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Editorial Office

*International Journal of Multidisciplinary Studies in Higher Education
Humanities 2109, State University of New York at Stony Brook
110 Nicolls Road, Stony Brook, New York, 11794*

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STAR Scholars Publications

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Working with Uncertainty

It has been three full years since the Covid-19 pandemic started spreading, halting or seriously disrupting travel and trade, healthcare and education alike across the world. Especially in societies that did not have the technological and educational infrastructure for online learning, students lost many months of learning, not to mention the more serious impacts of the socioeconomic inequities that the pandemic further aggravated. While the world celebrated the rapid development of vaccines and started resuming social life after two years, including education, this global crisis continues. Disruptions, death and illness, and the aggravation of inequality continue. We continue to live in the shadows of uncertainty.

It is uncertain how this virus will further evolve and how it will impact the world and for how long. It is uncertain how the world will deal if new variants and waves kill and sicken millions more, how the public and public institutions will pay the necessary attention in the face of growing complacency, and how a frayed international order will manage a protracted crisis. Given that the pandemic “is over” in the minds of too many, it is uncertain what the future holds for the health and wellbeing of the world. We cannot say with certainty that this will be the century’s only pandemic, or even of the first half. It is difficult to expect that the underlying conditions of human disruption of the environment, aggravated by necessary but risky human mobility, will change for the better; nor can we be certain that nations will learn lessons, get together, and prepare for the next pandemic.

Tragically, a pandemic that refuses to go away is only one of the crises of our time. There is the shocking reality of sovereign nations being

invaded, which we hoped wouldn't happen in the twenty-first century. There is the high possibility that there will be no significant collaboration or collective action to halt or slow human impact of the climate and vital ecological systems; the increasing population and its accelerating burden are not likely to be matched by commensurate global action to preserve the planet as we know it. Then there are other persistent or recurrent emergencies, ranging from alarming economic inequalities to the rise of authoritarian regimes undermining democracy, religious fundamentalism taking over politics and policy, the spread of disinformation and propaganda aggravating civic disorder, to the normalization of technological determinism and technologically enhanced neocolonial and neoliberal global orders.

All of the above crises shroud higher education with uncertainty. As educators, can we continue to focus on their core mission of preparing new generations for successful lives and careers? Can we be effective in creating and applying knowledge for greater human good? Our task of shedding light and paving way for social progress and common human good may need to be pursued increasingly under the clouds of uncertainty.

A reflection on the crises and the uncertainties they cause, however, also leads us to realize that uncertainty is a part and parcel of educating and learning, of knowledge-making and application—of scholars' role in society. It is our job to figure things out, to grapple with uncertainty. It is our responsibility to prepare future generations to navigate uncertainty, or navigate the world in the face of uncertainty. It is in the very nature of knowing and sharing knowledge to deal with uncertainty, to entertain ambiguity, to explore possibilities, to be open minded. Asking questions, posing hypotheses, engaging diverse perspectives, even tolerating contradictions—these are all tools of our trade. It is also part of our profession to do what we can when we do not know about every aspect of a situation, to contribute our bit even when we know it means little, and to hold judgment when we seem to be right.

Certitude is comforting, often necessary or desirable. But how are we to learn and teach, create and lead if a crisis won't go away? What are the skills we need, the mindset we must develop, the tools and approaches we must add to our repertoire when we become aware of layers of crises in our pathway? How can we learn to accept that dealing with uncertainty is part of our mission? How can we develop the toolset that we need to help ourselves and others deal well with uncertainty?

Certainty is an ideal, uncertainty more often the reality of life and society. The privileged could afford more certainty than those who are left behind or marginalized—as we see when crises like pandemics and wars refuse to spare the privileged entirely. Certitude borders on arrogance, while uncertainty-tolerance reflects humility. While the certainty of science and the uncertainty of philosophy can complement each other, objective reality itself must make way for the objectively unknown for knowledge to advance. Certainty is fixed but fickle, uncertainty fluid but permanent. Thus, the uncertainties of our time—caused by crises—are a call to action for educators and scholars. They are a call for us to recognize and respond to uncertainty as part of our role and responsibility.

It is for us as scholars and educators to guide the world through uncertainty, to help others to navigate uncertain terrains of time and reality—not to mention the inherent uncertainty of the future.

The articles in this issue deal with the conditions of uncertainty and challenges brought about the pandemic. They reflect upon, in diverse ways, the crisis of the pandemic, the fault lines that the crisis has exposed, and the challenges of our uncertain and difficult times. Writing from across the world, the authors try to grapple with a piece of the broader context of uncertainty—chipping away at it, recognizing its scale and preponderance.

We hope that as a reader, you will find articles that will inspire thought and action toward contributing to higher education—and through it to the world—in a world of uncertainty and its attendant anxieties. We hope that you will share the materials and consider submitting your own work for future issues of the journal.

Editors

Shyam Sharma, Nasrin Pervin,
Lina Gurung, and Pratusha Bhowmik

I. PEER REVIEWED ARTICLES

The role of secure-base supervision and dispositional attachment in predicting supervisees' research self-efficacy, curiosity, and satisfaction

Panoraia Andriopoulou

School of Humanities, Hellenic Open University, Patras, Greece,

Alicia Prowse

University Teaching Academy, Manchester Metropolitan University,
Manchester, UK

ABSTRACT

The present study explores the effects of secure-base supervision in predicting supervisees' research self-efficacy, curiosity and exploration, and supervision satisfaction. One hundred and eleven research supervisees completed an online survey.

Stepwise multiple regressions revealed that supervisors' ability to provide a secure base predicts supervisees' levels of research self-efficacy and supervision satisfaction and this effect is stronger for anxiously attached supervisees. Research self-efficacy mediates the relationship between secure-base supervision and curiosity and exploration as well as supervision satisfaction. The results provide the first empirical evidence that attachment theory is a relevant framework that can be applied to academic supervisory relationships.

Keywords: adult attachment, secure-base, research degree supervision

The supervisory relationship in the context of postgraduate research supervision has been predominantly conceptualized as an interpersonal relationship by numerous higher education scholars who have developed a number of models (e.g., Gatfield, 2005; Lee, 2008; Mainhard et al., 2009) in an attempt to promote supervisors' awareness and improve the quality of the relationship. Nevertheless, these models have struggled to receive strong empirical support (McCallin & Nayar, 2012) while the student-teacher relationship at university is still considered an under-researched area (Hagenauer & Volet, 2014). Although these models attempt to match supervisors to supervisees based on supervisory styles and interpersonal compatibility (Bastalich, 2017), they fail to acknowledge the importance of dispositional styles of relating as conceptualized by relational theories such as attachment theory, despite the evidence coming from the fields of clinical supervision (e.g., Dickso et al., 2011; McKibben & Webber, 2017) and leadership (Mayseless & Popper, 2019; Wu & Parker, 2017).

The study presented here contributes to filling this gap in the literature by exploring the role of secure-base supervision (SBS) and dispositional attachment (i.e., whether an individual has a secure or insecure attachment style) in predicting supervisees' research self-efficacy, curiosity and exploration, and supervision satisfaction. Employing a quantitative design, the current study showed that SBS predicts supervisees' levels of research self-efficacy and supervision satisfaction with this effect being stronger for anxiously attached supervisees. These findings contribute to the higher education literature by demonstrating that the relational dynamics of the supervisory relationship, as conceptualized by attachment theory, bear important implications for the study and practice of research degree supervision.

The interpersonal aspect of the research supervisory relationship

Undoubtedly, research degree supervision constitutes a distinctive form of pedagogy (McCallin & Nayar, 2012) in the context of which research supervisors are required to fulfill a number of roles ranging from project management and pedagogic support for the research process to developing and maintaining working relationships with students (Bastalich, 2017). Several pedagogical models have been developed (see Andriopoulou & Prowse, 2020 and Orellana, et al., 2016 for reviews) with an aim to match students to supervisors based not only on the project topic but also on interpersonal compatibility (Bastalich, 2017). Even though a

review of these models is beyond the scope of this paper, it is imperative to be mentioned that most of them (e.g., Gatfield, 2005; Mainhard et al., 2009) acknowledge the importance of the interpersonal aspect of the supervisory relationship. More recent studies have also shown that the research supervisory relationship is a major determinant (albeit not the sole one) of supervisees' satisfaction, retention, and thesis completion (David, 2020). Despite the growing recognition of the importance of the relational dimension of the research supervisory relationship, a conceptual model which would promote the understanding of the dynamics of this relationship and would inform supervisors' training is missing from the higher education literature. We propose that attachment theory provides a useful framework in this respect.

Attachment Theory Basic Concepts

Attachment theory posits that human babies are born with an innate biological system, the attachment system, that leads them to create emotional bonds with significant others to ensure their survival (Bowlby, 1969). The attachment system is activated by environmental threats to a person's survival and its primary and natural strategy is seeking proximity to significant, stronger others who will protect the person and provide support and comfort (Mikulincer & Shaver, 2007). Significant others, or attachment figures, when responsive to the infant's needs serve several functions that promote the infant's survival and well-being. When attachment figures fulfil their role in an optimal way, they provide a secure base from which the child explores the world. Securely attached individuals have been found to develop positive mental representations (internal working models: IWMs) of themselves and others (e.g., "I am lovable", "Others are trustworthy"), engage in more effective problem solving, regulate their emotions efficiently, develop flexible stress coping strategies, and enjoy better mental health in both childhood and adulthood (Mikulincer & Shaver, 2007; Schore, 2001). Children whose attachment figures have been unresponsive or insensitive to their needs develop an insecure attachment style and insecure IWMs (e.g., "I am not worthy of support", "Others will reject me") (Bowlby, 1969). Individuals whose attachment figures are completely indifferent towards their needs develop an avoidant attachment style that cause them to avoid intimacy and engage in compulsive self-reliance when dealing with stressors, whereas when attachment figures are inconsistently available, children develop an anxious attachment style associated with clinging behaviour, rumination,

and impaired problem solving (Mikulincer & Shaver, 2007). Bowlby (1969) theorised that the attachment patterns developed in childhood are maintained throughout an individual's life, "from cradle to grave", affecting cognitions, emotions, and ways of relating. Research into adult attachment has grown exponentially over the past 35 years revealing that adult attachment relationships share similar characteristics and functions with childhood attachment relationships (Gillath et al., 2016).

Attachment Theory in the Context of Professional Relationships

Attachment theory and individual differences in the way people relate and interact with others based on their dispositional attachment styles (i.e., whether an individual has a secure or insecure attachment style originating from their early interactions with attachment figures) are relevant not only in the context of close or intimate relationships but also in the context of professional (Wu & Parker, 2017) and supervisory relationships (Riggs & Bretz, 2006). Evidence from the field of management and leadership has revealed that managers' insecure attachment predicts employees' burnout, job dissatisfaction (Ronen & Mikulincer, 2012), poor socioemotional functioning, and poor mental health (Davidovitz et al., 2007). Similarly, professional doctorate or PhD supervisors with an anxious (preoccupied) attachment style have been found to rate their supervisees as less professionally developed when compared to the ratings of supervisors with different attachment styles (Foster et al., 2006). The authors explained this finding in the light of evidence showing that anxiously attached individuals have a negative view of self (Bartholomew & Horowitz, 1991) which leads them to diminish their supervisees' capabilities in an attempt to boost their own self-esteem. Likewise, Riggs and Bretz (2006) have found that supervisees who perceived their clinical supervisors as secure rated the supervisory bond higher as compared to supervisees who rated their supervisors as insecure.

Supervisees' organisation of attachment has also been found to affect supervisory outcomes. More specifically, Foster et al. (2007) have found that supervisees' attachment to their clinical supervisors was congruent with their dispositional attachment patterns. The study also revealed that insecurely attached supervisees scored low on a self-report measure of professional development. More recent studies in the area of clinical supervision have also revealed that supervisees with an insecure attachment style evaluate the supervisory relationship more negatively

(McKibben & Webber, 2017; Wrape et al., 2017), have higher levels of cognitive distortions, and are less receptive to corrective feedback (Rogers et al., 2019) as compared to their secure counterparts. As it becomes evident from the above literature review individual differences in attachment are particularly relevant in the context of supervisory relationships. Consequently, the current study set to explore the relevance of attachment dynamics in the context of research degree supervision.

Characteristics and Functions of a Secure Base

As mentioned above, attachment figures who are available and responsive to the individual's needs promote a sense of safety and security which evokes positive cognitions and emotions, and encourages confident engagement in growth-oriented activities such as curiosity and exploration (Mikulincer & Shaver, 2007). In other words, responsive attachment figures provide a safe haven and a secure base from which the individual explores the world. To put it in Bowlby's (1988) words: "In essence this role is one of being available, ready to respond when called upon, to encourage and perhaps assist, but intervene actively only when clearly necessary" (p. 11).

