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AN EXAMINATION OF THE RELATIONSHIP BETWEEN TECHNOSTRESS AND STUDENT CHEATING IN ONLINE CLASSES: PERCEPTIONS OF BUSINESS FACULTY

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ABSTRACT

This quantitative research study investigated the relationships among technostress creators (techno-complexity, techno-insecurity, techno-invasion, techno-overload, and techno-uncertainty) and faculty perceptions of student cheating in online classes. Data were collected from faculty members of the Management and Organizational Behavior Teaching Society (MOBTS), a member of the AACSB Business Education Alliance, and the American Society of Business and Behavioral Sciences (ASBBS), an interdisciplinary professional organization comprised of faculty teaching in accounting, finance, management, marketing, organizational behavior, and computer information systems during the Spring semester of 2021 (N = 94). Findings from regression analysis indicated that the techno-complexity subconstruct is positively related to a faculty's perception of student cheating in online classes, while the techno-uncertainty subconstruct was negatively related to the faculty's perception of student cheating in online classes. Techno-overload, techno-invasion, and techno-insecurity subconstructs were not identified as statistically significant in predicting a faculty's perception of student cheating in online classes. Results also showed that faculty with 0-5 years of teaching online experience were less likely to perceive that students cheat online as compared to those with more than 5 years of experience teaching online.

MEASURING ENTREPRENEURSHIP EDUCATION EFFICACY

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ABSTRACT

The impact of entrepreneurship has been widely recognized and has attracted efforts from university systems, which has led to a rapid growth of entrepreneurship education (EE) programs. Specifically, the intent of EE is to enable students and graduates to apply entrepreneurial skills and knowledge in a wide array of settings. However, entrepreneurial skills and knowledge are seldom the outcomes measured by EE pedagogy research or used in practitioner university ranking systems. Instead, the focus is frequently on start-ups - research examines the 'intention to start a new venture' and ranking systems on 'the number of start-ups' for recent graduates. Yet, launching a new venture is just the tip of the iceberg; EE must account for outcomes beyond venture starts. The facts are that less than 10% of students pursue a start-up after graduation. Additionally, entrepreneurial skills and knowledge provide a much wider benefit applicable both within and beyond new venture creation. In this paper, we make a case to broaden the focus from start-ups and lobby for appropriate metrics to assess EE efficacy.

Research has acknowledged the need for more effective measurement of EE outcomes that relate to the needs of students. Nevertheless, EE design is often driven more by replicating existing programs or to perform well in ranking systems. This has led to the proliferation of common pedagogical practices with a limited understanding of educational outcomes. Scholars have asserted that EE needs to better at meeting the needs of students but has faced challenges due to a lack of consensus relating to EE outcome metrics.

To better understand EE efficacy, educators at three universities have worked to assess EE effectiveness. Our research team has taken a competencies-based approach and employed the theory of change logic model to link EE efficacy to both entrepreneurial competencies and early career outcomes. Leveraging a logic model to map the connections between Inputs, Activities, Outputs, Outcomes, and Impact within a curriculum can provide much needed clarity on the rationalities behind EE and the role it plays for the career readiness of students. We have examined the structure of programs across our academic alliance, which contains over a dozen universities offering over 170 EE courses. Considerable time was spent understanding the core EE skills and knowledge each institution intends to impart.

Our research team found a lack of a consistent EE efficacy assessment and a significant disconnect between research and how programs are ranked. While academic researchers often examine how EE influences student mindset outcomes, such as entrepreneurial intent or entrepreneurial orientation, practitioners have focused on ranking lists such as U.S. News. The contributions of this paper are threefold. First, we propose a core set of EE outcomes to assess efficacy, based on an established logic model. Second, these outcomes are operationalized with quantifiable metrics. Lastly, the discussion is intended to broaden our view of how we assess EE outcome metrics and encourage conversation because we believe that a dialogue about the goals of entrepreneurship education is overdue and will strengthen all our programs.

CHALLENGES OF MOBILE PAYMENTS TO THE TRADITIONAL CARD PAYMENT SYSTEMS: A COMPARISON OF CHINESE AND AMERICAN CONSUMERS

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ABSTRACT

Mobile payment has accelerated the banking industry's transition to a new level of mobility around the world. During the global Covid-19 pandemic, such transitions have extended as the users favor contactless mobile payments. This study investigates and compares bank customers preferences of mobile payment between Chinese and American consumers through an empirical setting. The results show that both the Chinese and American respondents strongly prefer mobile payments, as they believe that mobile payments are reliable, dependable, accurate and easy to carry around, while Chinese merchants enjoy lower transaction fees when their mobile payment system linked with their bank accounts, while American merchants link via bank accounts and credit/debit card that results in a higher transaction cost. The emergence of mobile payments urges the banking industry and/or high-tech giants to push the mobile payment platform further, while at the same time continue to offer high quality services to their customers. The authors believe that mobile payment will continue to dominate its market in China in the foreseeable future, even as the Chinee regulators shift to curb private high-tech giants, i.e., Alibaba and Tencent, in favor of state banks, will darken in this emerging mobile payment system and innovations of these high-tech giants, and provide Western banking systems an opportunity to catch up.

WILL MOBILE PAYMENTS TAKE OVER CARD PAYMENTS IN THE UNITED STATES? AN EMPIRICAL STUDY OF THE U.S. USERS' PERSPECTIVES

Chiang-nan Chao, St. John's University
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ABSTRACT

Mobile payment has accelerated the banking industry's transition to a new level of mobility. During the Covid-19 pandemic, such a transition has extended as the users favor contactless mobile payments. This trend presents a huge challenge to the banking industry that needs to be better prepared for its future and meet customers' increasingly changing demand. This study investigates bank customers' preferences between mobile payment and card payment platforms through an empirical setting and hopes to offer some insights for the banking industry to better serve their customers. The results show that the respondents strongly prefer mobile payments while holding their card payments steadily, as they believe that mobile payments are reliable, dependable, accurate and easy to carry around. The findings suggest that mobile payment will continue to expand its market, however, will not take over the card payment system in the near future. This emergence of mobile payments requires the banking industry to push the mobile payment platform further and engage their customers 24/7, while at the same time continue to offer high quality services to their customers.

THE DATA PROBLEM WITH TEACHING DATA VISUALIZATION WITH TABLEAU

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ABSTRACT

To introduce IS students to data visualization, Tableau is an attractive option. It has been recognized by Gartner as a leader in Analytics and Business Intelligence for the last eleven years. With an interface that students typically find engaging, as well as an academic licensing arrangement that makes it free for students, instructors and labs, Tableau is a logical choice for introducing IS students to data visualization.

One of the helpful pedagogical features of Tableau is its 'built-in' datasets that students quickly become familiar with -- allowing them to better focus on mastering Tableau skills. Unfortunately, these datasets do not provide them with the skills needed to process a variety of data into a form that Tableau (implicitly) expects. These required data manipulation skills are very different than Tableau skills and generally the tutorials and Tableau learning materials available to students assume they already have those skills.

Even worse, terminology associated with data manipulation is not standardized and presents a significant challenge to a student who runs into a data problem. In fact, if the data visualization classes have focused entirely on Tableau skills, it is entirely possible that the student won't even recognize the problem as a data problem - instead wondering "Why is Tableau not working right?"

It is also important to note that the data skills required for data visualization are not the same skills IS students would gain from an introductory database course.

To help better prepare students for the problems they are likely to encounter when applying their new Tableau skills to 'real-world' data, this paper will explore the key foundational data concepts and skills required for data visualization and explore instructor options for incorporating them into their course. This introduction will provide students with the important knowledge that it is often the data dimension of data visualization that will be the most challenging, as well as providing them with a conceptual framework for understanding data problems, and the skills need to solve those problems.

THE IMPACT OF FIRM SIZE ON JOB EMBEDDEDNESS IN PUBLIC ACCOUNTING FIRMS

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ABSTRACT

Retention in public accounting firms has been and continues to be a top concern in the accounting profession. The direct and indirect cost of turnover; the decrease in accounting enrollment and graduation; the Great Resignation; and changes to work environments due to the pandemic elevate what was already a serious problem into a critical problem for the accounting profession. The size of public accounting firms is a well-used descriptor when employees talk about where they work. This study examines the relationship between firm size and an employee's level of job embeddedness. Many of the elements of a work environment that can increase an employee's sense of embeddedness can be changed or altered by firm management. A quantitative survey design was used to gather evidence from full-time accounting professionals working in public accounting firms across the United States. With a sample size of 136 full-time employees, results suggest that there is a positive relationship between firm size and job embeddedness. Two different measures of firm size were analyzed in the study. First, the number of full-time employees in the office was regressed on job embeddedness. Results indicated that the relationship was positive and significant. Second, the number of offices was used as a measure of firm size. The mean difference was calculated for job embeddedness and each of its six dimensions for firms with only one office and those means were compared to the means of firms with two or more offices. Results indicated again a positive relationship between job embeddedness and firm size, however, only the difference of means for the community fit dimension of job embeddedness was significant.

SUSTAINABLE MOTIVATIONS: FACTORS INFLUENCING SENIOR ENTREPRENEURSHIP

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ABSTRACT

A "longevity revolution" is in full force, with an estimation that, by the year 2050, 1 in 6 individuals will be over 65, up from 1 in 11 in 2019 (UN DESA Population, 2019). Research undertaken by the Kauffman Foundation suggests that the United States might be on the cusp of experiencing an entrepreneurial boom due to the increase in the aging population; their entrepreneurial activity consistently outpaces that of their younger counterparts (Stangler, 2009). At the same time, sustainable practices are a top consideration in today's leadership strategy. Organizations have increasingly incorporated sustainable practices into business strategies (Stewart, 2023).

Promoting entrepreneurship in older age groups can enhance the economy's innovative capacity, economic health, and sustainability practices. It can do so by capitalizing on the human and social capital of mature individuals through new innovative start-up companies (Bothman & Graves, 2009), reducing unemployment levels among older age groups (PRIME 2005), extending the working lives of older individuals (Webster, Walker & Turner, 2005), changing how organizations recruit, manage and retain older workforces (Kulik, Ryan, Harper & George, 2014), increase the levels of social inclusion for older people (Kautonen, Down & South, 2008) and benefit the role organizations play in sustainable practices (Wiernik, Dilchert, & Ones, 2016).

Traditionally, researchers have utilized quantitative methods to investigate entrepreneurship by using secondary data (Eken, 2017; Moulton & Scott, 2016; Halvorsen & Chen, 2019). However, research to date has often overlooked the motivations and intentions of senior entrepreneurs, specifically with sustainable entrepreneurship. In utilizing qualitative techniques, the most significant opportunities are to explore senior entrepreneurs' motivations and intentions further to understand the influx of sustainable entrepreneurship among older individuals. Why are 'seniors' starting new sustainable businesses when society suggests they should disengage from the workforce and spend more time on leisure activities instead? Given the importance of entrepreneurship to long-term economic growth, various questions arise, such as: (1) what factors influence senior entrepreneurs to start new sustainable business ventures? (2) what types of innovation emerge from sustainable senior entrepreneurship?

By collecting in-depth, semi-structured interview data, this research seeks to fill the gap in understanding the motivations of senior sustainable entrepreneurs. The theoretical framework draws on entrepreneurial expectancy, integrating empirical observations and existing literature. The perception of time is identified as an antecedent to entrepreneurial expectancy, emphasizing the unique perspective of seniors. The outcomes of their efforts and performances are evaluated beyond financial gain, encompassing broader sustainability considerations. The study assesses

entrepreneurial expectancy through five categories: action orientation, curiosity, self-efficacy, sustainability, and external resources.

