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The Limitations of European Comparative Studies in Vocational Education and Training Research and the Development of a Perspective to their Reduction

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Abstract

Empirical foundation or the current challenges and issues in the European comparative studies. Some challenges were spotted in a recent comparative VET study and questionnaire (by Kaiser, Struck & Frind, 2020) related to the number of respondents and the random distribution of the online questionnaire in the two countries in question. For example, the fact that in Finland or Sweden, the average age of vocational teacher-students is between early and mid-40s was not taken into account. In the extended follow-up study aiming at comparing teachers' multiple tasks and innovative potential in a changing world within six European countries, the contexts and variations will better be taken into consideration. The duration of the study program and entry requirements vary: In Germany, the duration of studies usually take five years, whereas in the Scandinavian countries or in Spain, it is usually shorter. There are also differences in the interest in or recruitment of new teachers within the countries. In Spain, many trainers or workers from the industry have switched to the state school system since the financial crisis, whereas in Germany and Norway, there is a relevant need for well-trained teachers in VET, also in the industry. In Finland, the demand for VET teacher education is four times higher than the supply. Without understanding or given an explanation regarding context, many comparisons and/or results finally do not make sense.

Keywords

VET, comparative studies, vocational teacher education

1 Context

Hence, in order to tackle some of the issues found challenging in comparative studies, we decided to present the contexts and differences of vocational teacher education implementations in the country involved. A theoretical framework is under construction.



In Finland the increased popularity of VET together with the changing working life and competence requirements create new demands on VET (Laukia, 2013). This has been taken into consideration by the vocational teacher education by stressing personalization, competences, multi-disciplinarity, working life needs and peer group mentoring. Moreover, this has meant giving emphasis to, pedagogical methods, ethics, values, and continuous personal, professional and working-life development. In Sweden, the interest on the part of trade and industry in being involved in defining employability in relation to education and competence requirements has increased (Olofsson & Persson Thunqvist, 2014). In the Malmö vocational teacher program the learning outcomes will be at fore in the future, perhaps better reflecting the working-life-competence requirements.

Constructive alignment (Biggs, 2014) is an outcomes-based approach to teaching in which the learning outcomes that students are intended to achieve are defined before teaching takes place. Teaching and assessment methods are designed to best achieve those outcomes and to assess the standard at which they have been realized. This is in line with the competence-based model that is applied in Finnish vocational teacher education. Yrjö Engeström's (1970) ideas of Finnish pedagogy influenced the teacher education curriculum in the 1980's, it became more student-centered, methods and education became more connected to the workplace and community citizenship (pp. 224-259).

At Haaga-Helia, the vocational teacher education program combines a strong theoretical foundation with an investigative and developmental approach to teaching and the student-teacher experience. It has a special emphasis on the integration of theory and practice, as well as on encouraging students to participate developmental efforts in their own institutions. It fosters an investigative and development-oriented approach to teaching. In teaching and tutoring training, you will be able to develop your skills in practices. The average age of vocational teacher student is 43 years of age, and already have both a Master's degree in her field of expertise as well as working-life experience.

Norway is characterized as a dual or mixed system, with two years of school-based education followed by two years of work-based training as the main model (2+2). The system, built upon the tripartite cooperation principle, has been established at both national and regional levels, involving both employers' and workers' unions. Vocational didactics is a central part of vocational teacher education, underpinning the learning processes connected to learning a trade, as the trainers undergo short courses while getting to know their role and responsibilities. Training offices owned by companies (employers) are a strong actor in the work-based part of VET and in the transitions between school and work.

In Norway, at OsloMet (former Högskolan i Oslo og Akershus), research and development is rooted in learning within educational institutions and in the work place. In their implementation work technology and learning, professional knowledge, experience-based competence development, and collaboration between school and working life is stressed at their vocational teacher education. At Malmö vocational teacher education values, leadership, conflict management, assessment, curriculum theory and didactics are at fore in the program.

At OsloMet two key concepts emerge when we discuss teacher education for vocational subjects: vocational pedagogy and didactics. Unlike general pedagogy, vocational pedagogy must engage with professional work tasks, and both work and production processes in working life (Gundem, 2011; OsloMet, 2017). These is traditionally articulated as vocational pedagogical principles (Inglar, 2009; Sannerud, 2020). Since these principles are developed over time without grounding in empirical studies, they cannot be regarded as scientific theory, although a number of these principles can be seen in the light of critical German philosophy (Negt, 2012; Sannerud, 2020). In vocational teacher education, the concept of vocational pedagogy is concretized as vocational didactics, a concept based on the dual nature of vocational teachers' pro-

fessional practices. These are the teacher's profession as a pedagogue/educator, and their relationship to the profession their students are trained for (Brevik, 2014). This means that vocational education has a foothold in both school and working life practice, which is often referred to as the double field of practice (Tarrou, 2005). This double field is made explicit in the admission criteria for students studying to become vocational teachers who must provide evidence of a journeyman's certificate or completion of a 3-year vocational education, in addition to a minimum of two years' relevant vocational experience after graduation.

