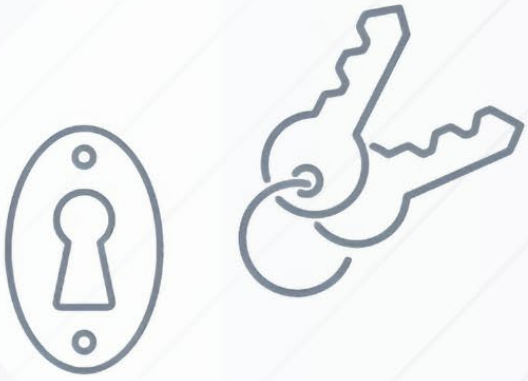
THE UNIVERSITY OF ARIZONA
GLOBAL CAMPUS
Teaching & Learning Conference

CONFERENCE PROCEEDINGS

2024

Where are my keys?
Unlocking belonging in higher education



THE UNIVERSITY OF ARIZONA GLOBAL CAMPUS
TLC
10TH ANNIVERSARY
2024
TEACHING & LEARNING CONFERENCE

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THE UNIVERSITY OF ARIZONA
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Welcome to the inaugural issue of the University of Arizona Global Campus (UAGC) Teaching and Learning Conference Proceedings. This publication represents one way that UAGC is dedicated to scholarship and sharing innovative research with the greater academic community. The 10th annual Teaching and Learning Conference theme, "Where are My Keys? Unlocking Belonging in Higher Education," brings together a diverse community of educators, scholars, and practitioners to explore critical issues surrounding belonging in higher education. Through engaging presentations and insightful discussions, conference attendees explored the multifaceted aspects of fostering inclusive and supportive learning environments.

This inaugural volume features six rigorously peer-reviewed papers that reflect current trends covering approaches to unlocking belonging, from using AI to effective instructional strategies to improve student learning and success. Each contribution offers unique perspectives and valuable insights into the nuances and complexities of creating a sense of belonging for all students, regardless of their unique experiences.

The peer-reviewed process was led by an 18-member international editorial board comprised of scholars and experts from diverse fields and disciplines. The submissions ranged from traditional research articles to white papers, and we believe the insights and findings will be of significant value to not only educators and researchers but also administrators seeking to improve student success and create more equitable and inclusive learning environments. We invite you to explore the journal and discover the latest research on belonging and its application to pedagogical practice.

This inaugural issue could not have been published without the support of Dr. Teresa Kuruc, Haley Sampson, and Jennifer Dunn. Their unwavering guidance and expertise have been immeasurable, and we are grateful for them. We also extend our sincere gratitude to all the authors, reviewers, and members of the editorial board for their invaluable contributions to this publication.

Sincerely,

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Classroom Innovations: A Study of Writing Tool Kits in an Online Graduate Course

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Author Note

This article is from the University of Arizona Global Campus 2024 Teaching and Learning Conference (TLC) proceedings, held on November 5-7, 2024.

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Abstract

Writer's Tool Kits (WTK) are structured resources designed to enhance students' academic writing skills and are increasingly utilized in higher education to support learning outcomes. This study examines the effect of Writer's Tool Kits (WTK) versus Non-Writer's Tool Kits (N-WTK) on student progression rates in an online graduate course. The study evaluated whether incorporating weekly WTKs, focused on academic writing, significantly affected progression rates compared to courses without WTKs. Using a two-proportion *z* test, data from 172 students across 16 courses showed no significant difference in progression rates between WTK (83%) and N-WTK (81%) groups. Results suggest WTKs have minimal impact on progression rates. Future research should explore qualitative student feedback, undergraduate-level effects, and demographic influences on progression rates.

Keywords: open enrollment, writing toolkit, academic writing, online learning, teaching strategies, graduate-level

Classroom Innovations: A Study of Writing Tool Kits in an Online Graduate Course

The purpose of this study was to examine existing data to determine if a significant difference existed between the progression rate of courses that integrated a Writer's Tool Kit (WTK) approach versus courses that integrated a Non-Writer's Tool Kit (N-WTK) approach.

Each week, a new WTK was provided that focused on writing awareness specific to that week's written assignment. The WTK was included as part of the weekly assignment instructions for students. The following are the WTK weekly focus:

- Week 1 WTK: Graduate Writing Expectation
- Week 2 WTK: Your Academic Voice
- Week 3 WTK: The Importance of APA Format
- Week 4 WTK: Back to Basics: Proofreading, Grammarly, and Outlining
- Week 5 WTK: Integrating Research
- Week 6 WTK: Revise, Edit, & Proofread (again), and Getting Help

A WTK is a more focused approach to include and direct students toward resources provided by the online university's writing center and library.

This study evaluated the student progression rate central score of the WTK group and the student progression rate central score of the N-WTK group. The student population for this research consisted of graduate students from their entry point course in the graduate course program of study.

The study utilized scientific investigations of quantitative data analysis properties and their relationships. A two-proportion *z* test was used to assess differences in the central scores between those courses with (WTK) and those without (N-WTK) and their effect on progression

rates. Knowledge gained from this research may provide insightful information about WTK and N-WTK approaches as they serve Open Enrollment Students (OES).

In higher education, particularly in graduate-level online courses, students often face challenges in maintaining academic progression due to the demands of writing assignments, especially when they are not fully prepared for the standards of academic writing skills. Given that many graduate students face writing-related challenges that can hinder their academic progress, it is essential to investigate whether these structured interventions, such as a WTK, can improve their outcomes. Despite the availability of resources to support writing development, many students struggle with applying academic writing standards at an open-admission university since there is typically no writing readiness assessment to identify students who may need more scaffolded support upon entering the graduate program. The integration of Writer's Tool Kits (WTK) with structured weekly resources focusing on various aspects of academic writing has been proposed as a potential solution. However, there is a gap in the existing literature regarding whether the use of WTKs truly affects progression rates compared to traditional approaches that do not incorporate such resources (Non-Writer's Tool Kits, or N-WTK). This research provides insights into the effectiveness of WTKs in influencing student progression in graduate-level online courses at an open-admission university.

Significance of the Research

Graduate students often face challenges adapting to the rigorous academic writing expectations of higher education. Many students, especially those in online environments, struggle with developing a consistent scholarly voice, which is essential for their success. While universities offer various writing resources, there is limited research on how specific tools, like Writer's Tool Kits (WTK), impact students' course progression. This study addresses the gap in

understanding whether WTKs, which provide structured guidance on writing skills, can improve student outcomes compared to traditional methods that do not include these focused resources.

The need for this research arises from the growing emphasis on online learning and the diverse writing needs of graduate students at an open-admission university. With increasing numbers of students pursuing graduate education online, understanding how to best support their writing development is critical for promoting their academic success, especially when writing readiness levels are not assessed prior to program entry. This lack of assessment of academic writing readiness prior to enrollment can lead to student frustration, negatively impacting retention and persistence. Focused supports such as a WTK could provide the necessary scaffolding students need to be adequately prepared to successfully complete written assignments.

By examining the effect of WTKs on progression rates, this research aims to provide insights that could inform the design of more effective writing support strategies, helping students navigate the challenges of graduate-level writing and enhance their scholarly communication skills.

Literature Review

It is essential to recognize that college students enter academic programs with varying writing readiness levels based on their prior education and experiences. According to Ross and the National Journal (2014), some students enter academic programs with writing skills comparable to those of elementary school students and are inadequately prepared to meet academic writing demands. This lack of academic writing preparation contributes to lower retention and graduation rates as these students struggle with basic writing tasks (Lyons & Elmedni, 2015). The struggle turns into student frustration and lack of confidence.

A decade later, Yongyan (2024) continues to address writing challenges, focusing on master-level postgraduate professional development programs. The study at a Hong Kong university analyzed 132 assignment prompts from a Master of Education program, revealing that 75% of assignments integrate academic and professional writing (Yongyan, 2024). Since a significant amount of graduate writing will require students to integrate academic and professional writing skills proficiently, it highlights the necessity for writing toolkits that address academic and professional writing challenges that provide additional scaffolding to support graduate students' academic success. This affirms our study's goal to enhance these tools for online graduate courses.

Open admissions policies in colleges and universities increase access to higher education but can also lead to challenges for underprepared students, resulting in lower retention and graduation rates (Scherer & Anson, 2014; Williams & Wendler, 2020). At the graduate level, students are not assessed for their academic writing skills to determine readiness levels, and no current remedial support is available to help students complete their degrees, as many open-admission universities lack the resource allocation to provide more personalized attention to support and develop student academic writing skills.

Powell (2009) emphasizes that remediation and basic writing should be viewed through the lens of retention, advocating for support beyond initial access to promote academic persistence. This insight is crucial for our study, as it highlights the need for writing toolkits that facilitate not just entry but also continued success throughout online graduate courses as they support students' diverse learning needs related to writing skills. Integrating writing toolkits aligns with the broader goal of fostering a supporting learning environment that nurtures academic growth and persistence.

Summers (2016) investigates how the Graduate Writing Center (GWC) at UCLA uses a mix of conventional and unconventional "expertise-based tools" to support graduate students' discipline-specific writing. This research is relevant as it informs the design of writing toolkits by demonstrating how a blend of traditional and modern support methods can create a nurturing environment that enhances students' writing skills and academic success. In online settings, such an approach can be particularly beneficial by offering flexible, accessible, and personalized resources that cater to the diverse needs of students, ultimately promoting engagement, confidence, and academic achievement.

Webb-Sunderhaus (2010) calls for a comprehensive approach to student success in basic writing at open-admission institutions, stressing that access alone does not guarantee success. This research stresses the importance of addressing both intellectual and social factors that help build student confidence in writing abilities. This perspective is critical for our study as we develop writing toolkits that support both immediate writing needs and long-term academic achievement.

While open admissions universities provide greater access to students who wish to further their careers or improve their economic status, a greater focus on adequately preparing students to meet the demands of academic writing is needed. Many students enter higher education with varying levels of proficiency in writing, which can affect their confidence and ability to succeed in coursework. By properly scaffolding academic writing skills, students are less likely to withdraw from their courses. This study aims to determine if integrating a Writer's Toolkit in an introductory graduate course can effectively improve student retention. The Writer's Toolkit exposed students to the various elements of academic writing skills and the plethora of tools available through the university's writing center that may have gone unnoticed by students. By

providing these tools, we hoped to create a supportive learning environment that empowers students to enhance their writing abilities and persist in their academic journey.

