

# THE CHALLENGES OF APPRENTICESHIP: THE STATUS QUO OF PROFESSIONAL MASTERS' PEDAGOGICAL COMPETENCIES

**Nijole Ciuciulkiene**

Institute of Educational Research, Academy of Education,  
Vytautas Magnus University, Lithuania

**Ilona Tandzegolskiene**

Academy of Education, Vytautas Magnus University, Lithuania

**Gita Ingrida Stupelienė**

Kretinga School of Technology and Business, Lithuania

**Abstract.** *With the emerging of apprenticeship (work-based learning form) in Lithuania, an important role is played by professional masters, who are monitoring young specialists' professional practice, form their professional skills, develop a well-oriented and skillful specialist. The main aim of this research is to analyze the development of pedagogical competencies of professional masters during work-based learning process. The qualitative research data were gathered during semi-structured interview. Twelve professional vocational masters from different Lithuanian vocational schools participated in the research. The performed thematic content analysis findings showed that the competencies of the professional vocational masters actively develop, grow, and change mainly through interaction with students in the process of work-based learning, when supervising practice masters become counselors, guardians, consultants, and inspirers. The most significant challenges include transferring subject knowledge to students, their motivation, and work with students with special needs. The results reveal that vocational practice masters need to improve their pedagogical competencies and psychological knowledge, which would help students to convey knowledge of the profession and motivate them to learn.*

**Keywords:** *apprenticeship; competence; master in vocational training; vocational education; work-based learning.*

## Introduction

Anyone seeking to improve personal skills should see vocational training as an attractive opportunity (Kaikkonen & Maunonen-Eskelinen, 2020). In this context, there emerges the concept of work-based teaching/learning. It aims to promote the motivation of vocational training institutions to organize the training

process paying constant attention to the improvement of the competencies of a vocational master.

Still this quite an optimistic attitude is juxtaposed by the the reality of vocational education. After reviewing the data of surveys of vocational professionals, it can be concluded that most of the research participants - vocational trainers/masters, who are educating a future professional in their place of work practice, tend to think passively enough, without trying to innovate in the process of their apprentices' development (Tütlys, 2017; Kaikkonen & Maunonen-Eskelinen, 2020).

The topicality of work-based learning highlights the significance of pedagogical competence of vocational masters and presupposes a problem question: what competencies should vocational masters develop while participating in the work-based learning process with the intention to prepare qualified employees for the labor market. The main aim of this research is to analyze the development of pedagogical competencies of vocational masters during the work-based learning process. The object of the research is the development of pedagogical competencies of vocational masters in the process of work - based learning.

Research methods: data collection methods is a semi-structured interview. Data analysis methods are the analysis of scientific literature and the qualitative thematic content analysis of the vocational masters' pedagogical competencies in the work - based learning.

### **Theoretical Framework of the Vocational Masters' Pedagogical Competencies Development in the Process of Work-based Learning**

In the system of work-based learning, the state and employers work together to meet the country's needs for youth education and skills in the labor market. In order to make work-based learning effective, it is inextricably important to support close relationship, communication and cooperation between vocational education and training (VET) teachers and VET masters, so that students have the opportunity to reflect on and link the learning gained in each institution. It is therefore recommended that theoretical knowledge be translated into practical experience, thus helping students to bridge gaps in theory and practice during learning (Tütlys, 2017; Eiríksdóttir, 2020).

The main goal of the work-based learning system is to provide comprehensive basic vocational training, to transfer skills and knowledge, and to provide awareness for qualified activities. According to the training regulations, the workplace is responsible for providing special and general technical skills. The

vocational school/training centre is responsible for combining the acquired theoretical knowledge and skills with practical experience and applying them in specific situations (Tibėnienė, Daujotienė, & Daujotas, 2015).

