

Chapter 7

Developing Integrated Learning Environments for Improved Outcomes

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ABSTRACT

This chapter addresses the use of design thinking in created integrated learning environments where student learning is captured across curricular and co-curricular experiences. The chapter outlines the current context and trends in higher education that demonstrate the need for integrated learning environments and the need to assess experiential learning by centering students in the process. Centering students in the process of designing integrated learning environments empowers them on a path of self-authorship where students identify the goals of learning, how that learning will be documented, and how experiences scaffold to ensure students move from introduction to mastery of skills. The chapter concludes with examples from campuses that have created integrated environments where learning is documented and recorded, including examples of comprehensive learner records and a fully integrated bachelor's degree program.

INTRODUCTION

The assessment of student learning outcomes in the co-curriculum is often diffused across many departments without central goals guiding students through their learning experiences. As higher education leaders consider what skills and abilities students should acquire in the years between orientation and graduation, it is imperative to identify and communicate outcomes with students and map those experiences to a curriculum. This curricular approach to determine the appropriate outcomes and how to measure student achievement align well with the design thinking processes. This chapter will focus on the

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define phase of design thinking by exploring the current trends in higher education, and considerations for measuring experiential learning in the context of defining a problem statement that can be addressed through the phases of the design thinking process. An effective way to achieve the goal of defining the purpose of experiential education and measuring success is through the creation and implementation of integrated learning environments.

Learning is often perceived to primarily occur in the classroom or under the leadership of a faculty member. Therefore, faculty and other academics have become the default practitioners in the development of curriculum and measuring student outcomes. In reality, learning is a continual process occurring in a multitude of environments through diverse experiences. Students often report hands-on application, also referred to as experiential learning, is how they best gain and solidify their understanding of new knowledge and competencies. Student affairs practitioners have long known the learning opportunities students have in student organizations, housing, student employment and other co-curricular experiences are highly effective environments for learning. In fact, the publication of the Student Learning Imperative (ACPA, 1994) shifted the field of student affairs to emphasize learning through service delivery. The statement argued that learning, personal development, and student development are intertwined and inseparable (Schuh et al., 2016). In the almost thirty years since the publication of the Student Learning Imperative, student affairs practitioners have continued to identify ways to measure and report the learning that occurs in the co-curricular. Such engagement opportunities teach and enhance students' skills, including communication, teamwork, and problem solving, to name a few. In the Project CEO White Paper, over 20% of respondents indicated that their co-curricular experiences were the primary environments where they learned teamwork, decision-making, problem solving, workflow planning, and verbal communication (Griffin, 2016).

This chapter will use the define phase of design thinking to address the integration of curricular and co-curricular experiences by first exploring the current environment and emerging trends in higher education that influence the outcomes and learning opportunities provided for students. This will lead into a discussion regarding design thinking and the foundations of integrated learning. Finally, the chapter will conclude with examples of how campuses are creating integrated learning environments and documenting student learning, including the use of comprehensive learning records.

Current Context and Emerging Trends in Higher Education

Before users of the design thinking model are able to define the problem they are addressing, they should have a strong understanding of the environment and context they are working within. In our case, we are discussing the challenge of assessing experiential learning. This section outlines some relevant changes in higher education that impact the implementation of experiential learning and the need to document student learning in multiple environments.

Higher education institutions face the ever-present challenge to develop and maintain learning environments across complex systems. In recent years, increasing accountability to document and quantify both student learning and the value of a college degree has mounted from a multitude of stakeholders that includes students and parents, state legislatures, accrediting bodies, alumni, and other community leaders. Much of the pressure for higher education to prove it's worth comes from increasing expectations for job placement and post-graduation success as the investment that families and parents make in a college degree has become a greater burden for families and students. Many institutions are facing mounting costs, declining enrollments, quickly changing demand for academic programs, and changing

population demographics. These factors are imperative to consider and address as part of the process to define integrated learning environments to ensure experiences are relevant to students and stakeholders.

Following the Great Recession in 2008, the rising cost of education became an even more pressing concern and led to two issues: the funding of post-secondary education and the increasing competitiveness for campuses to recruit more students and increase enrollment to meet budget needs. The impact of the recession was felt significantly by middle class families who struggled to keep up with the rising cost of attendance. This was due to the combination of colleges and universities facing skyrocketing costs and families experienced lost income and wealth. Universities endowment earnings went down, health insurance costs skyrocketed, and pension investments weren't performing as well requiring institutions to use revenue or cash reserves to meet their retirement commitments. In addition, states significantly reduced allocations to public education forcing institutions to identify new revenue streams, often in the form of student tuition dollars (Selingo, 2018). In 2015, a smaller percentage of first-year students reported using family resources to cover the cost of college compared to the 2001 cohort (Eagan et al., 2016, Johnson Hess, 2020).

