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Teaching Digitally-Ready Soft Skills for Employability: A review of the COVID-semester online-teaching strategies

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Abstract

The coronavirus pandemic triggered an abrupt change to emergency e-teaching and has accelerated the adoption of digital teaching practices in higher education. This transition from in-person instruction to online-only teaching took place globally and disrupted the conventional lecture format. While the catalyst, namely COVID, was the same throughout the world, a growing body of research confirms that instructors across the educational spectrum are experimenting with, and implementing, a plethora of methodologies based on their digital abilities and experiences.

This paper will critically analyse several online-based methodologies and digital tools developed and introduced at the University of Europe for Applied Sciences within an undergraduate module called Employability. The authors will use the six areas of the European Commission's DigCompEdu framework as a reference to analyse and summarise digital tool implementations and enhance students' digital collaboration skills, online experience, and learning outcomes.

The methodological focus is on teaching soft digital skills for employability, namely, digital communication, problem-solving, collaboration skills, as well as, digital content creation and media literacy in tandem with the main content of the course. Possible issues when teaching the Employability module in post-COVID offline or hybrid classrooms will be discussed, particularly with regards to ensuring that teaching formats are fit-for-purpose in increasingly digital, and remote, work environments.

Keywords: skills development, soft skills, digital collaboration, higher education, employability

1. The 2020 E-Emergency Teaching and The DigCompEdu Framework

During the spring of 2020 the COVD-19 pandemic catapulted teaching from face-to-face mode to "emergency e-learning" (Muller et al., 2021) or "emergency remote teaching" (ERT) – the term coined by Hodges et al. (2020). Teachers were suddenly required to boost their digital competencies. In a rather prescient and serendipitous move, three years before this disruption occurred, the European Commission's Joint Research Centre had already prepared and shared the European Framework for the Digital Competence of Educators, otherwise known as the DigCompEdu framework (Punie & Redecker, 2017). At the time, it was developed as a response to the growing "ubiquity of digital devices," and to provide instructors support in developing their digital competencies – an obvious prerequisite for teaching online.

This investigation will outline and examine the implementation of digital collaboration tools used in the Employability I: English and Employability II: Soft Skills modules taught during the second and third COVID-19 semesters of 2020-2021 at the University of Europe for Applied Sciences (UE). The courses were taught exclusively online at two campus locations, in the German cities of Berlin and Iserlohn. The four groups taught by the authors of this article were analysed according to the DigCompEdu framework, which provides a roadmap for enhancing student's digital competencies and information and communications technology (ICT) tools usage within a skills-based curriculum.

The concept of "lifelong learning" cannot be divorced from the methodologies and curricula of higher education. The speed at which technological advancement occurs and has had to be adopted since 2020 adds extra layers of both humility and urgency to the process of regularly updating course material, methods, and resources employed. Coming to terms with the "new normal" requires, first and foremost, a developmental mindset from both instructors and students, especially given that digital tools themselves are continually evolving. Those who embrace the challenges involved can, however, find new opportunities for innovation. Instructors can enhance and assess learning outcomes via a variety of ICT tools to translate real-life qualification assessment practices (Makhachashvili et al., 2021) into a blended or exclusively online format. Higher education students' perceptions of emergency e-learning during the COVID-19 pandemic showed noticeable differences in student engagement, participation, and learning skills compared to that experienced during in-person teaching (Cranfield et al., 2021). To all involved, the change in format is a significant step towards the evolution of education.

One key evolutionary aspect of teaching – well underway even before the pandemic began – is the trend toward knowledge- and skills-based teaching versus chiefly knowledge-based education (WEForum, 2017). Since the global financial crisis, awareness of the interdependencies and complexity in international markets has risen sharply, mostly due to factors "*subsumed by the term VUCA (Volatility, Uncertainty, Complexity, Ambiguity)*" as stated by Burgartz & Krämer (2016). Same research indicates that 83% of companies regard innovations as essential to their survival in the global marketplace. Within just three years, the top 20% of innovative companies grew at a rate that was almost 16% faster than those of their peers classified as least innovative. A skills-based curriculum focuses on building students' abilities to apply rather than repeat what they have learned, particularly within an interdisciplinary context and in original ways. Nurturing innovative approaches in the classroom will support students in mastering the skills of the twenty-first century and will

enhance their employability. Given the speed at which knowledge, practices, and products become obsolete in a VUCA world, both students and teaching staff must acknowledge this necessity and build their creative collaboration expertise while at school, cultivating skills that will prepare them for dynamic and disruptive working conditions.

