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Teaching Competences of VET Teachers in Russia and Serbia

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Abstract

The research and development project PRO-VET (Professional Development of Vocation Education Teachers with European Practices) works within the context of a lack of teaching competences in Vocational Education and Training (VET) in Russia and Serbia. It approaches the challenges via a comparative study on practices in VET-teacher education in chosen European countries and applies the method of mutual learning from apparent good practice. Main findings reveal that standard educational programmes for VET teachers are, to a certain extent, quite comparable within the four participating European Union (EU) countries (the Netherlands, Germany, Finland and Ireland): VET-teachers need a university degree that includes both the subject(s) and pedagogy. In the Netherlands, Ireland and Finland a bachelor is in some cases sufficient; in Germany a master is mandatory. Findings from Russia and Serbia differ partially: Whilst in Russia many VET-teachers only studied the subject (e.g. a Bachelor of engineering), full VET teachers in Serbia often hold a PhD. However, similarities predominate: In both countries most VET-teachers had no or only few pedagogical courses and the co-operation with the "world of work" in the form of work-based learning (WBL) is weak. The main conclusion can be summarised as follows: Preconditions, needs and interests differ, thus no "silver bullet" in terms of developing a single unit or standardised study programme to improve VET-teacher education is to be aspired.

Keywords

teaching competence, VET teachers, e-learning, policy learning

1 Context and research questions

In a world of ongoing standardisation, educational systems remain a fissured landscape; this applies for Vocational Education and Training (VET) systems as well (cp. CEDEFOP 2019), including VET-teacher education (see Klein et al., 2020). This paper does not aim at overcoming or bridging the different systems; on the contrary: The manifoldness offers multiple options of systemic mutual learning. However, before thinking about development or systemic learning the base lines must be set.

The first two steps of the current research and development project "PRO-VET" were analyses of the "state of the art" as well as the common and diverging trends within VET-systems and educational programmes for VET teachers in Finland, Ireland, the Netherlands, Germany, Russia and Serbia.

The first research question has been: What are the commonalities and the differences within policies and practices of VET and VET-teacher education in the four EU countries? The chosen methodological approach to answer this question was a comparative one: VET and VET-teacher education systems of the four EU countries were analysed with respect to agreed criteria (see Saniter et al., 2015), documented in national reports, then compared, and summarised in a joint document.

The theoretical approach is "policy learning" (see e.g., Tütlys et al., 2016), the results of the mentioned comparison should *not* be misunderstood as a "benchmarking" or "best practice" report; but rather as a field of potential development areas or an instrument for mirroring the VET-teacher education systems in Russia and Serbia.

Colleagues in Serbia and Russia analysed their VET and VET-teacher education systems in the same manner as sketched for EU-countries and wrote national reports.

The second research question has been: What are the main gaps between policies and practices in Russia and Serbia and those described in the comparative EU report? The methodological approach was again a comparison. To summarise findings very briefly: Not very surprisingly the systems ("state of the art") differ partly largely; but it was possible to identify common trends and development aims in some activity fields of VET teachers.

Based on these findings, colleagues from three Serbian and four Russian VET-teacher education institutions figured out fields, where they estimate that

a.) VET-teachers in their countries have the need and interest of improving their competences, and
b.) established practices or policies of one or more of the EU countries could serve as example(s) of apparent good practice for this field.

After these fields were determined, the colleagues in Serbia and Russia started to develop seven electronic-learning (e-learning) units with a length between 72 and108 hours; so called Vocational Open Online Courses (VOOCs).

Future research will include the evaluation both of learners (VET-teachers and VET-teacher students) competence development whilst working on the e-learnings and of their estimation of appropriateness of content, e-didactics, user-friendliness, etc.

2 Methodology

The project applies a row of established VET research methods: The national reports on VET-systems and educational programmes for VET teachers are mainly based on desk-research with respect to regulations, recommendations, case studies and previous research followed by a critical content analysis. In some countries, additional data was gathered (e. g. by interviews in Germany or by a survey in Serbia). The comparative research method tries to overcome the descriptive and "culture-free" approach by considering both, the history and traditions of the VET-systems and educational programmes for VET teachers respective the beliefs, hopes and aims of the stakeholders of the six countries. Development and testing of the VOOCs (e-learnings) applies design-based research; three iterations are foreseen and currently applied.

Evaluation of the VOOCs will be both, quantitative and qualitative: All (at least 450) VET-teachers who work on a VOOC will fill-in a standardised, semi-open questionnaire; additionally, a random sample of ~10% will be interviewed. The navigation of the participants will be (on a voluntary base) tracked and analysed via semantic learning analyses (SLA).