In addition, the population of the U.S. is getting older due to the aging of the Baby Boomer generation. The birth rate in 2020 was the lowest since 1979 (Acharya, 2021). Many individuals are waiting to start families or having fewer children, often as a result of the Great Recession and continued economic challenges. The aging of our population means that there will be additional increased competition for traditional-aged students and campuses will continue to see a rise in the number of adult learners, or students over the age of 25, returning to campus. There will be a drop in the number of students graduating from high school in about 10 years that will further reduce the traditional recruitment pool and the number of students attending college. Due to these increasing costs and often a lack of job prospect post graduation, many students are electing not to pursue higher education and the global pandemic of 2020 further impacted enrollment. Undergraduate enrollment fell 3.5% from fall 2019 to fall 2020, which is more than half a million students. Declining enrollments have been a trend for the past decade with the decline in 2020 more than twice the rate in 2019 (Nadworney, 2020).

The majors that students choose to study has changed over the past several years as well. More students are selecting to study what they perceive to be more practical majors, such as healthcare and business, and fewer students are studying humanities (Selingo, 2018). A study by the Higher Education Research Institute in 2016 found that between 2000 and 2015, first-time first-year students were increasingly reporting plans to pursue science and engineering (Eagan et al., 2016). Finally, "half of the oldest Gen Zers (ages 18 to 23) reported that they or someone in their household had lost a job or taken a cut in pay due to the outbreak," which was higher than Millennial (40%), Gen Xers (36%) and Baby Boomers (25%) (Parker & Igielnick, 2020). The changing interests in fields of study have left institutions attempting to shift their offerings and right-size or eliminate academic departments with declining enrollments.

The cost of higher education, debt accumulation, institutional budgets, and competition for enrollment are not the only changes occurring on college and university campuses. Students have become increasingly racially and ethnically diverse. From 2005 to 2015, the percentage of first-time, full-time first-year students decreased from 70% to 57.6%, while the percentage of Asian students rose from 7.4% to 10% and the percentage of Latinx students rose from 5.6% to 9.7%. (Eagan et al., 2016). These students are a direct reflection of the increasing racial and ethnic diversity of the country. According to demographer Dudley Poston (2020), between now and 2030, non-Hispanic white people will decrease as a proportion of the population and continue to do so. Minoritized race groups will continue to become a larger proportion of the population, with Black, Hispanic, and Asian populations growing significantly.

Poston estimates that whites will eventually drop below 50% of the U.S. population around the year 2045. Institutions of higher education have often been criticized of not being responsive in addressing racial justice in society and on their campuses. Breaking down systems of oppression is an ethical imperative that higher education must face. Failing to do so will continue to erode higher education's relevancy to an increasingly diverse enrollment.

Technology is another higher education trend that is experiencing rapid change accelerated by the response to the COVID-19 global pandemic. In 2018, more than a third of all college and university students took at least one online course. The rate of increase for online enrollments was slowing in 2018, but online education remained the main component of enrollment growth (Lederman, 2019). However, many institutions shifted to remote learning with both courses and student services being delivered through online learning management systems and virtual meetings. It is still unknown what the long-term impacts of this sudden shift will be on student expectations regarding the availability of online learning and services, but it may again accelerate the growth of online learning. Once the coronavirus pandemic subsides, higher education administrators will know more about the environment for online education and virtual programs and services. However, they should anticipate that students will continue to expect services remain available virtually, even if the student is taking face-to-face courses. In addition, technology expenses continue to climb in order to build, maintain, and provide students the infrastructure needed to effectively deliver remote courses, programs and services.

