



**Teaching and Learning in Business Schools Post-Pandemic:
A Digital Future'**

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Teaching and Learning in Business Schools Post-Pandemic: A Digital Future

Purpose

In 2018, a group of Higher Education Institutions (HEIs) in Switzerland started discussing the future of education. With the COVID-19 pandemic, many of their initial ideas and solutions were tested in the unpredictable, emergency online setting. The purpose is to utilize student and faculty member perceptions to **outline** the future of higher education.

Design/methodology/approach

This research is based on eight surveys from students and faculty members at one Swiss HEI in business studies. While many previous studies focus on one group or one moment in time, this study examines the future of business education from both perspectives and traces the responses throughout the pandemic.

Findings

Teaching and learning strategies and perceptions evolved during the COVID-19 pandemic. Nonetheless, despite the potential, many higher education institutions simply reverted back to normal instead of adapting to the 'new normal'. Conversely, some HEIs have continued using the same exercises and tools that were used in the emergency remote pandemic-mode, without adapting or reflecting on the current learning environment. Based on the findings, both students and faculty members have increased their interest and proficiency in using digital tools although the students remained more open toward the opportunities of digital teaching and learning.

Originality

Based on the results, we offer a model for the future of education that HEIs could implement when moving forward, whether on campus or online.

Keywords: Teaching and Learning, Higher Education Institution (HEI), business studies, digital tools, Switzerland, post-COVID-19 pandemic, future of business education

Research Article

Introduction

Before the COVID-19 pandemic broke in Wuhan, China, in December 2019, Higher Education Institutions (HEIs) were reluctant to embrace new technology, which potentially could put into question the traditional teaching and learning methods. They struggled when facing change to online teaching due to the dominant mindset of traditional, campus-based pedagogy among students and faculty. While the technology for HEIs has existed for decades, its use has often been neglected. Primarily, technology like LMS (Learning Management System) has been introduced predominantly for sharing content or managing information, experimenting only with a narrow range of interactive applications and technology. Nonetheless, the choice of technology is not about availability or ease of use for teachers; instead, it should be aligned with the course pedagogy.

During the pandemic, however, the educational landscape shifted radically. HEIs did not have the luxury of planning online courses or reflecting on new technology for their courses; instead, faculty members and students were thrown into the deep end although online teaching was not new (Lischer *et al.*, 2021). Both faculty members and students suffered from the switch from human, face-to-face, on-campus interactions to technology-driven courses.

When HEIs welcomed students back on campus, many institutions called for a return to 'normal' education, to a reminiscent past. It is as if many of the positive strides taken during the pandemic have been put on a shelf like an old textbook. This paper aims to identify the perceived needs of faculty members and students for the future of business education. Through surveys conducted before, during, and after the pandemic, we will attempt to analyse business

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3 HEIs' potential for change and spark a dialogue on their future. Unlike most studies focusing
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5 on one group, students or faculty members, this paper examines the faculty member and student
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7 perspectives to have a more holistic view of how business HEIs can effectively move. Our goal
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9 is to create an inclusive and participatory model to ensure the engagement of all HEI
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11 stakeholders.
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14 **Literature Review**

15 **Online distance education and blended-hybrid modes**

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19 Prior to the pandemic, there were great hopes for substantial changes in the educational
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21 landscape (Zapalska and Brozik, 2006) through the potential of digital technologies to create
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23 personalized, remote, and adaptive teaching and learning opportunities (Lischer *et al.* 2021).
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25 With the development of the Internet and learning technologies over the past few decades,
26
27 online education in various forms and modalities has emerged and flourished. Further, new
28
29 mobile devices such as smartphones, smartwatches, tablets, and apps allow two-way
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31 communication in real-time. Thus, well before the COVID-19 pandemic, educational
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33 institutions at all levels were experimenting with online options.
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38 When they were forced to move online in the remote emergency context of the
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40 pandemic, HEIs turned for set periods traditional courses into a completely remote course
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42 setting or variations of blended and hyflex teaching during the COVID-19 waves. Furthermore,
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44 the initial shift online had to be accomplished in a tight period that can be seen as an
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46 exceptional, one-off event (Goedegebuure and Meek, 2021). Many faculty members developed
47
48 new teaching techniques online despite minimal prior experience (Odularu *et al.*, 2022), prior
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50 knowledge in this domain and not knowing how to integrate technological tools into their
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52 pedagogical strategies (Callimaci and Fortin., 2022). Hence, emergency remote teaching and
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54 learning posed a significant challenge and became a survival reflex (Bozkurt, 2022). The
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3 change from face-to-face pedagogy to online pedagogy was not necessarily adequate nor
4 appreciated for many HEI faculty members.
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7 Faculty members especially missed the “real-time interaction” with their students and
8 felt their inability to engage with students as they did before (Goedegebuure and Meek, 2021).
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10 They realized its (potentially) adverse effects on motivation for students at the beginning of the
11 HEI programs (Marshall *et al.*, 2020). For students, part of their dissatisfaction was explained
12 as a direct result of instructors being unprepared for using new platforms and the design (often
13 haphazard) of alternate activities and delivery methods. The emergency circumstances of
14 moving online took a toll on student learning for many reasons, some of which had nothing to
15 do with the online medium itself (Marshall *et al.*, 2020). However, the result of this shift online
16 was not unanimous. Some faculty and students may have enjoyed this new version of teaching
17 and learning during the pandemic.
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30 Today, many HEIs have returned to campus and are evaluating what needs to be done
31 moving forward. According to the research, HEIs are currently reflecting on how new hybrid
32 or blended learning options can fit with the expectations and satisfaction of the stakeholders
33 (Bolam, 2021). As digitalization has become increasingly crucial for all sectors and industries,
34 HEIs should adopt what was positive from 2020 to the end of 2021 of teaching and learning
35 online. With new digital competencies becoming a must for the future of employability, HEIs
36 are including digitalization in their courses and programs. Digital literacy post-pandemic is
37 obligatory in HEIS (Lischer *et al.* 2021; Ng, 2012). Thus, hybrid teaching and learning will
38 continue and grow (Bolam, 2021) and help HEIs to readjust in the landscape of education
39 (Bozkurt, 2022).
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53 Challenges