Furthermore, this research explores the potential differences in the effects of sustainable entrepreneurship across diverse senior cohorts. By examining these differences, the study contributes to better conceptualizing expectancy theory within the context of contemporary entrepreneurial research. Understanding the motivations and intentions of senior entrepreneurs in pursuing sustainable ventures can inform policy and practice to promote senior entrepreneurship, thereby fostering economic growth and sustainability practices.

In conclusion, this research sheds light on the motivations driving senior entrepreneurs to embark on sustainable ventures. By adopting a qualitative approach and considering the unique perspective of seniors, the study contributes to our understanding of entrepreneurship among older individuals. The findings have implications for policymakers, organizations, and researchers interested in promoting sustainable entrepreneurship and harnessing the potential of older adults in driving innovation and economic growth.

TEACHING DATA ANALYSIS WITH A SURVEY SIMULATION OF A BEER PROJECT WITH R

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ABSTRACT

This pedagogical study involves a marketing research project that utilizes a survey simulation of beer inventory management. The project involves "interviewing" a deck of bridge cards about customer preferences for different types of containers and brands of beer across three regions and two states in the US. Students work individually and in teams to simulate survey data, enter data into an Excel spreadsheet, and use statistical software for data analysis to obtain results. Students perform exploratory, descriptive, and inferential statistical analyses and write a report to guide management decision making.

This is a hands-on project that involves students in all stages of data analysis and report writing. This project can be adapted for many different types of courses that require data analysis and the length of the project can be modified to fit course needs. The use of open-source R software makes data analysis transparent and reproducible.

PREPARING STUDENTS FOR CAREER SUCCESS: USING CREATIVE PSYCAP TO MEASURE AND DEVELOP CREATIVE PERSONAL IDENTITY

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ABSTRACT

Creativity is one of the top in-demand skills employers seek in the workplace. This paper presents Creative PsyCap as a tool that instructors use to measure and develop students' creative personal identities (CPI). We developed a 12-item self-report questionnaire (C-PCQ 12) to determine if Creative PsyCap is an appropriate measure of CPI. Results of this study indicate that CPI increases when students undertake creative activities and that Creative PsyCap is a valuable measurement tool. This provides instructors the opportunity to develop and measure various interventions and experiential learning exercises to improve students' creativity skills by using C-PCQ-12 as a measurement tool for developing CPI, which better prepares students for today's employer demands and work environments.

INTRODUCTION

The World Economic Forum's *Future of Jobs Report* (2020) states that creativity is among the top ten most in-demand skills across all jobs through 2025. To advance the work of management scholars and help meet the needs of employers, this paper introduces Creative Positive Psychological Capital as a tool for measuring and developing creative personal identity (CPI) in students to prepare them for their future career success. Creative personal identity is the belief that creativity is essential to one's self-concept (Farmer, Tierney, & Kung-McIntyre, 2003). People with a positive self-image of their creative abilities are likely to value creativity highly (Plucker & Makel, 2010). And if one places a high value on creativity, they are more motivated to engage in creative activities (McKay, Karwowski, and Kaufman, 2017).

Creative PsyCap measures hope, efficacy, resilience, and optimism. Psychological Capital is comprised of four theory-driven subdimensions, which include hope (i.e., the will and the way to reach goals), efficacy (i.e., confidence), resilience (i.e., the ability to bounce back and beyond from negative and positive life events), and optimism (i.e., a positive explanatory style) (Luthans & Youssef-Morgan, 2017). Luthans and Youssef-Morgan (2017) have argued that PsyCap is a "state-like" resource that is more malleable than traits (e.g., intelligence) and "trait-like" characteristics. Therefore, one's level of PsyCap can be developed with training interventions.

The relationship between PsyCap and creative performance was first explored by Sweetman, Luthans, Avey, and Luthans (2011). They examined the relationship between working adults' level of psychological capital with their performance in a 30-second creative exercise. They discovered that all four constructs of PsyCap related positively to creative performance, which

provides initial support for the critical role that employees' PsyCap can play in their creative contributions in the workplace.

In this study, students engaged in a semester-long, multi-faceted experiential exercise called the Board Game Project (Envick, 2023), which requires student teams to invent board games from the initial concept to a manufactured product. Our study measures students' Creative PsyCap before they engage in the project and after they complete the project by using a 12-item self-report questionnaire (C-PCQ 12) to determine if Creative PsyCap is an appropriate and valuable measure of CPI. The following hypotheses were generated:

- *Hypothesis 1:*   *There is a significant increase in Creative PsyCap mean scores for students who complete the Board Game Project (pre-C-PCQ 12 vs. post-C-PCQ 12).*
- *Hypothesis 2:*   *There is no significant difference in Creative PsyCap mean scores for students in the control group (pre-C-PCQ 12 vs. post-C-PCQ 12).*

We also explored feedback's role for students who completed the Board Game Project. Research by Zhou (1998) demonstrates that people exhibit the highest levels of creativity when they receive positive task feedback. Furthermore, Hon, Chan & Lu (2013) found that positive task feedback is a source of encouragement, which can reinforce creative behavior.

- *Hypothesis 3:*   In the Board Game Project population, the increase in the mean Creative PsyCap score, from pre- to post-C-PCQ 12, is significantly different across three subgroups of students (no tangible results, tangible results, tangible results plus evaluations).

METHODS

To explore our hypotheses, we surveyed 75 undergraduate business students. Forty-three students were in the Board Game Project (BGP) group. Each of the 43 participants in the BGP group was enrolled in a course on creativity and innovation and was on a team that invented a board game from the initial concept to a manufactured product. Thirty-two students were in the control group and were enrolled in a small business management course. Four control variables were recorded for all participants: their year in school, major, gender, and domestic vs. international students. None of the control variables correlated with any measure or statistical outcome.

Participants in the Board Game Project (BGP) group engaged in a semester-long exercise that challenged them to be creative in three ways: conceptually, functionally, and visually. Conceptual creativity requires novelty and relevance. It aims to solve problems by integrating current knowledge with new ideas. Functional creativity requires usefulness and performance. It ensures that every part of the invention serves a purpose and works with all the other parts. Visual creativity requires pleasing perceptions and the senses. It involves the game's artistic design and aims to ensure the invention is aesthetically attractive and appropriately communicates the concept. The entire Board Game Project is a nine-step process that takes 13 weeks to complete (Envick, 2023).

All participants completed the pre-C-PCQ 12 during the first step of the project. All BGP participants were also told that their final board games would be evaluated by objective outsiders using ten criteria. This evaluation form was provided to them during step one of their projects, and these criteria were emphasized through step seven of the project until all participants submitted their materials to the manufacturer for production. Furthermore, all participants knew that the results of these evaluations would be used to determine their final grade in the course. This ensured

that all three subgroups worked to achieve the same goals and outcomes. The only difference in the process between the three subgroups was when they completed the post-C-PCQ 12:

- *Subgroup 1 (11 participants)* – This group completed the post-C-PCQ 12 before seeing the tangible results of their manufactured board game (immediately after step 8). They had not seen or played their board games.
- *Subgroup 2 (17 participants)* - This group completed the post-C-PCQ 12 after seeing the tangible results of their manufactured board game (after step 8 but before step 9). They played their board games and saw other teams' board games.
- *Subgroup 3 (15 participants)* – This group completed the post-C-PCQ 12 after receiving the board game evaluations (after step 9). Like subgroup 2, they saw the manufactured board games, played their board games, and saw other teams' board games. Then, 20-24 objective outsiders played each team's game and completed the Board Game Evaluation (Appendix A). The results were summarized and provided to subgroup 3 participants before they completed the post-C-PCQ 12.

The students in the control group did not engage in any activity that required creativity. Instead, they only learned about the importance of creativity in organizations through readings, lectures, and videos. For example, the title of a chapter in their textbook is called *Small Business Ideas: Creativity, Opportunity, and Feasibility*. They were introduced to ideation tools such as SCAMPER and Business Model Canvas. They also watched videos about disruptive innovation and the importance of timing when introducing new business ideas into the marketplace. All participants completed a pre-C-PCQ 12 and a post-C-PCQ 12 during the course's first and last weeks, respectively.

RESULTS

The mean score for the BGP group increased by 11%, from 4.47 to 4.95. The mean score for the control group increased by 3%, from 4.64 to 4.79. Before testing our hypotheses, we generated a histogram of each data set to ensure our data represented the characteristics of a normal distribution, followed by a Kolmogorov-Smirnov test. The histogram and K-S results indicate that our data is normally distributed, signifying that a dependent t-test was appropriate to test our first two hypotheses.

For the BGP group, the results of the dependent t-test indicate there was a significant increase in Creative PsyCap from pre-C-PCQ 12 scores ($M = 4.47$, $SD = .59$) to post-C-PCQ 12 scores ($M = 4.95$, $SD = .57$), $t(42) = 6.3752$, $p = .00001$. These findings support our first hypothesis. Table 1 provides the Paired Samples Statistics for the BGP group, and Table 2 provides the Paired Samples Test.

Table 1 – Paired Samples Statistics for BGP Group

Paired Samples Statistics - BGP

		Mean	N	Std. Deviation	Std. Error Mean
BGP	pre-C-PCQ 12	4.47	43	0.5937	0.0905
	post-C-PCQ 12	4.95	43	0.5741	0.0876

Table 2 – Paired Samples Test or BGP Group

Paired Samples Test - BGP

				Paired Differences				
			Std. Error	99% Confidence Interval of the Difference				
	Mean	Std. Deviation	Mean	Lower Bound	Upper Bound	t	df	Sig. (2-tailed)
BGP Group Mean Score pre-C-PCQ 12 - Mean Score post-C-PCQ 12	0.4805	0.4942	0.0754	0.3000	0.7000	6.3752	42	0.00001

For the control group, results indicate there was not a significant increase ($p < .01$) in Creative PsyCap from pre-C-PCQ 12 scores ($M = 4.64$, $SD = .58$) to post-C-PCQ 12 scores ($M = 4.79$, $SD = .62$), $t(31) = 2.4807$, $p = .01875$. These findings support our second hypothesis 2. Table 3 provides the Paired Samples Statistics for the control group, and Table 4 provides the Paired Samples Test.

Table 3 – Paired Samples Statistics for Control Group

Paired Samples Statistics - Control

		Mean	N	Std. Deviation	Std. Error Mean
BGP	pre-C-PCQ 12	4.64	32	0.5796	0.1025
	post-C-PCQ 12	4.79	32	0.6249	0.1105

Table 4 – Paired Samples Test for Control Group

Paired Samples Test - Control

				Paired Differences				
			Std. Error	99% Confidence Interval of the Difference				
	Mean	Std. Deviation	Mean	Lower Bound	Upper Bound	t	df	Sig. (2-tailed)
Control Group Mean Score pre-C-PCQ 12 - Mean Score post-C-PCQ 12	0.1531	0.3492	0.0617	0.0000	0.3000	2.4807	31	0.01875

The means scores for the three subgroups did increase by different amounts based on the level of feedback received:

- *Subgroup 1* – The mean score increased by 8%, from 4.64 to 5.00.
- *Subgroup 2* – The mean score increased by 10%, from 4.35 to 4.79.
- *Subgroup 3* – The mean score increased by 14%, from 4.48 to 5.09.

