

PEDAGOGICAL SCIENCES

DEVELOPING LEADERSHIP SKILLS FOR DOCTORAL STUDENTS IN THE TECHNICAL UNIVERSITY

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The activity of a higher education pedagogue has a high social significance and occupies one of the central places in the formation of national consciousness and spiritual culture of Ukrainian society. The formation of an individual as a personality and a specialist takes place and the intellectual and spiritual potential of the nation is strengthened through the pedagogue's activity exactly. Innovative development of the modern high school is impossible without the spiritual and moral formation of a teacher. His pedagogical excellence is an integral part of society's development. Therefore, the actual task of contemporary Ukrainian society is the formation of educated, deep and skilled pedagogues who, through their work and skills, can form a new generation of students capable of meeting new social standards in morality, spirituality, civility, scientific and professional suitability.

Leadership training in the academic helps doctoral students to assume personal and group responsibilities which would otherwise be difficult to promote and evaluate. However, one of the main challenge in leadership development in pedagogical disciplines is the fact that this.

Traditionally, pedagogical courses have been taught in a straightforward way, starting with a lot of definitions, basic concepts, and methods for solving well-defined problems, which in most cases are simplified and idealized. In most of the basic pedagogical courses, the instructors provide just the necessary parameters to solve an idealized problem that includes an algorithmic procedure to efficiently solve the problem. Even though, it is necessary to provide the doctoral students with basic

principles and formulas needed to make judgments, this way of teaching is not sufficient to produce pedagogical leaders. Problem-based learning is a well-accepted and effective way to develop leadership skills. It challenges students to study while solving real-world problems, working in groups and learning from each other. The main teaching methods to develop leadership skills of potential of future high school pedagogues from the 1-year postgraduate students are presented.

Teaching methods to develop of future high school pedagogues from the 1-year postgraduate student's leadership skills contains: Teaching strategies; Students activities; Types of tasks.

Teaching strategies: teaching as facilitating; discussion occurs in classes, but mostly learning occurs outside the classroom; teacher coaches students when needed and directs their learning, engages students in the process of critical thinking; inviting coaches from industry who are successful leaders as well as future high school pedagogues, and who understand the importance of cultivating young leaders; service learning pedagogy methods.

Students activities: group works at the same project; fulfilment of duties under the certain "posts", which are rotating during the course; focus on outstanding communication; internships with education; self- and peer-assessment to determine their comfort with addressing and accepting change and seek input from their peers and advisors on the same; work on real-world projects in real pedagogical environment.

Types of tasks: real-world projects and tasks with technical complexity similar to the real pedagogical projects; writing detailed proposals and project reports similar to those written by practicing future high school pedagogues; writing a detailed and professional feedback of both the course and activities.

Another way to boost the level of practical pedagogical knowledge is service learning. It is a proven fact that students learn more effectively when they receive education complemented with experiments or hands-on training. Traditionally, pedagogies based on hands-on training include at least one or a combination of laboratory experiments, undergraduate research experiences, internships, and cooperative experiences. Instructors can also use field trips to provide practical

applications to higher education. This approach to higher education, which is inherent in technical high education in soviet and post-soviet countries, has been proven to be very effective. However, it still does not help students to independently cope with even a small project. Another modern pedagogical technique, service learning, involves integration of several components and partnership among several players, such as the community, practicing factories, doctoral students, and faculty. Service-learning pedagogy provides doctoral students an opportunity to work on real-world projects, giving doctoral students the opportunity to take the initiatives in challenging situations and exercise leadership in more natural way.

The above mentioned teaching methods and strategies have been tested on 1-years the doctoral students in Nation Technical University “Kharkiv Polytechnic Institute” during the courses “Fundamentals of pedagogy of higher education”, “Methodology and logic of scientific and pedagogical activity in the higher technical school” “Pedagogical rhetoric”, “Professional culture teacher”. 97 doctoral students participated in the survey, the results of which are presented in the Table 1.

The article contains: Leadership is a competence and as such it can be acquired, developed and polished effectively in academic environment. Currently, the criteria of leadership for doctoral students are getting clearer, which allows educators to develop proper curricula and teaching strategies. In addition, it is critical to apply active teaching method and modern facilities to create an essential environment for team working and leadership development.

The results of the survey revealed the significance of leadership skill development in teaching practise and high influence of the course structure on it.

Table 1**Assessment of influence of teaching environment to the doctoral students**

Quality of the students' responses	Positive responses	% from the whole amount of responses
The influence of the course content to the doctoral student's personality		
The course directly affected the leadership skills	68	70
Understood the essence of leadership	62	64
Realised the significance of modelling and troubleshooting skills in leadership	58	60
Realised the level of their own leadership skills development	79	81
Recognised the main obstacles to achieve the required leadership skills	77	79
Realised the importance of the ethics in leadership	66	68
Assessment of the teaching environment		
High level of the teaching environment	63	65
The scientific information is enough, well-organised and easy to comprehend	71	73
The doctoral students have the opportunity to express their thoughts and creativity	75	77
Sustainable interaction and effective feedback	77	79
The influence of the teaching environment to physiological state of the doctoral student		
Ability for the doctoral students to be active during the lessons	61	63
Increased cognitive activity of the doctoral students	65	67
Increased emotional and psychological state of the doctoral students	69	71
Doctoral students are not indifferent to the subject	64	66