken into account. The methodology for verifying the efficiency of the designed tools included panel discussion, piloting, and personal interviews. The results of the pilots in primary and secondary schools all over Slovakia were analyzed, evaluated and taken into account when modifying the final version of the evaluation tools. These are now offered for implementation by school managers in Slovak schools.

One of the issues in the research project, testing the process aspect of education, is the competence of planning education. The research, focused on identifying the complex of the given competence components and their analysis. The most important part of the competence is the ability to create a model (plan/scenario) of a lesson, the success of which is based on the correct identification and realization of the educational aims and objectives. The teachers demonstrate competence through their ability to implement relevant didactical transformation of the curriculum content, not only in the view of the requirements of particular subjects, but also in the view of the current societal challenges and needs, taking into account modern and effective methodological approaches. The assessment tools for the competence in educational planning were verified in a pilot. The paper presents partial results of the research, which confirmed the relevance and reasonability of the methodology for the competence assessment. Education and training requirements in the Slovak Republic accept common aspects related to the education of citizens of the European Union and at the same time prioritize education as an essential means for ensuring sustainable development. Achievement of these goals can be ensured not only via transforming the Slovak school system, but also via teachers' personal, professional and career growth.

Keywords: Teachers' professional competences; evaluation; competence in educational planning.

Профессиональные компетенции учителя и их оценка

Зденка Гадушова¹, Алена Гашкова² и Любица Преданоциова³

Все три автора работают в Университете Константина Философа в Нитре, Нитра, Словакия

¹ E-mail: zgadusova@ukf.sk

ORCID: <https://orcid.org/0000-0002-8954-659X>

² E-mail: aHaskova@ukf.sk

ORCID: <https://orcid.org/0000-0001-8592-7451>

³ E-mail: lpredanocyova@ukf.sk

ORCID: <https://orcid.org/0000-0003-0045-446X>

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Аннотация

Реформа словацкой системы образования потребовала повышения качества профессиональной деятельности учителя, в том числе через соблюдение требований к его компетентности. Группой ученых Университета Константина Философа в Нитре (Словакия) осуществлён исследовательский проект «Оценка компетенций учителя», посвященный разработке комплексной модели оценивания и необходимых для этого инструментов. Результатом стали специальные средства оценивания: оценочные листы для экспертов, листы самооценки для учителей и инструмент корреляции оценки экспертов и учителей. В процессе разработки оценочных средств были приняты во внимание специальная направленность каждой профессиональной компетенции и требования к содержанию и эффективности работы учителя. Эффективность разработанных инструментов определялась с помощью панельных дискуссий, пилотных исследований и личных интервью. Были проведены апробация оценочных средств в начальных и средних школах Словакии, анализ и оценка результатов исследования. Полученные данные использованы для корректировки финальной версии оценочных средств, которые будут предложены руководителям словацких школ для практического применения. Один из аспектов работы посвящен компетенции планирования обучения. В рамках исследовательского проекта авторы сосредоточили внимание на определении и анализе компонентов данной компетенции, самый важный из которых – способность создавать модель (план/сценарий) урока, успех которого зависит от правильной постановки образовательных целей и задач и способов их достижения. Эта компетенция проявляется также в способности учителя вносить в содержание учебного плана те изменения, которые диктует современная ситуация и которые ориентированы на наиболее эффективные методологические подходы. Разработанные средства оценивания компетенций, связанных с планированием обучения, были апробированы в пилотном проекте. В статье частично представлены результаты исследования, которые подтвердили актуальность и целесообразность предложенной методики. Требования к образованию и обучению в Республике Словакия разделяют общие подходы к образованию граждан Европейского Союза. В то же время образование рассматривается в качестве основы устойчивого развития общества, что может быть обеспечено как реформой словацкой школьной системы, так и путем личностного, профессионального и карьерного роста учителя.

Ключевые слова: профессиональные компетенции учителя, оценивание, компетенции по планированию обучения.

Introduction

The reform process in the Slovak school system has recently focused on reflection of the current requirements in order to increase quality and efficiency of the teacher's professional work. In this sense, teacher competences represent a set of specific requirements, aimed at improving the quality of their professional performance, in the context of the pupil's needs

and overall optimization of the education system (Predanociová & Jonášková, 2018). Identification of teacher competences and reflecting on them is a complex professional issue related to changes and increasing demands on teaching work. At the end of the 20th century, based on the specification of competences forming the core of teachers' professionalism, Central European experts in the field started to pay attention to the definition of the teacher professional competences and the taxonomical description of their professional profile. Current trends are based on the integrated application of the autonomous subject aspect and the social requirements aspect related to the school system (Pisoňová, 2016). The demands placed on the teacher's personality and their professional performance is systematized in the teacher's competence profile.

