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ASSESSMENT OF PEDAGOGICAL COMPETENCE OF ACADEMIC STAFF: CASE STUDY

Olga Vindača
Rezekne Academy of Technologies, Riga Technical University, Latvia

Abstract. *The current European guidelines and national priorities for the development of Latvia – to strengthen the teaching, learning and research capacity of higher education institutions and to develop the corresponding skills and competence of academic staff, promoting the excellence of science and higher education.*
The article will review the issue of pedagogical competence of academic staff (PCAS) in higher education institutions focusing on the primary tenants of its formation and development, offering the definition of PCAS, emphasizing non-teacher trained academic staff (without pedagogical background). As well as contribute to the discussion of PCAS among the experts and professionals of non-pedagogical field, formulating the core elements for the assessment of PCAS in three perspectives: of educators, of students, of higher education institution.
The aim of this article is to determine the list of core elements for the assessment of PCAS, analyzing the proposals of 60 experts from Riga Technical University and defining the perspectives of PCAS assessment.
This study will help higher education institutions to rethink their strategies for the assessment of academic staff and further perspectives of their development planning.
Keywords: *academic staff, assessment, higher education, non-teacher trained academic staff, pedagogical competence, teacher-trained academic staff.*

Introduction

The new European strategy for universities highlighted the updated challenges and trends in the context of HE, emphasizing the necessity to equip the academic staff with the corresponding skills that are necessary for achieving the scientific excellence, implementing innovations and effectively using the potential of information and communications technologies (European Commission, 2022).

Moreover, UNESCO, a global leader in education, by focusing on the transformation of education tried to answer the core questions: what should be continued, what should be abandon, what needs to be creatively invented afresh in teaching and learning, emphasizing the necessity to make further teaching professionalized, by moving pedagogy back to the foreground in higher education context (UNESCO, 2021).

The idea is not new, as it has been approved by the detailed Eurydice report in the context of higher education, where the insight into the realities faced by

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higher education in general and academic staff in particular at a time of fast-moving changes and challenges has been highlighted, considering the fact that not enough is known and investigated about how academic staff are affected by such changes, because academic staff are vital for the success and progress of higher education (European Commission/EACEA/Eurydice, 2017).

Conceptually, the idea of professionalism of academic staff is directly linked with pedagogical innovations and is often generalized to mean technological progress (Walder, 2014), while two different aspects have to be considered: social and technical. Social dimension is related to the continuous self and professional development and concept of teaching/learning, interdisciplinarity and interculturality. While technical dimension is related to tools/instruments, including information and communication technologies, pedagogical methods, models and approaches (Walder, 2015).

So, in concern of academic staff there is a need to stimulate pedagogical innovation, by redesigning and updating forms of teaching, learning and assessment (Kukulsk-Hulme et al., 2021), focused on the learners, with a variety of learning spaces and flexible, interdisciplinary paths (O'Neill, McMahon, 2005), the study process has to be based on hybrid solutions representing a good balance between physical presence and digital tools (Pavlik, 2015). Moreover, there is a need to tackle in a systemic and comprehensive way academic careers, to promote flexible and attractive career structures and improve working conditions. Assessment procedure of academic career performance is an integrate part of career planning. The assessment should consider the variety of activities of academics such as teaching, research, entrepreneurship, management and/or leadership. This will help to improve the attractiveness of research careers and ensure better access to excellent science (European Commission, 2022).

Without the clear understanding of further career development, the overall excellence and quality assurance can't be achieved. Therefore, academic careers have to be an important aspect of higher education policies and practice. High-quality academic work conducted by well-selected, supported, and incentivized academics is a major output of higher education. In this aspect within the World Bank project in close co-operation with the Ministry of Education and Science Republic of Latvia the new academic career framework has been offered, considering the solutions to fragmentation of teaching and research; lack of a predictable career path and weak internationalization (Ambasz et al., 2022).

Summarizing the aspect, the academic staff of higher education institutions should combine teaching, learning and research work for ensuring the high-quality study process, but the progress should be systematically evaluated for further development planning.

