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Design for Impact: Evaluation Models for Design Thinking Academic Centers in American Higher Education

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Abstract: Design thinking academic centers in U.S. higher education serve as hubs for innovation, interdisciplinary collaboration, and pedagogical experimentation. Despite their recent growth, evaluating their impact remains a challenge. This qualitative study examines how centers evaluate their effectiveness through semi-structured interviews with 27 leaders from 26 centers. Thematic analysis revealed eight distinct evaluation models: participation and interactions, engagement, capacities and competencies, research study, storytelling, academic impact, institutional metrics, and external metrics. Findings suggest that while leaders employ diverse strategies, many experience uncertainties in measuring long-term impacts of center programming on student learning and institutional transformation. This study offers insights for center leaders to tailor assessment methods strategically, aligning with their goals and institutional priorities. Future research should explore standardized evaluation frameworks to strengthen the evidence base for design thinking's impact in higher education.

Keywords: *design thinking, design impact, program evaluation, academic centers*

Introduction

Since the founding of the Hasso-Plattner Institute of Design (also known as the d.School) at Stanford University in 2004, educators and policy makers have made the case that design thinking, an iterative, empathy-driven creative problem-solving approach, is a powerful tool for improving student learning in higher education (Anderson et al., 2014; Cavagnaro & Fasihuddin, 2016; Staley, 2019). Increased attention from employers on valued attributes of innovative thinking, creativity, and problem-solving (Zahidi, 2005) has strengthened the case, and colleges and universities have turned their attention toward design-based pedagogy as a model for transformative teaching and learning (Kivunja, 2014; Mishra & Kereluik, 2011; Selznick, 2019).

Unique to the integration of design thinking in U.S. higher education is the rise of centers and institutes for innovation, creativity, and design (Konkel, 2024). Academic centers occupy a dynamic and flexible position on college campuses. They are considered flexible, interdisciplinary, and boundary-spanning (Ikenberry & Friedman, 1972; Larson & Long, 2000); they enable dynamic responses to social and research trends in part because they exist outside of the fixed structure of departments and disciplines (Stahler & Tash, 1994; Weber & Brunt, 2022). Academic centers can enable innovative research

practices with limited investment on the part of their home institutions due to external funding sources and support (Sá, 2008).

The particular mission and purpose of centers for design thinking varies depending on the home institutional context, motivations driven by external funders, and unique ambitions each center holds. Many centers for design thinking aim to transform learning experiences through creativity, collaboration, hands-on making, and interdisciplinary problem-solving; others are structured to develop entrepreneurial skills and mindsets; many more describe their purpose as enabling students to confront problems and create solutions that improve society and promote justice (Konkel, 2024). Centers for design, innovation, and creativity offer a wide variety of curricular and co-curricular programming, they provide technical and creative resources to support interdisciplinary research and teaching, and they are often considered recruitment and retention assets by their home institutions (Konkel, 2024, 2025). Given their stated ambition to transform learning in higher education and the prominent position many occupy on their campuses, it is important to explore the ways in which center leaders are evaluating the impact of their work – to what extent these centers are fulfilling the ambitions of their establishment.

The purpose of this qualitative research study is to understand center leaders' approaches to program assessment, to identify the techniques used by center leaders to evaluate the impact of their programmatic offerings, and to explore best practices to developing their metrics within the context of each center.

Literature Review

The literature supporting this research engages with two distinct but overlapping bodies of scholarship. The first, emerging more recently, investigates models to evaluate the impact of design thinking on learning outcomes, organizational innovation, and business practices. Although this field is growing, it remains relatively new and is methodologically varied. The second draws on a robust tradition of scholarship on institutional effectiveness and learning assessment to capture foundational concepts in evaluating outcomes in the context of higher education.

Despite the merits presented in the literature, many acknowledge that it is difficult to capture the impact design thinking can have on the individual or the enterprise. Scholarship in business and organizational management has focused on the value of design, with measurement attempting to quantify the impact of design on profit and loss (Björklund et al., 2018; Gardien & Gilsing, 2014; Royalty & Roth, 2016; Royalty & Shepard, 2018). A number of frameworks can be found in the literature, including models that evaluate individual and organizational creativity (Amabile & Pratt, 2016), design maturity (Gardien & Gilsing, 2014), and design strategy (Björklund et al., 2018), that aim to translate design's value.

Current education scholarship also focuses on demonstrating evidence of design's efficacy in cultivating student capacities for problem-solving, team-building, creative thinking, and other competencies traceable to design (Guaman-Quintanilla et al., 2023; Lattemann et al., n.d.; Oo et al., 2024). Yu et al.'s (2024) recent meta-analysis clarifies the positive and negative impacts of applying

design-based pedagogy, describing design as a learning orientation that cultivates students' ability to generate creative ideas, frame problems thoughtfully and appropriately, and actively explore potential solutions.

