

# **The Role of Modality in Developing Durable Skills: Challenges and Experiences of Diverse Student Populations**

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*The efficacy and benefits of various modalities for teaching and learning have been fiercely debated since the pandemic. In general, disciplines that are content-laden and could be taught primarily through passive learning strategies (reading and lecturing) fared better with the transition to distance and online learning. There was great skepticism about the ability to have the same engagement and learning outcomes met in asynchronous design for more applied and interactive disciplines, especially when considering the development of durable skills. Although market researchers have found that employers desire durable skills (formerly “soft skills”), few studies have been dedicated to identifying where, when, and how course modality plays a role in fostering such skill sets. This study proposes to investigate how modality contributes to or inhibits the development of durable skills and identify strategies for addressing challenges that different student populations face given their manner of course participation and attendance while in college. Results from the study indicate that commuters, first-generation, online, and graduate students, given the manner of their engagement with co-curricular and extracurricular activities, are at a disadvantage, requiring new strategies for skills development.*

*Keywords: transferable skills, power skills, durable skills, comparative modality, diversity*

## **INTRODUCTION**

The last two decades have seen an increased focus on the development and evaluation of durable skills (formerly known as “soft skills”) in academia. The promotion of such skills has emerged from several

directions. On the one hand, it is a direct demand of the increasingly competitive and ever-changing labor market (Taylor, 2016). Indeed, the importance attached to durable skills has become increasingly important, in connection with the transformation of and increased automation brought on by artificial intelligence (AI). Priority is given to creative problem-solving, critical thinking, and the ability to find patterns and manage information. As teamwork, interconnectivity, and communication are necessary for any successful organization, these have become foundational pillars of entry-level employees (Bargach, Ghailani, & Bouhdidi, 2021; Mitchell, Skinner, & White, 2010). Studies have examined in depth the needs of the labor market to identify the soft skills that should be promoted because of better job placement for students (Vogler et al., 2018), also considering that the gap between graduates' and employers' perceptions of the importance of soft skills still exists (Dolce, Emanuel, Cisi, & Ghislieri, 2020).

At the same time, higher education is under increasing pressure to demonstrate measurable outcomes, directly tied to career competencies. Detweiler (2021) recently argued that the pressure students feel to focus on mastering immediately practical, job-specific information overlooks the value of lasting, durable, and transferable skills. While college graduates continue to rank job placement among the top motivators for pursuing a degree, there exist two competing strategies: 1) the traditional liberal arts approach that focuses on lifelong value and transferable skills, and 2) vocationally focused training in job-specific information that leads to more immediate career applicability (Pasion, Dias-Oliveira, Camacho, Morais, and Franco, 2020). Market analysis performed by Emsi (2021) noted that the previous role of institutions of higher education was to maximize academic achievement. However, the need to include "durable skills" has increased as the demand for technical skills has. Regardless of field or career path, Emsi has identified 100 durable skills within 10 major competencies that transcend technical proficiency or discipline expertise and will become the most sought-after in the future, including Leadership, Character, Collaboration, Communication, Creativity, Critical Thinking, Metacognition, Mindfulness, Growth Mindset, and Fortitude. NACE (National Association of Colleges and Employers) includes many of the same competencies in their 8 Career Readiness Competencies, which include Career and Self-Development, Leadership, Communication, Professionalism, Critical Thinking, Teamwork, Equity and Inclusion, and Technology. Interestingly, NACE refers to these as Employability Skills. Of the top 20 careers by SOC (Standard Occupational Classification) code at the moment, all current postings have at least two durable skills listed as requirements (Emsi, 2021). The study notes a failure in postsecondary education to meet these goals and provide these necessary skills and calls upon the K-12 curriculum to also be mindful of this need. NACE also confirms faculty resistance to their roles including career preparation in many fields, as well as administrative failure to address institutional shortcomings in this area (Smydra, 2021). Yet, neither Emsi nor NACE identifies where and how these skills can/are developed. Where are these skills embedded throughout an undergraduate's career? Are they in specific disciplines or courses, or are they gained through experiential learning or extra-curricular activities?

What is clear is that engagement on the students' part in such activities is critical to developing both field-specific and durable skill competencies. Student engagement has been demonstrated to have a positive effect on academic performance and student retention (Chapman, 2002-2003; Coates, 2005; Kuh, Cruce, Shoup, Kinzie, and Gonyea, 2008; Pascarella, Seifert, & Blaich, 2010; DeOliveira, 2022). Furthermore, student engagement has a positive impact on the development of durable skills in every area (Kumar, Haque, Zhou, & Spivey, 2022; Almeida & Daniel, 2022). Engagement in the form of educationally effective practices can take place both in and out of the classroom and lead to many different measurable outcomes and skill development. Kuh, Kinzie, Buckley, Bridges, and Hayek (2007) define student engagement as being represented by two features. The first is the amount of time and effort that students put into their studies, while the second is what the institution does to support student learning, including deploying resources, curriculum, support services, and other activities. In essence, the features of student engagement are two sides of the same coin in that student effort, persistence, and success in coursework are directly affected by institutional strategies. One of these considerations is modality and adapting to new and changing circumstances. The difference between engagement in online versus traditional face-to-face courses has been well-studied (Ahlfeldt, Mehta, & Sellnow, 2005; Lindblom-Ylänne, Trigwell, Nevgi, & Ashwin, 2006; Günüç & Kuzu, 2014; Montgomery, Hayward, Dunn, Carbonaro, & Amrhein, 2015).

