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SOFT SKILLS IN EDU 4.0: LESSONS LEARNT IN HUE INDUSTRIAL COLLEGE

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ABSTRACT

This research focuses on soft skills practices; teaching and learning experiences in Hue Industrial College (HUEIC) from 2016 until 2020. The paper reports the results of a case study conducted in Vietnam as a part of EMVITET Erasmus+ capacity building project. Study data consist of feedback of college students (n=15), vocational and higher education teachers (n=20), and furthermore Vietnamese college students (n=130) who took part in an online survey. The results indicate that both students and teachers are willing to implement learning soft skills in practical activities in formal education context as well as outside of the classroom. The study recognizes the main required soft skill to be communication skills, however in the Vietnamese context IT application skills have a positive effect on students' online learning.

Keywords: *Soft skills, Edu 4.0, Vietnam, Hue Industrial College*

1. INTRODUCTION

Globally, the ongoing process of major transformations requires the education to prepare to deal with the resulting changes for the twenty-first century and Education 4.0. Vocational education together with higher education faces challenges when attempting to bridge education and the needs of the world of work, in which digital technology increasingly demands new kinds of skills that need to be integrated into the curriculum. In the EMVITET project, when determining the essential competencies in Education 4.0, the importance of soft skills is also identified.

Personality characteristics are regularly called 'soft skills' in contrast to cognitive abilities and technical knowledge, which are often called 'hard skills' (Heckman & Kautz, 2012). While the importance of soft skills has been recognised throughout the world, the terminology used to refer to these varies from country to country. An ongoing emphasis on soft skills learning represents one of the foremost cultural shifts (Kamin, 2013).

According to Tran (2019), soft-skills development is found to be closely associated with the socioeconomic, cultural, and political context of each country.

At present, countries around the world have various methodologies and approaches to both the assessment and teaching of soft skills. The aim of this case study is to explore soft skills practices; teaching and learning experiences in the Vietnamese vocational college context.

2. LITERATURE REVIEW

2.1. Soft skills in Vietnamese Education Context

The concepts and definition of soft skills vary a lot, and it must be noted that the term does not have a consensus of definition. Skills are conceptualised differently among different disciplines, educational contexts, countries and continents.

In Vietnam, these skills are applied in the form of *soft skills*, *transversal skills* or *life skills* (Tran, 2019). When exploring soft

skills, it is important to be aware of these definitions and not to simplify the concept. To establish a deeper definition of soft skills, we first need to understand how widely this context is understood. In Vietnam, for example, transversal skills are known as soft skills and life skills. And as Dao (2014) has noted, some skills can be recognized as soft skills: communication skills, listening skills, teamwork skills, team building skill, leadership skills, public speaking skills, conflict solving skills, understanding and empathizing skills, negotiation skills, sale skills, s, influencing skills, and wisely refusing skills

In Asia, soft skills' research and development have been very active in recent years. In the early years of the twenty-first century, interest in the field of soft skills and other related skills has been evolving in the Association of Southeast Asian (ASEAN) countries. In Asian countries, there is an increasing call for skilled labour (World Bank, 2015), while the high economic growth rate brings a need for new skills (Pham, 2013).

The Vietnamese labour market is undergoing significant changes as a result of the downsizing and restructuring of the public sector and particularly the rapid increase of private and foreign direct investment enterprises (Tran, 2010). Within this context of a changing labour market, previous research by Vietnamese and foreign researchers shows that Vietnamese graduates lack basic soft skills, such as communication, problem analysis and solving, fail to apply their existing skills and knowledge in the workplace and need retraining for employment (Mai, 2018; Tran et al., 2014; Tran, 2013). Most Vietnamese universities and vocational colleges are aware of the importance of soft skills requirements. However, research evidence suggests that embedding soft skills' development into the curriculum and training soft skills for teachers is still far from satisfactory (or not very efficient) (Nguyen, 2018). Soft skills in the Ho et al. (2020) clarified that soft skills

are related to 'language use, socialized ability, the attitudes and behavior applied in the communication between people. Some skills can be considered soft skills, such as communication skills, teamwork skills, leadership skills, public speaking skills, conflict solving skills, understanding and empathizing skills, negotiation skills, sales skills, team-building skills, influencing skills, listening skills, and wisely refusing skills' (cited in Dao, 2014).