While many scholars today are focused on understanding the impact of design as a pedagogy in classrooms (Lake et al., 2021; Noweski et al., 2012; Scheer et al., 2012; Shehab & Guo, 2021), relatively few are asking how centers that apply design thinking evaluate the impact of their programs, especially since many of those programs take place outside of traditional classrooms. As McLaughlan et al. (2022) note,

Within higher education, we see new centers, programs, and courses being established outside common DT fields (i.e., business, engineering, design) with a focus on teaching DT mindsets and skills ... as universities expand efforts to train students with DT mindsets and skills, we must assess faculty and student DT practices and outcomes to better understand DT ... experiences. (p. 2)

In this study, the researcher responds to McLaughlan et al.'s charge by exploring the ways center leaders experiment with techniques to assess the impact of their work in light of the challenges established in the literature of doing so.

Because the centers in this study are inherently academic, committed to student learning of creativity and innovation practices even in non-classroom settings, it is useful to draw on the deep pool of knowledge regarding institutional effectiveness and learning assessment. Assessment of student learning has three fundamental traits: there is evidence of how well students are achieving learning goals, the quality of that evidence is good enough that it can be used to shape decision making, and the evidence is used not only to assess the achievement of individual students but also to reflect on opportunities for change and improvement (Banta & Palomba, 2014; Suskie, 2018). Assessment goals include ensuring and improving educational quality, practicing good stewardship of teaching and learning, and holding institutions accountable for the promises they make to their students.

The same challenges confronting the attribution of learning outcomes to design pedagogy are described in the general assessment literature. Suskie writes that there are some learning goals that are hard to assess: "we can assess students' knowledge and skills because we have a fairly good window into their brains ... it's much harder to assess attitudes and values because we don't have a good window into the soul" (2018, p. 276). For design educators and program leaders who aspire to infuse student learning with design thinking attitudes and values, program evaluation can be challenging to accomplish.

This study, therefore, aims to understand center leaders' approaches to program assessment, to identify the techniques used by center leaders to evaluate the impact of their programmatic offerings, and to explore best practices in developing their metrics within the context of each center. In doing so, the author aims to support center leadership in their decision-making regarding meaningful and appropriate evaluation techniques that reinforce their center's mission.

Materials and Methods

To address the study purpose, the researcher utilized a qualitative design of one-on-one semi-structured interviews with center leaders. Institutional IRB approved the study protocol for human subject research under Exempt Determination in the fall of 2022 (Protocol #2022-094). To identify potential study participants, the researcher conducted a series of online searches to compile a list of centers that prioritized interdisciplinary programming applied through design thinking (for a full explanation of inclusion parameters, please see Konkel, 2024). A final list of 44 centers was developed (see Table 1). The researcher recruited participants via cold-outreach email, and interviews were scheduled using an embedded link to a calendar booking software.

Table 1

List of Design Thinking Centers and Institutes

Center / Institute	Year Est.	Home Institution	Location
DesignMatters	2001	ArtCenter College of Design	Pasadena, CA
Design Center at the Millstein Center for Teaching and Learning	2018	Barnard College	New York, NY
College of Innovation + Design	2015	Boise State University	Boise, ID
BUild Lab IDG Capital Student Innovation Center	2018	Boston University	Boston, MA
Geoffrey H. Radbill Center for College and Life Design	2022	Bowling Green State University	Bowling Green, OH
Rick and Susan Sontag Center for Collaborative Creativity (The Hive)	2014	Claremont Colleges	Claremont, CA
Creativity & Innovation	2019	Colorado College	Colorado Springs, CO
Nancy Richardson Design Center	2019	Colorado State University	Fort Collins, CO
Entrepreneurship Design Studio	2013	Columbia University	New York, NY
Design Initiative at Dartmouth (DIAD)	2021	Dartmouth College	Dartmouth, NH
Red Frame Lab	*	Denison University	Denison, OH
Elon by Design	2016	Elon University	Greensboro, NC
Innovation Hub	2018	Florida State University	Tallahassee, FL
Design Bloc	*	Georgia Tech University	Atlanta, GA
iLabs	2011	Harvard University	Cambridge, MA