Beyond technology simply being used for the remote delivery of courses, students are increasingly connected to social media and have grown up in an environment where everything they could want is available on demand, including learning. Born between 1995 and 2010, traditional aged college students are digital natives identified as Generation Z (Seemiller & Grace, 2016). For those that are not digital natives, there is still an expectation that higher education will train and prepare them for careers in fields that increasingly rely on these technological tools and systems. Most students have more computing power in their pocket than NASA had to put a man on the moon. These new tools at our disposal are game changing, not just through their capabilities individually, but their interconnectedness, they are plugged into a system where user data and choice are combined to personalize results from a huge system of possibilities. Downloading new movies to stream, ordering delivery for dinner, and having access to any number of everyday essentials with same day or next day shipping creates an expectation that colleges and universities will respond to student demands in the same way. Society as a whole has come to expect this tailored immediacy. This combination of speed, customization, and access has raised user expectation in all services. In addition to students, administrators and board of directors anticipate having access to the most minute details about our students' behavior, engagement, and success due to the data analytics they are accustomed to seeing in corporate America. To collect this level of data, access to systems and analysis that many campuses are not currently investing in is needed. However, integrated learning environments will also require the tracking and documenting of student experiences. Remote learning, social media, and data analytics are all technological trends that heavily influence our current environment.

The coronavirus pandemic that began in the spring of 2020 highlighted and accelerated many of the challenges that higher education has been facing for the past decade. Higher education budgets have tightened, student demographics are changing, and students and families are shouldering a greater proportion of the cost of education. With the increased cost of degree attainment being shouldered by families or students themselves, there is concern about the return on their investment in a college degree. Many are concerned about leaving with extensive student loan debt and not being able to find gainful

employment that justifies the expense. For students that enroll and make the investment in higher education, they often have increasing demands to be part of the decision about how their tuition and fee dollars are used. Technology has influenced everything from our expectations about service accessibility, knowledge acquisition, and social connections. Students will continue to push for accountability and a la carte delivery models for degree completion. Students will also expect programs and services to be available virtually. Institutions may also see a change in the programs and services students expect as competition for their time and resources increases. In addition, stakeholders are demanding increased accountability for return on investment and job placement outcomes for graduates. All these factors should drive us to prioritize defining a curriculum that encompasses the curricular and co-curricular aspects of the college experience in order to offer students the best value for their investment. This will provide students the structure to articulate the skills they have gained as a result. The current higher education environment, including affordability of college tuition, shifting campus demographics, and the increasing use of technology, must be taken into account before using the design thinking process to define a problem statement that addresses how to measure experiential learning that centers students and allows for iterative changes through the prototyping process.

APPLYING DESIGN THINKING TO INTEGRATED LEARNING ENVIRONMENTS

Design thinking is not only a process or strategy, but also a mindset. The design thinking process concentrates on analyzing context, identifying problems, and (re)framing them around inputs the user has the autonomy to control in order to influence and direct the outcomes measured. It is an iterative process, a steady and informed “wind in our sails” towards improvement, rather than a search for the fix. Design thinking is a complementary process to assessment as they share the goals of growth and improvement. This chapter is focused on the define phase of design thinking. Earlier in the book, authors have guided you through the empathize phase to understand students and their unique needs. This chapter has established the context and trends in higher education and will now explore ways to define the outcomes of experiential learning using integrated learning environments. After we have explored design thinking, we will discuss the literature and foundations of integrated learning environments. The chapter will conclude with examples of experiential learning that demonstrates the use of an integrated learning environment.

Design Thinking Applied

Problem solving is many times approached from a perspective that there is a right and wrong solution to the challenge at hand. However, design thinking addresses problem solving through an iterative process where the goal is to continue to improve toward solving the problem identified in the design phase. During the design thinking process, users build consensus around a thought-out problem and center it in an actionable context through the five key steps of design thinking: Empathize, Define, Ideate, Prototype, and Test. This chapter is focused on defining the problems related to documenting and measuring the outcomes of experiential learning. In the define stage of design thinking, users define and redefine the problem statement – or challenges -, reframing them until there are controllable inputs. The design thinking process breaks problem solving and creative thinking into a manageable process, rather than a big problem that feels hard to address meaningfully and effectively. During the define phase, users identify an actionable problem statement that will be used to direct the process of ideating solutions, prototyping,

testing and returning to previous phases to direct improvement. A strong problem statement is essential as it brings clarity and guide the team's work into the next phase of ideation.

Defining the Problem

Society is experiencing a new paradigm of unfettered access to information and nearly unlimited learning opportunities. To remain relevant and competitive, institutions must adapt and provide the learning opportunities that will continue to serve students and industry. Remaining relevant requires measuring the effectiveness of experiential learning and reporting student successes. Failure to articulate the value of education and learning puts institutions at risk to fall victim to declining enrollments in an environment of increasing accountability and not meeting students and stakeholder expectations. The authors pose that integrated learning environments are a potential solution that allow for institutions to define and measure meaningful learning across the institution.