Feeney & Thrush (2010) determined the characteristics and functions of a secure base and developed the Secure Base Characteristics Scale. According to their model, the first characteristic of a secure base is availability in times of need. There is evidence coming from different age groups showing that responsive attachment figures foster a sense of security (Ainsworth et al., 1978; Bowlby, 1988) and raise kids who feel confident in exploring novel environments because they know that support will be available when they need it (Waters & Cummings, 2000). More interestingly, even activating experimentally the secure base schema in adults has produced similar results facilitating exploration (Green & Campbell, 2000) and creative problem solving (Mikulincer et al., 2011). The second characteristic is non-interference as according to attachment theory interference communicates a number of negative messages related to the person's intelligence, competency, and their capability to engage in independent exploration (Feeney & Thrush, 2010). Conversely, a non-interfering attachment figure conveys a message of trust to the person's abilities promoting thus a sense of self-efficacy (Feeney, 2004). The final characteristic, encouragement and acceptance of exploration, refers to the degree to which the attachment figure supports the individual's growth by encouraging them to take up challenges and pursue personal goals (Feeney

& Thrush, 2010). The second aim of the present study was to explore whether research supervisors could operate as a secure base for their supervisees improving a number of outcomes such as research self-efficacy and supervision satisfaction.

Attachment, Secure Base Support, and Self-efficacy

Self-efficacy has been defined as “an individual's belief in his or her own ability to organize and implement action to produce the desired achievements and results” (Bandura, 1997, p. 3). Several studies have examined the relationship between dispositional attachment and self-efficacy (e.g., Mallincrodt & Wei, 2005; Julal Cnossen et al., 2019) and the results have revealed that attachment security is associated with higher scores in perceived self-efficacy in both social and non-social domains whereas attachment anxiety is related to low self-efficacy in all life domains. Avoidant individuals, contrastingly, perceive their self-efficacy differentially depending on the life domain studied exhibiting high self-efficacy for non-social domains and low self-efficacy in social domains (see Mikulincer & Shaver 2007 for a review). In the social domain, insecure individuals report lower satisfaction with their romantic partners and the relationship between attachment insecurity and relationship satisfaction is mediated by self-efficacy beliefs (Julal Cnossen et al., 2019).

The impact of secure-base support has been investigated in the area of leadership (Davidovitz et al., 2007; Wu & Parker, 2017). Leaders have been conceptualized as attachment figures who provide a secure base for their followers or employees and recent studies have revealed that leaders who provide a secure-base support facilitate role breadth self-efficacy and autonomous motivation with the effect being stronger for those employees with high scores on attachment anxiety (Wu & Parker, 2017) as they are the ones who have consistently been found to hold negative self-evaluations and therefore depend more on others' approval (Srivastava & Beer, 2005). The relevance of attachment theory and the positive influence of SBS have been established in the fields of clinical supervision and leadership (Andriopoulou & Prowse, 2020). We wanted to investigate the potential value of the theory for research supervisors.



The present study

To the best of our knowledge, no study has examined the research supervisory relationship through the lens of attachment and secure-base

support. Indirect evidence for the beneficial effects of a secure base on research self-efficacy (students' confidence that they can perform research tasks in a successful way) comes from a study by Overall et al. (2011) showing that the stronger predictor of students' research self-efficacy was the degree to which their supervisor encouraged autonomous thinking and acting (autonomous support). In addition, those students whose supervisors offered high levels of autonomy and academic support (as measured by supervisors' availability to provide feedback, advice, and practical assistance, and their ability to generate clear goals and expectations) exhibited the highest research self-efficacy. In the same study, it was found that greater supervisor availability predicted greater student satisfaction.

Therefore, the aim of the present study is twofold: firstly, to explore the relevance and usefulness of attachment theory in the context of research degree supervision; secondly, to investigate the effects of SBS on research self-efficacy, epistemic curiosity and exploration, and supervision satisfaction. Based on the literature reviewed above the following hypotheses have been advanced:

- a) Dispositional attachment and SBS will predict research self-efficacy, curiosity and exploration, and supervision satisfaction.
- b) The beneficial effects of SBS will be more evident for supervisees with high levels of attachment anxiety
- c) Research self-efficacy will mediate the relationship between SBS and curiosity and exploration, and this mediating effect will be stronger for supervisees with high attachment anxiety scores
- d) Research self-efficacy will mediate the relationship between SBS and supervision satisfaction, and this mediating effect will be stronger for supervisees with high attachment anxiety scores

No hypotheses were advanced for attachment avoidance as previous studies' findings have been inconclusive (e.g., Wu & Parker, 2017).

Method

Participants and Procedure

To calculate sample size Green's (1991) formula ($N \geq 50+8m$, where m = the number of predictors), for detecting a medium effect with 80% power in multiple regressions, was employed. Given the initial number of predictors (8) of this study, the sample size was calculated to be

114 participants. The final sample consisted of 111 participants (84 females, 25 males, 1 non-binary, and 1 participant who preferred not to reveal their gender), with a mean age of 35.27 (SD = 9.16). All participants were enrolled for a postgraduate research degree at PhD or Doctoral level. As for the areas of study, 38.7% of participants came from social science, 22.5% from science, 11.7% from education, 5.4% from arts, 5.4% from business, and 16.2% from other fields.

The study was administered online via the Qualtrics platform. Participation was completely anonymous and voluntary as no incentives for participation were given. Ethical approval for the study was obtained from the University's Research Ethics and Governance Committee.

Material – Measures

Secure-base supervision: An adapted form of the *Secure Base Characteristics Scale* (SBCS; Feeney & Thrush, 2010) was administered to participants. The *Availability* subscale assesses the extent to which supervisors generally make themselves available to supervisees if needed during exploratory activities. The *Interference* subscale assesses the extent to which supervisors generally intrude in the explorations and goal pursuits of supervisees. The *Encouragement* subscale assesses the extent to which supervisors generally encourage supervisees' goal strivings, personal growth, and exploration. The scale consists of 15 items (5 items for each subscale) and participants need to rate the extent to which they agree with each statement on a 6-point Likert scale. The scale has been found to have good psychometric properties (Feeney & Thrush, 2010). Cronbach's alphas for this study were calculated to be .89, .66, and .88 for availability, interference, and encouragement respectively.

Adult Attachment: The *Experiences in Close Relationships Scale-Revised* (ECR-R; Fraley et al., 2000) is a 36-item scale which assesses two orthogonal constructs, namely attachment anxiety and avoidance. Each subscale consists of 18 items and respondents need to rate the extent to which they agree with each statement on a 7-point Likert-type scale ranging from 1 (disagree strongly) to 7 (agree strongly). The anxiety subscale assesses the respondents' fears of abandonment, whereas the avoidance subscale assesses the respondents' fears of intimacy and emotional closeness. Low scores on both dimensions indicate attachment security whereas high scores on both dimensions is an indication of fearful attachment. The measure has been designed to assess general/dispositional attachment. Therefore, participants are instructed to complete the scale in

terms of how they experience intimate relationships in general rather than how they experience their current romantic relationship. The ECR-R was developed from a factor analysis of over 300 items drawn from different measures of adult attachment and is the most widely used, and for many the most valid, measure of adult attachment as it has good psychometric properties (Fraley et al., 2000). Cronbach's alphas for the current study were .94 and .95 for attachment anxiety and avoidance respectively.

Research Self-efficacy: It was assessed through the *Self-Efficacy in Research Measure* (Phillips & Russell, 1994) which is a self-report scale of 33 items. The scale consists of 4 subscales assessing Research Design Skills, Practical Research Skills, Quantitative and Computer Skills, and Writing Skills. Participants are asked to rate in a 9-point Likert scale (1= no confidence, 9 = total confidence) the degree to which they feel confident in their ability to successfully perform various research tasks. The overall score was used for the present study (Cronbach's $\alpha = .95$).

Epistemic Curiosity: The *Interest Type and Deprivation Type Scales* (I/D Scale; Litman & Spielberger, 2003) were employed to measure epistemic curiosity. This questionnaire consists of two 5-item subscales that assess Interest-Type epistemic curiosity and Deprivation-Type epistemic curiosity. Example items include "I enjoy exploring new ideas" and "I enjoy learning about subjects that are unfamiliar to me" for the Interest type, and "Difficult conceptual problems can keep me awake all night thinking about solutions" and "I can spend hours on a single problem because I just can't rest without knowing the answer" for the Deprivation type. Respondents have to select an appropriate response on a Likert scale with a highest point of 4 (almost always) and a lowest point of 1 (almost never). Cronbach's alpha for the epistemic curiosity scale was .80.

Curiosity and Exploration: The *Curiosity and Exploration Inventory* (CEI; Kashdan, et al., 2004) is a 7-item scale that assesses Exploration (pursuing novelty; e.g., "I would describe myself as someone who actively seeks as much information as I can in a new situation") and Absorption (being absorbed in activities; e.g., "When I am participating in an activity, I tend to get so involved that I lose track of time"). Participants respond on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach's alpha was calculated for the total score and was found to be .69.

Supervision Satisfaction: The *Postgraduate Research Experience Questionnaire* (PREQ; Ainley, 2001) which was developed by the

Australian Council for Educational Research was employed to assess students' satisfaction with research supervision. The measure consists of 28 statements relating to the experience of being a postgraduate research student. Those statements are divided into six subscales; Supervision, Intellectual climate, Skills development, Infrastructure, Thesis examination process, and Clarity of Goals and Expectations. Respondents need to rate how much they agree with each statement on a five-point Likert scale which ranges from "strongly agree" to "strongly disagree". There is also a "does not apply" option for those who think that a specific statement is not relevant to them. Only 25 items were used in the present study as 3 items concerned the experience of viva (item 2: "the thesis examination process was fair", item 15: "I was satisfied with the thesis examination process", and item 25: "the examination of my thesis was completed in a reasonable time") were not relevant for the current participants as the main inclusion criterion was that participants should be currently studying at a PhD or Professional Doctorate level. The psychometric properties of the questionnaire have been tested by the Australian Council for Educational Research (ACER, 1999). Cronbach's alpha for the overall score in the present study was found to be .92.

Results

Table 1 presents zero-order correlations among variables, and descriptive statistics. Higher order constructs were calculated for SBS, and for curiosity and exploration. The first variable was calculated by averaging the scores for availability, non-interference and encouragement (Cronbach's $\alpha = .91$). The second one was calculated by combining the average scores for curiosity and exploration and epistemic curiosity resulting in a variable that was labelled general curiosity (Cronbach's $\alpha = .83$).

Table 1.
Zero Order Correlations and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Mea n	SD
1. Age	1.00															35.27	9.16
2. Gender	-.01	1.00														--	--
3. Supervision length	.18	-.05	1.00													31.38	29.41
4. Full-time/ part- time	.57**	-.19	.19	1.00												--	--
5. Availability	.08	-.10	-.17	.11	1.00											4.02	1.43
6. Intrusiveness	-.17	.08	.06	-.35**	-.43**	1.00										2.44	.99
7. Encouragement	.07	-.10	-.14	.23*	.71**	-	1.00									4.67	1.25
						.60**											
8. Secure base supervision	.12	-.11	-.16	.25**	.88**	-	.91**	1.00								4.41	1.04
						.75**											
9. Research Self- efficacy	-.21*	-.04	.10	-.13	.18	-.05	.25*	.20*	1.00							218.17	48.82
10. Attachment Anxiety	-.16	.19*	.20*	-.17	-.11	.17	-.15	-.16	-.11	1.00						3.02	1.29
11. Attachment Avoidance	-.06	.09	.22*	.10	-.08	.10	-.07	-.09	-.03	.63**	1.00					2.76	1.19

12. Curiosity & Exploration	.06	.00	.08	.04	.01	-.06	.00	.02	.26**	.07	.06	1.00					30.92	5.47
13. Epistemic Curiosity	-.14	.03	-.04	-.08	.05	.05	.07	.04	.38**	.10	.03	.59*	1.00				28.91	4.88
14. General curiosity	-.04	.01	.03	-.02	.03	-.01	.04	.04	.36**	.09	.05	.91*	.88**	1.00			29.91	4.61
15. Supervision Satisfaction	.04	-.04	-.12	.13	.69**	-.43**	.68**	.72**	.52**	-.14	-.11	.18	.16	.19*	1.00	93.77	17.69	

Note: **Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

A number of stepwise multiple regressions were conducted for each of the dependent variables, namely research self-efficacy, general curiosity and supervision satisfaction. Age, duration of supervision, and part-time versus full-time status were included in the first step of every regression and were considered control variables. Secure base supervision was added in the second step of each multiple regression. In Step 3 attachment anxiety and attachment avoidance were added, and in the final step the interaction between secure base supervision and attachment anxiety and avoidance were included.

Neither attachment avoidance nor its interaction with secure base supervision made any significant contribution (all $t_s < 1$) to the regression models and were dropped from final analyses to avoid multicollinearity as attachment avoidance and attachment anxiety were highly correlated ($r = .63, p < .01$). Secure base supervision and attachment avoidance and anxiety were mean-centered before their production term was calculated. All estimates were bootstrapped with 2000 replications. The coefficients presented in table 2 are all bootstrapped coefficients.

As shown in table 2 secure base supervision predicted both research self-efficacy ($B = 11.76, p < .05$) and supervision satisfaction ($B = 12.29, p < .01$), but contrary to hypothesis a, it did not predict general curiosity ($\beta = .28, p > .05$). The main effect of attachment anxiety on research self-efficacy and the interaction between attachment anxiety and secure base were marginally non-significant ($B = -6.74, p = .07$ and $B = 6.21, p = .07$ respectively; see figure 1). Neither the main effect of attachment anxiety ($B = .33, p > .05$) on general curiosity nor the interaction between secure base and attachment anxiety ($B = -.112, p > .05$) were significant. There were no significant findings for the main effect of attachment anxiety ($B = -.46, p > .05$) or the interaction between attachment anxiety and secure base supervision ($B = 1.30, p > .05$) for supervision satisfaction.