54 While the COVID-19 pandemic could have been the impetus for change, many issues
55 arose, mentioned throughout the literature on online learning since 2022. Previous studies
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3 emphasized challenges such as technology issues, lack of infrastructure, accessibility of online
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5 resources, and deficiencies in digital competencies (Callimaci and Fortin., 2022; Rehm and
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7 Schulz, 2020). Other researchers addressed the inequality of treatment (depending, for
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9 example, on hard- and software expenses), mental or physical health issues such as increased
10
11 workload, insufficient work-life balance, stress and exhaustion, job ambiguity, and morale
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13 (Krishnamurthy, 2021; Thomas *et al.*, 2022). Still, other studies recounted issues such as lower
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15 student engagement or ineffective communication due to lack of facial expressions and
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17 gestures in videoconferences (Thomas *et al.*, 2022), lack of socialization, problems with the
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19 (online) assessments (including apprehensions of possible cheating), and an overarching
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21 scepticism of the suitability of some courses being taught online (Bozkurt, 2022; Ceallaigh,
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23 2022; Kupers *et al.*, 2022; Stankovska *et al.*, 2022).

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28 Nonetheless, faculty members and students appreciated the advantages of less
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30 commuting, more flexibility and autonomy (Kupers *et al.* 2022). Reflecting on the outcome of
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32 all the adaptations necessary during the pandemic can now be helpful for HEIs to improve
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34 future education (Li and Yu, 2022) by adopting new learning technologies and styles to create
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36 or promote a new type of digital resiliency (Bozkurt, 2022). For the time post-COVID-19, it
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38 will be necessary for HEIs to develop strategies aimed at digital education and digital
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40 pedagogies (Bozkurt, 2022; Rehm and Schulz, 2020) and invest in digital literacy resources
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42 (Sarfraz *et al.*, 2022) to mitigate the challenges of the past years.

43 44 45 46 **Opportunities**

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49 While there have been so many challenges, the opportunities for new study forms, new
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51 services, or new approaches and tools for online learning and capacity development are equally
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53 important. The pandemic opened up possibilities for teaching and learning (Stankovska *et al.*,
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55 2022), critical thinking, and innovative solutions. Many HEIs recognize the importance of
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57 online options moving forward (Maatuk *et al.*, 2022) and the possibility of speeding up the
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3 switch to a more significant offer of online teaching and learning (Odularu *et al.*, 2022).
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5 Further, they realized that adopting online education could benefit all HEI stakeholders (Li and
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7 Yu, 2022), especially in this very competitive sector of the education market.
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10 Faculty members demonstrated resilience, flexibility, responsiveness, and adaptability
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12 by rethinking and redefining their teaching practices (Ceallaigh, 2022). With the continuing
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14 restrictions due to the pandemic, faculty members improved their online teaching, and students
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16 became more comfortable with this type of learning. The time they initially spent in the early
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18 stages of the pandemic shifting from traditional to online courses was recuperated by reusing
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20 materials, reducing administrative efforts such as keeping attendance and preparing for live
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22 lectures (Maatuk *et al.*, 2022; Odularu *et al.*, 2022). Further, it allowed a change to more
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24 ‘modern’ teaching and learning practices.
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28 Online education has offered greater flexibility for students, fostering customized and
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30 self-regulated learning (Ceallaigh, 2022). Students saved time and effort while studying online,
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32 and some students became self-directed learners who could learn simultaneously and
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34 asynchronously (Maatuk *et al.*, 2022). While specific studies suggested that some students
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36 struggled to adapt to online or hybrid learning expectations, other data showed that digital
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38 platforms actually increased student comprehension by accelerating their knowledge
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40 progression and showing more confidence in the use of technology for learning (Sarfraz *et al.*,
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42 2022). Previous studies posited that students who were well assisted and trained during the
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44 pandemic received higher grades than in traditional settings (Li and Yu, 2022).
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48 To examine the topic of the future of education, our overarching research question is: Will
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50 HEIs simply revert back to what they were before the pandemic? More specifically, we
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52 investigate:
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55 **RQ1: What are the most relevant competencies for teaching and learning in HEIs post**
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57 **COVID-19?**
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RQ2: What do faculty members and students in business HEIs envision for the future of education?