Integrated learning is one approach that has demonstrated greater student achievement of identified learning outcomes and has become a common best practice. In the context of modern society and the current environment of higher education discussed previously, institutions must be able to deliver an integrated, user-centered, and customizable learning environment. As cited in Haynes (2006), Baxter Magolda's longitudinal study of student development explains that "learning can be enhanced if faculty and staff are attuned to the students' developmental needs and patterns" (p. 18). For this reason, learning environments must be interdisciplinary. Historically, the divide between the curricular and co-curricular was not as distinct when faculty engaged with students beyond lecturing and grading (Lucas, 1994). With the professionalization of faculty to teaching and research, learning experiences outside the classroom tend to fall to staff that may report to student or academic affairs. Students do not perceive the distinct reporting lines that differentiate the responsibilities of student affairs from academic affairs as they engage in experiential learning opportunities outside of the classroom. Student affairs administrators, academic affairs administrators and faculty must identify how to overcome organizational lines of distinction to provide a more robust and engaging learning environment.

While student affairs professionals acknowledge the importance of learning outcomes assessment, many divisions and departments are not adequately measuring student learning or struggle to communicate the learning achieved and how it contributes to the institution's academic mission. Preparing students to address the problems of tomorrow in the career of their choosing through education, training, and development is essential to the mission of higher education. To meet this goal successfully, administrators must identify the inputs that contribute to the makeup of a successful graduate, so institutions are able to consistently replicate those conditions to ensure student post-graduation success.

"Designing curricula and courses that pay little heed to the fundamental ways in which human beings learn leads to knowledge gains that are less deep and complete" (Eyler, 2018, p. 14). As the ways to engage students in integrated learning environments are considered, ensuring learners are centered in the work is essential. User-centeredness is a core concept of design thinking. In addition, Baxter Magolda's theory of self-authorship (2008) supports centering the learner to achieve the greatest possible outcomes. Haynes (2006) cites Baxter Magolda's work as follows:

[I]n order to generate new knowledge, take productive action to solve problems, and understand the complexities of the world, a learner must not only cultivate the ability to evaluate and interpret judgments in light of available evidence but also engage in authentic, mature relationships with others, generate a

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thoughtful, internalized belief system, and form an integrated identity. Put another way, if learners are unsure of who they are or what they believe, they will find it difficult to pursue intellectual inquiry. (p.18)

To center students in integrated learning environments, educators and assessors must address the many biases and assumptions that come with historically accepted assessment techniques. Assessment borrows from academic research techniques in using modified research designs and statistical analysis to make decisions about student learning. These practices are centered in Western and White ways of knowing, or epistemology, and theories of how knowledge is gained, or methodology. In his book *Research is Ceremony*, Indigenous researcher Shawn Wilson describes a research paradigm shared by Indigenous scholars that is centered in relational accountability. Wilson discusses how the paradigm requires relationship between the researcher and the researched population, which creates accountability. This reflects the first step of the design thinking process to empathize with users. The paradigm is circular, as opposed to linear and acknowledges that knowledge cannot be owned. Design thinking is also an iterative, circular process that relates well to an Indigenous paradigm.

In Western ways of knowing the research belongs to the individual. However, in an indigenous research paradigm the knowledge is shared with the researcher, those involved with the research and the broader community. In outlining how the paradigm can be put into practice, he states Western research “has a history of people being told to amputate a part of themselves to be able to fit something that’s rigid, and not built for them in the first place” (Tafoya, 1995, as cited in Wilson, p. 56). There is a history in research that the end of knowledge acquisition justifies the means, even when those means have negative impacts on the communities researched, such as the Tuskegee Syphilis Study. While there are ethnics and laws that would prevent a study from occurring today, there is still a tendency to do assessment TO students and not WITH students. Although some research philosophies posture that removing the researcher from the research eliminates bias, it is impossible to be completely objective (Wilson, 2008). Bringing students into the assessment process to reduce the possibility of bias occurring and the researcher or assessor acknowledging the biases they may project are more effective methods of addressing bias in assessment and research. This process of member checking is one of the most critical for maintaining credibility (Creswell, 2013). In addition, involving students in the process reflects the design thinking phase of empathizing with students in the first step. Students who are engaged in the process to define and create the learning environments they experience will be more motivated and often have higher levels of achievement due to their investment in what they are learning.