Table 2.

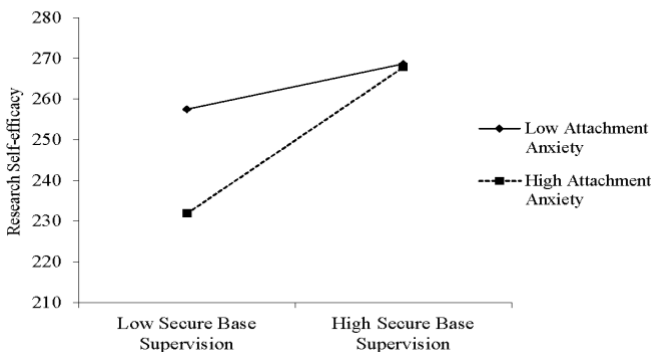
Results of Regression Analyses ($n = 111$, $B = 2000$ Bootstrap samples)

	Research Self-efficacy <i>B/S.E.</i>		General Curiosity <i>B/S.E.</i>		Supervision Satisfaction <i>B/S.E.</i>	
	Step 3	Step 4	Step 3	Step 4	Step 3	Step 4
Intercept	251.64/16.88	256.08/17.45	30.53/2.19	30.45/2.21	95.68/5.14	96.62/5.34
Age	-1.22/.49*	-1.35/.512*	-.02/.065	-.02/.06	-.05/.15	-.08/.16
Supervision length	.41/.16**	.46/.19*	.004/.02	.003/.02	.01/.04	.02/.04
Full-time/part-time	-16.99/11.81	-15.84/11.66	.04/1.46	.02/1.46	-2.04/3.75	-1.80/3.85
Secure-base Supervision (SBS)	12.88/5.08*	11.76/4.81*	.26/.44	.28/.45	12.53/1.28*	12.29/1.24**
Attachment Anxiety	-6.74/3.74	-6.57/3.46	.33/.34	.33/.34	-.50/.96	-.46/.95
SBS x Attachment Anxiety		6.21/4.48		-.112/.35		1.30/.99

* $p < .05$ ** $p < .01$

In order to test hypothesis 3 the PROCESS procedure developed by Hayes (Model 7: moderated mediation, Hayes, 2017) was employed bootstrapped with 2000 replications. Age, duration of supervision, and part-time versus full-time status were included in the analyses as covariates to control for their influence. Research self-efficacy had a significant mediation effect between secure base supervision and general curiosity when attachment anxiety was medium (conditional mediation effect = .42; C.I. = .08 to .86) or high (conditional mediation effect = .71; C.I. = .11 to 1.43) but a non-significant one when attachment anxiety was low (conditional mediation effect = .13; C.I. = -.39 to .68). In addition, research self-efficacy had a significant mediation effect between secure base supervision and supervision satisfaction when attachment anxiety was medium (conditional mediation effect = 1.76; C.I. = .35 to 3.58) or high (conditional mediation effect = 2.97; C.I. = .39 to 5.71) but a non-significant one when attachment anxiety was low (conditional mediation effect = .54; C.I. = -1.54 to 2.43).

Figure 1. Interaction of attachment anxiety and secure-base supervision in predicting research self-efficacy



Discussion of findings

The present study set out to investigate the role of secure-base supervision (SBS) and dispositional attachment in research self-efficacy, curiosity and exploration, and

supervision satisfaction. The findings indicate that attachment theory provides a useful theoretical framework when exploring the dynamics of the research degree supervisory relationship. In addition, the findings revealed that supervisors who serve as a secure base, by being available, encouraging and non-interfering, tend to have supervisees who report higher levels of research self-efficacy and supervision satisfaction. Most importantly, this effect was stronger for anxiously attached supervisees, who were benefited the most from SBS. These findings are in line with those of previous studies from the field of leadership. For example, Wu & Parker (2017) found that anxiously attached employees benefited more from secure base leadership in terms of experiencing higher levels of role breadth self-efficacy and proactive behaviour.

Contrary to the first hypothesis advanced in the introduction, dispositional attachment did not predict any of the outcome variables. One possible explanation could be the low mean levels of attachment anxiety ($M = 3.02$) and avoidance ($M = 2.76$) reported by the current sample. It is therefore possible that participants' attachment insecurities were not strong enough to have an effect on the outcome variables. In addition, previous studies have suggested that supervision-specific attachment has a stronger predictive power when it comes to the evaluation of the supervisory relationship as compared to general/dispositional attachment (Bennett et al., 2008; Marmarosh et al., 2013). Contemporary adult attachment scholars (Collins & Read, 1994; Mikulincer & Shaver, 2007) posit that adult representations of attachment are best conceptualised as a hierarchical network of interrelated mental models. Accordingly, at the top of the hierarchy there are general representations of attachment whereas further down in the hierarchy there are context-specific representations (Collins & Read, 1994; Overall et al., 2003). In line with the hierarchical model but also the most recent connectionist

approach to adult attachment (Fraley, 2007), context-specific representations might be more salient in the context of specific relationships and therefore more influential. Future research on supervisees' attachment to supervisors could employ scales that directly assess attachment bonds between supervisors and supervisees like the Experiences in Supervision Scale developed by Gunn & Pistole (2012) or the Experiences in Close Relationships – Relationship Structures Questionnaire (Fraley et al., 2011). It is likely that the scale utilised in this study (ECR-R) was not effective in capturing the attachment representations activated in the context of supervision.

In line with our third and fourth hypotheses, this study found that the relationship between SBS and curiosity and supervision satisfaction is mediated by research self-efficacy. These findings suggest that SBS from supervisors can promote supervisees' research self-efficacy by encouraging them to believe in their competence to achieve their research goals (Bandura, 1997), which in turn has a positive impact on curiosity and supervision satisfaction. This boost in self-efficacy is particularly important for anxiously attached individuals who hold negative IWMs of their selves (Bowlby, 1969) and score low on coping self-efficacy (Wright et al., 2017).

The lack of findings regarding attachment avoidance could be explained in several ways. First, the avoidance levels of the participants of the specific study might have been particularly low to predict any of the outcome variables. It is also possible that avoidant individuals' compulsive self-reliance (Mikulincer et al., 2003), which causes them to deny attachment needs and inhibit proximity seeking and interdependence, makes the provision and availability of a secure base irrelevant, or even threatening, as receiving supervisors' support would mean to reduce their emotional distance. Doing so would impair the effectiveness of their defensive strategies whose

main goal is to keep the attachment system deactivated or down-regulated (Mikulincer & Shaver, 2007). Finally, as mentioned above the attachment scale utilised might not have been sensitive enough to capture the dynamics of the supervisory relationship-specific IWMs.

This study makes a significant contribution to the research degree supervision literature. To the best of our knowledge, this is the first study to examine the research supervisory relationship through the lens of attachment theory. The results provide empirical evidence that attachment theory is a relevant framework that can be applied to academic supervisory relationships. The findings of this and future studies could inform the training of research supervisors who could learn to be vigilant towards signs of attachment anxiety or avoidance and employ suitable strategies which will allow them to meet the supervisees' needs, by being available, encouraging, and non-interfering, with an aim to enhance their sense of security. Based on the findings of the current study, it becomes obvious that anxiously attached supervisees would particularly benefit from SBS. Even though, the current study failed to demonstrate an interaction between attachment avoidance and SBS, it has to be noted that the benefits of this type of supervision were evident for all participants irrespective of their attachment style. Avoidant supervisees' attachment behaviours in particular have been reported to be challenging for supervisors (Wrape et al., 2017) as their compulsive overreliance leads them to avoid interpersonal interaction, disclosure, and even feedback. Supervisors should therefore be vigilant for the covert signs of avoidance behaviours and intervene before valuable supervisory time is lost. In addition, training for supervisors should also aim at enhancing their self-awareness regarding their own patterns of relating and their impact on the supervisory process as it has been shown, for example, that insecure supervisors tend to rate their supervisees as less

professionally developed (Foster et al., 2006) and engage in abusive supervision (Robertson et al., 2018). Moreover, evidence suggests that the supervisors' ability to form secure supervisory relationships is predictive of both supervisors' and supervisees' perceptions of the supervisory working alliance, while the supervisees' ability to form attachment relationships is not (Dickson et al., 2011; White & Queener, 2003), signifying the importance of the ability to provide a secure base in supervision. It is therefore imperative for supervisors to be encouraged and supported to provide supervisees with SBS tailored to their individual attachment orientations (Watkins Jr & Riggs, 2012). Recent evidence coming from attachment-based parenting (Huber et al., 2015b; Huber et al., 2015a) and couples' interventions (Wiebe & Johnson, 2016) indicate that attachment security can indeed be increased with positive outcomes.

Limitations and future research

The current study is not without limitations. The first limitation concerns the correlational nature of the data, which does not allow for any causal inferences. Future research could employ longitudinal or experimental designs to explore the effects of secure base supervision and supervision-specific attachment on a number of variables such as student satisfaction and retention, and timely completion of theses. Another shortcoming pertains to the sample size. Even though sample size calculations that were performed prior to recruitment indicate that the sample size is adequate for the analyses performed, future studies could replicate these findings with larger sample sizes for additional power. In addition, the sample is gender-biased as it consisted mostly of females (75.7%). However, previous studies have found no gender differences in adult attachment orientations (Kafetsios et al., 2014; Van IJzendoorn & Bakermans-Kranenburg,

1996). In addition, this study focused on a sample of doctoral and PhD students. Future studies could explore the attachment dynamics between supervisors and masters' students.

It is worth noting that the evaluation of SBS was based on students' perceptions of their supervisors' ability to provide a secure base. Even though, many studies have employed a similar design exploring the receivers' experience of supervision (e.g., Bennett et al., 2008; Halbert, 2015; Lindsay, 2015), which does not necessarily reflect the supervisors' actual ability to provide SBS, future research could recruit supervisory dyads to explore both the perspectives of the supervisors and the interaction of supervisors' and supervisees' attachment orientations. Moreover, although there is evidence that the attachment dynamics are activated within supervisory relationships (Rogers et al. 2019), we need to be cautious as supervisory relationships cannot be considered 'full-blown attachments' (Watkins and Riggs 2012). Even though, based on our findings, the interpersonal aspect of the relationship may play an important role in the learning process, this should not undermine the significance of other factors that bear important weight such as research expertise, project management, knowledge of university policies and procedures etc.

Conclusion

The findings of the present study demonstrated that attachment theory is a relevant conceptual framework in the context of research degree supervision and that secure base supervision enhances supervisees' research curiosity and supervision satisfaction. This evidence indicates that the interpersonal nature of the supervisory relationship and the relational individual differences should be taken into consideration in the development of university policies for

supervision and the design of training curriculums for research degree supervisors.

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Authors Bios

Panoraia Andriopoulou, BSc, MSc, PhD, CPsychol, FHEA is a HCPC registered Clinical & Counseling Psychologist and Senior Lecturer in Psychology. She is fully trained in CBT, Schema Therapy, and Systemic Family Therapy and has worked as a practitioner psychologist for more than 17 years both in private practice and in the public sector gaining extensive experience in the

assessment and treatment of adolescents and adults with anxiety, depressive, and personality disorders. She has been a trainer and supervisor for CB therapists since 2006. At present, she teaches clinical and counseling psychology at undergraduate and postgraduate levels and supervises post-graduate students carrying out qualitative and quantitative projects. Her research interests lie within the areas of clinical/counseling psychology and psychotherapy, psychopathology, psychological well-being, and the therapeutic properties of close relationships with a special focus on attachment.

Email: andriopoulou.panoraia@ac.eap.gr

Alicia Prowse is an academic developer in the University Teaching Academy (UTA) at Manchester Metropolitan University, UK. Her background includes a PhD in Plant Ecology, teaching in Higher Education (Biology and Research Methods), Teaching English to Speakers of Other Languages (TESOL), as well as having worked as an actor and collaborated with an artist. Her research interests include: Education for Sustainable Development; Student Transitions to HE; Personal Tutoring and Supervision.

Email: a.prowse@mmu.ac.uk

Problematic Internet Usage Behaviours of Undergraduate Students: A Modeling Study¹

Burcu Karabulut Coşkun

Kastamonu University, Kastamonu, Turkey

Serçin Karataş

Gazi University, Ankara, Turkey

ABSTRACT

This study aims to examine the problematic Internet usage behaviours of undergraduate students through structural equation model. The research group of this study consists of 2026 undergraduate students enrolled in universities representing the seven geographical regions of Türkiye. Universities were selected via stratified method and individuals from these universities were selected by random sampling. In

¹ This article was prepared by the first author, under the supervision of the second author, based on the doctoral thesis titled "Problematic Internet Use Behaviors of Undergraduate Students and Factors Affecting These Behaviors: Modeling Study" completed at Gazi University, Institute of Educational Sciences.

order to collect data, the Problematic Internet Usage Behaviours Scale for Undergraduate Students, developed by the researchers, was used. The scale consists of 32 items and 9 factors, including demographic information. The results revealed that problematic Internet usage behaviours of the students affecting by the factors were: social satisfaction which means meeting the expectations of the individual from the social environment, emotional satisfaction which means the individual's sense of emotional satisfaction, internalization which means the individual's assimilation of the situation she/he is in, perception of prestige which express dignity in social environments, physical negative impact means physical ailments that occur in the body of the individual, overuse which is about the usage of the Internet more than enough, loss of control which means being unable to control and continue to perpetuate one's negative behavior, academic failure, and internal deception which means deceiving oneself that one has misbehaved. In addition, correlation of factors was modelled and evaluated. When the structured model was examined it was seen that perception of prestige, internal deception, and overuse did not affect the physical negative impact factor. In addition to this, it was determined that the emotional satisfaction factor did not affect the overuse factor. Apart from these examples, all the other factors affect each other at different levels.