Methodology

This study was conducted at an open admissions online university that serves a diverse student population, many of whom are enrolled in graduate-level programs. Given the growing number of students pursuing graduate education online, it is crucial to explore effective methods for supporting their writing development. The decision to focus on Writer's Tool Kits (WTK) as a potential writing support intervention stems from the need to understand whether structured resources can positively impact student progression, particularly in an online environment. This research is designed to fill a gap in the literature by comparing student progression rates in courses that incorporate WTKs with those that do not. The choice of a quantitative approach was driven by the desire to gather measurable, objective data that would allow for clear comparisons between these two student groups. By utilizing pre-existing data from the university's Office of Institutional Effectiveness, the study aimed to evaluate real-world student outcomes in a practical, scalable way, providing valuable insights for future instructional practices in online graduate courses. The quantitative research data were taken from anonymous aggregated files over one year as provided by the University's Office of Institutional Effectiveness department. One group of data was from a sample subjected to WTK over a six-month time frame, and the other group was from a sample that was not subjected to the WTK over a six-month time frame.

This study evaluated the student progression rate central score of the WTK group and the student progression rate central score of the N-WTK group. The student population for this research consisted of graduate students from their entry point course in the graduate course program of study.

To research the progression rate rates between students experiencing WTK and students experiencing N-WTK, a two-proportion *z* test was conducted to determine if any significant difference existed. The Office of Institutional Effectiveness department at the online university electronically collected data. This information was then provided in the form of a spreadsheet.

The study utilized scientific investigations of quantitative data analysis properties and their relationships. A two-proportion *z* test was used to assess differences in the central scores between those courses with (WTK) and those without (N-WTK) and their effect on progression rates. The two-proportion *z* test was utilized because it is a useful statistical tool when comparing the proportions of a binary outcome in two independent groups (WTK vs. N-WTK) to understand if there is a statistically significant difference between them. Knowledge gained from this research may provide insightful information about WTK and N-WTK approaches as they serve Open Enrollment Students (OES).

Procedures

Permission to utilize the data was sought and approved through the university's Committee of Institutional Research and Effectiveness. All data for the study were provided as anonymous aggregated data. One set of data was from courses that provided the WTK. The other set of data was from N-WTK courses. The data were from students enrolled in the entry point graduate course. The data for the study were taken from approximately 16 courses to include 172 students.

Research Question

Is there a significant difference between the average student progression rate of the WTK group and the average student progression rate of the N-WTK group?

Null Hypotheses

H_1—There is no statistically significant difference between the average student Progression rate of the WTK group and the average student Progression rate of the N-WTK group.

Data Analysis

The goal of this research was to examine existing data on whether there was a significant difference in the WTK on progression rate. The analysis of a two-proportion *z* test was used to determine if there was a significant difference between the proportions (percentages) of the two groups. In simpler terms, it is like comparing two slices of pie to see if one slice is significantly bigger than the other based on the data we have collected.

A two-proportion *z* test was used to assess differences in the central scores between courses with (WTK) and those without (N-WTK), as well as their effect on progression rate. To determine if the difference in progression rates before and after improvements was statistically significant, a hypothesis test was utilized for the difference in proportions, using a two-proportion *z* test:

1. **State the hypotheses:**

   - Null hypothesis (H_0): $p_1=p_2$
     (The progression rates before and after improvements are the same)
   - Alternative hypothesis (H_a): $p1\neq p2$
     (The progression rates before and after improvements are different)

2. **Calculate the sample proportions:**

   - Before improvement $\hat{p}_1 = \frac{81}{100} = 0.81$
   - After Improvement $\hat{p}_2 = \frac{83}{100} = 0.83$

3. **Calculate the pooled proportion** ($\hat{p}$):

   Where 1_x and 2_x_are the number of $\hat{p} = \frac{x_1 + x_2}{n_1 + n_2}$ ›le, and n_1 and n_2 are the sample sizes.

   $x_1 = 0.81 \times 78 = 63.18 \approx 63$
   $x_2 = 0.83 \times 94 = 78.02 \approx 78$

   $$\hat{p} = \frac{63 + 78}{78 + 94} = \frac{141}{172} \approx 0.8198$$

4. **Calculate the standard error (SE), which is 0.0588:**

   $$SE = \sqrt{\hat{p}(1 - \hat{p}) \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}$$

   $$SE = \sqrt{0.8198 \times (1 - 0.8198) \left(\frac{1}{78} + \frac{1}{94}\right)}$$

   $$SE \approx \sqrt{0.8198 \times 0.1802 \, (0.01282 + 0.01064)}$$

   $$SE \approx \sqrt{0.1477 \times 0.02346} \approx \sqrt{0.00346} \approx 0.0588$$

5. **Calculate the *z* score, which is 0.34:**

   $$z = \frac{\hat{p}_1 - \hat{p}_2}{SE}$$

   $$z = \frac{0.81 - 0.83}{0.0588} \approx \frac{-0.02}{0.0588} \approx -0.34$$

6. **Determine the *p* value, which is 0.734**

   Using a *z*-table or standard normal distribution calculation, the *p* value for $z = -0.34z = -0.34z = -0.34$.

   For $z = -0.34z = -0.34z = -0.34$, the *p* value (two-tailed) is approximately **0.734**.

7. **Conclusion**
   We compared the *p* value to the significance level (commonly $\alpha=0.05$\alpha = 0.05α=**0.05**).
   Since **0.734 > 0.05**, it failed to reject the null hypothesis.

Limitations of the Study

The online university serves students across the United States from all walks of life. This study relied on the aggregated data collected from a course assessment survey to determine the differences between WTK and N-WTK learning environments. The results of the research include an analysis of the data collected. The data was available at the course group (case) level and not at the student level; therefore, the accuracy of the findings will depend on the accuracy of the data. Without knowing the academic writing readiness of our students when enrolled in our MAED program, improved retention rates may not be due to the Writer's Toolkit, but rather students who are more prepared and ready for academic writing prior to enrollment into the graduate program.

Delimitations of the Study

The study encompassed students enrolled in an online graduate course without regard to race, gender, age, culture, or religion. The research was conducted using end-of-course data, which is obtained after the final drop date for students who choose to withdraw from their courses. The sample did not include students who registered for the online course but withdrew before the study was conducted. Comparisons of progression data were included in the results. The data that were not relevant to the study were not disclosed.

Summary Findings and Recommendations

Pistone (2010) indicates that students often seek help from writing centers because they feel a lack of "caring" from their professors. The utilization of an in-classroom WTK in this study aimed to create a learning environment focused on a culture of care at the classroom level where students would feel more supported by their professors. While the WTK directed students to the writing center for various writing skills, students had the opportunity to engage in dialogue

with their professor about writing skills as the WTK is tied to various learning activities through the introductory course.

Pantic and Hamilton (2024) highlight that the lack of institutional support and transparent writing practices often compels graduate students to depend heavily on their academic supervisors. This is relevant to the study because it underscores the necessity for effective writing toolkits that can provide students with the guidance and resources typically offered by supervisors. By addressing the gaps left by institutional support, our research aims to develop tools that enhance writing practices and support students more autonomously in an online setting. Based on this analysis, there was an observed increase in progression rates from 81% to 83% when comparing the WTK group with the N-WTK group. Our conclusion is that there is no statistically significant difference in the progression rates before and after the integration of the Writer's Tool Kit. While this study did investigate the effects of a known set of categories, further research is needed and encouraged around scholarly writing at the graduate level. While this study provides valuable insights into the effectiveness of WTKs, it also highlights several areas where further research is needed to deepen our understanding of their potential benefits.

One key area for further investigation is the impact of WTKs on student perceptions, particularly how they influence the overall learning environment and contribute to a culture of caring. Understanding how students perceive these resources could provide more context for their effectiveness and help educators better tailor support to student needs. Additionally, exploring the long-term effects of improved writing proficiency on academic performance across various disciplines could reveal whether the benefits of WTKs extend beyond initial progression rates, potentially influencing overall academic success.

Further qualitative research is also recommended to gain more detailed insights into student experiences with WTKs. This could include interviews or surveys to capture the subjective impact of the Tool Kits on students' confidence, writing skills, and academic growth.

Another important avenue for future research is the application of WTKs at the undergraduate level. While this study focused on graduate students, analyzing the effects of these Tool Kits in undergraduate courses could provide a broader understanding of their effectiveness across different student populations. Moreover, conducting a quantitative investigation into student demographics, including factors such as gender, age, and geography, would help to identify potential disparities in the impact of WTKs and offer valuable information on how these resources may affect diverse student groups.

By expanding research in these areas, future studies can offer a more comprehensive view of how WTKs influence student outcomes and provide actionable recommendations for improving writing support in higher education.

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A Sense of Belonging Using Podcasting Technology

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This article is from the University of Arizona Global Campus 2024 Teaching and Learning Conference (TLC) proceedings, held on November 5-7, 2024.

The podcast series referenced in this paper, The Business Buzz: Forbes School of Business and Technology Corner, is available on the Spotify for Podcasters platform: https://open.spotify.com/show/7hbZ9Q3nNgPtPficvbUOYR

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Abstract

There is an opportunity for higher education institutions to increase students' sense of belonging seamlessly by using digital technology tools. This paper examines podcasting, a digital technology tool that can be used in higher education to foster the feeling of belonging. Podcasting can be used as a way of supporting mobile interactions since it enables learners to access material on portable devices in any location. Two research studies are covered in this paper: The research questions for the original research study focused on flexible learning opportunities and the use of digital tools, specifically the podcast, and the current study focused on using digital technology tools to create a sense of belonging along with providing learning opportunities beyond the online classroom.

A Sense of Belonging Using Podcasting Technology

Can higher education institutions seamlessly enhance a sense of belonging by utilizing digital technology tools? Podcasting is one such tool that supports mobile interactions, allowing learners to access material on portable devices from any location. The aim is to introduce podcasting technologies as an extension of the learning environment. Podcasting is intended to create a positive experience for student learning (Guedes & Almeida, 2010). A key question to consider is how online higher education institutions can leverage digital technology tools to provide students, faculty, and staff with opportunities to foster a sense of belonging outside the online classroom setting. This paper examines the use of podcasting technology to increase belonging at the individual course level as well as the academic program level.

Literature Review

Digital Technology Tools

The ongoing advancements associated with "Industry 4.0," which encompass digital technologies such as artificial intelligence, the Internet of Things, 5G wireless networking, augmented reality (AR), virtual reality (VR), and innovations in cybersecurity, require a comprehensive approach to the transformation of higher education through these tools (Reis et al., 2018; Teixeira et al., 2021; Rosmansyah et al., 2023). This fundamental shift acknowledges technology as a dynamic and interconnected ecosystem that promotes digital learning, influencing how institutions adopt these technological advancements (Mahlow & Hediger, 2019). Embracing digitization is essential for higher education institutions aiming to attract more qualified students while enhancing the overall quality of their courses, instructional materials, and training programs (Gurung & Rutledge, 2014).

