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## **Effective Teaching and Learning at Vocational Education at Tertiary Level: A Qualitative Study of Teachers', Students' and Administrators' Perceptions**

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### **Abstract**

The aim of this study is to explore the phenomenon of teaching and learning at higher vocational schools through the teachers', students' and administrators' perceptions. In line with this, phenomenological research design was employed, and data were collected at eight higher vocational schools in Nevşehir, Turkey from 8 administrators, 16 teachers and 16 focus groups through semi-structured interviews and non-participant observation. Data analysis, conducted through inductive content analysis approach, revealed that effective vocational teaching and learning was defined from two perspectives: product-oriented teaching versus process-oriented teaching, and product-oriented learning versus process-oriented learning. Also, aim of higher vocational education, characteristics of effective vocational teacher, learner and program emerged from data. The challenges faced were found related to teachers, students, curriculum, context, system, employers and parents. Finally, the findings related to strategies to cope with those challenges were categorized as teacher-led, student-led and administrator-led practices together with recommendations made to improve effectiveness.

### **Key words**

vocational teaching; vocational learning, challenges, higher vocational schools, Turkey

## **1 Background to the Study**

Vocational education at tertiary level intends to develop craftsmanship, practical experience and practical problem-solving and to “prepare people for careers in higher level technical, professional and managerial positions through the provision of job-specific skills” (CEDEFOP, 2012; OECD, 2012) for it is the role of higher education to enhance learners' knowledge, skills, attitudes and abilities, and simultaneously empower them as lifelong, critical and reflective learners for the sake of employability (Harvey, 2000).

Though the common point is its being “vocational,” “occupational,” “professional,” there have been varying conceptions of vocational education as the result of its heterogeneity in terms

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of its purposes, institutions, participants and programs, making it difficult to give a singular and unitary description of vocational education (Billett, 2011, quoted in CEDEFOP, 2017), and thus problematizing the accounts of effective vocational teaching and learning.

In an attempt to develop a theoretical framework in this context, the concept of vocational pedagogy has been coined by Lucas, Spencer, and Claxton (2012) in order to define working approaches to teaching and learning in vocational education (Commission of Adult Vocational Teaching and Learning (CAVTL), 2013) and develop models that work best in vocational education context (Faraday, Overton, & Cooper, 2011). Broadly, it is noted by CAVTL (2013) that excellent vocational teaching and learning depends on a clear line of sight to work; collaboration between employers, trainers and providers for the design and delivery of vocational programs; “dual” professional teachers with occupational and pedagogical knowledge and skills; and access to industry facilities and resources with recent technology and standard (p. 9). Going into deeper, the concept of vocational pedagogy deals with the outcomes of vocational education, identity of vocational teachers, models of and analogies for vocational education (Lucas, Spencer, & Claxton, 2012), and teaching skills, teaching relationships, teacher reflection and teaching models and teaching context (Faraday et al., 2011). More specifically, vocational pedagogy is concerned with:

- integration of theory and practice (CAVTL, 2013; de Brujin & Leeman, 2011; Kerna, 2012);
- use of variety of learning environments like real or stimulated workplace, classroom and workshops settings (Black & Yasukawa, 2013; Evans, Guile, & Harris, 2009; Mcrone, O’Beirne, Sims & Taylor, 2015; Moodie & Wheelan, 2012);
- use of authentic tasks in real or real-like contexts through practical problem solving, hands-on activities and reflection (CAVTL, 2013; de Brujin & Leeman, 2011; Lucas et al., 2012);
- responsiveness to diverse individual needs (CAVTL, 2013; Chappell, 2004; Cullen et al., 2002; de Brujin & Leeman, 2011; Harkin, 2012; McCrone, O’Beirne, Sims, & Taylor, 2015; Lucas et al., 2012);
- contextualized teaching and learning embedded in communities of practice (Barnett, 2006; Canning, 2011; Catts, Falk, & Wallace, 2011; CAVTL, 2013; Evans, Guile, & Harris, 2009; Smith & Blake, 2005);
- collective and collaborative approach to teaching and learning (Black & Yasukawa, 2013; CAVTL, 2013; Chappell & Hawke, 2003; de Brujin & Leeman, 2011);
- coaching and mentoring (de Brujin & Leeman, 2011; Evans et al., 2009; Jameson, 2012);
- use of variety of assessment and feedback methods (CAVTL, 2013; Lucas et al., 2012);
- dual identity of teachers with occupational and pedagogical knowledge (Barnett, 2006; CAVTL, 2013; Orr & Simmons, 2010; Palmieri, 2004); and
- eclectic and pragmatic approach to teaching (CAVTL, 2013; Chappell, 2003; Cullen et al., 2002; Harkin, 2012; Lucas et al., 2012).

