
Enhancing students' digital competencies within the Employability module of the University of Europe's skills-based curricula

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Abstract

The onset of the coronavirus has catalyzed an acceleration in the adoption of digital teaching practices that have been trending in Higher Education for over a decade. The most obvious of these has been the abrupt switch to online training. Given the speed at which this transition from in-person instruction has taken place, many instructors' natural first inclination has been to maintain teaching styles as similar as possible to those employed in person, including the traditional lecture format.

However, a growing body of research is confirming what instructors across the educational spectrum are observing: namely, that student behaviour, the psychological effect of the medium, participation levels, attention span and learning outcomes online can vary widely from those demonstrated in traditional classroom settings. It is becoming increasingly clear that conditions such as "Zoom fatigue" are very real, and that, if teaching is to be effective, different methodologies based on digital learning experiences should be added to educators' repertoires that take the particular challenges and new opportunities of the online environment into consideration.

This paper will examine how some of these new online-based methodologies and digital tools are being developed and introduced at the University of Europe within the undergraduate students' Employability module to enhance the student online experience as well as learning outcomes. The module spans three semesters; here the authors will focus on implementations within the first semester, Employability I: English and the second semester, Employability II: Soft Skills to nurture relevant skills and to ensure that learning environments remain fit-for-purpose for the digital age.

Keywords: employability, digital skills, soft skills, critical thinking skills, online teaching methodology, higher education

1. Introduction: The 2020 Anomaly and The Digcompedu Framework

With the rapid change to virtual teaching catalyzed by the COVID-19 virus, teachers were required to boost their digital competencies quickly at the start of 2020. As a response to the growing "ubiquity of digital devices," the European Framework for the Digital Competence of Educators, or Digcompedu framework (Punie & Redecker, 2017), was created and published by the European Commission's Joint Research Centre to provide instructors support in developing their digital competencies, an obvious prerequisite to teaching online.

This case study will delineate and analyze 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. 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 are hereby analyzed according to the Digcompedu framework (Figure 1) provides a roadmap for enhancing student’s digital competencies and information and communications technology (ICT) tools use within skills-based curricula.

FIGURE 1. THE DIGCOMPEDU FRAMEWORK - EUROPEAN FRAMEWORK FOR THE DIGITAL COMPETENCE OF EDUCATORS BY THE EUROPEAN COMMISSION’S JOINT RESEARCH CENTRE (JRC).



Source: Punie & Redecker, 2017

Coming to terms with the “new normal” requires, first and foremost, a mindset about learning for both instructors and students that sees it as a continuous rather than finite exercise, given that digital tools themselves are constantly evolving. While the concept of “lifelong learning” is nothing new, the speed at which technological advancements both occur and have had to be adopted since 2020 adds an extra layer of both humility and urgency to the process of updating course material, methods, and resources employed on a regular basis. 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.

2. Why Create Skills-Based Curricula?

A skills-based curriculum focuses on building students’ abilities to apply rather than repeat what they have learned, particularly within an interdisciplinary context. The popularity of this format has increased alongside the awareness that future employability will depend more on how adeptly a person can make use of widely available knowledge to achieve innovative results rather than the acquisition and retention of knowledge alone. Ever since the global financial crisis, awareness of the interdependencies and complexity in international markets has risen sharply, aspects “subsumed by the term VUCA (Volatility, Uncertainty, Complexity, Ambiguity)”. Fostering innovative attitudes in the classroom is not only popular; it is a key

mindset for future employers. Research indicates that 83% of companies regard innovations as either important or essential to survival in the global marketplace. In fact, over the course of three years, the top 20% of innovative companies grew at a rate that was almost 16% faster than that of those peers classified as least innovative (Burgartz & Krämer, 2016). Given the speed at which knowledge, practices and products become obsolete in a VUCA world, it is imperative for students to build their creative muscle while at school, developing skills that will help them adapt to changing circumstances.

Soft skills, including highly developed social skills, are critical to helping students succeed and are determinant for academic behaviours in online education (Cazarez, 2021) as the 21st century economy shifts from generating wealth via individualistic creativity to creativity that is “effectively fostered through collaboration” (Larson & Miller, 2011).

Skills-oriented teaching is trending in higher education curricula as a part of the competencies concept that is defined as an integration of “knowledge, skills and attitudes which are aligned to a professional context” (Kelder & Walls, 2017). A curriculum based on 21st century skills supports project-based learning to familiarize students with new technologies as constructive media for synthesis and creation (Chu et al. 2017). The transition from knowledge- to competencies-based teaching is also connected to preparing students for the demands of a VUCA world’s jobs market being “confronted by global higher education” (Waller et al., 2019).

The connection to Bloom’s Taxonomy of Learning (Anderson & Bloom, 2001) is clear, in which higher order thinking skills such as understanding, analysis, application, evaluation and creation, all built upon memorization, are consciously developed. A number of corporate studies, such as those conducted by LinkedIn Research (2019) and the World Economic Forum (WEF 2015 and 2020), indicate that the trend toward, and need for, a more competence-based curricula will be amplified in the coming years, and that employer demand has already shifted towards staff with a wide array of interdisciplinary skills.

3. Skills-based Curricula at the University of Europe

In the official Guideline for the Formulation of Qualification Objectives for Study Programs and Modules at the University of Europe, the importance of skills-based curricula is made clear in the first section, entitled “Introduction: Qualifications and competence-oriented learning outcomes”:

...A central concept of the Bologna reform is competence orientation, which...primarily refers to the didactic turn in university teaching away from input orientation toward output orientation. For lecturers, competencies are thus the central starting point and target variable for content-related and methodological considerations in teaching. The competencies to be acquired in the teaching/learning context are described and planned via learning outcomes. Learning outcomes formulated in a competence-oriented manner support students in evaluating their own learning and thus in taking responsibility for their own learning.