Sense of Belonging

A sense of belonging refers to how included and welcomed individuals feel within specific environments, such as their family, a physical space, or an academic institution (Allen et al., 2021). According to Garrison et al. (2010), students experience a sense of belonging when faculty facilitate discussions that encourage participation and model authentic discourse that promotes critical thinking and student success. In online learning settings, a sense of belonging can be fostered through frequent positive interactions between faculty and students (Garrison, 2011; Rovai, 2007; Yuan & Kim, 2014). Recent research has demonstrated that commitment from educators, along with well-designed online curricula, learning activities, and assessments, combined with technical support, can enhance student retention and contribute to a stronger sense of belonging (Al-Kadri et al., 2020; Sharma et al., 2021) and assessments, combined with technical support can assist retention and development of a sense of belonging (Al-Kadri et al., 2020; Sharma et al., 2021).

Podcasting

A brief review of the literature on podcast usage highlights a research gap regarding the use of podcasting as an informal learning tool. While numerous studies have investigated podcasting within formal higher education settings (Chung & Kim, 2015; Ferrer et al., 2020; O'Connor et al., 2020; Padayachee, 2017), there remains limited exploration of its informal applications. Shamburg (2020) conducted multiple case studies examining successful and diverse independent educational podcasts. The findings indicated that podcast creators were primarily motivated by a desire to address gaps in existing media content, the flexibility of their programming, and a strong appreciation for their editorial independence. Additionally, Drew (2017) analyzed the genres of the most downloaded educational podcasts, employing iterations of textual analysis to establish distinct categories. This analysis revealed three primary categories of educational podcasts: the quick burst, the narrative, and the chat show.

Methodology

Original Research Study

The original study was conducted in the researcher's online classroom. The four-part podcast series titled "Dr. Cappa's Podcast Series" was made available through an announcement posted in the undergraduate capstone course BUS402: Strategic Management & Business Policy, as well as on the Spotify podcast platform, from March 16, 2024, to July 29, 2024. All podcast sessions were recorded using the Spotify for Podcasters platform. The research questions for this original study focused on flexible learning opportunities and the utilization of digital tools, particularly the podcast format. The specific research questions were as follows:

- Research Question #1: Does podcasting facilitate more flexible and mobile learning?
- Research Question #2: Does the use of podcasting enhance the learning experience in the online classroom?

Current Research Study

This research study expands the podcasting application from a researcher-led classroom to all students enrolled in the Bachelor of Arts in Business Administration (BABA) program. The monthly podcast series titled The Business Buzz: Forbes School of Business and Technology Corner has been in operation since July 30, 2024. All sessions are recorded using the Spotify for Podcasters platform. The study's research questions aim to explore the use of digital technology tools in fostering a sense of belonging and providing learning opportunities beyond the traditional online classroom setting. The specific research questions were as follows:

- Research Question #1: Does podcasting foster a sense of belonging among students in the Bachelor of Arts in Business Administration (BABA) program?

- Research Question #2: How do students respond to podcasting as a digital technology tool?

Results

Original Research Study Findings

The initial findings supported the first research question: Can podcasting facilitate more flexible and mobile learning? As seen in Table 1, a total of 72 students participated during the study period, with 42% listening to the podcast sessions on Friday, Saturday, and Sunday.

Table 1

Podcast Participation Rates

Weekend Participation	# of Weekend Plays	Total # of Plays	Usage %
	30	72	42%

Note. This chart provides the number of podcast plays on Fridays, Saturdays, and Sundays during the study period.

The subsequent findings addressed the second research question: As a digital technology tool, can podcasting enhance learning in the online classroom? The four-part podcast series encompassed five of the six intended learning outcomes. Table 2 demonstrates the participation breakdown: Episode #4 addressed Course Learning Outcome (CLO) #5 and achieved a 28% participation rate. Episode #2 covered Course Learning Outcomes (CLOs) #2, 3, and 4, with a 19% participation rate. Episode #3 focused on Course Learning Outcome #1.

Table 2

Podcast Episode Usage by Course Learning Outcomes

Dr. Cappa's Podcast Series -- BUS402: Strategic Management & Business Policy			
Topic	**Total # of Plays**	**% of listeners**	**Course Learning Outcomes (CLO's)**
Dr. Cappa's Podcast Series Episode #2 The External Environment & The Organization	14	31%	CLO# 2. Determine the strengths, weaknesses, opportunities, threats, and distinctive competencies of an organization CLO# 3. Conduct an environmental analysis for an organization. CLO# 4. Examine the global environmental influences on a firm's strategic decisions.
Dr. Cappa's Podcast Series Episode #3 The Mission Statement Myth	11	24%	CLO #1. Examine the role of mission statements, including the manner in which the mission statement guides all organizational activities.
Dr. Cappa's Podcast Series Episode #4 The Strategic Plan	20	44%	CLO #5. Recommend how to best implement strategic planning in an organization, considering implications for structure, personnel, financial implications, marketing position and opportunities, and impact on the organizational culture.

Note. This chart provides the number of plays and percentage of listeners per podcast episode and as aligned to the Course Learning Outcomes.

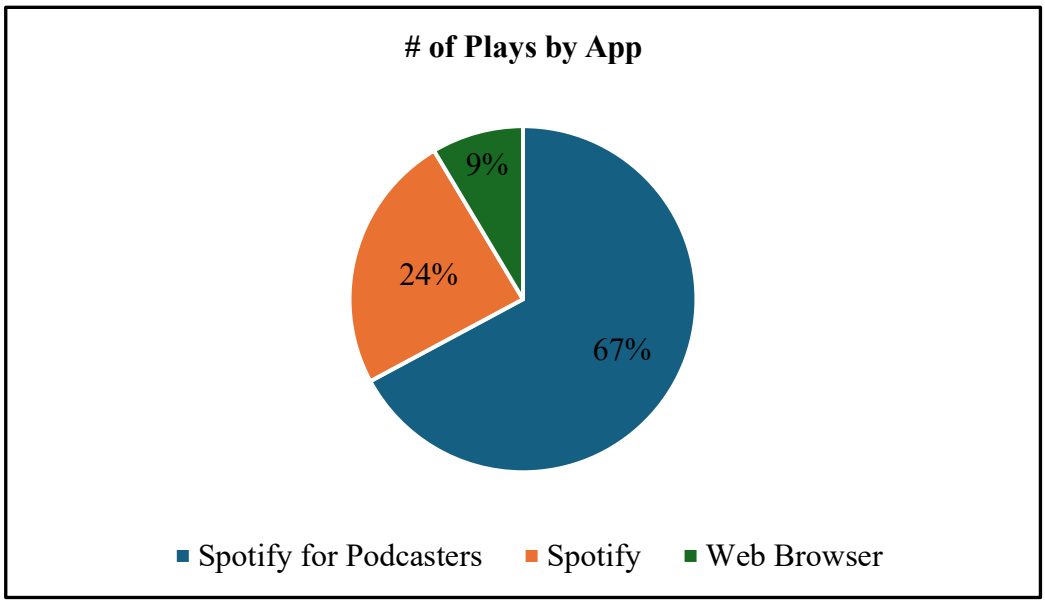
Current Research Study Preliminary Findings

The initial set of preliminary findings laid the groundwork for the first research question: does the use of podcasting foster a sense of belonging among students in the Bachelor of Arts in Business Administration (BABA) program? Table 3 demonstrates that as of September 18, 2024, 13 students have listened to the first podcast episode, while 6 students have engaged with the

second episode. The subsequent findings supported the second research question: how do students perceive podcasting as a digital technology tool? Currently, the usage rate for the Spotify platform stands at 81%.

Table 3

Podcast Episode Usage by Modality



Note. This graph demonstrates the percentages of podcast usage accessed through three different modalities: Spotify for Podcasters, Spotify, and web browsers.

Next Steps

The findings from both the original and current research studies highlight the significance of continuing the podcast series. The next phase will introduce a student feedback mechanism via a brief poll, allowing students to indicate whether the podcast has fostered a sense of belonging by connecting real-world events and applications to their weekly assignments. Based on this feedback, the strategy will involve implementing methods that actively engage students to

achieve the desired course-level outcomes, essentially starting from the learner's perspective. By ensuring that the content is accessible at the most fundamental level, we can then advance to more complex concepts. All podcast sessions were recorded using the Spotify for Podcasters platform: https://podcasters.spotify.com/pod/dashboard/home.

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Fostering Digital Communities in Higher Education: Unlocking Belonging

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Abstract

In the present era, belonging is valued more than ever in contributing to students' attained success. This makes achieving a sense of belonging easier and is now necessarily coupled with positive transition, retention, and completion rates (Tang et al., 2023). Many educational researchers have noted that a solid sense of connection and belonging is constitutive irrespective of the context of learning, with global impacts on engagement and academic success. At the same time, there is a unique set of challenges in building connections that could influence students' feelings of belonging and familiarity, as well as retention inspired by their peers (Peacock et al., 2020). The last two decades have seen many efforts to create a sense of belonging to an academic institution, considering the evidence that this helps student retention, satisfaction, and attainment. Many educational researchers regard establishing a sense of belonging and personal connection as essential matters independent of the learning environment (Edwards & Hardie, 2024). Learners need to see other people present in the online environment and to regard themselves as part of that group, thereby creating the feeling of "belonging" (Stoytcheva, 2021). This article features innovative techniques and good practices in creating digital communities that encourage and reinforce students' sense of belonging. Additionally, the researcher discusses such digital platforms, which can even be the 'key' to deeper-felt engagement, social connection, and academic belonging, anything that would have provided students with opportunities of support and value. Building online communities becomes even more important because it facilitates student interaction, retention, and success in hybrid and fully online learning environments.

Keywords: sense of belonging, online learning, digital community

Fostering Digital Communities in Higher Education: Unlocking Belonging

As the higher education process transforms in the digital space, the question arises: Where are my keys? The question is relatively related to the understanding of belonging. As the keys provide access to places, in this case, to foster a sense of belonging in the digital context, one needs to unlock the path that provides entry into collaborative, inclusive, and supportive online communities. According to Strayhorn (2012), belonging has always served as a basic human need, one of the major determinants of student motivation for persistence and success during higher education. The theory maintains that students should feel valued, connected, and supported in the academic communities to engage fully in the learning experience. In online education, where physical presence is absent, institutions must intentionally create opportunities for students to experience this sense of belonging through digital interactions. Strayhorn's framework guides this discussion by reinforcing that belonging is not a passive experience but one that requires active cultivation through inclusive practices and structured engagement.

