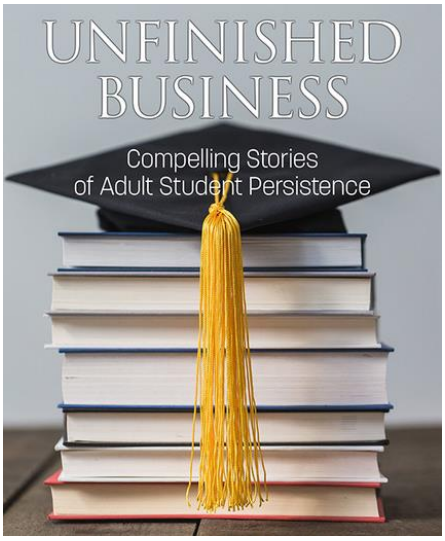
The Adult Higher Education Alliance



44th Annual Conference Proceedings

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What is AHEA?

The purpose of the Adult and Higher Education Alliance (AHEA) is to help institutions of higher education develop and sustain learning environments and programs suitable for adults.

AHEA does this by:

- Providing a forum for professional educators to share resources and information about alternative degree programs on a national and international level.
- Stimulating practitioner research, thereby contributing to the integration of theory and practice and promoting the improved quality of our efforts.
- Serving as a vehicle for cooperative consultation and collaboration among professionals in the field.
- Integrating the interests and concerns from a variety of areas within adult higher education including distance, international, and liberal education.
- Promoting rights of adult students.
- Influencing institutional and public policies concerning the principles of quality practice applied to adult education.
- Promoting cultural diversity and multicultural perspectives and maintaining that commitment through the incorporation of such perspectives into the policies, procedures, and practices of alternative degree programs for adults.

Letter from the Editors

Dear Reader,

We are pleased to present the Proceedings of the 44th annual conference of the Adult and Higher Education Alliance (AHEA), held at the University of Central Florida in March 2020. We wish to extend special thanks to the AHEA Board of Directors, members, and contributors. Without their support, this publication would not be possible.

To the AHEA Board of Directors, thank you for your continuous efforts to support mission of AHEA through your outreach, service, and perseverance. To the members of the Adult and Higher Education Alliance, you are the reason we do what we do, and you are the backbone of AHEA's growth, networking, and collaboration. Thank you for your membership and participation in our organization and at our conference each year.

To those who contributed papers for these Proceedings, thank you for contributing your research, theory, and practice to our collective knowledge. Through your work, collected in this document, we can strengthen our efforts to educate and serve adult learners in a variety of contexts. We appreciate your service to the larger community of professors, educators, and practitioners. This year, especially, we acknowledge your extra effort to compose these papers while navigating all the uncertainties of COVID-19. Thank you.

As AHEA continues to grow, we are always seeking new ways to contribute our shared endeavor of educating adults. Your feedback and ideas for expanding our impact matters; we look forward to hearing from you. Enjoy your read of the variety of engaging topics related to Adult and Higher Education.

Thank You,

Joann, Kemi, and Lauren

Welcome from the AHEA President

Thank you for your interest in the Proceedings of the 43rd annual conference of the Adult and Higher Education Alliance. We met at the University of Central Florida and the Morgridge International Reading Center to explore this year's theme: "*Unfinished Business: Compelling Stories of Adult Student Persistence."*

Our time together allowed us to explore this theme as graduate students, faculty, administrators, and practitioners. During the conference, we had the opportunity to hear about widely varying approaches to the best practices related the intersection of higher education and working-class students, scholars, and practitioners. Through these proceedings, you can join this conversation!

Make plans to join us for next year's conference, which is held every year in March. Find more information at www.ahea.org

Jeff Aulgur, Ed.D.
President, AHEA, 2019-2021

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Enhancing Pedagogy in the Virtual Classroom:
An Exploration of Qualitative Student Assessment

Jeff Aulgur

Abstract

Pedagogy, as it is commonly understood, is a generic term describing the educator-centered delivery of content to the learner. In a traditional learning environment, the learner has little, if any, control over how or when he or she interacts with the materials and learning activities. This pedagogical construct offers limited opportunities for one to examine the content through the lens of the individual lived experience, which mitigates the need to learn on the part of the adult learner. According to Alfie Kohn (1993), rewards serve the same function as punishments: They allow those with more power to exert control over those with less. In traditional quantitative student assessment constructs, grades are both punishments and rewards. By eliminating conventional points-based grading, or ungrading, Susan Blum argued, students are empowered to direct their learning outcomes based upon individual motivation and interests. This paper describes the implementation of an ungrading journey, conducted across two separate academic terms, in a senior-level asynchronous online course.

Key Words: andragogy, ungrading, adult learners, online

Truly effective teaching changes students. "[It] reminds us of the primacy of learning, not teaching, in education. Learning is the end, teaching I a means to that end."

Donald L. Finkel (2000, p. 8)

Eduard C. Lindeman, an early 20th-century pioneer of adult learning theory, offered this definition of adult education:

> A cooperative venture in nonauthoritarian, informal learning, the chief purpose of which is to discover the meaning of experience; a quest of the mind which digs down to the roots of the preconceptions which formulate our conduct; a technique of learning for adults which makes education coterminous with life and hence elevates living itself to the levels of adventurous experiment. (Knowles et al., 2015, p. 21)

Writing four decades before the publication of Paulo Freire's *Pedagogy of the Oppressed* (1970), Lindeman indicated the best adult learning occurs in the environment that facilitates shared authority between the student and the instructor, primarily if one cannot determine if the balance ledger of learning favors either party (Knowles et al., 2015). Pedagogy, as it is commonly understood, is a generic term describing the educator-centered delivery of content to the learner. In such an environment, the learner has little, if any, control over how or when he or she interacts with the materials and learning activities. This pedagogical construct offers limited opportunities for examining the content through the lens of the individual lived experience, which mitigates

the need to learn on the part of the adult learner. As summarized by Knowles et al. (2015), learners learn what they must as determined by the pedagogical educator, motivated by extrinsic rewards and punishment, with little to no importance given to the learner's experience. The only expected outcome of the learner is to master the subject content as provided by the educator.

Malcolm Knowles, beginning in 1950, began to develop an approach to learning focused on meeting the needs of adult learners, which he eventually identified as andragogy. Six primary assumptions establish the andragogical model's foundation (Knowles et al., 2015):

- The need to know
- The learner's self-concept
- The role of the learners' experiences
- Readiness to learn
- Orientation to learning
- Motivation.

In contrast to the pedagogical model, the andragogical construct, as described by Knowles et al. (2015), is a process model. This instructional paradigm demands the instructor to serve in the role of facilitator, responsible for preparing an educational environment where learning needs and learning outcomes are based not entirely upon the subject content but on the needs and desires of the adult learner.

Assessment in Teaching and Learning

The construct of learner assessment in higher education is dominated by the quantitative assessment paradigm, where the student submits a course requirement with a pre-determined point value. Based on a rubric or instructor subjectivity, the learner earns a percentage of the points allotted to the element. More often than not, at the end of the course, the student receives a final grade based upon a percentage of total points available in the class. Is this mostly unquestioned model the best to facilitate learning outcomes in adult learners based upon andragogical principles?

In his seminal 1993 book *Punished by Rewards,* Alfie Kohn examined the use of rewards and punishments—and the role of motivation—in the educational process. Kohn's main critique of rewards and punishments (as quantitative grades may be viewed as either) in education centers on motivation. He assumes people understand that punishing people—whether students, employees, or one's children—is ineffective. Addressing the motivation to learn, he wrote, "At any age, rewards are less effective than intrinsic motivation for promoting effective learning" (p. 143) and "rewards for learning undermine intrinsic motivation" (p. 148). According to Kohn, rewards serve the same function as punishments: They allow those with more power to exert control over those with less.

Ken Bain (2004) discussed the desire of teachers to achieve deep learning in their students as opposed to content mastery of the subject matter. One identified approach to attain deep learning is to create what Bain described as the "natural critical learning environment." In that environment, "people learn by confronting intriguing, beautiful, or significant problems,

authentic tasks that will challenge them to grapple with ideas, rethink their assumptions, and examine their mental models of reality" (p. 18). The natural critical learning environment, according to Bain, creates the space and opportunity for learners to explore topics of curiosity in a safe learning environment. Jose Bowen's (2012) *Teaching Naked* argued learning is not the transfer of facts and objective statements from the instructor to the learner; learning occurs when the context of the knowledge is acquired by the student. The natural tendency of the learner is to evaluate, if not digest, the information received through their fundamental world paradigm formed during the lived experience journey: "Students and teachers alike have a hard time learning things that contradict their current understanding of the world; most of us believe that the new information we receive confirms our earlier beliefs, theories, interpretations, and arguments" (Bowen, 2012, p. 87). According to Bowen, the context for learning for the individual student is the one he or she brings to the classroom.

Ungrading

An article in *The Chronicle of Higher Education* (Supiano, 2019), Susan Blum, a professor at the University of Notre Dame, described how she reached the conclusion that traditional grading paradigms create barriers to effective learning interactions between professors and students. By eliminating conventional points-based grading, or ungrading, Blum argued, students are empowered to direct their learning outcomes based upon individual motivation and interests. Ungrading offers a student the opportunity takes risks without the result negatively impacting the grade received on the assignment. This paper describes the implementation of an ungrading journey, conducted across two separate academic terms, in a senior-level asynchronous online course.

Course-level Learner Assessment Construct

Within the confines of the online classroom, it is critical to direct learners to the information they must know to establish a foundation for a successful experience. To achieve this goal, students are directed to an identified starting point within the course learning management system (LMS). The *Start Here* module contains an introduction to the course, the instructor's profile, course syllabus and schedule, an introduction to the learner's course self-assessment, a self-assessment quiz, and a syllabus quiz. Through either reading the syllabus or completing the syllabus quiz the student first is introduced to the qualitative assessment construct. From the syllabus:

> As noted above, individual numerical points are not given for any assignments in this course. You will be provided with written feedback on each assignment, indicating areas of strength and areas of potential improvement. Multiple check-in opportunities are offered during the term. Guidance and input as to your standing in the course are always available through communication with your professor. Critical components to self-assessment and instructor assessment are demonstrating improvement throughout the course as well as accepting the guidance provided by your instructor.

The *Start Here* module further enhances the student's understanding of the qualitative assessment construct with the introduction of the comprehensive learner self-assessment

template, as well as a one-on-one conversation with the instructor at the conclusion of the course. The template provides the student with the outline and guidance necessary to develop the self-assessment as the course progresses. Students are encouraged to use the document as a working draft during the term for submission the final week; however, they are also advised that deferring the development of the self-assessment to the last week of the course may present challenges to success in the class. The introduction to the learner self-assessment reinforces course's qualitative assessment construct:

> In this course, you will not receive grades (or points) on individual assignments. You will receive timely and written feedback from me on every aspect of the course. As part of your assessment, I will evaluate your engagement with the course materials and your classmates. I will consider your efforts to improve (and act upon my recommendations). You have two opportunities to self-assess your progress during the term. I will meet with you (via video conferencing, email, or telephone) at any point during the course to provide you with feedback and guidance.

The qualitative grading construct creates uneasiness in students, as it is unfamiliar and outside the norms of their previous academic journey (secondary and post-secondary). This uncertainty is acknowledged: "This approach may make many of you uneasy or uncomfortable. Do not be concerned. You will receive regular reinforcement."

A single-item quiz contained in the *Start Here* module requires the student to actively acknowledge the qualitative course assessment by typing the following paragraph:

> I understand the final grade in PS 4143 Nonprofit Governance is based upon my completion of the Portfolio Conference and the Concluding Reflection, and I will recommend a final grade for myself based upon my self-assessment of my course performance and the feedback provided by my instructor. I acknowledge it is my responsibility to communicate with my instructor any questions or concerns regarding my progress in the course [Insert name].

Establishing a clear and concise foundation for qualitative course assessment is imperative to mitigate initial student anxiety and to create a collaborative learning environment.

Individual Assignment Assessment and Learner Guidance

A qualitative approach to learner assessment begins with the instructor's commitment to deliver timely, individualized, and constructive feedback. Implementing holistic qualitative assessment in an online course is not an easy endeavor for the instructor; the method necessitates developing knowledge of each student's strengths and potential areas of improvement to achieve the desired course learning outcomes. Constructive written feedback and guidance, combined with a traditional grading rubric, provides the student with a comprehensive assessment.

The discussion forums in the course, as is the case with the majority of course assignments, challenge the student to examine the course materials and learning activities through the lens of lived experience; learners receive constant reinforcement that the instructor does not seek a single "correct" response. It is the engagement with the subject matter by the student, and the subsequent interaction with one's peers, that drives the learning experience in the virtual

classroom. The discussion forum rubric offers non-quantitative feedback on the quality and quantity of the student's engagement, along with timeliness and communication proficiency. Each domain is noted as Excellent, Average, Good or Below Expectations, and the provided descriptions of each area offer detailed feedback to the student. The instructor's qualitative assessment personalizes reinforcement and constructive guidance. For example,

> Thanks, [Student name]:
>
> Your initial post is excellent. You provide a complete analysis and presentation in your response to both prompts. Your writing is clean and robust. I do not have any specific recommendations. Please keep up the excellent work. You offer three exceptional peer responses, all of which enhance engagement in the course as well as contributing to the academic conversation. I appreciate your willingness to ask questions of your peers (as this increases engagement). While not used for quantitative assessment, please check the rubric assessment for additional feedback and guidance. Overall, exceptional work.
>
> -Jeff

The guidance provided, by identifying best practices and areas of improvement, must allow the student the ability to assess performance on the assignment. The integrated model of written qualitative assessment and a formal evaluative rubric is utilized for all learning assessment activities contained in the course.

Initial Learner Self-Assessment

The student submits an initial self-assessment during the fourth week of the 15-week journey. This assignment asks the learner to respond to seven open-ended questions regarding the learning experience to date, as well as the construct of the course design and delivery. The instructions provided to the student reinforce the instructor's desire to hear each student's voice:

> I am most interested in the depth and consideration given to your self-assessment. Your feedback guides how to mentor you for the remainder of the course, and it establishes a benchmark for future self-assessment inquiries.

The initial self-assessment offers the student the following prompts:

> *Question 1*: What work of yours was especially strong in the first four modules? Why? Explain the highlights of your selection.
>
> *Question 2:* What have you learned the most about so far in this course? Did you learn something you hadn't expected to learn about nonprofit organizations?
>
> *Question 3:* Which course activities (so far) stand out to you? Why?
>
> *Question 4:* Which assignments did you find most challenging? Why?
>
> *Question 5:* Did anything we did or learned in the first four modules surprise you? What, and why?