Already in 2011, the Ministry of Education and Training (MOET) in Vietnam issued Circular No. 66/2011/TT-BGDĐT regarding integrating communication skills in the training programs at the technical secondary level. Since then, such communication skills have been taught in schools as an elective module with two credits (Ho et al., 2020). In addition, the adjustment of the management of life skills' education as extracurricular activities appeared in Circular No. 04/2014/TT – BGDĐT dated February 28, 2014, by MOET. This action step-up the importance of soft skills preparation for students and teachers in Vietnam. Lately, Vietnamese government organisations and educational institutions have been engaged to prepare for teacher education in soft skills.

In addition, elsewhere has been doing investigations related to workers skills in several industries (food-processing, textile, healthcare, construction, transportation and logistics, and chemical and fertilizer) industries in Vietnam. The Manpower Group (2012) reported workers were lacking such skills as resilience, self-management, applying new knowledge, ability to motivate others and innovation.

2.2. Teaching and Learning Soft Skills

Most soft skills cannot be learned or taught in a classroom setting or by reading a textbook. Students learn soft skills by doing them (Steward, Wall & Marciniac, 2016). To implement and develop soft skills teaching Tran (2019) suggest using student-centered pedagogical approaches, such as problem-

based or project-based learning, community service learning, online and distance learning, and work-integrated learning.

As Tran (2019) has been noted, soft skills implementation and development strategies vary a lot. In his research in the field of Vietnamese higher education, he found that some universities believe in individual academics' consideration, without providing them with much support. Some universities have employed external experts to develop an "add-in" soft-skills curricula and deliver it independently or in cooperation with academics. Both approaches have their risks. He asks, how to connect soft skills and disciplinary skills in order to transfer these soft skills into learning and the world of work.

In Vietnam, soft skills learning is seen as an important part of graduation. Vietnamese students believe in the importance of developing soft skills for their future work and life. Vietnamese students appear to partake of non-curriculum-based activities more than curriculum-based ones. They cognitively engage with these learning activities much more than emotionally and behaviorally. Soft skills development activities should be well-aligned with students' needs and interests to maximize their participation and engagement. In that way, students' soft skills levels can be greatly improved, as can the efficiency of soft-skills implementation in each university, since organizing several types of activities consumes a great deal of time, financial, and human resources. (Tran, 2019.)

3. RESEARCH CONTEXT

3.1. Soft Skills Teaching in HUEIC

According to the 2016 Educational Research Institute, "there are more than 83% of Vietnamese students who lack soft skills", this is an alarming number of students' skills training. The lack and weakness of soft skills make it difficult at work and life and are a major obstacle in today's youth's career path. Hue Industrial College (HUEIC) is a vocational school with over 120 years old

with rich experience in prestigious vocational training in the local region and the country. The college is aware of its mission and continuously renews and updates its curriculum in accordance with the change in the new era. Besides vocational training, the college attaches great importance to soft skills training. In the framework of Promoting awareness on start-up and innovation in the Central region sponsored by the Innovation Partnership Program (IPP), HUEIC has established a Soft Skill Division in the 2015-2016 school year. The Soft Skills module is taught to students in the first year of study. This helps to equip them with some basic skills to use in their learning process and life. The students are also aware that after studying they will enter a challenging working environment. When recruiting, the person being recruited must meet the requirements of the employer. To conquer employers, in addition to mastering professional knowledge, learners need skills, such as communication skills, presentation skills, teamwork skills etc.

The Soft Skills module is initially designed to include 6 skills: Teamwork skills, Communication skills, Presentation skills, Job search skills, Startup skills, and Information technology application skills. At the outset, this module has 1 credit and is rolling out for the 2016-2017 school year. After one year of study, the division surveyed students' opinions and adjusted to 2 credits from the 2017-2018 school year to 2018-2019. By the school year of 2019-2020, due to the reduction of teaching hours in the curriculum, the Soft Skills module will be shortened to 1 credit. The following is a summary of skills in the Soft Skills module offered in school.

Communication skills include a brief introduction to communication theory. The rest is mainly about effective communication techniques and styles. Introduction to linguistic and non-verbal communication.