To test our third hypothesis, we conducted a one-way ANOVA to compare the effect of the three levels of feedback between the three subgroups. The results reveal no statistically significant difference in the mean score between at least two groups, $F(2, 40) = 0.8275$, $p = 0.4449$. These findings do not support our third hypothesis.

DISCUSSION

The preliminary findings of this study support previous research, which indicates that creative personal identity increases by undertaking creative activities. Creative PsyCap serves as an appropriate measurement tool. There is immense potential for Creative PsyCap to be used as both a predictive and developmental tool for bolstering creative personal identity and creative performance. Creative PsyCap development activities could be included in curricula to improve students' CPI, motivating them to apply their creative skills more effectively. For example, instructors could have students identify goals that require creativity, are personally valuable, and are challenging. Then have them generate multiple creative pathways to reach those goals. Deriving multiple creative pathways would help them develop a sense of hope, resilience, efficacy, and optimism. Much further research is needed to explore Creative PsyCap's role in predicting creative performance.

While the third hypothesis was not supported regarding the effect of feedback on Creative PsyCap, it warrants further exploration. The sample size in this study may have been insufficient to detect a significant difference between the levels of feedback each subgroup received, as the mean scores did increase by a wider margin with increasing levels of feedback.

In conclusion, utilizing Creative PsyCap could be a game changer for students seeking jobs requiring creative contributions, especially for employers using some measure of CPI as a selection tool. There are many potential developmental interventions and experiential learning opportunities an instructor could create in various courses to help prepare students for the job market, which demands more creativity skills from workers.

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SOUTH BY SOUTHWEST

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ABSTRACT

In December 2022, during the busy travel rush preceding the Christmas holiday, Southwest Airlines found itself in a deepening crisis that threatened to destroy the airline and the goodwill it had cultivated over decades in a cut-throat industry. Countless flights were cancelled or delayed during a brutal cold snap over the period of a week, stranding tens of thousands of travelers, until Southwest was finally able to recover. However, by this time, the damage was done. Could this disaster have been avoided? Many observers point out that there were warning signs that Southwest should have invested more in staffing and logistics technology that could have prevented this catastrophe. This case study provides a postmortem analysis on possible preemptive action Southwest could have taken, as well as a critique of the airline's crisis communication and recovery plan.

FUTURE CORRELATION OF DESIGN THINKING AND ORGANIZATIONAL LEADERSHIP

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ABSTRACT

The correlation between design thinking and organizational leadership is indirect and complicated. The transition of ideas from innovation to creation is arduous and requires multiple translations and handoffs. Through design thinking, leaders gained new insights into the company's culture and the strategies for building work cultures, such as AI, storytelling, and coaching. If leaders could identify the challenges and opportunities, the culture could shift from disengagement to engagement. In addition, they began to identify their values and realized how important it was to value employees to influence innovation and establish an engaged culture. The literature review included multiple cases and opportunities to glean a sense of parity. This study determined that the evolution of design thinking and the innovative thought process should be communicated faster and closer to the organizational leadership core. In a contemporary and accelerated business model, creative innovation-based ideas are more of a commodity and need. The study provides conceptual evidence that improving creative communication between organizational tiers and leaders can accelerate innovation development and implementation. The research process was leveraged to engage in a systematic search and discovery and determine the best analysis route. Supposing employees eventually fear innovation disruption and increased organizational culture change, remediation will be required. In that case, this research will provide balanced contextual relief by considering a path forward.

INTRODUCTION

Design thinking (DT) and organizational leadership (OL) have a disjointed but necessary relationship, and there is a need for a closer connection. Snyder et al. (2018) advocated that understanding qualities, including what they are and how they are created, is a contemporary test for most business pioneers (Snyder, Ingelsson, and Bäckström, 2018). Joachim et al. (2020) noted that in 2006, Roger Martin added the term "design thinking" to the management vocabulary, describing it as a way to "approach managerial problems as designers approach design problems (Joachim, Schulenkorf, Schlenker, & Frawley, 2020). Snyder et al. (2018) proposed that leaders aren't talking about what leadership is, what culture is, and what values mean in the organization. Also, there is much emphasis on process and structure, but no one knows why these things are there or how they can spark innovation. In addition, a crisis leadership model that heavily emphasizes productivity and bottom-line effectiveness leads manufacturing participants to succumb. Leaders gained new insights into the company's culture through DT and the methods used to develop work cultures, such as AI, storytelling, and coaching. The culture could be

transformed from one of disengagement to one of engagement if leaders could identify both the obstacles and opportunities. They also started to identify their values and realized how important it was to value employees to influence innovation and create a culture of engagement (Snyder, Ingelsson, & Bäckström, 2018, p. 1289).

A company should first consider the differences between the method, how well it fits the company, and how it can be used before joining the growing number of DT adopters, whether to meet the market's needs or stay ahead of the competition. According to Nakata (2020), citing Sommer et al. (2015), the Stage-Gate (SG) innovation system, which involves phased project reviews to develop new goods and services, is currently in use by many businesses. Nakata explains that the SG procedure is the primary and most well-known alternative to DT. DT's emphasis on mindsets and tasks during the innovation process is one of its most distinctive features. Advocates depict DT as a way of thinking, as a psychological model, and as talk, inferring it isn't simply a strategy, a bunch of activities embraced to make the development. The idea of finding a solution to a problem is yet another distinctive feature of DT. The DT method assumes the issue might have to be discovered or recast because it's possible that the wrong issue was initially identified. This may be particularly useful for complex and ambiguous innovation requirements (Nakata, 2020, p. 766).

Chesson and Kusy (2019) concluded that the connection between DT and leadership would interest particular observers associated with high innovation and conception levels. Over the past few decades, the need for innovation has become increasingly apparent. While costs have continued to rise, the lack of productivity enhancements is one factor driving the demand for healthcare innovation. Particular high creation and conception observers will find the connection between DT and leadership fascinating. The need for healthcare innovation has been emerging over the past several decades. While costs have continued to rise, the lack of productivity enhancements is one factor driving the need for healthcare innovation. A McKinsey study from 2014 says, "Healthcare ranks near the bottom in terms of productivity improvements since 1990." The shift in population demographics is another factor: as people born after WW2 (the most significant generational companion) arrive at retirement age, the requirement for medical care administrations will develop, which, like this, will expand the interest in medical care administrations. Digital technology advancements are a third factor, not just those directly related to medical advancements but also those operating in the periphery. Examples include scheduling apps that allow patients to make their appointments or text messaging services that speed up communication between service providers and patients (Chesson & Kusy, 2019, p. 171). DT and OL have a correlation chasm, and there is a need to close the divide.

LITERATURE REVIEW

DT is familiar, but the definition and connotation have evolved. Rylander Eklund et al. (2022), citing Micheli et al. (2019) and Brown (2008), discerned that in the literature on innovation management, DT is taken into account in the definition that is cited the most, "a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market

opportunity." Tim Brown, an influential proponent of and former CEO of IDEO, proposed this definition. He also observed that designers' ways of thinking and working had begun to "move upstream" and were playing a new strategic role that "pulls 'design' out of the studio and unleashes its disruptive, game-changing potential." Eklund et al. (2022), citing Brown (2009), proposed that in the face of complex problems in business and society that professional design had previously failed to address (Rylander Eklund, Navarro Aguiar, & Amacker, 2022, pp. 24-25). His main point is that design "thinking" and design "doing" in the traditional studio context can and should be separated. The basic supposition will be that this sort of "reasoning," even though grounded in creators' imaginative ways of working (i.e., the act of planning), can be separated, moved, embraced, and applied by non-originators in different settings and can prompt advancement innovation (Rylander Eklund, Navarro Aguiar, & Amacker, 2022, p. 25).

Snyder et al. (2018) expressed, considering that DT can affect and make noticeable hierarchical culture and hidden values inside a work setting, we became keen on investigating its application in the business to assist pioneers at all levels with creating mindfulness about hierarchical culture and the job of values in driving supportable quality turn of events. A project to develop an internal coaching process to support value-based leadership in a Lean initiative was launched in 2015 with funding from the Swedish Knowledge Foundation—the project aimed to investigate how quality can be improved in Swedish businesses. Snyder et al. said that this project aimed to assist leaders in developing internal processes to support value creation and foster long-term quality development. We were also interested in learning about what helped and hindered sustainable quality development (Snyder, Ingelsson, & Bäckström, 2018, p. 1290).

The cognitivist bias in the DT literature is unable to account for the experiential and cultural aspects of designers' creative practice or their sensibility, which would appear to be embedded in the potential contribution of DT to innovation (its "power" or "game-changing potential"). As a result, designers' "creative practice" remains undertheorized in the DT literature, making it challenging to comprehend implementation failures brought on by cultural clashes. (Rylander Eklund, Navarro Aguiar, & Amacker, 2022, p. 26).

The DT literature reflects a divergence between nomenclature and actual practice (Rylander Eklund, Navarro Aguiar, & Amacker, 2022, p. 28). First, we emphasize the need for a practice theory in the literature on DT. Second, we have stressed the necessity of using a different theoretical paradigm to examine experiential and cultural aspects of DT practice. We also discover issues with how the DT literature treats theoretical concepts like culture and experiential learning. Thirdly, we define sensemaking and emphasize its imaginative and improvisational nature and the significance of embodied experience in DT. Last, we emphasize the necessity of DT research methods concentrating on specific practice scenarios. Longitudinal qualitative research, such as in-depth ethnographic research, is needed to show how design thinkers use their imagination, improvise in situ, and develop their sensibility over time because of the emphasis on embodied and situated practice (Rylander Eklund, Navarro Aguiar, & Amacker, 2022, pp. 36-38).

DT offers business and public area associations an approach to creating unique items and administrations that address inert issues. It is thought to provide a competitive advantage; a method for coming up with new ideas and controlling organizational change in the face of rapidly shifting customers, supply chains, and hyper-competition; and dealing with "wicked" issues. According to

several authors, DT provides a competitive advantage through innovation and, citing Olson et al. (1998), can lead to a competitive advantage by creating value for customers (Dunne, 2018, p. 2).

Additionally, DT is regarded as a vehicle for leadership, organizational development, and change. Instead of choosing between well-defined alternatives, design thinkers seek to create new, valuable options through iteration and reflection. It is reasonable to anticipate discomfort in reconciling these two distinct positions. An identifiable, express design lab developed early-stage ideas for implementation in operating departments in some organizations' centralized model. The majority of the time, these labs offered programs for internal training. A distributed model, in which the design program is distributed among the operating divisions, offered an alternative. There were also hybrid models in which a small central team supported design programs across the organization and served as the design hub. The staff consisted primarily of non-designers, though only in a few instances where the units were led by designers: Design leaders were typically long-term managers with a thorough understanding of the organization. (Dunne, 2018, pp. 2-7).

According to Nakata (2020), leadership promotes and shepherds innovation efforts by providing employees with the motivation, direction, and means to carry them out. Notably, how leaders lead at the team level or senior management acts as a shaping force. Therefore, the approach taken to innovation is likely to be heavily influenced by a leader's leadership style—or their priorities and preferences when managing others. The combination of leadership through dedicated coaching and a culture of collaborative experimentation is the best fit for DT. In this specific situation, DT benefits from a climate where believing trades among advanced laborers promptly happen, chances are taken as speedy trials, and pioneers energize the turn of events and government assistance of workers.