Studies conclude that engagement is certainly possible in any modality, but strategies differ between synchronous and asynchronous classroom activities.

The importance of “soft skills” is no longer debated. The latest research on the global economy (Emsi, 2021) emphasizing the need for these skills has resulted in a rebranding in terminology and now they are referred to as “durable,” “transferable,” “indispensable,” and/or “power skills,” reflecting their indelible importance for the future of work (Adler, 1992; Madsbjerg, 2017; Khakhalkina, 2018; Weise, 2020; Abd Majid, Hussin, Norman, and Kasavan, 2020; Edmondson and Formica, 2021; Smydra, 2021; Barbuti, Zanni, Russo, and Valentini, 2021). As such, ensuring students develop durable skills in all modalities should be at the forefront of higher educational goals. Noting the challenge in developing durable skills in traditional online asynchronous classes, several case studies have been conducted providing examples to develop a specific skill (e.g. teamwork, communication, critical thinking, etc.) (France-Harris, Burton, & Mooney, 2019; Gay & Betts, 2020; Brown, Rongerude, Leonard, & Merrick, 2021). Additionally, research has demonstrated that students are more successful in online learning if they already possess “soft skills.” Non-traditional learners are often older and such skills are developed through their professional lives. At the same time, traditional online learners are at a disadvantage given the design and assessment of asynchronous classes. Skills such as teamwork, communication, and time management have yet to be developed and are rarely embedded in the classes proper (Tseng, Yi, & Yeh, H. T. (2019). Therefore, while the importance of such skills development is widely accepted, and piecemeal attempts have been made to address integrating one durable skill in one specific course, there remain few institutional studies on the differences in durable skills development from modality, level, and demographic perspectives. This study seeks to identify student perception of durable skills development during their course of study: where these skills were introduced, developed, and reinforced. Students were surveyed for patterns and experiences in developing durable skills in seven categories that align with NACE, major Emsi competencies, and the University’s Graduate Attributes, including Critical thinking and problem-solving; Teamwork and professionalism; Leadership; Career and self-development (life-long learning); Oral and written communication; Equity and inclusion; and Information literacy, quantitative and analytic analysis. Special attention was paid to where and how durable skills were developed in curricular, co-curricular, and/or extra-curricular activities while attending college. Results from the study reveal that students saw classroom activities often as equally or more impactful in developing durable skills than extra or co-curricular activities. Significant gaps in skills development were identified in specific populations, such as online learners and graduate students. Populations that are physically removed from campus activities and other means of support self-reported fewer durable skills developed as part of their college experience and instead pointed to work and life experiences to fill those gaps.

## **THEORETICAL FRAMEWORK**

Given the relevance of such skills, a growing body of research has focused on models for directly promoting durable skills in academia (Moore, 2004). The strategies that can be used by higher education institutions to promote transferable skills are diverse and can include different levels of engagement and scope of interventions (Jääskelä, Nykänen, & Tynjälä, 2018). Indeed, academic institutions can promote capillary projects, focused primarily on raising awareness, with extensive face-to-face, fully online, or blended events that are sustainable for both medium and large universities (Valverde & Ciudad, 2014). The effectiveness of online training for these skills is controversial, given their specificity and the central role of interpersonal relationships in fostering these skills. However, there is research evidence of the effectiveness of online courses in achieving some basic goals of durable skills acquisition, such as their understanding and awareness of their importance (García García, Biencinto López, Carpintero Molina, & Expósito Casas, 2016). The relative effectiveness of such programs and skills acquisition relates to student engagement and perceptions of their learning environment and academic outcomes (Lizzio, Wilson, & Simons, 2002).

The influence student engagement has on student success and learning outcomes in higher education have been thoroughly researched and demonstrated. As Trowler and Trowler (2010, p.1) relate, “the value

of engagement is no longer questioned.” Broadly speaking, the literature approaches student engagement as the “interaction between the time, effort and other relevant resources invested by both students and their institutions intended to optimize the student experience and enhance the learning outcomes and development of students and the performance, and reputation of the institution” (Trowler & Trowler, 2010, p.2). Institutions now focus heavily on how well they are doing with student engagement due to the clear association between engagement and other variables, including student retention, academic performance, placement rates, and employer feedback (Chapman, 2002-2003; Coates, 2005; Kuh et al., 2008; Pascarella et al., 2010; Harper and Quaye, 2015; Kleckner & Butz, 2022). Several studies have emerged from such research that point to employer dissatisfaction with entry-level employees and their durable skills. For instance, Kleckner and Butz (2022) reported the perception gaps between undergraduate business students and employers with regard to communication abilities. Yong and Ling (2022) noted a similar perception gap between employers and graduates in all areas of “soft skills” or twenty-first-century skills.