As addressed at the beginning of this chapter, student demographics are changing. Higher education leaders must acknowledge the differences that students from diverse racial and ethnic backgrounds and various cultures bring to campus. Students are often expected to demonstrate knowledge, growth, or development in only one way. This fixed, prescriptive way may not fully reflect students’ skills and experiences due to the rigidity of the assessment. Part of designing integrated learning environments requires educators to be open to new paradigms of assessment and data collection to document learning. Where should these paradigms come from? The learners themselves should be partners in defining what learning will occur and how that learning will be documented, measured, and recorded. Students bring to campus with them ways of knowing that are legitimate without having to be upheld by traditional ontology, axiology, and methodology. Educators and assessors are able to build frameworks upon these ways of knowing without having to justify them using dominant research methods (Wilson, 2008).

In addition to centering learners, integrated learning environments share common learning goals and map paths for learners to accomplish identified goals. A learning outcomes model should, minimally,

be consistent across a division of student affairs. Ideally, the model would also align with institutional learning outcomes. For example, the Texas Higher Education Coordinating Board has identified six core objectives for post-secondary public education core curriculum (Texas Higher Education Coordinating Board, 2018). At the authors' institution, the same six core objectives form the dimensions of a learning outcomes model in the process of being implemented in the division of student affairs. Other public institutions in the state have used the objectives as a base for building leadership programs and career development models. This approach allows for the reporting of outcome achievement from co-curricular experiences in a manner that reflects the expectations of the academic curriculum. This is one way to break down the historical divide between academics and student affairs. One limitation of this approach is that students were not part of the process to define the broad learning goals. However, they are still able to construct more specific learning outcomes within the framework established, identify potential learning experiences, and act as assessment partners in identifying how their learning should be measured.

Once learning goals and experiences have been defined, a curriculum map identifying potential paths for achieving learning goals will provide structure to the integrated learning environment. Identifying engagement and learning opportunities through which students would gain the skills is the initial step. Then, experiences should be scaffolded to identify what opportunities would introduce students to the objective, then allow for practice, and lastly demonstrate mastery. Working with students to initially develop such a map allows for continued self-authorship, with students selecting the objectives that appeal most to them. Mapping these experiences and marketing the curriculum gives students language about what competencies and skills they should expect to develop through their co-curricular experiences. For example, they might learn quantitative and budgeting skills from serving as an officer of a student organization or develop conflict resolution and team-building skills from being their sorority's house manager. Peck (2017) identifies the steps to co-curricular mapping to help students make those connections:

1. Identify the competencies to map.
2. Identify the experiences that can produce these outcomes.
3. Make connections between each experience and the competencies they produce.
4. For each connection, write a specific learning experience that develops the outcome to which it is linked.
5. For each connection, write a means of assessing whether or not the desired learning has taken place.

Lastly, providing students opportunities to demonstrate their learning in multiple ways is the final component of an integrated learning environment. The National Institute for Learning Outcomes Assessment occasional paper no. 29 titled, "Equity and Assessment: Moving Towards Culturally Responsive Assessment" addresses the concept of multiple means of demonstration at length, identifying that some assessment approaches may not be inclusive of diverse learners. "Assessment, if not done with equity in mind, privileges and validates certain types of learning and evidence of learning over others, can hinder the validation of multiple means of demonstration, and can reinforce within students the false notion that they do not belong in higher education" (Montenegro & Jankowski, 2017, p. 5).

Providing learners the opportunity to identify how they will be assessed on learning continues their journey of self-authorship and aligns with design thinking principles to center the learner. "There is an assumption at play within the field of assessment that while there are multiple ways for students to learn, students need to demonstrate learning in specific ways for it to count" (Montenegro & Jankowski, 2017,

p. 6). One approach is to provide students the option to demonstrate their learning in the method they choose. For example, students who have completed an introductory leadership seminar could choose to demonstrate their learning through writing a reflective essay, creating a vlog, or doing a poster presentation. The same learning outcome and evaluation would be used in each of these options and students would be able to demonstrate their learning through an avenue of their choosing. This removes potential bias against students who may not be strong writers or students who do not enjoy the spotlight, notably as the outcome measured is not the strength of the student's writing. The poster option may be ideal for students who demonstrate their learning best through visual mapping. Portfolios are another option that allow students to select which projects best demonstrate their learning. Portfolios can also be cultivated as a long-term project in which the student receives formative feedback and is able to see not just the final product, but their growth over time. "[A]uthentic artifacts, or demonstrations of student learning, need to come from a variety of sources to engage learners with curricula and assessment that reflect not just multiple ways to learn but multiple ways to demonstrate mastery of a competency" (Montenegro & Jankowski, 2017, pp. 7-8). In this way, portfolios allow students to provide artifacts from multiple sources to demonstrate competency.