The design of the module examinations as well as the recognition of external achievements are based on the competence-oriented learning outcomes. Competency-based learning outcomes express the level actually aimed at the university and are therefore an important instrument for controlling recognition processes (Translated from German with www.DeepL.com/Translator).

Additional emphasis on the importance of skills-based learning is seen in the University of Europe website at: <https://www.ue-germany.com/en/university/>, which notes:

*“The university promotes the **future-oriented development of skills** and interdisciplinary teaching formats in step with actual practice and according to the highest international standards. Through the interaction between **creative, entrepreneurial and digital thinking**, as well as an international perspective, the various fields of study mutually enrich each other and offer new approaches in teaching and research tailored to the requirements of Job Market 4.0.*

Our Vision and Mission

*At the University of Europe for Applied Sciences (UE) we are committed to providing our graduates with lasting and successful studies and training for jobs in the digital age. As a state-accredited university of applied sciences under private ownership, we promote especially **independent entrepreneurial-creative thinking and acting**. We provide the relevant specialist, decision-making and social skills through **modern pedagogical concepts**.” (Author emphasis)*

These assertions indicate the degree to which the University of Europe is aware of the changing demands of its students’ future employers. In every module, qualification objectives are to be focused on what the student will be able to do by the end of the semester in terms of the creative application of a wide range of higher order thinking skills. Thus, course developers are encouraged not only to see the delivery of knowledge as an end in itself, but as a means to empower students to think critically, communicate effectively and work collaboratively so as to achieve innovative results in “independent entrepreneurial-creative thinking and acting” to fit the “requirements of Job Market 4.0.”

4. The University of Europe Employability Modules

Based on recommendations of the state accreditation board, the Employability I: English and Employability II: Soft Skills modules have been designed to expose students to current concepts and trends in business and economics, and foster the formation and informed, articulate defense of diverse opinions about them. Rather than present the business world as a stagnant entity with set truths, students are encouraged to embrace its dynamic nature. Rather than just memorize and apply terms learned, tasks are designed to guide students on a journey, step by step, all the way up Bloom’s Taxonomy of Learning (Anderson & Bloom, 2001).

Throughout the courses, the authors encourage students to take an active role in evaluating their needs and expectations from a future career environment. For example, by studying Employability I topics such as metacognition and cognitive bias, participants explore how mastering the skills discussed can increase their chances of meeting the evolving requirements of interviewers as well as their long-term professional success in the VUCA world. At the end of the semester, students demonstrate the highest order thinking skill, creativity, by designing and presenting on a topic of their choosing and demonstrating how it relates to topics covered during the course.

According to the UE website, courses are aimed to prepare students to “successfully establish themselves in the digital job market of the future and to reach their personal and professional goals – anywhere in the world”. The Employability I: English module encourages students to take an active role in shaping their personal futures through the creative use of various online tools to evaluate key trending topics such as VUCA, disruption, ethics, regenerative design, and the paradigm shifts proposed in the “doughnut economics” of Kate Raworth, which are emerging as “a compass for humanity's 21st century progress” (Raworth, 2017).

The Employability course contains 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 B2+-C1 level proficiency in English. The second focuses on soft skills for the workplace in the 21st century, and the third module on 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 the second online semester:

- Two courses of predominantly German-speaking students at the Iserlohn Campus (roughly 30 students per group),
- Two courses of international students with English as first and second language from approximately fifteen countries of origin (roughly 60 students).

In both the first and second Employability modules, use of post-meeting summaries were employed to assist students in building upon their knowledge from one class to the next, and to provide updates to those that did not attend the previous lecture. According to the Employability Module I learning objectives (University of Europe, 2020), upon completion of Employability modules, UE students should be able to accomplish the following in English:

- Recognize and master the stylistic forms tested in standardized examinations such as the TOEFL and IELTS.
- Understand and utilize professional terminology such as that relating to key economic concepts.
- Explain what a paradigm shift is, and key paradigm shifts currently affecting businesses.
- Summarize video and other content from a variety of business media.
- Identify and employ HOTS (higher order thinking skills) in written and spoken assignments.
- Apply assessment tools to analyze current ethical issues in business.
- Illustrate how strategies studied could be applied in original ways to address current economic challenges.
- Critically evaluate classical and contemporary economic theories.
- Design and discuss the results of online surveys.
- Create and conduct presentations in teams utilizing digital tools.


In order to make sure students performed critical evaluations of the materials covered, skills-oriented activities were incorporated using digital collaboration tools. The competencies gained reflect the skills delineated in Bloom’s Taxonomy of Learning (Anderson & Bloom, 2001). In the following section the methodology used to achieve these goals will be discussed.

5. Adjustments for Online Teaching

Written after-training reviews assist students in reviewing what was learned during the class asynchronously. The summaries are also provided to help those who missed class or experienced an unstable connection to help them keep up with proceedings. Most importantly, they provide a consistently updated roadmap of the individual and collaborative learning journey. As *Employability: Soft Skills* is a conversation/discussion-based class rather than lecture-based, no video recordings are made. Pride of place is given to the process of live collaboration in the breakout rooms and that of debriefing immediately thereafter, in which the outcomes and key takeaways of the same are discussed with the whole class.