Teaching how to apply soft skills in real-life situations, including highly developed social skills, is critical to helping students succeed in their future careers. As twenty-first-century economies shift from generating wealth via individualistic creativity to team creativity, soft skills are now a determinant for academic behaviour in online education (Cazarez, 2021) as much as gaining "effectively fostered through collaboration" (Larson & Miller, 2011).

The University of Europe offers an Employability course containing consecutive modules over the first three semesters of the Bachelors' degree programme across several majors. The first semester concentrates on Business English communication skills, designed for students with the minimum requirement of advanced level proficiency in English. The second focuses on soft skills for the workplace in the twenty-first century, and the third module centres around design thinking. Out of the Employability I courses offered, the authors of this paper taught a total of 56 teaching units for each of four groups during two subsequent semesters of 2020:

a) University of Europe, Iserlohn Campus. Two courses of predominantly German-speaking students, roughly 30 students per group.

b) University of Europe, Berlin Campus. Two courses of international students with English as a first and second language from approximately fifteen countries of origin, roughly 60 students.

The competencies gained reflect the skills delineated in Bloom's Taxonomy of Learning (Anderson & Bloom, 2001) and the DigCompEdu framework. To encourage students to perform critical evaluations of the materials covered, skills-oriented activities were incorporated using digital collaboration tools. In the following section, the methodology used to achieve these goals will be discussed.

2. How Digital Competencies Were Enhanced in Combination with Other Soft Skills

In 2016 it was already posited that the *"forces outlined in the VUCA model are beginning to find their way into the rarefied environment of Higher Education, necessitating an existential reappraisal of higher educational institutions well before the coronavirus made its entrance onto the world stage. Higher Education may have bypassed the Industrial and Taylor mass production revolutions, nevertheless, they are unlikely to be as easily able to evade the very revolution they enabled through the knowledge economy"* (Stewart et al., 2016, p. 242). The DigCompEdu framework reflects an acute need for universities to include digital competence in their curricula, preparing students appropriately for employer's changing demands.

3. Methodology

A number of training programmes, frameworks, and self-assessment tools have been created and put into practice to identify and assess digital competence for educators. The common European Framework for the Digital Competence of Educators (DigCompEdu) was created to facilitate teachers in assessing *"their competence, identify their training needs and offer targeted training"* (Redecker, 2017, p. 8). DigCompEdu was therefore selected for its reliability

and validity as a "scientifically sound background framework" assisting in guiding further decisions on training focus, programs, methods, and tools used for further teaching Employability modules. The interpretive analysis was adopted to gain a detailed understanding of teachers competence to provide digital collaboration training, identify their training needs, and detect the skills gap for further learning and development. This article illustrates how the DigCompEdu principles have been incorporated into UE's Employability modules, including in terms of enhancing students' digital competencies and achieving other overarching learning outcomes within the courses. The authors summarised the two-semesters classroom efforts to map what was achieved and where more focus is needed in the upcoming semesters. A self-reflective, interpretive analysis was based on the conceptual framework proposed by Redecker (2017) so as to see the limitations and skills gap for further improvement and to further incorporate the best practices into the updated curriculum.

The six DigCompEdu areas focus on different aspects of educators' professional activities:

a) **Area 1: Professional Engagement.** Using digital technologies for communication, collaboration, and professional development.

b) **Area 2: Digital Resources.** Sourcing, creating, and sharing digital resources.

c) **Area 3: Teaching and Learning.** Managing and orchestrating the use of digital technologies in teaching and learning.

d) **Area 4: Assessment.** Using digital technologies and strategies to enhance assessment.

e) **Area 5: Empowering Learners.** Using digital technologies to enhance inclusion, personalisation and learners' active engagement.

f) **Area 6: Facilitating Learners' Digital Competence.** Enabling learners to creatively and responsibly use digital technologies for information, communication, content creation, wellbeing and problem-solving.

Reformulating the specific accomplishments in each area according to the DigCompEdu framework in terms of the Employability modules provides instructors with a roadmap for further growth and further professional development in digital competencies and ICT tools used to enhance students' digital competencies in the hybrid learning mode once the lockdown is over.