Overall, a successful integrated learning environment engages the learners in defining the learning outcomes, designing the learning opportunities, mapping the curriculum and learning experiences, identifying assessment methods, and making recommendations for improvement. These steps align with the designing thinking phases of defining the problem, ideating solutions, and prototyping. Integrated learning environments also allow students to demonstrate learning in multiple ways, increasing the use of authentic student assessments and dismantling potentially oppressive assessment components. When learners are intentionally centered, they become partners in assessment and are able to practice self-authorship. Once the institution has committed to pursuing integrated learning environments, the next critical step is to involve multiple voices, especially student voices.

Examples of Integrated Learning Environments

The chapter has addressed the current context of higher education as part of defining a problem statement related to effective measure of experiential learning. The authors have posed integrated learning environments as a potential solution for an effectively designed learning experience that measures students outcomes.

As the higher education community observes a period of increased focus on students' acquisition of job-ready competencies, senior leaders, especially those who have roles in student affairs, are developing methods to more effectively document and assess co-curricular learning. Although national discussions of such tools as co-curricular transcripts, badges, and eportfolios have progressed in recent years, efforts to create records that display the depth and breadth of student experiences is not new. Early projects that document students' participation in co-curricular activities have been largely effective. However, the process for adequately assessing the learning that occurs in those environments has been more challenging (Green & Parnell, 2017, p.16).

While the approach of using design thinking to address experiential learning may be a new concept, campuses have long been experimenting with the best ways to capture student learning in the co-curricular environment. The next section will share examples of campuses that have had success in addressing experiential learning effectively as the reader begins to consider the next step of the design thinking paradigm: ideating solutions.

One example of documenting evidence of an integrated learning environment is the comprehensive learner record (CLR). A document that combines the credits earned as traditionally seen on a student transcript, the CLR also provides information on learning acquired outside the classroom regardless of where the learning took place (Baker & Jankowski, 2020). The American Association of Collegiate Registrars and Admissions Officers (AACRAO) and the National Association of Student Personnel Administrators (NASPA) approached the Lumina Foundation to support the development of model records that would “demonstrate that a college education is more than a chronological enrollment summary” (Green & Parnell, 2017, p. #).

NASPA and AACRAO published a report of findings on the pilot of the Lumina Grant pilot program detailing comprehensive learning records implemented at 12 institutions and the summary of major findings. Each institution created a model for comprehensive student records. While examples of similar records were shared with participants, there was no expectation for them to follow a specific design. Through observation of the 12 institutions involved with the project and interviews with over 20 additional institutions not involved in the project, five central themes emerged:

1. Institutions are using a committee to document and assess co-curricular learning.
2. The process of categorizing activities and assessing outcomes is both organic and iterative.
3. The success of the effort is contingent upon students understanding the value of recording co-curricular experiences.
4. Institutions are using several types of technology to collect and document co-curricular experiences.
5. Students are currently the primary audience for co-curricular records.

It is important to note that the 12 initial pilot institutions are diverse in their purpose and the student bodies they serve. For example, participants include Elon University and University of Houston Downtown. These are two institutions that serve very different student populations.

Elon University is a private, residential, liberal arts institution of just under 7000 students and has long been known for their leadership in requiring and documenting experiential learning prior to the comprehensive student record project. Elon centers applied learning and it prides itself in sending more students abroad than any other masters-level granting institution in the U.S. As part of the Elon curriculum, a student must complete at least two experiential learning requirements to graduate. Experiences are available in five categories: study abroad, internships, undergraduate research, leadership, and service learning. Prior to the project, students had to opt-in and experiences were documented on student co-curricular transcripts. Elon worked with Parchment on documenting their student record and built a user-friendly web platform where student experiences can be uploaded as a spreadsheet to create the visual transcript. The University captures and documents the co-curricular data, ensuring that it is added to the student record. (Elon University, n.d.; Green & Parnell, 2017).