Given the increasing reliance on virtual classrooms, social media networks, and digital engagement tools, higher education institutions currently find it very challenging to rebuild the community feel that is a central part of the being-on-campus experience in the online space. Belonging seems particularly critical in the context of individuals, students, faculty, and staff members, who may cross multiple digital spaces that may not always promote feelings of connection or inclusivity. However, whereas students at physical campuses can chat and form friendships online and offline, teachers and administrators need to create digital communities. The 'unlocking belonging' online will not just mean giving access to platforms; it should mean creating sites where all community members can feel loved, appreciated, and enabled. New pupils consider the ambient transformation from teacher-centered to student-centered learning. In higher education, this foundation is

perceived as the ability to actively promote belonging in difficult but pressing avenues, especially as institutions extend online or hybrid access. Community inclusivity and a strong sense of community will necessitate connecting student engagement, retention, and academic success across campuses. This article examines the significance of digital collectives in higher education alongside practices to engender inclusive cybernetic spaces conducive to connectivity and fabric (Edwards & Hardie, 2024). Many universities realize that students are critical in driving academic communities. According to a high-quality study from the Buurtzorg team, a stronger sense of togetherness has generally been linked with better student outcomes, happier learners, and fewer dropouts (Edwards & Hardie, 2024). It also contributes to the issues of well-being and isolation. Students who are part of something and who are closely aligned with their institution tend to be less stressed with anxiety and depressive symptoms. Thus, the mode of higher education has come to feature a sizeable online learning presence. In the past decade, millions of online courses and programs have seen millions of participants (Seaman et al., 2018). Despite rampaging momentum and an impressive stack of enrollments in courses and programs indicating interest, many educators (and skeptics) doubt that real learning can occur here. Can instructors live-interact and have a social presence with their students? Is any true sense of community built between a teacher and student learner in this mode of delivery, which is entirely online (Trespalacios et al., 2021)? The argument almost exactly resembles questioning whether online learners must be given access to a sense of belonging as an obligatory condition in the new learning interactions. Peacock et al. (2020) assumed that learning becomes alienating in the first instance of online teaching when students are isolated and lack interaction, unlike in traditional classroom teaching. The main objective of this article is to set forth usage guidelines for building the community around the type of technology that can be used in the process and the different ways that these could continuously be altered for community benefit. This approach assures interactive and

dynamic pedagogy and learning technology while creating a long-lasting engagement framework for communities in the digital spaces that support great community among learners.

Literature Review

Understanding the Importance of Belonging

Belonging is one of the most intrinsic characteristics of a human being. It primarily defines how an individual interacts and works with the environment and the community. According to Strayhorn (2012), belonging is "the understood expression of social acceptance that the students feel they have from other students within the same academic space." Strayhorn developed this concept within the traditional campus through physical interactions in a class, student group, or social events. As more students work from remote or hybrid locations, this reality must transform how students connect and have a sense of belonging in a virtual context. Similarly, with the diversity in students' backgrounds and experiences concerning qualities like race, economic class, or learning modalities, all these factors would affect how actively they interact with the platforms. Prior research proves that students showing a strong sense of belonging within their institution are far more likely to persist in their studies and eventually graduate.

In this context, belonging becomes one significant determining factor in driving commitment to study, motivation for academic study, and even overall well-being in higher education. It is not just about being welcomed; it is a sense of recognition and value attached to something more significant regarding groups within the academic network and social exposure. Traditionally, belonging was built through personal interactions, shared physical spaces, and spontaneous social encounters between people within the campus premises. However, as this trend in higher education continues, with the growing number of digital

services and provisions, the challenge arises: How do faculty and staff create a sense of connection when there is less or no face-to-face contact?

Research on higher education continues to reveal that students enjoy a higher sense of belonging and that, in turn, their probability of persisting in their course and outdoing themselves in academia is higher. This attribute probably has the most significant importance for minoritized groups, such as first-generation college students, students of color, and students from lower economies, whose familiar disconnections may increase their feelings of isolation. This research is vital for lower-income, first-generation students and students of color (Beauchamp et al., 2020). Without intentional efforts to create inclusive and engaging spaces, online students will find themselves during their academic journey without peers, disconnected from professors and institutional support systems. In an educational landscape where hybrid and utterly online learning is becoming the norm, this responsibility for fostering belonging does not evaporate; its form changes.

The Role of Belonging in Online Higher Education

Numerous components may affect students' feelings of inclusion and community, i.e., interactions with teachers and peers, perceptions of stereotyping or tokenism, how instructor expectations are communicated, and the range of perspectives offered in course materials (Ambrose et al., 2010). Belonging equally needs to be designed deliberately in an online learning environment. Unlike students on a natural physical campus engaging in social and academic exchanges, online spaces would require structural approaches to opening doors to such engagement. Research has shown that students who report feeling isolated in online programs are more likely than their peers to find ways to disengage, struggle with academic performance, and eventually drop out of their courses. By contrast, institutions that engage in community building through virtual engagement strategies experience improved student

retention, satisfaction, and success rates. It is about creating spaces where students feel seen, heard, and valued, not just access to discussion boards or group chats.

The point is that the best distance programs do not treat digital interaction as an afterthought; instead, they seamlessly integrate it into the very texture of the learning experience. Either through virtual study groups, engagement initiatives between faculty and students, or peer mentorship programs, meaningful interactions provide much of a shared sense of purpose. However, a change of attitude is necessary to achieve all of this. Online education should go beyond an exchange of information into which fertile relationships can be created. Technology exists in learning management systems, social media platforms, and collaborative tools. How the technology is used determines whether students feel part of a thriving academic community or merely participants in an isolated digital classroom.

Unlocking Belonging in Digital Communities

Various elements can impact students' feelings of belonging and community, such as interactions with teachers and peers, views on stereotyping or tokenism, how to convey instructor expectations, and the diversity of perspectives in course materials (Ambrose et al., 2010). The feeling of belonging is critical for students as it is a psychological need that forms the foundation of their success and well-being in higher educational institutions (Walton & Cohen, 2007). Usually, physical campuses provide space for students to socialize, but currently, digital platforms have more space for social interactions. There is an opportunity and a challenge to unbundle such spaces to create a culture of belonging and inclusion in online spaces. As higher learning institutions adopt online learning spaces, they also need to pay closer attention to the sense of digital belonging in all students who should become active participants in education. Students who always decern online or offline contribute to education by engaging more and more in more profound issues, culminating in a positive response to online activities and challenges (Walton & Cohen, 2007). The sense of belonging

also contributes significantly to improving mental health status and reducing social isolation, an essential issue in the performance context in online environments. Such students may be less likely to be connected. When higher education institutions create a sense of belonging online, they can enhance students' satisfaction, retention, and academic performance.

Analytical perspective

Online learning is always going to be isolated. However, that need not be the case. The problem is how to design and facilitate engagement within it. Some universities have cracked the code for bringing digital communities to life as vibrant and supportive as their traditional analogs. However, others still struggle, leaving students to fend for themselves in courses online, devoid of interaction and warmth.

Higher Education institutions must ask themselves: Are they providing content or connecting? The difference between these two methods is profound: Knowledge acquired with content delivery can be made available to students, while connection allows them to stay, persist, and thrive. If institutions want to do what they wish and 'unlock belonging' in online higher education, they must stop thinking that digital spaces are secondary to physical ones. Instead, it should be considered an integral part of the student experience, enjoying similar care, investment, and innovation levels. Institutions that understand this will serve their students far better and build learning environments reflecting the connected, collaborative world we live in today.

Methodology

The methodology created an approach to support a sense of belonging through digital communities in higher education without referencing any one study or collection of data. Through a qualitative review of existing literature, institutional practices, and expert perspectives, this article examines digital communities' role in creating a sense of belonging in higher education. A structured approach was identified rather than a formal study to digest

academic research, case studies, and real-world applications within higher education institutions. Information was collected through scholarly works, institution records, policy documents, and expert insights from educators, student affairs professionals, and community managers. Trends in the industry and digital platforms that are widely used were studied to gauge their impact on student engagement. The information synthesized yielded some key themes: the influence of digital communities on feelings of belonging for students, successful techniques for creating inclusive online spaces, and some of the challenges faced through digital engagement. A comparative approach examined the varying institutional strategies and their applicability to different educational environments. Because this analysis relies on secondary source material instead of empirical data, findings articulated herein come from existing studies and expert commentaries. It is also recognized that institutional contexts, technological access, and student demographics may affect the outcome. The author hopes to provide insights and valuable recommendations for generating belonging in digitally mediated higher education spaces through this analysis.

Key Concept Identification

The first step included defining the key concepts to guide the search process. The following concepts determined the focus of the search:

***Digital Communities*:** These are digital spaces where students engage, collaborate, and communicate in theory through Learning Management Systems (LMS), discussion forums, and social media. Framing the key concepts is very important.

Belonging: This is a feeling of connectedness that students derive from being part of the academic community, expressed by acceptance, inclusion, and support. In digital education, belonging refers to the students' perceptions of their connectivity with peers, instructors, and the broader institution.

***Online Learning Environments*:** These are learning environments delivered through digital platforms that include virtual classrooms, online courses, and collaborative tools with very limited or no face-to-face interactions.

***Community Building in Higher Education*:** The term describes the intentional strategies and practices in creating and sustaining a connected, supportive community among the students, instructors, and peers involved in an online or hybrid educational environment.

Search Strategy

A systematic search strategy was adopted to identify relevant literature on the subject. This strategy included formulating specific search queries and the subsequent refinement during the process. The following took place:

Initial Search Queries:

- Digital communities in higher education
- Building a sense of belonging online in higher education
- Online learning and sense of belonging
- Community-building in digital education
- Student engagement in online higher education environments

Refined Searches:

- Fostering digital communities AND higher education AND student belonging
- Online learning platforms AND a sense of belonging AND community-building.
- Technology and student belonging in online higher education
- Building community through digital tools in online education

Boolean operators such as AND, OR, and NOT were used to balance the specificity of the search terms. The operators captured studies that address key themes of community-building and belonging and student engagement in digital learning environments.

Selection of Databases and Information Sources

The research was comprehensive and used various academic databases and sources. The platforms were selected due to their broad access to education, psychology, and technology content and high-quality, peer-reviewed research material. The databases used in carrying out the literature search are as follows:

***Google Scholar*:** A free, open-access, multidisciplinary academic search engine focusing on research articles, theses, books, and conference papers.

***ERIC*:** The Education Resources Information Center database has resources for specialized education research and gives access to many journal articles, research reports, and other materials about digital learning environments and student engagement.

***ProQuest*:** This resource indexes many dissertations and theses among other research projects on various subjects, including online education and digital community studies.

These databases provided a broad and interdisciplinary range concerning the topic under scrutiny.

Inclusion and Exclusion Criteria

The literature was screened based on the relevance and quality of the studies included for review by a set of inclusion and exclusion criteria.

Criteria for Inclusion:

***Peer-reviewed Articles*:** Peer-reviewed journal articles, conference papers, and reports were used to maintain academic rigor and validity.