Presentation skills introduce ways to present effectively, contents need to be

prepared before giving presentations, what techniques are needed when giving presentations (related to eye contact, standing posture, costumes, etc.), preparing presentation design. Teamwork skills introduce solutions to solving team conflicts, solving problems while working in groups; essentials for effective teamwork. Besides, organizing teamwork activities for students to practice. Start-up and Innovation skills provide the BMC business model, introducing strategies to make a difference with the MACES model, design thinking, sharing economy. This module contributes to increasing learners' understanding of start-up, provides much essential knowledge for students about start-up, motivates them to have creative and business ideas. Job search skills equip content on CVs, guide students on how to write CVs, how to interview effectively, and issues related to increasing their working capacity. IT Application skill guides students to use Office 365 like how to set up schedules, work in teams with the Teams app, study planning, search for information, share and secure information. This skill is learned in the lab. This skill has been removed from the 2019-2020 school year because it is taught in a different module of the students' curriculum. Instead, there are Start-up and Innovation skills. IT skills are seen as a kind of hard skill, but in Vietnamese context, there was a very practical need to include these skills as a part of the Soft Skills module. The soft skills program currently being used in teaching at HUEIC is shown in Table 1 below.

The college has organized courses to train students' essential skills in the environment of college and after graduation. The courses have attracted the participation of most of the students in the college. From September 2015 to the first semester of the 2019-2020 school year, the college has trained 119 Soft Skills modules with a number of 3,834 students. (Specific data are shown in Table 2).

Soft Skills lecturers have participated in training courses on Soft Skills and Start-up and Innovation. Each teacher undertakes teaching from 1 to 3 skills. Hue IC's management approach is as follows: after receiving a timetable from the Training Department, managers allocate skills to each class session to avoid the case where skills are not taught by teachers due to the same timing. We then send all the teachers in the team to sign up to teach. College prepares many learning materials for the effective learning process such as A0 papers, scissors, marker pens, color pens, glues. Besides, we also design many activities to enhance interaction among students and enhance practice and discussion. Every year, at the beginning or end of each semester, Hue IC organizes workshop to re-evaluate the effectiveness of Soft Skills teaching, from which to discuss and come up with more reasonable solutions. Results of the meeting have been agreed that each instructor would take on all the skills for a class. This makes management easy and brings many advantages for students.

4. RESULTS

4.1. Students' and teachers' experiences of soft skills development

The EMVITET project team in Hue College organized a two-day workshop on 28.11- 29.11.2019. The second day focused on the theme of soft skills. Workshop participants consist of 15 college students and 20 vocational and higher education teachers. The workshop started with Dr Sanna Ruhalahti's lecture regarding soft skills and participants were doing some group activities related to e.g. empathy skills. During the workshop we collected data to respond to the practical open question: *How Vietnamese college students want to learn soft skills? How Vietnamese teachers want to teach soft skills?*

Lists above summaries results from students and teachers (Table 3).

Table 1. Program of Soft skills module for the 2019-2020 school year (Soft Skills Division, 2020a).

No.	Chapter name / Item	Time (hour)			
		Total	Theory	Practice, experiment, discuss, exercise	Test
1	Lesson 1: Communication skills 1.1. Communication classification 1.2. Principles for effective communication	5		5	
2	Lesson 2: Presentation skills 2.1. Categorization of presentations and features 2.2. Preparation phase in presentation skills 2.3. The secret to a successful presentation	5		5	
3	Lesson 3: Teamwork skills 3.1. Teamwork overview 3.2. Effective teamwork skills	5		5	
4	Lesson 4: Job search skills 4.1. Job search skills 4.2. Resume and CV writing skills 4.3. Interviewing skills	5		5	
5	Lesson 5: Start-up skills 5.1. Introduction to startups 5.2. MACES model 5.3. Design Thinking 5.4. Sharing Economy	10		10	
	Total	30		30	

Table 2. Data of students studying Soft skills from the 2016-2017 school year to the 2019-2020 school year (Soft Skills Division, August 2020b).

School year		Semester 1	Semester 2	Extra semester	Total	Note
2016-2017	Number of classes (class)	19	18	1	38	
	Number of students (student)	696	575	14	1285	
2017-2018	Number of classes (class)	23	6	3	32	
	Number of students (student)	813	240	83	113	
2018-2019	Number of classes (class)	9	19	1	29	
	Number of students (student)	323	476	14	813	
2019-2020	Number of classes (class)	10	9	1	20	
	Number of students (student)	321	272	7	600	
2016-2020	Number of classes (class)				119	
	Number of students (student)				3834	

Table 3. *How participants are willing to learn and teach soft skills from students and teacher's perspectives.*

