Peak Learning Moments: A Thematic Analysis of Student Experiences in Higher Education

Authors:

Kendall M. McGoey, Ph.D.
Auburn University

Kathleen B. Boyd, Ph.D.
Auburn University

C. Ben Farrow, Ph.D.
Auburn University

Tom Leathem, Ph.D.
Auburn University

Eric M. Wetzel, Ph.D.
Auburn University

ABSTRACT

Peak learning moments are meaningful events that change an individual's perspective. Indeed, collecting students' accounts of peak learning can inform university-wide improvements. Researchers, at a large Southeastern university, employed NVivo in a two-part study to identify and compare themes within students' peak learning moments. Researchers identified 14 peak learning moment themes, with responses being categorized as class (22%) or faculty (15%) most frequently. A second study then compared the frequency of responses into the same 14 themes across two colleges with similar missions. As expected, similar top themes emerged in the two-college sample. However, study abroad emerged as a top theme in one college, while internship surged in the other, likely due to different co-curricular requirements. These studies highlight the value of qualitative data at various organizational levels and its ability to deepen understanding of student learning when combined with quantitative research.

Correspondence E-mail: kmmcgoey@gmail.com

Keywords: Peak Learning Moments; Transformative Learning; Higher Education Assessment; Qualitative Research; Student Experiences

Chip and Dan Heath's (2017) work, "The Power of Moments," examines the meaningful and impactful events that change an individual's perspective (what they called peak learning moments). In this book, the concept of peak learning moments was based on four fundamental ideas. First, individuals reflecting on events in their lives tend to focus on key moments within that event. Second, the transformative moment itself is meaningful and memorable. Third, these moments are created through one or more distinct elements: (a) elevation, (b) insight, (c) pride, and (d) connection. And fourth, individuals must "elevate the ordinary" by intentionally crafting "peak moments" throughout their lives. This involves not only identifying and commemorating significant events but also establishing clear expectations and rituals around transitions. By doing so, individuals can transform ordinary moments into powerful experiences that shape their identity and narrative.

There is evidence that teacher-educators reflect on their peak learning moments with other colleagues and graduate students through written methods like prose and poetry, finding deep gratitude and connectivity in this experience (Waterhouse et al., 2020). Additionally, these teacher-educators found the alignment between their peak learning moments and professional practice helped to sustain the commitment to their roles. While these peak learning moments were explored with a unique sample of teacher-educators, one could argue that this same type of reflection can be just as meaningful for students. A reflection on peak learning moments can allow students the opportunity to respond to about any type of event that they deem impactful, allowing for diversity in perspective and the ability to capture experiences that are beyond the "typical" transformative learning experiences in a quantitative data format for institutions. To capture a wide array of these impactful events, the researchers of the present studies suggest rethinking how institutions frame questions in data collection to account for a multitude of experiences. The approach in the following studies was to prompt students to consider peak learning moments, allowing them the opportunity to reflect on their undergraduate studies in an open-ended response format.

Those within the field of assessment in higher education are tasked to evaluate student learning that occurs both inside and outside of the classroom, while also considering how this learning will transfer to postsecondary contexts. The assessment process typically includes quantitative approaches to measure student learning. For example, faculty may use rubrics to evaluate performance on written assignments or internship supervisors may score student performance on a rating scale. Importantly, higher education continues to evolve, and faculty must seek meaningful ways to capture student learning from multiple perspectives. Researchers and practitioners alike wish to understand student learning at a deeper level, and this understanding may be better reached with the use of qualitative approaches alongside quantitative ones. As mentioned by Newhart (2015), "since qualitative assessment may allow for more depth…we can begin to answer the calls for more accountability for the work we are doing in more detail—as well as respect the diverse student experiences that occur at our institutions" (p. 7).

Because of numerous misconceptions regarding qualitative research in assessment, the use of this approach tends to be underappreciated and underutilized (Qualitative Research Methods in Program Evaluation: Considerations for Federal Staff, 2016). Fortunately, researchers have taken the time to address certain misconceptions and provide clarity on the role this approach can play in assessment. For example, while

researchers typically want to identify data that is generalizable to inform intervention and practice, qualitative research allows for the embracing of differences in students' experiences as opposed to the similarities; these differing perspectives are crucial in informing best practices or making improvements (Harper & Kuh, 2007). Additionally, qualitative data may contextualize quantitative metrics, lending to more meaningful discussions about student learning and perhaps more valid approaches to improvement (Patton, 2002). Fortunately, these approaches are not limited to interviewing or focus groups and can capture large samples of data using a method like open-ended survey questions.

There is existing research conducted with qualitative approaches that touch on very important topics in higher education and specifically aim to enhance understanding of student learning. High Impact Educational Practices (HIPs) are specific practices intended to engage students in deep learning and promote active engagement with knowledge and skills both inside and outside of the classroom, with a few examples being service learning, writing-intensive courses, and common intellectual experiences (Kuh, 2008). Research has shown that students who participate in HIPs better retain information, have improved grades, incorporate the knowledge gained with their overall education, and engage with people that are different than themselves (Nelson et al.; Kramer et al., 2007; Peck et al., 2010). In 2014, Blaney and colleagues qualitatively explored HIPs that were discussed in students' written reflections during an experiential learning program at their institution. They identified themes regarding peer and faculty collaborations, applied coursework, and personal growth. They reasoned that these HIPs could be used to improve or share these types of experiences across institutions.