Keywords: problematic Internet usage, higher education, undergraduate students, Internet usage behaviours

Introduction

The Internet has become an unconditional and indispensable element of daily life since it is becoming more and more easily accessible to every individual in society, its use is fast and easy, it is the shortest method of obtaining information, and it can be used for purposes such as shopping, communication, entertainment which are needed in daily life. The advantages of the Internet have a great impact on the spread of it. On the other hand, there

are many disadvantages of the uncontrolled, oblivious, indefinite and excessive use of the Internet. With the 2019 COVID pandemic, individuals have started to use the Internet more frequently and widely than usual for many different purposes. In this widespread use process, the negative effects of the Internet remained behind. Many studies state that excessive and uncontrolled use of the Internet causes problematic Internet usage (Akar, 2017; Gu, 2020; Günlü, 2016; Lim & Nam, 2020; Spada, 2014; Vadher et al., 2019; Yavuzarslan Gok, 2017). It is very important to recognize and regulate such negative behaviours, which are generally called "Problematic Internet Usage", in the early period so that these behaviours do not become permanent. According to TUSI (Turkish Statistical Institute) 2021 statistics in Türkiye, the most common group of Internet users is between the ages of 16-24 with 26.6%. Other groups follow as; with 15.7% individuals who are at 25-34 age group, with 9.4% individuals who are at 35-44 age group, with 5.5% individuals who are at 45-54 age group, with 1,6% individuals who are at 55-64 age group and lastly with 0,4% individuals who are at 65-74 age group (TUSI, 2021). On the other hand, Erikson (1968) stated that the developmental periods of the individuals within the 16-24 age group with the highest number of people as Internet users, are called the Young Adulthood period. Prominent behaviours of individuals in this period are identity confusion and intimacy versus isolation. Intimacy versus isolation is defined as the struggle of being able to establish close relationships with individuals of the same and opposite gender, identity confusion is defined as an effort to create an identity of one's own (Erikson, 1968). In other words, it is stated that establishing relations and forming their own identity are two stress factors for young individuals in this period (Ceyhan, 2011).

It is stated that young people in this isolation period see the Internet as a tool to cope with the stress factors mentioned (Guan & Subrahmanyam, 2009). It can be expected that the frequency of exhibiting problematic Internet usage behaviours could also be high, since these young individuals who use the Internet as an asylum from stress factors, can use the Internet uncontrollably. Besides; the ineffectiveness of the control mechanism of parents in this age group, the fact that classes direct students to use the Internet as a tool for research, classes being carried out via the Internet, there being no obligation to reveal identity in social networks, the opportunity to introduce themselves differently than they are, easy access to Internet from both school and social physical environment, being alone in social life, low cost of accessing to the Internet and the possibility of accessing any desired content are the factors that could cause the problematic use of the Internet by university students (Ceyhan, 2011; Ceyhan et al., 2007; Faghani et al., 2020; Gu, 2020; Hall & Parsons, 2001; Kandell, 1998; Karaca, 2007; Keser Ozcan & Buzlu, 2005; Turnalar Kurtaran, 2008). It is stated that outcomes frequently encountered in young individuals with problematic Internet usage can be understood from the disruptions of their familial, academic, and social responsibilities. Time spent on the Internet has a great effect on disrupting these responsibilities and it also creates an internal obstacle for individuals (Caselli et al., 2020; Chou et al., 2005; Esen, 2010). At this point, it is important to examine problematic Internet usage in detail.

Problematic Internet Usage

In the literature, many nomenclatures have been used to describe the normal or unacceptable amount of time spent while using the Internet. Before the problematic Internet usage has been nominated, Goldberg (1996); emphasized that the uncontrolled use of the Internet may

cause problems in fulfilling daily life responsibilities. In the following years, according to chronological naming:

- Young (1996) prepared a diagnostic criteria list with 8 items and stated that the fulfilment of 2 of these items can be diagnosed as “Internet addiction”.
- Griffiths (1998) defined the aspects of Internet addiction as; attention-seeking, relapse, withdrawal, tolerance, mood change, conflict criteria and expressed it as intensive use of the Internet due to the opportunities it provides.
- Davis (2001) preferred compulsive Internet usage and pathological Internet usage instead of naming it Internet addiction. This concept can be defined as individuals’ preference to use the Internet to meet their social needs apart from academic and business purposes and also Internets’ uncontrolled and excessive use since all life is carried on the Internet.
- Tam ang Walter (2013), accepted all of the naming and definitions and stated that these naming changes occur according to the 3-stage behavioural level. According to the model, Level 1 is called the "regular Internet use" level, family and peers are important in determining and control ff the problematic Internet usage behaviour is displayed or not at this level. Level 2 is called " Problemaic/Heavy Internet Use " level and teachers/instructors are important in determination and control of the problematic Internet usage behaviour at this level. Level 3 is called the “Pathological Use/Internet & Gaming Addiction” level, psychologists, psychiatrists and families are important in determining and control of the problematic Internet usage behaviour at this level. It is stated that not only therapy or usage measures but

also drug supports may be required in the treatment of fourth level users (Tam & Walter, 2013).

- Ceyhan and Ceyhan (2014) defined the behaviours regarding problematic Internet usage as not being able to control the use of the Internet and for this reason getting negatively affected on daily life skills.
- Similarly, Lim, and Nam (2020) used the term, problematic Internet usage and stated that it affects daily life and creates unhappiness and dissatisfaction in people when it is not used.

As it can be understood from the naming and the definitions of these nomenclatures, although similar behaviours are named differently, it has been determined that these definitions are gathered in a similar perspective and the term “problematic Internet usage” is often used in fields of education in recent years. But with the different levels of expressing these behaviours, problematic Internet usage can be the research subject of different branches (Ceyhan, 2011; Santarossa & Woodruff, 2017; Tam & Walter, 2013).

When the Internet’s most common users’ age groups are considered it can be seen that this correlates to university students’ age groups and the models suggest that when the diagnosis of these behaviours is made early, improvements to these behaviours can be made more efficiently. It is thought that identifying the problematic Internet usage behaviours of young users at the first and second level, will help protect them from possible problems they may encounter in their social, academic, professional and family lives later. Since the most common age group which have a problematic Internet usage correlates with the university students’ age group this the study was conducted with undergraduate students studying at various universities.

Within the context of the study, the following hypotheses were tested:

- H1: Social satisfaction has a significant effect on loss of control.
- H2: Social satisfaction has a significant effect on overuse.
- H3: Social satisfaction has a significant effect on academic failure.
- H4: Social satisfaction has a significant effect on physical negative impact.
- H5: Emotional satisfaction has a significant effect on loss of control.
- H6: Emotional satisfaction has a significant effect on overuse.
- H7: Emotional satisfaction has a significant effect on academic failure.
- H8: Emotional Satisfaction has a significant effect on physical negative impact.
- H9: Internalization has a significant effect on loss of control.
- H10: Internalization has a significant effect on overuse.
- H11: Internalization has a significant effect on academic failure.
- H12: Internalization has a significant effect on physical negative impact.
- H13: Perception of prestige has a significant effect on loss of control.
- H14: Perception of prestige has a significant effect on overuse.
- H15: Perception of prestige has a significant effect on academic failure.
- H16: Perception of prestige has a significant effect on physical negative impact.
- H17: Internal deception has a significant effect on loss of control.
- H18: Internal deception has a significant effect on overuse.

- H19: Internal deception has a significant effect on academic failure.
- H20: Internal deception has a significant effect on physical negative impact.
- H21: Loss of control has a significant effect on overuse.
- H22: Loss of control has a significant effect on academic failure.
- H23: Loss of control has a significant effect on physical negative impact.
- H24: Overuse has a significant effect on academic failure.
- H25: Overuse has a significant effect on the physical negative impact.

Method

Research Model

This research was designed as a cross-sectional survey method. Survey methods aim to describe a past or present situation as it is. With these models, the researcher does not intend to modify, or influence the investigated situations. The event to be investigated is observed as it is (Kalaycı, 2006). Survey methods have differences among them. In this study, a single research survey model was used to determine the factors affecting the problematic Internet usage behaviours of undergraduate students, while the relational survey method was used to determine the relationships between the factors. While in single survey methods, the formations of the variables are determined one by one, in relational survey methods differences between two or more variables are examined (Karasar, 2006). In the analysis of data; Structural Equation Modelling was used to predict the causal relationships between dependent and independent variables and to systematically interpret complex problems in a single process (Anderson & Gerbing, 1988). IBM® SPSS® Amos™ 21 software was preferred for SEM.

Research Population and Sampling

The research population of this study consists of undergraduate students attending universities representing the seven regions of Türkiye during the 2014-2015 academic year. In the selection of institutions, the stratified sampling method was used, and the students were selected randomly from each university based on the total number of students they have. In line with this approach, it was aimed to reach 2026 students studying in 9 universities from 7 regions according to the size of the region. The distribution of the undergraduate students participating in the study according to their age, gender, and grade level is presented in Table 1.

Table 1
Distribution of Participants According to Demographic Characteristics

The average age	n	%
19-21	1401	69.5
22-24	505	24.9
25 and above	120	5.92
Gender	n	%
Female	1109	54.7
Male	917	45.26
Grade Level	n	%
1 st Grade	903	44.57
2 nd Grade	510	25.17
3 rd Grade	261	12.88
4 th Grade	300	14.80
Grade Retention	48	2.36
Unspecified	4	0.19
<i>Total</i>	<i>2026</i>	<i>100</i>

When Table 1 is examined, it can be seen that 1401 (69.15%) of 2026 undergraduate students participating in the study were between the ages of 19-21, 505 (24.9%) of them were between the ages of 22-24, 120 (5.92%) of them were in the age group of 25 and above. When the distribution of the genders of undergraduate students participating in the research is examined it can be seen that 1109 (54.7%) of 2026 undergraduate students participating in the study were female and 917 (45.26%) were male. In addition, among the 2026 undergraduate students who participated in the study, the highest participation rate belongs to 1st graders with 903 (44.57%) students and the lowest participation rate belongs to students with retention status with 48 (2.36%) students.

Data Gathering Tool

The Problematic Internet Usage Behaviours Scale for Undergraduate Students, which was 5-point-Likert type and developed by the researchers in 2 stages and consisted of 32 items and 9 factors, used to collect the data of the study. In the creation of the scale items and factors, initially the models in the literature were examined and determined by content analysis, they were subjected to content validation by consulting with field experts. Then, 2 pilot studies were conducted and finally the item pool was formed. In the first pilot application of the scale, undergraduate students of a university that would not participate in the actual research were selected. Explanatory Factor Analysis and Reliability analyses were made on the obtained data. The second pilot was conducted with the students of the same university who did not take part in the first pilot and Confirmatory Factor Analysis was performed. As a result of two applications, final form of The Problematic Internet Usage Behaviours Scale of Undergraduate Students was obtained. Also, Academic Failure, Social Satisfaction, Emotional Satisfaction,

Internalization, Perception of prestige, Physical Negative Impact, Overuse, Loss of Control, Internal Deception were found as factors of the Problematic Internet Usage Behaviours Scale. The Cronbach Alpha value for the scale was calculated as 0.83, Goodness of fit indexes were determined as; χ^2 : 919.735; χ^2/df : 1.755; RMSEA: 0.088; GFI: 0.885; AGFI: 0.854 and CFI: 0.824.

Data Collection Procedures

The developed scale was applied online to the determined sample. The targeted number was reached in all universities except for one university because the university had no central student information system and information about the scale had to be send to students' personal e-mail addresses. As a precaution for missing data, the scale was applied to more students than the targeted number, and accordingly, complete feedback was obtained from a total of 2026 students.

Data Analysis

The data were gathered through an online electronic questionnaire and analysed with both IBM® SPSS® Statistics 21 and IBM® SPSS® Amos™ 21. Structural equation modelling was used to establish the model and determine its validity.

Findings

Problematic Internet Usage Rates

The mean scores of undergraduate students of problematic Internet usage were analysed according to the gender variable. If the average values are in the range of 1-3, it means that family, friends and teacher/instructor are authorized to determine and eliminate these behaviours. If it is between 3 and 4, it means that a psychologist must be consulted, and if it is between 4-5, it means that a

psychiatrist must be consulted (Tam & Walter, 2013). Relevant findings were presented in Table 2.