> *Question 6:* Do you have any questions or concerns about the course I may answer for you?
>
> *Question 7:* At this point in the learning journey, what letter grade would you assign yourself? Where might you most improve going forward?

Student responses to the first five questions above allow the instructor to identify any trends, themes, or challenges related to learner experience and performance; however, it is the answers to Question 6 and Question 7 that offer insights to the qualitative assessment experience. In completing Question 6, one student wrote:

> No questions or concerns. I did want to say that I have never had a course with a grading style like yours. As I explained to my wife, I think the meaning of this grading style is to build from your previous assignments. You are learning as you go. Once you get your comments on [a] previous assignment, as a student, you adjust to what is needed of you to strengthen your skills base or work style. The uniqueness of it is refreshing. I wonder why more instructors don't use it as well.

To which I, as the instructor, offered to the student:

> Thanks for the feedback. I want to free learners from "chasing the grade" because students tend to play it safe and stay away from strong opinions and risk-taking. I recognize it is uncomfortable at first, but students adapted well to my first attempt at this style. Pay attention to the feedback offered, and it will give you the guidance you need. Your responses here [the learner self-assessment] are strong.

A primary benefit of the qualitative assessment process, for both learner and instructor, is the honest, objective self-assessment students write. Answering Question 7, one student stated:

> I think, so far, I deserve an A. I have turned everything in on time, and I have put forth ample effort into my work. I have not rushed any of my work, and I have tried to be thorough in all my assignments. In going forward, I hope to continue to put just as much effort and time into my work. I hope to never miss a due date, and I hope to try my hardest with all my work. I think my biggest improvement would be to study the material more thoroughly, and I could answer more people on the discussion boards. Sometimes I skim through some of the reading material at times, because I find it really difficult to focus on the readings and take all the information in. I plan to read a small amount at a time in the future, rather than a large amount in the shortest amount of time possible.

To which I responded, "Excellent self-assessment and supporting justification. Keep up the strong work!" I, as the instructor, did not have to give constructive guidance to the student. He provided it to himself. I simply offered validation.

Mid-Course Learner Survey

The second student touchpoint regarding the qualitative student assessment process occurs during the *Mid-Course Learner Survey*. This learner feedback opportunity allows the student a chance to evaluate the structure of the course and the instructor's engagement and learner

support during the first half of the academic term. The survey opportunity is optional. Students receive guidance that all responses are anonymous within the learning management system, only indicating if one participates or not. The first 13 questions allow the learner to self-assess personal engagement and to offer an evaluation of the instructor's engagement, approachability, and timeliness in assignment assessments. Question 14 asks, "As we near the halfway point in [the course], please share your thoughts, comments, and recommendations regarding the non-numerical grading provided in the course." Examples of student feedback reflect anxiety and uncertainty, combined with statements of enhanced learning.

> "At the beginning of this course, I was concerned about the grading process. We are all conditioned to strive for the best grade possible. But, the feedback givens helps me understand if I am retaining and applying the information provided."
>
> "The non-numerical grading is great for me. . . I appreciate the time and consideration you put into each of the journal responses and the comments in the grade book. I feel it helps me engage deeper with the material, and the insights you offer are valuable to my learning."
>
> "Non-numerical grading is adding stress to this course . . . I appreciate what you are trying to do here, but it is giving me serious concerns and unnecessary stress."
>
> "This course is challenging and a tad bit nerve-wracking because there is no numerical grade to judge your work by. However, the instructor gives prompt feedback which is filled with information about how he feels you are doing in the course, which is significant enough for you to determine if your work is efficient or not."

The uniqueness of, and a lack of student experience with, a non-numerical assessment structure may create levels of uncertainty and anxiety detrimental to the overall learning experience at the mid-point of the course. Future iterations of this assessment construct must include additional protocols early in the term to mitigate learner anxiety. The initial deployment of the qualitative course assessment paradigm occurred during the fall 2019 term; the second iteration was disrupted mid-March 2020 by the emerging COVID-19 pandemic. Students enrolled in future iterations may experience more or less overall anxiety as influenced by both social and political environments.

Student Self-Assessment Portfolio

The critical artifact in the determination of the student's overall grade in the course is the *Student Self-Assessment Portfolio*. Students have the opportunity to build the portfolio over the term, as the template is provided in the course's first module. The self-assessment consists of 10 components:

- Assemble course work, self-assessments, and instructor feedback.
- Read and review assignments, discussion, journal entries, and instructor feedback.
- Identify and assess exceptional course work and potential areas of improvement.
- Connect initial course goals with individual learning outcomes.
- Assess course learning activities (e.g., interest, engagement, level of challenge, etc.).

- Assess individual productivity and engagement with course learning materials.
- Evaluate the course journal for strengths, weaknesses, learning, and missed opportunities.
- Evaluate the overall learning experience at the beginning, midpoint, the course end.
- Recommend a final grade based upon performance.
- Contact the instructor to schedule a concluding one-on-one portfolio review.

Students in the course were provided multiple reminders to initiate the self-assessment portfolio during the term, as it is the most critical artifact in determining a student's final grade in the course. The effort demonstrated in portfolio development ranged from minimal responses to the provided prompts to well-constructed and comprehensive submissions supported with detailed attachments. Correlations between the student's level of performance throughout the course and the quality of the final portfolio were not evident. The student final grade distribution for the fall 2019 term demonstrated no significant variance from previous versions of the course that utilized traditional quantitative assessment protocols. The spring 2020 final grade distribution deviated upwards from previous quantitatively assessed terms; however, the challenges presented in higher education during the semester due to the COVID-19 pandemic, and allowances incorporated to enhance student success and persistence, may reduce the reliability of the term's grade distribution.

Individual Concluding Student Conferences

In place of a standard end-of-course final examination, the course required each student to schedule a one-hour one-on-one conversation with the instructor to discuss the student's self-assessment portfolio and final grade recommendation. Students had the option to meet in person, via telephone, or by video conference. The in-person option was not offered in spring 2020 due to social distancing constraints. Students were informed the end-of-course conversation was not an oral examination, but rather it was a shared conversation about the learner's journey. The instructor initiated the discussion with reflective questions based on the evidence presented in the student's self-assessment portfolio; the second half of the exchange focused on the instructor's guided questions exploring the student's learning experience. The conference concludes with a determination of the student's final grade for the term. The instructor's critical tenet for final grade determination was to accept the student's recommendation, barring evidence during the course warranting an upward or downward revision based on the instructor's experience. Experience gained over two course sessions identified the concluding conversation as exceptionally beneficial for both the instructor and the student, as it provided students insights unavailable in other course activities. While taking into consideration time constraints, future iterations of the course might consider adding one-on-one conversations at the course start or mid-point to alleviate learner anxiety related to the qualitative assessment process.

Conclusion

The concept of ungrading, assessing learners through a qualitative assessment paradigm, is in its infancy within higher education. Based upon the author's experience, implementing ungrading in a single course during a semester enhances learner anxiety, creates unnecessary cognitive

dissonance for students, and requires an extensive time commitment on the part of the instructor. On the other hand, the effective deployment of a well-structured and consistent qualitative assessment protocol appears to increase students' interest in the course subject matter by mitigating risk, and learner exploration based upon one's lived experience.

In the course design, students were required to engage in five processes during the semester: understanding assignment assessment and the importance of instructor guidance, an initial learner self-assessment, a mid-course learner survey, the student self-assessment portfolio, and an individual concluding conference with the course instructor. The evidence indicates students develop a deeper understanding of the assessment construct over the term; however, the benefits after the course may be diminished by the anxiety and uncertainty students experience during the first few weeks of the course. Many of the learner self-assessment portfolios submitted at the end of the term indicate positive learning outcomes influenced by each student's lived experience. Based on the concluding course conversations between the instructor and the student, it is apparent the course experience, as well as the quality of the stated learning outcomes, was enhanced by the implementation of a qualitative assessment paradigm. An overall conclusion of the efficacy of qualitative assessment is yet to be determined, as this study is based upon a limited exploration constrained to the online learning environment. Future research efforts might consider implementing the model in the face-to-face classroom, at the graduate level, and in disciplines one would not normally consider for qualitative assessment (e.g., mathematics, business, chemistry).

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Dr. Jeff Aulgur is the Department Head of the Department of Professional Studies at Arkansas Tech University, and he has served in this capacity since May 2011. Before his academic appointment, Dr. Aulgur served as the Director of the Professional Development Institute at Arkansas Tech University. He earned his Doctor of Education in Workforce Development from the University of Arkansas in 2013. His research focuses on the governance of nonprofit

organizations and the application of governance theory, as well as the influence of Paulo Freire in the online learning environment. Dr. Aulgur's instructional interests include nonprofit organizations, the application of adult learning theory, and leadership theory.

Does Gender Influence Major Selection?
Gender Segregation Within Higher Education

Jennifer Castellanos

Abstract

Currently, women are earning more educational degrees (bachelor's, master's, doctoral) than men, yet gender inequality still exists within higher education. Prior research in higher education shows a relationship between the ascriptions placed on men and women by cultural beliefs and selection of major based on gender. The present study aims to explain the segregation found within higher education caused by gender-ascribed characteristics that encourage both men and women to choose majors according to gender stereotypes.

Keywords: gender segregation, major selection, gender

Women earned 1,082,265 bachelor's degrees, 452,118 master's degrees, and 93,626 doctoral degrees in 2015 compared to the 812,669 bachelor's degrees, 306,590 master's degrees, and 84,921 doctoral degrees earned by men (Digest of Educational Statistics, 2015). These statistics clearly show that women earn more educational degrees than men; however, gender inequality still exists within higher education (Diehl & Dzubinski, 2016; Riegle-Crumb et al., 2016). "For example, women are strongly over-represented among those majoring in education and health fields whereas men are much more likely than women to enter some STEM [Science, Technology, Engineering, and Math] fields" (Riegle-Crumb et al., 2016, p. 2). This gender inequality in the workplace can stem from strongly held cultural beliefs about the attributes of men and women that suggest particular fields of study are better suited for one gender and not the other (Ridgeway & Correll, 2004).

Gender is the behavior, social, and psychological characteristics of men and women and accounts for the way they behave in society (Ayman, 2010). Gender emerges from culture and cultural beliefs which are shared by individuals about how men and women should behave within society (Kluckhohn, 1951). Gender beliefs encourage stereotypes about women's mediocre mathematical skills as opposed to men, making them less suitable for fields like engineering (Riegle-Crumb et al., 2016). There are also similar beliefs about men. Men's lack of nurturing discourages them from pursuing caregiving fields such as nursing (Schrock & Schwalbe, 2009). There is a clear relationship between cultural beliefs about gender and education. According to Riegle-Crumb et al, (2016), those beliefs "contribute to educational and ultimately occupational segregation by discouraging multitudes of young men and women from even considering, let alone choosing, to enter certain fields of study" (p. 2; Correll, 2004; DiDonato & Strough, 2013; Eccles, 2007).

Gender segregation in higher education is a key factor in understanding gender inequality in the workplace (Barone, 2011). It has been estimated that 15 to 25 percent of the gender income gap can be explained by the choice of program among college graduates (Brown & Corcoran, 1997; Bobbitt-Zeher, 2007). Gender segregation may discourage incoming men and women from pursuing careers for which they may be especially talented; this may be to the disadvantage of society (Ransom, 1990, p. 477). Gender expectations and opportunities have hindered many women from entering quantitative fields (mathematics, science, engineering; Ethington & Wolfe, 1988), not to mention fields stereotypically deemed more suitable for men.

Research Questions

Prior research in higher education shows a relationship between cultural beliefs and selection of major based on gender (Riegle-Crumb et al., 2016, p. 2; Correll, 2004; DiDonato & Strough, 2013; Eccles, 2007). Drawing from the relationship between cultural beliefs and the selection of major according to gender, this study was conducted. Specifically, this study explored these research questions:

1. Is there a significant association between gender and selection of major at four-year institutions?
2. Is there a significant association between ethnicity and selection of major at four-year institutions?

Research Design

Participants and Sampling

To compare student selection of major by gender and ethnicity (African American, White, and Hispanic), previously gathered data was used among three institutions (Florida International University, University of Miami, Barry University). The data was gathered by Integrated Postsecondary Education Data System (IPEDS) in 2016. The data included number of students enrolled in the fall, by race/ethnicity, gender, attendance (full- or part-time) status, and level of student for selected major fields of study. The major field of studies included: Education, Engineering, Biological Sciences/Life Sciences, Mathematics, Physical Sciences, Business Management and Administrative Services, Law, Dentistry, and Medicine. Institutions used had traditional academic calendar years (semester, quarter, trimester, or 4-1-4) and reported their enrollment as of October 15 or the official fall reporting date of the institution. There were 36,464 students enrolled in the three institutions.

Procedure

To support the research purpose of understanding whether there is a significant association between gender and selection of major, Chi-Square was used. This method allows for the independent variable (frequencies of both genders; males and female students) to be analyzed according to their section of the dependent variable. The dependent variable included 8 different majors (education, engineering, law, biological sciences, math, physical sciences, medicine, and business sciences). When using frequency and two classification variables (gender and selection

of major) contingency table analysis is the best method to use. This method explains whether the distribution of one variable is contingent on a second variable. Table 1 shows the frequencies according to gender and selection of major according to three four-year institutions within the South Florida area.

Table 1
Contingency Table for Selection of Major According to Gender

	Edu	Engin	Law	Bio	Math	Psy Sc	Med	Bus	Total
Males	1,519	3,484	990	2,657	211	846	688	8,183	17,736
Females	1,604	1,100	1,037	4,548	132	742	614	8,109	18,728
Total	3,123	4,584	2,027	7,205	342	1,588	1,302	16,292	36,464

Table 2 shows the frequencies according to ethnicity and selection of major according to three four-year institutions within the South Florida area.

Table 2
Contingency Table for Selection of Major According to Ethnicity

	African American	Hispanic	White	Total
Education	557	1,737	504	2,798
Engineering	361	2,185	683	3,229
Law	169	703	850	1,722
Biological Sciences	758	3,760	1,335	5,853
Math	33	147	79	259
Physical Sciences	102	796	302	1,200
Business Sciences	1,578	8,342	2,898	12,818
Total	3,558	17,670	6,651	27,879

Results

Difference in Major Selection

After organizing the data by frequency, Chi-Square analysis was conducted to understand the chances of choosing a selected major according to gender (male and female). Pearson Chi-Square shows that there is a significant association between gender and major within the three institutions (2743.870, $p<0.01$). Pearson Chi-Square also shows a significant association between the three ethnicities (African American, White, and Hispanic) and the selection of major (843.776, $p<0.01$). Table 3 shows the Chi-Square value for the test analyzing gender and selection of 8 majors among three institutions.