InLab@HCC	*	Hillsborough Community College	Plant City, FL
Hynes Institute for Innovation and Entrepreneurship	2021	Iona University	New Rochelle, NY
Student Innovation Center	2015	Iowa State University	Ames, IA
X-Lab	2015	James Madison University	Harrisonburg, VA
Design Innovation Hub	2020	Kent State University	Kent, OH
HIVE	2018	Lakeland Community College	Kirtland, OH
Baker Institute for Entrepreneurship	2010	Lehigh University	Bethlehem, PA
Center for Design Thinking	2019	Manhattanville University	Purchase, NY
Morningside Academy for Design	2022	MIT	Cambridge, MA
Center for Design	2020	Northeastern University	Boston, MA
Segal Design Institute	2007	Northwestern University	Evanston, IL
Keller Center	2005	Princeton University	Princeton, NJ
Design Thinking Initiative, Conway Center	2015	Smith College	Northampton, MA
Hasso-Plattner Institute of Design (d.School)	2004	Stanford University	Palo Alto, CA
Taylor Center for Social Innovation and Design Thinking	2014	Tulane University	New Orleans, LA
Innovation for Justice	2018	University of Arizona + University of Utah	Tuscon, AZ
Jacobs Institute for Design Innovation	2015	University of California, Berkeley	Berkeley, CA
Innovation, Creativity & Design Practice	2009	University of California, Berkeley, Haas School of Business	Berkeley, CA
Design Lab	2014	University of California, San Diego	San Diego, CA
Center for Design Innovation + Spatial Design Studio	2005	University of North Carolina campuses	Winston-Salem, NC
Siebel Center for Design	2016	University of Illinois, Urbana-Champaign	Champaign, IL
Academy for Innovation and Entrepreneurship	2013	University of Maryland	College Park, MD
Creativity, Innovation, Entrepreneurship Initiative	2021	University of Richmond	Richmond, VA

iZone	*	University of Rochester	Rochester, NY
Changemaker Hub	2011	University of San Diego	San Diego, CA
Center for Integrated Design	2016	University of Texas, Austin	Austin, TX
The Batten Institute for Entrepreneurship, Innovation, and Technology	1999	University of Virginia	Charlottesville, VA
The Wond’Ry	2016	Vanderbilt University	Nashville, TN
DaVinci Center for Innovation	2007	Virginia Commonwealth University	Richmond, VA
*Note: founding year not available on public website data			

Interview questions were developed in part through open-ended conversation among design educators involved in the Future of Design in Higher Education (FDHE). FDHE is a loose consortium of higher education professionals engaged with design thinking on their campuses who hold weekly network discussions via Zoom. Discussions ranged among a variety of topics related to the increase of design thinking centers on college campuses; in response to the interest demonstrated by the collective, the researcher developed a set of broad, open-ended questions to guide the study (see Table 2). Interviews were conducted via Zoom, audio recorded for transcript generation, and lasted approximately 45 minutes on average. A total of 27 interviews were conducted with leadership from 26 of 44 identified centers. Other publications explore findings from questions Q1, Q3, and Q4 (please see Konkell, 2024, 2025); this manuscript focuses on findings from the analysis of data drawn from question Q5.

Table 2

Interview Protocol

Question #	Question Prompt
Q1	Can you tell me about how the [fill in Center name] was started? What drove the university to establish the center and what were its goals at the start?
Q2	What is your background and how does that shape your approach to leading [fill in Center name]? What is the disciplinary approach to [fill in Center name]?
Q3	Can you explain where the [fill in Center name] is positioned within the university structure? To whom do you report, and how does that shape your work with the Center?
Q4	I’ve spent some time on the website looking at your programming and events. Could you explain the decisions that you and your team make about programming types, audience, and how you fulfill your mission on campus?
Q5	In thinking about the impact of what the [fill in Center name] does, what does success look like and how do you measure it?

Data Analysis Procedures

Interpretive research calls for theory to be drawn inductively from data, emerging through a cyclical process of coding, memoing, diagramming, and interpreting (Andrade, 2009; Savin-Baden & Howell Major, 2013). In this study, thematic analysis followed the recursive approach described by Braun and Clarke (2006) (see Figure 1).

Figure 1

Thematic Analysis Procedures (adapted from Braun & Clarke, 2006)



Following the initial review of interview data from Q5, responses were coded according to assessment technique described. An initial set of characteristics was developed for each assessment code, capturing participant motivations in the development or application of each assessment technique, their observations of advantages and limitations associated with those techniques, and their use of assessment outcomes. The researcher then developed a thematic map (Braun & Clarke, 2006) to represent the results of the analysis, and mined interview transcripts for illustrative excerpts that brought the thematic map to life.

Results

When participants were first asked how they measured the success of their center's work, many responded with uncertainty. Responses to the question were brief, simple, and imbued with the challenges that scholars have uncovered in measuring the value of design. One leader responded, "Yeah. That's a fabulous question ... and we don't have a particularly clean answer for it yet." Another said, "It's a very complicated question – I think, you know, measurement is a challenge," while yet another commented, "Yeah. So that's a loaded question." Still more responses included, "I think those are things that we're still frankly in the process of figuring out," "I'm probably not doing as good a job as I should be," and "Yeah. So, my short answer is not much." When asked to elaborate, however, many leaders shared a range of techniques being implemented with varying degrees of confidence.

Following the data analysis, a set of themes describing impact assessment models and their associated goals emerged, including: **participation and interactions**, to uncover *how many people center programs are touching*; **engagement**, to explore *how successful center programming is to its participants*; **capacities and competencies**, to understand *how center programming is shaping student participants along a longer timeline*; **research study**, to ask *how centers are contributing to understanding and knowledge dissemination*; **storytelling**, to explore *how people's lives are impacted by their work with the center*; **academic impact**, to determine *how center programming is changing the institution*; **institutional metrics**, to examine *how program outcomes align with institutional goals*; and **external metrics**, to capture data about industry and community impact (see Figure 2). A brief explanation of each evaluation approach, with goals and measures, follows.

