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## **Developing teaching competences of PhD students as future academics**

### **Introduction**

The quality of education depends on a significant number of factors, and one of the most important among them is qualified teaching staff. A qualified teacher is defined as the one who, in the specified conditions, fulfils their direct responsibilities with maximum efficiency – creates effective curricula and courses, provides updated materials for students, conducts effective and innovative research work. Such activity results in the high level of students' training, weighty percentage of graduates' employment, as well as high rating of the educational institution. Therefore, formation of the teaching staff and provision for their professional growth and improvement of professional competencies are the important prerequisites for successful functioning and competitive advantage of a higher educational institution in the national and international market of educational service. As the European Commission reports, the quality of teaching in higher educational institutions is crucial for the development of creativity and critical thinking in graduates and adapting them to the realities of the labour market, since they will shape our future (Report..., 2013).

At the same time, according to some foreign researchers, evaluation of the activities of a teacher on the basis of student's success is rather superficial and not always objective. A more fundamental approach focuses on the ability of higher educational institutions to improve the teaching staff abilities, their motivation for creative activity, introduction of organizational and pedagogical conditions for their professional development. It can be stated that the obligation of an educational institution to carry out professional development of scientific and pedagogical staff in order to ensure high-quality educational process is closely related to the task of guaranteeing successful learning outcomes (Onsman, 2011).

### **International experience in the development of teaching competences**

International experience demonstrates the significant achievements of some countries regarding the detailed determination and approval of teaching requirements in the context of relevant educational programs at the state and university level. This step is regarded as the starting point for building a quality assurance system covering

the entire institution, from the supervisory board of the educational institution to the teachers, students and administration.

For example, more than 10 years ago, Estonia adopted the Strategy for Higher Education for 2006–2015. The main emphasis of the Strategy was on the development of teaching abilities, since the transition to the implementation of competency-based study programs requires special teacher training, focus on modern innovative methods of teaching and assessment of students' learning outcomes (Estonia..., Strategy, 2006–2015). During 2008–2014, with the support of the European Social Fund, the Ministry of Education and Science of Estonia implemented the program "Primus" aimed at ensuring the quality of higher education and increasing the competitiveness of graduates. Among the six main directions of this program, the most important was "Improving Teaching and Management Skills in Science and Education Personnel" (Primus..., Estonia..., Strategy, 2012). As one of the successful consequences of the implementation of this program was the middle position of the universities of Estonia in the World University Rankings (2016–2017). This is an important factor, taking into account the ratio of the population of Estonia and the number of universities in this country.

The experience of Spain is also worth mentioning. In 2015, the Spanish government initiated a state strategy for modernizing the university educational system. One of its main priorities was to ensure the quality of teaching through evaluation, certification and accreditation of national educational institutions, scientific and pedagogical personnel, as well as the programs for their training and retraining. A special agency was formed to realize this strategy – the Quality Assurance and Accreditation Agency (ANECA) (ACADEMIA national accreditation program...).

In 2012, in Ireland, the National Forum for Teaching and Learning Enhancement (The National Forum...) was established in order to promote the professional development of teachers. The functions of this organization include the development and implementation of tools to assist scientific and pedagogical staff in the way of improving their professional competence, in particular, organization and support of the national information platform for distance education, announcing calls for scholarships, internships, and awards.

The Belgian government provides for a special article in the state budget to allocate costs on improving the system of teaching. According to article 83 of the Bologna Declaration (2004), universities should spend at least 10% of the main state funding to improve teaching and establish appropriate centers at universities (Supérieur universitaire...).

Methodological excellence of scientific and pedagogical staff is one of the main goals of the National Higher Education Program 2011–2020 in Slovenia. In accordance with the recommendations set out in the Program, educational institutions should develop the practice of methodological teaching and support to their teaching staff in order to achieve teaching excellence. The mechanism for promoting methodological excellence should also include the establishment of centers of teaching competence (Republic of Slovenia, Ministry of Higher Education...).

Thus, the European educational policy formulated in the report of the working group of the European Commission on modernization of higher education is

primarily aimed at increasing the responsibility of the administration of educational institutions for providing permanent, well-funded support of universities in their efforts to improve the quality of teaching and learning (Report..., 2013: 23).