In the process of determining and specifying teacher's competence profile, there was a problem of evaluating teacher's competences. Currently, the Slovak theoretical and teaching setting is interested in finding tools for evaluating the work of teachers in the context of the needs for a quality education and training process. The emphasis is put on the achievement of the required competences of the pupil, oriented at coping with personal and social life and work duties.

Research problem

We consider the process of competence evaluation and its measurement by the relevant tools to be a key element in teacher's work. In connection with the absence of comprehensive criteria and tools for an objective evaluation of the teacher's professional performance in Slovakia, the team of experts from Constantine the Philosopher University in Nitra raised the issue of solving the issue. The research intention of the APVV-14-0446 *Evaluation of Teacher Competences* project has been to create a reliable and valid comprehensive teacher competences evaluation model reflecting social and professional requirements.

The initial methodological aspect of the research project was to identify a teacher competence model defining their professional requirements (Oser, 2001; Kasáčová & Kosová, 2007). The result of the team's work is a model that places the selected teacher's professional competences in three dimensions: learner, educational process and teacher. In each dimension, specific competences (knowledge, skills, and attitudes) were singled out, and these were subsequently transformed into ten key competences that create the teacher's competence profile. The research team identified the following teacher competences:

- can identify the developmental and individual characteristics of the pupil;
- can identify psychological and social factors of learner learning;
- can develop pupil's personality and competences;
- can create a positive climate in the classroom;
- is aware of the subject content and its didactics;
- can plan and project the teaching process;
- can select and implement teaching methods and organizational forms of teaching;
- can use material resources (teaching aids) in the teaching process;
- can evaluate the progress and outcomes of teaching and pupils learning;
- can plan and carry out their professional development (Magová, & al., 2016).

Research tool – concept and methodology

The specificity of this stratification of competences is the design of tools for their evaluation. The research team developed a set of evaluation sheets, related to each key competence of the teacher. In compliance with the traditional approach to the evaluation of the professional work of teachers in Slovakia, we have used observation as a tool to

obtain relevant information. However, the newly developed methodology brings a specific approach, based on detailed observation and evaluation of constituents of different key competences and capabilities relevant to them.

The first step in the evaluation methodology is the teacher evaluation carried out by an internal or external evaluator using the assessment sheet. Designing this tool for each of the ten identified key competences followed the analogous structure and nature of the evaluation process. For this reason, we decided to use three basic items in the sheet: open items – to record observed facts in writing; closed items – in which the evaluator uses the agreed scale; closed items in tabular form, in which the evaluator indicates the occurrence, rate, intensity, level of observed phenomena. The sheet also provides some space where the evaluator presents their conclusions and makes suggestions for further professional development of the evaluated teacher.

While monitoring the object of the research, we found it unusual for teachers to be provided with the opportunity to self-reflect on their performance. That is why the research team decided to place the self-assessment aspect (as an important part of teacher's self-regulatory process, with the potential to increase teacher' individual interest in improving quality of their performance) in the central position of the stratified approach to evaluation of teacher competences. That is why a specific self-evaluation tool, self-assessment sheet, has been designed for each of the ten key competences. The aim of the sheet is to give the evaluated teacher a chance to reflect, to express their opinion and to defend it. The records in the sheet serve as a springboard for a comparison of the evaluator's assessment with the position of the evaluated teacher on the recorded issue; it leads to discussion of both actors in the evaluation process and to elimination of drawbacks, misinterpretations and misunderstandings. Presentations of the self-assessment sheets to teachers and their evaluators (during the life of the project) evoked very positive reactions, which confirmed the rationale of the idea and reasonability of the development of this innovative evaluation tool.

The last element in the set of the designed evaluation tools is the Post-Observation Interview, for which a list of questions and suggestions for discussion about the implementation of the evaluated competence in the observed lesson has been developed and the corresponding Record Sheet intended for writing down essential findings and conclusions from the interview between the evaluator and the evaluated teacher. The Post-Observation Interview is expected to be carried out with the time distance of 2-3 days after the observation. The result of using the developed set of evaluation tools should be a comprehensive view about the evaluated competence, which is achievable by combining the records from the Assessment Sheet filled in by the evaluator and their comparison with the opinion of the evaluated teacher, recorded in the Self-Assessment Sheet, and finalized in the Post-Observation Interview (Stranovská & al., 2018).

Competence of education planning and its evaluation tools

The teacher's education planning competence is an inseparable part of the education management competences. It consists of specific capabilities: (1) knowledge: its basis is relevant knowledge and awareness of the education planning issue; (2) skills and attitudes: to be able to plan education, to be able to reflect the real process of pupils learning and compare it with the projected process; to create an individual educational plan for pupils with special educational needs. The starting point for the planning competence is the ability to set teaching objectives. Their definition is related to the requirements of the Slovak society formulated in the Act no. 245/2008 Z.z. on education and training. The Act sets out the general objectives of education, oriented towards the content and formative aspects, based on the need to develop and achieve pupil's key competences. The

requirements on the relevant setting of educational objectives are closely related to the development of pupils' psychological processes; the teacher must adequately differentiate and subsequently achieve the objectives in cognitive, socio-affective and psychomotor areas of pupil development (the Act of 9 December 2014).