Table 3
Chi-Square Tests (Gender & Selection of Major)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2743.870	7	.000
Likelihood Ratio	2872.812	7	.000
Number of Valid Cases	36,464		

Zero (0) cells had an expected count of less than 5. The minimum expected count is 166.83. Table 4 shows the Chi-Square value for the test analyzing three ethnicities and the selection of 8 majors among three institutions.

Table 4
Chi-Square Tests (Ethnicity & Selection of Major)

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	843.776	12	.000
Likelihood Ratio	742.947	12	.000
Number of Valid Cases	27,879		

Zero (0) cells had an expected count of less than 5. The minimum expected count is 33.05.

Within males, there is a 3.8% chance of choosing education, 19.6% chance in engineering, 5.6% chance in law, 15% chance in biological sciences, 1.2% chance in math, 4.8% chance in physical sciences, 3.9% chance in medicine, and 46.1% chance in business. Within females, there is a 13.1% chance of choosing education, 5.9% chance of engineering, 5.5% chance in law, 24.3% chance in biological sciences, 0.7% chance in math, 4% chance in physical sciences, 3.3% chance in medicine and 43.3% chance in business. Table 5 shows the chance percentages of a student (whether male or female) of choosing between 8 different majors.

Table 5
Cross Table with Percentages for Selection of Major According to Gender

	Edu	Engin	Law	Bio	Math	Psy Sc	Med	Bus	Total
Males	3.8%	19.6%	5.6%	15%	1.2%	4.8%	3.9%	46.1%	100%
Females	13.1%	5.9%	5.5%	24.3%	0.7%	4%	3.3%	43.3%	100%
Total	8.6%	12.6%	12.6%	5.6%	0.9%	4.4%	3.6%	44,7%	100%

Table 6 shows the frequencies according to ethnicity and selection of major according to three four-year institutions within the South Florida area

Table 6

Cross Table with Percentages for Selection of Major According to Ethnicity

	Edu	Engin	Law	Bio	Math	Psy Sc	Bus	Total
African American	15.7%	10.1%	4.7%	21.3%	0.9%	2.9%	44.4%	100%
Hispanic	9.8%	12.4%	4%	21.3%	0.8%	4.5%	47.2%	100%
White	7.6%	10.3%	12.8%	20.1%	1.2%	4.5%	43.6	100%
Total	10%	11.6%	6.2%	21%	0.9%	4.3%	46%	100%

Within African American students, there is a 15.7% chance of choosing education, 10.1% chance in engineering, a 4.7% chance in law, 21.3% chance in biological sciences, 0.9% chance in math, 2.9% chance in physical sciences, and 44.4% chance in business. Within Hispanic students, there is a 9.8% chance of choosing education, 12.4% chance of engineering, 4% chance in law, 21.3% chance in biological sciences, 0.8% chance in math, 4.5% chance in physical sciences, and 47.2% chance in business. Within White students, there is a 7.6% chance of choosing education, 10.3% chance of engineering, 12.8% chance in law, 20.1% chance in biological sciences, 0.9% chance in math, 4.3% chance in physical sciences, and 46% chance in business.

Implications Within Higher Education and the Workplace

Gender segregation is "the employment of men and women in different industries, occupations, firms, or jobs (Perry et al., 1994), but it can also be seen within higher education. Gender segregation can be attributed as the root cause of the gender gap within the workplace (Perry et al., 1994). "The segregation is apparent both horizontally—simplified as women working with 'people' and men with 'things' (Su et al. 2009)—and vertically, with men dominating superior positions across sectors" (Tellhed et al., 2017, p. 86; Blackburn et al. 2014). This remains true within relatively gender-equal countries like for example Sweden (European Commission 2009, 2014; Tellhed et al., 2017; World Economic Forum 2014).

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Coming to America:
Current Immigration Policies Embraced by International Students Majoring in STEM

Aynur Charkasova & Yvonne Hunter-Johnson

Abstract

In the 2018-2019 academic year, 1,095,299 international students were enrolled in U.S colleges and universities. Of this number, 33% came from China, followed by India (18%) and South Korea (4.8%) (Open Doors Fast Facts, 2019). Approximately 40-55% of international students at U.S. colleges and universities major in STEM (Council of Graduate Schools, 2015; Open Doors Report, 2020). This paper, utilizing an integrated literature review, explores the role of immigration policies, the employability of international students (STEM discipline) and aims to understand the challenges they experience while pursuing academic degrees in the United States and employability upon completion of their academic degrees. The findings from the literature review will be discussed and recommendations provided.

Keywords: International students, current immigration policies, STEM, higher education in the USA, employability, visa reforms for international students

While the overall number of international students has historically increased in the United States, declines of 6.6 % in the 2017/18 academic year and 7% in 2018/19 were observed (Institute of International Education, 2018; Open Doors Fast Facts, 2019). Factors such as U.S. visa policy, high tuition cost, and work permit issues are among obstacles international students seeking study and employment opportunities in the United States. Although international students majoring in STEM have more Optional Practical Training (OPT) time compared to non-STEM majors, they still face challenges due to other immigration restrictions. This paper will discuss the findings from an integrated literature review regarding challenges faced by international students studying in a STEM discipline and the impact of immigration policies on potential employment.

Background and Problem

The scientific and financial benefits of international students at U.S. colleges and universities cannot be overestimated. International students contributed nearly $41 billion to the U.S. economy in 2019, created and supported more than 458,000 jobs, and led to increased innovation and higher average earnings (NAFSA Losing Talent Report, 2020). Approximately 25% of the founders of $1 billion (U.S.) start-up companies entered into the United States as international students and immigrant-founded tech companies contributed $52 billion in revenue and employed 450,000 U.S. workers in 2005 (Niskanen Center Report, 2019).

However, a recent trend confirms that students throughout the world no longer perceive the United States as the primary place to study (Douglass & Edelstein, 2009). According to the recent Open Doors Report (2019), new international student enrolment has declined by 0.9% in 2018-2019, and there has been a 10.8% decrease since fall 2016. This represents the third consecutive year of decline in new international student enrollment in U.S. colleges and universities. This steady decline is particularly worrisome for science and engineering schools as they draw 90% of their applications from overseas (Mervis, 2013). As one-third of all science and engineering post-graduate students in the United States are foreign-born and the future of STEM education is closely tied to international student enrollment and American immigration policy (Mervis, 2017; Han et al., 2015), this decline could potentially delay the innovations in the industry, since most STEM graduates enter the U.S. job market upon graduation (Mervis, 2017).

While engineering schools in the U.S. are struggling to attract foreign talent, competitors including Canada, Australia, the UK, and China are recruiting more international students and scholars compared to the previous years (NAFSA, 2020). Canada received the largest number of international students between 2015 and 2017 increasing its international student enrollment by 16% thanks to its immigrant-friendly policies (Semotiuk, 2018; NAFSA, 2020). Both China and Australia saw a substantial increase in international student flow in 2018 and 2019. Additionally, China and India have recruited a vast number of U.S.-trained engineers and scientists to enhance their economy and scientific innovations (Wadhwa, 2009).

Methods

This integrated literature review provides the background and context for the research problem and shares the results of previous studies that are closely related to the study. A comprehensive search of peer-reviewed journals was completed based on several keywords, such as international students, immigration policies, STEM, and the timeline was set to 2001 to present. Secondary sources such as U.S. federal government websites were used to learn about recent policy changes. Additionally, we utilized non-governmental organizations' annual reports to better understand the international student population. Web pages of international offices at multiple U.S. universities were reviewed to learn about the recent news regarding the policy change, OPT and employment opportunities. We performed a search for those studies that specifically examined the challenges international students in STEM majors faced based on the current changes in immigration policies in the United States. All relevant peer-reviewed journals in English language published were chosen for search.

Recent Immigration Policy Changes

After September 11, 2001, American immigration policy has shifted to be more restrictive toward foreign students, while other countries simultaneously improved their university systems (Wade, 2003). These policy changes included tightening rules in student visas and creating a common tracking database system (Arroyo, 2002). Immigration and Naturalization Service (INS) made several changes to control student visas (F-1 and M-1) by placing various restrictions both

on foreign students and U.S. universities. As mandated by the Enhanced Border Security and Visa Entry Reform Act (2002), aliens were required to provide their current address(s) and name(s) of their previous employment(s), the name(s) of contacts in the country of residence, the name(s) of their spouse, sibling, and family members for verification purposes (Arroyo, 2002; Wade, 2003). U.S. universities must enroll an international student in fill-time studies for that student to be eligible for a student visa. The issuance procedures of social security numbers have drastically changed as well. Prior to 9/11, an international student could apply for a social security number prior to arriving to the United States (Department of Homeland Security, n.d.). As of May 2020, international students should be physically present in the country, need their school's authorization, and meet eligibility requirements to apply for an SSN (Social Security Administration, n.d.). Social Security Administration also needs INS's verification to issue a social security number to a foreign national, which was not required prior to 9/11. Creating the Student and Exchange Visitor Information System (SEVIS) enables INS to track international student information, from the time students obtain their visas until they graduate or leave the school (Wade, 2003).

With these restrictions in place, it became more challenging for international students to travel to the United States to study and find employment upon graduation. Immigration-friendly policies of other countries and hesitancy of applying to U.S. universities due to the changing governmental regulations are among the multiple reasons in the decline of the international student population.

The Visa Policy

International students are eligible for three types of non-immigrant visas for educational purposes: J-visa for cultural exchange programs, M-visa for vocational study, and F-visa for academic study. Approximately 94% of U.S. colleges and universities sponsor students using the F-visa program (Student Exchange and Visitor Program, 2014). Although there is no cap on the number of F visas that can be issued every year, these visa numbers have declined in the last four years. In 2019, 364,204 F-1 vias were issued compared to 644,233 F-1 visas in 2015, representing a 56% decline (U.S. State Department Report of the Visa Office, 2019) Although the U.S. non-immigrant visa fee stayed the same, the I-901 SEVIS fee for F-1 international students increased from $200 to $350 in June 2019. The I-901 SEVIS fee for J-1 exchange also increased from $180 to $220.

The F-1 visa category offers a limited work permit opportunity (usually 12 months for non-STEM majors without any further extension and 12 months for STEM majors with another 24-month extension possible) to a newly graduated international student, which may potentially lead to sponsorship of another type of temporary work authorization. Optional Practical Training (OPT) is a temporary employment permit that is directly related to the F-1 student's area of study. OPT allows STEM graduates to legally work in the U.S. for 12 months, and they may be eligible for another 17-month extension. In October 2015, President Barak Obama signed an executive order to replace 17 months of STEM OPT extension with 24 months of temporary training for the international students majoring in STEM (F-1 OPT extension report by

Department of Homeland Security, 2020). OPT provides a window of opportunity for STEM students to acquire long-term employment with U.S. employers upon graduation (Demirci, 2019). Despite these benefits, current policy changes, including a travel ban and increased fees, have created additional burdens on international students. Since December 2016, OPT application fees have increased by 20% to $490 per applicant. Additionally, OPT application processing time has risen from three months to five months which created concerns among universities throughout the U.S. STEM majored international students should pay an additional $200 if they wish to extend their STEM OPT at the end of the 12th month (U.S. Homeland Security, 2020).

H-1B Visa

The H-1B system is a complex, but significant, non-immigrant visa category that welcomes thousands of skilled foreign nationals to the U.S. workforce each year. H-1B category visas are considered the most popular temporary employment visas for college-educated foreign workers. This visa category functions as a bridge, allowing U.S. employers to sponsor F-1 students under the OPT program for specialty occupations. H-1B nonimmigrant visas provide a work permit for up to three years with the potential of another three-year extension.

However, there is ongoing debate regarding several aspects of the H-1B visa program. Nearly two-thirds of requests for H-1B workers are for STEM occupations (American Immigration Council, 2020; Ruiz, 2017). High-tech companies, including Amazon, Google, Microsoft and Facebook have predominantly used the vast majority of the H-1B visas to increase and maintain their productivity (Richter, 2017).

H-1B visas are subject to caps each fiscal year. The current policy allows for a total of 85,000 new H-1B visas to be made available each government fiscal year: 65,000 new H-1B visas available for workers in specialty (professional) level occupations and 20,000 visas available for those specialty workers with graduate degrees from U.S. universities. H-1B is a dual-intent visa, which means companies may sponsor the immigrant's green card application to become a Legal Permanent Resident (LPR) (H-1B Handbook, 2019; Nitzschke, 2019).

H-1B cap is a big concern among international students studying in the United States and desiring to be part of its workforce. International students must scale immigration barriers while being enrolled and confront the challenges in securing H-1B visas to be able to legally work in the United Sates. International students with bachelor's degrees have a 36% chance of obtaining an H-1B lottery whereas students with master's degrees and higher have a 50% chance (Hughes, 2019). Since 2017, USCIS is denying more H-1B petitions than ever before. H-1B denial rates have risen from 4.3% in 2015 to 15.2% in 2019 after the Trump Administration's Buy American, Hire American (BAHA) executive order (Fragomen et al., 2020).

Long processing time is also a challenge that international students have to consider if they want to participate in the lottery. The average processing time is two to seven months, but can take 12 to 16 months at some service centers (Anderson, 2019; Fragomen et al., 2020). Longer

processing time may cause a financial burden for the recent graduates of U.S. universities who are currently residing and waiting for the H-1B approval, especially for international students who have dependents and children. After the visa application has been processed, a foreign national must apply for the H-1B visa outside of the United States. The Consulate can then decide whether the applicant is fit to work in the United States with an H-1B visa. Therefore, getting the H-1B visa lottery is not considered a final step.

F-1 and J-1 student visas put several restrictions on the employability of international students in U.S. campuses. F-1 and J-1 holders are not eligible for off-campus employment and cannot work more than 20 hours per week (U.S. Citizenship and Immigration Services, n.d.). Off-campus employment is permissible only in case of severe economic hardship after the student has been in F-1 status for at least one full academic year (U.S. Immigration and Customs Enforcement, 2018). Upon graduation, the work authorization and visa regulations govern all aspects of international students' employability. According to World Education News Review's report (2017), 51% of current students and 67% of alumni cited work authorization regulations to be the top barrier while seeking employment in the United States.