An important direction for the development of higher education, especially for the countries of Eastern European partnership, is the development and implementation of the strategies of state support and improvement of the quality of teaching and learning, as well as allocation of necessary human and financial resources to ensure the implementation of this task. As the European Commission reports, there is an urgent need to integrate this priority into the overall HEI mission and assess the quality of teaching similarly to the implementation of research (Report..., 2013: 27). A good example of such practice is the experience of the Norwegian Ministry of Education and Science in piloting the project at Oslo University in cooperation with the University of Tromsø. The project deals with the organization of the first Center for Excellence in Education in Norway, by the example of the already existing Centers of Excellence in Research. The purpose of the newly formed Center was to develop new knowledge about teaching, learning and research in the programs of training and advanced training of scientific and pedagogical staff (ProTed – Center of Excellence...).

Similar centers operate successfully in most European and American universities. Their activities are also focused on the opportunities for doctoral students to develop as teachers, collaboration schemes with faculties that promote excellence in teaching and mentoring, and integrating blended learning into courses and seminars.

### **Experience of Polish universities in developing teaching competences of PhD students**

Among the Polish universities, the Jagiellonian University has the most successful experience in organizing and running such centers aimed at improving teaching competences and support professional development of the academic staff and PhD students (Center of Excellence...). They offer the following main courses and workshops: Art of Presentation, Art of Communication, Course Design, Intercultural Competence, Master-student relationship: coaching-mentoring-tutoring, Problem Based Learning, Evaluation of student progress in the area of knowledge, skills and social competences, the practical use of PEGAZ learning platform, active methods of teaching and learning, etc.

The activities of the centers demonstrated their entire correspondence with the European policy in Higher Education. In particular, according to the direction of the Polish Ministry of Higher Education, PhD programs should include at least 5 ECTS of pedagogical courses, which aim to prepare PhD students for teaching activities, developing communicative skills, abilities to organize learning activities, competencies for reporting current, up-to-date knowledge and developing students' active life attitudes, talents and skills that employers look for.

In 2013, in accordance with this requirement, Wrocław University of Environmental and Life Sciences introduced two pedagogical courses for PhD students – Pedagogy with the Basics of Didactic and Teaching Methods. Together with the

Centre of e-learning technologies in Wroclaw UELS a common search for the most efficient, innovative methods and techniques of organizing learning activities of PhD students was conducted. The use of IT has caused the need to study the best European and American practices of training future teachers and their introduction in Polish university of life sciences, taking into consideration the readiness of PhD students to develop teaching competencies. One of the latest trends in higher education is the use of e-learning or its elements in the academic process. It is vital that apart from technical training, a university teacher of today has specialized pedagogical, psychological and methodological training. This is what we focused on in our research.

There are various ways of improving teaching skills, such as psychological and pedagogical education, IT competences, deep knowledge of the subject, pronunciation improvement (rhetoric), the use of active methods, openness towards new experiences and criticism, positive attitude to teacher's activities, observing the colleagues' teaching style.

However, according to the results of the research carried out by American scientists, the most efficient technique is the analysis of video elements of one's own presentations in the class. As a result, while making a public speech, students are able to improve their non-verbal communication instantly and develop self-confidence (Laurillard, 2014).

### The aim of the research

The purpose of our research has been to study the readiness of PhD students as future teachers to develop their teaching competences.

### Methods and materials

The survey was conducted in the form of an online quiz which included 15 closed questions with multiple answers to choose from. Respondents: first year PhD students of Wroclaw University of Environmental and Life Sciences 2013–2014, 2014–2015, 2015–2016 (total of 156 people). The questionnaire was e-mailed to students after they have finishing the course on "Teaching Methods".

### Results

After processing the responses, the following results were obtained.

About 90% of respondents recorded the elements of their lectures during the course on teaching methods. The rest of students (10%), who were reluctant to record the lectures, were proposed to choose the reason for their refusal from among the four provided. The results of the survey are presented in Table 1.