In the context of this competence, the teacher is in the role of a designer at several levels. The State Education Program represents the first level of planning which provides teachers with long-term design of school education in the Slovak Republic. The second level of planning is expressed in School Education Programs and their basic pedagogical documents, such as curricula and syllabi. The mid-term planning results in the developed thematic education plans. The lesson plan/scenario is the result of short-term planning and it presents a daily professional task for teachers (Lomnický & al., 2017).

A specification relevant to the professional competence aimed at educational planning has been designed, based on the unified methodological approach regarding the design of the set of evaluation tools developed within the project.

The *Assessment Sheet* consists of evaluation criteria and related indicators, such as: school planning system; planning for a particular teaching process; monitoring the development of the subject from a theoretical and methodological point of view; reflection on evaluation processes in planning; structure of a lesson; subject matter content and methodological aspects of the lesson; lesson planning in the context of pupils needs. The Sheet provides also some space for the Evaluator's Conclusions and Recommendations, on which the evaluated teacher can comment in the item, entitled Teacher's Opinion.

The *Self-Assessment Sheet* was designed based on the teachers need for self-reflection. In the Sheet, 17 indicators correspond to the criteria and indicators in the Assessment Sheet. In terms of the planning process, the indicators are tied to the assessment of a specific lesson. Teachers express their opinion about the listed criteria by choosing one of the possible three answers (*yes – partially yes – no*); the teacher's own ideas and additional corrective statements can be recorded in the form of notes (Lomnický, Jonášková & Predanocytová, 2018).

The drafting of the last of the three tools, the *Post-Observation Interview*, provides the opportunity for mutual exchange of opinions and attitudes between the evaluated teacher and evaluator. The interview has a semi-structured character, and ten open questions take into account evaluation of the planning activities. With regard to the data processing, a part of the evaluation exercise for the Interview is the *Record Sheet* from the Post-Observation Interview; the Sheet is used to record in writing teacher's responses and reactions to the questions (Stranovská & al., 2018).

Results – Testing and verification of the evaluation tools

Testing and verification of the tools for evaluating the key teacher competences was carried out in the years 2017-2018, using the methods of panel discussion, piloting the developed tools in schools and personal interview. The focus of the pilot testing was the verification of the relevance of the complete set of tools for different competences. The complete set of the tools includes 10 Assessment Sheets, 10 Self-Assessment Sheets and 9 Record Sheets from the Post-Observation Interview (the competence of planning and carrying out teacher's own professional development was excluded from the interviews). The testing was carried out directly in 100 Slovak schools, of which 61 were so-called basic schools (joint primary – ISCED1, and lower secondary – ISCED2 schools), 12 were grammar schools and 27 secondary vocational schools (ISCED3).

In total, the research team analyzed 928 Sheets. It should, however, be noted that not all of the Sheets mapped the developed tools comprehensively, i.e. they assessed the different competences from the three proposed aspects: the evaluator aspect, the

evaluated teacher aspect, and the mutual penetration of the two aspects and attitudes of both the subjects as related to the monitored competence. We assume that the reason for this is the nature of the instruments designed for each competence and the way they were completed. In the case of the 'yes'/'no' answer or the answer on the scale (1 – *yes*, 2 – *rather yes*, 3 – *rather no*, 4 – *no*), in the tools, a much stronger willingness to respond and use the Sheet was observed than in cases where open items were used, for which verbal expression and expertise were needed. However, we do not consider this situation as a fundamental problem (Stranovská & al., 2018).

The aim of testing and verifying the content and formal relevance of this comprehensive approach to evaluating the professional work and competences of a Slovak teacher was not only to acquire knowledge about the functionality and reliability of their use in school practice, but, above all, to obtain suggestions for modification and improvement of the designed tools in their final form (Szíjjártóová & al., 2018). Considering the number of responses received from the addressed respondents (Slovak teachers), their territorial representation, as well as the overall involvement of different types of schools, we consider the results of the piloting to be valid.

Results – Testing, verifying and evaluating competence for planning education evaluation tools

The main objective for testing and verifying the tools for evaluating the competence in education planning, were the verification of the relevance and efficiency of the tools with the purpose of their subsequent correction and improvement. The secondary objective was to identify the current state-of-the-art of the competence. Verification of the relevance of the designed methodology was part of the pilot research conducted by the UKF in Nitra (Slovakia) research team. The data were processed using Microsoft Excel and subsequently evaluated. The answers were verbally interpreted and graphically depicted. The truthfulness of the hypotheses was verified using statistical methods, in particular the Chi-Square test of the square contingency and the Relative Ratio test with the known constant (Stranovská, & al., 2018, 140-169).