An analytical summary of the UE Employability course outcomes according to the DigCompEdu framework:

a) **Area 1: Professional Engagement**. Leveraging in-classroom collaboration and discussion to foster asynchronous communication both on a corporate and personal level between students and teachers, sharing knowledge, experience, found topic-related resources, building curiosity into constant professional development.

b) **Area 2: Digital Resources**. Using various ICT tools and sources to maintain synchronous and asynchronous communication and collaboration by co-creating and editing digital resources.

c) **Area 3: Assessment**. Critically analysing students' progress in using various collaborative digital tools, providing a platform for peer assessment and room for growth, building regular feedback into the classroom.

d) **Area 4: Empowering students.** Providing room for an informed choice on how to use digital tools that correspond best to learning objectives and tasks, improving students' digital skills, collaboration and autonomy in terms of areas of study focused on and how to present their thoughts on these to others.

e) **Area 5: Teaching and Learning**. Teaching, coaching, facilitating, and assessing the development of digital competencies along with discipline-related tasks, encouraging students' online collaboration to support the individual learning journey.

f) **Area 6: Facilitating Digital Competence.** Supporting students to use digital tools creatively and responsibly to find, interpret, classify, evaluate, and co-create project-based content.

In the following conclusion, the achieved goals are summarised into three areas: digital communication and collaboration, digital content creation and media literacy, and digital problem solving, and are followed by critical points and suggestions for further research in the final section.

4. Conclusion

4.1 Focus: Digital communication and collaboration

To enhance students' skills at collaborating effectively using digital tools, regular breakout rooms, discussions, and digital collaborative activities were introduced and implemented within both the Employability I: English and Employability II: Soft Skills modules. The components of the collaborative peer-learning were presented methodically into the classroom. Students shared after-class feedback that they were regularly helping their peers proceed through the tasks. Instructors witnessed students sharing the related links and explanatory comments to facilitate task accomplishment within Microsoft Teams breakout rooms (further in text - MS Teams).

Throughout the semester, students were assigned to different groups in each class. During the regular debriefing after the task-based discussions in the breakout rooms, some students reported training in taking individual responsibility and practicing building trust with new co-learners when instructors assigned students into new mixed/randomised groups. Meanwhile, assigning students to stay in the same team during the 135-minute class and to fulfil their tasks within the same group contributed to growth in their awareness of personal accountability and cooperative skills even online, according to their self-reported post-class reflections. However, as students were building longer-lasting teams for their project-based semester exams, instructors practiced assigning students within their formed project teams to provide more time for the in-class tasks, time collaborating together, and building relationships. Students reported through the post-class feedback that it helped build up bonds within their final exam teams and increased productivity and efficiency.

In regards to working in teams, UE Employability students were challenged to interact with their international peers in the breakout rooms, with three to four participants in a discussion. It is the authors' experience that designing tasks for pairs and putting students into two might be suboptimal for larger classes. Intercultural tensions or reluctance to start a conversation might arise when two students in a breakout room are not well-acquainted or avoid switching on cameras, or simply have an unstable connection. Increasing the number of students to 3-4 in

a breakout room can minimise these factors and stimulate better-mediated and less polarised discussions. Other hidden issues might relate to previous communication between them, as well as, the concern that disparate opinions about a topic may potentially lead to conflictual situations and can drive them to retreat from the classroom activities.

Being more aware of these pitfalls, instructors can design more inclusive collaborative spaces so as to prevent a number of these self-reported issues, as well as, stimulate critical and systems thinking, collaboration and understanding, along with respecting different perspectives and views – this latter point is one of the key aims of both modules.

Reformulating the specific accomplishments in each area according to the DigCompEdu framework in terms of the Employability modules provides instructors with a roadmap for further growth and further professional development in digital competencies and ICT tools used to enhance students' digital competencies in the hybrid learning mode once the lockdown is over.

UE Employability students are routinely engaged in solving problems in smaller randomized teams and learning to create their own digital activities using a variety of digital technologies (see Figure 1) such as interactive ICT-tools. These include Cloze, Kahoot, Microsoft Forms and Surveys, Mentimeter, Padlet, and Quizlet as well as collaborative environments in Microsoft Teams, Excel, Word and PowerPoint, Mural and Google Jamboard.