*Table 1 Vocational Trainer/Master Competence Thesaurus (created by authors)*

No.	Competencies	Knowledge, abilities and skills
1.	Didactic competencies	knowledge of legal norms of the work environment and institutional policy; knowledge of the subject learning material and the ability to adapt it to a specific situation; development of the relevant knowledge about the profession, the ability to link learning materials and the teaching subject; knowing that students have different perceptions of the subject being taught; knowing how the curriculum fits in with other forms of education; knowledge of various teaching / learning theories and materials; the ability to apply the theoretical knowledge into practice; the ability to draw students' attention to the importance of learning materials for professional practice; knowledge of didactic literature of vocational education and systematic application of methodologies; the ability to recognize learning disabilities such as dyslexia, ADHD and physical learning disabilities, the application of school policies in this regard; knowledge of qualification assessment; knowledge of development-oriented forms of testing
2.	Pedagogical competencies	the ability to manage students' learning; the planning of learning outcomes and their systematic pursuit; assessment of student performance
3.	Practical consultation competencies	having up-to-date knowledge of the professions that are being taught; the ability to recognize different ways of students' learning and to adapt teaching according them; knowledge of modern theories about the development of self-directed learning; knowledge of the literature on vocational guidance and the ability to apply a pedagogical system, which corresponds to the school's vision.

Work-based learning is greatly influenced by the competencies of a vocational master. It is the purposeful efforts of the masters that lead to the excellent educational results of the students, therefore, the didactic competence of the vocational training masters is emphasized. Great importance is given to the

unity of personality traits, pedagogical mastery is also needed, and it is one of the most significant factors of authority (Stankevičienė, 2012; Eidukevičiūtė et al., 2015). The insights of the above-mentioned researchers and the data of document analysis, enabled to design a thesaurus of the most relevant competencies of professional masters (see Table 1).

The theoretical analysis on masters' competencies and student outcomes also highlighted the facts that more competent educators had a deeper understanding of their teaching subject and the impact of their pedagogical means on students. They also had a sense of control during the teaching process, were very passionate about teaching and learning, respected their students, and fostered a positive workshop atmosphere inspiring the active learning (Melnikova & Trakšelys, 2016). The compiled vocational masters' competence thesaurus served as a basis for creating semi-structured interview questionnaire.

### **Research Methodology, Design and Research Ethics**

The qualitative type of research is valuable because it helps to see how each research participant presents the answers relying on their personal attitudes. According to some scientists the qualitative methods allow the researcher to discover the inter-related dynamics, new variables, and relationships of these experiences and to illustrate the influences of their social contexts (Gioia, Corley, & Hamilton, 2012; Creswell, 2013; Shufutinsky, 2020). The originality of the qualitative research process is presented through the interrelationship between the data collection, interpretation and work stages. The data collected during the qualitative research process must be sufficient to draw smooth conclusions, formulate reliable theoretical statements and interrelationships (Gaižauskaitė & Valavičienė, 2012).

The qualitative data were collected while performing semi-structured interview. The major researchers' motivation to choose the semi-structured interview for their research was quite a sensitive topic. Thus, semi-structured interview could serve as a human encounter, the dialoguous nature of which could encourage the participants to present their ideas more frankly (Qu & Dumay, 2011; Brown & Danaher, 2019). The semi-structured interview question blocks were compiled relying on theoretical analysis results – the thesaurus of masters' competencies (see Table 2).

Table 2 *Structure of the Interview* (created by authors)

Question block	Related Questions
Work experience of vocational masters, existing pedagogical competencies.	How long are You working as a vocational trainer/master? (1) Describe Your impressions of being a vocational trainer/master. (2) What is Your opinion about work-based learning?(3)
Participants' knowledge about work based learning. The status quo of their work-based learning experience.	What is Your opinion about the work – based learning? (4) Are You involved in work – based learning? (5)
Priorities provided by vocational masters for pedagogical competencies (general, didactic) while developing apprenticeship in work-based learning	What are Your strong sides concerning competencies? (6) What competencies would You like to develop first? (7)
Peculiarities of formation and development of professional masters' competencies	What is Your experience of planning Your teaching/learning activities? (8) Do You often reflect Your pedagogical success/failures? (9) What are Your insights about the competence and qualification development? (10)

Klaipėda School of Tourism, Kaunas Food Industry and Trade Training Center and Kaunas “Karaliaus Mindaugo profesinio rengimo centras“ were chosen because they are equipped with a modern, innovative hotel and restaurant and trade sector practical training center, where students study and work in real working conditions, trained by vocational masters. Four masters from Klaipėda Tourism School, four professionals of Kaunas Food Industry and Trade Training Center and four masters from Kaunas “Karaliaus Mindaugo profesinio rengimo centras“ were invited to participate in the research on voluntary basis (see Table 3).