The present research includes two studies, the first conducted in the fall of 2022 and the second in the summer of 2023, that incorporate a qualitative approach to the assessment and analysis of peak learning moments in higher education. The purpose of the first study is to answer the following research questions.

- How do graduating students describe transformative peak learning moments? And, what types of experiences do graduating students identify as being transformative peak learning moments?
- What overarching, institutional themes exist within the dataset categorizing these students' responses?
- Does gender impact the types of learning moments that graduating students identify as transformative?

In identifying these themes, the researchers can determine which themes were mentioned with the highest frequency, thus informing future student experience-focused interventions and considerations of what is working well at the University. The findings from Study 1 are foundational for this process, with Study 2 addressing additional research questions that expand the thematic analyses.

- Does the field of study impact the types of learning moments that graduating students identify as transformative?
- Can collecting qualitative data about graduating students' transformative peak learning moments provide valuable context to data collected via more direct methods of assessment?

Method

Students at the University are required to complete a zero-credit graduation class. As part of that class, data is gathered via Qualtrics on various elements of their academic experience. Referred to as the Campus Experience and Engagement Survey (CEES), completion of the survey is required for students to meet graduation requirements. The CEES has approximately 40 questions that measure a variety of domains including demographic information, graduation term, perceptions of class experiences, HIP participation, peak learning moments, and expectations as an alum. In addition to HIP participation, this survey collects information about student experiences with HIPs, specifically assessing internships, co-ops, ePortfolios, undergraduate research, and study abroad. The students are asked to respond to questions aligned with the described eight key elements of HIPs, like significant investment of time and effort, diverse experiences, and public demonstration of one's competence (Kuh & O'Donnell, 2013). This study focuses on one question regarding peak learning moments asked as part of the CEES that allow a free response by the student:

> Describe a transformative learning experience, while a student at the University, that helped shape the person you are today (a short experience that was both memorable and meaningful). Please be descriptive and note that the moment could take place anywhere (classroom, internship, study abroad, work, athletics, fraternity/sorority, student government, etc.).

An Introduction to NVivo

NVivo is a software based on the work of Lyn and Tom Richards that provides numerous types of qualitative data via coding, searching for patterns, reporting/exporting data, complex searches and queries, and different modes of output (numeric, visual, and textual) (Jackson & Bazeley, 2019). The software can be used to conduct open-ended searches, queries, and attribute classifications with text data, the latter allowing demographic information to be explored within the created theme cases. The researchers have chosen NVivo for these reasons, and the software itself is helpful in working with large datasets like the ones used in the present studies. The approach to the extraction of themes at the institution level included a combination of NVivo's word and text search query functions and a manual coding review process. As mentioned by Welsh (2002), "NVivo can add rigor to the analysis process…[but] this searching needs to be married with manual scrutiny techniques so that the data are in fact thoroughly interrogated" (p. 5).

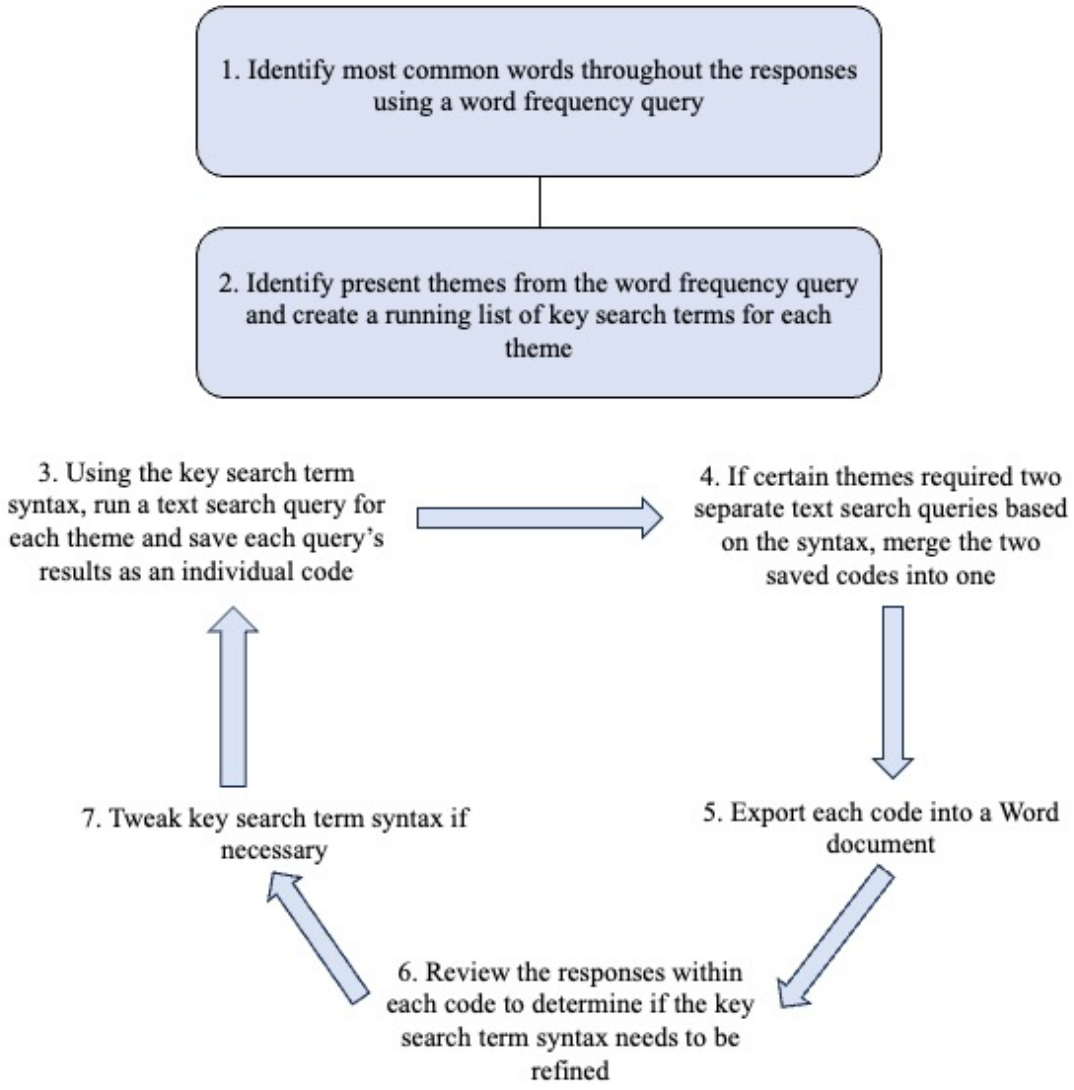
Study 1: Institution-Level Theme Extraction