The University of Houston Downtown (UHD) is a public regional comprehensive university of around 15,000 students. The institution was founded in 1974 and the majority of classes and campus services are located in one building in central downtown Houston. The student body is one of the most racially diverse in the nation, with 52% of students identifying as Hispanic and 20% identifying as Black. Over 50% of the student body attends classes part time and the average age of an undergraduate student is 26 years old. There is no residential housing and students commute to campus. First generation students comprise approximately 60% of the population and 68% are from a low socio-economic background. (University of Houston Downtown, 2020; Green & Parnell, 2017).

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UHD's comprehensive student record focuses on the institution's mission to serve its community and produce graduates with transferable employment skills. The institution's project is aligned with their quality enhancement plan (QEP) for its regional accreditation body and will be used to develop the campus' first competency badge: Engaged Scholar in Critical Thinking. The overarching goal is a visual diploma that would document student competencies in 21st century skills. This will provide students with the language needed to communicate to employers their ability to perform in the workplace.

Other participants in the pilot program include: Indiana University Purdue University Indianapolis, Quinsigamond Community College, Stanford University, University of Maryland University College (now called University of Maryland Global Campus), University of South Carolina, University of Wisconsin Extension and Wisconsin Colleges. As you can observe from Elon, UHD, and the other participants, a wide range of institution types have committed to improving the documentation of student learning outside the classroom. In addition, campuses designed the learner record initiative around goals that were already important to their campus. For Elon, that is applied learning through the co-curriculum. For UHD, it was their commitment to community engagement.

The report also identified four areas for future consideration for institutions to ensure that their use of the comprehensive learner record is successful:

1. Engaging the full student population
2. Improving assessment of co-curricular learning
3. Connecting co-curricular data to student information systems
4. Increasing collaborations with employers

Data management was identified as the primary obstacle to implementation of comprehensive student records. Existing student information systems are often not designed to track and record data in the co-curricular. Institutions will have to identify how to resolve this challenge. Many are using third party vendors for the tracking and reporting of comprehensive learner records. Institutions must also design a learning framework. As mentioned, Elon had existing frameworks and an established paradigm. Improving the measurement of learning outside the classroom is also an area for growth. When students are not assigned a grade, it becomes challenging to ensure they complete all steps needed for student affairs to track, document and assess learning that occurred. Co-curricular learning must embed assessment, but also appeal to students through providing growth and development. In addition, involving faculty in the design and execution of projects is imperative to create integrated learning environments. These should be campus-wide initiatives, not isolated to be the work of student affairs. As discussed previously in this chapter, the framework must align with campus learning outcomes, competencies, and co-curricular experiences. Finally, the learning and experiences must resonate with students and develop skills that are needed by employers.

While comprehensive learner records and badging are certainly one route of documenting the entire learning experience, campuses may opt to choose other models that integrate learning environments. In addition, a CLR does not guarantee that learning is integrated, it merely allows students to document that learning does not happen exclusively in the classroom. In an *About Campus* article from 2006, Carolyn Haynes details the process her campus went through to integrate co-curricular and curricular aspects of an honors program in which 80% of students were exiting the program before their senior year. The program was adapted to address not just cognitive capacity, but epistemological, interpersonal, and intrapersonal learning and development. The program increased the requirements for co-curricular engagement, built

a scaffolded learning model, and created a more holistic admissions process. The result was doubling the retention rate in the honors program and an increase of 25% in program applicants.

The University of North Texas launched a highly-integrated accelerated degree in project design and analysis in 2019 with the admission of the initial cohort. The bachelor's degree is designed with six semesters of project-based learning and three summer internships. Each semester, students in each cohort work together on a real-world project with a client. The curriculum for that semester is taught through working on and completing the project for the client. Math classes are taught to address the needs of the client's project, as well as science, English, and other courses. Students take a course that specifically gives their team time to work on the semester-long assigned project. Faculty have worked with clients prior to the start of the semester to identify the problem statement. During this course, they meet with the client and identify solutions to their problem. This course also provides students with the opportunity to learn how to interact in a professional environment and complete the types of projects that will be expected of them as professionals. Students also take a one credit applied seminar each semester, which is taught by the student success staff located at the regional campus that is home to the degree program. The seminar aims to develop students' personal responsibility and professionalism. It also serves as a course to support students in connecting the elements of the integrated program and is taught with a just in time (JIT) mentality, addressing the needs of the cohort and project as they arise as opposed to following a regimented calendar of topics. Rather than expecting students to seek out learning opportunities for the expansion of their skills in career development and self-management, the seminar builds those skills into the curriculum by bringing the typically cocurricular experience into the curriculum. Finally, as a critical piece of the integrated curriculum, faculty and instructors meet weekly to discuss the status of the cohort project. They address next steps following a team-based curriculum and use the time to identify challenges and obstacles the cohort or individual students may be facing in order to address any needed student interventions (University of North Texas, 2021; Hope Garcia, personal communication, February 4, 2021).