In addition to these, as vocational education is “hands-on, practical, experiential, real-world” (Lucas et al., 2012, p. 9), situated and context-bound (Faraday et al., 2011), enacted through formal vocational and technical school programs, in training centers or institutes, and in the workplace, both on and off the job (Tsang, 1997), effective vocational teaching and learning also require recontextualization (Barnett, 2006; Evans et al., 2009), as a form of learning transfer, in order to put the knowledge generated and practiced in one context to work in another through the recontextualization of content, pedagogy, workplace and learner (Evans et al., 2009).

Moreover, teachers’ pedagogical content knowledge, used to tailor pedagogy according to the content, includes up-to-date occupational knowledge and knowledge of disciplines/subjects

which underpin job knowledge and practices (Barnett, 2006; Chappell, 2003; Harkin, 2012; Lucas et al., 2012; Shulman, 2005; Young, 2004) and is needed to inform the practices and decisions of vocational teachers for the sake of effective vocational teaching and learning. However, as discussed by Cochran, Deruiter and King (1993, cited in Chappell, 1995), most research on teachers' knowledge dealt with these two domains: subject knowledge and pedagogical knowledge, disregarding other domains like knowledge of learners, technological knowledge, knowledge of educational contexts and curriculum knowledge (Robertson, 2008).

Concerning effective vocational learning, discussions centered on two perspectives: (1) learning as the acquisition of vocational knowledge, and (2) learning as the contextualized application of knowledge (Catts et al., 2011), conceptualized as quantitative (knowledge acquisition) versus qualitative (meaning making) perspectives by Biggs (1994), and surface learning approach versus deep learning approach by Säljö (1979, cited in Richardson, 2005). As a result of transition from teacher-centered to learning-centered approaches (CEDEFOP, 2004; Chappell, 2004), situated learning advanced by Lave and Wenger (1991) has been equated with effective vocational learning as it helps vocational learners construct vocational knowledge and skills through participation in communities of practice and interacting by members of that society (Barnett, 2006; Catts et al., 2011; CAVTL, 2013; Evans et al., 2009; Smith & Blake, 2005), namely employees and trainers at workplaces and peers and teachers at schools. Beside, experiential learning, together with problem-based and inquiry-based learning, is found requisite for effective vocational learning enacted through hands-on activities and supported with reflection and feedback (Clark, Threeton, & Ewing, 2010; Lucas et al., 2012; Scott & Sarkees-Wircenski, 2008). Therefore, vocational learning can be defined from a constructivist perspective as an active process in which learners construct occupational knowledge rather than acquiring it passively while vocational teaching can be viewed as facilitating that construction rather than imparting mere knowledge (Duffy & Cunningham, 1996).

Due to direct links with labour market, effectiveness of vocational education and training has been widely measured with the use of performance-oriented outcomes (Imel, 1990). Since the skills, knowledge and understanding provided through vocational education is necessary for the growth, productivity and competitiveness of economies (OECD, 2004) responsiveness of vocational education to the labour market has been the main objective and concern of policy makers, social partners and vocational education providers (see World Economic Forum Global Agenda Council on Employment, 2014). Bosch and Charest (2010) argue that the value of vocational education for the society and companies is determined when the trainees enter the labour market and put their gains into practice. For this end, outcome-based qualification frameworks are being inevitably designed by countries to regulate and contract the provision of education (Allais, 2014), and vocational education and training is labeled effective in case of responsiveness to competence standards.