Besides this, two types of academic staff are considered within the current analyses: teacher-trained academic staff and non-teacher trained academic staff (without pedagogical background). R. Voss and T. Gruber (2006) indicate that

having an attitude that best promote learning of students is the most important aspect of pedagogical competence and is more implemented in teacher-trained educators than in non-teacher trained educators (Voss, Gruber, 2006). Still the need of continuous improvement and development is required to achieve the quality of teaching/learning in engineering education (Kersten, 2018). Moreover, any academic understand the importance of high-quality teaching as a part of their academic career (Graham, 2015).

So, the aim of this article is to determine the list of core elements for the assessment of PCAS, analyzing the proposals of 60 experts from Riga Technical University and defining the perspectives of PCAS assessment, focusing on the non-teacher trained academic staff.

Literature Review

For clear understanding of the assessment process of academic staff in higher education institutions the funding model used by the Ministry of Education and Science Republic of Latvia has been reviewed in order to figure out the main pillars to stimulate research and innovation, according to the three-pillar funding model there are three types of funding specified: base funding for studies and basic research; performance-based funding for study outcomes and research results; innovation funding - development-oriented financing to promote the specialization of institutions and their profile development (Ministry of Education and Science of the Republic of Latvia, 2015).

Still the requirements for the academic staff performance are not clear from the offered three-pillar funding model. Additionally, the progress forecast for scientific excellence has been reviewed. The progress is planned to measure by the following indicators: number of research staff, % of total number of employees (full-time); % of population aged 25-34 with a doctoral qualification; funding for research and development, % of GDP; number of annual publications by Latvian authors in the international citation database Scopus; Latvian author publications in the top 10 of most frequently cited within their field, %; Business funding for R&D activities in the public sector and higher education sector, % of total R&D funding in the public sector and higher education sector (Saeima of the Republic of Latvia, 2020).

Only quantitative indicators are specified for the assessment of academic staff performance, considering the fact that academic staff takes an elective position, so there is a need for the regulations for evaluating their performance. According to the regulations of Cabinet of Ministers of Republic of Latvia Nr. 129 for evaluating the scientific and teaching qualifications of an applicant for the position of professor or associate professor covering the key requirements in three dimensions: scientific qualification, pedagogical qualification and organizational work (Cabinet of Ministers Republic of Latvia, 2021).

Despite the fact that pedagogical competence of academic staff hasn't been mentioned in either strategic documents, the regulations for evaluating associate professors or professors, or three-pillar funding model, in the context of current research, when the emphasize is on non-teacher trained academic staff, there is a need to specify the list of core elements for the assessment of PCAS as a part of academic performance.

Pedagogical Competence

There is no unique concept of pedagogical competence, while by analyzing several scientific doctrines the reflection of how the concept of pedagogical competence has been changed over time is specified.

A.I. Suciu and L. Mata have defined pedagogical competence by considering psychological, interactional, organizational, managerial, administrative, social, economic, cultural (ethnical, religious, of gender, class, age, etc.) aspects and regarded it in close connection with three important factors of education: educational achievement/ success/ efficiency, professional development and societal change (Suciu, Mata, 2011).

While I. Febrianis, P. Muljono, D. Susanto have defined pedagogical competence as the ability to organize the study material in understandable way for the students by using pedagogical knowledge and skills for best achievements of the students. Additionally, specifying that pedagogical competence affects the success of educator in teaching, students' motivation and is directly linked with creativity and performance of educator and their satisfaction of work (Febrianis, Muljono, Susanto, 2014).

S. Aimah, M. Ifadah, D.A.L. Bharati have specified pedagogical competence as the ability to manage and run the process of teaching and learning in the classroom, interaction, educators' performance, the ability of planning, the appropriateness in choosing the method and media of learning. It should be built through active practicing and collaboration with the colleagues, taking into consideration the progress of students' learning. Additionally, the importance of professional development has been specified (Aimah, Ifadah, Bharati, 2017).

Similar concept of offered by C.K. Sahana as pedagogical competence referring to performance, knowledge and skill in teaching and learning, including educators' capability to manage the teaching and learning process from the planning to the evaluation stages (Sahana, 2018).