Methodology

This research project is based on eight surveys conducted in one business HEI in Switzerland in consecutive semesters before, during and after the recent COVID-19 pandemic waves: before (survey of Oct. 2018), during COVID-19 (5 surveys), and after (surveys in June 2022 and December 2022). Except for the survey in October 2018, which was sent only to students, all others were conducted both with faculty members and students. The very first survey was part of a project of a group of four HEIs in Switzerland evaluating the perceived needs and expectations of their students of the future envisioned for teaching and learning in HEIs.

All data was gathered using LimeSurvey, an online questionnaire tool that allows a high guarantee of data protection. This tool is used in this specific HEI for all course evaluations and is user-friendly for the participants, who were informed about the future use of the data for scientific research. The survey was completely anonymous and there was no obligation to contribute. Further, participants were free to stop at any time if they wished.

Student participation rate varied from 26% in October 2018 to 56.6% in April 2020 a month after the pandemic obliged HEIs in Switzerland to move all courses online. The lowest participation rate occurred after the pandemic, in December 2022 for the students (22.5%), which is at the same time the date of the highest participation rate for faculty members (76.7%) as can be seen in table 1. These numbers are representative according to Jacob *et al* (2019) as each subgroup should comprise at least 20 to 25% of the whole population.

The surveys consisted of a range of at least eight questions (April 2020) up to 25 (June 2022). Besides single- or multiple-choice questions, half of the questions in each questionnaire were open to gather comments on particular topics adapting to the context of

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3 time. In 2018, the questions asked turned around the student's learning styles such as "How
4 do you learn best?" or "Which Internet sources do you use most often for learning?", whereas
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6 the questions during and after COVID-19 treated the changes from presential courses to
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8 online courses and its consequences for learning and teaching. We used some very concrete
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10 questions such as "How do you estimate the time you have to invest in online learning /
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12 teaching compared with face-to-face teaching?" which was asked in all three surveys in 2020
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14 and in June 2021. Other questions were more general: "Do you think that the adaptations /
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16 efforts / changes made during this period will be useful in the future?", used in all surveys
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18 with adaptations of the wording in the later surveys: "Do you think digital tools, as used in your
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20 courses/training, are conducive to your learning / to your student's learning?". In December
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22 2020, we started to ask about the concrete use of tools "What tools do you find particularly
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24 useful for your online courses?" which was later supplemented by a question asking which
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26 tools from the online phase did the students or the faculty members continue to use in their
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28 presential courses. According to the sanitary situation, other questions about their need of
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30 support or their emotional state were added in June and December 2021 ("How would you
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32 describe your emotional state today, given the changes in teaching methods due to the health
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34 situation?"). In the latest surveys, questions were added about the competencies acquired
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36 during the online phase ("What learning skill did you / your students specifically develop
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38 during the pandemic?") or a revue on the use of technology with this question: "Now that the
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40 courses are back in the classroom: Are you satisfied with the current use of technology in
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42 teaching? / your teaching?" In total, we asked 108 closed questions and 90 open questions,
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(see Table 1). We marked the phase of online courses during COVID-19 in grey.

	October 2018*	April 2020	June 2020	December 2020	June 2021	December 2021	June 2022	Dec. 2022
Student's participation (n/N)	664/2485*	319/564	314/560	291/559	249/524	212/515	165/480	104/463
In %	26.7	56.6	56.1	52.1	47.5	41.2	34.4	22.5
Faculty's participation (n/N)	-	61/86	51/90	58/87	67/90	43/64	53/85	59/77
In %	-	70.9	89.7	66.7	74.4	67.2	62.4	76.7
Number of closed/open questions for students	14/6	4/4	5/5	6/7	5/6	6/6	13/7	3/5
Number of closed/open questions for faculty	-	5/5	8/6	7/10	6/6	8/7	15/10	3/5
Number of comments (student/faculty)	172/-	589/107	733/201	565/199	733/201	1310/264	329/200	76/157
Average numbers of comments per students/faculty member	0.8/-	1.9/1.8	2.3/3.3	1.9/3.4	2.9/3.0	6.2/6.1	2.0/3.8	0.7/2.7
Average numbers of words in comments per students/faculty member	7/-	74/68	54/71	38/25.5	23/21	16/17.5	11/19	35/19

Table 1. Data collection.