In contrast, a culture of specialized efficiency and leadership through metrics management is the worst fit for DT. DT encounters a conflicting logic in these circumstances, where leadership favors procedural rationality to safeguard goals while the culture values structured arrangements to direct resources. In this culture-leadership setting, DT's distinctive features of abductive reasoning and less predetermined tasks will not fit well (Nakata, 2020, pp. 768-769). To this point, DT and the innovative ideas created should be more of an organizational high-objective initiative.

THE FUTURE FIT OF DESIGN THINKING AND ORGANIZATIONAL LEADERSHIP

DT, which ranges from low to moderate to high, should be adjusted to the various degrees of firm fit to guarantee successful innovation. The method can be used with hopes of success in businesses with a culture of collaborative experimentation and committed coaching leadership (an environment of high fit). In contrast, organizations should steer clear of DT because of the strong incompatibilities in settings where a specialized efficiency culture and metrics-managing leadership style prevail (reflecting a low fit) (Nakata, 2020, p. 770).

Snyder et al. (2018) completed a multi-site case study methodology in which we combined DT to inform data collection processes used in a study that focused on the (research question and research hypotheses). Respondents, or partners in this study, were employees and leadership teams from three Swedish manufacturing companies. Company A had one general director, two production leaders, and 16 leaders in middle management. Ten middle managers and one

production leader represented Company B. There were three middle managers, a production leader, and a general director for Company C (Snyder, Ingelsson, & Bäckström, 2018). To foster a limit to configuration thinking, most associations should initially recognize and face their inherent inclination for double-dealing and insightful reasoning and their propensity to lean toward unwavering quality over legitimacy. In the business world, programs like Six Sigma exemplify the dependability direction, while research and development address the sort of exploratory movement generally connected with legitimacy (Leavy, 2010, p. 8).

FUTURE RESEARCH

Nakata (2020) explained that because integrating a novel innovation strategy like DT takes a lot of time and resources, managers must be aware of and consider essential aspects before committing. Employee resistance to and opposition to DT initiatives may surprise managers. Workers in innovation who are accustomed to SG may perceive DT as insincere, indirect, or even pointless. Instead of ignoring this unease, it is best to confront it. Managers should stress DT's singularity and set expectations for its procedures, including counterintuitive acceptance of failure opportunities. In aggregate, to guarantee DT's adequacy, whether it is taken on totally or just specifically, directors ought to plan for workers to figure out, practice, and embrace it, alongside applying the strategy in manners steady with their organizations' way of life and authority (Nakata, 2020, p. 771).

Snyder et al. (2018) noted another observation made by the leaders: how they responded to questions and comments from employees. Teams were more dissatisfied when leaders reacted quickly to employee comments without taking the time to comprehend the situation. On the other hand, leaders were found to have groups that appeared to be more at ease, calm, and secure when they took in the information and addressed the question after looking at additional details. The leadership team continued to work with the protocol throughout the year, and these are just a few examples of observations made using it. As a result of the analysis, the routines of how they held meetings, shared information, communicated with workers, engaged workers, and displayed with each other changed (Snyder, Ingelsson, & Bäckström, 2018, p. 1297).

CONCLUSIONS

Communication between the various organizational tiers needed to be improved, most notably at the executive ranks. Snyder et al. (2018) concluded a general need for more discussion among leaders regarding the organization's culture, values, and leadership roles. Too, there is a weighty accentuation on construction and interaction. Still, simultaneously, there needs to be a more transparent comprehension of why the designs exist and how they can be utilized to bring forth development. More importantly, this study demonstrates how manufacturing leaders succumb to a crisis leadership model brought on by a strong emphasis on productivity and bottom-line effectiveness (Snyder, Ingelsson, & Bäckström, 2018, p. 1298).

The research discovered that DT provided a strong foundation for helping leaders understand their leadership styles, define culture, and determine how to shape it. Participating

executives were given a manageable framework by DT to help them better grasp the limitations they encountered in their day-to-day leadership roles and to picture the kinds of workplace cultures and corporate values they believed were crucial. Snyder et al. discovered that participants could delve deeper beneath daily work to find gaps between leadership theory and practice, dreams and realities, and organizational culture through the participatory-exploratory method. In addition, we can reason that creating esteem-based administration expects pioneers to see themselves as a reference point that directs the organization's fundamental beliefs, behavior, and perspectives reflected in individuals and practices. Leaders can build participatory spaces that engage coworkers and prevent fires from growing by using DT and the processes of storytelling and dialogue. They must also balance production, process, and people and explain why decisions are made (Snyder, Ingelsson, & Bäckström, 2018, pp. 1298-1299).

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THE INDECISIVE EXECUTIVE

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CASE DESCRIPTION

This case can be used to explore the influence of outside entities on the management of an organization's personnel and the lack of commitment by the corporation's leadership. After completing the case, students can identify issues resulting from indecisive leadership and potential methods for avoiding those issues. The case has a difficulty of one to two and is designed to be taught in one class hour. Depending on the depth of detail the instructor intends to pursue, preparation time for the students will take from one to two hours.

CASE SYNOPSIS

The oil and gas industry had entered a recession, and executives of the mid-size natural gas company hired a consultant to advise them on the best way to survive the economic downturn. "Cut labor" was one of the recommendations. After carefully examining labor needs, the executives dutifully began notifying personnel that the company would no longer need their services. During the termination meeting with her boss (a vice president), the engineer recounted all of the projects that she was involved in, some directly related to the firm's financial success. Several days later, the vice president informed the engineer that, after his careful consideration, it was determined that her value to the company was significant and that the firm would retain her. Relieved, the 20-year employee began working on updating the workload of her projects based on the reduced available workforce.

Several weeks later, however, the executive called the engineer to his office and was told that the consultant had convinced the executive that she needed to be laid off with the rest of the workforce. To make matters worse, the executive informed her that her job was not eliminated but would be filled with another employee.

Based on the case details, students will view the events from the perspective of the executive, the engineer, and the consultant. The ethics of the actions surrounding the termination of the engineer will be explored, as well as the human resource practices involving layoffs of significant company personnel.

THE POTENTIAL BENEFITS OF A PROFESSIONAL DOCTORATE DEGREE IN ACCOUNTING

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ABSTRACT

In 1967 the AACSB declared the Ph.D. or research doctorate to be the preferred terminal degree for accounting faculty, and that they be active and productive researchers. The thrust of accounting research also became more scientifically and quantitatively oriented through the 1970s and subsequent decades. By 2006, the AACSB had declared the "optimum mix" faculty would include both academically professionally qualified individuals. In 2016 the AACSB released a formula for the percentages of faculty in each of the above categories required to maintain accreditation, and "scholarly academics" with a doctorate degree were required to represent a minimum of 40% of all accounting faculty. This formula was reaffirmed by the AACSB in 2022. However, there are a number of benefits associated with an alternative terminal degree such as a professional doctorate in accounting which make it worthy of further consideration.

Keywords: accounting education, professional doctorate

DISCUSSION

Various scholarly, regulatory, and professional organizations along with individual scholars have challenged the research doctorate's usefulness to the study and practice of accounting. The reasons for this include the belief that the cost, length of time, and difficulty in preparing and defending a dissertation have contributed to the a lack of interest in a research doctorate and a subsequent shortage of the accounting faculty. In fact, the shortage of accounting faculty has been identified and lamented by various professional organizations and committees for years, most significantly by the Pathways Commission of the American Accounting Association and the AICPA (The Pathways Commission, 2012, 2015), and continues to exist today (Kerler, et al., 2022).

Another reason is that there is a lack of correlation between accounting research and practice. Over 30 years ago, Ingram (1991), criticized "scientific empirical paradigms," and the failure of accountants to "establish our own unique intellectual discipline". Bennis and O'Toole (2005) asked "why have business schools embraced the scientific model of physicists and economists rather than the professional model of doctors and lawyers?" McGee (1999) noted that Ph.D. programs are much more narrowly focused than those for the J.D. degree, while Plumlee & Reckers (2014) lamented that "in accounting, the disparity between the content of master's programs and Ph.D. programs is enormous".

Taking their concerns one step further, some of these organizations and scholars have proposed that accounting adopt a professional doctorate as an alternative to a research doctorate (Van Wyhe, 1994; Sundem, 1999; AACSB Management Education Task Force, 2002; AACSB

Doctoral Faculty Commission, 2003; Mounce, et al., 2004; The Higher Learning Commission, 2006; Advisory Committee on the Auditing Profession, 2008; Boyle, et al., 2011 & 2014; Pathways Commission, 2012 & 2015; AACSB Doctoral Education Task Force, 2013; AACSB International, 2016). Among the most far-reaching of these proposals was the call for new professional doctorates by The Higher Learning Commission (2006), and Objective 2.2 of the report from the Pathways Commission (2012) to "develop multiple pathways to terminal degrees in accounting" including a professional doctorate.

While a detailed consideration of the characteristics of professional doctorate in accounting is not the primary focus of this paper, it is likely that such a degree would incorporate some of the features of the professional doctorates in other well-established professions, such as the JD in law and the M.D. in medicine. These would include the inclusion of numerous case studies and the case-dialogue method as practiced in law schools, the acquisition of practical experience in a clinical setting as found in medical schools, and the elimination of the dissertation or other original research component as a requirement to receive the degree.

Before taking any further steps, it must of course be established that there is a demand for this type of program, that it will be accepted and supported within the higher education establishment, whether the graduates of professional doctorate programs be successful in finding employment, etc. On the other hand, what might be the potential benefits of such a program?

To begin with, a professional doctorate in accounting could be an attractive alternative to a research doctorate, which is long and challenging (Plumlee & Reckers, 2014), for accounting professionals who wish to enter higher education. Ph.D. programs in accounting also suffer from high attrition rates, representing an additional waste of resources devoted to those who do not finish them. A professional doctorate would offer accountants another path to join the academic community similar to the paths already available in medicine and law. This would most likely increase the supply of full-time faculty candidates with terminal degrees. Assuming a professional doctorate in accounting is also recognized by the AACSB (and there is evidence that it would be), there would be a greater supply of faculty to meet the AACSB requirements for faculty qualifications. A side benefit of this greater supply is that schools aspiring to achieve initial AACSB accreditation might be able to attain this goal more quickly.

In addition, it seems likely that faculty with a professional doctorate would be assigned to teach various courses in undergraduate, master's level and professional doctorate programs, rather than in Ph.D. programs. This could result in a closer alignment between the training of the professoriate and the courses they teach. Plus, there is another potential benefit of such a program. Since a professional doctorate is more likely to be earned by faculty who are primarily interested in instruction as opposed to research, these individuals could be assigned higher teaching loads. According to Vedder, et al. (2011), this alone could significantly lower the tuition at large universities.

A further benefit is that faculty with professional doctorate degrees would more likely be interested in professional issues and accounting practice. In order to meet the requirements of their colleges and accrediting organizations for intellectual contributions, these individuals might be expected to generate articles largely of an applied and pedagogical nature, such as the interpretation of existing standards and real-world case studies. The benefit to students could be substantial, as has been observed by Badawy (1998), Albrecht & Sack (2000), Bennett (2002), Mounce, et al. (2004), Bennis & O'Toole (2005), Cohen & Holder-Webb (2006), the Advisory Committee on the Auditing Profession (2008), Carcello (2008), Frecka & Reckers (2010), Boyle, et al. (2011), Marshall, et al. (2010, 2012), and Khayati & Ariail (2020) . In addition, there would

be an increased opportunity for collaboration with Ph.D. faculty on projects that link theory and practice.