Participation and Interactions

Many center leaders spoke to the value of tracking numbers as a form of evaluation, what one participant referred to as “sheer engagement.” The guiding question prompting this model is *how many students, faculty, or community members does the center connect*; one leader asked, “how can we touch on a lot of students from a lot of different colleges and track that?” Goals of this approach to evaluation include spreading the word across campus about center programming to encourage usage, broaden interactions among various colleges and programs on campus, and ensure that usage demographics are consistent with the rest of the university. A leader whose center is occupying a new building on campus explained that this approach to measurement helped them “make sure our spaces are full, actively,” demonstrating success to university administrators for the building venture.

Centers with maker spaces were particularly focused on participation and interaction measures. One leader mentioned tracking swipes at the turnstile – tracking the volume of entrances to the maker space provided key data to advocate for resources and materials. Additional measures to evaluate participation and interaction include numbers of students enrolled in courses, workshops, academic programs, and events; numbers of research projects supported; numbers of class interactions on the part of center staff; numbers of faculty involved with center programming; and numbers of community partnerships.

Engagement

While participation tracking provides important numerical data, center leaders explained the importance of evaluating engagement in the content of the various interactions being tracked. In assessing engagement, centers ask *how they are doing at the things they do*; how interested are students and faculty in the work that the center is doing, and how interested are they in returning for additional programming or activities.

Mechanisms for evaluating engagement include providing opportunities to students and faculty to offer feedback quickly and easily. Several leaders mentioned post-session surveys with easy access through QR codes to capture quick, in-the-moment impressions. One center leader explained, “we ask session attendees to scan that code if they're willing at the end of a session to take a quick assessment, because otherwise I lose them.” Another leader described QR codes posted throughout the facility linking to a quick form where participants can capture positive and negative experiences. One leader

cited the “I like, I wish” format for collecting feedback, implementing this metric “throughout our programs [to] conduct regular feedback sessions with students.”

Figure 2

Evaluation Models, Guiding Questions, and Measures

Participation + Interactions: <i>How many touchpoints do we have?</i>	Goals: Fill the space, encourage facility usage Breadth of contact and interaction with colleges and programs Increased diversity of students Measures: Number counts: students enrolled, access swipes, research projects or collaborations, faculty involved, programs partnered with, class interactions, etc.
Engagement: <i>How are we doing at what we do?</i>	Goals: See trends in participation, interactions Collect feedback, identify areas for improvement Evaluate learning and understanding from programming Measures: Quick surveys: QR codes throughout space, good/bad experiences, post-interaction feedback, “I like, I wish” feedback
Capacities + Competencies: <i>How are we shaping our students?</i>	Goals: Understand the human outcomes of interactions Observe competency development over time Align with programmatic or institutional goals Measures: Pre-post mechanisms (surveys, etc.) Portfolios of student work, including meta-cognitive reflection prompts
Research Study: <i>How are we contributing to understanding?</i>	Goals: Develop robust, scholarly approach to understanding impact Raise institution profile Disseminate knowledge, support institutional research classification Measures: Mixed methods, qualitative/quantitative research frameworks and instruments Multi-university collaboration, longitudinal studies, publication and presentation
Storytelling: <i>How are we changing people's lives?</i>	Goals: Build the narrative of impact Develop a library of testimonials and stories Measures: Interviews, panels, and testimonials Connections with alumni
Academic Impacts: <i>How are we changing, contributing to our institution?</i>	Goals: Improve university standing Cultivate new academic program development, offer market-driven programs Differentiate the university Measures: Number of new programs—majors, minors, certificates—and courses established Program learning outcomes, enrollment numbers
Institutional Metrics: <i>How are we improving our institution?</i>	Goals: Gain support from institutional leaders Differentiate the institution in recruitment and admissions Demonstrate value Measures: Recruitment impact Retention and persistence, student success metrics
External Metrics: <i>How are we impacting our community and the world?</i>	Goals: Support connection between university and industry Quantify innovation development Establish strong partnerships with community, support community development Measures: Ventures launched, capital raised, products developed, community development and growth, position in the ecosystem of innovation and startups, revenue to university

In the engagement model for evaluating impact, center leaders aim to see trends in the participation and interaction metrics they've collected, gather feedback and identify opportunities for improvement, and evaluate simple learning metrics from the programming they offer. The measures they employ are nimble, flexible, and able to supply a sense of how their offerings are being received by their intended audiences.