Didactics concerns the assessments behind the selection and structuring of the teaching content (Sjøberg, 2009). Didactics is a term that is mainly used in teacher education, and can be identified on three levels, all of which are core areas. These three are: the research plane, the practical plane, and a discussion plane (Gundem, 2011). In the same manner as subject didactics, Vocational didactics is a term primarily used in general teacher education, and in vocational teacher education in particular. A general definition of the concept of vocational didactics can be formulated as "Practical-theoretical planning, implementation, assessment and critical analysis of vocational-specific learning and teaching processes" (Hiim & Hippe, 1999, p. 177). Vocational teacher education at university level uses a didactic relational model based on the Berlin model, with central elements such as intention, content, method and media, surrounded of concepts such as socio-cultural and anthropological -psychological requirements and consequences (Heimann, Otto, & Schulz, 1965).

The course of study for the teaching profession at VET schools in Germany comprises the proportion of educational sciences with a focus on vocational education and training or business education as well as subject didactics for the vocational specialization and the second teaching subject and practical school studies totaling 90 ECTS credits (KMK, 2018). The content-related and didactic focus of the university education of future VET teachers varies comparatively strongly between the locations within Germany. At the University of Rostock, the study program aims to promote the critical design competence of vocational school teachers. This includes self-reflective autonomy and socially responsible action. Thus represents both the ability to guide oneself, but also to take into account the interests of others in one's own actions (Traum, Ziegler & Kaiser, 2021).

The pedagogical education of VET teachers is only a recent requirement in Spain, even if there are differences according to the VET subsystem (Basic VET, formal VET and non-formal vocational training). It also varies according to the background and initial education of teachers and trainers (Ros & Marhuenda, 2019).

The Department of Education of the Spanish government approved in 2007 the Order ECI/3858/2007, further specified in the Royal Decree 1393/2007. The rule applies to all regions and frames the minimum requirements for teachers in lower and upper secondary education, both academic and vocational, as well as those teaching in official language schools. This regulation clearly states that the universities are the institutions responsible for the initial education of all these teachers, and it also establishes that the level of a master's degree is required for access to the profession (Marhuenda, 2018).

The Master course, is comprised of a training of 60 ECTS organized in three blocks: Generic -12 credits which will include the modules of learning and development of the personality, educational processes and contexts, and society, family and education-, Specific -24 credits relating to the complements of disciplinary training, learning and teaching of the corresponding subjects and teaching innovation and initiation to research), Practicum and master thesis -16 credits- (González-Sanmamed, 2009).

A longitudinal study carried out by Manso & Martín (2014) concludes that the block most valued by the participants is that of learning related to specific content, as well as the work placement. The study also shows that, in the opinion of all the participants, the new master's

degree represents a clear improvement compared to the previous model of initial teacher training. In historical perspective, we may see that even if there is much room for improvement, the steps taken in the past two decades have meant the establishment of an initial education system for VET teachers where there was previously none (Ros & Marhuenda, 2019).

2 Methodological considerations, mixed methods and outlook

This illustration shows how complex and diverse the educational pathways are in Europe. A study that wants to take a comparative view at these must accordingly take into account numerous special features of the countries.

Hence, in order for a new or follow up questionnaire to be successful and expandable to e.g., six European countries, the contextual and sampling questions would need to be resolved.

We propose that the respective countries' researchers would be responsible for distributing the questionnaire in their respective country in accordance with GDPR and ethical considerations and agree to a coherent sampling with the other countries' researchers, and a thorough explanation of context as part of the analysis and reporting.

For this reason, in the current project VETteach, we try to avoid the limitations and develop a research design that can be used (in the best possible way) in all the six countries and at the same time, take into account the country-specific characteristics, so that 1) the generated results are comparable and 2) meaningful and provide potential for optimizing the practice.

Furthermore, it is proposed, that the extended follow-up study involves mixed methods, not only a questionnaire.

For example, in a comparative study in which teachers in Germany and England were qualitatively interviewed, Bergen (2014) developed six types of teachers ("the appointed teacher", the "teacher with a tendency toward cynicism", persons with "subject identification", the "nostalgic", the "fun in the teaching profession" type and the "satisfied teacher"). These findings, as well as the aspects of the interview guide to the professional self-concept, can be built upon for the future research project. The aspects from the interview guide include „Experiences/General Information“ (like „Why did you decide to become a teacher?“), Daily routine (like „As I am not familiar with the daily routine: Would you give me an overview of an average school day?“ or „Are there factors you enjoy?“), Society (like „Please imagine the following situation: You are invited to a party and the group starts talking about professions. All other guests are not teachers and you are asked to tell them about your profession. What do you say? (How do the others react?)“), External factors/ school system (like „Do you have any experiences with other school systems?“) and Expectations (like „I do not know whether you have children. Imagine your son or daughter or another relative is telling you that he/she is thinking about becoming a teacher. How do you react?“) (Bergen, 2014).

Based on these findings, survey instruments will be developed in the coming months, which take into account the country-specific characteristics, but at the same time, in the understanding of a European perspective, can be used comparatively for analysis. In our considerations there is a first tendency to proceed both quantitatively and qualitatively in order to be able to look at the educational pathways of European teachers in the VET system and thus to meet an existing research gap in the vocational education.

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