FIGURE 1. INTERACTIVE AND COLLABORATIVE DIGITAL TOOLS USED TO ENHANCE STUDENTS' DIGITAL COLLABORATION FOR EMPLOYABILITY MODULE AT UNIVERSITY OF EUROPE IN 2020-21

Source: Own compilation

Students first learn how to complete an exercise or take a quiz online, then go from takers to makers, creating their versions for each other after collaborating on the design and relevant content. They are encouraged to analyse and discuss the benefits and drawbacks of each, and to evaluate the professional context in which this tool might be used most effectively.

Brainstorming, classifying data and opinions, creating and refining input into the digital visualisation or frameworks within a given professional or educational context take place frequently during the classes.

In addition, the intention was to train students to systematically co-create, co-construct, and share the results of their discussion and collaboration through the use of digital whiteboard collaboration tools such as Jamboard and Mural. During the course, students showed improved online collaborative skills as their abilities evolved from complete unfamiliarity with online visual collaborative tools, to creating and reviewing digital content with their peers, choosing the appropriate ICT-tools for a given task, adapting communication strategies to a specific audience, and demonstrating their awareness of cultural and generational diversity in digital environments.

4.2 Focus: Digital content creation and media literacy

A variety of activities were incorporated into the digital environment via synchronous and asynchronous assignments and post-task assessments, to encourage the mastery of digital content creation skills. Employability students at UE learn to classify, modify, evaluate, and create digital content, and to integrate and refine information into different formats using Common License copyright, licenses, and references appropriately. UE Employability module students are also systematically challenged to search for current data, business analyses (Harvard Business Review, Gartner & World Economic Forum reports), and case studies to illustrate the concepts and frameworks taught in class.

To build their ability to assess media messages critically, students were introduced to the Media Literacy Framework by Christ (2016) and Schilder & Redmond (2019), which train the user to ask key questions when assessing the credibility of a given information source. Students then searched for advertisements and applied what they had learned, analysing their subject by exploring who wrote it, for what purpose, to which audience, with what formats, and why certain content was chosen, and what other related information was not included.

4.3 Focus: Digital problem solving

It was already apparent pre-pandemic that "the VUCA forces will present businesses with the need to move from linear modes of thought to problem-solving with synthetic and simultaneous thinking" (Stewart et al., 2016, p. 241). To incorporate interactive and collaborative learning activities, asynchronous assignments, and post-task assessments, Employability module UE students were introduced to and given a forum to practice applying problem-solving techniques. By identifying and addressing case study problems that were either individually chosen or provided by their instructors, students found themselves in near-real work situations. After discussing their options, creative group-work solutions were transferred into a visual digital collaboration board (Jamboard, Mural, Whiteboard) and they considered viable ways to adapt these practised solutions into new business-oriented situations.

To implement this "learning by doing" approach, the instructors introduced digital collaboration tools and their main features one by one and task by task, increasing the complexity as students gained experience in using them. By building their skills from Awareness through Acquisition to Application, followed by Experimenting and Evaluation, to

finally reach the Creation level, they self-evaluated their digital collaboration skills according to the Six Levels of Skills Development Framework (Shtaltovna, 2021), see Figure 2.