Recommendations

Utilizing the findings from the literature review, several policy changes can be made to increase international student enrollment, specifically in STEM majors, and overall improve their employment opportunities upon graduation. We suggest the following three policy goals:

- **Promotion of Higher Education**
  Attracting international students and improving their experience in the United States is a means to expand the position of U.S. universities. Therefore, enrolling talented STEM students should be a part of the U.S. strategy to support the global flow of talent, expertise, and knowledge. To increase program capacity for international students, U.S. universities may initiate a partnership with foreign universities and STEM majors to promote their programs and explain post-graduation work opportunities in the United States.
- **Flexibility in Visa Policy**
  Various visa policy adjustments should be made to improve both recruitment and employment opportunities of foreign nationals majoring in STEM. Friendly immigration laws, policy changes in the administration of OPT, and H-1B visas should be considered to encourage talented STEM students to choose the U.S. as a primary destination for education and employment purposes. These policy changes will allow international students to gain work experience upon graduation without dealing with long processing time, expensive fees, and work- visa cap. Additionally, a liaison within the university setting who would work specifically with STEM majors navigating immigration policies could be a great asset for U.S. universities to offer for their international students.

- **Encourage U.S. Employers to Hire Foreign Talent with Minimum Restrictions** The federal government should permit American employers to hire talented students relaxing the H-1B annual cap, high processing fees, and longer waiting times. This policy change will allow more American companies to utilize the talent they need and enhance their economic productivity. Special provisions can be given to STEM majors as it relates to the processing of immigration documents and to apply for a legal permanent residency.

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The Changing College Experience as We Age

Patricia G. Coberly-Holt

Abstract

Research highlights that the adult student population is a diverse group with diverse needs, experiences, and goals (Panacci, 2015). College at any age is fraught with emotions, whether it be excitement and confidence, math or test anxiety, or imposter syndrome. Non-traditional student attendance remains high. Of the 19.9 million students enrolled in a degree-granting post-secondary institution in 2017, 34% were over the age of 24-years old (National Center for Educational Statistics, n.d.). Although there are numerous studies seeking information that will lead to an enhanced experience for the traditional-aged college student, there are limited studies about nontraditional-aged college students. This study is designed as a pilot to gauge the difference in traditional and non-traditional students' feelings of impostership at the beginning of a semester in classes with one professor in a public state university in the southeast.

Keywords: Impostership, Non-traditional, Student age, Post-secondary, adult learners, college experience

Brookfield (2015) states that impostership, or the imposter syndrome, plagues students across all races, classes, ages, genders, and levels of education. Imposter syndrome is characterized by a lack of confidence and feelings of not being prepared for the demands in a particular area, such as education or on the job, and believing that others are smarter and they are simply acting a part with the possibility of being discovered at any time. Neither remedial learners nor doctoral students are spared from feelings of impostership. Brookfield (2015) theorized that those who experience imposter syndrome during their educational careers create an image of the ideal all-knowing student who is already an expert, and they do not see themselves in this manner. According to Jehangir (2010), first-generation students are especially at risk for experiencing feelings of impostership. She stated that first-generation students are more likely to report feelings of low confidence and isolation when they are asked to reflect upon their college experience Additionally, when compared to continuing-generation students, first-generation students predict receiving lower grades. Their experiences with anxiety about academic success are more frequent and more acute than those of continuing generation students.

Symptoms of imposter syndrome can include varying degrees of self-doubt, fear, stress, and immobility, all of which have negative experiences in the classroom. To better understand and prepare for students, I have prepared an on-going, anonymous, informal class survey that students complete at the beginning of each semester to determine the number of students experiencing this condition and its severity.

If feelings of impostership are not addressed, Brookfield argued that they can damage students' ability to engage in critical thought processes vital to success in school (2005). This knowledge is of vital importance to higher education faculty and staff because students who feel like imposters may shy away from critical thinking. Because of the emphasis that higher education places upon critical modes of thinking, it is vital that university staff, faculty, and administration make efforts to identify and address students' feelings of impostership.

Methods

Procedures

A simple anonymous questionnaire to determine if students, regardless of their age experience feelings of impostership was created and piloted over several semesters. The survey consisted of 12 items, including demographic data, Likert-style response inquires, and yes/no closed-answer questions to gauge where students enter class academically and emotionally, including feelings of imposter syndrome. The survey was based upon the review of the literature surrounding imposter syndrome experiences, and was designed to be simple and to the point.

This survey has been utilized multiple times with numerous classes over five years in an effort to determine how and where to begin the classes. This study is based upon survey data collected from one select semester and allows an opportunity to determine on a small population if and how imposter syndrome tends to affect students by age.

Participants

Survey responses were gathered from 56 undergraduate and graduate students between the ages of 18 and 52. They were enrolled in courses with one college of education professor located in a college of education at a southeastern state university. There were 42 females and 14 males; one African; 18 African American; two biracial; two Native Americans; one Pacific Islander; and 31 White students. Respondents included 17 first-time-in-college students, 17 sophomores, 6 juniors, two seniors, 13 master's, and one education specialist candidate.

Findings

Data analysis was carried out in two stages. In the first stage, descriptive statistics of the categorical and ordinal survey responses were used to gain an understanding of how ubiquitous feelings of imposter syndrome were in undergraduate and graduate students, as well as among age ranges of students.

Participants were put into age-range groups to change the information from interval to ordinal data, making it easier to complete the statistical analysis with such a low number of participants. See Table 1.

Table 1
*G or UG * Age Range Crosstabulation*
Count

		Age Range				
		18-24	25-34	35-44	45-52	Total
G or UG	Grad	1	4	5	4	14
	UG	35	4	2	1	42
Total		36	8	7	5	56

Of the 56 participants who completed the survey, 31 (55.4%) indicated experiencing characteristics of imposter syndrome sometimes, often, or very often (Table 2).

Table 2
Age / Impostership Feelings
Count

		V11		
		No	Yes	Total
V3	18-34	18	27	45
	35-52	7	4	11
Total		25	31	56

The second phase of statistical analysis involved the completion of a chi-square test comparing students' age ranges and self-determined feelings of impostership to determine if there were statistically significant differences in proportions of the sample who selected survey responses. A type-1 error rate of $\alpha = .05$ was used for the test of significance.

After the chi-square test, it was determined that 1 cell (25%) had an expected count less than 5. The minimum expected count was 4.91. A second statistical analysis chi-square (Table 3) was completed using the same data, along with a Fisher's Exact Risk test.

Table 3
Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.998[a]	1	.157		
Continuity Correction[b]	1.156	1	.282		
Likelihood Ratio	1.997	1	.158		
Fisher's Exact Test				.190	.141
N of Valid Cases	56				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.91.
b. Computed only for a 2x2 table

Primary outcome results (Table 4) indicated a significant incidence rate of imposter syndrome feelings between students with a higher prevalence of those aged 18-34 at 60% (27/45) and 36% (4/11) aged 18-34 and 36% (4/11) of those aged 35-52.

Table 4
Risk Estimate

	Value	95% Confidence Interval Lower	Upper
Odds Ratio for V3 (18-34 / 35-52)	.381	.097	1.493
For cohort V11 = No	.629	.355	1.114
For cohort V11 = Yes	1.650	.729	3.736
N of Valid Cases	56		

Conclusion

This study surveyed undergraduate and graduate students at a small, master's degree-granting public state university registered for a course with a professor in the southeast. Students were asked if they sometimes, often, or very often experienced characteristics of imposter syndrome. A significantly higher percentage of students between the ages of 18-34 self-reported instances of feelings associated with impostership than students ages 35-52. The implications of these findings must be considered when working with students, especially younger students, in the college classroom. Students who experience the negative effects associated with impostership experience stress, thereby decreasing their ability to engage in critical thought processes, decreasing their likelihood of success. By being aware that the threat exists, instructors can inform students that these unfounded feelings are ubiquitous during college and offer solutions to diminish the negative effects.

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Adult Undergraduate Students as a Minoritized Student Population: Implications on Sense of Belonging at Four-Year Institutions

Michael D. Giacalone

Abstract

Four-year colleges and universities in the United States are typically designed for 18 to 22-year-old residential students (Attewell & Lavin, 2012). Therefore, adult undergraduate students at many institutions are minoritized (Harper, 2013), not because they are proportionally smaller, but because the structures are not designed for them. As a minoritized group, they may not feel like they belong, which is important for all college students and attributed to a myriad of benefits (Strayhorn, 2019). While a sense of belonging has been studied for various minoritized student populations, undergraduate adult students is not one of those groups. This paper will discuss the literature on belonging to the adult student experience This information will provide the reader with recommendations and future research.

Keywords: adult students; sense of belonging; undergraduate students

American higher education is designed after the residential models from Oxford and Cambridge Universities in England (Rudolph, 1990). However, the idea of college being solely for the sons of aristocrats is no longer the reality of higher education in our country. Many four-year higher education institutions in the United States still are designed for traditional, residential 18 to 22-year-old students (Attewell & Lavin, 2012). This mismatch may lead adult students (i.e., those who are 25 years or older) to feel like they do not belong, which, in turn, can have a negative impact on their persistence (Bean, 1985; Strayhorn, 2019). The purpose of this paper is to explore how the concept of *minoritization*—the idea that social structures define a person as a "minority" in various contexts (Harper, 2013) and that has been applied in studies on college students sense of belonging—can illuminate how higher education institutions can implement policies and practices that increase belonging for adult students.

Minoritization

The term "minoritized" was developed by Dr. Shaun R. Harper in the context of race on college campuses. He argued that the term "[signifies] the social construction of underrepresentation and subordination in U.S. social institutions, including colleges and universities, [and] occurs in particular situations and institutional environments" (2013, p. 207). Again, in the context in which he was arguing—race—this means that one is not born a racial "minority," it is the social structures and situations that one finds themselves in that makes them one.

The concept of minoritization can be extended to consider students from other social identity groups such as adult students. There is nothing inherent to being 25 years old that demarcates a

switch from "traditional" to "non-traditional." It is the institutional structures (including social program offerings, class scheduling, and the types of services available, along with the social construction of who is, and is not, a "college student") that *minoritizes* those students who are older than the traditionally-aged student.

Sense of Belonging

Scholars have defined a "sense of belonging" in different ways. Most famously, Maslow (1970) identified belonging as an intermediate step between basic and more complex human needs. Furthermore, other scholars have narrowed that consideration so that belonging occurs among groups of specific people within defined environments (Baumeister & Leary, 1995; Goodenow, 1993; Strayhorn, 2019). Still others have parsed out behavioral and psychological dimensions of belonging (Hausmann et al., 2009; Hurtado & Carter, 1997). Based on these definitions, we can conceptualize *belonging* as a social phenomenon that occurs in degrees within a specific environment.

A Case for Belonging

As identified previously, sense of belonging has been used in studies with minoritized student groups (e.g., Dueñas & Gloria, 2017), first-year students (e.g., Bowman et al., 2019), and an intersection of the two (e.g., Vaccaro & Newman, 2016). Fewer studies have examined a sense of belonging for adult students at four-year institutions, and those have only considered the experiences of graduate students (Curtin et al., 2013; Strayhorn, 2019; White & Nonnamaker, 2008). Missing, therefore, is research about—and recommendations for—developing a sense of belonging for adult undergraduate students.

Even though adult students are likely to be connected to other groups such as their families, home communities, and places of employment, Maslow (1970) suggested that belonging is something that people seek out in their environments, including their college or university. Further, developing a sense of belonging would be a requisite step for adult students to fully engage in self-actualization within the college setting. Indeed, Strayhorn (2019) argued that helping all students develop a sense of belonging is required for colleges and universities to achieve their missions. Beyond the functional effect of belonging as a mechanism to institutional missions, colleges and universities have an *ethical* requirement to help their students develop a sense of belonging by deciding to admit them in the first place.

A sense of belonging is important because it is associated with several benefits. To begin, developing a sense of belonging is helpful for a smooth transition into college (Hurtado & Carter, 1997), and assists with student retention (Hausmann et al., 2009). Further, a sense of belonging has been associated with self-actualization (Maslow, 1970; Orta et al., 2019) and self-efficacy (Freeman, Anderman, & Jensen, 2007). Even though adult students have different needs than first-year and graduate students, Chaves (2006) argued that Schlossberg's (1989) theory of mattering and marginality could be applied to support adult students. While he was considering

adults in the context of community colleges, the ideas remain the same: Adults need to feel like they are important, visible, cared about, and needed.

How and Where Belonging is Developed

Sense of belonging fluctuates based on the positive and negative experiences that students have. Some factors that influence belonging are the quality of interactions with faculty members (Freeman et al., 2007; Hoffman et al., 2002-2003; Hurtado & Carter, 1997), programs and systems that are supportive of one's identities (Dueñas & Gloria, 2017; Tachine et al., 2017), interactions with staff and administrators (Manley Lima, 2014), finding groups with whom one can be their authentic selves (Vaccaro & Newman, 2016), and student involvement (Johnson et al., 2007). While the above factors occur primarily during college, one study found that minoritized students receive and internalize messages about whether or not they will belong at an institution before even attending (Means & Pyne, 2017), which has implications for if and how adult students are represented in recruitment materials and activities.

Finally, belonging occurs in different spaces and at different levels within an institution (Vaccaro & Newman, 2017). For example, while a student may feel like they belong in one class because of their relationship with their faculty member, they may not experience that belonging in other classes they take (Freeman et al., 2007). Further, the sense of belonging that a student develops in an organization may extend to their sense of belonging at their institution as a whole (Giacalone, 2020).

Recommendations

There are three main recommendations that can be derived from the literature on minoritized students' sense of belonging in college. The first is providing opportunities to interact with other adult students, the second is developing relationships with faculty and staff, and the third is designing structural supports for adult students. Each will be discussed in more detail below.

Peer Interactions

Throughout the literature, the importance of minoritized students finding other students "like them" is clear (e.g., Dueñas & Gloria, 2017). A student finding others with similar identities and backgrounds is important because it enhances the mutual understanding of one's experiences and encourages students to present themselves authentically. Therefore, colleges and universities must provide opportunities for adult students to connect. This can begin at the start of their collegiate careers by designing and offering new student orientation programs specifically for this student population, and continue throughout college by hosting programs for them; designating space, such as an adult student lounge; and potentially even helping them organize a student club. However, faculty, staff, and administrators need to be cautious about treating adult students as a monolithic group. Age, social identities, and experiences outside of college likely influence an adult student's experience. For example, the 30-year-old White parent who is starting college for the first time will likely have a different experience and needs than the 70-year-old gay Latino man taking a few classes as part of personal enrichment during retirement.