***Publication Date*:** Publications in the last 15 years (2010–2024) were prioritized to guarantee a reflection of contemporary trends, technologies, and theories in digital education and community development.

***Concentration on Higher Education*:** Only research on higher education was incorporated. Studies from K-12 settings or other unrelated educational fields were omitted unless they directly pertained to higher education.

***Importance of Digital Communities and Belonging*:** Only documents that directly addressed the impact of digital communities on fostering a sense of belonging and involvement in an online educational setting were included.

Criteria for Exclusion:

***Non-Peer-Reviewed Sources*:** Articles omitted included non-academic or non-peer-reviewed sources like blogs, news publications, or opinion articles.

***Unrelated*:** Articles that centered mainly on the technical features of digital tools without addressing community-building or belonging were omitted.

Screening and Selection Process

The researcher identified only the articles' titles, abstracts, and keywords for relevance. Full-text studies that met the inclusion criteria were retrieved and further reviewed for the appropriateness of the research focus, excluding irrelevant, redundant, or articles not meeting the criteria from further analysis.

Data Extraction and Synthesis

The researcher extracted data for key information from each study for selected relevant articles. Data extraction focused on identifying the following in the data analysis:

***Community-Building Strategies*:** Techniques and approaches used to engender a sense of community in collaborative activities, discussion forums, peer mentorship, and social media engagement.

***Digital Tools and Platforms*:** Learning Management Systems, social media tools, and video conferencing platforms are digital platforms identified by the literature as supporting the development of a connected, engaged, in-country learning environment.

***Psychosocial Aspects of Belonging*:** The concept of how emotional connection and digital platforms facilitate social support and a sense of inclusion.

***Implications for Student Success*:** Outcomes related to students' sense of belonging through digital communities affect their engagement, academic performance, and retention.

Synthesis provided an overall understanding of how the role of digital communities contributes to students' development and maintenance of a sense of belonging within online higher education settings.

Synthesis and Reporting

The findings were synthesized from the literature search into a comprehensive report organized around the identified key themes and findings. Synthesis focused on the following aspects:

***Psychosocial Implications*:** Emotional and social factors enhance students' sense of belonging and engagement.

***Educational Implications*:** Recommendations can be offered to educators, institutions, and policymakers on creating supportive, inclusive digital communities that foster belonging among students.

Strategies for Designing Belonging in Digital Communities

- **Build Inclusive Platforms:** Use tools and platforms where online interaction can occur. Learning Management Systems (LMS) such as Canvas or Moodle, discussion forums, and social media groups provide a platform for students to exchange messages, work on projects in collaboration, or simply network and build rapport.
- **Facilitate Open Communication:** With openness as a core value, facilitate dialogue in which students are encouraged to share their thoughts and experiences. Get into the conversation using icebreakers, polls, and discussion prompts. Students learn that faculty and staff care and hear them using these approaches.
- **Peer Mentorship:** Develop peer mentor programs for students to help each other. However, not only does this allow connection-building, but it also supports student

ownership of their learning. Mentorship may be a valuable resource for first-time enrollees transitioning from offline learning.

- **Encourage Group Work:** Give learners assignments where they need to work in groups. Projects can be coordinated via digital collaboration tools such as Google Workspace or Microsoft Teams, enabling students to collaborate to establish common goals.
- **Embrace Diversity:** Acknowledge and celebrate the different cultural experiences that students bring to school. Foster sharing of cultural viewpoints through conversations by promoting traditions and practices committed to content. The aim is to create an environment where all the students are part of a familiar narrative.
- **Student Well-Being:** Ensure that full student access to the mental hygiene resources and support services is offered in an institution. In this way, the community of well-being members would reshape the holistic sense of belonging for a disconnected and disillusioned learner.
- **Get Feedback:** Regularly request feedback from students on their perspectives surrounding the engagement with the online community experience. In this manner, requirements and expectations on the part of students can be understood by faculty and staff and thus improve their educational experience while making it clear that their views matter.

Conclusion

Belonging is crucial to student success in higher education, and doing so for online communities can be facilitated. Through several broadly recognized approaches to promote interaction, collaboration, and support, institutions can create beehive-like atmospheres where the students are connected and engaged. So, as higher education continues to evolve through digital learning models, putting connections and community at the forefront positions

students for a meaningful college career from an academic and social standpoint. Through this process, institutions not only make the education of students a more enriching experience but also prepare future global leaders to navigate our complex and connected world successfully.

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AI is Part of the Belonging Ecosystem

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Abstract

In higher education, fostering a sense of belonging is critical to student success, influencing academic performance, retention, and overall well-being. However, creating this sense of belonging can be challenging, especially in online and hybrid learning environments with limited in-person interactions. This paper explores the role of AI course assistants as a scalable, personalized solution to address this challenge. By providing responsive, 24/7 support, AI tools can help bridge the gap between students, instructors, and their peers, enhancing engagement, encouragement, and support. Drawing on data from Los Angeles Pacific University's (LAPU) implementation of Spark, an AI course assistant, we present findings highlighting how AI can play a vital role in supporting students who report lower levels of connection within their courses. Our analysis reveals that students who utilized the AI assistant earned higher GPAs than those who did not, and AI significantly benefited those who initially felt less encouraged, engaged, and supported. These findings suggest that AI course assistants can foster a greater sense of belonging, particularly for students at risk of disengagement.

Keywords: AI course assistants, AI and belonging, belonging, higher education

AI is Part of the Belonging Ecosystem

Belonging is a critical factor in student success, influencing academic performance and overall well-being. In higher education, particularly in online and hybrid learning environments, fostering a sense of belonging can be challenging. However, AI course assistants offer a scalable, personalized solution to bridge this gap and improve student engagement, encouragement, and support. At LAPU, we have implemented AI course assistants for each course and have collected data to show their effectiveness. This analysis highlights critical data points that suggest the need for AI course assistants, particularly among students who report lower feelings of connection within their courses.

Belonging is a foundational component of student success in higher education, influencing not only academic performance but also retention rates, well-being, and long-term engagement (Strayhorn, 2019). Students who feel connected to their institution and their peers are more likely to persist in their studies and achieve academic milestones. However, creating a strong sense of belonging poses a significant challenge in increasingly digital and hybrid learning environments, where in-person interactions are limited. As higher education evolves, the need for innovative solutions to create a more inclusive and connected student experience becomes paramount. AI course assistants are part of this solution.

Several well-established theoretical models provide a foundation for understanding how educational environments can cultivate belonging, particularly when integrating AI tools like Spark, Los Angeles Pacific University's AI course assistant. Three key frameworks are Tinto's Model of Student Retention (1994), Maslow's Hierarchy of Needs (1943), and the Community of Inquiry (CoI) framework.

AI technology can potentially enhance students' sense of belonging by providing personalized, responsive, and scalable support (Woolf, 2013). AI-driven tools, such as chatbots and virtual assistants, are designed to be accessible around the clock, answering questions, offering guidance, and providing timely feedback, which can help students feel supported and connected to their learning community. Particularly in online and hybrid learning environments, where feelings of isolation can be exacerbated, AI assistants can bridge the gap between students and their instructors or peers, reducing the sense of disconnection that is common in such settings (Winkelmes et al., 2016). AI tools are also increasingly capable of strengthening interpersonal relationships through adaptive learning pathways and conversational interfaces, offering tailored resources based on individual student needs (Baker et al., 2008).

Personalization

Spark tailors its responses to individual student queries, providing specific examples and step-by-step guidance. For instance, a student struggling with essay structure can receive a customized explanation on organizing ideas based on their unique writing prompt. This personalized support helps create a responsive learning environment that meets diverse student needs (Hanshaw et al., 2024). In ENGL 101, several students stated their appreciation of using Spark for its 24/7 availability, non-judgmental support, and ability to assist with essay structure and thesis statements, catering to the needs of non-traditional learners (Ho, et al., 2024).

Customization

Faculty can adjust Spark's interaction settings to align with course-specific goals. Instructors can modify prompts, adjust feedback style, and tailor response formats, ensuring Spark complements their pedagogical approach. This adaptability allows Spark to seamlessly integrate into various academic contexts, enhancing instructional design flexibility (Hanshaw et

al., 2024). For example, in ENGL 101, Spark was trained on the syllabus and course content. This empowers students to confidently understand and complete assignments, enhancing their sense of belonging at LAPU (Ho, et al., 2024).

Interpersonal Capabilities

Spark's question-based dialogue system encourages critical thinking by prompting students to explore solutions rather than providing direct answers. Through Socratic questioning, Spark promotes reflection, asking questions like, "What argument are you trying to make?" or "How does this idea support your thesis?" This approach builds problem-solving skills while enhancing student engagement and confidence (Hanshaw et al., 2024).

Faculty Perspectives

Garrison and Vaughan's (2008) Community of Inquiry (CoI) framework highlights that instructors establish teaching presence by designing, facilitating, and guiding learning experiences. Similarly, researchers underscore the pivotal role of instructors in fostering student engagement with AI-powered course assistants. Instructor presence shapes how students perceive and use AI tools integrated into courses.

At Los Angeles Pacific University (LAPU), instructors who framed Spark as a collaborative learning partner observed higher student adoption rates. Faculty modeled specific AI interactions, such as brainstorming and receiving writing feedback, normalizing AI-assisted learning. They also encouraged metacognitive reflection by prompting students to consider how Spark's feedback influenced their understanding and skills, reinforcing the perception of Spark as an essential learning tool.

Transparency about AI's role further promoted engagement. Faculty who explained Spark's capabilities while clarifying that it supplements, not replaces, instructor feedback saw

greater adoption. Embedding guided activities, demonstrations, and real-time examples helped students view Spark as a valuable learning extension, reducing resistance and skepticism.

Despite these efforts, some students hesitated to use Spark due to concerns about AI reliability, a preference for traditional learning methods, or discomfort with technology (Hanshaw, 2024). Faculty addressed these concerns by clarifying Spark's limitations and emphasizing its role as a learning partner. Student testimonials further built trust and increased acceptance.

Survey data from ENGL 101 courses revealed that 75% of students felt Spark clarified coursework and enhanced learning, while 85% in subsequent sections reported an improved understanding of complex concepts. Feedback emphasized Spark's immediate, tailored support, particularly valuable for non-traditional learners managing academic and personal responsibilities.

These findings reinforce the importance of faculty engagement in optimizing AI-powered course assistants. Instructors who communicate clear expectations, model AI use, and integrate the tool into meaningful tasks can significantly enhance student engagement and learning outcomes. By framing Spark as a collaborative partner, faculty can cultivate deeper learning, build student confidence, and strengthen the sense of belonging in online and hybrid learning environments.