Participants

The data collected in this study includes student responses from graduating seniors across ten academic semesters (Spring 2020-Spring 2023). In total, open-ended response data from N = 18,267 students about their peak learning moment at the University was collected. After removing duplicate and abstentions (i.e., "N/a", "Prefer not to answer"), the total response count for analysis was N = 17,867. The sample identified as 48.24% male, 82.82% White, 18.93% transfer student, 12.98% first-generation student, and 17.38% eligible for financial aid (Pell Grant eligible).

Procedures

To fulfill the aim of this research - the collection of student transformative experiences - the peak learning moment question allowed for students to freely respond based on any type of experience, not limited to a "traditional" HIP, or educational experience. Again, the research team used queries (word frequency and text search) within NVivo, along with manual coding techniques, to identify the top themes emerging from the data. Please refer to Figure 1 for a framework of the queries used to finalize the themes and the following details provided for each query's purpose.



Note: Steps 3 through 7 are repeated until the text search queries are refined.

Figure 1. *A framework of word frequency and text search queries, along with manual aspects, to code the top themes using NVivo*

A word frequency query, which "catalogues the words used most often in the data," was run first, and the research team manually created a list of present themes and possible key search terms within the response data from this query output (Jackson & Bazeley, 2019). Fourteen overarching themes were identified in the peak learning moment responses:

- Class (response mentioned a class-related experience such as an assignment, project, or exam)
- Co-op (response mentioned full-time, career-related, paid work experience that takes place over three semesters or more with the same organization)
- Diverse Experiences (response mentioned an experience with individuals the student perceived as not common to them)
- ePortfolio (response mentioned a personal website that communicates a professional identity and experiences)
- Faculty (response mentioned a meaningful interaction with faculty that left a lasting impression)
- Greek Life (response mentioned participation in a Greek fraternity or sorority)
- Internship (response mentioned a paid or unpaid professional learning experience that is related to a specific field of study or career)
- Leadership Positions (response mentioned an experience holding a leadership position at the University)
- On-Campus Organizations and Clubs (response mentioned participation in non-Greek organizations and clubs affiliated with the University)
- Personal Relationships (response mentioned a meaningful connection with peer(s), such as friends or significant others, at the University)
- Study Abroad (response mentioned a chance to study in a foreign country)
- Team-Oriented Experiences (response mentioned engaging in groups with a common goal, including athletic and competition-based teams)
- Undergraduate Research (response mentioned an opportunity to participate in research either as a member of a lab team or through classwork)
- Volunteer Experiences (response mentioned volunteering within the community as a part of various personal or organizational endeavors)

A text search query was then used to search for the specific words and phrases within the dataset that were identified during the word frequency query. Text search queries use purposeful search terms to help categorize responses into cases, referred to in this research as themes (Jackson & Bazeley, 2019). The researchers used their generated list of key search terms from the word frequency query, in conjunction with a list of similar words the team identified as important to include (e.g., specific campus unit names associated with diversity in the Diverse Experiences theme). The text search queries were narrowed in focus during the coding process by adding the word "NOT" in addition to "OR," in attempts to exclude responses that may better represent other themes. Of importance, the researchers use the language of "frequency" to report on the responses within each theme because students, while only asked to respond with one peak learning moment, may have mentioned multiple experiences in their responses. This speaks to the nature of qualitative data, but there is richness in identifying how frequently these particular experiences are mentioned throughout the student population. An example

Table 1. *Example Theme, Syntax, and Response*

Theme	Query	Example Response
Class	"class project" OR "class projects" OR "service learning" OR "service-learning" OR "group project" OR "team project"; class OR project OR lab OR laboratory OR test OR assignment OR presentation OR exam OR lecture OR read OR capstone OR technology OR homework OR coursework OR study OR studies OR studio OR preceptorship OR portfolio OR journal OR test OR academic OR course OR instruction OR curriculum OR syllabus NOT abroad NOT sorority NOT fraternity NOT greek NOT internship NOT intern NOT interned NOT interning NOT research NOT professor NOT teacher NOT co-op NOT leadership NOT "Dr." NOT friend NOT friends NOT classmate NOT classmates	"I would say that the most transformative learning experience was my Capstone project for my apparel design degree. We were asked to work in a group and create a collection for a brand of our choosing that could help that brand branch out to new customers. We created an androgynous line of clothing for the brand XX. We were required to create a manufacturer packet called a spec pack. We had to be so thorough with the project that we could send off what we made to a manufacturer they could understand it and start creating our fashion line if we wanted to. I learned so much and applied a lot of my learning and experience to the entire project."