Unfortunately, these lifelong, transferable skills are not foregrounded in or are completely overlooked in higher education curricula (Ramnanan, 2022). One reason for this oversight is the perceived role of faculty and curriculum as mediators of content, whereas durable skills may be developed in activities external to the classroom. Robertson and Riggs (2018) discuss the benefits, challenges, and solutions to incorporating collaborative work in online asynchronous courses. The researchers argue that collaborative assignments lead to many of the competencies in durable skills (p. 71). At the same time, they argue that attempting to embed durable skills in online education may not be successful for all online students, noting that “...much of the commentary about students needing to learn to collaborate assumes the traditional transition from high school to college. However, for mature students, especially those who have been in the workforce or military, learning to collaborate may not be new, and the academic activity may feel forced and unnecessary” (p. 78). The study calls for a careful evaluation of student demographics when designing assignments or activities to develop such skills.

As such, there has been increasing interest in determining where and how durable skills are developed in various disciplines. However, previous studies have focused on the role that Humanities and Social Sciences play in contributing to others like the physical sciences, such as engineering. For instance, Donald, Lachapelle, Sasso, Gonzales-Morales, Augusto, and McIsaac note that non-technical or “soft skills” in the Canadian engineering curriculum are necessary to instill ethical decision-making and communication skills into students through the development of “social competency, ethical awareness and the ability to express themselves with ease, both orally and in writing” (2017, p.1). Since the 1940s, the Humanities (and later the Social Sciences) have been seen as a means to prevent over-specialization, enhance creativity and promote more socially conscious engineers (Cassidy, 1955; Forbes and Story, 1957). Other studies have confirmed this line of thinking in concluding that the primary “soft skill” learned from the Humanities is empathy for those in STEM (Smith, 2005; Edmondson, Formica, and Mitra, 2020). These are seen to complement the primary field of study, which is most often more technical.

The focus on the economic impact higher education has on creating a sustainable and well-trained workforce is reflected internationally. Studies in Asia, in particular, find a parallel to those in the Americas. For instance, a study of Malaysian undergraduates identified “endurance force, time management, research experience and activities involved in university” as the most significant variables in successful employment (Abd Majid, Hussin, Norman, and Kasavan, 2020, p.1). Of these factors influencing employability, the so-called “endurance force” was identified as the most influential, representing 68.5% of predictors of employment. Included in the characteristic is “consistency of stress, physical endurance, adaptability, risk-taking, enthusiasm, high motivation, and willingness to work hard for success,” what otherwise Emsi would refer to as “Fortitude” (Emsi, 2021; Abd Majid, Hussin, Norman, and Kasavan, 2020 p.42). Recommendations from the study include institutions highlighting the marketability of their graduates; providing more community-based, extra-curricular activities; increasing experiential learning opportunities; and, finally, the government should ensure new jobs are created for graduates.

With the conversations around skills development changing, and greater emphasis being placed on non-job specific skills, further investigation into where these are being developed during a student’s time in college is warranted. Moreover, with the demand for more flexible options to gain a college degree

increasing, online, HyFlex, hybrid, and distance education will become the norm instead of the exception (Punjani & Mahadevan, 2022). As such, piecemeal initiatives are already underway to identify how durable skills may be developed in various modalities (France-Harris, Burton, & Mooney, 2019; Gay & Betts, 2020; Brown, Rongerude, Leonard, & Merrick, 2021). Student perception of their learning environment and academic outcomes also impact durable skill development. Lizzio, Wilson, and Simons (2002) noted in their study of undergraduate student perceptions of ‘hard’ (academic achievement) and ‘soft’ (satisfaction, development of key skills) learning outcomes were directly influenced by how materials were presented, and, in turn, how students approached study. Results confirm that student perceptions of teaching environments influence learning outcomes both directly (perceptions towards outcomes) and indirectly (perceptions towards approaches to outcomes). As such, changes in teaching environments and modalities have an impact on students’ learning outcomes without necessarily affecting their learning approaches. While the study was concerned with appropriate academic workload and teaching methods, the results have implications for modality as well.