A professional doctorate in accounting could also strengthen the relationship between accounting educators and accounting practitioners, which has been relatively weak for many years (Albrecht & Sack, 2000; Van Wyhe, 2007). Faculty who completed professional doctorate programs involving case studies and clinical training would have a greater understanding of the needs and priorities of the profession, which they could employ to update the accounting curriculum and keep it relevant. Finally, a professional doctorate in accounting could provide its recipients with knowledge and expertise that would be of greater value to the professional community and government agencies, thereby facilitating non-academic career paths for those who did not enter higher education. In sum, we believe these benefits make a professional doctorate in accounting worthy of further consideration.

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THE RELEVANCE OF PROFESSIONAL DOCTORATES IN LAW AND MEDICINE TO ACCOUNTING EDUCATION

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ABSTRACT

The fact that accounting is a profession, like law and medicine, is well established. The foundational characteristics for every profession include self-regulation, a body of knowledge and educational requirements, and a commitment to the public good (Starr, 1984; Sullivan, et al., 2007). In accounting, the Financial Accounting Standards Board is recognized as the standard setting agency for the accounting profession, and the American Institute of CPAs regulates ethical requirements for Certified Public Accountants. The AICPA is also responsible for the licensing exam to become a CPA, and state Boards of Accountancy establish the educational requirements to obtain and maintain a CPA license.

However, accounting also has a de facto second standard required through institutional accrediting agencies such as the AACSB, which that to teach accounting in an institution of higher education often means to have a research doctorate. In 1967 the AACSB declared the Ph.D. or research doctorate to be the preferred terminal degree for accounting faculty, and that they be active and productive researchers. By 2006, the AACSB had declared the "optimum mix" faculty would include both academically professionally qualified individuals. In 2016 the AACSB released a formula for the percentages of faculty in each of the above categories required to maintain accreditation, and "scholarly academics" with a doctorate degree were required to represent a minimum of 40% of all accounting faculty. This formula was reaffirmed by the AACSB in 2022.

Both law and medicine also have research doctorates where a dissertation and defense is required, and both the research doctorate and professional doctoral degrees are customarily used as a credential for teaching in those fields. However, professional doctorates are more common than research doctorates in law and medicine. Here we discuss the relevance of professional doctorates in law and medicine to accounting education.

Keywords: accounting education, professional doctorate

DISCUSSION

There are a number of significant differences between research and professional doctorates in law and medicine. To begin with, a dissertation is not a requirement to obtain a Juris Doctor or Doctor of Jurisprudence (JD) professional degree in law or a Doctor of Medicine (MD) professional degree in medicine. Furthermore, a broad set of case law has driven law schools to teach "a process, not a body of knowledge" which has "the ability to structure approaches to issues and locate and understand the relevant body of knowledge when needed" (Sundem, 1999).

Sullivan, et al., (2007) wrote that law schools also "focus on teaching students how to think like a lawyer" and that "the case-dialogue method constitutes the legal academy's standardized form of the cognitive apprenticeship". These approaches could be beneficial for aspiring accountants, given that accounting, auditing, and tax standards are now quite extensive and because audit environments can be quite diverse and dynamic.

Medical schools have adopted practices from other educational traditions, such as the case study method in law schools (Sullivan, et al., 2007). In addition, however, the acquisition of practical experience in a clinical setting is a feature that makes the professional doctorate program of a medical school distinctive (Ludmerer, 1999). The benefits of required clinical experience to accounting students could also be substantial.

It has been found that faculty with experience and training that are relevant to real-world situations are valued by students and other constituencies. For example, a survey of students conducted by Mounce, et al., (2004) revealed that "professors possessing relevant practical experience are perceived to be of significantly higher quality than professors lacking relevant practical experience". A survey of accounting professors conducted by Marshall, et al., (2012) found that the professors believed that either practical experience or certification for practice were at least as beneficial for teaching effectiveness as a Ph.D. degree. Comparable sentiments were found by Boyle, et al., (2011) among accounting practitioners. Similar conclusions have been reached in other studies and reports (AACSB Doctoral Faculty Commission, 2003; Fernandes, 2006; Van Wyhe, 2007; Advisory Committee on the Auditing Profession, 2008; Khayati & Ariail, 2020).

Numerous studies and commissions have concluded that either the Ph.D. degree is not serving accounting academia effectively and/or that an alternative doctorate for accounting should be considered (Van Wyhe, 1994; Sundem, 1999; AACSB Management Education Task Force, 2002; AACSB Doctoral Faculty Commission, 2003; Mounce, et al., 2004; The Higher Learning Commission, 2006; Advisory Committee on the Auditing Profession, 2008; Boyle, et al., 2011 & 2014; Pathways Commission, 2012 & 2015; AACSB Doctoral Education Task Force, 2013; AACSB International, 2016). Among the most far-reaching of these was the call for new professional doctorates by the The Higher Learning Commission (2006), and Objective 2.2 of the report from the Pathways Commission (2012) to "develop multiple pathways to terminal degrees in accounting" including a professional doctorate.

Based on the above findings and our examination of the unique characteristics of the professional doctorates in law and medicine, we believe that that JD and MD degree programs might be useful templates for revising accounting Ph.D. programs or potentially developing an alternative professional doctorate in accounting.

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MACHINE LEARNING METHODS FOR GPS SPOOFING DETECTION AND MITIGATION TECHNIQUES ANALYSIS

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ABSTRACT

Global Positioning System (GPS) spoofing is a significant threat to IoT devices, and mitigation strategies utilizing machine learning (ML) and Artificial Intelligence (AI) are being developed to detect and stop such attacks. These methods use cryptographic methods to verify GPS signals, and GPS receiver producers, system operators, and end users can recognize and combat GPS spoofing through standards and best practices. Accurate detection is crucial for distinguishing actual GPS signals from fraudulent ones, and real-world procedures depend on response speed. Mitigation Strategies (A and B) have slightly longer response times, but their efficacy varies. In this study, we focused on enhanced algorithms, real-time mitigation, multi-sensor fusion, user-centric design, secure Global navigation satellite system (GNSS) infrastructure, and standardized testing and assessment frameworks to improve GPS spoofing detection and mitigation.

Keywords: Global Positioning System (GPS) Spoofing, Machine Learning (ML) Classification, Signal Anomaly Detection, Mitigation, Detection.

INTRODUCTION

Spoofing GPS signals is a risk to commercial enterprises and governmental organizations and poses a potential danger to private citizens who depend on this navigational technology (McAfee, 2022). This study aims to determine how well-informed people are and their perception of data security and privacy concerns in IoT (Internet of Things) devices and applications. It is critical to comprehend how people view and treat data privacy and security in this digital era as the use of IoT devices continues to expand quickly. The study is made up of ten thoughtfully crafted questions that cover a range of topics. These questions are related to data privacy laws, potential risks, security features, control over personal data, rights, and permissions, experiences with privacy breaches, reviews of privacy policies, reluctance to share personal information, manufacturer and service provider transparency, and willingness to prioritize data privacy and security.

This study's results give essential information on how people now feel about data privacy and security about IoT devices and applications in terms of awareness, attitudes, and behaviors. This knowledge can benefit from strengthening IoT security measures, creating more vital user education and awareness programs, and designing strong data privacy laws. The ultimate objective is to develop a safer and more secure IoT environment that upholds people's right to privacy and safeguards their data.

There are various sections to the research study. A literature review is presented in Section 2, the experimental design is described in Section 3, and the research findings are presented in Section 4. The conclusion is contained in Section 5.

LITERATURE REVIEW

A brief review of several studies proposes innovative frameworks, such as Wei et al. (2022), who introduced the PerDet framework that utilizes perception data for GPS spoofing detection. Bose (2022) focused on neural network-based methods for detection. Aissou et al. (2022) investigated instance-based supervised machine learning (ML) models, and Pardhasaradhi et al. (2022) proposed a method combining distributed radar tracking and fusion for GPS spoofing detection and mitigation. Sung et al. (2022) developed a GPS spoofing detection method specifically for small UAVs using a 1D convolutional neural network. A comparative analysis of supervised and unsupervised models for GPS spoofing detection on UAVs is presented by Khoei et al. (2022).

EXPERIMENTAL SETUP

Software-defined radio (SDR) and GPS signal generators are assembled to study GPS signals, and then GPS signal collection and analysis software is installed. Afterward, we test a target GPS receiver, and then SDRs create fake GPS signals that change timing and location. Simulate continuous, multi-location, and single-location spoofing. We used SDR and monitoring software to capture and save the target receiver's GPS signals. Examine the received signals' time, signal intensity, and signal-to-noise ratio. Then, compared to the expected GPS signals, Experiments analyze GPS signals, evaluate receiver behavior, use ML algorithms, and validate mitigation techniques. The findings will improve GPS spoofing countermeasures and our understanding. Table 1 compares the received signal parameters (signal intensity, signal-to-noise ratio, timing deviation) with accurate GPS signals and various spoofing scenarios. The effectiveness of various mitigation measures is assessed based on detection accuracy, false positive rate, and false negative rate.

Technique	Detection Accuracy (%)	False Positive Rate (%)	False Negative Rate (%)
Table 1 **Performance of Mitigation Techniques**			
Signal Anomaly Detection	93	5	7
ML Classification	98	2	3
Mitigation Strategy A	-	1	-
Mitigation Strategy B	-	3	-

RESEARCH OUTCOMES

In this study, an analysis of GPS spoofing detection and mitigation techniques is conducted, which includes evaluating the efficacy and performance of various approaches for detecting and mitigating spoofing assaults. This review focuses on the consequences and countermeasures adopted to mitigate the hazards associated with GPS spoofing.

Figure 1 compares mitigation response times. The average response time of each technique in milliseconds indicates how quickly they can detect and respond to spoofing incidents. Response times indicate mitigation approach speed and efficacy. Signal anomaly detection took 50 ms, while ML classification took 75 ms. Mitigation Strategy B responded in 80 ms, compared to 100 ms for Mitigation Strategy A.

Figure 1
Response Times of Mitigation Techniques
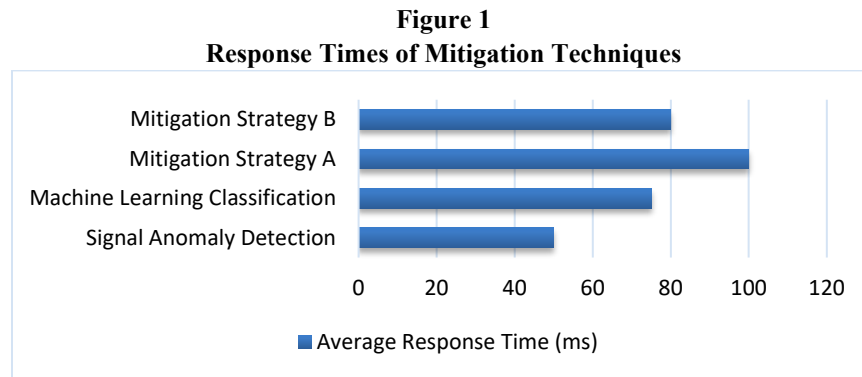


Examining GPS spoofing detection and mitigation approaches attempts to provide a complete understanding of various solutions' effectiveness, performance, and response times. This analysis aids in the identification of the most dependable and practical approaches for detecting and mitigating GPS spoofing attacks, hence improving the security and integrity of GPS-based systems and applications.