Table 2
The Distribution of Problematic Internet Usage Rate According to Gender (According to 1-5 Point Range)

Gender	n	\bar{X}(Avg.)
Female	1109	1.778
Male	917	2.030
Total	2026	100

When Table 2 is examined, the average score of female students of problematic Internet usage behaviours was determined as $\bar{X}=1.778$, while the score of male students was determined as $\bar{X}=2.030$. This showed that male students tend to exhibit more problematic behaviours than female students.

Measurement Model and Test Results

In this section, descriptive statistics of the gathered data regarding the measurement model were given. In this context, the validity characteristics based on the standard deviation, mean, skewness, and kurtosis scores were examined, and the findings are presented in Table 3.

Table 3
Mean, Standard Deviation, Skewness and Kurtosis Values of Factors Included in the Model

Factor	\bar{X}	SS	Skewness	Kurtosis	Item Number
Physical Negative Impact (PNI)	2.55	.79 9	.440	-.509	3
Overuse (O)	2.42 7	.87 0	.583	-.256	2

Loss of Control (LC)	2.30 9	.90 3	.601	-.168	4
Academic Failure (AF)	2.21 7	.86 7	.760	.350	3
Perception of Prestige (PP)	2.25 8	.89 7	.538	-.373	5
Internalization (I)	2.22 3	.86 5	.597	-.131	5
Emotional Satisfaction (ES)	2.15 0	.86 4	.814	.151	4
Internal Deception (ID)	2.19 0	.85 5	.692	.061	2
Social Satisfaction (SS)	1.90 6	.91 7	1.021	.373	4

The results in Table 3 reveals that the mean values of the factors were less than 3.

This showed that the problematic Internet usage behaviours of undergraduate students participating in the research are at 2nd Level according to the Behaviour Level Model of Tam & Walter (2013) and that the family, social environment and education authorities were responsible for the detection and correction of these behaviours. When the factors were examined in detail, it was seen that the highest average score belongs to the Physical Negative Impact Factor ($\bar{X}=2.555$), in other words, undergraduate students were mostly affected physically by their Internet usage behaviours. Also, it is noteworthy that the mean values of Overuse ($\bar{X}=2.427$) and Loss of Control ($\bar{X}=2.309$) factors were close to the median point. The lowest mean value belongs to Social Satisfaction Factor ($\bar{X}=1.906$). In terms of the standard deviation scores, all scores were below 1 which proves that the measurement values were close to the mean scores. When the skewness and kurtosis values were examined, the fact that the Skewness value was between .440 and 1.021 and the Kurtosis value was between -.579 and .373 showed that the assumption of normality is met.

Testing the Model

In this section, the model developed in the study was tested within the scope of the structural equation model. The obtained measurement model was presented in Figure 1.

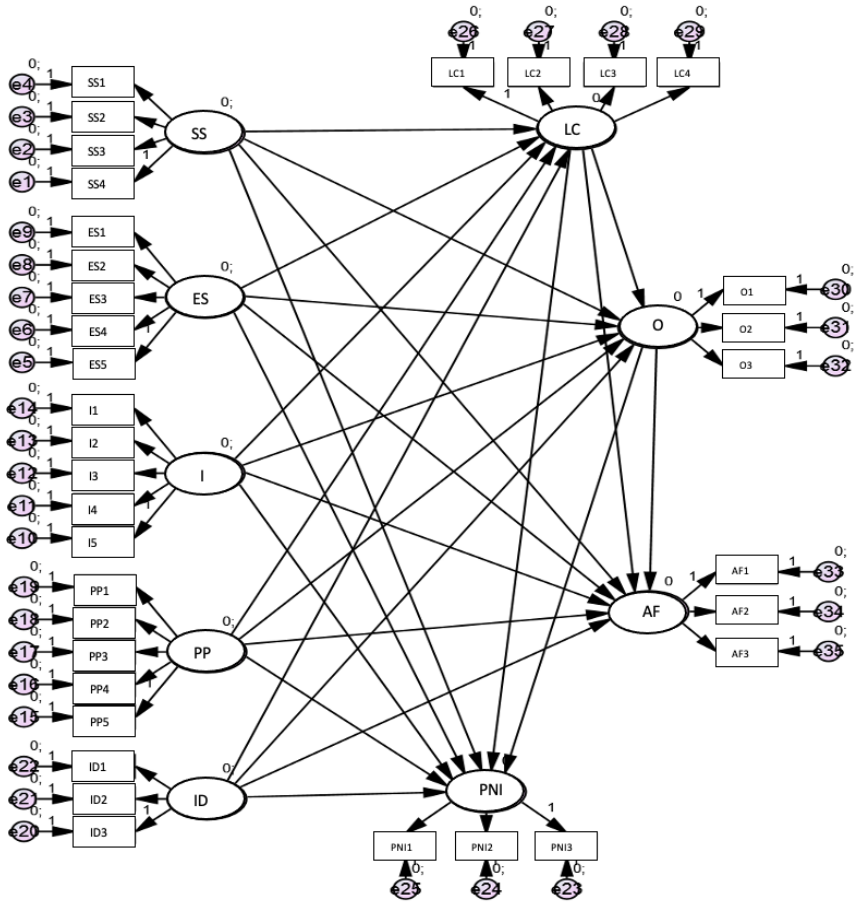


Figure 1- Measurement Model of Problematic Internet Usage Behaviours

Normality Assumption Values, Construct Validity and Goodness of Fit Indexes

The skewness and kurtosis values were examined in order to understand whether the model met the criteria of the assumption of normality. According to Kline (2005), skewness and kurtosis cut-off values should be between 3.0 and 10.0. The values related to the model were for the skewness value it was between the .440 and 1.021 and for the Kurtosis value, it was between -.579 and .373. These values showed that the normality assumption was met.

To evaluate the construct validity of the model, the convergent validity was evaluated via examining the mean, standard deviation, skewness, kurtosis, factor loadings, Cronbach's alpha and variance values. Discriminant validity was evaluated via examining the correlations among the factors in the model. The findings regarding the convergent validity of the model were presented in Table 4. In order to present the values, the construct validity table prepared by Ursavas (2014) was used.

Table 4

Construct Validity Results of the Measurement Model

Factor	\bar{X}	SD.	Skewness	Kurtosis	Load	Alpha	Variance
AF	2.217	.867	.760	.350		.783	.797
AF1	3.24	.867	-.137	-1.164	.77		
AF2	1.59	.902	1.827	2.383	.74		
AF3	1.82	.823	1.295	.607	.72		
SS	1.906	.917	1.021	.373		.810	.706
SS1	2.18	.812	.813	-.236	.78		
SS2	2.05	.931	.983	-.080	.81		
SS3	1.93	.803	1.144	.265	.72		
SS4	1.47	.930	2.128	3.981	.76		
ES	2.150	.864	.814	.151		.812	.644
ES1	3.15	.767	-.101	-1.203	.74		
ES2	2.34	.807	.640	-.734	.76		
ES3	2.06	.820	1.003	.027	.82		

ES4	2.66	.861	.337	-.651	.72		
I	2.223	.865	.597	-.131		.847	.718
I1	2.26	.805	.725	-.634	.73		
I2	1.59	.943	1.717	2.495	.77		
I3	1.83	.814	1.230	1.022	.82		
I4	1.91	.712	1.105	.378	.72		
I5	1.87	.919	1.189	.562	.78		
PP	2.258	.897	.538	-.373		.853	.698
PP1	1.49	.914	2.058	3.812	.80		
PP2	1.46	.926	2.178	4.206	.74		
PP3	1.40	.835	2.326	5.215	.79		
PP4	1.58	.991	1.864	2.908	.76		
PP5	1.79	1.185	1.431	3.812	.81		
PNI	2.555	.799	.440	-.509		.729	.696
PNI1	2.78	.807	.201	-1.210	.87		
PNI2	2.39	.785	.597	-.917	.89		
PNI3	2.26	1.305	.725	-.634	.78		
O	2.427	.870	.583	-.256		.821	.738
O1	2.31	1.322	.665	-.717	.84		
O2	1.65	1.025	1.635	1.948	.81		
LC	2.309	.903	.601	-.168		.856	.732
LC1	2.02	1.223	.997	-.068	.79		
LC2	1.87	1.213	1.234	.390	.78		
LC3	1.51	.967	1.940	2.984	.78		
LC4	1.63	1.014	1.623	1.823	.84		
ID	2.190	.855	.692	.061		.867	.607
ID1	1.92	.708	1.157	.285	.82		
ID2	1.89	1.187	1.201	.410	.92		

AF: Academic Failure, SS: Social Satisfaction, ES:
Emotional Satisfaction, I: Internalization PP: Perception of

prestige, PNI: Physical Negative Impact, O: Overuse, LC: Loss of Control, ID: Internal Deception

To evaluate the convergent validity of the model, the factor loadings of the items, Cronbach's alpha values and variance values were examined (Table 4). Accordingly, factor loadings were between .72 and .92, alpha values were between .729 and .867, and variance values were between .607 and .797. When the scores were examined, it could be said that the models' convergent validity was confirmed (Fornell & Larcker, 1981; Hair et al., 2005). For the discriminant validity of the model, the correlations among the factors were examined. The results are presented in Table 5.

Table 5
Discriminant Validity Values of the Model

	LC	O	PNI	PP	I	ES	SS	AF	ID
LC	.726								
O	.336	.411							
PNI	.351	.195	.706						
P	.400	.254	.188	.538					
I	.441	.245	.227	.444	.576				
ES	.425	.196	.305	.301	.514	.823			
SS	.431	.253	.297	.467	.446	.498	.751		
AF	.398	.217	.222	.258	.274	.271	.270	.513	
ID	.392	.179	.193	.249	.284	.298	.270	.224	.466

* $p < 0,001$

When the data in Table 5 were examined, it could be said that the model had discriminant validity (Ursavas, 2014). Lastly, the goodness of fit indexes for the model were presented in Table 6.

Table 6
Goodness of Fit Indexes of the Measurement Model

Goodness of Fit Indexes of Model	Good Fit	Acceptable Fit	Model
χ^2/df	$0 < \chi^2/df < 3$	$3 \leq \chi^2/df \leq 5$.615
RMSEA	$0 < RMSEA < 0,05$	$0,05 \leq RMSEA \leq 0,10$.070
GFI	$0 < GFI \leq 1$	$0,80 \leq GFI \leq 0,95$.916
AGFI	$0,9 \leq AGFI \leq 1$	$0,85 \leq AGFI \leq 0,9$.921
CFI	$0 \leq CFI \leq 1$	$0,70 \leq CFI \leq 0,97$.865

(Schermelleh-Engel et al., 2003)

According to Table 6, it could be said that the model's goodness of fit indexes was within the acceptable levels (Gefen et al., 2003; Klem, 2000; Kline, 2005; McDonald & Ho, 2002).

Testing of Hypotheses for the Hypothetical Model

Research hypotheses were tested within the framework of the developed model. Thus, in line with the hypotheses developed at the beginning of the research, the direct and indirect relations of the factors with each other were tried to be explained. The path model notation, which was explained earlier, was used in the representation of the model. A straight one-way arrow was used to indicate direct relationships, while a dashed one-way arrow was used to indicate indirect relationships. In order to determine whether the relationships were direct or indirect, the effect values of the factors on each other were examined. According to Cohen (1988), if the effect value is less than 0.2, it can be defined as an indirect relationship, and if the effect value is greater than 0.8, it can be defined as a strong relationship. However, Rosnow and Rosenthal (1989)

mentioned that there might be special cases where even an effect value of 0.2 could be considered as a strong effect. The findings obtained as a result of the analyses were presented in the Table 7 and Table 8. As a result of the findings, 5 of the relations between the factors were rejected and the remaining 20 hypotheses were accepted (Table 7).

Table 7: Results Regarding the Hypotheses

Hypothesis	Relationship Between Factors	Path Value	t value	Result
H ₁	SS→LC	.431	16.321*	Accepted
H ₂	SS→O	.253	7.372**	Accepted
H ₃	SS→AF	.270	8.341**	Accepted
H ₄	SS→PNI	.297	8.965**	Accepted
H ₅	ES→LC	.425	15.783*	Accepted
H ₆	ES→O	.016	.543	Rejected
H ₇	ES→AF	.271	8.871**	Accepted
H ₈	ES→PNI	.305	9.991**	Accepted
H ₉	I→LC	.441	17.617*	Accepted
H ₁₀	I→O	.245	6.345**	Accepted
H ₁₁	I→AF	.274	8.871**	Accepted
H ₁₂	I→PNI	.227	4.344**	Accepted
H ₁₃	PP→LC	.400	16.645*	Accepted
H ₁₄	PP→O	.254	7.112**	Accepted

H ₁₅	PP→AF	.258	7.321**	Accepted
H ₁₆	PP→PNI	.088	.621	Rejected
H ₁₇	ID→LC	.392	15.754*	Accepted
H ₁₈	ID→O	.032	.975	Rejected
H ₁₉	ID→AF	.224	8.221**	Accepted
H ₂₀	ID→PNI	.093	1301	Rejected
H ₂₁	LC→O	.336	14.121*	Accepted
H ₂₂	LC→AF	.398	15.972*	Accepted
H ₂₃	LC→PNI	.351	15.418*	Accepted
H ₂₄	O→AF	.217	7.732**	Accepted
H ₂₅	O →PNI	.031	1.314	Rejected

*p<0.05, **p<0.001

When Table 7 is examined, it was seen that Social Satisfaction had an effect on Loss of Control ($\beta=.431$, $p>.05$), Overuse ($\beta=.253$, $p>.05$), Academic Failure ($\beta=.270$, $p>.05$) and Physical Negative Impact ($\beta=.297$, $p>.05$). Results showed that H1, H2, H3, and H4 were accepted. Emotional Satisfaction had an effect on Loss of Control ($\beta=.425$, $p>.05$), Academic Failure ($\beta=.271$, $p>.05$) and Physical Negative Impact ($\beta=.305$, $p>.05$), it also had an indirect effect on Overuse ($\beta=.016$, $p>.05$). Results showed that H5, H7, H8 were accepted but H6 was rejected. It was determined that Internalisation had a direct effect on Loss of Control ($\beta=.441$, $p>.05$), Overuse ($\beta=.245$, $p>.05$), Academic Failure ($\beta=.274$, $p>.05$) and Physical Negative Impact ($\beta=.227$, $p>.05$). Results showed that H9, H10, H11, H12 were accepted.