Student Perspectives

Student response to Spark has been overwhelmingly positive. One student said, "Thanks for modeling for us how to use Spark. I think Spark is cool. I can ask Spark questions even at 3 AM in the morning. I learned a lot about how to outline a paper from Spark." Another student said, "Spark does not do the work for you. Spark asks me questions on what I already know and

it was like Spark and I did the work together." One last student said, "I used Spark when I did not understand what I was reading. And when Spark explained the difficult concept for me, I finally understood."

Spark has been a great tool in building student morale, and frankly, students love Spark because it is fun to play with. Prof. Ho gave Spark the prompt: "Write an essay about topic X." Spark came back with "What do you know about essay writing?" to prompt the user to keep discussing what they know about essay writing rather than Spark writing the essay for the student. Spark does not write the essay for the student. Instead, Spark encourages students to write the essay themselves because of the probing critical thinking questions it provides at the end of each Spark session. Spark engages students in an active learning process.

Spark also adapts to the English level of the student. If a student speaks at a beginning level of English, Spark adjusts its output to simpler English to reflect what the student can do. Also, a student can prompt, "Explain topic X in Simple English for a beginning ESL student," or "Explain this topic that a 2nd grader would understand," or "Explain topic X for an advanced ESL student." By adjusting to the students' English level, students can better understand difficult concepts in the class, thus enhancing student confidence and belonging in the class (Ho, et al., 2024).

Implementation

The research utilized a quasi-experimental approach due to the absence of a random assignment. Students self-selected into two groups based on their use of Spark:

- **Treatment Group:** Students who actively used Spark during the course
- **Control Group:** Students who did not use Spark

This design allowed for a practical evaluation of Spark's impact within a real-world educational setting, capturing authentic usage patterns.

Data were collected through two primary sources: End-of-course surveys and academic records. The first three questions in the end-of-course survey for LAPU pose three self-report Likert-style questions on the students' feelings of encouragement, engagement, and support within the course. A permutation analysis was conducted to compare the responses of students who used Spark, the AI course assistant, and students who did not use Spark. The three statements the students rated were as follows:

1. I felt encouraged throughout the course.
2. I felt engaged throughout the course.
3. I felt supported throughout the course.

Data analysis involved both descriptive and inferential statistical methods:

- **Descriptive Statistics:** Means and standard deviations were calculated for survey responses and GPAs.
- **Inferential Statistics:**
    - **Permutation analysis:** To compare GPA and survey responses between the two groups
    - **Effect Size (Cohen's d):** To evaluate the magnitude of observed differences

Table 1

Comparison of Means, P-Value, and Cohen's D Effect Size Calculations

Feelings of	Mean Used AI	Mean Did not use AI	p-value	Cohen's D
Encouragement	4.41	4.54	<0.001	-0.15
Engagement	4.39	4.52	<0.001	-0.18
Support	4.43	4.52	<0.001	-0.12

Note. The data measures students' self-reported levels of encouragement, engagement, and support.

The results across all three questions show a lower mean score for those who utilized Spark when compared to those who did not use Spark, as demonstrated in Table 1. This is interesting, but it does not help us answer any questions. When we take a deeper dive into the data, we find that the correlation is not that the use of AI assistants is causing lower feelings of encouragement, engagement, and support. It is the opposite. The AI assistants are being used more by those with lower feelings of engagement, encouragement, and support. The AI assistant is supporting and helping foster a greater sense of belonging for those who do not have that sense.

Our data indicates that students who used the AI course assistant had a significantly higher GPA ($M = 3.32$, $SD = 1.05$) compared to those who did not ($M = 3.04$, $SD = 1.23$), with a mean difference of 0.28 ($p < .001$, Cohen's $d = 0.23$). This difference demonstrates that AI

course assistants may contribute positively to academic performance, likely by providing timely feedback, personalized support, and an enhanced learning experience.

Further analysis revealed positive correlations between GPA and students' reported feelings of encouragement, engagement, and support:

- **Encouragement**: r=0.23
- **Engagement**: r=0.26
- **Support**: r=0.21

These relationships suggest that students who feel more encouraged, engaged, and supported tend to perform better academically. The students who used the AI course assistant already had a lower feeling of engagement, encouragement, and support. The engagement with Spark helped them actively learn in the course and earn a higher grade, thus positively affecting their feelings of engagement, encouragement, and support. Therefore, addressing gaps in these areas—particularly for students who report lower levels of belonging—could directly impact their academic success.

Furthermore, the fact that these students had higher GPAs suggests that AI course assistants are beneficial academically, but they may also play a role in building emotional and social connections, critical components of belonging. By improving how AI assistants foster engagement, encouragement, and support, institutions can further enhance the sense of belonging among students.

Best Practices or Lessons Learned about AI and Belonging

A key takeaway and best practice are that the level of engagement and encouragement from the instructor significantly influences how many students will use and benefit from AI tools. The instructor's attitude and the value they place on the tool have a direct impact on

student adoption and utilization, making the professor's role crucial in driving student engagement with AI resources (Hanshaw, 2024). From a teaching perspective, faculty need to have an open mind about AI. There are still some faculty who are against AI because they think AI is a cheating tool students use to do their homework for them. Because Spark has been programmed not to do the work for the student, it makes for a great study buddy or virtual tutor for the student. Therefore, faculty who are resistant to AI or think AI is a cheating tool can train their customized AI not to do the work for them: that is what makes Spark a great addition to any online class (Ho, et al., 2024).

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The Connection Between Social Belonging and Classroom Success: A Correlational Study

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Abstract

In an asynchronous online undergraduate statistics course, an intervention was designed and introduced to increase students' feelings of belonging within the class. Students reported their feelings of belonging at the beginning and end of the semester, along with various perceptions about the course. Overall, feelings of belonging significantly increased across the semester, coinciding with the introduction of the social belonging intervention. This was the case even though students reported that they were initially anxious and not excited about the class. Importantly, the change in belonging scores was particularly pronounced for first-generation college students, who began the course with lower initial belonging scores compared to their continuing-generation peers. Additionally, higher social belonging scores were correlated with more knowledge, more confidence, more excitement, more time spent on classwork, and better predicted final grades. These findings suggest that fostering feelings of social belonging is associated with positive outcomes across both academic and social domains.

Keywords: social belonging, student engagement, academic achievement, first-generation, educational intervention

The Connection Between Social Belonging and Classroom Success: A Correlational Study

Students' feelings of belonging in higher education are widely recognized as critical to various social and academic outcomes, including student retention, motivation, academic performance, and subjective feelings of enjoyment (Pedler, Willis, & Nieuwoudt, 2021). Belonging is particularly important in fostering resilience and engagement among students who may face systemic barriers, such as first-generation college students. For example, research has shown that a strong sense of belonging can mitigate feelings of alienation and improve persistence, especially in challenging or unfamiliar academic settings (Scarf, Moradi, McGraw, Hewitt. & Hunter, 2016; Hausmann, Schofield, & Woods, 2009).

Despite this, much of the existing research focuses on institutional belonging – students' sense of connection to their college or university as a whole – rather than the microlevel experience of belonging within an individual classroom (Walton, Murphy, Logel, Yeager…. & Krol, 2023). Classroom belonging is a particularly critical domain, as it directly impacts students' day-to-day experiences and engagement with coursework. Faculty, through their design of course activities, interactions, and overall pedagogy, play a central role in shaping classroom belonging. This is especially true in asynchronous online courses, where students may struggle to feel connected to their peers, instructors, and course materials due to the lack of in-person interaction.

Additionally, the experiences of first-generation students often differ significantly from those of continuing-generation students, as they may encounter unique challenges, including lower initial confidence, less familiarity with academic norms, and heightened feelings of imposter syndrome (Beattie, 2018). However, less is known about how these differences manifest at the classroom level and whether targeted interventions can reduce these disparities.

Given these gaps in the literature, this study implemented a social belonging intervention designed to foster feelings of connection and inclusion within an asynchronous online undergraduate statistics course. This intervention incorporated evidence-based practices such as small, low-stakes assignments encouraging self-reflection and peer engagement, which have been shown to enhance feelings of belonging (Walton & Cohen, 2011). By focusing on these strategies, this study aims to provide insights into whether such an intervention can support students' sense of belonging and how this might relate to broader academic and social outcomes.

This paper details lessons learned from the classroom-based social belonging intervention. The primary research question addressed in this study is: does implementation of a social belonging intervention positively correlate with beneficial student class outcomes? The primary hypothesis is that higher ratings of social belonging will be positively correlated with other beneficial class outcomes, such as students' self-reported ratings of excitement and confidence in the class.

Method

This study was conducted in a large, asynchronous online undergraduate statistics course at a major university in the Southwest United States. Students complete the course as part of curricular requirements for a Psychology major, typically during their second year. Data were collected across two semesters in one academic year and were combined for data analytic purposes. This research was approved by the university's Institutional Review Board (IRB).

Study Design and Questionnaire

A classic pre/post design was used, in which students completed a questionnaire at the beginning (Time 1) and end (Time 2) of the class to assess changes across time. Throughout the course, a social belonging intervention was employed, as described below. The class

questionnaire, administered at the beginning and end of the term, asked students about their feelings of belonging within the class, their demographic information, and their feelings and attitudes towards the class, in general. Response rate at Time 1 was 82% and at Time 2 was 43%.

The lower response rate at Time 2 is likely attributable to several factors. During the first week of class, students were diligently completing all items on the Week 1 checklist, which may have contributed to the higher response rate at Time 1. By the final week of the term, students were likely prioritizing final exam preparation and other end-of-term obligations. Additionally, the absence of explicit grade-related incentives for completing the survey may have reduced motivation to participate at Time 2. These contextual factors are important to consider when interpreting results.

Social Belonging Scale. To assess social belonging, a modified version of the Social Belonging Scale (SBS) was used. The original scale, developed by Walton and Cohen (2007), was designed to measure students' sense of belonging at an institution. For this study, the scale was adapted to specifically assess belonging within a class context. Modifications included rephrasing items to refer to the classroom environment and interaction with classmates and instructors rather than the broader institutional setting. The changes ensured the scale captured students' perceptions of belonging as they related to the specific course. See Appendix A for complete list of survey items and details on scoring methodology. Internal reliability for the adapted SBS was high, with a Chronbach's alpha (α) of .88 at Time 1 and .80 at Time 2, indicating consistency across items in the modified SPS.

Additional Questions. At Time 1, students answered questions about their general excitement and anxiety about the class. At Time 2, students were asked to rate their level of knowledge, confidence, excitement, time spent on classwork, and expected final grade, in

addition to reflecting back on their excitement and anxiety at the beginning of the term. See Appendix B for questions and response scales. Additionally, students were asked about a variety of demographic information, including whether they are first-generation (defined as having neither parent completed college) or a continuing-generation student.