Effectiveness of Mitigation Techniques

Figure 2 evaluates GPS spoofing mitigation methods. Each technique is tested to identify single-location, multi-location, and continuous spoofing assaults. "Signal Anomaly Detection" caught all three spoofs. Anomaly detection detects GPS spoofing signals.

Spoofing detection shows its versatility. "ML Classification" excelled in all spoofing cases. ML algorithms trained on GPS spoofing patterns accurately classify and identify attempts. Its high detection rates show that ML algorithms can distinguish accurate GPS signals from fakes.

Figure 2
Detection Accuracy of Mitigation Techniques
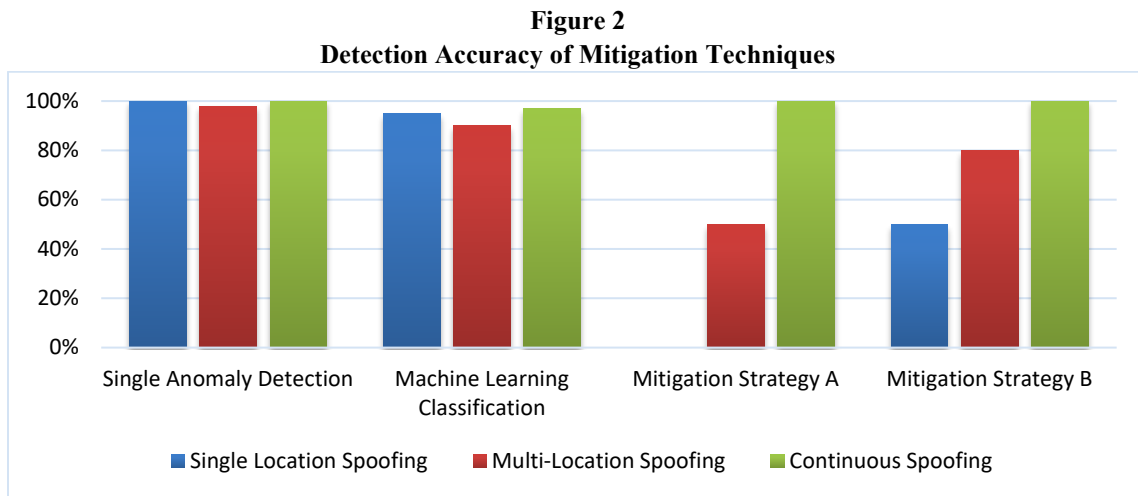
Spoofing affected Mitigation Strategy A missed single-location spoofing. Multi-location and continuous spoofing worked. Due to the difficulty of detecting fake signals from multiple sites, multi-location spoofing may fail.

Spoofing mitigation strategy B worked better. It reduced single-location spoofing and handled multi-location and continuous spoofing well.

The findings of this study highlight the need for multiple GPS spoofing mitigation strategies. Not all strategies work. Signal Anomaly Detection, ML Classification, and Mitigation Strategy B prevent GPS spoofing in various situations. Mitigation methods depend on spoofing attack sophistication, detection algorithm quality, and timely countermeasure installation. Mitigation strategies and GPS spoofing resistance need more research.

GPS spoofing reduces the accuracy of GPS receivers' position estimates and navigation information (Figure 3). GPS spoofing manipulates GPS receiver signals to produce inaccurate location data.

Figure 3
Impact on Navigation Accuracy
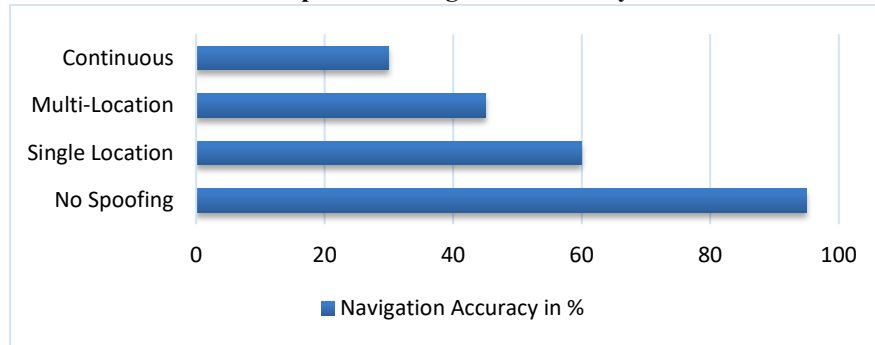
These findings show that GPS spoofing negatively influences navigation accuracy and highlight the necessity for effective mitigation measures to limit the consequences of spoofing attacks, with high detection rates in all spoofing cases. It detects 95% of single-location spoofing, 90% of multi-location spoofing, and 98% of continuous spoofing. The result shows that the ML-based solution effectively learns patterns and characteristics of faked signals, allowing it to recognize and categorize them reliably.

Table 2			
Evaluation of mitigation strategies against various spoofing scenarios			
Technique	Single-Location Spoofing	Multi-Location Spoofing	Continuous Spoofing
Signal Anomaly Detection	Detected	Detected	Detected
ML Classification	Detected	Detected	Detected
Mitigation Strategy A	Not effective	Partially effective	Effective
Mitigation Strategy B	Partially effective	Effective	Effective

Table 2 compares GPS spoofing mitigation methods. "Detected" means the technique detected the spoofing attack, while "Not effective" means it failed to protect. "Signal Anomaly Detection" and "ML Classification" algorithms detected all spoofing attacks, according to statistics. The mitigation strategies, "Mitigation Strategy A" and "Mitigation Strategy B," were effective depending on the spoofing situation. Mitigation Strategy A worked against multi-location and continuous spoofing but not single-location. Mitigation Strategy B was half-effective against single-location spoofing and 100% effective against multi-location and continuous spoofing. These findings suggest that different mitigation measures work better in different spoofing scenarios. To prevent GPS spoofing attacks, appropriate mitigation measures must be taken based on the environment.

Evaluation of Mitigation Strategies

The mitigation strategy evaluation evaluates GPS spoofing countermeasures. It evaluates each strategy's spoofing detection and prevention capabilities. Detection accuracy, false positive rate, false negative rate, and mitigation technique response time are evaluated. These factors illuminate each technique's pros and cons. Researchers can assess mitigation strategies' efficacy in different spoofing scenarios by comparing mitigation strategies. The evaluation helps determine which spoofing detection and mitigation tactics work best and which have drawbacks. Mitigation measures are essential for GPS security, accuracy, and safety from spoofing attacks. These results suggest that different mitigation solutions identify and mitigate spoofing attacks in different contexts. It emphasizes the importance of choosing the proper mitigation method based on the spoofing event to protect against GPS spoofing.

CONCLUSION AND FUTURE DIRECTIONS

The study on GPS spoofing detection and mitigation approaches offers valuable insights into resolving issues posed by GPS spoofing attacks. Signal anomaly detection and ML classification algorithms performed well in recognizing spoofing assaults in various settings, suggesting their potential to detect and mitigate GPS spoofing problems. The impact of GPS spoofing on navigation accuracy was significant, with a significant decrease in accuracy when spoofing situations were used. The effectiveness of mitigation solutions varied, with some strategies outperforming single-location or multi-location spoofing versus continuous spoofing. The "Signal Anomaly Detection" method had the fastest reaction time, followed by the "ML Classification" method. Further research is needed to enhance spoofing detection algorithms, real-time mitigation techniques, multi-sensor fusion approaches, user-centric design principles, secure GNSS infrastructure, and standardized testing and assessment frameworks.

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NAVIGATING CONSUMPTION RITUALS IN NONTRADITIONAL FAMILIES

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INTRODUCTION

As the world has become flatter, tolerance increases, and mobility becomes more prevalent, diversity in families has and continues to increase. Going from the 'traditional' family to families that are composed of a much different set of members, the idea of a family itself has changed in the past several decades. Since the 1970s, marriage rates and family size have decreased while single parenthood, divorce, cohabitation, dual-career couples, single person households, and same-sex couples have increased (Gates et al. 2007; U.S. Census Bureau 2022). Multicultural families are on the rise. The rate of interracial marriage has double in the past 30 years (Wang 2012), and nearly 27 percent of married or cohabitating couples are from different faiths (Lugo et al. 2008).

Rituals have played a role in the lives of humans since the beginning of existence. As couples married, they brought with them rituals from the family in which they were raised. These rituals were integrated into the new family unit and passed down to the next generation and their families. With the increasing changes in what constitutes a family, it is important to understand how rituals may play a different role in nontraditional families. Rosenthal and Marshall even suggest that changes in family rituals may reflect changes in the society at large (1988). This study takes an exploratory look at varying nontraditional families and how the very essence of being nontraditional has affected the creation, use, and role of family rituals and ritual artifacts.

LITERATURE REVIEW

Family Rituals

Rituals play an important role in family life.and provide both a framework for family behavior and a basis for family identity and meaning (e.g. Bossard and Boll 1950; Imber-Black, Roberts, and Whiting 1988; Wolin and Bennett 1984), thus demonstrating that rituals are functional as well as symbolic. Ritual has been defined over the years in several different ways, but for the purposes of this study, the definitions put forth by Rosenbuhler (1998) and Rook (Rook) will be referenced, Rosenbuhler states that ritual is "the voluntary performance of appropriately patterned behavior to symbolically effect or participate in the serious life" and Rook defines ritual as:

> *"a type of expressive, symbolic activity constructed of multiple behaviors that occur in a fixed, episodic sequence, and that tend to be repeated over time. Ritual behavior is dramatically scripted and acted out and is performed with formality, seriousness, and inner intensity".*

In the marketing discipline, family rituals have been studied from several perspectives including that of loss of or interrupted family rituals (Baker, Hunt, and Rittenburg 2007), intergenerational influence and brand relationships (Diamond et al. 2009), grooming activities (Rook 1985), and holidays characterized by consumption activities (Otnes et al. 2009; Wallendorf and Arnould 1991). Rituals can range from everyday activities to major holiday celebrations. As noted by Rook (1985), any household or family activity has the potential to become a family ritual.

Bossard and Boll (1950) suggested that a ritual is prescribed, rigid, and has a sense of rightness emerging from the history of the ritual itself. In other words, a ritual includes specific behavior that has a sense of tradition. The four required elements of a ritual are: ritual artifacts, a ritual script, ritual performance roles, and a ritual audience (Rook 1985). For instance, in a family's birthday ritual, there are the artifacts of special foods, wrapped presents, a decorated cake, and party hats. The ritual script includes the lighting of candles on the cake and the singing of "Happy Birthday" followed by the blowing out of the candles. Each member of the family has a specific performance role, from the birthday boy or girl to the youngest child 'helping' to unwrap gifts, and the family members also constitute the ritual audience. Objects alone can signify the presence or enactment of a family ritual, such as the use of special table linens for a holiday meal (Haines 1988). Belk (1988) and McCracken (1986) posited that possessions are a part of an individual's identity, and suggested that consumer goods are integral to identity. Most extant literature focuses on the individual nature of possessions, but more recent work started to examine possessions in a social context (Cursai et al. 2008). Still, the research is lacking.

What is missing from these are elements that distinguish family rituals from generic rituals beyond simply the individuals that take part. Three key aspects are emotion, a social nature, and pride (Bossard and Boll 1950); family rituals are, in a sense, the group behaviors that the family is proud of and desires to continue. Any given family ritual is oriented by and serves the purpose of fulfilling five basic themes: *membership, healing, identity, belief expression and negotiation,* and *celebration* (Imber-Black et al. 1988). Whether they are daily practices, traditions, cultural ceremonies, or life cycle transition customs; any ritual will include one or more of these themes.