It was seen that perception of prestige had a direct effect on, Loss of Control ($\beta=.400, p>.05$), Overuse ($\beta=.254, p>.05$), Academic Failure ($\beta=.258, p>.05$) and had an indirect effect on Physical Negative Impact ($\beta=.088, p>.05$). Results showed that H13, H14, H15 were accepted but H16 was rejected. It was determined that Internalisation had a direct effect on Loss of Control ($\beta=.392, p>.05$) and Academic Failure ($\beta=.224, p>.05$) and had an indirect effect on Overuse ($\beta=.032, p>.05$) and Physical Negative Impact ($\beta=.093, p>.05$). The results showed that H17 and H19 were accepted but H18 and H20 were rejected.

Loss of control had an effect on Overuse ($\beta=.336, p>.05$), Academic Failure ($\beta=.398, p>.05$) and Physical Negative Impact ($\beta=.351, p>.05$). The results showed that H21, H22, and H23 were accepted. Overuse had a direct effect on Academic Failure ($\beta=.217, p>.05$) and it had an indirect effect on Physical Negative Impact ($\beta=.031, p>.05$). The results showed that H24 was accepted but H25 was rejected. It was determined that all effects were positive and significant. The Direct and Indirect Effect Values of the hypotheses were presented in Table 8.

Table 8
Confidence Interval Values for Hypotheses

Dependent Variables	Direct Effect	Indirect Effect	Total Effect
Loss of Control ($R^2= .94$)			
SS→LC	.104**	--	.104 (.075: .134)**
ES→LC	--	.058**	.058 (.046: .116)**
I→LC	-.647**	--	-.647 (-.706: -.589)**
PP→LC	.724**	--	.724 (.684: .767)**
ID→LC	.812**	--	.812 (.795:

			.828)**
Physical Negative Impact ($R^2 = .92$)			
SS→PNI	-.338**	--	-.338 (-.373: -303)**
ES→ PNI	.336**	--	.336 (.267: .423)**
I→ PNI	--	.066**	.066 (-.009: .146)**
PP→ PNI	.465**	--	.465 (.407: .523)**
ID→ PNI	--	-.039**	-.039 (-.087: .011)**
O→ PNI	.590**	--	.590 (.531: .645)**
LC→ PNI	--	-.063**	-.063 (-.147: -.021)**
Overuse ($R^2 = .81$)			
SS→O	.171**	.031**	.202 (.156: .248)**
ES→O	-.412**	--	-.412 (-.485: -.344)**
I→O	-.129**	--	-.129 (-.210: -.050)**
PP→O	.893**	--	.893 (.840: .949)**
ID→O	.553**	--	.553 (.529: .577)**
LC→O	.647**	--	.647 (.634: .892)**
Academic Failure ($R^2 = .40$)			
SS→AF	.166**	.098**	.264 (.165: .365)**
ES→AF	-.167**	--	-.167 (-.329: -.002)**
I→AF	.189**	--	.189 (.016: .358)**

PP→AF	.134**	--	.134 (.06: .259)**
ID→AF	.267**	.030**	.297 (.245: .350)**
O→AF	--	.252**	.252 (-.186: .274)**
LC→AF	.222**	--	.222 (.042: .376)**

*p< 0.05. ** p< 0.01. CI= Confidence Interval
(%95)

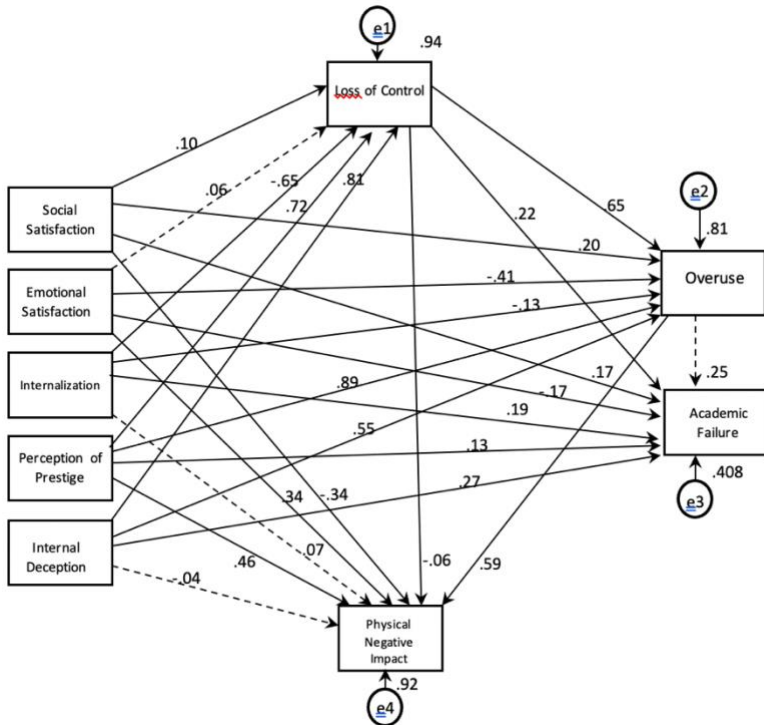
According to the results presented in Table 8, factors affected dependently among the 9 factors were: Academic Failure, Overuse, Physical Negative Impact, Loss of Control. Impact levels of these factors were examined within the context of confidence interval. In this context, confidence intervals were examined under three categories as indirect, direct and total effect. As a result of the analysis, it was determined that the lowest variance was on Academic Failure with 40.8%. The variance of 5 variables (Social Satisfaction, Emotional Satisfaction, Internalization, Perception of Prestige, Internal Deception) on Loss of Control was 94%, the variance of 7 variables (Social Satisfaction, Emotional Satisfaction, Internalization, Perception of Prestige, Internal Deception, Overuse, Loss of Control) on Physical Negative Impact was 92%, the variance of 6 variables (Social Satisfaction, Emotional Satisfaction, Internalization, Perception of Prestige, Internal Deception, Loss of Control) on Overuse was 81% and the variance of 7 variables (Social Satisfaction, Emotional Satisfaction, Internalization, Perception of Prestige, Internal Deception, Overuse, Loss of Control) on Academic Failure was 40.8%.

Based on the data, Social Satisfaction (d=.104) and Internalization (d= -.647) had a negative effect, Perception of Prestige (d=.724) and Internal Deception (d=.812) had a direct effect and Emotional Satisfaction (d=.058) had an

indirect effect on Loss of Control. The variables that affected the variance on Loss of Control were mostly determined as Internal Deception with a total effect of $d=.812$ and Perception of Prestige with an effect of $d=.724$. Social Satisfaction ($d= -.338$) had a negative effect, Emotional Satisfaction ($d=.336$), Perception of Prestige ($d=.465$) and Overuse ($d=.590$) had a direct effect and Internalization ($d=.066$), Intrinsic Deception ($d=-.039$) and Loss of Control ($d=-.063$) had a negative indirect effect on Physical Negative Impact. The variables that most affected the variance on the Physical Negative Impact were determined as Overuse with a total effect of $d=.590$, Prestige Perception with an effect of $d=.465$, and Emotional Satisfaction with an effect of $d=.336$. It was determined that Social Satisfaction ($d=.171$), Emotional Satisfaction ($d=-.412$) and Internalization ($d= -.129$) had a negative effect, Perception of Prestige ($d=.893$), Internal Deception ($d=.553$) and Loss of Control ($d=.647$) had a direct effect on Overuse. The variables which affect the variance on Overuse mostly were Prestige Perception with a total effect of $d=.893$ and Loss of Control with an effect of $d=.647$ and Internal Deception with an effect of $d=.553$. It was determined that Social Satisfaction ($d=.166$) and Emotional Satisfaction ($d=-.167$) had a negative effect, Internalization ($d=.189$), Prestige Perception ($d=.134$), Internal Deception ($d=.297$) and Loss of Control ($d=.222$) had a direct effect, Overuse ($d=.052$) had an indirect effect on Academic Failure. The variables that affect the variance on Academic Failure were mostly determined as Internal Deception with a total effect of $d=.297$, Social Satisfaction with an effect of $d=.264$ and Overuse with an effect of $d=.252$. When the findings are examined, the rate of variance in the explanation of dependent variables was calculated as 94%, 92%, 81% and 40.8% respectively. These rates show that the rate of explanation of the variables is high and the model obtained as a result of the

method is strong (Cohen, 1988). The resulting hypothetical model is presented in Figure 2:

Figure 2 - Hypothetical Model



Results, Discussion, and Suggestions

Because Internet usage is one of the indispensable necessities of life, it is observed that individuals experience problems in their work/school and social life as a result of excessive Internet use. According to the studies, individuals with extreme Internet users who prefer the Internet environment in social interaction are exposed to loneliness in their natural social environment. Undergraduate students especially like the Internet in their social interaction with both genders and opposite sexes, negatively affecting the development of their social skills. It is stated that it is inevitable for young individuals who cannot develop these skills in the natural social environment to experience significant problems in other stages of their lives, such as work life and family environment, especially in occupational groups such as teaching, where social interaction skills should be used effectively. It is also stated that negative reflections such as excessive Internet use, disruption of responsible work, scheduling problems, reduced social interaction skills, and loneliness/isolation will lead to issues that cannot be compensated in the future in many occupational groups and cause permanent behavioural disorders in individuals (Fichter, 2006; Gremeaux, Coudeyre, Givron, Hérisson, Pélissier, Poiraudau, ve Bénaïm, 2007; Gülnar, Balcı & Çakır, 2010; Khalid & Dix, 2007; Murero ve D'Ancona, 2006; Rafaeli, Raban & Kalman, 2005; White & Horvitz, 2009).

Although some factors are mentioned that are caused or related to Problematic Internet Use, it is noteworthy that a clear framework for the effect of factors within the framework of the cause-effect relationship is not drawn on this issue. In other words, removing the framework of *Problematic Internet Use* and observing the need to determine its sub-variables constituted this study's starting point.

In the study, the problematic Internet usage behaviours of undergraduate students were examined. The study started with the application of the scale developed by the researchers to 2026 undergraduate students attending at the universities for each region of the country. The results of the scale in total were taken into the analysis process. The findings obtained as a result of the analyses were discussed in line with the basic hypotheses of the research and comments on these findings were presented.

The students who participated in the research were between the ages of 19-25. When the studies on individuals with problematic Internet usage are examined, it is noteworthy that the majority of these studies indicate the highest risk group as the ages from adolescence to young adulthood (Akar, 2015; Çelikkaleli et al., 2018; Durak, 2018; Haug et al, 2015; Kim et al., 2010; Kowatsch & Schaub, 2015; Sirakaya & Seferoglu, 2018). In addition, young adults, aged between 19-25, might be exposed to a risk in terms of Problematic Internet Usage when daily Internet use is taken into account. The reason for this could be that this age group uses the Internet the most to fulfil their daily academic responsibilities. For this reason, it is considered important to renew the study, to make comparisons and to provide the necessary precautionary mechanisms after the COVID-19 pandemic.

When the distributions according to gender were examined, it was determined that female students had a higher rate of participation than male students. Results show that the Problematic Internet Usage average scores of male students were higher. Even though this result is supported by the studies of Buyuksahin et al. (2010), DiNicola, (2004), Frangos et al. (2010), Kubey et al. (2001), Morahan-Martin and Schumacher (2000), Odacı and Kalkan (2010), Although Çelik and Odacı (2011), Çelik and Odacı(2013), Durak-Batıgun and KılıC (2011), Leung and Lee (2012), it contradicts the results of the

studies by Doğan et al. (2008) and Odacı (2011). In addition, it can be seen that there are studies in the literature that show that problematic behaviours do not differ according to gender (Balçı & Gülnar, 2009, Kim et al., 2006; Odacı; 2013).

When the duration of Internet use of undergraduate students is examined, it can be said that their duration of Internet use is not excessive. It is at a controllable level, and the reason why this time is not excessive is that the users may have reached satisfaction due to their long-term use of the Internet. According to averages of the problematic Internet usage, male students exhibit more problematic behaviours than female students.