Social Belonging Intervention

Throughout the course, a social belonging intervention was employed. This intervention consisted of a series of six mini-assignments that students completed as part of course requirements. These mini-assignments combined amounted to 6% of the overall course grade, about half a letter grade. In other words, these assignments did not make up a substantive portion of the course grade, but were worth enough to motivate students to complete them.

The mini-assignments, themselves, fell underneath one of four broad categories: academic coaching, growth mindset, mental health, and transferable skills. Importantly, these mini-assignments do not test students over statistical core concepts within the class. Instead, these mini-assignments were designed to promote feelings of belonging within the class by helping students feel valued as individuals (rather than seen as just a number or an impersonal, faceless entity in a large online class). Because these assignments do not tie directly to course content, they can easily be applied and adopted across disciplines regardless of the subject matter of the course.

The intervention was delivered entirely online through the course's learning management system. Each mini-assignment was provided as a stand-alone with clear instructions, deadlines, and examples to guide students. The instructor played a key role in the intervention by designing the assignments, monitoring student engagement, and providing individualized feedback where applicable. While not all mini-assignments required extensive feedback, the instructor made an

effort to provide encouraging comments and acknowledgement of students' submissions, particularly for assignments that involved personal reflection or self-disclosure.

To ensure that students saw the relevance of these assignments, each assignment included a brief explanation of how the activity could benefit them academically or personally. Additionally, the instructor encouraged students to share takeaways from these assignments in end-of-semester class discussions, fostering a sense of community and peer support.

Academic Coaching. Academic coaching interventions required students to engage in goal setting and self-reflection, developing a study plan for the class. Additionally, it asked students to anticipate how to overcome potential barriers to their learning. Academic coaching has been shown to improve grades and retention rates for at-risk college students (Capstick, Harrell-Williams, Cockrum, & West, 2019). This support may be especially valuable for first-generation college students, who lack a parent with college experience to guide them through the hidden curriculum of academia, such as unwritten rules, norms, customs, and expectations (Delgado, 2020).

Growth Mindset. Growth mindset interventions lean on research about strength-based pedagogy, which focuses on a student's strengths rather than their limitations (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). This mini-assignment asked students to identify their personal strengths and explain how the strengths benefit them as a student within the course. Additionally, it asked students to reflect on how much they've learned and how well they've done in the class so far. These types of growth mindset-oriented interventions have been associated with development of courage, grit, and confidence (Dweck, 2006; Kosterlitz, 2015; Park, Tsukayama, Yu, & Duckworth, 2020).

Mental Health. These interventions lean on humanistic pedagogy in which a student-centered view of teaching is taken (Tangney, 2013). For instance, a mini-assignment asked students to take a "time out" for mental health and self-care and to explain how the activity they chose helps relieve stress. Researchers have theorized that employing humanistic teaching approaches, ones like this in which the student is viewed as a "whole person", can promote student well-being in higher education (Chong, Francis, Carter, & Baffour, 2022).

Transferable Skills. Finally, the transferable skills intervention helped students with career planning and preparation by asking them to explain how a take-away from class can apply to life outside of academics, and to identify transferable skills that may be beneficial for current or future employment. Past research in the field of Psychology has shown that emphasizing transferable skills with students is associated with higher final course grades (Miller & Favelle, 2024). It is possible that students are more invested when they can see the relevance of course material and assignments to their lives outside of academia.

These mini-assignments were spread throughout the course, starting immediately following the Time 1 pre-survey and concluding immediately prior to the Time 2 post-survey.

Results

Participant Demographics

In total, 249 students completed the questionnaire at Time 1, and 116 students completed the questionnaire at Time 2. The majority of participants identified as white (42%) or Hispanic (33%), and the majority were female (86%). Just over a third of respondents identified as being a first-generation college student (38%). Importantly, although participation was lower at Time 2 relative to Time 1, statistical analysis indicated no significant differences between respondents

due to race/ethnicity, gender, or first-generation status, meaning samples did not vary in any systematic way on key variables of interest.

Anxiety and Excitement

As you can see in Figure 1, most students reported that they were anxious about the class ($M = 3.63$, Median = 4, $SD = 1.19$, $N = 116$) and were not excited about the class ($M = 2.34$, Median = 2, $SD = 1.19$, $N = 116$) at the beginning of the semester.

Social Belonging

Social belonging scores significantly increased from T1 to T2, $t\ (362) = 4.00$, $p < .01$. As you can see in Table 1, mean belonging scores increased by 11% after implementation of the social belonging intervention from T1 ($M = 4.06$, $SD = .98$, $N = 248$) to T2 ($M = 4.51$, $SD = 1.04$, $N = 116$).

However, this increase was even more pronounced for first-generation students. While social belonging scores significantly increased from Time 1 to Time 2 both for first-generation students, $t = 2.96\ (127)$, $p < .01$, and continuing generation students, $t = 2.61\ (225)$, $p < .01$, the magnitude of the effect size was more robust for first-generation students, Cohen's $d = .54$, compared to continuing-generation students, Cohen's $d = .38$. Continuing-generation students' social belonging ratings increased by approximately 9%, while first-generation students' social belonging ratings increased by approximately 15%. See Table 2 for details.

Correlations

A correlation table was created for the key variables of interest collected at Time 2. As you can see in Table 3, higher scores for social belonging were associated with: more knowledge ($r = .64$, $p < .001$), more confidence ($r = .66$, $p < .001$), more excitement ($r = .40$, $p <$

.001), more time spent on classwork ($r = .25$, $p < .01$), and better expected final grades ($r = .25$, $p < .01$).

Discussion

Overall, mean social belonging scores increased across the term for the full class, with particularly pronounced gains among first-generation college students, who began the course with lower mean sense of belonging compared to their continuing-generation peers. These findings suggest that the social belonging intervention is associated with increased feelings of belonging over time.

In addition to the observed increase in belonging scores, the implementation of a social belonging intervention was associated with students reporting greater knowledge, confidence, and excitement about the course. Students also reported spending more time on coursework and anticipating higher final grades. These self-report outcomes are noteworthy, given that initial impressions of the course were generally not positive, with the majority of students expressing high anxiety and low excitement at the start of the term.

Limitations

Several limitations of the study should be acknowledged. Survey items were based on self-report data. Additionally, the anonymous nature of the surveys precluded linking responses across time points, preventing analysis of individual-level change in belonging or other outcomes. While increases in mean social belonging are correlated with improvements in students' reported expectations for final grades, we could not link the survey responses to academic performance. Thus, we cannot confirm whether improved social belonging is directly related to better grades.

Grades were updated regularly for students, and the Time 2 questionnaire was completed during the final week of class. As such, students likely had a fairly accurate understanding of their final grades. Nonetheless, future research would benefit from including objective measures of academic success (e.g., final course grades) to complement self-report data and provide stronger evidence of the impact of social belonging interventions on an individual level.

Conclusion

Enhancing students' sense of belonging within a class does not need to be overly complex or difficult. The mini-assignments described in this study require minimal additional effort from the instructor and were designed to be broadly applicable across disciplines and course modalities. By incorporating similar assignments into their teaching, college instructors may support students' sense of belonging within the class. While the present study suggests potential positive associations between social belonging and various academic and social outcomes, caution is warranted when interpreting these findings, as the data do not allow for causal conclusions. Future research should explore these relationships further to build upon these initial insights.

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Tables

Table 1

Social Belonging Means and Standard Deviations for All Students, Combined

	Mean	Standard Deviation	N
Time 1	4.06	.98	248
Time 2	4.51	1.04	116

Table 2

Social Belonging Scores for First-Generation and Continuing-Generation Students

Time 1 First-Gen	Time 2 First-Gen	T-statistic	Cohen's D
$M = 3.92$ ($SD = 1.05$), $N = 85$	$M = 4.52$ ($SD = 1.17$), $N = 44$	$t = 2.96$ ($df = 127$), $p < .01$	$d = .54$
Time 1 Continuing	**Time 2 Continuing**	**T-statistic**	**Cohen's D**
$M = 4.13$ ($SD = .95$), $N = 159$	$M = 4.49$ ($SD = .96$), $N = 68$	$t = 2.61$ ($df = 225$), $p < .01$	$d = .38$

Note. First-generation has been abbreviated "first-gen" and continuing-generation has been shortened to "continuing."

Table 3

Correlations Between Social Belonging and Other Variables of Interest

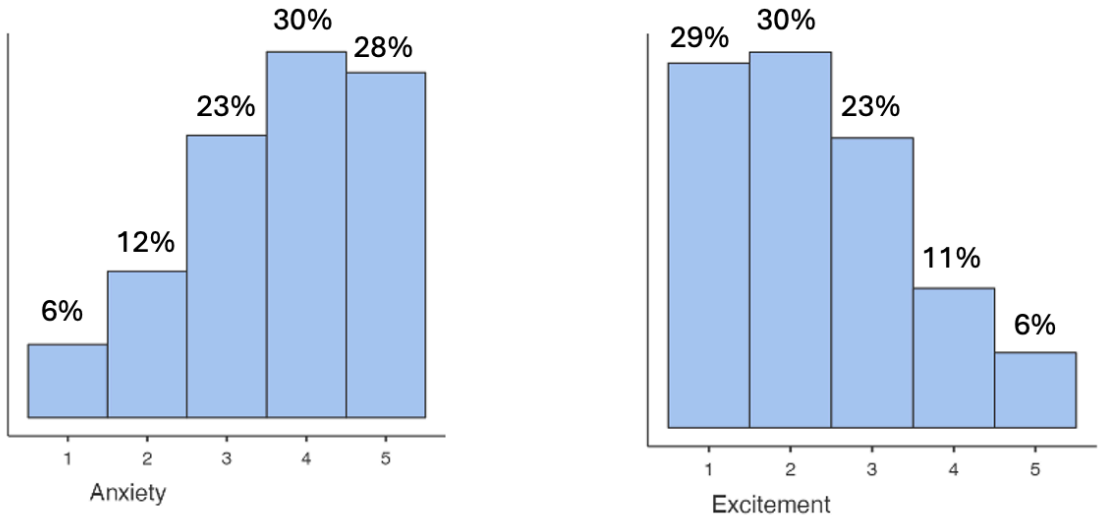
	Belonging	Knowledge	Confidence	Excitement	Time Spent
Social Belonging					
Knowledge	.64***				
Confidence	.66***	.65***			
Excitement	.40***	.48***	.50***		
Time Spent	.25**	.23*	.23**	.15	
Expected Grade	.25**	.21*	.27**	.14	.04

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figures

Figure 1

Student anxiety and excitement for the statistics class.