FIGURE 2. POST-CLASS SUMMARY-GUIDANCE FOR ASYNCHRONOUS LEARNING POSTED IN THE MS TEAMS CHANNEL

It was my pleasure to start this new semester of the Soft Skills with you!
 We have started by learning more about group mates and your expectations of the course.
 We have an amazing diversity in the class, I do hope it you are going to leverage it!))



We discussed where we found ourselves after a year of remote study, learnt about the Global Research results on the State of Remote Work and discussed what struggles do you have to overcome and which skills to strengthen for being better prepared to work remotely with the new virtual teams. You learnt that it is possible to build trust remotely and found out the strategies to incorporate into your teams in the *Employability Course* and to any new team.

Try to think of specific tactics/instruments/tools that will help you to build trust in a new remote team and put them on this Jamboard before the next class. Happy to introduce you to digital collaborative tools - jamboard and padlet - more to come 😊

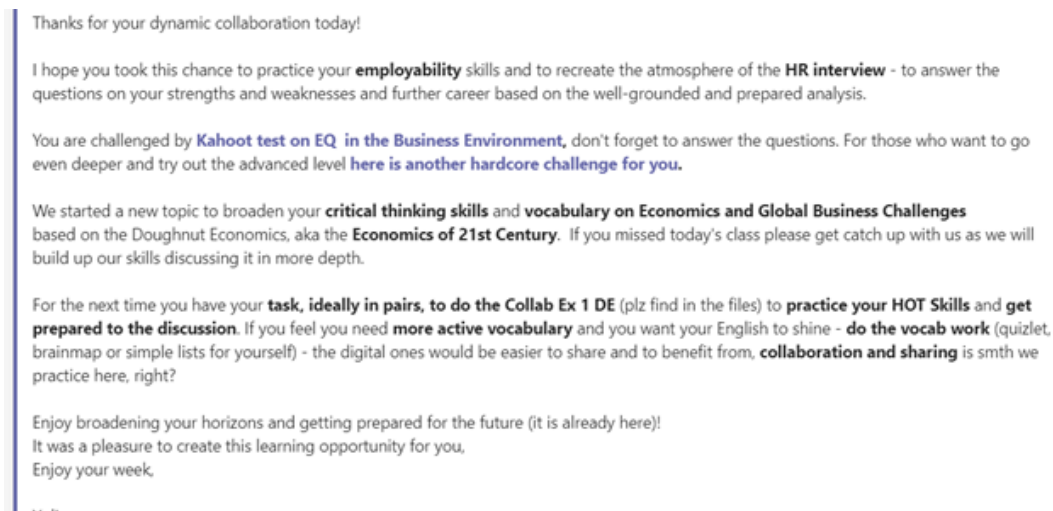
You have 2 weeks to form groups for your final presentation and initiate your team (3-5 students in each)!

Looking forward to the next class and more collaboration!

Source: Shtaltovna MS Teams Channel Summaries, 2021

Post-class summaries such as those pictured here (Figure 2 and Figure 2a) provide a bird's eye view of the learning roadmap and motivate students by highlighting their achievements. They are skills-based, detailing what they are able to do after a given day of class. These summaries build self-awareness and add an asynchronous, autonomous aspect to the course. Students can choose when to read them, and they provide links to digital exercises so those who wish to develop their abilities in specific areas further can do so at their own pace.

FIGURE 2A. POST-CLASS SUMMARY-GUIDANCE FOR ASYNCHRONOUS LEARNING
POSTED IN THE MS TEAMS CHANNEL



Source: Shtaltovna MS Teams Channel Summaries, 2021

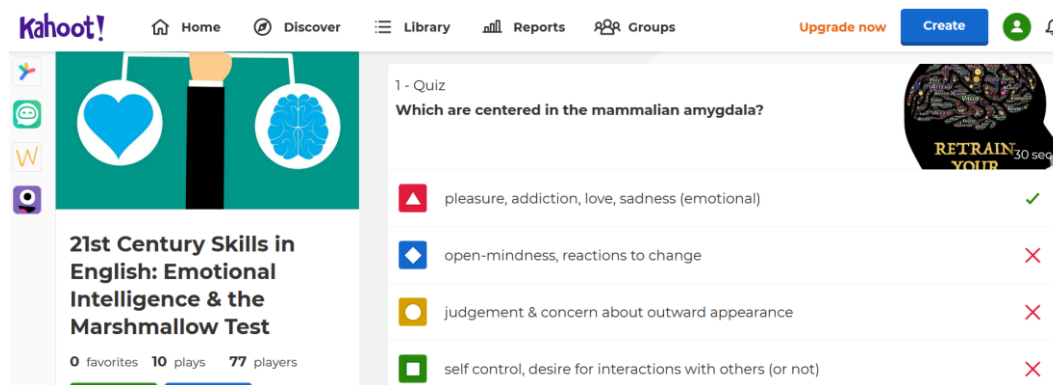
Another example of how students' learning outcomes can be enhanced through the use of digital tools can be seen with Kahoot quiz games. This tool offers the benefits of gamification in that it encourages student engagement with its competitive infrastructure, in which the points of top players are shown to all as they are accumulated and the winners are celebrated at the end of the game. It can be played individually online from disparate locations, providing ease of use. Students also receive encouraging messages after each attempt, whether correct or false, to keep them engaged. Being used both as a synchronous and asynchronous digital tool, for both individual and group answers, Kahoot quizzes helped students learn the material, while sharpening their critical thinking skills and collaboration techniques when designing their own as well.