According to the measurement model, Academic Failure, Social Satisfaction, Emotional Satisfaction, Internalization, Perception of Prestige, Physical Negative Impact, Overuse, Loss of Control, and Internal Deception / Deception were determined as the variables which predict the problematic Internet usage behaviour. Also, the studies on Problematic Internet Usage and Internet addiction are very intertwined, and there are studies that assess the Problematic Internet Usage via Internet addiction scales. With this aspect, the study is thought to be important in terms of both developing a scale that measures the Problematic Internet Usage behaviours of undergraduate students and defining these behaviours within the framework of a model with the factors affecting them.

When the hypotheses obtained as a result of the measurements were examined, five of the twenty-five hypotheses developed at the beginning of the research were rejected (H6, H16, H18, H20, and H25). The rejected hypotheses are as important as the accepted hypotheses in the model. In order to understand these relationships more clearly, it is thought that examining the factors affecting problematic Internet usage behaviours and also more variables will be important for future studies. When the

model obtained as a result of the measurements is examined, it can be said that the predictive power of the model is high, valid and reliable. When the factors' variance rates are examined, there is a need for a more in-depth analysis of the reasons for the unexplained variance values. As a result of the measurements, it was determined that academic failure, loss of control, internalization and social satisfaction were important factors in predicting the problematic Internet usage of undergraduate students. The results of the present study are consistent with the study of Caselli et al. (2020) regarding the negative factors' effect on problematic Internet usage. Furthermore, the results of the study are consistent with the study of Faghani et al. (2020) in terms of the effects of hardships with emotional regulations (Loss of Control, Overuse and Internal Deception) on problematic Internet usage. The results of this study are also consistent with the model of Gu's (2020) study regarding the effect of Loss of Control on Social Satisfaction. In line with these results, the following suggestions can be made for future studies:

When the studies are examined, it was seen that most of the studies used surveys, and no experimental interventions was made. With this aspect, it is suggested that experimental studies with different research groups should be conducted in order to evaluate the relationships between the daily Internet usage time and problematic Internet usage behaviours, the Internet access source and problematic Internet usage behaviours, the department which participants attend and problematic Internet usage time and, the purpose of the Internet usage and problematic Internet usage behaviours. Also, new studies should be conducted with additional sample group different than the primary sample group of the study in order to compare the results regarding the unexplained variance rates. Scientific research is carried out to lay a foundation for and scientific applications assist them. This research is the main basis of

educational activities, especially since they are prepared according to the results of studies focusing on individual behaviours. It is thought that this study will shed light on Scientific research on problematic Internet usage behaviours that may pose a threat to individuals with the aspect of modelling individual problematic Internet usage behaviours.

In this study, problematic Internet usage behaviours of undergraduate students before the COVID-19 pandemic and the factors affecting these behaviours were examined within the framework of a model. Today, Internet technology is used by billions of people around the world for a wide variety of tasks in their personal, social and professional lives. Whether these uses are efficient or problematic is in the hands of the users themselves. Problematic usage behaviours, which can be explained as the difficulties experienced by users in regulating their Internet usage behaviours due to their (excessive) Internet use for a very long time, seem to cause many psychological, social, and physical consequences. Also, studies that indicate that individuals in many different age groups spend a long time on the Internet as a result of social isolation during the COVID-19 pandemic process indicate that their usage time has increased compared to the pre-pandemic period and they had some psychological problems during this process (Dong et al., 2020; Duan et al., 2020; Gómez Galán et al., 2020; Özdemir & Arpacioğlu, 2020; Siste et al., 2020; Sun et al., 2020). Because data of this study was gathered before the COVID-19 process, the results of this study cannot be generalized to the current usage rate of the Internet. Accordingly, it is considered appropriate to re-examine the problematic Internet usage behaviours of individuals after the pandemic process due to their excessive use of the Internet during COVID-19 and compare them with the results before the pandemic. In this context, it is thought that the results of

the current study will provide an opportunity to make comparisons with the results of future studies.

The study has defined all the factors mentioned so far within the framework of a model. It is thought that the created model will guide and assist current, functional and future studies since it reveals the comprehensive factor structure for future modelling studies.

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Authors Bios

Serçin Karataş, is a Professor at the department of Computer Education and Instructional Technology, Gazi Faculty of Education, Gazi University. She undertook graduate studies at Gazi University, Turkey (MSc. Computer Education) and at Ankara University, Türkiye (Ph.D. Educational Technology). Dr. Karataş has more than twenty years' experience in focusing on the theoretical and applications of distance education. Her research area includes theories and applications of distance education, designing and developing story board and content for online learning, instructional design, design principles for online learning, interaction applications for online learning, L(C)MS, and creativity for (online) learning and gamification in learning. Dr. Karataş has many national and international articles, reports and book chapters on these issues. Dr. Karataş worked for Erasmus + Strategic Partnership Projects as coordinator and researcher. Since 1999, Dr. Karataş has been developing content in the field of distance education, teaching design, teaching and management. In this field, she has conducted various courses, seminars and trainings both face-to-face and online, from pre-service to doctoral level. She has also been working as an instructor, researcher, consultant and executor in TUBITAK and BAP projects. She was the director of Center of Distance Education Application and Research at Gazi University between 2018-2019.

Email:sercin@gazi.edu.tr /sercinkaratas@gmail.com

Burcu Karabulut Coşkun, had her BC degree from Baskent University, Faculty of Education, Department of Computer Education and Instructional Technologies and her MSC degree at Usak University, Institute of Social Sciences, Department of Primary Education and PHD degree from Gazi University, Institute of Educational Sciences, Department of Computer and Instructional Technologies. She is now working as an Asst. Prof. Dr. at Kastamonu University, Faculty of Education, Department of Instructional Technologies and as the director of Kastamonu University Distance Education Application and Research Center.

Email: bkarabulut@kastamonu.edu.tr /
burcu.karabulut@gmail.com

Mitigating Risks in Education Abroad with Theory Grounded Strategies

Janet H. Davis

Purdue University Northwest. USA

Kyle Rausch

University of Illinois Chicago

Gemma Delicado Puerto

University of Extremadura, Spain

Jesús M. Lavado García

University of Extremadura, Spain

ABSTRACT

Based on the Theory of Bureaucratic Caring, recommendations are offered in order to cover different areas crucial to the development of an education abroad experience. The recommendations include the areas of pre-departure and in-country orientations, legal and health considerations, a crisis response plan, psychological and physical well-being, adapting to the host culture, readapting

at home, housing/homestays, safe excursions and mitigating risk in clinical service-learning abroad. The time devoted to collaboration in planning “Explore Healthcare in Spain” resulted in meeting the stakeholders’ needs with a program reflecting bureaucratic caring for students throughout the process. The coronavirus pandemic threatens to stall nursing’s progress in education abroad as it brings new risk management challenges. The recommended strategies hold promise for mitigating risks and reflect a sound footing in a theoretical base.

Keywords: Nursing, Risks, Education, Theory, Spain

The coronavirus pandemic has drastically impacted many aspects of higher education. This has been especially salient for institutions’ internationalization efforts, which often include education abroad programming. Education abroad participation of U.S. college and university students has grown over the past several decades. For example, during the 1998-1999 academic year, 129,770 students studied abroad for academic credit and during the 2018-2019 academic year, that number had grown to 347,099 students, representing a marked increase in participation. However, for the 2018-2019 academic year, only 7 % of U.S. students who studied abroad were in the health professions (Institute of International Education, 2020).

Nursing programs across the country are working to increase international opportunities for their students (Mailloux, 2017). These include Arizona State University Edson College of Nursing faculty-directed programs for students: “East African Endeavors in Community Engagement and Health Development” and “From Lima to Machu Picchu: Exploring Healthcare, Culture and Ethics in Peru.” The University of Illinois at Chicago College of Nursing in recent years has offered a faculty-directed

program that travels to the island nation of St. Kitts and Nevis to understand disaster preparedness and global health perspectives. The first author led an inaugural study abroad service-learning course for Purdue University Northwest nursing undergraduates to Nicaragua. As positive as the faculty momentum is in this area, those who are involved in such programming must take into consideration the considerable complexity of the interaction between institutional investment in and faculty managed oversight of education abroad programs.

The current pause in education abroad caused by the pandemic's international travel bans can be used by nursing faculty to partner with their stakeholders to strategically develop program offerings in light of the pandemic's impact. Such programs will enrich the cultural scope of U.S. nursing in the future. The purpose of this paper is to converge existing knowledge, expertise, and research that currently exist in both the divergent fields of education abroad and in nursing education under theory-grounded recommendations with a program example.

Explore Healthcare in Spain

Purdue University Northwest with campuses in Hammond Indiana and Westville Indiana enrolls approximately 9,000 undergraduate and graduate students. The College of Nursing supports curricula that foster critical inquiry through experiential learning and community partnerships. As Napolitano and Duhamel (2017) wrote, "Nursing students are largely excluded from travel-abroad studies because of demanding curricula, lack of time, and cost" (p. 53). In an effort to grow participation by nursing students in education abroad, the Purdue University Northwest Office of Global Engagement and the College of Nursing jointly developed and sent a college-wide survey to all currently enrolled undergraduate and graduate students in the winter of 2020 to inform future program design. Sixty-five percent of the students indicated

they were likely to consider short term education abroad, related to time, financial, and family life reasons, and 90% wanted to study in Europe.

Based in part on the results of this survey, the authors collaborated on a new non-credit offering, “Explore Healthcare in Spain.” Purdue University Northwest had partnered with University of Extremadura for 23 years in offering semester abroad study in the Spanish language. The long-standing partnership between the universities is built on trust and mutual respect which supported the development of this first nursing offering. The program host University of Extremadura is a Spanish public university located in the region of the Southwestern area of Spain and at the border with Portugal. It is the only university in a region of one million inhabitants. It was founded in 1973 by the Ministry of Education and Science of Spain. Currently the University has around 25,000 students.

“Explore Healthcare in Spain” connects University of Extremadura faculty and students with nursing faculty and students from Purdue University Northwest and includes visits to community health organizations, affording students a first-hand glimpse into Spain’s healthcare system. The planned spring break week-long program provides insight into the impact of the pandemic on international healthcare by comparing the cultural, political, educational, technological, and economic forces influencing healthcare systems. The objectives are: 1) Examine cultural influences on healthcare and 2) Reflect on cultural competence while interacting with the healthcare team and members of the community. The program includes discussion seminars facilitated by the international faculty, clinical site visits, and group cultural excursions.

Grounding Framework – Bureaucratic Caring

A more nuanced understanding of education abroad bureaucracy is needed given nursing programs’ interest in

developing education abroad opportunities for students and a heightened awareness of global threats and how they may impact travelers. The Theory of Bureaucratic Caring provides parameters for the dynamic structure of education abroad programming. Marilyn M. Ray used a qualitative design to study caring within hospitals as the focus of her doctoral dissertation work. In her findings, she applied Hegelian dialectical analysis of the thesis (caring) and antithesis (bureaucracy). This synthesis evolved in the Theory of Bureaucratic Caring which positions caring within an organizational context (Ray & Turkel, 2015). Ray proposes that nursing care is a relational process framed by a healthcare organization's bureaucratic dimensions. According to the theory, bureaucratic values compete with humanistic caring values, impacting the work of nurses in organizations (Ray & Turkel, 2012). In this way the theory illustrates conflict between the "business" and the "caring" sides of healthcare organizations. According to the theory, bureaucratic caring unifies the thesis of caring (spiritual-ethical) and the antithesis of bureaucracy (legal, technological, political, economic, education, social-cultural, physical factors).

The theory has been applied to nursing in both education and service organization settings. Maykut and McKendrick-Calder (2013) used the Theory of Bureaucratic Caring in developing a baccalaureate nursing course that examined the interrelated provincial, national, and international trends and issues affecting the Canadian healthcare system. In other Canadian work, the theory provided a theoretical framework to guide nursing in addressing maternal health inequities experienced by indigenous peoples (Waschuk, 2018). Johnson (2015) applied the theory to the multiple systems that impact the advanced practice Registered Nurse's (APRN) role in home healthcare. In a process improvement project, the theory

guided the improvement of patient care set within a complex healthcare system (Potter & Wilson, 2017).

Recognizing the interplay of university bureaucratic and nursing humanistic caring priorities produces holistic guidance for international programs' development and delivery. It is particularly important during times of stressful change to uncover the contextual meanings of mutually experienced events and processes. The Theory of Bureaucratic Caring is useful as the foundation for education abroad partnerships because it considers the relationships of all stakeholders within complex bureaucratic systems. In education abroad programs there is a unique student-faculty caring relationship that emerges from jointly experiencing international travel. Faculty are concerned about ensuring their students' health and well-being and in turn, students rely on the faculty for support and guidance while in a foreign country (Davis & Spoljoric, 2019). These characteristics guided choosing the Theory of Bureaucratic Caring for the theory grounded strategies in "Explore Healthcare in Spain."

The coronavirus pandemic drove home the global interrelatedness of the Theory of Bureaucratic Caring dimensions: 1) legal, 2) technological, 3) political, 4) economics, 5) education, 6) social-cultural, 7) physical, 8) spiritual-ethical in education abroad. For the purposes of this article, the authors use the term faculty director to denote the lead faculty member from a nursing program who has proposed, teaches in, and leads an education abroad program.