FIGURE 2. THE COLLECTIVE SYNCHRONOUS SELF-EVALUATION OF THE COLLABORATION, CREATIVITY AND DIGITAL TOOLS/COLLABORATION BY THE EMPLOYABILITY II STUDENTS AT UNIVERSITY OF EUROPE, 2021
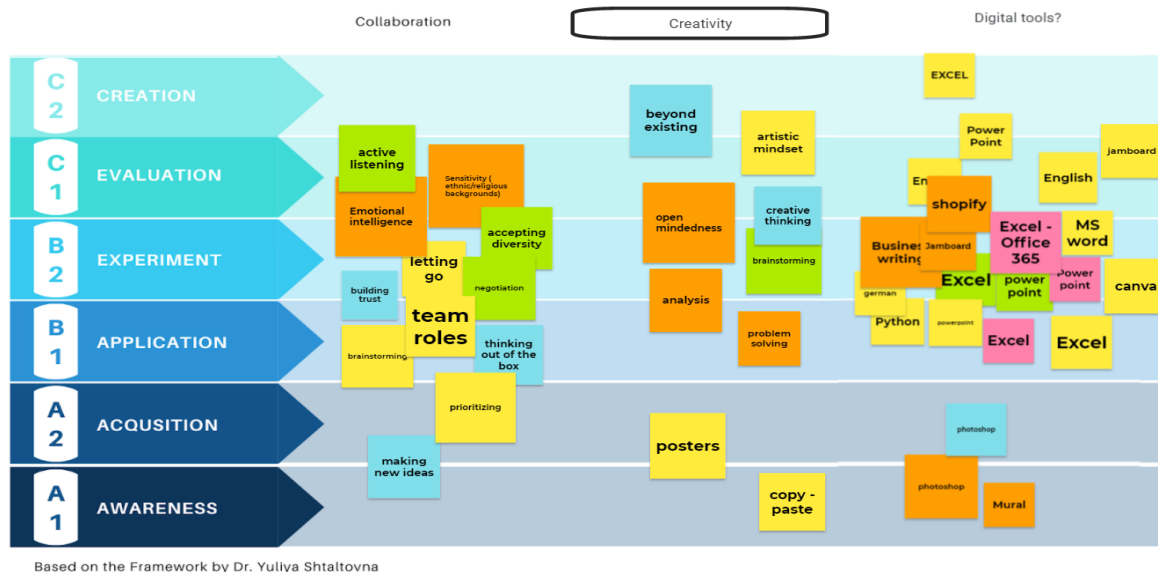
Source: Jamboard Collection Employability, Shtaltovna, 2021

This self-assessment framework allowed students to self-assess their collaboration and digital collaboration skills in teams for evaluating several subskills in real time. They saw where they progressed during the online semester and identified where to focus their future efforts. The student teams first brainstormed what constitutes each competency representation (tools and skills in terms of using them) and then anonymously and individually identified their levels, by evaluating and weighing them against the professionals' levels. The fonts automatically fill in the sticky notes in the Jamboard tool, therefore, they do not represent a metric here.

When the instructor debriefed the class on proposed solutions, students were invited to consider efficient ways to use the tools, and in which cases these tools could be used similarly or even more creatively. Students could adjust and customize digital environments further according to their team and personal learning/professional needs. Students reported that this framework helped them in various ways. They realised the complexity and overlapping aspects of the subskills as well as identified and celebrated their learning journey. They recognized the milestones they experienced and formulated where to invest more time and effort, should they wish to refine a specific skill further.

5. Further research and critical points

Several trends are emerging in the higher education landscape. Challenges to the status quo of the higher education sector pre-pandemic already included the trend toward mobility,

increasingly known in the wake of the coronavirus as the Work From Anywhere (WFA) movement (WEF, 2021). Another key trend remains the increasing accessibility of knowledge. Related to this access is "*the increasing size of the market for learning, creating new competitors outside of traditional university programs, as well as the affordances of technology to augment, improve and economise program delivery*." Higher education is no longer an observing non-participant, viewing technological and social developments from the safe distance of its "cloistered classrooms" (Stewart et al., 2016, p. 246).

Given the dynamic nature of these developments, further and continuous research into up-and-coming technologies designed to facilitate the move from office work to working from "anywhere" is needed. For example, a "visual email" application, Loom, arrived on the market, and given the likelihood of its growing popularity in a remote work environment, student familiarity with this form of communication is likely to be an additional helpful digital soft skill which could be introduced and practised in future courses.

As online applications are subject to regular updates, with features added or modified, instructors should not only track the development of new technologies but ongoing changes in those they already employ as well. This paper is based on the authors' continually evolving digital competencies, developing through online experimentation with students since the initial abrupt switch to online education. Future class preparation should include the latest advances in these and other tools employed in the class.

Additionally, a more detailed methodology with which students can express their reactions to the various tools and teaching styles they experience in the course is currently in development. Changes may be appropriate if and as students' beginning competency level changes, depending on what they are learning in other courses whose instructors are equally cognisant of, and respond to, external trends accelerated by the events of 2020.

It is a year that will likely go down in history as the epitome and prime example of what it means to live in a VUCA world. Post-pandemic, the long-term effects of the coronavirus will continue to affect not only individual educational institutions well into the future, but the face and structure of education itself.

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