Moreover, N. Novianti and I. Nurlaelawati have defined the pedagogical competence as the ability to manage students' learning which includes understanding the learner; designing, and implementing, learning outcomes; and developing learners to actualize their potential. Additionally, it is comprehensive, encompassing an educator's ability in various aspects of teaching and learning that has to be developed in line with the development of time, such as technological advances, scientific revolution, etc. (Novianti, Nurlaelawati, 2019).

According to A.V. Fakhrutdinova, M.R. Ziganshina, V. Mendelson, and L.G. Chumarova pedagogical competence is a professional and personal characteristic of the educator, providing a high level of scientific and pedagogical activity. While in the detailed interpretation of pedagogical competence as the possession of the necessary amount of knowledge and skills that determine the formation of the pedagogical activity, pedagogical communication and the personality of the educator as a carrier of certain values, ideals and pedagogical consciousness. A set of knowledge, experience, skills and possession of pedagogical technology, finding the optimal means of influence on the students, considering their needs and interests, rights and free choice of ways of activity and behavior (Fakhrutdinova et al., 2020).

While additional aspect is added by L. Yue, Z. Li, and S. Yu-Sheng. In terms of the cognitive area, it is emphasized that educators should have certain types of knowledge, including pedagogical content knowledge, educators' content knowledge, and general pedagogical knowledge. With the application of digital technology in the education system, the usage of digital technology in the process of teaching has placed higher requirements on educators' competence, so their knowledge and skills should be expanded by utilizing technology effectively in teaching/learning, by adding technological pedagogical knowledge (Yue, Li, Yu-Sheng, 2022).

By combining the analyzed doctrines, the definition of pedagogical competence is specified as the professional and personal characteristic of educator, providing a high level of scientific and pedagogical activity with the ability to manage and run effectively the process of teaching and learning through active practicing and collaboration, with the application of digital technologies, considering continuous self and professional development.

A Romanian Perspective of Pedagogical Competence reflects the core activities and elements of pedagogical competence, emphasizing the study environment as well, mapping the theoretical background (see Figure 1).

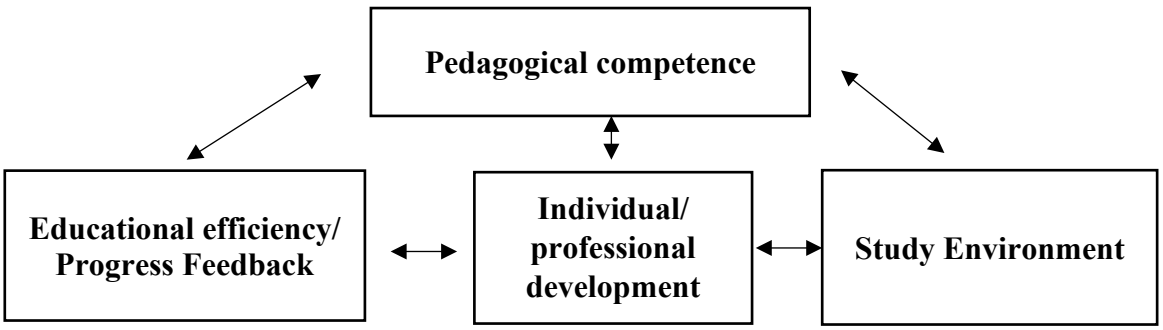

Figure 1 ***A Romanian Perspective of Pedagogical Competence*** (Suciu, Mata, 2011)

According to Figure 1 the teaching/learning and research fields are combined, where the education efficiency corresponds to teaching and learning, while professional development covers the related discipline.

Research Methodology

The current study is based on non-experimental qualitative research design. In April 2022 the Methodological Conference took place in Riga Technical University, organized by RTU Study Department Center of Academic Excellence. The theme of the conference was the Enhancement of Pedagogical Competence of Academic Staff: Content, Methods, Experience. Sixty representatives of RTU academic staff took part in the conference, additionally providing the comments and suggestions for open-ended questions, concerning two key aspects:

- the core elements for the assessment of pedagogical competence of academic staff;
- the proposals, how to make the assessment process more effective and value-added.

The answers of experts were analyzed in three different perspective:

- I. Group – Educators' Perspective;
- II. Group – Students' Perspective;
- III. Group – Institutional Perspective.