* Students of four HEI's of the same group have been asked, 175 belong to the school analyzed here.

The response rates were relatively high, particularly in the earlier waves of the pandemic. Further, the faculty members responded more frequently than the students for all semesters. We collected 5836 comments in the surveys from April 2020 to December 2022, with an average of 2.9 comments per person and 33 words per person.

We classified the comments in order: 2018, before the pandemic; April 2020, two weeks after the start of online courses; June 2020, at the end of the first online semester; December 2020, after a second semester online (with the exception of the first three weeks); June 2021, online after a few weeks onsite; December 2021, introduction of hybrid form where students

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3 chose online or onsite; June and December 2022 after the pandemic with traditional face-to-
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5 face courses.
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8 For data, we use an interpretive approach answering the questions of how and why that
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10 affect both theory and practice (Gioia, 2021). Thus, we classified the qualitative data in first
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12 and second order about the use of digital tools for teaching and learning and their side effects
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14 often mentioned such as distraction or the subject of notetaking. Using the comments as first
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16 source of information in this study helps us giving a comprehensive picture “grounded in the
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18 informants’ experience and their understanding of that experience” (Gioia, 2021, p. 21). For
19
20 the sake of brevity, a few of the comments are included in this study in table format to reflect
21
22 the “lived experiences” of both faculty and students (Goedegebuure and Meek, 2021).
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26 **Results**

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28 On Table 2, we have summarized some of the most relevant comments from the
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30 students and faculty. The comments were classified as positive, negative, or neutral.
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	Use of digital tools in courses & learning impact (comments of students)	Use of digital tools in courses & teaching impact (comments of faculty)
2018	<p>+ Tools deliver information that is not only additional to that provided by the teacher, but also clearer/more precise and often of better quality. // Advantages are speed, fewer documents to carry, easier organization // I can quickly look up additional information on the internet about the material I've learned in class.</p> <p>- It very much depends on how the teacher uses it (= technology). In some courses, the tools are poorly used and doesn't add any value.</p>	Not applicable.
April 2020	<p>+ We're discovering that distance learning is totally feasible. We save time on travel. I often have trouble concentrating in class, being alone in front of my screen helps me to be more efficient!</p> <p>- Human contact (with teachers and classmates) is certainly lacking... Since we have to fend for ourselves, the time we have to devote to teaching is enormous!</p>	+/- It is clear that the teaching materials intended for " traditional " face-to-face teaching cannot be used unchanged for distance learning. In my case, the creation of customized teaching material in particular takes a lot of time (screen casts, detailed solutions, etc.), but it's also fun! // It's a major effort. However, a follow-up on this subject is imperative.
June 2020	<p>+ Being fairly self-taught, I had no difficulty adapting to online courses. // Telecommuting will be desirable later on in the professional world, so why not at school!? You have to keep up with the times.</p> <p>- It takes a great deal of willpower to get structured. Some courses work well online, others are far too complex to study alone..</p>	+/- During the first few weeks, the imposed distance learning allowed me to find new ways of reinventing my courses, creating content, maintaining a new class dynamic and motivating the students. So, it was a good experience. However, over time, the practice runs out of steam. Face-to-face teaching remains the foundation on which to build a course, and distance learning can complement it very nicely.
Dec. 2020	<p>+ For some courses, the possibility of reviewing part of the course was a great help. // It helped me to be even more disciplined and regular in my work at home. Something I didn't think I could do. I was convinced that I needed a place where I work, study and live, but I realized I could manage all three in a single apartment.</p> <p>- When the course lasts too long, it's difficult to concentrate. Concentration is different, and so is interaction.</p>	<p>+/- I've learned a lot about technology. However, we are more aware of the limits of these technologies. Interactivity is central, and these tools are just window-dressing.</p> <p>- If the future of teaching is online, I would consider changing jobs. I miss the "feedback" as I cannot see during the course how things are applied and what progress is made. As a teacher, you sit in front of a screen and talk to yourself and you don't know if anyone is listening.</p>
June 2021	<p>- There is a lack of social contact between students, therefore, extra effort has to be made. // I had to go over each lesson in its entirety at least once, whereas in face-to-face classes, I usually go over the more complicated notions but not the whole lesson. //</p> <p>+/- I think that our capacity for organization, adaptation, stress management and autonomy are put to the test every month or even every week. Online, it's a very different pace of life.</p>	<p>+ Online teaching enables activities that are impossible in the classroom. //</p> <p>- The rhythm needs to be planned more and supported with technical aids, which increases the amount of preparation required.</p> <p>Everything has been done in a hurry, and we need to straighten up before reusing the material we've created. // Towards the end, I noticed that some students were no longer getting involved, and when I asked, I was told that there was a lack of motivation.</p>
Dec. 2021	<p>+ I like the courses very much; the teachers are well organized for the most part and I feel motivated to go to class every day.</p> <p>- After more than a year and a half under this system, it's really hard to feel involved in the academic curriculum if you're 100% distance learning. Contact with the classroom is essential for a fulfilling student life.</p>	<p>+ Hybrid teaching is very similar to today's professional world with telecommuting. So it's quite natural for me to have some people working remotely and others in person.</p> <p>- Hybrid teaching is a mental construct that doesn't correspond to reality: you can't teach face-to-face while focusing on online teaching.</p>