Initially, students participated in instructor-created games on curriculum topics such as metacognition and doughnut economics, so building their skills in using a new digital tool while reviewing key points. Once students gained an understanding of how the game works, they were asked to design their own Kahoot activities. In groups, they were given a selection to read from Daniel Goleman's *Emotional Intelligence* (Goleman, 2012), and asked to create a Kahoot together about it for the rest of the class. For the presentation on a topic of their choice, students were asked to create and include an interactive review session for their classmates. For this, many groups chose Kahoot as their digital interactive review tool of choice.

Students brainstormed, strengthened their visual communication skills by pairing images with questions, collaborated to decide on questions and answers and improved their ability to write concisely thanks to the application's strict wording limits. Students reported satisfaction from learning and choosing "new, exciting facts and ideas," formulating them into the engaging and concise questions and thinking of misleading answer options based on their own prejudices before learning the topic. Another aspect noted in the students' feedback was the pleasure of seeing their work published in Kahoot, making it visible and accessible to users throughout the world. In contrast to a comprehension-type task like answering questions after reading a text, by creating their own Kahoots (Figure 3) where they employed all the higher order thinking skills in Bloom's taxonomy, from remembering to creation.

Those students who showed persistence in creating and practicing Kahoot quizzes reported more self-confidence before the exam. The voluntary, asynchronous nature of being able to practice at their own pace and as many times as desired fostered a sense of individual responsibility and time management.

FIGURE 3. EXAMPLE OF KAHOOT! STUDENT-CREATED QUIZ USED FOR UE EMPLOYABILITY: ENGLISH COURSE



Source: Muzzu & Shtaltovna Kahoot! Collection, 2021

In a similar manner, EU Employability I: English students were first introduced to Microsoft Forms and Quizzes by being given an instructor-created version, taught how to take it from within the Microsoft Teams after some lecture segments as a review of the material, and then encouraged to develop full mastery of the tool by creating their own for each other. Microsoft Forms and Surveys allows students to receive instant feedback, as well as compare their answers with that of their classmates anonymously after responses have been sent. Showing the results of the group answers immediately after a quiz was taken prompted further discussions and exposed them to different perspectives within their peer group. Within the breakout discussions that followed, students practiced emotional intelligence competencies by learning to express and ask for opinions in a respectful way.

Microsoft Forms and Surveys were also used to break down reading selections into shorter paragraphs, after which students answered comprehension and analysis questions in either closed or open styles. Using these digital tools helped to increase the readability of the articles and keep students focused on manageable segments. Compared with using other tools for online reading where a rather advanced level text fills the screen and the questions are all at the end, so that much scrolling back and forth is required each time an answer must be checked, overall user experience satisfaction and task completion increased when Forms were used, even for the texts with significant complexity. When used asynchronously, these tasks again helped to increase engagement and eased time management issues for students, many of which were feeling overwhelmed with the first pandemic semester and trying to adapt to it.

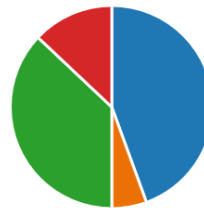
Students had an opportunity to take the same quizzes, either in Kahoot! or Forms (Figure 4) more than once, and reported a surge in motivation as they saw their speed increase and results improve, measurable proof of their progress that improved their confidence. In both cases, key soft skills such as creativity, responsibility, initiative and teamwork were developed when students built upon their knowledge of the content and the format to move from being as quiz takers to quiz makers, be it to review course segments or as their digital tool of choice for the interactive review requirement of their final presentations.

FIGURE 4. EXAMPLES OF MS FORMS QUIZZES USED IN UE EMPLOYABILITY: ENGLISH

2. 21st century skills are:

49% der Antwortenden (17 von 35) haben diese Frage richtig beantwortet.

AI-resistant – not easily replac...	24	✓
developed when you can me...	3	
reflected in your ability to han...	20	✓
All of the above	7	



3. Three areas of foundational literacies – the ways you apply core skills to everyday tasks – are:

31% der Antwortenden (11 von 35) haben diese Frage richtig beantwortet.

Persistence	17	
Numeracy	28	✓
Information and communicati...	25	✓
Necromancy	4	
Cultural	22	✓



Source: Muzzu & Shtaltovna MS Forms Collection, 2021

Wordwall classifying and quiz activities were used extensively throughout the semester, often first discussing topic-related exercises in breakout groups and then comparing results. Sometimes these were timed warm-up activities, and sometimes these were given without a timer to promote deeper discussions about which answer fit best, to produce valid arguments and to decide on one option as a team. This tool reduces time spent on working out the in-class exercises significantly, as most of the answers that puzzle students can be solved with the knowledge in the mini-group. After debriefing the breakout experience, the instructor can offer correction where needed and answer remaining questions. As students still have the access to the links and are shown that they can themselves change the mode of such activity from matching exercise to quiz and vice versa, they can further practice as many times as any individual might find useful and appropriate. Some students value the asynchronous access to the exercise as they can conduct additional research on concepts, vocabulary and the topic categories featured. A sampling of categorization exercises in Wordwall related to emotional intelligence and logical fallacies can be seen in Figure 5.