All respondents were the representatives of academic staff of Riga Technical University. The answers were submitted in written, online form, using menti.com.

It is important to indicate, that several reports on the issue of pedagogical competence were listened during the conference, before the asked questions, therefore, the respondents had a common vision on the related topic.

Results

The results of open-ended questions were analyzed using the content analysis approach, by determining the presence of same words and ideas through content units, by categorizing the presence of the same ones and offering the concepts accordingly, as the primary aim of content analyses is to identify the subjective formation of the certain reality or situation (Kroplijs, Raščevska, 2010).

Educators' perspective was analyzed in Table 1. The unit of content is formed by the particular statements of the respondents, while categories are general ideas scientifically expressed, then the concept is formed based on the applicable theory and scientific background, following the research tasks.

Table 1 ***Content, Unit, Categories and Concepts of PCAS from Educators' Perspective***
(developed by researcher)

Content Unit	Category	Concept
It is clear that knowledge, experience, the ability to explain are important, but also good mood and good communication skills are very important.	Knowledge, experience, communication	**Knowledge Experience**
Professional experience	Experience	
Ability to use terms understandable to students and provide their explanations; to change different types of perception, the use of assessment methods of students' performance.	Didactics Feedback Assessment	**Feedback Assessment**
Ability to provide qualitative results.	Feedback	
Using various pedagogical methods, the ability to organize the study process in such a way as to provide useful, effective students training	Didactics Teaching/ Learning	**Didactics Teaching/ Learning**
A clear goal expressed in text format, as well as methods for achieving it. Evidence that the development and improvement is taking place.	Didactics Teaching/Leaning	
The most important are teaching methods and motivation of students in the study process.	Didactics Teaching/ Learning	
Clearly understandable and properly prepared teaching materials and lecture structure. Digital skills (using different techniques).	Didactics Digital skills	**Didactics Digital skills**
Understandably and meaningfully implement the specific study course in the changed world; use the opportunities offered by Moodle.	Didactics Digital skills	
To formulate interesting technical problems and motivate students to solve them.	Teaching/ Learning	**Teaching/ Learning Field knowledge**
Ability to teach and learn, while maintaining interest in the field, the subject being taught.	Teaching/Leaning Field knowledge	
Knowledge in the field of your study subject and constructive contact with students.	Field knowledge	
The desire for self-development and self-learning and the ability to combine several fields while teaching the specified subject.	Self-development Self-learning	**Self-development**
The ability to keep up with the development trends in order to keep up with students	Self-development	
Interest in teaching and self-learning. Empathy. Ability to explain. Patience.	Teaching/Learning Empathy	**Attitude Empathy**
Attitude, support, sensitivity, empathy, orientation to the solution, ethics.	Attitude Empathy	
Attitude towards students and studies.	Attitudes	
Educators' attitude towards the students	Attitude	
Respect, take in account the suggestions of the students concerning the changes of topics etc.	Suggestions of students	**Student-centered approach**
Flexibility, a balance between wishes of students and subject requirements	Flexibility, suggestions	
Cooperation with the students	Cooperation	**Cooperation skills**
Cooperation and openness	Cooperation	

Students' perspective was analyzed in Table 2. In general categories and concepts of Students' perspective are similar to Educators' perspective.

Table 2 ***Content, Unit, Categories and Concepts of PCAS from Students' Perspective*** *(developed by researcher)*

Content Unit	Category	Concept
The educator's PCis the best shown by the students' acquired knowledge, their compliance with the corresponding subject level	Results/ knowledge	**Assessment Feedback Reflection**
Students' achievements in practical work	Achievements	
The actual results of the work and the assessment of students and graduates	Results of work	
Students' professional competence acquired/improved during the lecturers, practical lessons. Students' assessment both in surveys and their presence in the classes as an indicator.	Results/ competence	
Complex: 1) increase the level of knowledge of students as at the beginning of study course and at the end; 2) feedback of students; 3) the student chooses an educator as the supervisor of their scientific paper.	Results/ knowledge Attitude	
Feedback of students, long-term skills and competencies of students (surveys of graduates)	Results/ long-term skills Long-term competencies	
Growth of students	Results	
Concerning the study results, a lot depends on the students himself, including the previous knowledge	Results	
As a result, students understand the subject (can't always be evaluated with a grade), are interested in it.	Results/ understanding	
Feedback of students on the course and educator	Results	
Students' respect	Attitude	**Attitude**
The best moment occurs when students admire the academic staff for their knowledge and contribution to the work.	Attitude	
Students' attitude towards the educator	Attitude	

Finally, the perspective of higher education institution was analyzed (see Table 3), where the main concept is to understand the term of competence and pedagogical competence, including the criteria and indicators for PCAS assessment.