The purpose and procedures of the the research were explained to all participants of the semi-structured interview. They were informed about the research ethics as well.

The sample of the research may be regarded as a comfortable one, as the participants of the interview were selected on the basis of the special criteria: all participants must have at least 5 years of work experience in the work-based learning process with students and be willing to share more detailed information about their competence development experience.

*Table 3 Sample Characteristics (created by authors)*

No.	Education	Age	Work experience	Labor sector
1.	Collegium	45	10	Building industry
2.	Collegium	40	12	Building industry
3.	Collegium	50	25	Building industry
4.	Collegium	42	18	Car service
5.	Collegium	39	12	Car service
6.	Collegium	43	18	Car service
7.	Collegium	45	18	Tourism service
8.	<u>University</u>	48	19	Tourism service
9.	Collegium	35	5	Tourism service
10.	Collegium	52	7	Food industry
11.	University	39	10	Food industry
12.	Collegium	46	10	Food industry

The researchers followed the ethical principles of interview highlighting the ideas of recognition and respect of a person's independence, freedom to participate or refuse to participate in the research, to mind the participant's confidentiality and privacy, to protect the participants from moral hazard (Gaižauskaitė & Valavičienė, 2012).

### **Research Data Analysis and Discussion**

The major research methods for the interview analysis was a qualitative thematic content analysis. It was performed while following the traditional patterns of qualitative descriptive thematic content analysis (Anderson, 2007; Denzin & Lincoln, 2011; Vaismoradi & Snelgrove, 2019; Lochmiller, 2021): familiarization, coding, generating themes, reviewing themes, defining and naming themes, and writing up.

The data gained during the semi-structured interviews formed quite a massive data base. Still, while coding the data according key words and phrases connected with work-based learning and masters' competence development, there appeared that the texts have many similarities. The researchers think that it is due to similar work experience and qualification of interview participants. There are clearly expressed 17 subcategories, which may be grouped into 6 categories. The content of the categories displays two major themes: "Being a Real Master" and "Learning by Doing". While interpreting the texts, the researchers worked independently till the homogenous themes were reached. The final version of the thematisation was compiled while comparing the independent findings. The titles of subcategories are

presented in a more extended way, while trying to stick to the manner of respondents' thinking as all of them tended to use such phrases as "...competence development...", "...understanding of work environment..." (See Table 4).

Table 4 *The thematic content of Masters' competence development (created by authors)*

No	Theme	Category	Subcategory
1	Being a real master	High professional level	Evidence of professional qualification
			Demonstration of excellent professional skills
		Being a strong personality	Authority or a friend
			Development of non-cognitive skills
		Duality of master's work	Understanding of work environment
			Putting theory into practice
2.	Learning by doing	Formation of master's competencies: skills that a master lacks	Problems of applying IT in distant learning
			Lack of knowledge in psychology
			Lack of knowledge in inclusive education
			Lack of didactic skills
			Lack of creativity development skills
			Lack of communication skills in a foreign language
		Development of master's didactic competencies: skills that a master has and polishes	Development of master's explanatory, demonstrative teaching methods
			Development of master's lesson planning, lesson management skills
			Development of project – based learning skills
		Ways of professional improvement	Availability of professional improvement courses
			Availability of pedagogical improvement courses