Family identity as a concept has been examined in the literature in many fields including marketing (Cursai, Arnould, and Price 2008; Epp and Price 2008). The definition of family identity for this study comes from Bennett and colleagues (1988), "Family identity is the family's subjective sense of its own continuity over time, its present situation, and its character. It is the gestalt of qualities and attributes that make it a particular family and that differentiate it from other families". Family rituals are important activities in creating as well as enacting family identity (Bossard and Boll 1950; Rosenbuhler 1998; Tuominen 2005). Rituals are also passed down from generation to generation, preserving a part of the family identity as well as the identities of family members passed on. One study found that ritual transmission through generations was quite successful among three generations of families (Rosenthal and Marshall 1988); the study also found a positive ritual socialization effect that if one experienced family rituals during childhood, he or she was more likely to pass family rituals on to his or her own children. This leads us to our research questions:

In nontraditional families,
RQ 1:   *What role do consumption rituals play in enacting family identity ?*
RQ 2:   *How are traditional consumption rituals navigated?*
RQ 3:   *How do consumption activities and artifacts contribute to family rituals?*

Family Rituals in Specific Contexts

Throughout history differences in family rituals among differing groups have been observed; black families and white families, upper-class and lower-class families, Muslims and Christians - race, status, and religion all lead to unique, though sometimes similar, family rituals (Pleck 2000). There is some, albeit not much, literature on the cross-cultural aspects of family rituals. Tuominen (2005) examined rituals of ethnic families in the United States. Specifically, the study found that immigrant parents must negotiate family rituals in a mainstream culture that does not support or participate in similar rituals. Other important negotiations occur between parents, particularly when one parent is American and the other is an immigrant, and between parent and child, as the child grows up in the mainstream culture. These families tend to create hybrid family rituals that borrow from the immigrant culture and the American culture.

Cross-cultural couples and their wedding rituals were studied by Nelson and Otnes (2005) and Nelson and Deshpande (2008) through the lens of cultural ambivalence, which describes the emotional state that results from conflicting cultural norms and traditions. They found that the couples used several key strategies in dealing the cross-cultural issues: negotiation, compromise, and ritual creation/invention. For example, some couples negotiated by trying to incorporate both cultures. The inclusion of both cultures is called additive multiculturalism (Triandis 1995).

Even in families several generations away from cultural rituals, many family rituals still serve a function of transmitting culture through the generations. These family rituals are typically based on the family's ideological ethnicity, which exists when the family's ethnic identity is not a focal part of social life (Rosenthal and Marshall 1988). Specific examples include eating traditional ethnic food for holiday celebrations. Even these ethnic foods constitute a part of the family identity and the coherence of that identity. Holidays generally serve as a central hub for family rituals (Rosenthal and Marshall 1988), but it is in these focal events that ideological ethnicity is often found. Ritual transmits culture and identity to children, grandchildren, and other members of the family (Bossard and Boll 1950; Tuominen 2005).

The literature on rituals in diverse family structures has looked at single parents, divorced and remarried couples, and single person households. In each of these types, major family rituals associated with major holidays like Christmas cause uncertainty and tension (Rook 1985). In single parent families, rituals actually serve a facilitative function and help the parent feel more competent as a father or mother (Brody and Flor 1997; Olson and Haynes 1993). For families of remarriage, the process of creating family rituals can be rife with conflict, but can also provide an important sense of continuity (Braithwaite, Baxter, and Harper 1998; Whiteside 1989). This study contributes to this body of literature by examining rituals in multiracial families.

THEORETICAL FRAMEWORK

Family Ritual Theory

There are three major theories of family rituals in extant literature - structural-functional, constructionist, and mobilization (Cheal 1988). Structural-functional theory views family ritual as a means of "tension management" within the family. The purpose of a family ritual is to reduce the stress and/or conflict in vulnerable family relationships. In other words, family rituals lead to stability in families. The next key theory is constructionist theory. This theory posits that a

society's system of symbols that are utilized in social interaction provide social order (Berger and Luckmann 1967). To relate this to family rituals, this theory posits that family rituals that use a system of symbols provide familial order. The application of mobilization theory to family rituals demonstrates that rituals provide structure and identity to families. As Collins (1984) states "rituals have important structural effects… by tying some people together and by setting them apart from others". An important dynamic in human social life is that of group membership, and it is within these groups that rituals are produced. The focus of mobilization theory is on networks, not dyads, which applies quite clearly to families. For example, in the case of remarried families, there is a strong need for structure and family identity that does not conflict with the identity of the original families. By creating rituals that respect both identities, structure can be reaffirmed.

Consumer Culture Theory

Consumer culture theory (CCT) offers another frame through which family rituals can be examined. CCT "is organized around...the relationships among consumers' personal and *collective* identities; the *cultures created and embodied in the lived worlds of consumers*... and the dynamics of the sociological categories through and across which these consumer culture dynamics are enacted"(Arnould and Thompson 2005). In this study, both cultural groupings of people and cultural meanings are examined through family rituals. In other words, family rituals are a way to look at the enactment of consumer culture, specifically the diverse cultures that can be found in multicultural and uniquely structured families.

METHODOLOGY

This study sought the perspectives of nontraditional families that have come from different backgrounds leading them to deal with cultural issues regarding traditional consumption rituals; the context of multiracial families was used inform the research questions. Theoretical sampling (Creswell 2007) was used to recruit and 86 individuals that made up 21 families to participate.

Data was collected through depth interviews that ranged in duration from 35 to 101 minutes with couples interviewed together and children interviewed together. The interviews were open-ended and based on an interview protocol that included five questions, as recommended by Creswell (2007), as well as potential probing questions. Informed consent was gained from all participants and all interviews were video and audio recorded. Though traditionally the mother serves as the family's representative in research interviews, this study utilized the perspectives of both members of the couple. Interviewing family together allows for observing the how the family behaves together (Reinharz and Davidman 1992) and gaining understanding of their shared reality (Valentine 1999). In the interview, the family was asked about a major family consumption ritual.

DATA ANALYSIS

The qualitative data collected was analyzed through an iterative process to determine major themes within the data. The data included interview transcripts as well as audio and video files, researcher observation notes, and visual media such as photographs from the observations.

Data analysis was conducted using the systematic view of Strauss and Corbin (1990, 1998) in which simultaneous data collection and data analysis occurred along with the constant

comparative analysis method, in which data are used to create themes or categories and then subsequent data are analyzed and compared to the existing themes (Boeije 2002; Glaser and Strauss 1967). Additionally, each ritual described will be compared to the strategies presented by Nelson and Deshpande (2008) of negotiation, compromise, and ritual creation/invention. To verify the data, the member-checking method was applied (Creswell and Miller 2000).

RESULTS

Results indicate that multiracial families lean heavily on the ritual navigation strategies of negotiation and new ritual creation. In fact, the term "blending" may be more appropriate than negotiation to describe the navigation of rituals in multiracial families. Holidays were the most often referenced consumption ritual; these rituals clearly play important roles within families (Otnes et al. 2009; Rosenthal and Marshall 1988; Wallendorf and Arnould 1991). The families in this study were no exception to the importance of holiday rituals, but their enactment of the rituals demonstrated approaches similar to those describe by Nelson and Deshpande (2008).

In the majority of the families interviewed, either negotiation or new ritual creation were the key strategies of navigating traditional consumption rituals. For example, in multiracial families, the family has two races and two families of origin from which to develop holiday traditions. Most families in this study took traditions from each racial culture to create a ritual that looks like the "salad bowl" analogy that is used to describe America. These decisions involve consumption and require marketplace knowledge to enact the ritual artifacts, script, and performance roles required by the traditions established in multiracial families. The parents in the passage below describe their (un)traditional Christmas dinner. This tradition blends the two racial cultures from which the parents come. The mother is Hispanic, and she brings the tradition of tamales to the Christmas dinner table; the husband is Black and brings the tradition of collard greens to the Christmas dinner table. In this case, each parent must learn about the purchase, preparation, and consumption of specific ritual artifacts and ritual scripts. The blending of rituals provides the couple's children with a demonstration of family identity through consumption rituals that draw from both cultures.

> Jackie/mother: We'll have breakfast and it's Chorizo and grits. A lot of unusual foods together just because we pick and choose the best parts that we love, whether it's eating it or speaking it or whatever.
> Robert/father: We'll have collard greens and tamales.
> Jackie/mother: Yeah, for Christmas, especially.

Some families have not only blended rituals, but also celebrate new consumption rituals related to their family composition just as Nelson and Desphande (2008) found that cross-cultural couples created new rituals for the wedding. For families, this is especially prevalent in adoptive families. These families often create a new ritual that is their own way of celebrating holidays from their child's home region or that celebrate their adoptive status. Multiple families adopted children internationally, and so in addition to celebrating Christmas according to mainstream American rituals, the family has also added the holiday rituals of their child's country of origin. To enact the new consumption rituals, the parents intentionally educated themselves on ritual scripts and ritual artifacts such as spices, foods, and traditional clothing.

Ashley/mother: We celebrate a couple of really important Ethiopian holidays. Genna, which is their Christmas. We have special Ethiopian meals at that time so we are purchasing traditional Ethiopian spices, like berbere. We have a lot more lentils in our pantry.

The data show that consumption rituals play a key role in demonstrating family identity primarily within the nuclear family, but also to extended family. The primary methods of navigating family consumption rituals were blending and ritual creation. Blending was more prevalent in interracial couples and their biological children, while ritual creation was prevalent among transracial adoptive families. The ritual script and artifacts played more salient roles than ritual performance; the ritual audiences were made up of immediate and extended family.

DISCUSSION

The study contributes to the literature in two key areas - diverse families and the extension of the literature on the development and navigation of multicultural rituals. Extant literature has called for additional research on diverse families in term of structure (Commuri and Gentry 2000) and multiculturalism (Fiese et al. 2002; Nelson and Deshpande 2008). This research examined both nontraditional family structure and bicultural families. Specifically, this study looked at the family as the unit of analysis as opposed to the couple as the unit of analysis in prior research (Nelson and Deshpande 2008). Overall, the results of this study shed light on family structures that are less prevalent in the consumer behavior literature.

The second key area that this study contributes to is extending the navigation strategies used by multicultural families to develop their family identity and communicate such identity both within and outside of the immediate family. Interestingly, the importance of ritual artifacts over all other elements of ritual was demonstrated, showing that possession may play a stronger role in defining and creating family identity among nontraditional families. The study also extends the research on the meaning of possessions from an individual context to the social context of a family.

LIMITATIONS AND FUTURE RESEARCH

Future studies may add a quantitative element by using the Family Ritual Questionnaire to compare diverse family types. Additionally, we acknowledged a random sample would provide more generalizability of the findings, though most family ritual studies used a purposeful sampling method (Fiese et al. 2002), but this fact does not change the limitations it presents.

DEVELOPING A NEIGHBORHOOD-BASED ENTREPRENEURSHIP PROGRAM WITH A FOCUS ON HIGH PRIORITY MICROENTREPRENEURS

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INTRODUCTION

According to the U.S. Economic Development Administration, economic development is defined as, "creating the conditions for economic growth and improved quality of life by expanding the capacity of individuals, businesses, and communities to maximize the use of their talents and skills to support innovation, job creation, and private investment." Often when the term is tossed around, it emphasizes the job creation component and refers to attracting big companies to come into a location and create job opportunities for the local residents. But what happens when a university and local nonprofits decide to focus on individuals and their skills instead?