June 2022	<p>+ The video conferencing courses have enabled me to do other things at the same time as listening to the lessons, which improves my learning. I'm more at ease at a distance than in f-t-f courses. //</p> <p>+ Videos can be used to supplement course content, to explain a specific process in a different way. This is particularly useful if you missed a lesson, you're able to "revisit" it retroactively thanks to the video support.</p>	<p>+ (Using technology in teaching) is an exciting way to make lessons richer, more interesting and more interactive.</p> <p>- More emphasis is being placed on form to the detriment of content. I believe that, first, students need to acquire knowledge and be able to make links with their practice. What's the point of diversifying communication tools if the content of that communication remains superficial? //The subject does not really lend itself to new tech.</p>
Dec. 2022	<p>+ The good thing at least is that the PDFs and PowerPoints we inhale all day long are available for review on Moodle, and we can revisit them. // Technology allows us to do more advanced research for ourselves (if interested in a specific subject). // Having access to online documentation is a plus. Otherwise, technology doesn't affect learning any more than that.</p> <p>- When it comes to technology, the school is not keeping up with the times.</p>	<p>+ Through the use of technology, teaching becomes more interactive, I reach more students and their engagement with my course improves significantly.</p> <p>+/- In my opinion, some content can be worked on very well online (synchronously or asynchronously) (knowledge acquisition). For others, on-site presence is essential (cooperative units, discussions, etc.)</p>

Table 2. Comments of students and faculty members Key: + positive, - negative, +/- neutral

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3 When we first asked students about their use of technology during their classes, their
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5 focus was on the additional information obtained. The use of digital tools by the faculty was
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7 not considered as these were rarely well used for teaching and learning. When online courses
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9 started, the biggest challenge for both students and faculty was about time management.
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11 Students complained about lengthy courses to be followed online with all the fatigue that came
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13 with it and faculty griped of the time spent for preparing the courses. Both groups though saw
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15 the feasibility of this switch and the potential of this move. Continuing through the second
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17 semester new issues appeared: self-discipline, motivation and will-power were mentioned from
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19 the side of the students and both groups repeated the missing social contact, which were so
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21 much reduced in private and professional life due to the sanitary conditions. Back on the
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23 campus in September 2021, everybody welcomed the restored social contact of presential
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25 courses. But new constraints came with hybrid teaching, the biggest effort to be done was on
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27 the side of the faculty. Teaching to two kinds of audiences, one in class and one online is after
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29 all the most difficult form of education and not being trained for this kind of teaching certainly
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31 represented a big challenge for faculty members.
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38 In 2022, face-to-face courses could finally take place as usual, the technology then was
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40 used as a side-effect for some activities, but many faculty members were glad to do without.
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42 When we asked in 2022 about the tools they used foremost, most student's response indicated
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44 videos, especially explanatory videos "to complete explanations or fill gaps in understanding"
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46 (Student, survey June 2022). The faculty members give a broader picture of useful technology
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48 for students, including blogs, online encyclopedias, but mentioning complementary videos,
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50 too. In their teaching, they were only some teachers who continued using electronic devices for
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52 their teaching, as can be seen in this comment: "Now that I'm teaching offline again, I am
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54 communicating with the class again without a tool." (Faculty member, survey June 2022). So
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56 in the end, we've got a very motivated group of students who see the advantages of technology
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3 in teaching and learning and who aspire for more flexibility in their study time table, using
4 their devices still for note-taking during the courses, whereas faculty now are confronted with
5 students following the presence courses while taking notes on their laptops: “It is difficult to
6 work with students who have a laptop in front of them as they are being used for other activities
7 during the course.” (Faculty member, survey June 2022).

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15 In our closed question of the survey of June 2022, we asked if faculty and students
16 thought that the student's learning improved with the use of technology, which was confirmed
17 by the majority of the faculty (36 answers out of 53) and denied by eight, one person even
18 thought their learning has *deteriorated*, and eight *were not sure*. For the students, 131 out of
19 165 stated that their learning improved, 15 students thought it *did not improve*, and four
20 imagined *it got worse*, whereas 15 *were not sure*. We can infer that students are more optimistic
21 about the advantages of technology for their learning.