While reasoning the interpretation logic the researchers anchored to the major concept of "competence" and its structure consisting from knowledge, abilities and skills, attitudes and values (Penttinen, 2020). For this reason the interpretation was organized so that it would enhance the masters' knowledge about work - based learning and the requirements for a master who strives to be successful. Concerning knowledge about work - based learning it was connoted by the third category of the first theme. Work-based learning for some masters is related to practical experience, independence, responsibility: "<...>practical experience, touching, calculating for yourself, organizing work..."(R1) "<...> we have internships, days of practical training, <...>."(R5). More than half of the interview

participants regard a work-based learning concept as a version of the real work environment: *"To feel real, <...>."* (R2) *"<...> you actually face your work."* (R4). *"< ... > - the whole basis is real work, ..."* (R6); *"<...> simulation of a work process a workplace."* (R7). Most of the participants of the research stated that the work in the company is real, because the student performs all the work functions belonging to him/her: *"<...> arrange the workplace, <...>."* (R6) *"<...> all training takes place in those kitchens where they are already doing a specific job."* (R10); *"the work is done in a consistent manner, at the beginning we figure it out theoretically, then the apprentices make calculations, then they distribute the work and we go into production in practice."* (R3); *"<...> students work with modern equipment"* (R9); *"<...> apprentices are provided with excellent equipment which is constantly updated."* (R7); *"<...> having modern equipment facilitates work in the first place, because I have the opportunity to work with all the technologies, I do not have to think of how to get out of a situation ..."* (R8).

These statements demonstrate masters' quite clear vision of work-based learning, its duality, consisting of grouping theory and practice together. They are acquainted with apprenticeship program. They highlight the importance of the modern equipment and technological knowledge how to work with it. Still, nobody mentioned the possibilities of dual vocational training. Thus, it is possible to agree with researchers statement, that dual vocation learning and its positive influence to Lithuanian society of work is still hardly known (Tūtlys, 2017, p.1).

The concept of work - based learning implies the idea of "a real master". The respondents put forward the high professional competence of a master: *"<...> I had my own business, I was a technologist, I saw a lot, so I can provide this knowledge from a to z."* (R3) *"<...> I know what needs to be required, what it takes to train that apprentice should become a valuable employee in the company."* (R11). *"<...>It is important to have special, technological knowledge, knowledge about work organization, because I am competent in that, <...>."* (R12). The participants also highlighted the relationship between a master and a student, stressing the importance of master's personality. *"<...> the best example of a real professional is the master"* (R12); *"<...>master has to be friendly, but strict, teach not only profession, but also discipline, self-confidence, how to be reliable <...>"* (R4).

The latter attitude is supported not only by masters themselves, but also by scientists importance of master's professional qualifications and personality. Stankevičienė (2012), Čemeškaitė (2013) support the position that masters must have a quick orientation, the great importance is given to the personality traits, and pedagogical mastery is acquired, and it is one of the most significant factors of authority.

The idea of pedagogical mastery initiates the analysis of masters' competence thesaurus. The respondents' opinions clearly divide into two large groups: competencies that masters lack and need to be formed and the competencies that masters possess and can develop. As competence formation and development is provided in the process of work based learning the second major theme is called "Learning by doing".

Majority of respondents clearly expressed the lack of knowledge about how to use the technologies in the distant learning: "*<...> When those new programs emerge, they need to be mastered, it takes more time and there is a lack of understanding*" (R1). "*Technology is changing, it is not possible to drive everything in traditional ways especially in the Covidian times*"(R5). Some participants of the research though declared their high qualification and perfect understanding of labor world, still admitt that they lack psychological knowledge: "*<...> we no longer know how to motivate students because there may be a lack of some psychological courses, <...>.*" (R7); "*<...> I consult a psychologist all the time, say how she thinks it would be better to give them some material*" (R2).

One of really challenging issues for a modern master is an inclusive education. Majority of the masters' state that they "*<...> lack the ability to work with the students with special needs <...> with very difficult students, with very difficult situations, <...>*" (R8).

Some of the participants declare the lack of didactic and creativity development skills: "*<...> I need information how to convey training in an interesting way, I lack such competence*". (R6). "*<...> to convey the theory in an interesting and informative way*"(R11); "*I do not know how to urge them to make something original*"(R12).

Masters still stress the unsatisfactory level of communication in a foreign language: "*It would be very good to learn English <...>.*" (R3); "*I need better German in order to participate in dual learning projects <...>*" (R 10).