The Small Business Administration defines a microbusiness as a small business with less than 10 employees (Headd, 2017), and these businesses make up nearly 75% of private-sector employers in the U.S. Academic research has defined a microbusiness as one with less than five employees (Kelly & Kawakami, 2008). South Carolina is home to 445,804 small businesses employing 830,094 South Carolinians, with businesses with less than 20 employees making up 97% of small businesses (SBA 2021). Women and racial minorities make up 49% and 30% of small business owners, respectively. In the county in question, small businesses only employ about 28% of the workforce, a dramatic difference in comparison to the state or nation (Fox, 2018; .

The purpose of this paper is to describe the development and outcomes of a neighborhood-based microbusiness entrepreneurship program. Economic development is the ultimate goal of the program. A grassroots approach to economic development is taken. Instead of trying to bring in one large company to provide 100 jobs, the goal is to develop neighborhood residents to successfully run their own business, provide for their families, and employ one to four employees.

In a medium-sized Southeastern city, a partnership between the regional comprehensive university business school and a local nonprofit was formed to create economic development, but backwards. Instead of trying to bring in a large firm to employ many people, the goal was to build up many individuals who could support themselves and their families through microbusinesses. The nonprofit's purpose is to redevelop a poverty-stricken former mill village and focuses on both property redevelopment as well as developing the population. The organization has been the catalyst for over $20 million in property redevelopment including mixed income apartment housing as well as a community center, early childhood center, medical clinic, and medical school. Investments in neighborhood residents have included an owner-occupied home improvement program, financial literacy training, homeownership programs, trade skills training, and the entrepreneurship program described in this article.

The entrepreneurship program is a microbusiness accelerator designed to focus on a specific neighborhood; the initial neighborhood is a former mill village that suffered from "white flight" leaving a predominantly black population. The residents of the neighborhood are

predominantly under the poverty line and African American. We refer to low-income communities in this manuscript as "high priority" neighborhoods. Within this high priority neighborhood, over 70% of residents rent as compared to 50% for the surrounding area. Further, the median income for the community was just $15,427, compared to $29,172 for the city, and $43,656 for the county. When just renters are taken into consideration, the median income drops to below $15,000. The education level represented by community residents is also quite different from both the city and county – nearly 40% of residents are not high school graduates. And in terms of employment, approximately 65% of residents were unemployed. These factors made the neighborhood a strong candidate for a place-based entrepreneurship program, and in 2017, the first cohort of entrepreneurs graduated from the program and started making their mark on the neighborhood.

Partnering with the neighborhood non-profit was a local university's business school. The university is a regional comprehensive campus located in the same mid-sized city in the Southeast. The business school is AACSB accredited with approximately 800 students. AACSB accreditation requirements as described in Standard 9 Engagement and Societal Impact, are moving toward an emphasis on community engagement. The entrepreneurship program provides the university with a strong connection to community outreach as well as an opportunity for experiential and service learning for the university's business students both in and out of the classroom.

LITERATURE REVIEW

Research on entrepreneurship has grown and expanded from the initial research on the who, why, and how well of entrepreneurship. Still, the focus of much government-based research emphasizes demographic and geographic data on start-up businesses. The Small Business Administration defines a small business as a firm with 500 or fewer employees, but with vast differences between the operations of firms on either end of this spectrum, it is common in academic research to further segment these enterprises (Katz & Green, 2007)

We use a case study (Yin, 1994) as a framework for evaluating the program, similar to the approach used by Heriot & Campbell, 2004).

Entrepreneurship Education

While there are wide variety of differing models of entrepreneurship training including workshops, incubators, certificates, and accelerators. In this case, the program was developed as an entrepreneurship accelerator. A business accelerator is defined as an "organization which provides support for startups in order to accelerate their development through one or more processes: learning, validation, access & growth, and innovation" (Crisan, et al, 2021). And existing research demonstrates that the outcomes of accelerators can include both soft and hard outcomes, and the combination of both is most prevalent. Knowledge and skills are examples of the former, while funding and market access are examples of the latter. (Crisan, et al, 2021)

Mattare, Shah, and Monahan (2010) call for more research on microbusinesses and their relationships with business training resources.

MICROBUSINESS ACCELERATOR

Selection Process

The program is specifically designed for a competitive application process as opposed to sessions open to anyone in the community. We are looking for entrepreneurs committed to starting or growing their businesses who want to commit to consistent attendance and engagement in the program. Marketing efforts for brand awareness purposes are primarily composed of flyers, robocalls, and social media. Door hangers are placed on residents' doors each September. At the same time, the program team works with the school district to include notifications of the open application in the district's autocalling in September as well. An average of 72 applications are received each fall. Applications are then reviewed and screened for completeness, communicative habits, connection to the neighborhood, and for-profit status. Forty to fifty applicants are selected for interviews. Interviews are conducted by a selection committee made up of program team, mentors, alumni, and community partners. From the interviews, the top 15 applicants are chosen to be in the program cohort.

Program Structure and Content

The microbusiness accelerator program focuses on three pillars that research and experience shows are critical for entrepreneurs' success. These pillars are: knowledge, networks, and capital. The following section describes the approach to each key pillar of the program.

During the 14 weeks of the program, business education is delivered through local professors, business owners, and other experts. Specifically, the business topics covered include: business plans, financial statements, target markets, marketing strategy, funding and capital, professional communication, business banking, business pitches, and legal structure and other legal issues.

The networks component of the program encompasses a mentoring program as well as intentional networking incorporated into the program. When the program began, entrepreneurs and mentors were matched by the fourth week of the program. Each entrepreneur was assigned two mentors, who were dedicated to that single entrepreneur. After year five, the mentoring was changed to developing mentor teams in which two entrepreneurs were grouped in team with three mentors. The goal of using dedicated mentors is to foster strong relationships between mentors and entrepreneurs.

In addition, several sessions throughout the program incorporate networking with external parties. Bankers are invited to attend the Banker Panel session and the Mock Loan Interview sessions. Attorneys attend the Legal Issues session, and a multitude of business resources attend the Doing Business in the Community Tradeshow.

Microbusinesses need, on average, $3,000 to start or grow their business. With this in mind, three key avenues were developed to access capital – low-cost loans, IDA program, and alumni grants. The loan program provides a loan of up to $5,000 to the top three entrepreneurs each year. We partner with a local Community Development Financial Institution (CDFI) to administer the loans. In order to implement loans backed by the accelerator, we applied for and received a grant from a local foundation to provide a loan-loss reserve fund.

Each year, three entrepreneurs are chosen as the top three in their class. This is unique because the top three are chosen by the other entrepreneurs in the cohort; it is a peer-based loan program. Entrepreneurs rate each other on five criteria – background/skills, committment, customer value, target market, and financials. Experts, program staff, and credit ratings have no impact on the selection or cost of the loans. The winners work closely with the partner CDFI to "right-size" the loan. We have found that oftentimes, a loan of the full $5,000 was both unnecessary for target growth and also would require an unaffordable monthly loan payment. And in some cases, an eligible entrepreneur opted out of the loan. As shown in Table 1.1 below, through the partner CDFI, the program has distributed $57,500 through 13 loans.

Individual Development Accounts (IDA) make up the second capital component. This is a matched-savings program. The mechanics of this component have varied over the years the program has been active due to variations in grants and funding received. During the inaugural year of 2017, the IDA program was administered through the same CDFI partner as above. Through this program, entrepreneurs whose income fell below limits based on household size, could save up to $1,000 over the course of 6-12 months, after which the funds were matched at a 4:1 ratio. While this allowed entrepreneurs to have more funds available for their businesses, only half of the cohort's entrepreneurs were eligible for the program. The federal funding was not renewed by the federal legislature, so the IDA accounts were funded by the partner non-profit following. Starting in year three, the partner nonprofit opted to incorporate IDA funding into their annual budget. Fewer funds were available, but the income limit was no longer a requirement. With this change, all entrepreneurs were eligible for their savings of $100 over 14 weeks to be matched with $400. Not only does the IDA program assist entrepreneurs with increasing the amount available to start or grow their businesses, it also assists in developing a habit of saving.

In order to graduate from the program, each business owner must have no more than two absences, submit a complete business plan, and present their business during the final pitch night session of the program.

Alumni Program

Access to capital remains a key success factor for alumni entrepreneurs. In Year 6, a statewide CDFI approached the program with funding for alumni grants. In response, an alumni pitch competition was developed. To compete in this competition, alumni entrepreneurs submit a 3-minute pitch video. The videos are voted on by a panel of judges, and the top ten pitches are invited to pitch in-person to a second judge panel. The judges rank these pitches; the top ten receive grants ranging from $5,000 to $1,000.

The alumni program also includes monthly or bimonthly workshops on topics relevant to these entrepreneurs, social and networking events, and pop up markets. Workshop topics have included Quickbooks, bookkeeping, business taxes, Instagram, Reels and TikTok, business loan process, and growth strategies. The program runs an annual pop up shop that has grown from 20 entrepreneur vendors to 88 vendors in three years. Finally, the program sponsors an alumni networking event annually.

RESULTS

Over the course of the seven cohorts of entrepreneurs who have completed the program, 98 entrepreneurs have graduated, representing a 93% graduation rate. The program participants

have also been relatively representative of the neighborhood on which the program focuses with 97% of participants black and 72% of participants female.   Black, female owned businesses are the fastest growing small business ownership demographic in the country, so this also follows national trends. As shown in Table 1 below, approximately 81% of entrepreneurs are still working their businesses. In some cases, graduates have started more than one business after completing the program.

Table 1. Program Impact Statistics

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	TOTAL
Applicants	25	40	125	79	86	76	73	504
Number of Participants	16	14	16	15	13	14	20	108
Graduates	13	12	14	15	13	13	18	98
Ventures Participated	15	14	15	14	13	14	20	105
Ventures Woman-Owned	11	9	13	12	13	14	14	86
Ventures Minority-Owned	15	14	14	14	13	13	19	102
Ventures Graduated	11	12	13	14	13	13	18	94
Graduated Ventures In-Business	8	8	11	11	11	13	18	80
Graduated % In-Business	73%	67%	85%	79%	85%	100%	100%	85%

DISCUSSION & CONCLUSION

The development of the microbusiness accelerator program has impacted the community by adding nearly 100 new businesses to the local ecosystem and creating or maintaining over 150 jobs. Moreover, alumni contribute over $1 million to the local and regional economy each year and provide important goods and services to their target consumers. The sheer number of applications to the program indicate that high priority, minority business owners have a high demand for entrepreneurship training and may lack access to it in the southeastern state where the program is located.

A critical limitation faced by the program is a lack of commercial space in the target neighborhood, so while program alumni can contribute the the community's success and development through home-based or mobile-based businesses, the lack of commercial space limits the number of brick-and-mortar business, and thus the number of customers and revenue coming into the target neighborhood.

In sum, place-based entrepreneurship training programs have the opportunity to impact varying levels of communities – neighborhoods and expanding out to cities, counties, and regions. Entrepreneurs who successfully complete such microbusiness accelerators have a much higher chance of staying in business than the national average, according to the Bureau of Labor Statistics. Data show that 85% of program graduates are still successful after one year or more; 20% of businesses fail within the first two years. And 70% of graduated entrepreneurs are still in business five years later compared to 55% nationally. Training programs that emphasize knowledge, networks, and capital have the opportunity to effectively impact the success of participating entrepreneurs.