Faculty and Staff Relationships

Developing positive relationships with faculty and staff is important for a college student's sense of belonging (e.g., Freeman et al., 2007). When working with adults, this means faculty and staff need to acknowledge and value the experience and knowledge that adult students bring with them to college. In the classroom, this work includes valuing their experience as knowledge and encouraging those contributions (Chaves, 2006; Knowles, 1980). Outside of the classroom, faculty and staff can encourage adult students to apply for departmental student jobs and participate in major-related student organizations, both of which are beneficial for helping students make connections that contribute to belonging (Manley Lima, 2014). With an emphasis on "traditional" college students, however, both faculty and staff may benefit from training about adult students' experiences and needs, which can lead to those positive relationships that foster belonging.

Structural Support

Belonging is a multi-layered experience, in which feeling valued is important at both individual (e.g., "I, as an adult student, feel valued here") and group (e.g., "adult students are valued here") levels (Vaccaro & Newman, 2017). Individual belonging occurs on the interpersonal level through interactions with peers, faculty, and staff, but the group level occurs structurally. While some of the recommendations made already are structural ones, such as providing space for adults and training faculty and staff, other recommendations include providing the necessary services for adult students, including adult students in marketing materials, and ensuring courses, services, and programs are available at times that accommodate working adults' schedules.

Colleges and universities can utilize the data they already have to make these decisions. For example, the institutional research office can provide data about who the adult students are, their average age, and other demographic information. The records office can use that information to identify students who are on campus and work with academic departments to provide an audit of classes so that courses are offered at times convenient to the student. Information about when and where adult students are on campus can also help other offices on campus offer services and programs in spaces and at times that are convenient for adult students to access.

Conclusion and Areas of Future Research

Strayhorn (2019) argued that since self-actualization is the goal of higher education, developing a sense of belonging in inherent in the mission of colleges and universities, regardless of who the student is or the social group to which they belong. This goal includes adult students as well and may be addressed through the suggestions listed above—positive peer interactions, relationship with faculty and staff, and structural supports. Research in this area, however, is lacking and can be addressed in several ways. Qualitatively, a study can research how adult students experience a sense of belonging on campus as it relates to age and social identity groups. Quantitatively, a study can research the adult students' sense of belonging in the various spheres of their lives, and

the influential factors. With further research on these topics, we can learn how to further support adult students as they enter, persist, and graduate from four-year institutions.

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Saved by bell:
Using hooks as an Intervention into Southern Higher Education Curriculum

Edith Gnanadass, Kyle Bellue, Chan Dunn, & Jessie Tinoco

Abstract

This paper features a dialogue between a panel of four diverse learners on their experiences reading bell hooks in an adult learning class in a higher education setting and how it has transformed the class, the lives of the students, and their pedagogy.

Keywords: Engaged pedagogy, Learner experience, Transgression, Non-Hierarchical

Conference Approach

Theorists hooks, Freire, and Vella call for engaged pedagogy that connects and builds on learner experiences. They argue that when learning is relevant and contextualized to the lives of the learners and includes spaces for dialogue, students engage and want to learn. At the same time, in the institutional space of higher education, student persistence and success are mandates for all educators today. So, how do we bridge these two seemingly separate and dichotomous calls for educators?

Using hooks' *Teaching to Transgress* in a higher education graduate online classroom for two semesters challenged and electrified the students. The online discussion forums were filled with student postings. Many students commented how this was the first time they had read and heard about the lived experiences of African Americans in the classroom. Many African American students commented that this was the first time in their higher education journey that they had seen their lives in a text and could relate to hooks's lived experiences. White students commented on how they struggled to understand hooks's struggles as an African American woman growing up in the South and had to reflect on their own prejudices and privileges. Both male and female students recounted how they felt compelled to examine their own pedagogy from reading, discussing, and hearing each other's voices regarding *Teaching to Transgress*.

Based on these classroom experiences, the professor and three students (co-presenters of this presentation) undertook a research study to survey the curriculum used in Southern higher education graduate programs and examine if texts such as hooks are included in the curriculum. We argue that engaged pedagogy using contextualized learning and texts that connect to students' lives will bridge the apparent dichotomy between student learning and student persistence and success.

The presentation featured a dialogue between a teacher and a panel of three diverse doctoral students on their experiences reading *Teaching to Transgress* in an adult learning class in an

urban university in the mid-South and how it has transformed the class, the lives of the students, and their pedagogy and research.

Participant Engagement

This session started with a brief mindfulness activity to center the participants, followed by an opportunity to briefly reflect on their lived experiences and how their higher education curriculum connected with those experiences. Participants were then engaged in a short dialogue between three diverse doctoral students on how using hooks's *Teaching to Transgress* in a higher education classroom impacted the course curriculum, the students, and the teacher's experiences in the course.

Jessie

After asking participants about their familiarity with hooks, I began to describe my takeaways as well as my experience following through with what I had learned from the text. She often talks about a paradigm shift in teaching, and how the need for community is an integral part of enabling the shift to occur. She believes by creating a community in a classroom, it will allow the students to feel comfortable enough around one another to share their voices and experiences. Also, this setting creates an openness and willingness of the students to learn from one another and obtain "an unbiased inclusive perspective" (hooks, 1994, p. 43) even if the classroom is mostly made up of White students. She goes on to state, "I teach about shifting paradigms and talk about the discomfort it can cause" and that "White students learning to think more critically about questions of race and racism may go home for the holidays and suddenly see their parents in a different light" (p. 43).

In reading hooks's collection of essays and the quote above, I have recognized that I am not as progressive as I thought I was and that my actions are not as inclusive as they need to be. With that said, a personal transformation has begun, one where I yearn to understand how I can improve my thoughts and behavior so I can connect with others and create a community surrounding me. Through this self-realization, I have been able to acknowledge the importance of creating an environment where others feel comfortable enough to have their voices heard and where they feel included.

The passage below resonated with me because it essentially conveys that shifting our way of thinking is uncomfortable and painful, but that is normal, part of the process, and how we build community. Once our paradigm shifts, we see things and people in a new light, causing estranged relationships questioning of our own habits; however, we also find a new community of people who have had the same experiences. And I saw for the first time that there can be, and usually is, some degree of pain involved in giving up old ways of thinking and knowing and learning new approaches. I respect that pain. And I include recognition of it now when I teach, that is to say, I teach about shifting paradigms and talk about the discomfort it can cause. White students learning to think more critically about questions of race and racism may go home for the holidays and suddenly see their parents in a different light. They may recognize nonprogressive

thinking, racism, and so on, and it may hurt them that new ways of knowing may create estrangement where there was none. Often when students return from breaks, I ask them to share how ideas that they have learned or worked on in the classroom impacted their experience outside. This gives them both the opportunity to know that difficult experiences may be common and practice at integrating theory and practice: ways of knowing with habits of being. We practice interrogating habits of being as well as ideas. Through this process we build community (p. 43).

It also resonated with me because as a White reader with a privileged worldview, it feels like hooks is speaking directly to me about certain stark and fundamental realities. In the text, hooks describes students who experience shifting paradigms and the discomfort caused by recognizing nonprogressive thinking, racism, and other old ways of thinking. It hurts when they must distance themselves from people who demonstrate harmful thinking and behavior, but a community grows out of the experience.

The surprise for me in reading this book was that it was I who was affected, as I experience precisely what hooks describes in the passage above. I recognized that I was not as progressive as I thought and that my actions were not as inclusive as they need to be. Thus, a personal transformation began, one where I yearn to understand how I can improve my mentality and behavior and connect with others. Although this was a tough realization, luckily it brought me to a place of understanding and acknowledgment.

Kyle

I began by asking the panel to think about engaged pedagogy and what it meant to them. From hooks's text, engaged pedagogy begins with teachers seeing, valuing, and responding to their students as unique human beings. It includes seeing students as active participants and fellow keepers and builders of knowledge with the teacher. In that respect, teachers become "healers" who help students reconnect knowledge with practice and experience. Knowledge is not kept separate from experience; rather, it is fused, sometimes painfully, to transform and enrich how students view and live in their world. This engaged pedagogy activates both the teacher and student as fellow laborers in the field of knowledge. It is risky, but it is also in this space where both students and teachers remain vulnerable to take risks and grow.

One quote that illustrated the risk in this endeavor comes from hooks's discussion regarding a faculty development session looking into ways of including more Black women authors within their curriculum. Of this experience, she stated, "All too often we found a will to include those considered 'marginal' without a willingness to accord their work the same respect and consideration given other work" (hooks, 1994, p. 38).

To simply add Black women authors to the curriculum was not an engaged pedagogical practice, for that was not where the risk resided. It was akin to valuing the author while silencing the voice. No, the risk was in connecting the Black women authors to their race experiences in the classroom. As teachers, we cannot expect our students to be the first ones to wrestle with these

uncomfortable conversations. We must model this to our students and show that there is value in the dissonance between our knowledge and our experience. If we, as educators, are not willing to engage in risky and uncomfortable conversations, then neither will the students. Yet, it is exactly in these uncomfortable spaces of risk where growth and learning can occur.

Chanda

I began a discussion into the current and past utilization of texts by Black female authors in former college experiences and the current work of adult educators. The purpose of this question was to bring awareness to unconscious decisions to limit diverse representation in curriculum and perspectives. According to hooks (1994), the knowledge and ideas of Black women in academia have been historically left out due to educators inadvertently using Black male authors text to explain "the Black experience." Acknowledged within the group was the idea that Blackness has no characteristics of homogeneity due to the intersectionality of multiple identities that we hold. The struggle, however, is ongoing for Black female scholars, as Black male scholars' rendition of experiences does not account for the experiences of Black women yet is widely used to do so. As hooks (1994) indicated, there is a lopsided view of inclusion because the Black woman's thoughts and experiences are unique and cannot be accurately explained by others. The continued assumption that feminist texts, or those by Black male authors, utilized in the classroom are an accurate representation of Black women's voices has led to an erasure of the Black female presence in academia. This conversation moved in a direction that focused on the process of change and benefit to students like me. Encouragement of cultural diversity and cultural humility has made its way into the world of academia as a forceful revolution. As expressed by hooks (1994):

> At last, there was the possibility of a learning community, a place where difference could be acknowledged, where we would all finally understand, accept, and affirm that our ways of knowing are forged in history and relations of power. Finally, we are all going to break through the collective academic denial and knowledge that the education most of us had received and were giving was not and is never politically neutral. Though it was evident that change would not be immediate, there was tremendous hope that this process we had set in motion would lead to a fulfillment of the dream of education as the practice of freedom. (p. 30)

The hooks quote resonated with me because it expressed the same thoughts and sentiments that I had regarding confronting the patterns and denials that continuously work throughout the educational system. The excitement seen was one that was unparalleled to my previous understanding of history and that created some level of ease in knowing that willingness to join a revolution that was radical and in the interest of equity would be met with hesitation from others. hooks allowed for the excitement of seeing oneself represented accurately in the classroom and-text in a way that motivated students to be reconnected to the joy and ecstasy of learning. She further motived me into the use of non-traditional teaching styles that were fueled with critical reflection and interrogation aimed at dismantling oppressive structures. I saw a home for my experiences of racism, classism, and sexism to be shared openly and with an abundance of truth. The classroom had become a place for safety and creativity, but only if a professor was willing to

leap out of the comfort zone of traditional teaching styles. There is a level of satisfaction for a Black woman to find herself through words and texts. A Black woman's identity is at the crux of her being … Sister, daughter, friend, educator, and Black woman are formulations in me that were transformed through liberating knowledge. That identity is continuously in the formation and a large part of my identity as a Black female doctoral student lies in the journey that takes place in higher education and academia. For me, hooks successfully opened doors of hope, promise, and affirmation that would be closed by no entity, system, or inequitable practice.

Conference Outcomes/Discussion and Conclusion

Approximately 10 teachers and graduate students participated in the discussion. Participants were highly engaged and eager to learn about the experience of the students and teacher and how the text impacted the overall dynamic of the course. Participants agreed that using text written by Black women authors was important and a critical component to furthering the conversation on the intersectionality of race, capitalism, gender, and systems of oppression. During the Question and Answer section, panelists raised the question as to how many had utilized Black women texts in their classrooms and—to no surprise—nobody was utilizing these texts, although everyone was familiar with Black female texts. One participant described how her department was trying to raise awareness by conducting book clubs and even sent a photo of the book back to her department chair to include in their next meeting; however, while many of those agreed these texts are important, they were not incorporated in the classroom.

After presenting, the panel members opened it up for discussion and questions. Among the first questions asked was related to a concern that teachers might be expected to take on roles in their classrooms for which they are not be prepared. The participant confessed that he worried about what effect this might have the classroom and if teachers were not prepared, or even capable, to answer the types of questions these fears would bring up. Because of this, he confessed some teachers did not want to pursue these subjects. He recalled a faculty development session where one faculty member stated, "I'm not a therapist!" in response to discussing the possible outcome of introducing risky subject matter into the curriculum. This led to a rich discussion of the preparation required by faculty who desire to include engaged practices in their pedagogy. At the end of the discussion, one participant added, "Isn't the classroom the perfect place to take these risks?" We all agreed that the risks were real, and those who go down this road should be prepared for students to reveal some scars deeply embedded into their souls. However, in committing with the student to a journey of healing that connects knowledge to experience, risk is necessary and will reap the reward of healing that can transform students' patterns of thought forever. As hooks (1994) confessed,

> I am reminded of the power we have as teachers as well as the awesome responsibility. Commitment to engaged pedagogy carries with it a willingness to be responsible, not to pretend that professors do not have the power to change the direction of student's lives. (p. 206)

Time was too short to fully explore the participants' experiences and barriers to utilizing Black female texts, and whether they would incorporate these texts into their classroom going forward.

However, based on the vibrant conversation, we speculate that all participants are eager to fully engage and start the conversation about how to responsibly incorporate these critical pieces of literature into their syllabus.

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Experiences of Non-traditional Age Students in Conducting Research

Marilyn S. Lockhart & Elyse D'nn Lovell

Abstract

This study asked non-traditionally aged undergraduate and graduate students to describe their experiences conducting research and its impact on their confidence, motivation, and other aspects of their self-perception. Upon completion, all students viewed conducting research positively. Themes including the ability to choose a research topic with personal meaning, fear/uneasiness increasing to greater confidence, the importance of support from others, significant impact of culture and experiences, positive change as a person, and a growth in aspirations and dreams emerged. Faculty are encouraged to incorporate research into their courses and to consider these themes when designing the assignment.