As discussed by Bedi and Germein (2016) and Mitchell, Chappell, Bateman and Roy (2006) policy and research discourses mostly appropriate the term "effective vocational teaching and learning" by dealing with matters exterior to the pedagogical experience occurring between teachers and learners although higher vocational schools have mostly been viewed as being "teaching and training institutions" since its faculty is not required to conduct research, and can, therefore, devote their time to teaching and learning (Vaughan, 2006). Although this view may be a popular long-held belief the idea that higher vocational school faculty have special knowledge about being effective teachers or that they utilize this knowledge has little empirical support (Palmieri, 2004; Shepherd, 2009). Likewise, Chappell, Solomon, Tennant and Yates (2002) criticized outcome-oriented perspective in vocational education as "the journey to vocational competence is now regarded by many as less significant than the arrival, with the quality of the journey largely left to the professional competence of the teacher or

trainer” (p. 7) although it is widely accepted that “the effectiveness of any education system also strongly depends on the quality of interactions and relationships that occur between the teachers and students.” (UNESCO-UNEVOC, 2012, p. 5). Amongst others, Lucas et al. (2012), echoed similar concerns by suggesting that key to the delivery of excellent teaching and learning is knowledge and understanding about pedagogy. Therefore, shedding light on the teaching and learning practices, and the factors that have facilitative and distractive impact on those practices is required to understand and reveal the processes leading to those demanded outcomes and qualifications.

### **1.1 Research Questions**

In line with the abovementioned thrust, the purpose of this study is to explore effective teaching and learning processes experienced by the teachers and their students at tertiary-level vocational education. Specifically, this study attempts to answer to the following research questions through the perceptions of administrators, teachers and students at higher vocational schools:

- What are the perceptions of administrators, teachers and students on effective vocational teaching and learning at vocational education at tertiary level?
- How do teachers and students assess teaching and learning activities at vocational education at tertiary level?

## **2 Method**

Aiming to investigate effective teaching and learning processes at tertiary-level vocational education schools through the perceptions of administrators, teachers and students, I utilized a qualitative research approach. The study of lived experiences of teachers and students, who are the main actors of effective teaching and learning processes, calls for qualitative rather than quantitative methodology because it allows more in depth and detailed understanding of the phenomenon constructed by individuals (Yıldırım & Şimsek, 2018) in a certain context (Bogdan & Biklen, 2007).

### **2.1 Research Design**

I employed phenomenological research design as in this approach, the researcher focuses on a concept or phenomenon and seeks to understand the meaning of experiences of individuals who have experienced or lived the phenomenon (Creswell, 2007). In other words, it is sought to examine how those individuals who experience any phenomenon “perceive it, describe it, feel about it, judge it, remember it, make sense of it, and talk about it with others” (Patton, 2002, p. 104).

### **2.2 Data Collection Procedures**

Framed within purposive sampling, multi-level sampling strategy was employed to reach the data sources of the study which consist of administrators, students and teachers at the higher vocational schools in Nevşehir, Turkey. All of eight higher vocational schools serving in Nevşehir were included; and totally, 8 administrators, 16 teachers and 70 students (16 focus groups) participated in the study. At each school, administrators were first contacted and interviewed, and upon their reference, first teachers were selected for interviewing. Other teacher and student participants at each school were selected through concurrent utilization of maximum variation and snowball sampling strategies. Before the conducting interviews, four-hour session of a vocational course of the selected teacher was observed in order to provide supplementary data for interviews. Focus groups were selected through recommendations of teachers and these groups included 4-6 students with various performance levels while the

variation among participant teachers and was provided through including the teachers teaching at distinct programs and departments.

Data were collected from participants through non-participant observation, and individual and focus group interviews during 2017-2018 academic year. The semi-structured interview forms and observation guide were developed by the researcher through literature review and expert opinion. During the observation, the stream of behaviour records was utilized. Interviews were audio-recorded upon consent of participants and transcribed by the researcher for analysis.

### 2.3 Data Analysis

For analysis of the data, content analysis was used to identify main concepts and categories (Miles & Huberman, 1994; Patton, 2002; Yıldırım & Şimşek, 2018) to identify “core consistencies and meanings” (Patton, 2002). After organization of raw data in accordance with research questions, codes were identified, and these codes were grouped under upper level codes and categories through inductive content analysis approach.