The data collected from the Assessment Sheets were evaluating against the different evaluation criteria and the corresponding indicators. This paper, presents only selected findings of the research.

We proposed to evaluate the content and methodology aspects by means of several indicators; the planned content fulfillment of teaching is achievable on the basis of the appropriate selection and application of teaching methods. At the same time, the evaluator has to monitor the appropriateness of applying the logical and psychological bases of teaching. The relevant indicators were evaluated positively, within the range of 78% to 67%, in the case of respect for a differentiated approach to pupils the evaluators were completely satisfied in 59% of the evaluated cases.

Indicators, which represent another group of evaluation criteria, monitor the complexity of education planning (interdisciplinary context, cross-curricular topics) and the way of assessing the achieved results, we perceive as part of pedagogical aspects supporting the development of key competences of pupils. 61% of evaluated teachers observed to apply interdisciplinary contexts in their teaching, and the application of cross-curricular topics was reported for 53% of them. The relevance of planning methodological procedures for assessing and grading pupils was identified by the evaluators in 82% of cases, while 6% were unable to evaluate this competence.

We identified 17 indicators for the purpose of piloting the autonomous evaluation of the quality of learning process planning by teachers. Each of them was addressed by teachers individually. With regard to the evaluation of the research, we have split the

indicators into 6 thematic areas and to illustrate the nature of the data processing, we present two of them.

It is important to set educational goals. Only 9% of teachers considered setting educational goals to be partially important. 94% of respondents respect the continuity of the content and aims of teaching and 25% of teachers partially realize the need to familiarize pupils with the intentions of a particular lesson.

In the context of self-assessment, interesting results have been recorded in the area of mastering the planned tasks. Nowadays, a vital problem, which is not necessarily covered in the training of potential teachers in Slovakia, is work with pupils requiring a special pedagogical approach. This indicator is completely covered by 42% of teachers while 2% did not pay attention to it at all. 72% of teachers say they prepare tasks, activities with the aim of covering the subject content of the curriculum. 49% of teachers evaluated the full accomplishment of the scheduled tasks for a specific lesson and 51% evaluated this indicator as just partially achieved so that the planned tasks were not fully implemented.

The research data collected from the Post-Observation Interviews showed some discrepancies related to the fact that the respondents did not clearly state whether they were the evaluators or the evaluated teachers. For this reason, the evaluation of this part of the research was carried out by using the interpretation method. As an example, we present the evaluation of the question focusing on the implementation of interdisciplinary issues and cross-curricular topics. The issue is an important part of the formation approach – to educate a complex pupil's personality; therefore they are a natural and necessary part of the pedagogical process of planning. The data from the Post-Observation Interview Record Sheets indicated that 80.95% of teachers actively applied the monitored indicator, 14.28% used cross-curricular links and cross-curricular topics only partially, and only one respondent expressed their negative attitude to the issue.

The research on the teacher competence in educational planning, as one of the components of the research, demonstrated two aspects: it confirmed the validity and relevance of the newly designed approach in the form of the way and methodology of the teacher's professionalism evaluation (Boboňová, & al., 2017); as to the secondary research aim, we can state that the level of the competence to design and plan education was assessed as a very good one by both subjects, the evaluators and the evaluated teachers.

Conclusion

The issue of increasing the quality of the access to education and training of the young population has long resonated in the Slovak society and interest in its solution is demonstrated in the reform process of the school education system (the Act of 9 December 2014). One of the fundamental prerequisites for the increase of the efficiency of education is the teacher's professional skills and their evaluation. The team of specialists from UKF in Nitra (Slovakia) has undertaken the task to seek and propose a solution to it, as part of the research project *Evaluation of Teacher Competences* (2015-2019). Within the project activities and tasks, the teacher's competency profile was established as a complex of ten key professional competences and specific abilities that form the structure of each key competence.

Identification of the competences and their internal structure was the basis for the development of their evaluation tools. The philosophy behind the tools design was based on the implementation of humanistic aspects and the fact that in the evaluation process the evaluated teacher should not feel threatened by the evaluator, but should feel the real interest of the evaluator to help the evaluated teacher. In case of identified failures, the evaluator should seek appropriate solutions together with the assessed teacher.

The national pilot, aimed at verifying the relevance of the developed evaluation tools for the complex competences of the teacher, justified the appropriateness and relevance of the newly designed approach to the character and methodology of evaluating the professional work of teachers. The fundamental scientific contribution of the project is the established new methodology for an innovative approach to evaluating the work of teachers and their competences, based on the penetration of evaluation opinions and attitudes of both agents, the evaluators and the evaluated teachers, following the idea of the educational process quality increase in the context of the needs and required key competences of Slovak learners.

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