The specification of vocational training didactics highlights the priorities of demonstrative, explanatory methods. The participants of the research declare that they are satisfied with their skills lesson management, assessment, planning, professional knowledge transfer, progress monitoring, choice of methods: "*<...> lesson management, assessment competence, <...>.*" (R4). , *<...>.*"(R6). "*Knowledge transfer, lesson management, <...>, lesson planning, assessment.*" (R1). "*<...>, Monitoring progress, choosing methods <...>*" (R10).

According to the answers provided by all the surveyed vocational masters, it can be assumed that the vocational masters are characterized by strong, well-developed teaching subject competencies.

Though the vocational masters are satisfied with their professional subject teaching competencies, the dominating lack of vocational trainers/masters technological, didactic, communicative, creative thinking and inclusive education competencies demonstrate the fact that the relevant innovations are quite slowly implemented in vocational education. Some participants of the research openly state that their priority is the formation of students' professional skills and they are not interested in the development of student's personality. *"My business is to teach how to work. Other things are not for me<...>Everything is changing so rapidly, programs, technologies, still everybody expects that a young master would know how to make his/her job"* (R1).

Vocational masters are quite active in their search for interesting programs. The surveyed professionals said they were being forced to change by a fast-paced life, new technologies that required them to learn constantly to pursue new skills: *"It would be very good to have training, some kind of seminars, <...>."* (R1). *"There is no day when I am not in a lecture, training, conference, which deals with the current situation of distance learning, platform management, information generation, lesson structure, task formation, <...>."* (R4). *"<...> I need to improve, constantly raise competencies, is it in one place, it is in another place, is it that I can single out something more? <...> Whichever part is weaker, I seek to strengthen it "* (R4).

The participants of the survey underline the quality and relevance of the professional and pedagogical courses. They state that it is necessary to develop qualifications at the highest level with the highest technology. *"<...> There is always a need for professional development, <...>."* (R7). *"Germany, Austria, not only Belgium, France, where they have those traditions, there is a very respectful, very important approach, in general, professionals in vocational training have the opportunity to improve their qualifications at the highest level with the highest technology."* (R5).

The vocational masters/trainers give the most relevant priorities to the teaching subject competencies of the profession, work organization. From the answers of the research participants, it can be assumed that in their work the masters of the profession follow the traditional (impact) paradigm, when the goals of teaching and not learning are important. When looking at pedagogical communication, the most frequently mentioned competence is combined with interpersonal relationships, where communication itself is understood as an everyday tool to get to know the student better, which helps to educate the student qualitatively and successfully.

While relying on the answers received from the survey participants, it can be stated that 50% of the surveyed vocational masters should improve their

competencies in training students with special needs, as well as develop psychological competencies that would indicate the way to access students. It can be stated that the professional expectations of some vocational masters who participated in the research are the desire to expand, improve their pedagogical competencies, deepen their psychological knowledge, and to improve their qualifications.

The study revealed that vocational masters face a variety of challenges while getting involved in work-based learning. The most relevant challenges identified by the vocational masters are how to involve students, how to understand them, leading them on a path of cognition so that they understand that they are learning along this path. Integrally important is how to educate students with special needs. This shows that the vocational masters lack pedagogical and psychological knowledge that would help to open the inclusive way for all students to get to know and be motivated to learn and work.

### **Conclusions**

After a theoretical analysis it has become clear that a successful professional master in his/her field must acquire experiential teaching and learning methods that guarantee the quality of the development of employees' competencies. Great importance is given to the unity of personality traits that affect his/her behavior and didactic competencies that affect students' learning motivation and outcomes.

One of the most significant factors of master's authority is the pedagogical quality of the teaching performance that has developed over a period of time. Competent and motivated masters are able to create teaching and learning environments, apply technology-based learning, evaluate the achievements and progress of apprentices, motivate and apply support to learners.

The study revealed that the extensive work experience in production and business of the masters involved in the study shows that they have enough professional knowledge to transfer to students, they have a good relationship with the students, but the masters lack pedagogical and psychological knowledge to train a student with special needs to motivate students to learn.

It can be stated that the some vocational masters want to expand, improve their pedagogical competencies, some of them want to deepen their psychological knowledge, and to improve their qualifications. The masters of the profession associate the perspectives of competence development not only in seminars, trainings, but also by cooperating with each other and applying innovative work methods.

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