Concerning trustworthiness, the credibility of the study was established through triangulation by supporting interviews with observation, member checks, peer debriefing and prolonged engagement. For transferability of the study, rich and detailed description of findings was provided and purposive sampling was utilized. As for dependability, detailed account of research context was given and data was triangulated by collecting data from administrators, teachers and students. Finally, confirmability was ensured by auditing account of research process, data, and findings by an external audit.

## 3 Results

The analysis of data indicated that teachers, administrators and students viewed effective vocational teaching and learning from two perspectives: process-oriented teaching versus product-oriented teaching, and process-oriented learning versus product-oriented learning.

Most of the teachers and students, and a few administrators defined effective vocational teaching as a process in which students gain job skills and knowledge. In this process, *teacher roles*, *teacher knowledge*, *curriculum design* and *content delivery* and arrangement of *learning environment* were considered to contribute to the effectiveness of teaching practices. As for the perspectives with regard to effective vocational teaching as a product, most teachers and students equated it with *the acquisition of job competences* by gaining job knowledge, skills, code of conduct and ethics, gaining vision about job and entry level job knowledge and skills. In other words, vocational teaching would not be considered effective if the students did not achieve job-related outcomes.

Similarly, perceptions of teachers and students about effective vocational learning were reflected in two perspectives: effective vocational learning as a process and effective vocational learning as a product. More teachers and teachers viewed effective vocational learning as a product by equating it with *the acquisition of job competences* and *curriculum objectives* while there were teachers and students who thought that effective learning was a process of gaining job skills and knowledge by adopting appropriate *learning strategies* and having required *personal traits*.

Besides conceptions of effective vocational teaching and learning, the aim of higher vocational education which is promoting *personal, occupational and intellectual well-being* of students emerged from data. Most of the administrators and teachers agreed that higher vocational education aimed to improve occupational well-being of the students.

With regard to the characteristics of effective vocational teacher, emerging themes were *teacher knowledge*, *teacher role* and *teacher traits*.

Interviewees' descriptions of effective vocational teacher revealed four types of *teacher knowledge*: content knowledge (subject knowledge and vocational knowledge), pedagogical

knowledge, technology knowledge and contextual knowledge. Among all, characteristics related to teacher knowledge were what administrators, teachers and students mostly touched upon, valued and provided definitions for. Interviewees also brought forward *the roles* required from effective vocational teachers. Mentoring, coaching and role-modeling were highlighted by most of the teachers, students and administrators while these roles were followed by being a leader, acting as vocational knowledge source and employer/workplace manager. Finally, *traits* of effective vocational teachers emerged from the data by producing three subthemes: personal qualities, interpersonal interaction and professional responsibility.

Likewise, themes regarding effective vocational learner characteristics evolved from data and these characteristics were grouped under *entry characteristics*, *affective characteristics*, *cognitive characteristics* and *personal traits*.

With regard to *entry characteristics*, students were required to have prior knowledge and meet the eligibility criteria for the sake of effective learning. Prior knowledge involved students to study at the relevant department at high school, have general knowledge and basic level knowledge of Turkish language, English language and Math. *Affective characteristics* of effective vocational learners included motivation and interest. It was mostly teachers and administrators together with a few students who highlighted the significance of motivation and interest of students for effective learning. They indicated that vocational learners should be motivated to learn the job and have job-related objectives. In respect to the *cognitive characteristics* of effective vocational learners, most teachers and students felt that effective vocational students adopted appropriate learning strategies like being research-oriented by making research for deep learning and doing extra practice out of classroom by working on part-time basis or spending more time in laboratories and workshops. Finally, *personal traits* of effective vocational learners were brought forward by the interviewees. Eagerness to learn and improve himself/herself was the most expressed personal traits while other qualities were perceived to be creative, observant, curious, patient, self-regulative, responsible, and have generic skills like problem solving and time management.

Characteristics of effective vocational program also emerged from data gathered mostly from the administrators revealing three themes of person-related factors, school-related factors, and system-related factors.