Note: The ";" signifies that there were two separate text search queries that were merged to identify the final count of responses within the theme. The separate searches helped determine that the first set of phrases were captured accurately as they required exact matches.

Table 2. *Using NVivo To Conduct a Text Search Query*

Step 1	Highlight the file of interest and click "Query," then "Text Search Query"
Step 2	Enter in the "Search for" box a list of your key search terms. Separate the terms by "OR," "AND," or "NOT."
Step 3	When using a phrase, defined by quotation marks (i.e, "peer mentor"), or when an exact match is needed, make sure the "Exact Matches" option is clicked. When conducting any other search where it is helpful to see stemmed words (i.e., internship, internships), make sure the "With stemmed words" option is clicked.
Step 4	Choose the "Broad Context" option underneath the "Spread to" dropdown list. This allows NVivo to remove duplicate responses in the case. For example, if a student mentions one of the key search terms more than one time in their response, NVivo will count that as multiple responses. To be able to identify counts for how many students answered within a certain theme, how many female students talked about internships, etc., the researchers wanted to have an accurate number of responses per theme.
Step 5	When the Query is run, save this as a Case with the name of the theme. Of note, the researchers used Cases instead of Codes for saving the themes. This is because Cases are easily merged into other Cases if needed, and the Case Classification option was helpful with our attribution analysis.

theme and query of key search terms can be found in Table 1. In Table 2, there is a step-by-step process of a text search query, which highlights the importance of multiple rounds of coding to refine the themes.

Results

Fourteen overall peak learning moment themes were coded at the institution level, with the top three themes being "class", "faculty", and "internship". The frequencies and percentages of responses per top themes in the data can be found in Figure 2.

Qualitative comments by students reveal additional depth that helps one better understand some of the themed responses above. Comments on "class" included the following:

> One environment that I believed help shaped me into the person I am today, both personally and academically, was my classroom environment. I believe that my cohort, professors, and course work combined help me evolve throughout my experience at the University. With my cohort I learned teamwork and effective communication, allowing me to assess and discuss any obstacle that may have been hard to understand or overcome. With my professors, I believe I learned my value as a student and future employee. Time and time again I did not believe in myself and my potential, which is especially hard within my degree because a lot of our work is based on personal skills and talent. However, my professors always knew the right time to tell me what makes me personally valuable, and I will never forget that.

> I went through a rigorous process to get into my major called summer op. This summer intensive was 10 weeks long and we were in class from 8am-5pm MWF. It was a really long summer and incredibly hard. But I had to complete it to get into my program. It shaped me as a designer and as a student. It instilled in me my work ethic and my time management skills.

Comments on "internship" included the following:

> My child life internship at East Tennessee Children's Hospital and my child life practicum at East Alabama Health were transformative experiences for me because they allowed me to apply all of the learning I had done in my courses to real-world situations in the hospital environment. Although these experiences were different (in practicum, I was in an observer role, and in the internship, I was in a leadership role providing independent interventions), they both allowed me to see the goodness of fit for myself and this career path.

> During my senior internship at Storybook Farm, I was able to put all of my coursework, leadership experience, and skills into practice. Working with children facing adverse childhoods is so fulfilling. You can visibly see how much these children love Storybook and want to be there. There were a few

times I would interact with a child who I know is facing a lot of adversity, but there would be the look of pure joy on their face. That's why I chose the University for HDFS. For moments like these.