Keywords: non-traditionally aged student, student experiences conducting research

Undergraduate students are increasingly expected to conduct research while attending higher education institutions (Moore et al., 2018) and now most colleges and universities include a research experience (Linn et al., 2015). As an example of this growth, thousands of students attend conferences annually, including the National Conference on Undergraduate Research (NCUR), an organization devoted to undergraduates presenting outcomes of research they have performed. Thousands of students attend these annual conferences. As a specific example, one of our institutions has included in its strategic plan that all undergraduates are to have a research experience before they graduate. Studies have been conducted on the outcomes of undergraduate research and it has revealed deeper and increased student connectedness to learning (Tootle et al., 2019). Most undergraduates evaluate research experiences highly upon completion of their project (Shaw et al., 2013) and other analyses have shown that research increases course engagement, program persistence, and self-confidence (Linn et al., 2015). However, since undergraduate research requirements are a recent development, non-traditionally aged students, a minority group that is growing on many campuses, may be surprised to find that they are expected to conduct research when they arrive on campus and the impact of the activity on them is unknown. Our study asked non-traditionally aged undergraduate and graduate students to describe their experiences of conducting research and its impact on their confidence, motivation, and other aspects of their view of themselves. While we had a small sample size of four, we believe that results can be used by faculty in their work.

Methodology and Analysis

After receiving approval from the Institutional Review Board, we used the phenomenological qualitative approach recommended by Creswell and Poth (2018). To understand the experience of non-traditionally aged students in conducting research, we interviewed two undergraduate and

two graduate non-traditionally aged students. A non-traditionally aged student was defined as someone who had not attended higher education for at least four years since their most recent enrollment. While non-traditionally aged graduate students would expect to be asked to conduct research as part of their degree, we wanted to make a comparison between undergraduate and graduate students to gain an understanding from a broad perspective. A convenience sample was used to select the participants. One researcher interviewed the undergraduates and the other graduate students. The two undergraduates had been in that researcher's past classes. While the graduate students were people the other researcher knew, they had not been in any of our classes. All the students were female. We asked all students the same initial questions and followed up with questions based on their responses.

We asked the following questions:

- What was your reaction when you were asked to conduct a research project?
- Did you conduct your project with a team or independently?
- How did you select your topic?
- What, if anything, interested you in the topic?
- How did you feel while conducting the project?
- After conducting research, how did you see yourself – were their changes?
- How did any of your life experiences impact your confidence, your ability, skills, etc.?
- How did your research experience impact your motivation to continue your program?

Responses from interviewees were recorded and reviewed. We used an inductive analysis, looking for general patterns and major dimensions of interest as recommended by Patton (2015). We summarized the data and created categories that emerged as our analysis proceeded. Working independently, we compared our coding as we proceeded and then created common categories. We highlighted comments from students that we considered especially noteworthy.

Results

The undergraduates had conducted more than one research project and had worked independently and as part of a team for their projects. The graduate students had also conducted multiple projects, and these were all performed independently.

Six themes emerged from the data. As can be typical in qualitative data, some of the themes overlapped slightly (Creswell & Poth, 2018). However, we deemed them distinctly different enough to list each one. The themes were the same for undergraduate and graduate students. Any variation within each theme is summarized below.

Theme 1: Selection and Personal Meaning of Topics

All participants were able to select the topic of their study and chose topics that related to some aspect of their life or career. Due to this connection, the task had strong meanings for them and was a strong motivator for them to complete the project. As one of the undergraduate students reflected on her mental health project, she said it was easier for her to complete because she had

past mental health issues. One of the graduate students said that her project was meaningful to her because it related to her current job.

Theme 2: Fear/Uneasiness Increasing to Greater Confidence

All students had some initial misgivings about designing and carrying out a project. The undergraduates all experienced fearfulness when they learned they would need to conduct research. One stated: "I had never done it before; I had limited knowledge with research." As they moved through their assignment, the fear lessened. As an example, the other undergraduate student said: "I kind of got over the fear of it because it was just so exciting." While the graduate students knew they would be expected to have research projects as part of their program, they also encountered what they described as uneasiness or worry. "I was worried and excited at the same time. I was especially worried that I would have the time over a semester to finish. My feelings were complex. I knew this was a very important task." All four reported increased confidence as they moved through the process and learned more about the "how" of research.

Theme 3: Importance of Support from Others

All students received support from others and viewed it as critical to success. However, the support they received was from individuals in a variety of roles. Three found support from their instructor; three from their family. One found support from her classmates especially helpful. One of the undergraduates cited a lack of support from her immediate family so the support she found from others was especially helpful.

Theme 4: Significance of Culture and Experiences

Life and work experiences had an important bearing on all these non-traditionally aged students. The impact of the culture where she was born, raised, and worked was especially noteworthy for one of the graduate students. She grew up in China and, as a consequence, her research interests have focused on the experiences of other individuals raised in another culture. Since her culture values the stories of individuals, the selection of a qualitative methodology coincided with her ethnicity. Both graduate students' past and current work greatly influenced their reactions. Both had worked in higher education and so were familiar with the expectations of graduate degrees and selected research topics relating to their past or current experiences in anticipation of it helping to further their career. As described in Theme 1, both undergraduates selected topics that connected with their life.

Theme 5: Positive Change as a Person

All participants described how their experiences in conducting research changed them as a person. One of the undergraduates stated: "So I found out through research I was smart and that I had a lot more going for me if I only put in the effort." Another stated: "All that talking I've had to do with people when I interviewed them, I think it kinda helped me when I present to be more comfortable talking with people." Another described a shift in reasoning: "There's just so many different ways of looking at something… I think it's given me more patience, more open mind."

One of the graduate students described a strong increase in self-confidence in personal aspects of her life as a result of conducting her research project.

Theme 6: Growth of Aspirations and Dreams

This theme emerged especially strong for the undergraduates. One stated: "I believe it was the road to my academic persistence." Both undergraduates decided to pursue additional education degrees and attributed these changes in goals of conducting and presenting their research in public venues. While one graduate student found quantitative data analysis especially challenging to the extent that she hired a tutor, she believes that the results of her study will make her more competitive in future job searches and promotions.

Discussion and Conclusion

At the end of our study and after our discussion with each other, we said to each other: "Our results are very 'adult-like.'" This struck us like a bolt of lightning. "Of course they are," we said. "They are adults! We teach this." Adults are all about experiences—work and life. They learn by doing. They want to relate what they are learning to their lives. Emotions matter. Adults are motivated when assignments are close to real-life contexts. This is what well-known adult education authors, such as Brookfield (2013), Merriam and Bierema (2014), and Taylor and Marienau (2016) wrote about. When examining our results from this perspective, there were no surprises.

While our sample was relatively small and of the same gender, we believe there are valuable findings that faculty can use in their classes. First, if you are not already incorporating research as part of a class, we encourage you to do so. The process can positively change students' lives. Upon reflection, all the students in our sample found it a worthwhile experience. From increasing confidence, hoping for better jobs, and changing their dreams and aspirations, all the students evaluated their experience positively once it was completed. This may be more feasible in some classes than others. However, we know that faculty can be very creative. If you are not certain what could work in your class, consult with others in your department or even other departments. Second, have students share their worries. This can be done either in small groups or have them post their concerns anonymously so that you can address them to help build their confidence early on. Third, give students a choice in their topic; this was a salient feature to our sample to reach a positive outcome. Some students may need some coaching in how to select a topic. Relating a project to one's life is not something an undergraduate might see the value in or consider possible. Fourth, tell students to look for support in various places. Let them know you are available; schedule office hours to discuss their projects. Be available to students for one-on-one meetings to coach them through the process. Some students may need a little more support, especially at the beginning. Consider having a former student come to class to share their experiences and provide peer support. Encourage them to talk with one another about their project. Both undergraduates in our study found that presenting their results to others, either orally or in a poster, was also helpful in building confidence. Because of this, consider building a public presentation into your assignment.

In conclusion, we found our study meaningful and helpful to us, as faculty, in thinking about how to design all our classes in the future and how we can support our non-traditional age students. These individuals worked several years before returning to college and the desire to change their lives brought them to us. We want to help them all we can to fulfill their dreams and create new aspirations. We hope that you, as a result of our study, can learn new ways to help them in your work.

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"Right Now, I'm Narrowing It Down": Career Development in Undergraduate STEM Majors

Joann S. Olson, Yun Wan, & Beverly C. Tomek

Abstract

Recruiting and retaining students in STEM fields has become a topic of much discussion and research in recent years. This presentation presents preliminary findings from the first phase of a small, longitudinal, qualitative case study. This study follows 10 undergraduates majoring in Math, Computer Science, or Digital Gaming, all of whom were awarded scholarships through an NSF-funded grant (Grant # 1741820). The grant program provides for tutorial and career-development support as well as opportunities to be engaged in research and other high-impact practices. Data analysis is underway; research findings will be the focus of the presentation.

Keywords: STEM, career development, social-cognitive career theory

Virtually every sector in higher education is grappling with the issue of student retention. Within STEM fields, while student attrition may be similar to those in other fields (Chen, 2013), the loss of students from these fields is often portrayed as a crisis (Belser et al., 2018). While many strategies have been pursued, such as mentoring (Lisberg & Woods, 2018; Thiry & Laursen, 2011) or undergraduate research experiences (Amaya et al., 2018), the results of these efforts are not uniformly successful. What are the most effective strategies for helping students be successful and develop the perseverance they need to persist to graduation?

The purpose of this study was to explore career development among math and computer science majors as a first step to understanding how students' understanding of their chosen career may have an impact on their persistence. We used a qualitative approach with the flexibility of semi-structured interviews within a case study design to potentially maximize what could be learned (Stake, 1995, p. 4) about how these students think about the career they are preparing for as well as the connections they may (or may not) be making between their current coursework and their future work. Specifically, the research question driving this study was: How do under-represented STEM-major students describe their career development?

Theoretical Framework

This study used Social Cognitive Career Theory (SCCT; Lent et al., 1994) as the framework for data analysis. Niles and Harris-Bowlsbey (2009) highlighted the usefulness of SCCT for understanding career concerns for those who persist in the face of obstacles, and Olson (2014) proposed that SCCT was particularly appropriate for understanding the career development needs of first-generation college students. SCCT frames career decision making in terms of the individual's career self-efficacy, outcome expectations, and personal goals. Career self-efficacy

is a set of "self-beliefs" (Lent et al., 1994, p. 83) that shapes an individual's determination about the likelihood of being successful at a particular task (e.g., if I pursue this major, will I be able to pass my classes?). Outcome expectations are the individual's beliefs about the outcome of engaging in a particular set of behaviors (e.g., if I pursue this major, what jobs do I think will be available to me?). Personal goals also shape the individual's career-related decisions (e.g., I want to design the next *Minecraft*; will this major set me on a path to do that?). Although not explicitly explored at this preliminary stage of the project, SCCT also suggests that contextual supports and barriers play an important role in career decision making (e.g., I want to work in computer science in a large city, but my family expects me to return to my hometown after graduation; how do I manage that?).

Methods

CoastalU (a pseudonym) is located in Texas. It is a public, four-year university that enrolls about 4,400 students. It offers approximately 30 undergraduate majors and 23 master's-level programs. Through a National Science Foundation five-year grant, awarded to CoastalU in 2018, the university is now providing undergraduate scholarships and enhanced support services for low-income, academically talented students in computer science, digital gaming, and mathematics majors. We conducted interviews with 10 scholarship recipients, all of whom are first-generation college students. Eight of the 10 are first-year students; the other two were interviewed as juniors. Two of the participants/recipients are female; the other participants are male. Interviews were transcribed verbatim, and data analysis was conducted using a general thematic analysis approach (Braun & Clarke, 2006), searching for codes and themes related to the theoretical framework.

Findings

Interviews with these students were wide-ranging. As they discussed their career development, participants described the ways they were approaching their careers and the activities they were engaged in to begin building their careers. They also described their approaches to work; in many cases, they shared the examples of hard work set by family members. Most participants were interviewed during their first year at college, and as one participant stated about his current career development: "right now, I'm narrowing it down," working through the options and trying to determine what the best fit might be. In addition, their responses aligned with the key components of SCCT: career self-efficacy, outcome expectations, and personal goals.

Career Self-Efficacy

Niles and Harris-Bowlsbey (2009) suggested that personal performance accomplishments (p. 91) are key to developing career self-efficacy. Many participants in this study described early, positive experiences with computers through high school coursework or extra-curricular activities. One participant had taken a class in computer maintenance, during which the class took on "little mini-projects for the school," cleaning computers, and learning to solder. In one case, the participant suggested that because he "worked from bell to bell" during the school day,

his teachers gave him additional responsibilities; his work ethic led to increased opportunities to learn.

Another aspect of SCCT is social persuasion (Niles & Harris-Bowlsbey, 2009), and participants in this study described a wide range of career influencers including high school teachers and robotics coaches, or other teachers who were "just so knowledgeable." One participant talked about grandparents who lived out of state who "would always, like, buy stuff. Like to help me with all this stuff, because I would say, 'Oh if I had this I could do so much more…' You know they just were on it." Participants developed a greater sense of self-efficacy for their chosen career path because of the influence and support of those supportive and persuasive people.

Outcome Expectations

For the most part, participants in this study expected that their degrees in computer science or mathematics would lead to a job and a career in that field. One of the first-year students indicated that his post-college employment plan was to

> Start small … to be well-rounded in different aspects-, so not just in programming but animation, level design, storyboards, stuff like that. So you know, whatever position they need, I'll be able to like perform well, and then hopefully I can get better over time.

Another participant indicated that he was already in the process of creating his own company, in the hopes of designing a game and pursuing success as an entrepreneur.

One of the third-year students seemed rather ambivalent regarding his career outcomes. He commented that he hoped he would like game design, but since he hadn't taken those specific classes yet, he was not sure that it would work out. He said:

> I'm still in that process, because … I've done like all the basic stuff at the top, and then like all that's really left is like literally all the gaming electives and I'm just like, well, I really don't know what to say about whether I'm really good at this or not because I really haven't taken anything yet. But I feel like my major in digital gaming—once I actually start completing the actual digital gaming centered electives more—I'd have a better sense on what I'm interested in and maybe like even certain things in the classes I take that I don't like gaming-wise, but then it might have something to do with a different kind of career path. And I find out that I'm actually interested in that.

In other words, he was hopeful, but somewhat concerned and a little bit confused. As we talked, he highlighted this idea several times, suggesting that this is a significant concern. This type of uncertainty is not unusual for students approaching graduation, but it serves to highlight the importance of ongoing career development interventions for undergraduate students throughout their college career.