FIGURE 5. SOME EXAMPLES OF WORDWALL ACTIVITIES USED FOR EMPLOYABILITY: SOFT SKILLS COURSE PRACTICE AND TESTING

Source: Shtaltovna Wordwall collection, 2021

6. The concept of enhanced digital learning

An overarching concept informing the Employability I: English and Employability II: Soft Skills course designs is that of self-determination theory (Jeno, Danielsen & Raaheim, 2018; Hsu & Wang, 2019) which posits that for deep engagement and the ensuing long-term learning to occur, three prerequisites must be met. Firstly, the competence the task will strengthen must be clearly understood and desired by the student. Secondly, the task must allow a certain level of autonomy, or creative freedom, in terms of how it can be carried out. Thirdly, it must offer relatedness, which in the current situation in which social contact has been and still is limited, means not only that students must see how the topic relates to their lives, but also, ideally, that the activity design should allow for students to build relatedness to the instructor and more importantly, to each other while they are completing it. A mnemonic device to assist in remembering the key points is to think that every young person wants a HOT CAR: higher-order thinking skills used towards developing competence, autonomy and relatedness (Watson-Brown, Scott-Parke & Senserrick, 2021).

Four additional principles were adopted to enhance learning outcomes in the digital environment, namely:

- **Connection before Cognition:** designing class structure with increased attention to the emotional and social needs of students.
- **More Visuals, Less Verbiage:** understanding and expanding the tasks to include visual cues as an important aspect of communication.
- **Takers to Makers Mindset:** ensuring course flow moves students from “takers” of information and quizzes, etc. to “makers” of their own course-content-based online creations.
- **Ask the Right Questions:** maintaining a user-centered approach focused on inquiring how to provide opportunities for students to give attention to actively creating something based on their own interests within the realms of the topics covered rather than how to achieve passive student attention to instructor-led lectures.

In the initial stages of universities’ COVID-related disruptions in 2020, taking the emotional and social needs of students into account and creating a safe and secure environment to make meaningful connections in their groups became crucial as students suddenly found themselves learning alone online and having to collaborate with a group of strangers. Stewart et. al. note that in his 1966 tract “The Idea of a University,” John Henry Newman stressed

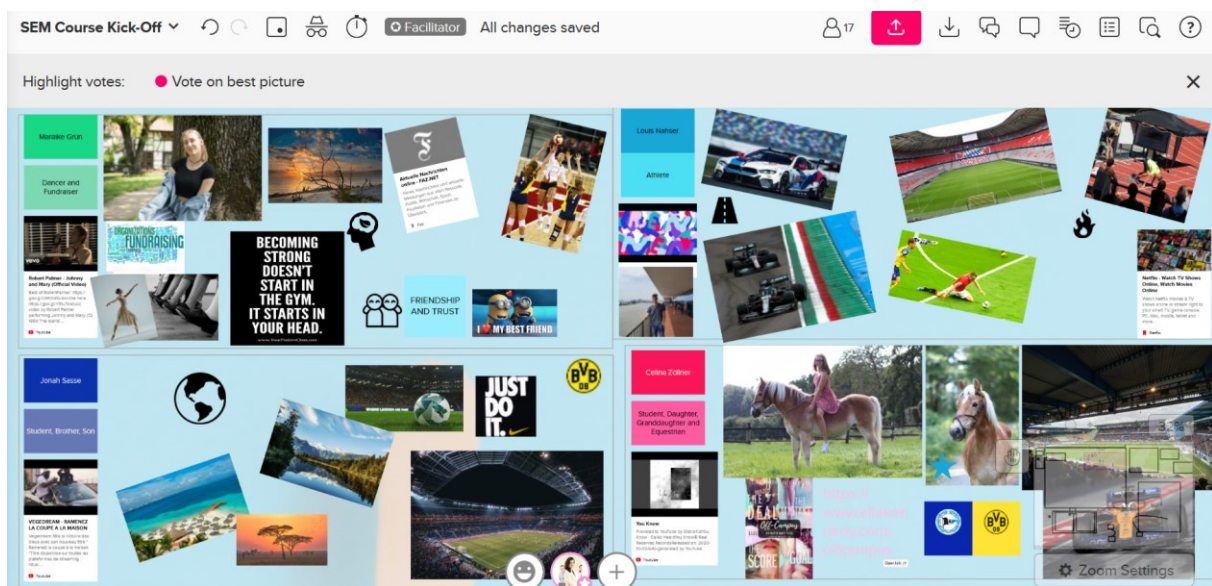
“the need for the personal touch to provide the understanding and contextualization required for effective personal learning. The artisan, if not the artist, is the key to providing the real essentials of a tertiary education....[it is crucial to] address the holistic needs of the individual...Virtual realms have yet to replicate the richness of in-person on-site instruction...the in situ mode is not mainly based on listening to an instructor deliver from a platform...but the social experience of being with focused fellow learners. The commonality of purpose creates relationships that provide stimulus and support to the members of the particular learner community.” (Stewart et. al., 2016, p. 247-248.)

One of the key challenges involved in teaching the Employability module was creating precisely this sense of a “personal touch” as well as of a “commonality of purpose” amongst the students within the online environment.

The authors found that applying the first principle, **Connection before Cognition** by, for example, attributing more time for a meaningful digital warm-up activity increasingly helped students quicker develop a sense of safety, and of connection to their classmates which increased their motivation to engage with each other and the material. Rather than allow attendees to slide into a passive “School: The TV Show” mentality, their participation was activated immediately to ensure each class was a live social experience.