Note. Student responses were on a scale from 1-5, where 1 = not at all anxious/excited, 2 = a little, 3 = a moderate amount, 4 = a lot, and 5 = extremely anxious/excited. $N = 116$

Appendix A

Social Belonging Scale, adapted from Walton & Cohen, 2007

1. I belong in statistics.
2. I feel comfortable in statistics.
3. Other people understand more than I do about what is going on in statistics. (reverse-coded)
4. I think in the same way as do people who do well in statistics.
5. It is a mystery to me how statistics works. (reverse-coded)
6. I feel alienated from statistics. (reverse-coded)
7. I fit in well in statistics
8. Compared with most other statistics students, I am similar to the kind of people who succeed.
9. Compared with most other students, I know how to do well in statistics.
10. Compared with most other statistics students, I get along well with people in statistics.

All questions were answered with a 7-point Likert-style scale indicating level of agreement. After reverse-coding Questions 3, 5, and 6, a mean social belonging score was calculated for each student. These mean scores were used in subsequent analyses.

Appendix B

Time 2 Survey Questions

- Knowledge: How much do you currently feel like you know about statistics?
    - 5-point scale from not knowledgeable at all (1) to extremely knowledgeable (5)
- Confidence: How confident are you in your ability to learn statistics?
    - 5-point scale from not at all confident (1) to extremely confident (5)
- *Excitement: How excited were you for this class?
    - 5-point scale from not at all excited (1) to extremely excited (5)
- *Anxious: How anxious were you about this class?
    - 5-point scale from not at all anxious (1) to extremely anxious (5)
- Time Spent: How much time did you spend on this course per week (including reading, studying, and completing any class assignments or activities)?
    - Less than 5 hours
    - Between 5-10 hours
    - Between 10-15 hours
    - Between 15-20 hours
    - Over 20 hours
- Expected Grade: What final letter grade do you expect to earn in this class?
    - A
    - B
    - C
    - D
    - F

Note: This was for a 7.5-week course, so students were encouraged to spend 12-15 hours per week on coursework. The expected grade question was coded such that F = 1 and A = 5. *Students were also asked about their initial excitement and anxiety at Time 1 in addition to being asked to report retrospectively at Time 2.

Bridging the Gap: Career Competencies as Keys to Student Belonging

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Abstract

Career support does more than break down barriers; it enhances feelings of belonging, uncovers hidden curricula, and leads to paid internships and long-term career success. Career support helps to retain students, clarifies the value of one's education, and increases feelings of support from one's college or university. This panel presentation explores strategies for incorporating career competencies within discipline-specific curricula. With a focus on practice, panel members discuss ongoing interdisciplinary collaborative efforts and unique approaches to incorporate career competencies into their respective curricula. In doing so, barriers are broken down, and students gain opportunities for a greater sense of belonging. Given the social responsibility of educators at a large Hispanic-Serving (HSI) University, panel members are incredibly passionate about helping ensure all students thrive academically and within their chosen career field. The panel discussion will highlight immediate and tangible actions individuals, departments, and colleges can employ depending on their timeline and available resources.

Keywords: belonging, career readiness, career competencies

Bridging the Gap: Career Competencies as Keys to Student Belonging

A student's sense of belonging improves academic outcomes (Gopalan & Brady, 2020). Improved academic outcomes improve career prospects. However, racial-ethnic minority and first-generation students report lower belonging in institutions of higher learning than their peers (Gopalan & Brady, 2020). These reports of lower belonging are especially alarming given that most college students today are from Generation Z, born after 1996, which is more diverse than any previous generation.

The racial and ethnic makeup of Generation Z is well documented. The Pew Research Center reports that a "bare majority" (52%) are non-Hispanic white, a 9% decrease compared to Millennials (Parker & Igielnik, 2020). Not surprisingly, diversity in higher education has also increased, and while educational attainment levels continued to rise for all racial and ethnic groups, non-White, non-Asian adults were less likely to earn a college degree (Kim et al., 2024). Furthermore, Black or African American students were less likely than their peers from other racial and ethnic groups to complete a degree or certificate (Kim et al., 2024). Black or African American students were also more likely to incur large amounts of educational debt, and Black or African American and Native Hawaiian or other Pacific Islander students were most likely to enroll in for-profit institutions (Kim et al., 2024), which often cost more.

As recently as 2020, six-year graduation rates for first-time, full-time undergraduate students who began a bachelor's degree at a four-year institution in the fall of 2014 was 64% (National Center for Education Statistics, 2022). Within that, social positionality characteristics such as gender, race/ethnicity, and socioeconomic status further determine who completes a degree. For example, analysis by Barshay (2023) illustrated that while rates of Americans with a college degree have risen for all racial/ethnicity groups:

> In 2021, there remained an enormous 40 percentage point difference between Asian American adults, among whom 66 percent have a college degree, and Native American adults, among whom only 25 percent have a college degree. Among Black adults, 34 percent have college degrees. Among Hispanic adults, it's 28 percent and among white adults, it's 50 percent.

These graduation rates are especially alarming when unemployment and underemployment trends are examined. Consistent employment trends over decades have established that the more education one completes, the less likely one is to be unemployed or underemployed.

Colleges and universities, which are less racially and ethnically diverse in their faculty and staff compared to their students (Kim et al., 2024), have and continue to struggle with practices that best serve their increasingly diverse student populations. Career support and professional development are often overlooked areas where connection and belonging can be established and enhanced. Indeed, this is an area where everyone wins: students can feel increased connection and belonging because their goals are identified and supported while also feeling greater confidence in their career readiness. Career readiness refers to one's sense of preparedness to find, acquire, maintain, and grow within a job. Career readiness translates to students who graduate into jobs more aligned with skills, interests, goals, and jobs that ultimately pay more long term (Kelderman, 2023).

Career and Professional Development Support as Key to Building Belongingness

Research on embedding career readiness into the curriculum, rather than offering it as a separate service, shows promise for enhancing students' sense of belonging. Lambert et al. (2024) demonstrated that developing STEM career identities can shift students' motivation from destination-driven to purpose-driven, thus increasing their sense of belonging. Further, data

collected by Gallup (2018) finds that students thrive when they see a clear connection between their education and future work.

Incorporating career readiness into the curriculum not only prepares students for future careers; it dismantles barriers by clarifying hidden curricula, customs, and resources, and most importantly, it contributes to enhanced feelings of belonging. It equips students with essential skills for current job searches, such as internships and future employment, fostering agency through informed decision-making and increased confidence. However, integrating career readiness into an already packed curriculum poses challenges. Below are strategies that have been adopted to varying degrees by faculty at the University of Arizona, a large public R1 Hispanic-Serving Institution (HSI), to enhance feelings of belonging via concerted efforts to enhance career readiness.

Strategy 1: Assignments

Incorporating career readiness into student assignments can be creative and effective. One approach is to explicitly include career readiness tasks in courses, having students engage in discipline-specific activities that provide insights into future careers. For instance, an assignment could ask students to explore common career paths by researching current job postings for requirements and salaries or using LinkedIn to analyze profiles of professionals in desired roles. Bonus if students can find professionals who share salient identity characteristics.

Alternatively, career readiness can be integrated indirectly through assignments that develop relevant skills. After teaching concepts like statistical reliability and validity, students could complete personality assessments and critique their reliability. Similarly, instead of traditional essays, students could write cover letters or personal statements to showcase their writing abilities while enhancing their career readiness. Such assignments allow students to

reflect on their educational experiences while requiring them to articulate the value of their education.

Strategy 2: In-Class Experiences

Incorporating career readiness into both in-person and online classes through live or recorded professional interactions can significantly enhance student engagement. Inviting diverse guest speakers or panels from fields like Human Development & Family Science, Psychology, and Public Health provides practical insights into panelists' careers, daily work, and the skills required in their industries. These experiences make career options more tangible and attainable for students. Live Q&A sessions encourage direct interaction, while online students can connect with speakers via email or other platforms, fostering meaningful relationships. Importantly, it's crucial to ensure diversity among speakers, as representation helps students envision themselves in similar roles.

Additionally, faculty can dedicate class time to skill-building workshops or mock interviews to support career development. These workshops can cover various topics, including resume writing, networking, and job searches. Faculty can collaborate with their institution's career services to create a tailored approach that meets students' needs.

Strategy 3: Experiential and Service-Learning Experiences

Experiential and service learning are crucial for fostering a sense of belonging by connecting students with real-world experiences in their communities and classrooms. These hands-on activities empower students to integrate their personal and academic identities in a supportive environment (He, 2019). Kolb's experiential learning model emphasizes a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation (1984). This cycle encourages deep engagement and reflection, transforming

experiences into learning opportunities. Reflection is essential for helping students understand their role within broader societal contexts. According to MIT's Office of Experiential Learning, reflective activities like group discussions or journaling help students connect personal growth to academic content, enhancing their connections with peers and the community (MIT Office of Experiential Learning, 2023).

Service learning further strengthens belonging by immersing students in meaningful community service while meeting academic objectives. He (2019) notes that this active involvement fosters relational ties that enhance feelings of inclusion. Through service projects with local businesses, municipalities, or nonprofits, students not only contribute positively to society but also build relationships with community members, creating a sense of "place-belongingness" that extends beyond campus (He, 2019).

Strategy 4: Career Competency Curricular Integration

A fourth strategy involves integrating career readiness into the curriculum by aligning course objectives with established career competencies, such as those from the National Association of Colleges & Employers (NACE) or related accreditation bodies. Examples of these competencies include Strategic Communication, Critical Thinking, Equity and Inclusion, and Leadership (Cooke et al., 2024). "Thoughtful curricular design which maximizes student engagement and incorporates pedagogies for career and employability learning can prepare students for the realities of the workplace. Such pedagogies enhance student wellbeing and their perceived sense of belonging" (Rowe et al., 2023, as cited in Cooke et al., 2024, p.1). Incorporating career competencies not only prepares students for the workforce but also fosters personal growth, leading to holistic development. This real-world application of course content boosts motivation and engagement by helping students see the immediate benefits of their

studies for future careers. Additionally, aligning career competencies promotes equity, enabling all students—regardless of background—to connect classroom skills with workforce demands (Kirby & Thomas, 2022). This approach supports social mobility and helps underrepresented students succeed in college and beyond.

Concluding Remarks

In conclusion, as higher education continues to face scrutiny over its return on investment, especially for its increasingly diverse student population, integrating career readiness provides a valuable solution to build belongingness and enhance outcomes for all students. The approaches outlined in this article will prepare students for long-term career success while fostering a sense of belonging. Connecting academics to real-world career readiness enhances student engagement and boosts confidence in achieving career goals. When aligned with institutional equity and inclusion goals, career readiness strategies can bridge gaps for marginalized students, equipping them with the tools needed for high-caliber jobs. As universities move forward, emphasizing career programming and competencies will be essential to meet the diverse needs of today's students.

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