Personal Goals

Given that most of the participants in this study were first-year students, it is perhaps not surprising that their goals ranged from crystal clear to rather ill-defined. One participant stated his clear aspiration "to make stories [games] that … bring tears and happiness to my customers

… my players." Others described hopes of working in particular aspects of gaming such as animation. One participant described his career goals by saying, "I know it's kind of basic, but I'm kind of looking forward to being a software developer." He later mentioned that he hoped to work for Microsoft at some point.

One of the third-year students had a much clearer sense of his future plans. He was already working for a bank, and he was looking forward to working in data analytics within the same bank after completing his degree. He said that the bank had already been "really flexible with me. Really encouraged me to try to do more with them," and as a result, he indicated that he hoped to stay with that institution long term.

Discussion and Conclusions

This paper outlines preliminary findings from the first phase of interviews in a longitudinal study that will follow the career development of math, digital gaming, and computer science majors who are receiving scholarships funded by a grant from the National Science Foundation throughout their college careers. This first phase of interviews demonstrates, not surprisingly, that first-year students do not always have a well-defined set of outcome expectations or career-related goals.

What is clear from this round of interviews, however, is the significant role that pre-college advisors, teachers, and mentors have on the aspirations of these students to pursue STEM majors. Most participants talked about the impact of high school teachers, college-educated relatives, or extra-curricular coaches on their choice of these majors. One student highlighted the impact of her math teachers:

> I just always had like the thing for math.… it's my math teachers that really kind of like influenced me. Because I've never had a bad math teacher—all of them. I just always had like a good connection with all my teachers. … I've always been good at math and they kind of just like my idea that I'd be like a good math teacher. And I was like, yeah I would.

Perhaps, then, retention of STEM students in college begins long before that student reaches college. This participant's teachers (1) were consistently good at their jobs and (2) were realistically supportive of the participant's goals and encouraged her toward a STEM major.

Furthermore, it is important to help students prepare for and respond to career ambivalence. Faculty and staff know that careers shift and morph over time, but students often only see the result. They see a college professor and assume that person followed a linear career path to that particular job. If students are ambivalent, perhaps they can benefit from hearing stories of ambivalence and winding career paths from those influential mentors and role models.

All of this presumes that we are creating space for career-related conversations with our students. Getting a college education is about more than content knowledge and course grades. Career development is about more than attending a "how to write a resume" workshop sponsored by the career services office. Promoting retention and persistence in STEM majors will require a

holistic approach to academic preparation and training, student support, and career development. It is imperative that those who wish to help STEM students succeed make the effort in all of these areas.

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An Engaged and Empowerment Based Reciprocal Pedagogy: Addressing Shame with Adult Learners Returning to College

Julie M. Skogsbergh

Abstract

This paper reflects on my upbringing and background and experiences with shame as an entry point to highlight teaching strategies and pedagogical approaches garnered through both teaching and advising to address shame and stigma among adult students who have not completed their college degrees while centering students' voices and experiences.

Keywords: Shame, Adult Learners, Adult Education, Reciprocal Pedagogy

I was a first-generation college student and grew up in a working-class family in a small town in southern Wisconsin. I had always been a good student, and I was one of those kids who loved school and learning. I would say that the expectation in my house growing up was that I would go to college (although as time went on, I was never quite sure how I would afford to do so, but I always planned to go and did everything I could to make it happen). For as long as I can remember, I wanted to be a pediatrician—I wanted to help people. I loved kids, and as I already stated, I was what people would refer to as a "good student." I excelled in school, especially math and science. But, if I am honest, somewhere deep down I also knew very early on that being a medical doctor was a really good job. The main driving force behind that goal (besides genuinely wanting to help people) was that it would be a way out of poverty and a way to distance myself from the financial struggle I experienced growing up.

So, I set my sights on the University of Minnesota-Twin Cities, was accepted, and declared a pre-med major. I arrived the fall of 1992, having graduated in the top ten percent of my class, joined the pre-med club, and had the opportunity to shadow and observe transplant surgeries. I also volunteered at the Children's Hospital. However I struggled immensely with calculus and the rigorous science courses at the university level despite having excelled in high-level advanced placement math and science courses during high school. After some soul searching at the end of that first year, I decided to switch majors and pursued my other budding interest in culture. This was a starting point, and it was an area that would get more defined over time as I became aware of the social inequities both here and around the globe. I loved my experience at "the U" (as we called it). I dove in, chose a new major, International Relations, and continued with my minor in Spanish. I did quite well in my classes, and by some miracle, I was able to use my financial aid to do an internship abroad in Ecuador during my junior year. Throughout my undergraduate experience, I focused on, nurtured, and developed my Spanish language skills, having fallen in love with the language when I started taking it in ninth grade. As I took classes and met people from all around the world on the urban campus, I also began to develop a deep interest in social inequality and oppression, as I often struggled to make sense of the world

around me. I graduated, got a job using Spanish in the medical insurance field, and two years later moved out east to do a master's degree in Intercultural Relations, which subsequently led me to doctoral studies in Anthropology. My pursuit of a doctorate was rooted in a love for qualitative research and an even bigger love for teaching. I had one primary goal: to teach at the college level.

Little did I know, when I started with this goal, that working with adult students would be my calling. By far, it is the most rewarding work I have been engaged in. For the past four and a half years, I have served as a Lecturer in the University Without Walls Adult Degree Completion Program at UMass-Amherst (referred to as UWW), a program started as an educational experiment in 1971. Our program is entirely online, but we do offer some of the core classes in a hybrid format. As core faculty in our program, we are generalists who teach some combination of a critical thinking and degree development course as well as the junior year writing course, where students write a Prior Learning Portfolio evaluated for credit.

When I joined the UWW faculty, I began to plan for the critical thinking and degree development course. I had a lot of flexibility in how I approached it and in what I could include in the overall course content. I wanted to incorporate the fundamental themes of inequality and oppression, which underpinned my academic work. These were the themes and experiences that led me on a path of engagement and commitment to teaching equity, diversity, and inclusion. I was also aware that most adult students were coming back to school after various amounts of time away, and there was much to accomplish in this one course. I felt it was important to address the basics of scholarly writing and research in addition to the one required component—developing students' individualized area of study to complete their degree. Additionally, I felt it was important to provide students with an introduction to theory and a broad range of these theoretical concepts and their respective applications to and critical analysis of a variety of social issues in American society. And, lastly, I wanted to have students reflect on their own educational journeys, thinking about what led them to UWW and where they saw themselves now, having completed their first semester back at college.

In my first semester of teaching, I designed the course with the components mentioned above, which included a reflection piece on their educational journeys. I planned that first semester so consciously in terms of content and flow. When I made this initial decision, I thought it would be a nice way to wrap up their first semester at UWW. So, as I read the students reflections at the end of that first semester, I was shocked and deeply unsettled by the one theme that repeatedly emerged in each essay—shame. Bergman et al. (2019) wrote in the preface of *Unfinished Business*— the inspiration for our conference theme this year—that "not having a college degree is taboo among friends, coworkers, and family members. For many, the embarrassment of not finishing college is often a closely held secret that weighs on them as they discuss, engage, and compete to meet the challenges of the workforce in the 21st century" (p. xiii).

Indeed, as I read their reflections, students talked about their shame around never having finished their degree, about starting and stopping (sometimes several times), about having to hide the fact that they did not yet have a degree in professional settings where it was often assumed, about

feeling like a failure, and feeling that they were letting their kids or family down. This was so prevalent that I immediately knew I had to address this and make changes to my course. It was so jarring it made me think back to what I experienced as shame and failure in my life. I remembered the weight of it, carrying it all those years, and found a deeper lesson in those life experiences to relate to what I was reading from the students in my course. For a long time, despite my continued academic accomplishments, in the back of my mind, I always harbored shame around what I considered "failing" in my pursuit of becoming a physician, which I internalized mean I wasn't smart enough. I recognize that this initially played a role in my pursuit of a PhD so that I could prove myself in some way. I let that go somewhere along the long doctoral road, but it was a revelation for me when it happened and later served as a point of connection for me at the beginning of my work with adult students at UWW.

This moment was perhaps one of the most salient and important lessons for me as I began my work with adult students. I always wanted and desired for any student I worked with to feel empowered in their life and their learning. However, I learned that wasn't even possible without first acknowledging and processing the barrier of shame (as well as the many others). Only then could we focus on freeing the path forward in order to open up the transformative power of knowing and learning.

I spent time at the end of that first semester, reflecting on what I could do to address this glaring issue in students' lives. So, I returned to what I knew, to an approach to teaching and learning I have developed over a decade and a half of teaching: Reciprocal Pedagogy (further addressed in a forthcoming publication in *Dialogues in Social Justice: An Adult Education Journal*). Reciprocal Pedagogy starts from the supposition that the roles of teacher and of self-defined lifelong learner are not separate, but that each directly informs the other. The combination of these roles provides the foundation for this approach. Furthermore, it is an engaged and social-justice based pedagogy built upon the principle of respect, focusing specifically "on the way respect creates symmetry, empathy, and connection in all kinds of relationships, even those, such as teacher and student, […] commonly seen as unequal" (Lawrence-Lightfoot, 2000, p. 10). Finally, it also draws from the Highlander principle that everyone has something to teach and everyone has something to learn (Horton et al., 1998), with learning that takes place in multiple ways:

- Students learn from the teacher and the course materials provided.
- Students learn from one another.
- Students learn about themselves, and the teacher learns about herself.
- The teacher learns from the students.
- Students and the teacher take the information, experiences, and knowledge from their learning as they each engage in their daily lives with family, colleagues, and their community.

As I planned for the second semester, I drew upon this approach to redesign my course. I kept the first week the same, which included an overview of the course, introductions (that I also participate in), a review of the history of the UWW program, material on and about Paulo Freire. In addition, I described my teaching philosophy, which I always highlight in my classes so that

students can learn more about me, why I choose the materials I do, and my beliefs and approaches to teaching and learning.

Given what happened the first semester, I decided that before doing anything else that I would start week two by directly addressing the topic of shame. I wanted to center and highlight the topic right away in the class so students could begin to process what it had meant in their respective journeys with the goal of demystifying its overarching power and presence in their lives—to acknowledge the space and psychic weight it took up in their minds and hearts. I moved the reflective exercise on student's educational journeys that I had previously done at the end of the course to week two. Additionally, I incorporated materials that directly addressed the theme of shame. I started with a key contributor of research on the topic of shame, Dr. Brené Brown. I added both of her TED talks "Listening to Shame" and "The Power of Vulnerability" to the course materials for this week. Additionally, I found a TED talk by Lidia Yuknavitch titled "The Beauty of Being a Misfit," and I added Ibram X. Kendi's graduation speech titled "Are you an Intellectual?" These all resonated deeply with me, and they have subsequently done so with the students each semester as well.

Here is a sampling of what some of the students with whom I've worked have said about the role of shame and moving beyond the shame they carried:

> "The most important thing I gained was the realization that I don't need to apologize to anyone (especially myself) for my nontraditional path." (SF)
>
> "I have never regretted my decision to leave college originally in 1995. I was a sophomore at the time. But knowing that was the right choice for my life did not eliminate the feeling of shame when people would ask 'Where did you go to college?' I straddled a duality for twenty-five years—feeling both pride for what I refer to as a deliberate life…but also a deep shame. In the experience of being an adult student, working to earn one's first bachelor's degree, shame is shared across all social and economic contexts. To bring more emotional willingness into the classroom for all students would be valuable. And, at the other end, professors and educators should be aware of the power of their visibility and inter-classroom interactions – and how that provides an emotional safety net for all students." (MC)
>
> "I've felt shame my entire life, from the moment I found out [about] society's perception of my differences, to becoming a statistic of teen parents, and furthermore, not accomplishing what I thought I should by the time I was 25 years old. I felt shame for not finishing college the first time and returning almost a decade after. Shame is a word I have never used, but have felt. I [have] learned all of us feel shame in one way or another and [that] it's okay. [I've also learned that] because of shame we sometime inhibit ourselves in overcoming obstacles. [But] I've also been empowered throughout this time of shame. I've encountered moments of self-realization. I've used coping skills that held me through these shameful moments including positive self-talk to drown out negative thoughts in [my] mind […] because shame is very heavy for ones soul to carry." (RS)
>
> "The lead cape of shame is a garment I've worn most of my life. The hot flush of humiliation and shame was a weight I dragged with me everywhere without even

realizing it. Feeling embarrassed, overwhelmed, inadequate, not good enough, judged, and found wanting was just – normal. In retrospect, I can see more clearly now that this shame was not only mine. It was a family legacy carefully nurtured and passed down through generations. Once I enrolled at UWW, for the first time, I realized that my sense of shame was totally coloring everything. Over the course of finishing my degree, [it was] the support I received from everyone [faculty, staff, and fellow students that] slowly made me aware that my sense of inadequacy was not real; and in fact, I was a fine student, classmate and a pretty darn great human! Being in an environment where being thoughtful, deep, and smart is an asset [that] is appreciated, not something to be put down for, changed my world." (MW)

"Shame can create unique challenges for the adult learner but it can also open windows of opportunity. My experience [has been] one of support and nurturing, which was essential for me because my thoughts that I wasn't good enough were still very close to the surface. At the start of my return to school, every little bump in the road would remind me that failure was always waiting for me, and the urge to give up and drop out of school seemed stronger than my desire to finish my undergraduate degree. What I encountered in the adult learning environment are other students who shared similar fears and worries, which helped normalize my own feelings of shame and inadequacy [as well as] professors who supported us as we ventured back to the world of education. Learning has been the thing that has opened my mind to other ways of thinking—it has helped me to see the benefit of vulnerability and imperfection, [and] it has helped me to be open to supporting others in their learning process and to accept support from them. Every academic success […] builds confidence. The learning environment has helped me to find my people (my tribe) and helped me to discover my authentic voice. I am discovering that learning is a lifelong process, and that my identity is closely linked to learning. I am learning that imperfection is not a failure, it's not shameful. Being human is being subject to imperfection. And when you get to that final semester you realize that you've actually done it—something that seemed so impossible is becoming a reality and the confidence that I've developed on my journey to graduation [is something that] will always be with me." (AD)

I make the conscious choice to position myself in the classroom very intentionally. I unapologetically bring an anti-racist and feminist lens to my teaching. I also bring my whole self (this is in part why I started this presentation the way that I did—to model that which I do in the classroom). I don't believe in asking my students to engage in something I myself am not willing to do. I am asking them to have the courage to be open and vulnerable, so I too, must be. I believe, as bell hooks (1989) stated, that "it is our collective responsibility to educate for critical consciousness" (p. 118). Through engaging in a self-reflexive process about my teaching, I have been able to position myself both personally and professionally through my lived experiences as well as through the experiences of the adult students with whom I am honored to work. My hope is that my future work continues to draws upon the knowledge created through the plethora of experiences in learning—both in the classroom and the everyday—always allowing room for growth, engagement, and liberation.