With regard to developing “soft skills” in online environments, several studies have been conducted. The more common variety deals with a singular durable skill in a case study of a course. Klegeris (2021), for instance, discusses a small-group PBL (problem-based learning) activity used in a flipped-class-model biochemistry course. Klegeris suggests that the flipped model and PBL activities promoted the development of generic problem-solving skills in students. The study occurred during the Covid-19 pandemic, meaning that the functionality of PBL and small group work for online instruction was also included in the study, with a positive result. In another study, Mitchell and Benyon (2018) noted that soft skills, including intercultural communication, are traditionally absent from Information Systems education because “the IS curriculum is already full of traditional knowledge requirements” (p. 2). Mitchell and Benyon discuss an assignment designed to increase intercultural communication skills coordinated between two universities, one from the U.S. and one from South Africa. The assignment included conversations between the students and a final reflection. Other notable collaboration studies include using virtual teams in a MOOC (Verstegen, et al., 2018) and outcomes process structuring (Dittman, et al., 2010). Myers et al. (2014) also examined how to implement two active learning techniques that work well in face-to-face classes in online environments to support the development of interpersonal and communication skills in students. For synchronous online courses, Myers et al. used Blackboard Collaborate’s digital whiteboard and breakout rooms to simulate the use of POGIL (Process Oriented Guided Inquiry Learning) in face-to-face courses. The asynchronous online courses created blogs and used the commenting function for an informal peer review. Likewise, Thompson et al. (2021) discuss how “soft skills” are developed in a business course by using an immersive learning technique: students were tasked with creating a marketing plan for a client company and presenting the plan to the company. Students work in teams throughout the semester and create a viable marketing plan, and Thompson et al. present a method in which the learning experiment can be implemented in traditional and online courses.

Other studies have attempted to address multiple skills in the same course or program. Moore and Pearson (2017), for instance, offer an example of an asynchronous online horticulture class where durable skills, such as communication, problem-solving, critical observation, and professionalism were cultivated. Assignments were developed to specifically address each skill, such as challenge questions, that focused on having students solve situational horticulture problems or data interpretation where students were provided data from an experiment and then asked to summarize. Brown (2018) discussed the results of a study on a program to instill durable skills in online graduate programs that were designed by business leaders and an academic learning team. The skills identified in their study were: communication, courtesy, flexibility, integrity, interpersonal skills, positive attitude, professionalism, responsibility, teamwork, and work ethic. The outcomes were strategically embedded throughout the curriculum in several master’s degree programs and assessed via self-reflection surveys of the students and employers. Graduates reported higher proficiencies in the skills areas and 91% reported salary increases due to them. Likewise, the University of Turin assessed 12 “soft skills” in a study using Passport, an online enhancement platform (Emanuel, Ricchiardi, Sanseverino, & Ghislieri, 2021). The course administered by the platform consists

of 87 online activities and a self-assessment to certify students in their skills. Participants who completed the training reported significantly higher scores on all associated skills.

The commonality among these examples is to consider the strengths of each modality and align those with assignments, assessments, and instructional strategies. Developing these skills in any modality needs to consider the types of interactions in a class (student-to-student, student-to-instructor, etc.) and available tools to facilitate engagement (Suryaningsih, 2021). The value of durable skills is not in dispute, and those in industry and STEM all agree that students coming out of college need further development in these areas to refine these competencies. To identify strategies to further develop durable and transferrable skills, understanding where and what associated activities or events students and faculty believe are most impactful needs to be researched. The role of modality is also critical at this watershed moment in higher education. With the emergence of the “mega-university,” strategies need to be formalized to ensure such skills are kept in mind in curriculum development for online education and not solely developed by the privileged few who can afford a “traditional” college experience (Bartee, 2022). As such, the following study will survey students to identify where the major career competencies are best fostered and refined in curricular, co-curricular, and/or extracurricular areas.

## **MATERIALS AND METHODS**

### **Setting and Procedures**

The mixed-methods study included data from surveys collected from undergraduate and graduate students. The sample was collected from Lindenwood University, a private, four-year, liberal arts institution in the suburban ring of St. Louis, Missouri. Participants included 340 students from the College of Arts and Humanities, College of Education and Human Services, Plaster College of Business and Entrepreneurship, and College of Science, Technology, and Health. The purpose of the project was to assess where students developed durable skills during their time at college and how modality impacted development. Results were gathered and compared across demographics and modalities. This project utilized a mixed-methods study design, including qualitative (open-ended comments) and thematic (quantitative) results from an online survey. The survey was administered in the Spring of 2022 and collected data on student demographics, modality of attendance, where NACE competencies and Graduate Attributes were developed in curricular, co-curricular, or extracurricular activities, and what had the greatest impact on the development of said skills. The instrument was designed using the categories and meta-categories identified by Emsi, NACE, and the Lindenwood University Graduate Attributes and previous literature (Adler, 1992; Madsbjerg, 2017; Khakhalkina, 2018; Weise, 2020; Abd Majid, Hussin, Norman, and Kasavan, 2020; Edmondson and Formica, 2021; Smydra, 2021; Barbuti, Zanni, Russo, and Valentini, 2021).

### **Participants**

Participants were asked to indicate via a 1-10 Likert scale their perceptions of durable skills and also rank available options of where they were developed from most to least impactful. Students were asked an open-ended question regarding what activities they found to be most important for developing durable skills. Students were contacted either through the University course management system or were emailed with links to online surveys. The survey was available for approximately two weeks in the middle of the term and all data was collected using Qualtrics to ensure the privacy and anonymity of responses. These results were sorted based on demographics (age, gender, major, modality, first-generation, veteran, student-athlete and student worker statuses) and data were exported for the survey system. Descriptive statistics were calculated and used for comparisons between groups.