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31 Although a significant number of learning applications can be used for teaching and
32 learning, few faculty members used them for their courses when asked in June 2022. Only three
33 faculty out of 53 (5.7%) answered that they used them *a lot*, seven (13%) *sometimes*, and *not*
34 *at all* was the answer from the majority of the faculty (42 persons or 81%). On the other hand,
35 19 out of 153 students (12%) claimed they use learning applications *often*, a quarter (23%)
36 *sometimes*, and more than half (58%) *not at all*. The main tool named by students was quizlet,
37 a tool much used for language learning, faculty members mentioned tools for live-online
38 polling such as wooclap or Kahoot, one faculty member commented his choice: “A learning
39 app is a poor substitute for lecturers”.

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60 When asked if digital tools helped to teach and learn, more than half of the faculty (30
out of 53) thought the tools were *useful*, 22 considered them *a bit useful*, and only one person
did not think they *contribute to learning*. In the comments to this question, some posited the
success of the technology, others suggested tools should be used in moderation, and a few went

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3 as far as to refer to technology as a potential hindrance. In comparison, the students were more
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5 favorable toward the tools, as a majority (102 out of 163) thought the tools were *useful*, a third
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7 of the student considered them *a bit useful*, and eight *do not think they contribute* to learning.
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10 Nonetheless, their comments were more measured: For the students, it depended on the subject
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12 and the course and how the faculty member used the tools for learning.
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15 When creating our rubrics for the data analyses, we integrated the subjects of distraction
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17 and self-motivation: “The problem often comes from the great risk of additional distraction
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19 caused by computers, tablets, ... What's more, it's more tiring to follow a course and take notes
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21 or revise on a computer than on paper.” (2018 – student) / “There's the motivation to get to
22
23 work, which has to be self-managed. Whereas when we go to school, we know it starts at a
24
25 specific time and not otherwise.” (2020 April – student). Time saving was another subject, we
26
27 invested: “The reuse of material prepared last year reduced the investment in time.” (2021 June
28
29 – faculty). / “We avoid all the commuting, so I save 2 hours every day. I have everything at my
30
31 disposal, so I save more time, and we're better able to follow the lessons because we're not
32
33 disturbed.” (2020 April – student)
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38 Both students and faculty see the practical side of using technology during the courses,
39
40 for example, for notetaking (“taking notes by hand during class is difficult as it's much quicker
41
42 on the computer” – 2022 December – students) or the possibility to replay videos or repeat
43
44 exercises. On the other hand, some lecturers would prefer to control the selection of websites
45
46 themselves; they consider the critical faculties and the digital skills of the current generation of
47
48 students insufficient to differentiate between good and bad learning material. Students seem to
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50 be more positive and like the playfulness of some of these tools, while the faculty members
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52 stress that technology might help to vary the course methods. As confirmed in the literature
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54 (Callimaci and Fortin., 2022), the digital possibilities are immense, and both faculty and
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3 students admit this fact. However, many students especially find that these tools are under-
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5 utilized.
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8 We also asked which competencies the students developed during the pandemic or what
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10 faculty thought students might have acquired. The answers are similar between both groups
11
12 and unanimous: All aspects concerning mental strength, such as autonomy, time management,
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14 perseverance, and self-motivation, are seen as the primary inputs. Both groups also put forward
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16 collaborative know-how and practical capabilities such as better note-taking on the computer.
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18 Personal growth is seen as a benefit during these difficult times. HEIs have focused on the
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20 concept of self-directed learning before but it became central during COVID-19.
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24 After two years of the pandemic, how do faculty members and students finally want to
25
26 continue classes? Our surveys show that the desire for face-to-face courses decreased for both
27
28 groups between December 21 and May 22, and lecturers significantly underestimated students
29
30 in their preference for presential courses. Students ranked all possibilities offering more
31
32 flexibility highest, followed by hybrid courses and report fewer interest in blended learning
33
34 than the faculty member. The scheme of blended learning courses with 50% presence is rated
35
36 best of all given choices (Blended learning with 30 %, 50% or 70% online), which shows their
37
38 need to have social contact with colleagues and faculty members. This differs from the faculty's
39
40 perceptions about students, thinking that students want predominantly to be 100% face-to-face,
41
42 followed by blended learning with 70% presence and hybrid. For themselves, in 2021, faculty
43
44 members foresaw 100% face-to-face followed by two blended options with 70% or 50% face-
45
46 to-face time, expressing thus their preference to return to the campus and the 'normal'
47
48 traditional teaching environment. In 2022, faculty members cited the same top three choices,
49
50 but the 50% blended replaced the 70% blended option. No faculty members in 2022 chose the
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52 full online option; this was also the lowest ranking for the students in 2022. This could suggest
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3 that both groups want some percentage of face-to-face courses and need social interactions on
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5 campus.