Students (to learn soft skills)	Teachers (to teach soft skills)
<p>Create outdoor activities after class Team working, enhancing more confident, self-creativity Presentation Exchange activity, participating in some contest in school Teachers need to know how motivate to students Group assignment Taking part in Youth Communist activities Create some games in lesson action Part-time job Participating community activities Want to get more practice in major, so that learners can get some skills in practicing Through solving problem Strong knowledge regarding major subject Take part in social volunteer activities at school Surf web/watch on the internet or other mass media on how to develop soft skills Read in the newspaper and magazine regarding soft skills Take part in workshop how to develop soft skills Attract learners to clubs at school such as English club Enhance internship, collaborate with companies Self-study</p>	<p>Enhancing soft skill subjects Cooperate with enterprises Changing method teaching into student-centered learning Encourage students participating community activities (Green summer) Put soft skills in some units Build outdoor activities for students Team-based working class Project-based assessment used to motivate students' creativity and oral project presentation Create chances for students organizing their activities Encourage part-time jobs Respect students' ideas Push students' confidence and creative Enterprises experiences Pair and group work Field trip Solve problems Give topic and situation solving Help students understand the importance of soft skills Training plan Create chances for students in active practicing and show their abilities Open day (one day of students) HueIC Challenge contest Playing game on Kahoot.it Holding some activities related to their major subject Enhancing technology application in units Extend more time for students to intern at enterprise Exchange student activities Close to students To be patient, motivating Learning by doing Use critical thinking</p>

Based on these results we can see that there are many similarities between students and teachers how to learn and teach soft skills.

4.2. How soft skills learning affects online learning?

The COVID-19 pandemic affected many areas of life, and educational activities were not an exception. Soft skills learning was made easy to access for the students and theory-based subjects were taught online. The research data were collected via online survey (See Appendix 1) and the main aim was to find out how soft skills learning affects online learning. Data consist of Hue IC students ($n=130$) from different educational fields. Data was collected randomly, and the survey was voluntary based. Survey consisted of questions e.g. related to soft skills effects to online learning, soft skills learning period, length and content. Results are presented here.

Fig.1 shows that most students think that IT application skills have a positive effect on their online learning. Besides, communication skills are also useful for students in learning online.

In order to help the Soft Skills Division of HUEIC to make appropriate adjustments in the soft skills curriculum, the authors also consulted with students about whether to increase or decrease the amount of skills' teaching time, adding or removing some of the skills in the curriculum. As a result, the majority of students want to add Time Management Skills and many students also want to learn Adaptive Skills and other skills (Figure 2). Among the Soft Skills included in

the curriculum at Hue Industrial College, students are very interested in learning Teamwork and Communication skills. The remaining skills are less popular. Thereby, we see that the training of soft skills is very necessary. Vietnamese college students see Teamwork and Communication skills as a one of their favorite skills (Figure 3).

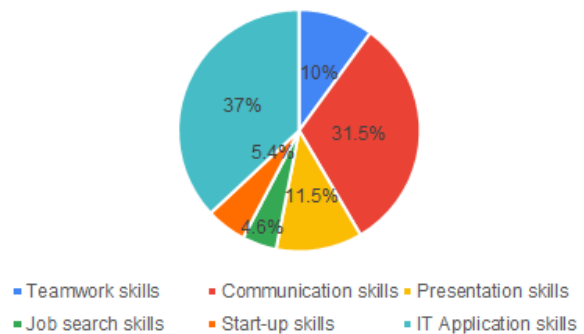


Fig.1. What soft skills have the most positive effects on online learning

During the COVID-19 pandemic, the college could not deploy the teaching of soft skills because it is a practical subject, and our soft skills curriculum has not been adjusted in time to apply the teaching at that time. To adapt to the change, lecturers of the Soft Skills Division organized a Soft Skills Workshop titled "Soft skills - New skills in education 4.0" which took place on May 23, 2020, and they had come up with options to change the subject's curriculum. The content and teaching methods are adjusted to be suitable for online teaching. And now when the pandemic returns, we have applied online teaching to this module but only applied to some classes.

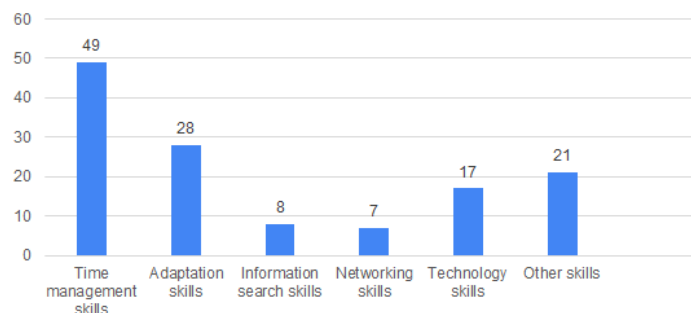


Fig. 2. Soft skills which should be added to the curriculum.