The University of North Texas is also actively addressing the challenges of conceptualizing and testing a more comprehensive approach to fostering transferable knowledge and skills for the entire undergraduate student body. From exploration on comprehensive learning records, offering digital badging through academic and cocurricular engagement, creating free ePortfolio accounts for all students, expanding on-campus internships, and more, the university leaned into the design thinking mindset by defining the problem that students lack the documentation of the marketable skills they gain from their experiences at the institution. Through data collection and iterative design, campus leaders continue to offer solutions to this common problem. A specific example of one of these strategies was to dedicate a staff position to identify experiential learning projects based on campus or within the local community. The goal was to identify projects based on events, programs and services that already existed and identify hypothetical client projects that solved problems identified by community organizations willing to work with students. Some examples of these projects include upper-level Spanish classes providing United Way with translation services for their community tax preparation service, fibers design courses coordinating a fundraising auction for Habitat for Humanity using only supplies from the Habitat for Humanity ReStore, upper level business computer information systems courses providing site maps or app consultation for campus departments, or communication design classes learning about messaging and advertising impacts through canned food drives. These opportunities allow students to gain valuable real work experiences during their time in college addressing the previously mentioned challenge of needing experience to break into their field of choice as a new professional. Through this shift in

program/curricular design, more professional experiences are inaugurated into the existing coursework and student programming. These professional skill-building experiences coupled with the university's dedication to provide platforms and resources that encourage students accurately capture, document, and share their experiential learning provides students the benefit of continued self-authorship, skill development, and strengthened employability options. The organization has demonstrated commitment to the cultivation of marketable skills, but the work is not done. Design thinking encourages the reiterative process of assessing these experiences to ensure they are meeting the needs of the students and the organization and re-designing, improving, or deleting if they are not solving the problem of students gaining, documenting, and being able to communicate their marketable skills.

CONCLUSION

The application of design thinking to creating and implementing integrated learning environments allows a complex system, like a college or university, to recognize and address high-level, shared problems. When creating integrated learning environments, problems must be defined and iterative solutions tested in a collaborative manner. The goal of integrated learning environments is to improve student learning by centering students in the design of meaningful learning that will prepare them for post-graduate success. As institutions considered integrated learning opportunities, acknowledging the current context of higher education and student expectations is essential. Leaders must operate in environments with tight budgets and increasing student and stakeholder expectations on graduate outcomes and customizable, accessible credentials. Centering students in the process provides the opportunity for students to engage in self-authorship and reduces potential bias in the measurement of outcomes. Defining the goal of an integrated learning environment and testing the outcomes through an iterative process is essential to ensuring the success of the integrations. While there are challenges to created integrated learning environments, there are multiple approaches that have proven successful at a variety of institution types serving diverse student bodies.

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KEY TERMS AND DEFINITIONS

Comprehensive Learner Record (CLR) or Comprehensive Student Record (CSR): An official college or university document that records student learning experiences that occur in the co-curricular and integrated learning environments. They are similar to an academic transcript but instead of listing the courses taken and grades received, CLRs/CSRs document student learning. Often colleges or universities will have pre-determined categories for achievement, such as global learning and citizenship, diversity and inclusion, leadership, teamwork, critical thinking, personal management, etc.

Integrated Learning Environment: An integrated learning environment is one that breaks down the traditional silos of higher education where curricular (classroom) learning is a separate experience from co-curricular experiential learning. In integrated environments, students have the opportunity to document learning in both the curricular and co-curricular environment with the application of learning to develop marketable skills as a goal.

Just In Time (JIT): Typically used in a business environment to describe an inventory management method, in this case Just In Time course content is the approach of not pre-defining the course topics discussed at the beginning of the term, but rather addressing topics in the course as needed in response to student needs at that time.

Self-Authorship: Initially developed by Robert Kegan and popularized in higher education by Baxter Magolda, self-authorship is one's ability to define their beliefs, identity and relationships. Self-authorship requires observing and analyzing the world to form personal perspectives.