Capacities and Competencies

A limitation of the engagement measures described by center leaders is their immediacy; study participants described an effort to understand the larger implications of their work by focusing on the development of capacities and competencies among their students. In doing so, center leaders want to demonstrate the ways in which interaction and engagement with design thinking is shaping who the students are becoming as learners. All participants agreed that this is a much more difficult task, requiring a long-range perspective on the evaluation process.

Despite its challenges, several participants described this approach as inherent to how they think about the goals of their programs. Design thinking cultivates mindsets which translate pragmatically to higher education; skills and competencies like collaboration, problem-solving, entrepreneurialism, and critical thinking are central to the undergraduate learning experience, and many leaders aspire to draw connections between their work and those outcomes. One leader described developing a “quantitative and qualitative dashboard” to capture the impact on student capacities and competencies. In collaboration with key stakeholders at the university, they developed a “success metric persona” to encapsulate the key competencies they aim to cultivate. That persona, the “fearless collaborator,” could be understood as:

Someone who can jump into a new team, knows how to connect, to communicate, to build trust, and knows how to use the tools and tactics to facilitate, and ... is employing human-centric techniques as a way to keep teams from having the natural tendency to jump too quickly to solutions.

Applying a common design thinking method, the student success persona profile presents an informed summary of the characteristics, actions, and behaviors of fearless collaboration (LUMA Institute, 2012). Using AAC&U rubrics to “cherry pick” competencies, this leader and their partners developed an evaluation rubric designed to capture its assigned competencies among their student participants. The metric is designed to be used longitudinally to gather insight from students and center employees about “their perceptions in connection with the design innovation in their experience.” In addition, this metric allows center leadership to evaluate how they are facilitating competency-building with students over multiple engagements with center programming.

Research Study

As competency evaluation addresses student growth over longer periods of time, some center leaders reach for mixed-methods research approaches to capture a larger representation of impact. These leaders described research as important not just to demonstrating value to their home institutions but also to contributing to scholarly understanding of design in higher education. One leader commented,

“the question is, well, is there enough intellectual rigor, or is this actually a field?” in rationalizing their use of scholarly research study to inform impact evaluation. This approach is partially motivated by supporting scholarly research in an academic setting, showing what this leader said “design and design research is capable of” to establish respect among peers and administrators.

A range of research methods informs leaders’ approaches in this model: case studies; mixed-methods approaches that combine qualitative and quantitative frameworks; multi-university collaborations that aim to generalize findings; longitudinal studies to capture impact over time. Some leaders are actively engaged in publication and presentation of their findings, motivated to strengthen the case for design in higher education. One leader described a systematic approach to creating and testing evaluation instruments, using those instruments in research studies to validate them, publishing results, and building over time a carefully constructed body of evidence and support for the center’s work. They noted:

I love that our center from the very beginning decided to go with a research-based evidence approach, that we are always aware of these things and caution – take caution when we talk about them, and how we build our programs, how we report our success, how we report our impact.

This sense of caution, of being careful with how evidence is built is characteristic of those who bring research into the evaluation process. For these leaders, the time and resources needed to develop a robust body of evidence are critical investments in the success of their programs.

For those committed to this approach, the research study supports genuine interest in bolstering the case for design as pedagogy. Other leaders described goals to develop a robust, scholarly approach to understanding impact, raising institutional profile in scholarly circles, and to disseminate knowledge. As described above, the result of these efforts is starting to be evident in the literature.

Storytelling

While relatively few center leaders described relying on research study to determine impact, many described concerted efforts to bring storytelling into their evaluation techniques. In this model, center leaders ask how their programming and experience might change people’s lives, shaping their attitudes about creativity on into their professional lives. One leader noted that while participation and interaction metrics are useful to track usage, “the stories are important” in expanding understanding beyond “students in seats.”

Many leaders who emphasized storytelling as an evaluation metric rely on alumni to capture the many ways that design thinking can integrate professionally. One leader commented, “just seeing the success of our alumni who move on, even if they don’t take a direct career pathway into social innovation ... they all report back to me that design was formative to them.” Another leader described a human-centered design alumni panel over zoom as a way to connect current students with those who are exploring design approaches in their professional lives; these events not only drive

participation and engagement among current students but also help capture alumni stories that can be brought into evaluation metrics.

For many, stories are critical to building the narrative of impact for the center; they serve as both data and communication technique. Leaders described the value of building a library of testimonials and stories that they can use in a variety of settings, from website copy to discussions with prospective donors. Stories also form a natural bridge to design; storytelling captures the human experience in a way that is rich and empathetic, key qualities to a design approach to problem-solving.

Academic Impact to the Institution

Some leaders described a slightly different application of participation, interactions, and engagement by asking the question how are we changing or contributing to our institution. For them, the question focuses less on how many current students may be interacting with center programming and more about how the center is helping the institution position itself with prospective students. One leader explained,

What if someone's coming to [institution] and they want to do design – what are their options now? What were they a year ago? What were they five years ago? What can they be in the future? So, a lot of what the story we're trying to tell is, like, hey – as a student coming to [institution] and you want to learn about doing design innovation work, here are your options ... here's what you can do, here's what you can create.