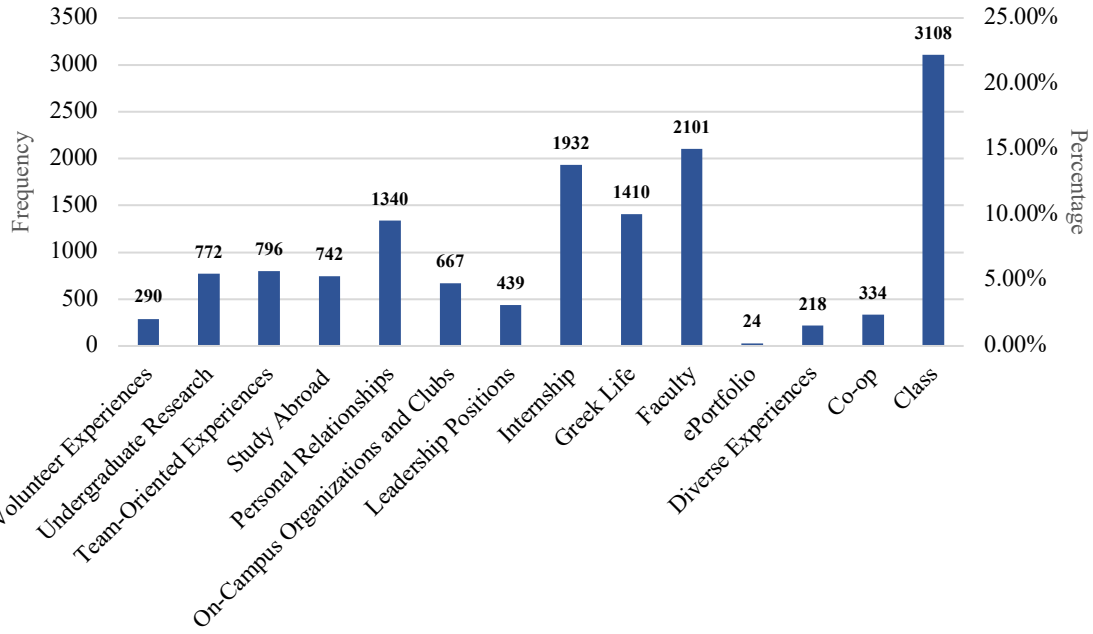


Figure 2. *Frequency and Percentage of Peak Learning Moment Responses per the Top 14 Themes at the Institution Level*

Crosstab Query: Analysis of Themes across Gender

Because students are not only diverse in their experiences but also in their individual backgrounds, it is important to consider how certain demographics may impact such experiences. In NVivo, a crosstab query can be used to provide an overview of response patterns, displaying counts for how each theme is distributed across certain attributes like term, college, gender, and so on (Jackson & Bazeley, 2019). For Study 1, the researchers were interested in conducting a crosstab query analyzing the themes across gender. This can be valuable information to help programs address demographic challenges with enrollment. For example, one of the programs focused on in this study is predominately male. If the crosstab query shows that females identify peak learning experiences different from males, the program can work to emphasize inclusion of experiences that are more appealing to females. The results of this query are shown below in Table 3. It is evident that "class" is the most frequently mentioned theme across both male (29%) and female (21%) students. Interestingly, when considering how this institution's HIPs are represented in the table, it appears that females are mentioning internships (17%), study abroad experiences (9%), and undergraduate research (7%) at a higher frequency as opposed to males mentioning co-ops (5%) at a higher frequency. The researchers found this information to be meaningful, yet it sparked additional questions. To elaborate, looking at gender is important, while it also might not give credence to how

students are represented in programs or colleges across campus as many colleges at this Southeastern university differ in their ratio of males to females. It may not necessarily be a gender effect shown below but a curricular effect. It is important to delve further into these differences as the University promotes these experiences for their students and hopes for them to be impactful across the student population.

Table 3. *Frequency of Responses per Theme Across Gender*

Themes	Gender = M	Gender = F	Response Count in Theme
Class	878 (29%)	746 (21%)	1624
Faculty	514 (17%)	620 (17%)	1134
Internship	395 (13%)	619 (17%)	1014
Greek Life	285 (9%)	485 (13%)	770
Personal Relationships	358 (12%)	360 (10%)	718
Study Abroad	117 (4%)	336 (9%)	453
Undergraduate Research	137 (5%)	234 (7%)	371
On-Campus Clubs & Organizations	166 (5%)	214 (6%)	380
Team-Oriented Experiences	218 (7%)	198 (6%)	416
Leadership Positions	80 (3%)	153 (4%)	233
Volunteer Experiences	37 (1%)	131 (4%)	168
Diverse Experiences	39 (1%)	83 (2%)	122
Co-op	156 (5%)	52 (1%)	208
ePortfolio	6 (.2%)	9 (.3%)	15
Total (unique)	3021	3597	6618

Note. A heatmap is displayed to highlight the frequency of responses per theme based on lowest (red) to highest (green).

Study 1 was useful in identifying themes at the institution level as it relates to students' peak learning moments, along with exploring how the themes are represented across genders. While within Study 1 the researchers began exploring other areas of interest, like themes across gender, there was a desire to delimit the sample population to examine themes at lower levels, like across departments, colleges, or programs. The purpose of this was twofold: (1) to identify if such differences in frequency of responses in themes across gender was more curricular in nature, and (2) to create more generalizability to other institutions hoping to conduct similar research but not having university-wide capacity.

Method - Study 2

Participants and Procedures

The purpose of Study 2 was to compare two colleges, a College of Architecture, Design, & Construction (CADC), and a College of Human Sciences (CHS), to see how their students responded to the peak learning moment prompt. The two colleges have similar levels of hands-on learning and design-focused mission. Being able to see similarities and differences in student responses and the frequency of responses within the existing 14 themes could inform practices within those colleges. Additionally, while the two have

similar missions, they differ in their gender distribution within the college and employ some different curricular structures, requirements, and opportunities for students. Because this study expanded upon Study 1, the researchers used the same sample of data from the campus engagement and experience survey, along with the same 14 themes. Again, N = 17,867 responses were included in the NVivo file and then delimited to student responses only from the two colleges.