Kick-off or energizer activities created in digital collaboration tools like Padlet and Mural increased students’ competencies in using ICT while allowing them to express themselves creatively and get to know each other. For example, one warm-up involved showing where on a world map they were currently located, thus discovering both the rich diversity of the global contingent in Berlin as well as points in common. The Iserlohn cohorts “took” a “Class Selfie” with a Mural template (Figure 6) in which each filled their area with links they like, a picture of themselves and/or activities they are interested in, and other personal details they chose to share with each other. While many attendees did not feel comfortable having their cameras on throughout an entire meeting, with such an activity, they enjoyed being able to show themselves as they wished to be seen. In both Berlin and Iserlohn, the time dedicated to these activities has led to high levels of student participation and positive feedback in creating emotional bonds between students who only knew each other from virtual classrooms.

FIGURE 6. CLASS SELFIE – PORTION OF A MURAL ACTIVITY
FOR BUILDING TRUST AND PERSONAL CONNECTION



Source: Muzzu, 2021

The second principle, **Less Verbiage and More Visuals**, is also part of a user-centered approach. Students are online several hours a day, with short intervals between one class and another. Brain research has established that the mind can process visual cues and infographics at a much faster rate than written language according to numerous neuroscience studies: Holcomb & Grainger (2006), Lester (2006), and Bohn & Short (2012).

Therefore, incorporating visuals to either support or replace verbiage where possible enhances the user experience by both speeding up and deepening students’ understanding of key concepts discussed in a given segment. The added variety from the images also provides relief from the

visual monotony of text alone. The Employability I: English course incorporates the awareness of the power of visualization, and its increasing importance in companies, by stressing how language is one part of a larger picture, communication. Course materials are rich in visual cues, and students learn about copyright restrictions, creative commons licenses, and sources for open access images such as Unsplash and Ouch! by icons8. Many classroom activities, such as those using PowerPoint, Jamboard or Mural are designed to encourage students to express themselves both verbally and visually as well.

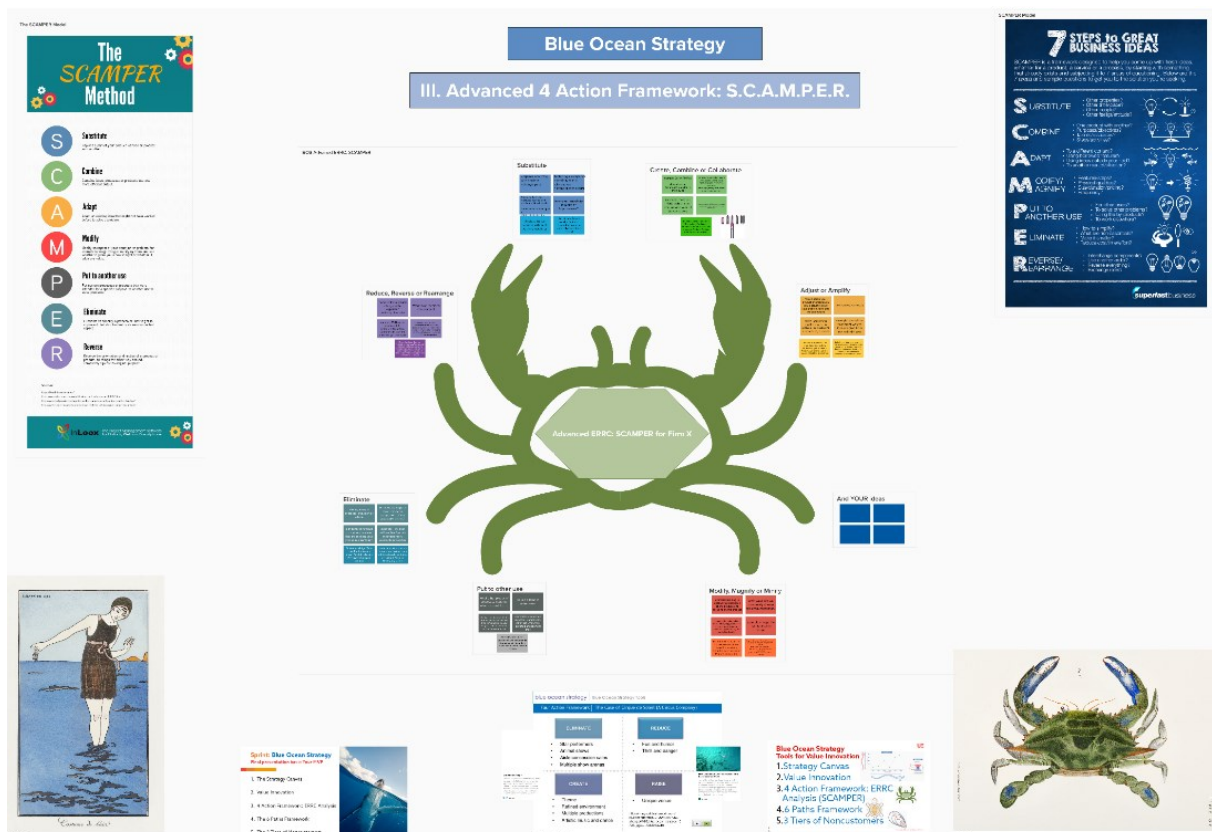
The third **“Taker to Maker”** principle informing how the courses were designed and taught is a key factor in skills-based education: the shift from seeing students in the role of somewhat passive recipients of knowledge given to them by an instructor to making them active participants and co-creators of their own education. This progress is made possible in an online environment thanks to the use of collaborative online tools, in particular in break-out rooms such as those provided by learning platforms such as Microsoft Teams. Within Teams, students can collaborate on the same Powerpoint, Word or Excel document. Other online digital tools introduced to enhance student engagement included Cloze, Kahoot, Mentimeter, Microsoft Forms Surveys & Quizzes, Mysimpleshow, Padlet, Quizlet and WordWall.