Another leader spoke about a concerted effort to position the university in national rankings for entrepreneurship universities; every decision made about how to strengthen programming and broaden impact was shaped by contributing to the institution-wide entrepreneurial spirit, such that it became a differentiator for the university. Yet another noted, “we have evidence that many students, students who otherwise would not have chosen [institution] are coming here because of ... our entity or concept.”

The institutional effect of investing in design as a pedagogy can be tracked through the number of new academic programs that foreground design thinking whether they are housed within the center or in colleges and departments, the number of design courses established across the range of colleges within the institution, and the program learning outcomes being attained.

Institutional Metrics

Like those who track the academic impact of their work, leaders who focus on institutional metrics of recruitment, retention, and persistence are interested in translating the impact of their work into practical measures vital to higher education. In this way, leaders can ask *how their centers are* not just changing but *improving their home institution*. One noted that “some of our strongest metrics of impact have to do with how we have changed recruitment and retention for the university.” For these leaders, translating the impact of their work into measures that administrators are driven by is both pragmatic and productive.

But many also pushed back against the limitations of an institutional metric approach to evaluating impact; for some, the simple measures of retention and persistence, while tantalizing to pursue, offer frustratingly small benefits. One commented, “so in terms of higher ed, you know, how are we measuring student success? Yes, retention - yes, graduation rates. But how do we do that even better?” While institutional metrics can help gain support from administrative leaders and demonstrate value in a shared language in higher education, some center leaders pointed out the limits to their value.

External Metrics

For the subset of centers whose focus is on community outreach, venture creation, and entrepreneurship, a smaller set of measures offer important insights into the impact of their work. These external metrics allow center leaders to ask how they are impacting their community and the world, in support of stronger connections between the university and the world beyond its gates. For those centers, measures used to evaluate impact include venture capital raised, founders and startups launched, and grants funded.

While these metrics illustrate impact, some center leaders hesitated to embrace them fully; one explained, “I don’t look at this as an outcome or impact necessarily, but [one of our teams] raised \$7 billion in capital. It’s a great number to fill out, but that’s over-indexed on the number of teams [that] have had significant outcomes.” Another commented that “for us, not starting a venture might actually be a sign of success – because for us, it’s about the learning process ... we don’t think every grad student needs to develop an app to solve social problems.” The tension exhibited by these comments meant that relatively few center leaders relied solely on external metrics to demonstrate impact. For those who valued the metric, its limits were balanced in combination with other models as described above.

Discussion

Higher education institutions that launch centers and institutes for design thinking, creativity, and innovation do so with a wide range of ambitions, and those brought on to guide these centers come from a variety of backgrounds. Participants in this study came to their directorships from higher education in fields as diverse as Engineering, Business, and Philosophy and from corporate backgrounds in design, entrepreneurship, and community impact. Some leaders have PhDs, while many others have MBAs, MFAs, and JDs. It is reasonable to expect, given the diversity of lived experience that participants bring to their center leadership, that their exposure to formal program evaluation and assessment is varied and may draw on settings beyond higher education.

On the surface, it may appear that design thinking center leaders are successful in implementing a wide array of evaluation techniques to determine the success or impact of their work. Findings from this study outline eight different evaluation models described by center leaders, suggesting a broad range of techniques being applied. The truth is less clear; participants’ hesitant initial responses when asked to describe how they measure their center’s impact demonstrates the shared uncertainty many leaders feel. All but a few center leaders are actively engaged with evaluating the impact of their programs, but many are doing so in self-doubt.

Many participants discussed the tension felt between using assessment to justify their position on campus and their hope for developing innovative holistic evaluation programs to authentically appreciate their impact. The assessment models uncovered, therefore, are rarely used in isolation; rather, center leaders approach the evaluation of their success or impact from a variety of different angles, searching for an appropriate combination of techniques to best respond to institutional pressures for measurement while also supporting the context of each center.

Many center leaders, for example, combine tracking *participation and interactions* with techniques to evaluate *engagement* alongside models that capture the human *capacities and competencies* they aim to cultivate among their student participants. Others described deliberately pairing *storytelling*, especially from alumni who are able to trace current career progression to the *capacities and competencies* gained through engagement with the center, in combination with quantitative techniques such as *participant and interactions*, *academic impacts*, and *institutional metrics*. This approach toward program assessment, using what might be considered a “recipe” (LUMA Institute, 2012), supports what one leader called the internal and external storytelling of impact.