Person-related factors covered *student characteristics* and *teacher characteristics*. According to the view of one administrator, an effective vocational program offered at higher vocational schools enrolls students with prior knowledge, preferably knowledge acquired at a vocational high school. As for the *teachers' characteristics* working at effective vocational programs, as noted by nearly all administrators, they contribute to the program effectiveness through their job experience and teaching experience.

School-related factors which are the *curriculum* and *school context* played important roles for the effectiveness of vocational programs. Based on the experiences of administrators, teachers and students, curriculum, implemented at effective vocational programs, is designed according to the needs of labour market, involves hands-on experience for students, and is delivered through authentic materials and tools and offers more practice-based hours than theory-based courses.

Lastly, a few administrators, one teacher and one focus group expressed their opinions with regard to student *admission*, *further study* and *employment opportunities* and these perspectives were grouped under the theme of system-related factors.

As to the challenges hindering the effectiveness of vocational teaching and learning seven main themes evolved as the result of interview data analysis. These challenges were categorized as teacher-related challenges, student-related challenges, curricular challenges, system-related challenges, contextual challenges, employer-related challenges and parental challenges.

First of all, teacher-related challenges were found related to *teacher knowledge* and *teacher traits*. With regard to the first theme, the interviewees consisting of administrators, teachers and students reported the challenges derived from teachers' (lack of) content knowledge, (lack of) pedagogical knowledge and (lack of) technological knowledge while the problems originating from *teacher traits* were teachers' (negative) attitude, (un)professionalism, beliefs and (lack of) skills.

Second theme that data analysis revealed was student-related challenges that proved compelling during the teaching and learning processes at higher vocational schools. Student-related challenges were found to be pertinent to students' *entry characteristics*, *cognitive behaviors* and *affective behaviors* displayed at school.

Thirdly, concerning the curricular challenges faced by the teachers, students and administrators there evolved six themes, namely challenges related to *curriculum development*, *content selection*, *teaching-learning process*, *measurement and assessment*, *resources* and *evaluation*.

System-related challenges were the fourth main theme producing six themes, namely *prior education*, *admission*, *planning*, *implementation*, *resources* and *policy-making*. Highly influenced by system-related challenges, contextual challenges hindering the effectiveness of vocational teaching and learning were found related to *school environment*, *resources* and *administration*.

Data also revealed that employers and parents also posed challenges for vocational teaching and learning. Employer-related challenges were related to *workplace learning*, *characteristics of workplace* and *personnel selection* while parental challenges were based on *parental approach* and *parental involvement*.

Teachers, students and administrators also provided information about their practices to cope with these challenges. Teacher-led practices were grouped into four themes, namely practices for *curriculum*, practices for *instruction*, practices for *resources* and *peer collaboration*. Along with teacher-led practices, student-led practices evolved in two themes, which were *learning strategies* and *extracurricular activities*. As far as data analysis revealed, students developed and employed learning strategies like peer collaboration, in-classroom learning, out-of-classroom learning and workplace learning to cope with challenges derived from ineffective teaching and learning. Last of all, administrator-led practices were categorized under seven themes, namely *student learning*, *accommodation*, *teacher development*, *resources*, *curriculum development*, *community-student interaction* and *diagnostic evaluation*.

Finally, participants made recommendations for improving higher vocational education producing five main themes: student-centered recommendations, teacher-centered recommendations, curricular recommendations, contextual recommendations and policy recommendations.

#### **4 Conclusion**

The participants' perceptions and experiences indicated that teaching and learning at higher vocational schools are under the influence of: teachers' knowledge, conceptions and beliefs, industry experience and currency, teacher skills, teacher behaviours, personal traits and professional development; and students' learning orientation, prior learning experiences, prior knowledge, learning approach, cognitive and affective characteristics and personal traits. Besides these, educational context, its resources, administration, school environment, relations with employers and community, and the curriculum and its responsiveness to the demands and needs affect the teaching and learning processes at those schools. Among all, national education system, educational policies concerning vocational education, and local and institutional-level administration were found to be most determinant factors. The attitude and actions of employers

and parents, somehow indirect, were also found to influence teaching and learning practices at vocational schools.

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