The fourth principle incorporated into every meeting, **“Ask the Right Question,”** was placed on the computer screen on a sticky note by one of the authors as a reminder to fight the tendency to ask, “How can I make my students pay attention to me?” and replace this with the question “How can I help students put something together that they want to pay attention to?” This shift is an established method to enhance student engagement and long-term learning outcomes based on the concept of student rights and freedoms as learners (Macfarlane & Tomlinson, 2017). Providing individualized learning paths and feedback tools to help students use metacognition and goal setting as well as facilitating professional learning sessions (Emery, 2019) create an environment for enhanced collaboration.

In all cases, the priority is to shift the focus from a passive student role, listening to the instructor, to an active one in which class time is specifically dedicated to giving students opportunities to “put something together” with the content covered in ways that result in creations of their own making, so engaging their highest order thinking skills, according to Bloom’s Taxonomy (Anderson & Bloom, 2001). Marzano Research makes the point that this is a shift from collecting dots, to connecting dots. While collecting dots is important, leaders must also learn to “connect dots“, by “seeing patterns before they are obvious and making connections between disparate data to generate new insights and novel ideas that lead to innovation. This capability requires a mind-shift and skill-shifts from industrial-age thinking to the creation of knowledgeable, creative and adaptable life-long learners” as Linda Neiman puts it in her article “Will the rise of A.I. put you at risk or make you more competitive?” (Neiman, 2019).

One way students have “connected dots” together online is using visual collaboration tools such as the Mural whiteboard. In the example shown in Figure 7, students studied and evaluated a variety of information resources to produce their own unique explanations, examples and recommendations for application:

FIGURE 7. SCAMPER - A MURAL ACTIVITY FOR CONTENT CREATION AND EVALUATION



Source: Muzzu, 2021

Additionally, introducing students to the Digital Competencies Wheel by the Center for Digital Dannels (Skov, 2016) in the form of an online assessment test enhanced their awareness of the portfolio of hard and soft digital skills that exist and that could be relevant to their upcoming professional life. Students' feedback included requests to have a similar test for every skill. The exercise exposed them to how an abstract concept such as "communication" can be broken down into sub-skills (team collaboration, digital collaboration, business communication, etc.). Each can then be assessed individually, giving students specific feedback on where there is room to improve.

The Digital Competencies Wheel in particular showed that not all skills are relevant to or expected of every student. The framework helps students see the big picture and make an informed decision about their ambitions in each subskill given the understanding that time and resources are finite. These reflections led to a prioritization of learning goals and taking personal responsibility for personal and time management by the end of the discussion.

7. How Digital Competencies were Enhanced in Combination with other Soft Skills

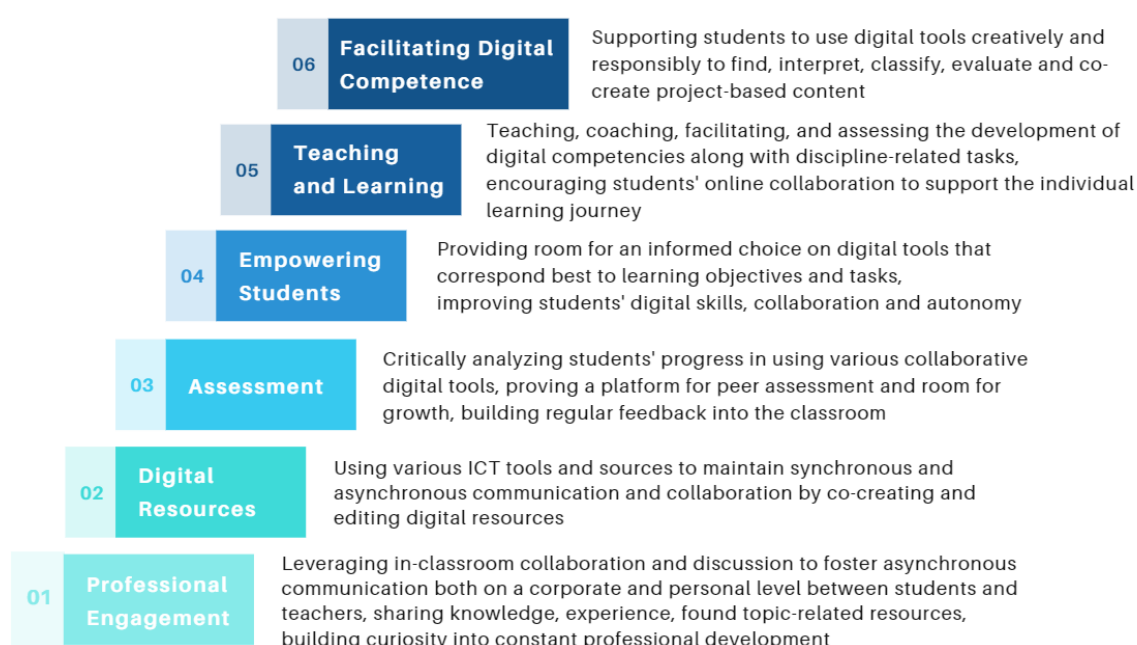
The six DigCompEdu areas focus on different aspects of educators' professional activities:

- **Area 1: Professional Engagement** – Using digital technologies for communication, collaboration and professional development.
- **Area 2: Digital Resources** – Sourcing, creating and sharing digital resources.