6 7 **Discussion**

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10 Based on the surveys conducted over more than two years of the pandemic and the
11
12 literature, the shift of needs and demands in a changing HEI education environment is
13
14 enormous. Still, some progress is visible. We mentioned that the acquisition of many personal
15
16 competencies is recognized by both faculty and students, knowing that much more technical
17
18 knowledge will be crucial to future employability. The potential seems tangible, with students
19
20 seeing the advantages of technology for their learning. In a world of economic competition,
21
22 students need more substantial business and digital competencies along with personal skills
23
24 such as agility and adaptability that have been promoted during the pandemic but need to be
25
26 honed moving forward. HEIs should take the time to review the pedagogical concepts for
27
28 tomorrow based on the period from 2020 to 2021. Faculty members must overcome their
29
30 resistance, even when confronted with complex technological systems. The institutions can
31
32 help: if the perceived usefulness of the tools (Callimaci and Fortin, 2022) is understood and the
33
34 complexity of the systems reduced via better explanations, training, and support, the personal
35
36 cost-benefit analysis of the members of the faculty will change and help to overcome their
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38 resistance.
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45 As seen in this study, the transition back on campus offers an excellent opportunity for
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47 HEIs to consider student and faculty needs (Ceallaigh, 2022; Pownall *et al.*, 2022) and allocate
48
49 the necessary infrastructure for staff support (Pownall *et al.*, 2022). Pownall *et al.* (2022)
50
51 suggested five critical factors for student success when coming back to campus: Capability to
52
53 master academic knowledge, connectedness to build relationships off and online, purpose to
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55 set autonomous and realistic goals, resourcefulness to balance work, private lives, studies, and
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57 culture to appreciate the core values and principles of the 21st century. HEIs can help in the
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3 curation and crafting of contemporary pedagogy, implementation of the instructional process,
4
5 cultivation of interactivity and discourse (particularly peer-to-peer interaction), and a catalyst
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7 for transformation since asynchronous teaching needs to be tailored to suit particular needs and
8
9 contexts such as discipline-specific pedagogies (Ceallaigh, 2022).
10
11

12 Thus, based on the findings of this study, the response to our overarching research
13 question **Will HEIs revert back to what they were before the pandemic?** is partially
14 affirmative. We say partially as there are some innovative ideas and potential acceptance of
15 new teaching and learning tools and formats by both faculty members and students; however,
16 these measures need the buy-in from the management who makes the final decisions regarding
17 the overall strategy of the HEI. If the management does not want to change the existing format,
18 if they insist on the return to the **traditional classroom** the faculty members and students will
19 be obliged to follow. Despite the strides taken in COVID-related teaching and learning
20 environments in the past years, many HEIs want to revert to what they have done before. We
21 posit that this is a disappointing result as the obstacles overcome and the potential that
22 innovative tools and practices have offered could have been the catalyst for a significant change
23 toward more effective and rewarding teaching and learning HEI environments.
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40 **In response to RQ1: What are the most relevant competencies for teaching and**
41 **learning in HEIs post-COVID-19?**
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44 From the experience gained in the past few semesters and the responses of the faculty
45 members and students in our study, there is growing importance in using digital tools and
46 resources to improve teaching and learning in HEIs. **Some faculty members who were initially**
47 **reticent to use digital tools have seen their benefits as the use of technology enhances the**
48 **lessons, adds dynamism, and enables the integration of more students. This move brings the**
49 **courses closer to the professional world with the technological but also the communicational**
50 **skills needed. For students, the acceptance of online resources was quicker and more positive.**
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3 Revisiting the resources helps them to find individual learning paths and prepares them for
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5 professional careers where self-motivation and a good work organization is needed. Further,
6
7 they recognized the efforts that faculty members made to employ new digital options but
8
9 regretted that they were under-exploited.
10

11
12 **To respond to RQ2: What do faculty members and students in business HEIs**
13
14 **envision for the future of education? What did they imagine post-pandemic?**

15
16 Students in 2021 and 2022 voiced their choice for hybrid courses when asked about
17
18 their preferred form of teaching: a decision aiming at more flexibility in course attendance.
19
20 Their preference for 100% presence courses dropped by 6% from 2021 to 2022, suggesting
21
22 that, as time went by, they were less inclined to follow courses in the ‘traditional’ face-to-face
23
24 manner. Finally, they have become accustomed to online learning and feel ready to use this
25
26 environment fully. While faculty members in 2021 chose 100% presence courses, they were
27
28 open to blended learning alternatives in 2022. Thus, we can see a shift in faculty members’
29
30 perceptions of what the educational environment in HEIs could entail. Now, it is up to the
31
32 institution to consider these preferences.
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37 **Conclusions/Implications**

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39 During the pandemic, HEI’s were confronted with an urgent change and they are still
40
41 facing new challenges. As the competition among Swiss universities of applied sciences
42
43 intensifies (Rostetter, 2020) and student mobility grows (Rehm and Schulz, 2020), HEIs may
44
45 be faced with more national and international competition for the same students. One
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47 opportunity to face this competition could be that HEIs might seek to integrate more students
48
49 studying part-time who need flexible courses independent from time and space preparing them
50
51 for their future home office working online. In the past, technology was introduced because we
52
53 faced too many students, today it is needed to prepare them for their professional work-place
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55 and tomorrow it might be necessary to attract more students!
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HEIs need to center their efforts on their different stakeholders: companies as the future workplaces and the students themselves, as outlined in Figure 1.