Table 3 ***Content, Unit, Categories and Concepts of PCAS from Perspective of Higher Education Institution*** *(developed by researcher)*

Content Unit	Category	Concept
Competence description, self-assessment options and systematic tests for self-assessment with the offered self-development courses at the end.	Competence description	**Essence of Competence Index of Competences**
It might look like an index that includes several competences.	Index of Competences	
First of all, it would be important to agree, at least at RTU level, what do we mean by the term competence, including pedagogical competence. It currently means and describes different things.	Description of competence	
At first, it is necessary to determine the most important competences, and afterwards to look for the appropriate evaluation mechanisms.	List of competences Evaluation mechanisms	
To provide recommendations for the improvement of competences.	Improvement of Competences	
Criteria	Criteria	**Assessment System Assessment Criteria**
Measurable and clearly classified criteria.	Criteria	
Clear criteria. It is useful to find out the opinion of students as well.	Clear criteria	
To go to the heart of the matter of each representative of academic staff – there shouldn't be the same measure for all	Criteria	
Internal Quality Management	Criteria	
Comprehensible criteria covering all areas of the work of academic staff	Comprehensible criteria	
Create a system with clear/understandable criteria that will motivate academic staff to increase their pedagogical competence, not just a set of formal criteria for fulfillment.	System with clear criteria	
Centralized system.	Centralized system	
The performance of academic staff can't be evaluated all over the world. It is discussed in many parts of the world – what of all work conducted by academic staff has a real impact on a student (attitude, excellent knowledge/ erudition, good leadership skills, digital skills, etc.)?	Impact Evaluation	**Assessment Evaluation Self-assessment**
Qualitative evaluation of competences – that can't be evaluated according to the usual quantitative criteria (number of supervised theses, number of supervised lecturers, etc.)	Qualitative evaluation of competences	
Attitude towards students and studies can be assessed using questionnaires.	Assessment using questionnaires	
Evaluation of the professional qualification of academic staff can only be done by another representative of academic staff.	Evaluation of professional qualification	
Self-critical assessment	Self -assessment	

By summarizing the concepts, the following core elements should be specified for the assessment of PCAS:

- in Educators' Perspective – knowledge and experience of teaching/learning (didactics) and related field, student-centered approach, digital and cooperation skills, considering self-development;
- in Students' Perspective – assessment, feedback, reflection and attitude;
- in Perspective of higher education institution – assessment system and index of competence.

For ensuring the assessment of PCAS the higher education institution should develop the assessment system of PCAS with clear and transparent index of pedagogical competence, listing the above-mentioned elements. For credibility check the self-assessment and students' assessment of the same elements is recommended.

Conclusions

Summarizing the study results, it can be concluded that the academic staff of higher education institutions should combine teaching, learning and research work for ensuring the high-quality study process, but the progress should be systematically evaluated for further development planning. While the core elements of the assessment of PCAS should be clearly identified within the higher education institution, by developing the assessment system, considering the non-teacher trained and teacher-trained academic staff aspect.

By combining the analyzed doctrines, the definition of pedagogical competence was specified as the professional and personal characteristic of educator, providing a high level of scientific and pedagogical activity with the ability to manage and run effectively the process of teaching and learning through active practicing and collaboration, with the application of digital technologies, considering continuous self and professional development.

Moreover, the following core elements should be specified for the assessment of PCAS: knowledge and experience of teaching/learning (didactics) and related field, student-centered approach, digital and cooperation skills, considering self-development; assessment, feedback, reflection and attitude, forming the clear and transparent assessment system and index of pedagogical competence. For credibility check the self-assessment and students' assessment of the same elements should be organized.

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