## **RESULTS**

### **Graduate Versus Undergraduate Student Perceptions**

The first important demographic difference in student populations is that graduate students tend to pursue online programs in greater numbers than undergraduates. The comparison of graduate student

responses and undergraduate student responses highlights both modality (e.g., face-to-face, hybrid, online) and age differences. Graduate students are typically older (84% older than 24 years old) whereas 78% of the Undergraduates were between 18 and 24 years of age. All graduate students were taking either hybrid or online courses, compared to 55% of undergraduates who were taking either hybrid or online courses. When considering where students felt critical thinking and problem-solving was developed, there was also a notable difference in the two populations (**Figure 1**). Undergraduate students tended to value General Education and Student Life more than graduate students, who tended to value mentoring more in the development of critical thinking skills. However, both populations valued major coursework as their leading experience. The same can be seen in teamwork and professionalism development but overall fewer undergraduates and graduates tended to identify major coursework as experiences where teamwork was developed (**Figure 2**). Instead, they more frequently identified student life as being important in developing teamwork, compared to critical thinking. Interestingly, more graduate students identified volunteer work as more important to teamwork skills than to critical thinking skills. Finally, the pattern for experiences that support career- and self-development follow the pattern in the development of critical thinking skills (**Figure 3**). The exception is the importance of volunteer experiences for graduate students.

### **Modality and Critical Thinking Among Undergraduates**

To focus on modality and tease out the effects of age, we compare only undergraduate student perceptions among face-to-face, hybrid, and online students. While older face-to-face was emphatic about the role that major courses play compared to students 18-24, it should be noted that there were only six undergraduate students who were taking predominantly face-to-face classes (**Figure 4**). Students who were face-to-face or hybrid tended to identify the importance of Gen Ed and Student Life more than online students in the 18-24 age group (**Figure 5**). Students who were older than 24 and took classes predominantly in hybrid or online modalities tended to not value Student Life (**Figure 6**). Interestingly, online undergraduate students who were older than 24 (47% of the 57 online undergraduates) tended to value Gen Ed more in the development of critical thinking skills than any of the other groups.

### **Modality and Teamwork Among Undergraduates**

To focus on modality and tease out the effects of age, we compare only undergraduate student perceptions among face-to-face, hybrid, and online students. The importance of Student Life in the development of teamwork skills is evident in the responses of face-to-face and hybrid students, typically on par with the importance of major coursework (**Figures 7-8**). Both face-to-face and hybrid students found greater value in on-campus experiences. For instance, outside of major coursework, the face-to-face population ranked work-study and mentoring as the most influential, while students older than 24 did not seem to participate in Student Life activities, and thus did not rank them as highly. In contrast, online students tended to value major coursework more than Student Life activities. For online students, Gen Ed was more important in teamwork than for face-to-face or hybrid students (**Figure 9**). There was consistency among age groups in those in the 18-24 category in that, regardless of modality, there is greater engagement with and influence relegated to Student Life than older students.

### **Modality and Career- and Self-Development for Undergraduates**

Many of the trends evident with critical thinking and teamwork are also visible in career- and self-development (**Figure 10**). In comparing students by their modality of attendance, major coursework remains the highest ranked among all populations. Interestingly, experiential learning (which includes internships and research) becomes significant primarily to hybrid students (51 students out of the 195, that is 26%, of undergraduate respondents) (**Figure 11**). There were only 10 hybrid students who were older than 24. As was seen in the comparison between graduate students and undergraduate students, volunteering becomes more valued among undergraduate online students in the 18-24 age group (30 respondents compared to 152, that is 20%, of the 18-24 undergraduate respondents) (**Figure 12**).

## DISCUSSION

As the results demonstrate, students report having different expectations and experiences depending upon their modality. Students between 18-24 years of age who primarily take classes face-to-face are the most engaged in on-campus activities. Therefore, co-curricular and extracurricular opportunities for students to develop various durable skills are currently more varied among the traditional-age population who live on campus. Participating in Student Life events and activities was highest among this population, as well. Not surprisingly, graduate student expectations for Student Life in their educational experience were different than for first-year, residential undergraduates. However, the difference in experience with Student Life was due more to the modality of attendance than the level of degree pursued. If students are primarily taking classes off-campus, then they reported having little to no time to come to campus for Student Life or sporting events.

Expectations among student populations also differ regarding experiential learning and teamwork skills development. For instance, graduate students found little value in experiential learning (i.e. internships) as many noted that they were already employed and gained real-world experience through their daily employment. Online and graduate students stated that experiential learning was not as important for developing durable skills. Undergraduate students, however, have fewer opportunities outside of part-time employment or student worker positions to gain professional experience, making experiential learning more important for this population. Likewise, undergraduates noted that skills such as teamwork were developed more so in extracurricular activities, such as with Student Life, while graduate students pointed to positions held professionally and mentoring. A point to be made concerning the data would be that even though graduate students have no exposure to either the General Education curriculum or First-Year UNIV classes, both were selected, confirming that a subset of the graduate population did not fully understand all of the options.