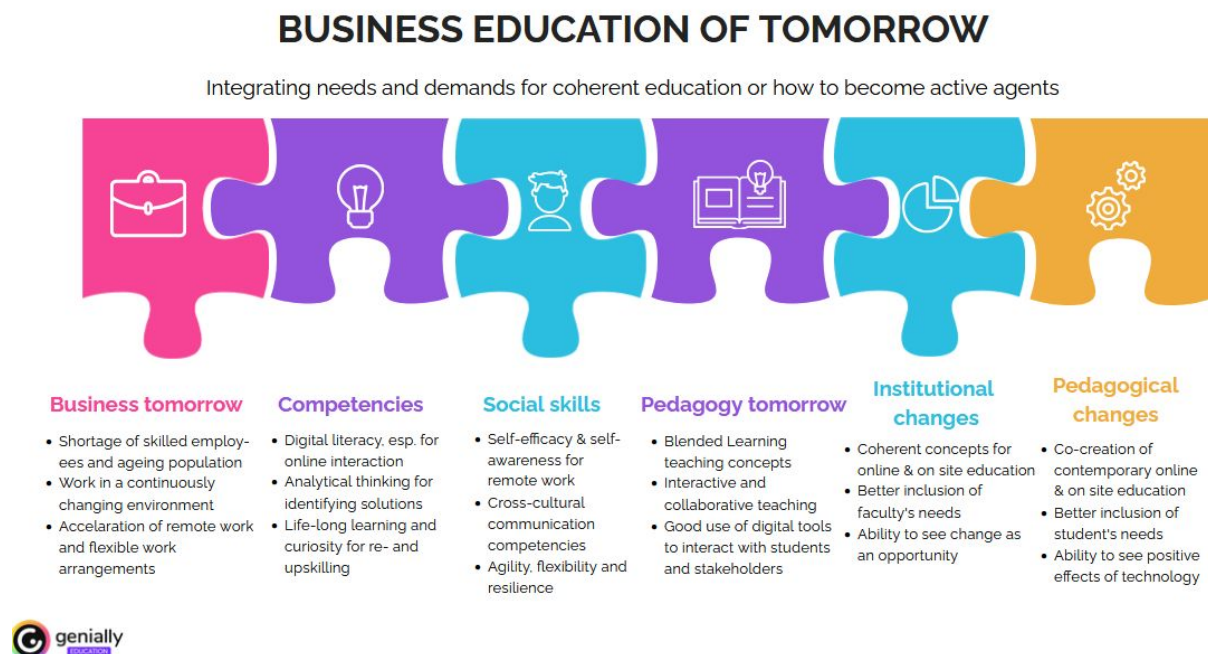


Figure 1 – Business education of tomorrow, created with genial.ly

For the future of education, HEIs will need to create a coherent pedagogical concept with the focus on the shifting demands and needs of the upcoming generations. As different professional and personal competencies have been pushed to the forefront during the pandemic especially when dealing with uncertainty or adjustment to technological changes, further collaborative learning possibilities are needed that promote knowledge learning and critical thinking (Bächtold *et al.*, 2022). Potential business HEI students will seek programs that offer these competencies to ensure their future careers. Thus, HEI managers must reflect on how these competencies can be introduced and honed within the existing and traditional HEI programs. To gain a competitive advantage, Swiss HEIs must profit from the momentum of the pandemic to create innovative and forward-thinking higher education experiences.

To conclude, we posit that HEIs need to be active agents of change and promoters of development (Li and Yu, 2022). The long-lasting effects of the COVID-19 pandemic on

learning innovation and digitalization in HEIs are evident (Stankovska *et al.*, 2022). Whatever choices HEIs make, the only option according to our results is that HEIs must be open and proactive to confront the upcoming changes. Ultimately, it is the decision between the future use of electronic, digital, and online whiteboards or going back to the traditional blackboard.

Limitations/Future Studies

This study has several limitations. Firstly, the results were derived from one business HEI in Switzerland based on eight surveys from 2018 to 2022. Secondly, the students or faculty members who responded may have changed over time. Some students graduated during the analysed period, while others joined the program; some faculty members may have left or joined the HEI. Finally, while our results showed a shift in faculty member and student perceptions of effective teaching and learning modalities, if the HEI management does not come on board, it will be back to the traditional classroom with the teacher in the front and the students passively awaiting knowledge. The advances made during the pandemic will be lost if HEIs don't go digital.

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