- **Area 3: Teaching and Learning** – Managing and orchestrating the use of digital technologies in teaching and learning.
- **Area 4: Assessment** – Using digital technologies and strategies to enhance assessment.
- **Area 5: Empowering Learners** – Using digital technologies to enhance inclusion, personalisation and learners’ active engagement.
- **Area 6: Facilitating Learners’ Digital Competence** – Enabling learners to creatively and responsibly use digital technologies for information, communication, content creation, wellbeing and problem-solving.

In an especially prescient statement, it had already been posited well before the coronavirus made its entrance on the world stage that the “forces outlined in the VUCA model are beginning to wend their way into the rarefied environment of academe and are necessitating an existential reappraisal of higher educational institutions. Higher Education may have bypassed the Industrial and Taylor mass production revolutions, but they are unlikely to be as easily able to evade the very revolution they enabled through the knowledge economy” (Stewart et al., 2016). The DigCompEdu framework reflects an acute awareness of the need for universities to include digital competence in their curricula if they are to prepare students appropriately for employer’s changing demands. The critical analysis (Figure 8) of how Digcompedu principles were incorporated into UE’s Employability modules demonstrates the results of this reappraisal as it took place in terms of enhancing students’ digital competencies as well as greater learning outcomes within the courses analysed here.

FIGURE 8. AN ANALYTICAL SUMMARY OF THE OUTCOMES OF THE UE EMPLOYABILITY COURSE ACCORDING THE DIGCOMPEDU FRAMEWORK - EUROPEAN FRAMEWORK FOR THE DIGITAL COMPETENCE OF EDUCATORS BY THE EUROPEAN COMMISSION’S JOINT RESEARCH CENTRE



Source: analysis and design by Shtaltovna & Muzzu (2021); framework by Punie & Redecker (2017)

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

usage to enhance students' own digital competencies in the hybrid learning mode once the lockdown is over. In the conclusion, the achieved goals are summarized 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.

8. Conclusion

8.1. Digital communication and collaboration

To enhance students' skills at collaborating effectively using digital tools, regular breakout rooms, discussions and digital collaborative activities have been introduced and implemented within both the Employability I: English and Employability II: Soft Skills modules. UE students are 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 putting students into pairs is less effective for larger classes. This can be due to resistance to starting a discussion with students who are not well acquainted with each other, or other hidden issues related to previous communication between them, as well as the concern that disparate opinions about a topic may lead to conflict. Placing students in groups of three to four resolves or prevents many of these problems, and stimulates critical and systems thinking, collaboration and understanding as well as respecting different perspectives and views - the latter one of the key aims of both modules.

UE Employability students are exposed to, and learn to create with, a variety of digital technologies such as Cloze, Kahoot, Microsoft Forms and Surveys, Mentimeter, Padlet and Quizlet as well as collaborative exercises in Microsoft Excel, Word and PowerPoint. In each case, they first learn how to do an exercise or take a quiz online, then go from takers to makers, creating their own 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, such as brainstorming, classifying data and opinions, creating and refining input into the digital visualisation or given frameworks within a given professional or educational context.

In addition, students are systematically trained to co-create, co-construct and share the results of their discussion and digital collaboration through the use of digital whiteboard collaboration tools such as Jamboard and Mural. In doing so, they improve their ability to create as well as review digital content with their peers, to choose the appropriate digital technologies for a given task, to adapt communication strategies to a specific audience and to be aware of cultural and generational diversity in digital environments.

8.2. Digital content creation and media literacy

In order to encourage mastery in digital content creation skills, a variety of activities were incorporated into the digital environment via synchronous and asynchronous assignments and post-task assessments. Employability students at UE are learning to modify, classify, evaluate and create digital content, and to integrate and refine information into different formats using Common License copyright, licenses and references adequately. UE Employability module students are also systematically challenged to search for current data, business analyses (HBR reports, Business Insider, WEF 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, analyzing their subject by exploring who wrote it, for what purpose, to which audience, with what formats and why certain content was chosen and other related information was not included.

8.3. Digital problem solving

It was already evident 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). In order 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. After discussing their options, creative group-work solutions were transferred into a visual digital collaboration board (Jamboard, Mural, Whiteboard) and considered how to adapt these solutions into new business-oriented situations.

To implement “using by doing” approach, the instructors introduced digital collaboration tools and their main features one by one and task by task, increasing complexity as students gained experience in using them, and building their skills from Awareness through Acquisition to Application, followed by Experimenting and Evaluation to finally reach the Creation level of digital collaboration, according to the Six Levels of Skills Development Framework (Shtaltovna, 2021).

When the class was debriefed by the instructor on proposed solutions, students were invited to consider in which way the use of the tool was beneficial, and in which cases it could be used similarly or even more creatively so that students could adjust and customize digital environments further according to their team and personal learning/professional needs.

8.4. Further research and critical points

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 WFA or Work From Anywhere movement (WEF, 2021).

Another key trend was and remains the increasing accessibility of knowledge. Related to this access is “the increasing size of the market for learning, creating new competitors to 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).

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, has 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 practiced in future courses.

Visual online collaboration tools such as Jamboard and Mural will increase in importance as productivity facilitators, whether staff is meeting in person or remotely. As online applications are subject to regular updates as features are added or modified, instructors should not only track the development of new technologies, but 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.

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. It is possible that changes will be appropriate if and as students' beginning competency level changes, depending on what they are learning in other courses whose instructors are equally cognizant of, and responding to, external trends accelerated by the events of 2020, 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 bodies well into the future, but the face and structure of education itself.

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