## CONCLUSION

The development of durable skills can be attained in a variety of ways in curricular, co-curricular, and extracurricular activities during the time in college. The results from the study here indicate the rich array of opportunities students have in their educational environment to further refine these transferable skills that are highly desirable among employers. However, not all students have access to all opportunities to develop said skills due to various factors including modality. To support students that are not physically involved in campus activities, faculty need to be direct in their interactions with students in how classroom activities lead to the development of durable skills, otherwise, students do not realize the skills are developed as an outcome of coursework. One strategy would be for faculty to narrate their teaching experience and consider the process as an exercise in critical thinking. Faculty can also be intentional in bringing in external experiences they and students have had into the classroom, even in online engagements. Provide opportunities for students to share prior learning experiences, such as those who served in the military discussing foreign policy. Real-world experiences of students can be shared with the group to amplify and reinforce the curriculum that is under faculty control. The process provides critical reflection for students who are self-consciously noting how they are developing durable skills, such as teamwork. The strategy may include parsing out development and having students reflect on where these skills are applied in their curriculum. In practice, assignments can include having students take stock of what is being covered in class and how that would apply to life post-graduation; students can analyze how these skills can be applied in the next steps of their academic and professional careers.

Recommendations from the study include identifying where durable skills are already being taught in the curriculum. To clarify and highlight what activities should reinforce those skills for both faculty and students, clearly identifying them in the syllabus through “skillification” or “skillifying the syllabus” should be a priority. The use of student information systems (SIS), such as Anthology allows for the tracking of such skills across syllabi and coursework and brings together the curricular and co-curricular in one area to help students and employers identify what skills are being developed in different areas and disciplines.



Along with outlining the course and program level outcomes, faculty should identify which durable skills are covered as part of the class (e.g., written communication or problem-solving). When considering whether durable skills are developed through the material content covered or how that material is taught, postsecondary institutions need to consider a holistic approach to student learning. Experiences in classrooms are equally important for building transferable skills as those outside. A greater synergy needs to be reached between expectations and content covered in general education coursework, that is taught in the major and minor, and experiences where those skills may be practiced and reinforced outside. As employers increasingly demand general competencies in durable skills as noted in job postings compared to pre-pandemic, a college education needs to address the skills gap and realize field-specific knowledge as important as, or arguably less so than, transferable skills that can be applied in a wide array of future careers and situations. As such, adaptability has become one of the most significant employable skills.

## REFERENCES

- Abd Majid, M.Z., Hussin, M., Norman, M.H., & Kasavan, S. (2020). The employability skills among students of Public Higher Education Institution in Malaysia. *Geografia-Malaysian Journal of Society and Space*, 16(1).
- Adler, P.S. (1992). *Technology and the Future of Work*. Oxford University Press on Demand.
- Almeida, J., & Daniel, A.D. (2022, March). Student-led organisations and STEM education: A review. In *2022 IEEE Global Engineering Education Conference (EDUCON)* (pp. 1026–1030). IEEE.
- Bailey, S., Barber, L.K., & Ferguson, A.J. (2015). Promoting perceived benefits of group projects: The role of instructor contributions and intragroup processes. *Teaching of Psychology*, 42(2), 79–83. <https://doi.org/10.1177/0098628315573147>
- Barbuti, N., Di Zanni, A., Russo, P., & Valentini, A. (2021). Community-Based Co-creation of Soft Skills for Digital Cultural Heritage, Arts and Humanities: The Crowddreaming Method. In *Co-creating in Schools Through Art and Science* (pp. 17–26). Springer, Cham.
- Bartee, S. (2022, February). History at the Online Mega-University. In *AHA22 Online*. AHA.
- Bérubé, M., & Nelson, C. (Eds.). (1995). *Higher education under fire: Politics, economics, and the crisis of the humanities*. Psychology Press.
- Bowen, W.G., & Shapiro, H.T. (2014). *What's Happened to the Humanities?* (Vol. 358). Princeton University Press.
- Brown, L.S. (2018). Soft skill development in the higher education curriculum: A case study. *IUP Journal of Soft Skills*, 12(4), 7–29.
- Brown, T., Rongerude, J., Leonard, B., & Merrick, L.C. (2021). Best practices for online team-based learning: Strengthening teams through formative peer evaluation. *New Directions for Teaching and Learning*, (165), 53–64.
- Cassidy, H.G. (1955). Chemistry, chemical engineering, and culture. *J. of Chemical Educ.*, 32(2), 86.
- Chamorro-Premuzic, T., Arteche, A., Bremner, A.J., Greven, C., & Furnham, A. (2010). Soft skills in higher education: Importance and improvement ratings as a function of individual differences and academic performance. *Educational Psychology*, 30(2), 221–241.
- Cooper, M.G., & Marx, J. (2013). Crisis, crisis, crisis: Big media and the humanities workforce. *Differences*, 24(3), 127–159.
- DeOliveira, S. (2022). *Student Engagement and Performance Assessment as Associated with Three Types of Integument System Laboratory Activities*.
- Detweiler, R. (2021). *The Evidence the Liberal Arts Needs: Lives of Consequence, Inquiry, and Accomplishment*. Cambridge, Massachusetts: MIT Press.
- Dittman, D.R., Hawkes, M., Deokar, A.V., & Sarnikar, S. (2010). Improving virtual team collaboration outcomes through collaboration process structuring. *Quarterly Review of Distance Education*, 11(4), 195.