Crosstab Query: College Comparison and College by Gender Comparison Analyses

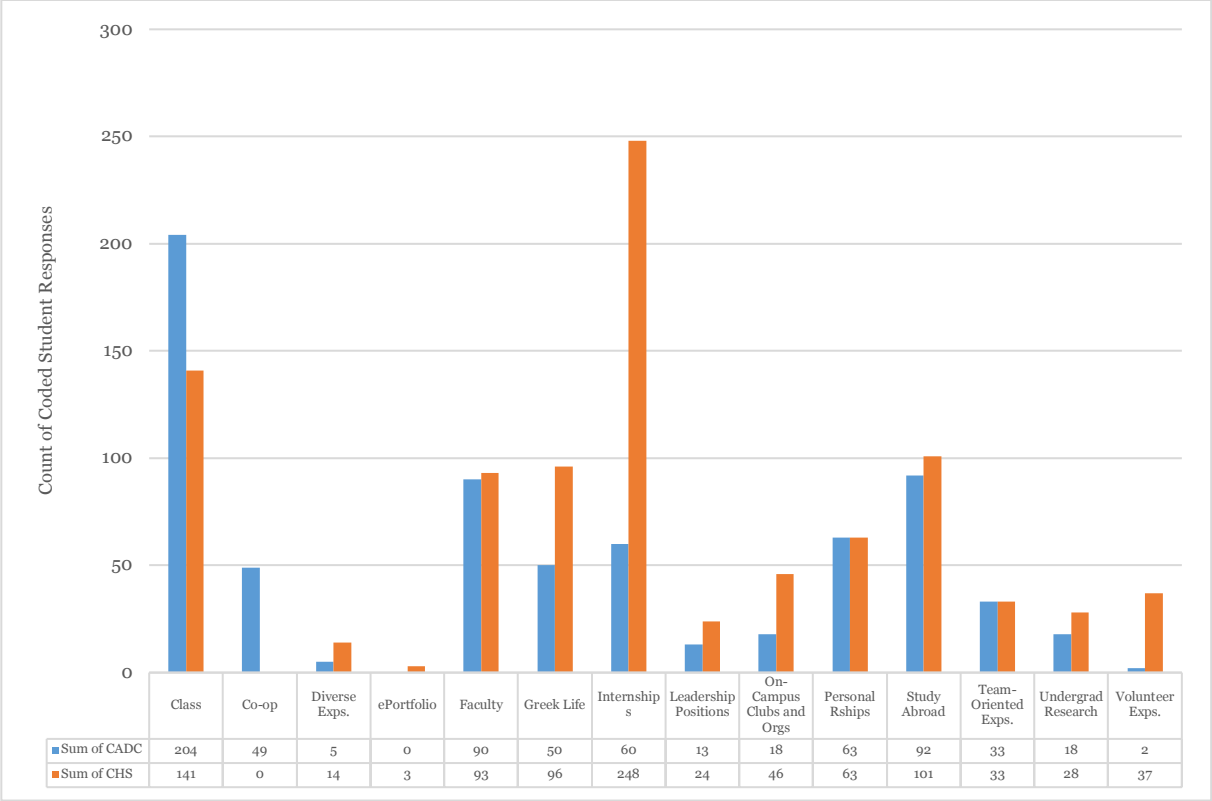
Two crosstab queries were run to address the research questions for Study 2, identifying the frequency of responses per theme between the two colleges, then exploring the differences by gender.

Results - Study 2

The initial results of Study 2 can be found in Figure 3, displaying the frequency of themes by college. Of note, 615 graduates of a CHS were represented in this data, with 93% of that total being female. With this gender distribution, the researchers did find similar trends between the top responses for females in a CHS when compared to the institution level across gender, with many female students mentioning internship experiences. In a CADC, there were 525 graduates represented in this data, with 34% of that total being female. The three themes mentioned with the highest frequency by both colleges are "class", "faculty", and "study abroad". When considering the ingrained experiences in each college, it makes sense that students in a CHS, who do not have co-op opportunities available to them, did not identify those experiences as peak learning moments. On the contrary, because of their required internship program, internships are mentioned most frequently by these students. Interestingly, students in a CADC have many studio-based classes that may heighten the mention of experiences by students about their transformative learning in the classroom.

The qualitative comments do provide additional depth to what quantitative data may have revealed regarding peak learning moments. One of the quotes about class specifically noted the importance of the "cohort" in a CADC. This approach puts a group of students in the same set of classes for a minimum of two years. Similarly, the quotes on internships demonstrate the importance of connecting classroom material to the real world in CHS.

The degree to which the co-op in a CADC and internships in a CHS was referenced is interesting. Co-ops in a CADC are available to only 7.5% of graduates. However, 7% of peak learning moment responses in a CADC noted that they had their peak experience through a co-op. This appears to imply that for students that did a co-op, it was typically their peak learning moment. The same does not hold true for internships, where less than 8% reported it as a peak experience in a CADC while it was available for 100% of the students at multiple times during their studies. In comparison, internships in a CHS were reported as peak experiences for 27% of their respondents. Internships in a CHS are required for multiple majors, and these are formalized, structured programs. Further study is warranted to understand why peak learning moments related to work experiences seem to occur more frequently in some settings than others.



	Class	Co-op	Diverse Exps.	ePortfolio	Faculty	Greek Life	Internships	Leadership Positions	On-Campus Clubs and Orgs	Personal Rships	Study Abroad	Team-Oriented Exps.	Undergrad Research	Volunteer Exps.
Sum of CADC	204	49	5	0	90	50	60	13	18	63	92	33	18	2
Sum of CHS	141	0	14	3	93	96	248	24	46	63	101	33	28	37

Notes. The trendlines represent the moving averages for both colleges across themes. CADC= College of Architecture, Design & Construction. CHS = College of Human Sciences.