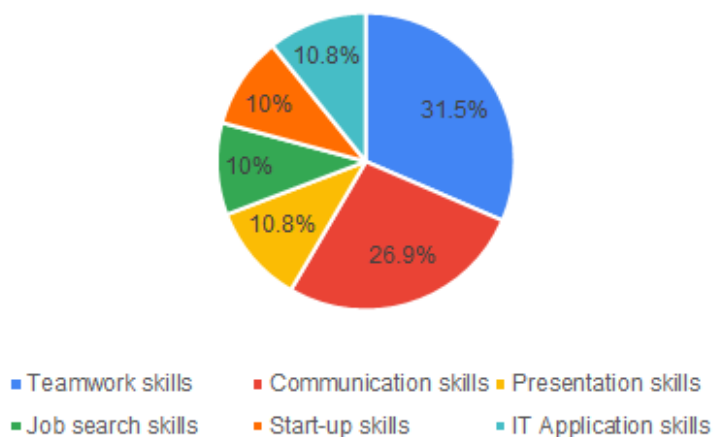


Fig.3. The most favorite soft skills

5. CONCLUSION

This study has served as a unique opportunity to analyse HUE Industrial College's practices and development regarding soft skills teaching and learning. The research period itself has been very different than for example one year ago. As said, the ongoing process of major transformations requires education to prepare to deal with the resulting changes for the twenty-first century and Education 4.0. Vietnamese educational field has faced a force to move to online learning, as well the whole world. Digital technology increasingly demands new kinds of skills that need to be integrated into the curriculum. As Tran (2019) noted, soft-skills development is found to be closely associated with the socioeconomic, cultural, and political context of each country.

This study focused on the current situation of students' soft skills that Mai (2018), Tran et al. (2014) and Tran (2013) found Vietnamese graduates lack. Several soft skills were implemented in 3834 students' study programs. As studied earlier by Steward et al. (2016) soft skills can be learned by doing them and therefore soft skills are implemented in teaching practices such as experiment and discussion activities.

The results show that there are needs to integrate soft skills learning and teaching

more widely to the different learning activities and especially on informal learning. In addition, it seems obvious that soft skills awareness increases as a part of social volunteering activities, free time, and when working. It will be important to take account of all wide informal learning opportunities and develop how to show soft skills achievements.

As Ho et al., (2020) has noted, colleges should flexibly and creatively apply the skills teaching in their own school practical conditions. Hue Industrial College has shown interest to further develop their teaching and learning practices. Through Soft Skills Seminars twice a year, staff discuss how to refine the content of skills, as well as whether there is a change in increasing or decreasing some of the skills or changing or removing certain skills. To respond to the needs of Edu 4.0, they have also noted that there are needs to develop digitalization through equipment and tools. This is in line with Ho's et al. (2020) suggestion, when training teachers with both teaching methodology and technical knowledge and skills should be a plan to be conducted annually to meet the demand of TVET activities suitable to the market economy.

To follow Ho's et al (2020) findings, there is a need to pay more attention to improve students' transversal competences for their future jobs. Lecturers of the Soft

Skills Division of HUEIC always try to be agile, adapt and change teaching methods and programs in order to respond to reality, needs of the world of work and bring efficiency, in order to enhance students' skills.

By the results both students and teachers are willing to implement learning soft skills in practical activities in formal education context as well as outside of the classroom. Both want to have collaborative assignments to learn soft skills as well as learn via problem solving. Teachers mentioned some pedagogical approaches such as student-centered learning, project-based learning, technology enhanced learning and learning by doing. These results support Tran's (2019) suggestion to use student-centered pedagogical approaches.

During the Covid-19 pandemic the data were collected in order to discover what soft

skills students favor when online learning processes increased. The study recognized the main required soft skill to be communication skills. In addition, presentation skills and teamwork skills were mentioned. These three soft skills are following Dao's (2014) definition of required soft skills. The study revealed also that most of all students needed IT application skills that is not concerned as a soft skill but rather 'hard skills' (Heckman & Kautz, 2012). Students were asked also what soft skills should be added to the curriculum. They required time management skills, adaptation skills, information searching skills and networking skills. In addition to these soft skills they required a hard skill related to technology. This case study can serve as a foundation for building future soft skills development activities and research studies for Education 4.0.

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