- Donald, J., Lachapelle, S., Sasso, T., Gonzales-Morales, G., Augusto, K., & McIsaac, J. (2017). On the place of the humanities and social sciences in the engineering curriculum: A Canadian perspective. *Global Journal of Engineering Education*, 19(1), 6–18.
- Edmondson, J., Formica, P., & Mitra, J. (2020). *Empathy, sensibility and graduate employment—Can the humanities help?*
- Emanuel, F., Ricchiardi, P., Sanseverino, D., & Ghislieri, C. (2021). Make soft skills stronger? An online enhancement platform for higher education. *International Journal of Educational Research Open*, 2, 100096.
- Emsi. (2021). *The High Demand for Durable Skills*. America Succeeds.
- Fish, S. (2010). The crisis of the humanities officially arrives. *New York Times*, 11.
- Forbes, W.F., & Story, G.M. (1957). Science and the humanities: the unity of knowledge. *Journal of Chemical Education*, 34(12), 594.
- France-Harris, A., Burton, C., & Mooney, M. (2019). Putting Theory into Practice: Incorporating a Community Engagement Model into Online Pre-Professional Courses in Legal Studies and Human Resources Management. *Online Learning*, 23(2), 21–39.
- García, M.G., López, C.B., Molina, E.C., Casas, E.E., & Morales, Y.A.R. (2016). Development and evaluation of the team work skill in university contexts. Are virtual environments effective? *International Journal of Educational Technology in Higher Education*, 13(1), 1–11.
- Gay, G.H., & Betts, K. (2020). From Discussion Forums to eMeetings: Integrating High Touch Strategies to Increase Student Engagement, Academic Performance, and Retention in Large Online Courses. *Online Learning*, 24(1), 92–117.
- Griffin, M., & Taylor, T.I. (2017). Shifting expectations: Revisiting core concepts of academic librarianship in undergraduate classes with a digital humanities focus. *College & Undergraduate Libraries*, 24(2–4), 452–466.
- Gutting, G. (2013). The real humanities crisis. *The New York Times*, 30.
- Hale, J. (2020). High-Impact Practices in Online Education: Research and Best Practices ed. by Kathryn E. Linder and Chrysanthemum Mattison Hayes. *The Review of Higher Education*, 43(3), E–32.
- Hall, S. (1990). The emergence of cultural studies and the crisis of the humanities. *October*, 53, 11–23.
- Jääskelä, P., Nykänen, S., & Tynjälä, P. (2018). Models for the development of generic skills in Finnish higher education. *Journal of Further and Higher Education*, 42(1), 130–142.
- Jay, P. (2014). *The Humanities “Crisis” and the Future of Literary Studies*. Springer.
- Khakhalkina, E. (2018, November). The future of the Humanities under the Forth Industrial Revolution: the UK case study. In *The papers of the Third University Cities Forum/Ed. by Anastasiya Pogorelskaya* (p. 34). Tomsk: Tomsk State University Press, 2018.–126 p. ISBN 978-5-94621-788-0
- Kleckner, M.J., & Butz, N.T. (2022). Developing Entry-Level Communication Skills: A Comparison of Student and Employer Perceptions. *Business and Professional Communication Quarterly*, 23294906221078300.
- Klegeris, A. (2021). Mixed-mode instruction using active learning in small teams improves generic problem-solving skills of university students. *Journal of Further and Higher Education*, 45(7), 871–885.
- Kumar, S., Haque, S., Zhou, L., & Spivey, C.A. (2022). Classroom engagement through short stories and motivational messages. *Pharmacy Education*, 22(1), 199–210.
- Lizzio, A., Wilson, K., & Simons, R. (2002). University students’ perceptions of the learning environment and academic outcomes: Implications for theory and practice. *Studies in Higher education*, 27(1), 27–52.
- Luke, C., & Kersel, M. (2013). *US cultural diplomacy and archaeology: Soft power, hard heritage*. Routledge.
- Lund, S., Madgavkar, A., Manyika, J., Smit, S., Ellingrud, K., Meaney, M., & Robinson, O. (2021). The future of work after COVID-19. *McKinsey Global Institute*, 18.