Figure 3. *Frequency of Top 14 Themes and Comparison of Colleges*

The researchers hoped to further examine if the gender differences found in Study 1 at the institution level were in fact attributed to gender or instead because of curricular differences. References to class experiences differ by college and by gender which influences the institutional breakdown. Importantly, within a CADC, there were consistently high percentages of mentions about class experiences for both genders (29% of males and 35% of females). This leads the researchers to believe that the results of the institutional analyses by gender may have been impacted more by the college the students are in, which highlights curricular differences.

Discussion

The results of Studies 1 and 2 provide insight as to what types of transformative peak learning moments are taking place during college (within a single sample). The 14 identified themes appear to encompass a wide range of student experiences, including more nuanced ones like relationships with faculty or peers and team-oriented learning. According to the Wabash National Study, there are "three good practices that promote student learning: academic challenge and high expectations, diversity experiences, and good teaching/high-quality interactions with educators" (Goodman et al., 2011, p. 4). These practices seem to align well with the top two themes of "class" and "faculty", which supports the University's goal to foster experiences that researchers identify as best practices for learning.

The top two peak learning moments of "class" and "faculty" emphasize the importance of the educational experience in developing peak learning moments. Students who mentioned key words related to "class" highlighted challenging projects that developed time management and design skills, knowledge gained in the classroom, and having the chance to apply their expertise in studio settings. Students who mentioned key words related to "faculty" highlighted how their professors supported them, provided guidance, and gave helpful critiques that improved their skillsets. As institutions focus on the "student experience" and direct funding to initiatives that support that experience, they would be well-served to realize that peak learning moment data indicates the most common ones are associated with education and not with other out-of-class activities. Engaging classrooms, passionate professors, and mentors challenge students deeply and challenge them to think critically and develop skills necessary for lifelong learning. Connections forged with faculty and the wisdom gained from their expertise continue to shape and influence young minds positively. These interactions create transformative experiences for students and prepare them for impactful lives.

Regarding the crosstab query analyses for student attributes, the researchers found that the differences in frequency of responses by theme may be less affected by gender and more by college. This is beneficial information to have, as there are more ways institutions can improve curricular experiences for their students. For example, at this Southeastern university, it would be fruitful for the colleges to learn from one another in making curricular changes. A CHS could learn more from a CADC about what they do to make such impactful "class" experiences. A CADC might be able to learn more from a CHS about how their internships are so impactful.

Limitations

There are limitations worth noting. As previously mentioned, the researchers prompted students to respond with a transformative peak learning moment. While the prompt was expected to engage students to think about meaningful, memorable experiences, students had to define this for themselves. This could present slight error in the data as they may have not interpreted it as the researchers intended. And in relation to the subjective nature of this question, using self-reported data also lends itself to potential error. As is the case with most survey-based research, one limitation to this research is the bias that comes from collecting self-reported data. Indeed, this study relies on a graduation survey where students are asked to report their peak learning, at a time point that may be long after the experience has concluded. The nature of this survey is also low-stakes, which may not provide a lot of buy-in from students to respond with the best insights. However, the research benefits from having near census-level reporting from graduating seniors and allows for an analysis that explores trends and provides value through the review of themes rather than specific details of individual responses. In addition, the researchers expect that this data adds value by being jointly considered with other institutional and learning outcome data. And finally, the purpose of collecting these responses was to collect student perceptions, without locking them into responding about moments that were suggested to them.

It is important to note that because the data includes semesters of students who were impacted by the COVID-19 pandemic, certain experiences for student engagement may have been limited throughout this period of data collection (i.e., study abroad). The

lasting effects of the pandemic are expected to influence the educational landscape for the foreseeable future. The researchers believe that while certain experiences may have been limited or decreased during some of these academic semesters, the students were still prompted to consider their peak learning moments across their entire undergraduate journey. Therefore, the students can still recall other impactful experiences they may have had the opportunity to participate in, and their responses reflect the current state of higher education. Additionally, there was no pre-COVID data to compare to this, which would be worth exploring in a future study now being multiple years out of the height of the pandemic. The researchers do not expect that the themes would change drastically, but that an increase in certain experiences (e.g. study abroad) may shift the frequency or prevalence of certain themes.

Generalizability

Despite these limitations, this research has considerable generalizability to other institutions. The University has an ongoing and well-established data collection process that explores student experiences and success outcomes which other institutions have the opportunity to do as well, even if on a smaller scale. Institutions can collect qualitative data, whether through course-level surveying, broader surveys upon graduation, or focus groups with samples of students. And yet, institutions often collect this data only to let it remain underutilized because of how unwieldly it can be. While the researchers had a paid-for qualitative analysis software, there are free tools and AI-based software that make qualitative data analysis increasingly more attainable. Of note, a manual coding process is entirely possible depending on the size of the dataset and clearly used in this research as well to refine the analyses as best as possible. This research expands our understanding of how students' perceptions about their learning can be captured and analyzed in concert with more direct and quantitative metrics.