Tab. 1. Students' responses about the reason for their refusal to record the elements of their lectures

Answer	%
Distrust in the technical side concerning the compliance with authorship right	25
I do not like seeing myself on the video recordings	25
I do not want to present my teaching materials in the form of video	25
I have not attended the course on "Teaching methods"	25

The method proposed also included classes, where the students viewed the elements of their lectures, carried out self-analysis which was followed by group discussions. The majority of PhD students attended the classes where they discussed the previously recorded lectures. After analyzing their answers on self-evaluation of the recorded lectures, it was found out that two thirds of respondents evaluated their videos as good with some minor faults, whereas the percentage of respondents who believed that they looked better in the real classroom environment with students was 13% (Table 2).

Tab. 2. Students' answers about self evaluation of the recorded lectures

Answer	%
Very good	9
Good, but I can notice some minor faults	65
Average, since I did not get ready for recording	4
Bad, since I do not like seeing myself on the recordings	4
I believe that I look better in the real classroom with students	13
I have not participated in recording	4

Regarding the main teaching mistakes, the respondents mentioned the following: every fifth noticed their fast tempo of speech, the similar number of respondents did not have eye contact with the audience, 17% of students spoke in a quiet voice, 23% of students experienced stress and embarrassment and a fifth of respondents did not come to any conclusions (Table 3).

Tab. 3. Students' answers about the main teaching mistakes as noticed by themselves

Answer	%
I spoke too fast	20
I did not have eye contact with listeners	20
I spoke quietly	17
I felt embarrassed and stressed	23
Lack of conclusions	20

It was important to find out the opinion of respondents on what teaching skills they need to improve or develop. Obviously, the biggest percentage of respondents felt lack of competences in assessing students and involving them in class activities (Table 4).

Tab. 4. Students' answers about teaching skills students need to improve or develop

Answer	%
Communication with students and/or colleagues	13
Assessing students	23
Behavior in conflict situations	18
Ability to involve students in class activities	21
Technical skills (ICT)	13
Extended knowledge of the course	13

As for the personal opinion about new methods and techniques PhD students would apply after analyzing their videos, the answers were as follows: first and foremost is – the way of speaking (67%), the attitude to students during the class was noted as important by only 13% of respondents. They were mostly satisfied with teaching methods and facilities which they used during the recordings (Table 5).

Tab. 5. Students' answers about new methods and techniques they would apply

Answer	%
Teaching methods	8
Teaching facilities	8
Attitude to students during the class	17
Way of speaking	67

## Conclusions

Professional development of scientific and pedagogical staff is a prerequisite for ensuring high-quality educational process, which is a priority task of a modern higher educational institution. The international experience demonstrates significant advancements in this area. In particular, the effectiveness of their activities in the direction of developing and improving teaching competences is shown by the Centers of Excellence in teaching and learning created in some European universities. In Poland, such Center successfully operates at the Jagiellonian University. Regarding Polish universities of life sciences, certain experience in preparing PhD students has been developed at Wroclaw University of Life and Environment Sciences. The research carried out at this institution allows us to conclude that PhD students as future teachers need to develop and deepen their teaching skills. Analysis of video-recordings contributes to developing teaching competences. There is need to persuade future teachers to provide free access to their didactic materials including video-recordings for their students. PhD students as future teachers are aware of their teaching shortcomings and can solve them effectively, particularly after doing the course on Teaching Methods.

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## Developing teaching competences of PhD students as future academics

### Abstract

Development and improvement of teaching competences is a crucial requirement for providing high quality education service. Centers of Excellence in teaching and learning, functioning successfully in many foreign universities, play a significant role in this process. There are various ways of improving teaching skills, such as psychological and pedagogical education, IT competences, deep knowledge of the subject, pronunciation improvement (rhetoric), the use of active methods, openness towards new experiences and criticism, positive attitude to teacher's activities, observing the colleagues' teaching style. The purpose of our research was to study the readiness of PhD students as future teachers to develop their teaching competences. The research was carried out at Wroclaw University of Life and Environmental Sciences during the 2013–2016 academic years when PhD students were doing a course on Teaching Methods at this educational institution. After completing the course, PhD students were offered to answer a questionnaire to determine their readiness to develop their teaching competences. The results of the study show that PhD students as future teachers are aware of their teaching shortcomings and can solve them effectively, particularly after doing the course on Teaching Methods. The results obtained prove the necessity to organize special centers in the structure of universities which will focus on improving teaching competences and support professional development of the academic staff and PhD students.

**Key words:** teaching competences, methodology of teaching, PhD students

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