3 Findings

Due to limited space, this chapter focuses on findings from Russia and Serbia, more details, also for participating EU-countries, can be consulted via the comparative report (Jong et al., 2020).

The ***Serbian*** colleagues report rather outdated teaching style at university, including VET-teacher education:

> The presence of modern methods of work is low at higher education institutions – lectures are dominant, while very little attention is paid to active learning, research methods, individualised classes and other methods which focus on students and which allow greater student participation in the teaching process […] (Country report Serbia, unpublished).

In the empirical study (with *n*= 125 Serbian VET-teachers) one finding is that more than 50% of VET-teachers are holding a PhD; thus, it can be concluded that education of VET-teachers is science-based. On the other side, pedagogical skills are limited: 31.5% of VET teachers have neither received any pedagogical nor psychological knowledge and another 31.4% have gained this knowledge through personal initiatives (see Burns et al. 2020). Another significant weakness is seen in the implementation of dual (alternating between VET-school and company) approaches:

> Even the Strategy for Education Development until 2020 has identified the issue of quality assurance in professional practice outside of school (work-based learning) as a weakness. The existing practical training system is also characterised by a lack of accredited posts and trainers for practical teaching and by a lack of various incentives to companies to provide better quality practical training to students. (Country report Serbia, unpublished).

In 2015, ***Russia*** implemented the occupational standard "Teacher of vocational education and training, additional vocational education" establishing that teachers should have training in the field of vocational pedagogy. Before 2015, VET-teachers have been mainly recruited from scientific skilled staff (e. g. engineers), thus Russian colleagues state: "Today a large number of VET teachers need retraining programmes, because they do not have basic pedagogical education, but have education in other areas (technical, economic, etc.)" (Country report Russia, unpublished). Additionally, Russia faces the challenge of exploiting learning potentials of real work processes: "The lack of practical knowledge and prior work experience of VET graduates linked with weak relations between VET schools and enterprises leads to the low quality of achieved learning outcomes in comparison with labor market demand" (Country report Russia, unpublished).

A central element of the research on VET-teacher education are digital skills, an aspect that became recently even more important due to COVID. Thus, empirical research included questions on this topic. The ***Serbian*** colleagues summarise:

> Great opportunities provided by modern information technology have not been sufficiently exploited and applied in the system of vocational education of the Republic of Serbia. In the past few years, the main limitation in their implementation was the lack of funding for these technologies (especially in state vocational schools), and then the inadequate training and inertness of teachers to apply this technology (Country report Serbia, unpublished).

The ***Russian*** colleagues state the need and interest of improving digital skills of VET-teachers as well:

> The growing interest of Russian teachers and educators in various digital online forms of teaching and learning is due both to the general trends in the development of information society and desire of educational institutions to change the vector of their activities towards innovation, technology, accessibility, flexibility and professionalization of education (Country report Russia, unpublished).

Despite all the differences in detail, a couple of similarities between VET-teacher education in Russia and Serbia can be summarised

- strong discipline/science orientation,
- VET-teachers are academically educated,
- pedagogical skills play a minor role,
- weak co-operation with enterprises, poor exploitation of learning potentials of real work-processes,
- needs and interest of improving digital skills.

Consequently, the following cases of apparent good practice in the participating EU-countries respective expertise of the participating universities have been highlighted (Jong et al., 2020):

- ***Germany***: The established co-operation between companies and schools in VET, the so-called "dual system".
- ***Finland***: The elaborated pedagogical approaches in the Finnish VET-schools, especially considering soft skills.
- ***Ireland***: Exhaustive experience in online learning.
- ***Netherlands***: Application of advanced measures for semantic learning analyses (SLA).

4 Conclusions and next steps

As sketched above, Russian and Serbian colleagues have chosen themes for developing VOOCs. In-line with their need-analyses and the expertise of partners from EU-countries they have chosen the following subjects:

Table 1
Content of the on-line modules

Russia	Design and tutoring of e-learning	Methodology of tutor support	E-learning methodology	Chosen policies from EU-countries
Serbia	Design and tutoring of e-learning	Interactive strategies of teaching and learning	Soft skills via e-learning	

The first six modules focus, with differing emphasis, on pedagogical skills and e-learning and thus their development is supported by Irish and Finnish colleagues due to their expertise. The last Russian module focusses on policies with respect to work-based learning (WBL) and is supported by German colleagues. Dutch expertise on semantic learning expertise (SLA) comes into play once the development phase, where evaluation/testing is mainly technical, is finalised and first VET-teacher students learn with support of the modules.

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