- Madsbjerg, C. (2017). *Sensemaking: The Power of the Humanities in the Age of the Algorithm*. Hachette Books.
- Marks, M.B., & O'Connor, A.H. (2013). Understanding students' attitudes about group work: What does this suggest for instructors of business? *Journal of Education for Business*, 88(3), 147–158. <https://doi.org/10.1080/08832323.2012.664579>
- Mitchell, A., & Benyon, R. (2018). Teaching tip: Adding intercultural communication to an IS curriculum. *Journal of Information Systems Education*, 29(1), 1.
- Moghaddam, Y., Yurko, H., Demirkan, H., Tymann, N., & Rayes, A. (2020). *The Future of Work: How Artificial Intelligence Can Augment Human Capabilities*. Business Expert Press.
- Moore, K.A., & Pearson, B.J. (2017). Soft skills in an online class. *Horttechnology*, 27(5), 583–585.
- Moore, T. (2004). The critical thinking debate: How general are general thinking skills? *Higher Education Research & Development*, 23(1), 3–18.
- Myers, T., Blackman, A., Andersen, T., Hay, R., Lee, I., & Gray, H. (2014). Cultivating ICT students' interpersonal soft skills in online learning environments using traditional active learning techniques. *Journal of Learning Design*, 7, 38–53.
- Oliveira, K.K.D.S., & de Souza, R.A. (2021). Digital transformation towards education 4.0. *Informatics in Education*.
- Pasion, R., Dias-Oliveira, E., Camacho, A., Morais, C., & Franco, R.C. (2020). Impact of COVID-19 on undergraduate business students: A longitudinal study on academic motivation, engagement and attachment to university. *Accounting Research Journal*.
- Punjani, K.K., & Mahadevan, K. (2022). Transitioning to online learning in higher education: Influence of Awareness of COVID-19 and Self-Efficacy on Perceived Net Benefits and Intention. *Education and Information Technologies*, 27(1), 291–320.
- Ramnanan, N. (2022). *Developing Soft Skills: Faculty and Employer Perspectives and Recommendations* [Doctoral dissertation, Walden University].
- Russo, J.P. (2005). *The future without a past: The humanities in a technological society*. University of Missouri Press.
- Shor, I. (1992). *Culture wars: School and society in the conservative restoration*. University of Chicago Press.
- Shuman, L.J., Besterfield-Sacre, M., & McGourty, J. (2005). The ABET “professional skills”—Can they be taught? Can they be assessed? *Journal of Engineering Education*, 94(1), 41–55.
- Sirat, M. (2015). The Humanities, General Education and the Push Towards Knowledge-based Economy in Malaysia: Complementing or Competing Agenda? *Journal of Education and Information Technologies*, 9(2), 377–396.
- Small, H. (2013). *The value of the humanities*. Oxford University Press.
- Smith, B.H. (2005). Figuring and Reconfiguring the Humanities and the Sciences. *Profession*, pp. 18–27.
- Smydra, R. (2021, May). Facilitating Faculty Buy-In to Career Readiness. *NACE Journal*.
- Stearns, P.N. (1993). *Meaning over memory: Recasting the teaching of culture and history*. UNC Press Books.
- Steinkraus, W. (1980). Socrates, Confucius, and the Rectification of Names. *Philosophy East and West*, 30(2), 261–64.
- Stone, M. (2009). Challenge for the Humanities. *Working together or apart: Promoting the next generation of digital scholarship*, 43.
- Suryaningsih, V. (2021). Strengthening Student Engagement: How Student Hone Their Soft Skill Along Online Learning During Covid-19 Pandemic? *Jurnal Manajemen Bisnis*, 18(1), 1–15.
- Thompson, K., Conde, R., Gade, M., & Mims, T. (2021). An Immersion Approach to Client-Sponsored Projects: Preparing Students with Soft Skills Required for Hiring—Face to Face & Virtual Methods. *International Journal of Higher Education*, 10(2), 42–61.
- Trowler, P., & Trowler, V. (2010). *Student engagement evidence summary*.
- Tseng, H., Yi, X., & Yeh, H.T. (2019). Learning-related soft skills among online business students in higher education: Grade level and managerial role differences in self-regulation, motivation, and social skill. *Computers in Human Behavior*, 95, 179–186.

- Valverde Berrocoso, J. (2014). El uso de e-rúbricas para la evaluación de competencias en estudiantes universitarios: Estudio sobre fiabilidad del instrumento. *Red U: Revista de docencia universitaria*.
- Verstegen, D., Dailey-Hebert, A., Fonteijn, H., Clarebout, G., & Spruijt, A. (2018). How do virtual teams collaborate in online learning tasks in a MOOC? *International Review of Research in Open and Distributed Learning*, 19(4).
- Weise, M. (2020). *Long Life Learning: Preparing for the Jobs that Don't Even Exist Yet*. John Wiley & Sons, Incorporated.
- Yong, B.P.P., & Ling, Y.L. (2022). Skills Gap: The Importance of Soft Skills in Graduate Employability between the Perspectives of Employers and Graduates. *International Journal of Social and Humanities Extension (IJSHE)*, pp. 10–24.