Shared among all participant conversations were questions about how to determine the best combination of approaches, which techniques are mandatory and which are complementary for any center to fulfill its mission? No clear answers emerged. Yet clues can be found in the examination of how a center’s mission typology (Konkel, 2024) relates to its organizational position (Konkel, 2025). In associated scholarship, the researcher found that participating centers can be organized into a typology of mission and purpose. Seven types describe participating centers’ outward-facing positioning of their mission surrounding design, creativity, and innovation, including in order of prevalence: design used to reimagine higher education, design as a purpose and mission in the world; design to develop the student as entrepreneur; design to develop the student as designer; design as a means to confront problems and create solutions; design as a learning-by-making approach; design to develop the field of design (Konkel, 2024). It has also been found that centers for design, innovation, and creativity occupy a range of positions within the organizational structure of their home institution, each of which offering advantages and limitations to their ability to fulfil their purpose (Konkel, 2025).

Inherent to each typology and organizational position is a set of values that drive decision-making on center programming and services. A center whose primary type is, for example, to engage students with using design as a mission and purpose to change the world may have a very different approach to programming than one driven to introduce students to making as a learning approach.

The findings from this study suggest that the same may hold true for decisions regarding impact evaluation. A center whose primary mission is to reimagine and transform higher education may value the introspection gained from evidence that students are developing key *capacities and competencies* over time, or that they are changing the very fabric of their home institution through *academic impact*. By contrast, the center that focuses on cultivating the student as entrepreneur may value insights gained from *external metrics* far more than *academic impacts* or *institutional metrics*.

Institutional context also plays a contributing role in helping center leaders determine their best approach toward impact evaluation. A center situated in a R1 institution may find that *research study*-generated evidence is more persuasive in communicating impact to institution administrators, faculty, and leaders, while a center located at a Baccalaureate College with an Arts & Sciences Focus can adequately capture their impact through *storytelling* and *engagement measures* (*Institutions Search*, n.d.).

Despite the challenges and uncertainties, most study participants agree that impact evaluation's "greatest benefit is fostering academic introspection – making the institution more self-conscious about what its programs are accomplishing" (Banta & Palomba, 2014, p. 10). Notable throughout participant responses regarding their approach to impact and success evaluation was the sense that they felt isolated in their ability to make appropriate choices. That isolation might be due to their positioning within the organizational reporting structure of the institution, or it may be related to their non-academic backgrounds. Many responded to the researcher's question with their own interest in the techniques being employed by their peers across institutions. Future research could explore standardized evaluation frameworks to strengthen the evidence base for design thinking's impact in higher education. In addition, future studies may uncover the role that cross-institution networks might play in supporting center leaders in their impact evaluation approaches.

In the interim, center leaders may apply the findings of this study to purposefully tailor their evaluation efforts, to apply some approaches and ignore others in a way that reinforces mission, type, and context. Doing so in a mission-forward, considered manner may help center leaders evaluate the impact of their work with efficiency and confidence.

References

- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157-183. <https://doi.org/10.1016/j.riob.2016.10.001>
- Anderson, N., Adam, R., Taylor, P., Madden, D., Melles, G., Kuek, C., Wright, N., & Ewens, B. (2014). *Design thinking frameworks as transformative cross-disciplinary pedagogy*. Australian Government Office of Learning and Teaching.
- Andrade, A. D. (2009). Interpretive research aiming at theory building: Adopting and adapting the case study design. *The Qualitative Report*, 14(1), 42-60.
- Banta, T., & Palomba, C. (2014). *Assessment Essentials: Planning, Implementing, and Improving Assessment in Higher Education* (2nd ed.). Jossey-Bass.
- Björklund, T. A., Hannukainen, P., & Manninen, T. (2018). Measuring the impact of design, service design and design thinking in organizations on different maturity levels. *Proceedings of the ServDes2018 Conference*, 500-511.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Cavagnaro, L. B., & Fasihuddin, H. (2016). A Moonshot approach to change in higher education. *Liberal Education*, 102(2), 8-17.
- Gardien, P., & Gilsing, F. (2014). Walking the walk: Putting design at the heart of business. *Design Management Review*, 25(4), 75-88. <https://doi.org/10.1111/drev.10305>
- Guaman-Quintanilla, S., Everaert, P., Chiluiza, K., & Valcke, M. (2023). Impact of design thinking in higher education: A multi-actor perspective on problem solving and creativity. *International Journal of Technology and Design Education*, 33(1), 217-240. <https://doi.org/10.1007/s10798-021-09724-z>
- Ikenberry, S. O., & Friedman, R. C. (1972). *Beyond Academic Departments: The Story of Institutes and Centers* (1st ed.). Jossey-Bass.
- Institutions Search. (n.d.). Carnegie Classification of Institutions of Higher Education. Retrieved February 4, 2025, from <https://carnegieclassifications.acenet.edu/institutions/>
- Kivunja, C. (2014). Do you want your students to be job-ready with 21st century skills? Change pedagogies: A pedagogical paradigm shift from Vygotskyian social constructivism to critical thinking, problem solving and Siemens' digital connectivism. *International Journal of Higher Education*, 3(3), 81-91. <https://doi.org/10.5430/ijhe.v3n3p81>
- Konkel, M. (2024). Incubating ideas: A typology of design thinking academic centers in American higher education. *New Directions for Higher Education*. <https://doi.org/10.1002/he.20520>
- Konkel, M. (2025). Autonomy—Anomaly: The tension of fit and flexibility among centers for design thinking. *International Journal of Design Education*, 20(1), 1-19. <https://doi.org/10.18848/2325-128X/CGP/v20i01/1-19>
- Lake, D., Flannery, K., & Kearns, M. (2021). A cross-disciplines and cross-sector mixed-methods examination of design thinking practices and outcome. *Innovative Higher Education*. <https://doi.org/10.1007/s10755-020-09539-1>
- Larson, R. S., & Long, R. F. (2000). Academic centers: Moving beyond the periphery. *Journal of Public Service & Outreach*, 5(2), 39-47.