The qualitative data can and should be paired with other data to tell a more complete story of how, when, and where students are learning. And the 14 themes identified in this research appear to be generalizable across other research institutions that have very applied experiences built into their curriculum and degree offerings. Generally, these themes may not be a perfect fit for other institutions and their student body with different majors, required experiences, etc. The purpose of the present research study is not to state that these are the top themes across all institutions, but to provide a roadmap of how an institution explored peak learning moments in their student population of graduates, aiming to use this data to inform institutional practices and approaches to further enhance student learning and engagement.

Future Research

This research can inform both longitudinal studies and broader institutional practices. First, in relation to longitudinal research, it is worth identifying peak learning moments for both incoming students and alumni. The incoming students could provide peak learning moments from their formative years before college, and alumni could provide insight into whether their originally stated peak learning moments remained post-graduation. The latter would provide insight into how their peak learning impacted their success in their post-college endeavors.

There is opportunity to introduce the concept of "peak learning moments" earlier in a student's undergraduate journey. This would help students recognize, seek out, and reflect on these experiences throughout their education in ways that align with the University's desired approach. A key aspect of this University's mission is to not only provide accessibility to these experiences, but also to prepare students to articulate their learning for future success. It would be valuable to research whether additional preparation during peak learning experiences—specifically focused on articulating these experiences—enhances students' ability to achieve successful outcomes compared to those who do not receive this targeted support.

Conclusion

Understanding student learning experiences through qualitative data, like the peak learning moment question studied in this research, offers complementary insights that are crucial for assessment of the educational process. In addition to depth and nuance of data, the individual perspectives provided here offer a window into the world of each student allowing an institution to tailor instruction and support individual student needs. In addition, the comments provide information on how and why students learn and shed light on the emotional and motivational factors that add to learning. This in and of itself demonstrates significant value added by exploring qualitative data. The findings of this research emphasize the value of understanding student learning and respective experiences with approaches that may provide greater depth of understanding when viewed in conjunction with quantitative research.

References

Blaney, J., Filer, K., & Lyon, J. (2014). Assessing high impact practices using NVivo: An automated approach to analyzing student reflections for program improvement. *Research & Practice in Assessment, 9*(1), 97-100. https://eric.ed.gov/?id=EJ1062704

Goodman, K. M., Magolda, M. B., Seifert, T. A., & King, P. M. (2011). Good practices for student learning: Mixed-method evidence from the Wabash National Study. *American College Personnel Association and Wiley Periodicals, Inc., 16*(1), 2-9. https://doi.org/10.1002/abc.20048

Harper, S. R., & Kuh, G. D. (2007). Myths and misconceptions about using qualitative methods in assessment. *New Directions for Institutional Research, 2007*(136), 5-14. https://doi.org/10.1002/ir.227

Heath, C., & Heath, D. (2017). The power of moments: Why certain experiences have extraordinary impact. Simon & Shuster.

Jackson, K., Bazeley, P., & Bazeley, P. (2019). *Qualitative data analysis with NVivo*. Sage.

Kramer, P., Ideishi, R., Kearney, P., Cohen, M., Ames, J., Shea, G., Schemm, R., & Blumberg, P. (2007). Achieving curricular themes through learner-centered teaching. *Occupational Therapy in Health Care, 21*, 185–198. https://doi.org/10.1080/J003v21n01_14

Kuh, G. D. (2008). High-impact educational practices: What they are, who has access to them, and why they matter. Washington D.C. AAC&U.

Kuh, G. D., & O'Donnell, K. (2013). Ensuring quality and taking high-impact practices to scale. *Peer Review, 15*(2), 32. https://link.gale.com/apps/doc/A339018909/AONE?u=anon~eb93e534&sid=googleScholar&xid=c45ecfdf

Nelson, T. E., Shoup, R., Kuh, G. D., & Schwartz, M. J. (2008). The effects of discipline on deep approaches to Student learning and college outcomes. *Research in Higher Education, 49*(6), 469–494. https://doi.org/10.1007/s11162-008-9088-5

Newhart, D. W. (2015). To learn more about learning: The value-added role of qualitative approaches to assessment. *Research & Practice in Assessment, 10*, 5-11. https://www.rpajournal.com/dev/wp-content/uploads/2015/06/A1.pdf

Patton, M. Q. (2002). Qualitative Research and Evaluation Methods (3rd ed.) Thousand Oaks, CA: Sage Publications.

Peck, K., Furze, J., Black, L., Flecky, K., & Nebel, A. (2010). Interprofessional collaboration and social responsibility: Utilizing community engagement to assess faculty and student perception. *International Journal of Interdisciplinary Social Sciences, 5*(8), 205–221. https://doi.org/10.18848/1833-1882/CGP/v05i08/51853

Qualitative Research Methods in Program Evaluation: Considerations for Federal Staff. (May 2016). Office of Data, Analysis, Research & Evaluation Administration on Children, Youth & Families. https://acf.gov/sites/default/files/documents/acyf/qualitative_research_methods_in_program_evaluation.pdf

Waterhouse, P., Creely, E., & Southcott, J. (2021). Peak moments: A teacher-educator reflects (with colleagues) on the importance of heightened moments of teaching and learning. *Teaching and Teacher Education, 99*, 1-10. https://doi.org/10.1016/j.tate.2020.103275

Welsh, E. (2002). Dealing with data: Using NVivo in the qualitative data analysis process. In *Forum qualitative sozialforschung/Forum: qualitative social research*, *3*(2). http://nbn-resolving.de/urn:nbn:de:0114-fqs0202260.