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The Benefits of Reflection on Improving Teaching Through Change: A Reflective Model for Professional Development

Rachel Wlodarsky

Abstract

This paper looks at the implications of reflection on improving teaching through change for college faculty. In this research study, I explored reflective practices where teacher educators defined reflection and discussed processes, which they used to facilitate reflection on their professional development. A qualitative coding strategy was used, then an analytic concept mapping procedure described by Novak and Gowen (1984) was employed. Findings include an unmistakable pattern of change that derived from identification and correction of deficiencies in practice. Second, reflection is a process of discovery of strengths and successes, to confirm and plan for continuation in that same path. Demonstrated in the event path is a process that can lead to change and ultimately improved teaching practices.

Keywords: Reflection, Change, Professional Development, Learning, College Faculty

Kouzes and Posner (2007) argued that there are no shortages of challenging opportunities for organizations and the people who work within them. In these extraordinary times, the challenges seem only to be increasing in number and complexity. They stated, "the abundance of challenges is not the issue. It's how we respond to them that matters. Through our responses to challenges, we all have the potential to seriously worsen or profoundly improve the world in which we live and work" (p. xi). At the core of this discussion of challenge and opportunity, threats and circumstances, is the issue of *change*. In higher education, the issue of change relates to several key stakeholders, one of which is faculty members.

In this research study, I explored the process of reflection, where I observed a consistent focus on change, unsolicited, across all experience levels of professors who chose to participate. For novice and expert alike, the most common descriptions of reflection on practice linked past experiences with the information captured in journals, evaluations, student comments, and peer reviews, to a conscious decision to do something different: to change. I acknowledge a few participants made the conscious choice not to change. In summary, this paper explores the implications of reflection on change in the context of higher education, specifically college faculty.

Reflection and Change

The literature on reflection is vast; there is too much to capture within this paper. Therefore, I will focus my efforts on reflection and its association with change. Meryl Thompson (2010) suggested that reflection and reflexive practice are a close examination of one's thoughts and

behaviors, leading to learning from experience and an experimental disposition toward outgoing activity. This outgoing activity could be perceived as a change in behavior. According to Nguyen et al. (2014), although reflection has been viewed as a thinking process, it does not mean that *reflecting* and *thinking* are synonyms; reflection includes further elements such as "thoughts and actions; attentive, critical, exploratory and iterative processes; an underlying conceptual frame; a view on change; and self" (p. 1180).

Observing reflection in the context of education, Kahn et al. (2008) were interested in the instrumental uses of reflective practice: Was the reflection in any of its various definitions treated in the literature as causal of professional development, individually or with education cohorts of practitioners? And if or when the reflective practice was viewed as an essential tool to create change in individual educators or groups of educators, was their evidence that this change occurred? Kahn et al. came to a rather stark, but not necessarily unanticipated conclusion for the outcomes of grand-scale education efforts:

> While exploration of their meaning might well occur during a program, it was clear in the documentation that the ability to engage in a reflective process was not simply an end in itself. Other intended outcomes flowing from the application of reflective processes included the ability to innovate, the willingness to take risks, a framework for career-long development and so on. A direct link was made in each educational program between reflective processes and professional development, with the use of reflection to support self-improvement and adaptation of practice prevalent to varying extents. This was typically set within a context of change within higher education. (p. 170)

In short, the literature surrounding reflective practice was packed with outcomes expectations: education systems adopt the language and "practices" instrumentally. Education institutions and programs encourage, require, or use reflective processes instrumentally to cause change in individuals and among cohorts of practitioners. Yet, as Kahn et al. (2008) and others observed, actual performance data have been, in many cases, ambiguous or inconclusive as to whether this change takes place (Clegg et al., 2002; Lyons, 2006). Nevertheless, I would agree that the degree of the reality of change is highly variable within cohorts of education professionals and even for individuals in problematized contexts. With this increased attention on *change* comes a responsibility to better understand the role reflection can play in enabling and operationalizing change.

For many researchers, including myself, the interest lies in what conditions optimize the possibility that change occurs. This paper introduces a reflective model of change that emerged from the data provided by the teacher education faculty. Although the model is introduced in its entirely, the purpose of this paper is to give greater attention to the *Change Point* component in this reflective process.

The Study

Research Questions

The research study was developed to consider the influence of reflection as an element in bridging decision-making and change in professional contexts. The research questions answered using the data were as follows: what does the reflective *process* look like? Were there similarities among the individual respondents to their specific processes? Lastly, how might this practice relate to the professional development and personal growth for professionals?

Participants and Data Collection

A convenience sample was recruited comprised of 17 professors within a college of education at a private, liberal arts university in the Midwest. The participants varied, ranging from tenure-track to tenured faculty who teach undergraduate and graduate courses. The faculty who volunteered comprised approximately 33% of the total college faculty at the time of the study. All volunteers signed informed consent statements that explained the study and the intended use of their responses.

The sample included individuals who selected to participate at an anonymous level—completing the survey only. The specific survey item read as follows:

> Write out a brief definition of reflection and describe how this practice might relate to your professional development as a faculty member. As part of your definition, describe the tools you use to facilitate your reflection(s).

Data Analysis

A constant comparative procedure, which is a qualitative coding strategy, was used to examine the process(es) described in the responses to the item above. Initial themes and categories among the narrative responses were established as a first step in enhancing the credibility of the project. The themes which emerged have been observed in related literature as cited throughout this paper, providing additional confirmatory support for the reliability and credibility.

An analytic concept mapping procedure described by Novak (1998) and Novak and Gowen (1984) was used to organize the narrative. This procedure allowed the researcher to organize and to label participant responses. The coding strategy, following Novak (1998), treated words and phrases (grammatical units) as discrete conceptual units of equal weight. Based on a logical-rational use of vocabulary definitions, these conceptual units were then clustered to establish themes. These themes were then cross-walked to the literature cited previously to establish the reasonableness of the themes and to control or constrain researcher bias. The researcher employed a colleague with expertise in data coding to assist in the analysis process. The researcher/author and this colleague/coder coded the first participant's survey responses together to standardize the coding process. Following agreement on the process to be used, two additional participant responses were coded and compared to monitor agreement on the process and consistency of coding. Finally, the remaining responses were coded, creating a total of 17

concept maps. Analyses, as well as findings, were constructed and edited to protect the individual privacy of the participants.

Findings

Fourteen of the 17 concept maps were developed from participant responses have strong similarities. This implies that a preponderance of participants use the same reflective process to consider their professional activities. The meta-map depicts the typical path followed by the respondents (Figure 1 below) and is consistent with the 14 maps developed around the respondents' narratives. For 3 of the 17 respondents, there was not a clear indication that a behavior change (new event) was implemented.

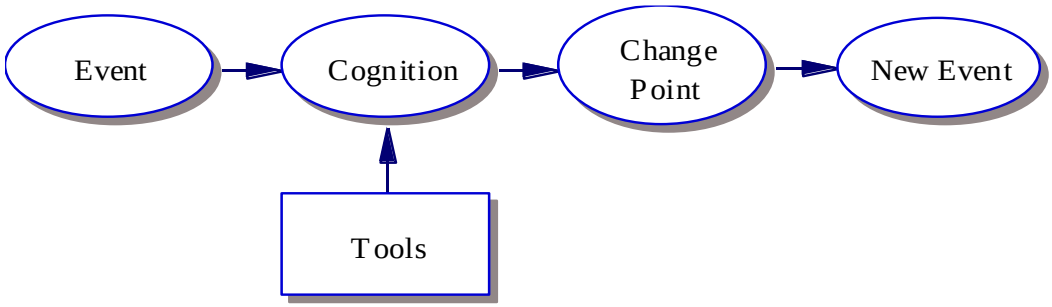

Figure 1. Event path for professional reflection

The typical path followed by the participants indicated a precipitating *Event*, followed by an intentional period of *Cognitive* processing of information. The *Cognition* component served as the point in which some problem was formulated. The information processed during this cognitive period was derived from *Tools*, which is a form of data collection by the respondents. Common types of tools used by these respondents varied from individual to individual; including but not limited to journaling, input from peers through direct observation, input from peers when the event is identified by the individual requesting feedback, and student input. For 14 of the respondents with strong similarities mentioned above, these phenomena are followed by a *Change Point*, where a decision or judgment is made about future behavior. The *New Event* terminology is limited to the occurrence of an actual change in behavior.

Change Component of the Event Path

That this model is a simplified approach for analyzing the professional reflections of college faculty members, and that the terminology supplied by the respondents in the survey narrative can be viewed as indicators of individual cognitive, epistemological, developmental, and reflective levels or stages. Furthermore, it was clear from the response language that effective elements such as satisfaction and confidence—or the lack thereof—were threaded through and not distinguishable from these other dimensions of human development and self-evaluation. Consequently, this model provides an organizing framework, which may be useful for self-evaluation and professional development of individuals, planning professional development for faculty members, or perhaps evaluating the professional growth of faculty.

Discussion

Change and Deficiency

In this study, there was an unmistakable pattern of change that derived from the identification and correction of deficiencies in practice on the part of the participants. Their responses suggested that as they mentally reviewed a completed class, for example, they looked at student work, graded tests, read student or peer evaluations, looking for weaknesses that could be corrected or strengthened. This self-critique or evaluative mindset appeared to drive most decisions to change on the part of the participants. All but three of the individual maps that were created in the study included a specific moment in the life of the individual when the process led to a change in behavior with their professional practice. This observation supports that of Ebert and Crippen's (2010) use of language such as "confront…reform…acknowledge…and threat." This is the idea that motivation for change, at the individual level, may be best activated when it includes clear information about current or past performance that reveals a level of deficiency. This creates an opportunity to compare current or past performance with alternative futures that are within the decision-making authority of the individual and creates a period of cognitive engagement. Ebert and Crippen's contribution, which this study did not address, is the issue of time. Reflective processes take time, and consequently, as Schön (1983, 1987) wrote, reflection must reach a level of practiced engagement so that, when the pressures of decision-making emerge, the professional defaults to better quality decisions.

This observation also resonates with Rogers' (2003) acknowledgment of future possibilities and the opportunity for correction in a supportive environment. This is somewhat parallel to Gregoire (2003) and Ebert and Crippen's (2010) use of a reform message, almost as an advanced organizer for what the future should look like, early in the change process, or in the event path model, an authentic event (Wlodarsky & Walters, 2012). It further resonates with Wright's (2009) and others' (Wilson, 2008) use of the language of future-orientation for practice change and reflection. The participants' reflections on practice emerged in an environment where deficiency was almost acceptable so long as it was highlighted in a process of reflective change. There was a forgone conclusion that a continuous process of critique and growth was necessary in the system and that future practice should be demonstrably different from past practice. This is, perhaps, a theoretical progressivism operationalized into college practice.

Renewal and Confirmation

Nevertheless, we cannot overlook the fact that for some, reflection is ultimately not entirely a tool for uncovering and rectifying deficiencies in performance or practice, but a process of discovery of strengths and successes, and an opportunity to both celebrate those, and to confirm and plan for continuation in that same path. Three of the maps that emerged in the study described the reflection path for education professors who made a conscientious attempt to review information about an experience. Generally, these were class sessions where they taught some group of students to self-evaluate performance for future improvement. In these three cases, after cognitively processing information, these professors concluded that they were

pleased with their performance, that the event had not created tension or displeasure, but had, in the final analysis, proven quite satisfying.

For these professors, change, rejecting, and abandoning past practice in favor of a different future would be abandoning past success in favor of an unknown. They held evidence that their past performance was worth repeating: positive student evaluations, reinforcing peer reviews, examples of student work that demonstrated that the students had learned well the concepts being taught. These professors found confirmatory evidence that the structural elements or characteristics of the event that they had both created and experienced fully met their individual goals. To clarify, it could be interpreted that change still occurred, but rather in the form of a behavioral change: A change occurred in the form of attitude. The awareness and ultimately satisfaction—change in attitude—may not have happened had the participants not reflected on their experience(s).

Implications of Reflection on Teaching Through Change

So, change is confronting and interrupting existing performance to insert an evolved and changed vision of the future, and then acting to see that future materialize. *Change*. Whether one accepts change gracefully, or fights it, it is a given in professional fields. Many of us, perhaps because of disposition or personality, embrace change. We relish a rapid pace of movement around and about the status quo. For us, boredom sets in when we are too often confronted with stasis in our professional lives. For others, change is fraught with emotional tension. It is difficult. It is stressful in a negative way and it is, consequently, resisted. But again, as history shows, it is inevitable. Among other reasons change is necessitated:

1. To improve on past deficiencies.
2. To solidify and reinforce past successes.
3. To manage changing contingencies, and consequently is also driven by timetables not of our choosing.
4. To find a consensus or center for socio-cultural compromise.

In all of these circumstances, a reflective approach to change protects the individual and the organization from repeating the mistakes of the past in the unrealized future. Reflection, as demonstrated in the event path at the core of this study, is a process that can lead to change, but which connects past practice and experience to the unrealized future in an informed manner. The information collected through the tools of reflection, processed cognitively in a way that leads to informed possible futures from which to select trial pathways, guards the professional against thoughtless, reactionary, and fad-driven pivots into a future that is in no way preferable to the past.

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Save the Date—AHEA Conference 2021

Make plans now to join us next year. We'll be in the same location, but our focus will shift. The next installment in the AHEA Book Series is titled *Transformative Learning in Healthcare and Helping Professions Education: Building Resilient Professional Identities*, and this will be the theme of the 2021 conference.

This book explores the nature of professional identity formation by examining ways that professionals in training can thrive amid the challenges of today's stressful practice environments. First-hand stories of resilience illustrate how learners, as well as educators in these professions, are addressing adversity, career decision-making, service to the underserved, and the self-care needed to provide excellent care for others. The prominence of transformative learning within adult learning theory is illustrated for its potential to revise the meaning that learners make of their experiences and open up new possibilities for renewed vitality in professional education and practice environments.

The importance of fostering learning that is transformative has never been more important than it is today for those who will work in these demanding professions. We invite readers to discover experiences and strategies for achieving individual wellbeing, as well as opportunities for building a culture within professional education and practice settings that will foster resilience.

Begin thinking now about how your ideas might add to this discussion. The call for presentation proposals and details regarding the conference dates and location will be sent early in the fall.