- Lattemann, C., Arntsen, E., Flaten, B.-T., Fürst, N., Holen, J., & Cappelen, B. (n.d.). *Is There a Proper Way to Teach Design Thinking? Empirical Evidence from Design Thinking in Education*.
- LUMA Institute. (2012). *Innovating for people: Handbook of human-centered design methods*. LUMA Institute.
- McLaughlan, J. E., Chen, E., Lake, D., Guo, W., Skywark, E. R., Chernik, A., & Liu, T. (2022). Design thinking teaching and learning in higher education: Experiences across four universities. *PLOS ONE*, 17(3), e0265902. <https://doi.org/10.1371/journal.pone.0265902>
- Mishra, P., & Kereluik, K. (2011). *What 21st century learning? A review and synthesis*. Society for Information Technology & Teacher Education International Conference.
- Noweski, C., Scheer, A., Büttner, N., von Thienen, J., Erdmann, J., & Meinel, C. (2012). Towards a paradigm shift in education practice: Developing twenty-first century skills with design thinking. In H. Plattner, C. Meinel, & L. Leifer (Eds.), *Design thinking research* (pp. 71-94). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-31991-4_5
- Oo, T. Z., Kadyirov, T., Kadyrova, L., & Józsa, K. (2024). Design-based learning in higher education: Its effects on students' motivation, creativity and design skills. *Thinking Skills and Creativity*, 53, 101621. <https://doi.org/10.1016/j.tsc.2024.101621>
- Royalty, A., & Roth, B. (2016). Mapping and Measuring Applications of Design Thinking in Organizations. In H. Plattner, C. Meinel, & L. Leifer (Eds.), *Design Thinking Research* (pp. 35-47). Springer International Publishing. https://doi.org/10.1007/978-3-319-40382-3_4
- Royalty, A., & Shepard, S. (2018). Mapping and Measuring Design Thinking in Organizational Environments. In H. Plattner, C. Meinel, & L. Leifer (Eds.), *Design Thinking Research* (pp. 301-312). Springer International Publishing. https://doi.org/10.1007/978-3-319-60967-6_15
- Sá, C. M. (2008). University-based research centers: Characteristics, organization, and administrative implications. *The Journal of Research Administration*, XXXIX(1), 32-41.
- Savin-Baden, M., & Howell Major, C. (2013). *Qualitative Research: The Essential Guide to Theory and Practice*. Routledge.
- Scheer, A., Noweski, C., & Meinel, C. (2012). Transforming constructivist learning into action: Design thinking in education. *Design and Technology Education: An International Journal*, 17(3), 8-19.
- Selznick, B. S. (2019). Developing innovators: Preparing twenty-first century graduates for the idea economy. *New Directions for Higher Education*, 2019(188), 81-90. <https://doi.org/10.1002/he.20348>
- Shehab, S., & Guo, C. (2021, September 24). Measuring the impact of integrating human-centered design in existing higher education courses. *LearnxDesign 2021: Engaging with Challenges in Design Education*. LearnxDesign 2021: Engaging with challenges in design education. https://doi.org/10.21606/drs_lxd2021.04.254
- Stahler, G. J., & Tash, W. R. (1994). Centers and institutes in the research university: Issues, problems, and prospects. *The Journal of Higher Education*, 65(5), 540-554. <https://doi.org/10.2307/2943777>
- Staley, D. J. (2019). *Alternative universities: Speculative design for innovation in higher education*. Johns Hopkins University Press.
- Suskie, L. (2018). *Assessing student learning: A common sense guide* (3rd ed.). Jossey-Bass.

- Weber, P., & Brunt, C. (2022). Building nonprofit management education in the US: The role of centers in supporting new academic disciplines. *Journal of Public and Nonprofit Affairs*, 8(1), 96-121. <https://doi.org/10.20899/jpna.8.1.96-121>
- Yu, Q., Yu, K., & Lin, R. (2024). A meta-analysis of the effects of design thinking on student learning. *Humanities and Social Sciences Communications*, 11(1), 1-12. <https://doi.org/10.1057/s41599-024-03237-5>
- Zahidi, S. (2005). *Future of jobs report 2025*. World Economic Forum.

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