Theory of Bureaucratic Caring Dimensions

Legal

The legal factors impacting caring include responsibility, accountability, policies and procedures, informed consent, and liability exposure (Ray, 2015). The Forum on Education Abroad (2020) has produced the

Standards of Good Practice for Education Abroad.

Standard 5.1.7 states: “Each organization shall have policies and procedures in place regarding security and risk management that prioritize the health, well-being, and safety of students and personnel, including, but not limited to: Risk assessment and monitoring for program locations and activities; Tracking, responding to, and reporting critical incidents; Written emergency plans and protocols; Insurance coverage” (p. 28). The Forum’s standards serve as a roadmap for institutions offering education abroad opportunities to ensure that they are considering the risks involved with sending students to particular places in the world and mitigating those risks through careful program design and creating and sharing resources for the program participants. The *Scope of Practice for Academic Nurse Educators* Standard of Practice Competency VI: Pursue Continuous Quality Improvement in the Nurse Educator Role states that the nurse educator “Uses knowledge of legal and ethical issues relevant to higher education and nursing education as a basis for influencing, designing, and implementing policies and procedures related to students, faculty, and the education environment” (Christensen & Simmons, 2019, p. 20). Examples of policy and procedures legal documents include a fair program admission process, participant contracts/waivers to reduce institutional liability, consent forms giving permission to the university faculty to seek out healthcare for participants, and accessible as well as participant acknowledged health and safety and other vital program information.

The scope of training for program leaders also applies to the legal domain. For example, the “Explore Healthcare in Spain” faculty director’s Title IX training documentation demonstrates that she received reporting and response training. Applying these legal considerations to education abroad means that the faculty director is

required to inform the student about specific possible and actual safety, health, and security risks.

Universities have an obligation to mitigate any foreseeable risk that faculty and students may face. Many institutions of higher education in the U.S. have policies governing student and faculty/staff travel, require a formalized proposal and review process, and provide required training for program participants. Faculty directors leading programs should be aware of institutional policies related to emergency response protocols and resources and contingency plans. An appreciation of how these legal aspects contribute to good care of both students and faculty in education abroad can help in facilitating the details of these requirements.

Technological

Bureaucratic technological resources, are equipment and machines, including computers, electronic communication, and the knowledge and skills to effectively use the resources (Roy, 2015). Organizations sending students abroad should require that all participants have a comprehensive international health insurance policy that includes coverage for emergency evacuation and repatriation. Faculty directors should receive a copy of the insurance policy along with information about how individuals contact the provider, open a claim, and any notable exclusions, with particular attention given to the types of activities nursing programs are likely to involve. Clauses covering reimbursement of program fees and travel expenses are important. If working with local partners, the faculty director needs to know what liability insurance, if any, they carry.

Emergencies can happen during programs, and faculty directors are responsible for appropriately reporting and responding to an emergency. Given the wide variety of emergencies that may impact a program, it is advisable that incident-specific scenarios and protocols are developed and

reviewed with faculty directors. For instance, what should a faculty director do if a student goes missing? Is arrested? Is hospitalized? Is the victim of sexual assault? Discussing how to respond to these and other scenarios and having the procedures documented will help faculty directors feel more empowered to respond in times of an emergency, and will help limit the institution's and the faculty director's liability. The National League for Nursing (n.d.) offers broad advice in its *Faculty Preparation for Global Experiences Toolkit*© such as registering travel plans with the U.S State Department prior to departure and knowing the location of U.S embassies while in country.

The coronavirus pandemic has highlighted the importance of having contingency plans in place for programs abroad. Now more than ever before, care should be taken to determine how a group could be safely evacuated should conditions in the host country require a premature end to a program. Since an abrupt ending to a program could impact students' academic progress. Faculty directors should develop alternative methods for delivering course content and collecting student work should travel be cut short or not permitted altogether. Bureaucratic technology can be a resource for developing academic continuity plans. For instance, faculty can consider creating an online course framework built in the institution's learning management system. It can help prepare students for the experience while also serving as a backup forum in which to continue the class should travel become interrupted. Similarly, guest speakers can be brought in using platforms like Zoom if conditions prevent travel.

Depending on the in-country travel and communication technology, students may be allowed to travel on their own if independent excursions are covered under the travel insurance plan. Students should be required to follow these steps: 1) Check the U.S. embassy and its warnings on unsafe territories; 2) Avoid travel to

any location where the U.S. government has restricted or forbidden visits; 3) File an electronic and paper copy of a “travel form” with the faculty director that includes information about transportation (bus, train, flight, etc.), dates, where the student is going and with whom; 4) Provide name, address, and phone number of lodging such as hotels, hostels or any address where the student will be staying along with a contact’s name, phone, and email; 5) Always carry a hard copy card with the program leader’s and host director’s information and emergency numbers; 6) Always carry a charged cell phone and a charger and program emergency numbers into the cell phone; 7) Carry a copy and have a COVID passport or proof of vaccination/negative test result downloaded into a cell phone. Independent excursions are not allowed in the example program due to the full itinerary for the week-long experience.

It is difficult to generalize about the risks of public transportation because there are several factors that increase or decrease the risk. General recommendations for using public transportation are: try to travel at off-peak times, reduce the number of changes, buy tickets online, keep a distance away from other passengers, and wash hands at arrival. The example program uses a private vetted van service with seat belts for group transportation to and from the airport and for excursions. The technological resources needed for international programs may incur additional costs to the institution. Providing them as part of a safe education abroad experience is a non-negotiable bureaucratic responsibility.

Political

In the immediate academic community, institutional politics and an organization’s power structure influence stakeholders’ competition for tangible resources and intangible rewards. It is recommended that faculty directors have an initial meeting with political stakeholders

such as the university contact for study abroad programming, the travel safety manager, the centralized study abroad office, or a departmental contact before program development begins. Discussion outlining the roles and expectations of these stakeholders includes authority and accountability for decision-making. Host partners should inform U.S. partners about specific country and/or regional program considerations prior to the arrival of the group. This information can be shared during virtual sessions and during in-country orientation. The host collaborates on a local response plan for emergency contacts, evacuation procedures, methods to communicate with parents, and embassy information. A final version of the plan is written up a few weeks prior to the arrival of the U.S. group so it is connected to the latest national considerations.

In the broader international community, on-site partners should provide students with scientific literature that describes the strengths and weaknesses of the host healthcare system and clarifies evident differences with their own country. The language to be used during education abroad should also be clarified during orientation. English is the language used in “Explore Healthcare in Spain.” Besides major differences among healthcare systems, differences in health policies and national health strategies, there are important differences in the daily practice of nursing in different regions of the planet. *A priori*, these differences may provoke some rejection among nursing students, but being in contact with other ways of doing may be very useful in order to import best practices and enrich the U.S. healthcare system. This is one example of how political factors can nurture caring in education abroad.

Economics

Realistically, in education abroad, goods, money, and services. supported by tuition, fees, and grants, are

required to provide caring (Ray & Turkel, 2014). “Explore Healthcare in Spain” met the student survey responses’ program price point of approximately \$2,000. The program needed to at least break even based on student enrollment according to university policy. Salary or stipends for the faculty director were negotiated early in the program planning process with clear guidelines for reimbursable expenses and reimbursement processes. The faculty director’s travel expenses and housing in Spain were covered and a small stipend was offered.

Program housing is a facet of program coordination where conflicts can arise. Sometimes, in the interest of saving money, faculty directors may propose sharing accommodations with students or teaching assistants. Even if the student or teaching assistant is fine with this arrangement, it is not advisable due to the potential for allegations to arise and protecting the faculty member’s liability.

With regards to student housing, the example program includes a host family stay, which can often be another way to make program costs more affordable for students. Host family stays have the benefit of sometimes being cheaper than more expensive student apartments and can be a good value if they offer the inclusion of meals. The host partner provided reasonable homestays with meals, in-country transportation, and excursion costs for the program budget. Accessing university resources such as special scholarships and awards to overcome financial barriers for education abroad is an example of bureaucratic caring.

Education

The Theory of Bureaucratic Caring education dimension includes informal and formal education (Ray & Turkel, 2014). The complex caring obligation for education abroad programs differentiates the faculty director responsibilities from the typical faculty role on the home

campus. It can be helpful to equate the scope of the faculty director's roles to those of various bureaucratic positions on a traditional college campus such as dean of students, an advisor, a health professional, and a residential life coordinator. Accordingly, it is imperative that faculty directors receive professional development education to help them assume these role responsibilities. Where appropriate, bringing in institutional experts on topics can be an excellent way to ensure that faculty directors are receiving information that is grounded in the institution's protocols. Additionally, including experienced faculty director colleagues can be a powerful addition to professional development sessions.

The student's education abroad experience should be accompanied with training and orientation negotiated between the U.S. faculty director and the on-site host partner. Kalbarczyk et al. (2019), present the range of pre-departure preparation training available to public health, clinical, and undergraduate trainees across the continuum of education for short-term experiences in low-and middle-income countries. According to these authors, ensuring well-being of faculty and students during the experience is considered a priority of the faculty trip director. In the example program, the formalized orientation can be hosted virtually. Additionally, the lead faculty for the on-site student seminars, were recruited from the host nursing faculty. These faculty also participate in the scheduled student informal events.

Social-cultural

Examples of social and cultural factors particularly applicable to education abroad are communication; social interaction and support; community involvement (Ray & Turkel, 2014). A pre-departure orientation introducing students to the new country, culture, language, and cultural differences illustrates the social-cultural aspect of bureaucratic caring. This prior guidance will enrich

students' ability to correctly interpret the behaviors and events observed during their stay and the information gathered from the perspective of the host culture. In addition, important health and safety information that is situated in the host culture context can be shared during these pre-departure meetings. Involving the institution's education abroad or travel safety office in such meetings helps ensure that proper institutional protocols regarding international health and safety are communicated.

“Explore Healthcare in Spain” is an island program meaning that the participants are all from the home institution and travel and take part in class and social-cultural excursions together as opposed to taking classes with local students. The island approach carries some risk management considerations. Students may sign up for island programs not knowing one another or the faculty and because there are no formal class meetings necessarily taking place before the program starts abroad, it is critical that faculty directors take the time to coordinate pre-departure meeting(s) to allow students to begin forming bonds that will serve them well in-country. Cultivating a group where members trust and look out for one another is an essential task for faculty directors and can go a long way in helping prevent or respond to health and safety concerns once abroad

Homestays are excellent intercultural opportunities for students, however, proper vetting and preparation of families and students must be done. Most host families collaborating with University of Extremadura have been part of education abroad for a good number of years, three of them for more than 20 years. There is a relationship of complete trust with these host families.

Physical

The physical state of being factors include mental health needs (Ray & Turkel, 2014). The coronavirus pandemic has increased the scope of bureaucratic caring

flowing from the theory's physical dimension. In the example program, health protocols applied to stays with host families follow national guidelines from the U.S. and Spain. One current practice is that prior to the trip students and faculty directors are informed via a virtual session of any extra COVID prevention strategies being used in Spain. Some of these strategies include: proof of vaccination, proof of pre-arrival testing, consistent hand washing, masks, social distancing, efficient ventilation in every room of the host family's home, and individual bedrooms for students. Students will be required to bring the U.S. equivalent of the European vaccination passport.

During study abroad, most students experience some degree of culture shock as they learn to adapt to their host culture or country. According to the classic *Survival Kit for Overseas Living* (Kohls, 1984), they could experience: anxiety (physical and/or psychological issues); homesickness (may lead them to spending excessive time on Skype or social media); helplessness (need for excessive amounts of sleep); boredom (only seeing students in the group); depression (avoiding contact with host nationals); self-doubt (loss of ability to study effectively); psychosomatic reactions (quitting and returning home or staying and hating host). There are a number of routines that directors can provide to students for mitigating culture shock. For example, first understand the symptoms and recognize the signs of culture shock which are normal. Understand that this is a passing phase and use the support network of education abroad classmates and others working in the program.

Reflection and validation over the international experience should be systematic and built into the program. One systematic approach deconstructs events and encounters so that deeper and multiple understandings might be considered (The Center for International Programs, 2012). Journaling and de-briefing discussions

are common reflection practices. De-briefing daily in different formats and activities is a crucial part of a safe education abroad experience in order to validate interpretations of new experiences. These practices are included in the example course.

At the same time that adapting to the host culture may be hard, readapting to the U.S. culture may take some time. Students can start contacting their friends back home and make plans to meet after returning. Once home, the student can also stay in contact with international friends for treasured relationships.

Spiritual-ethical

Spirituality involves creativity and choice; ethics are moral obligations to others (Ray & Trukel, 2014). In education abroad this is realized by making bureaucratic choices for the good of others. Education abroad programs afford faculty members and students a unique opportunity to engage outside the confines of a traditional classroom, but doing so brings a host of potential personal concerns for faculty directors. A best practice is for faculty to clearly delineate “program time” from “off-program time,” perhaps including this in the syllabus for the program. In this way, faculty directors and institutions are likely to be better protected in case a student is involved in an incident during “off-program time.”

There are many different aspects of a program that can introduce ethical considerations. For instance, if there is an official group meal during the program and alcohol is served, this could raise questions about the faculty director’s liability. As another example, if a faculty director offers to lead a small group of students on an extra activity that is not officially part of the program itinerary and an incident occurs, the faculty director’s judgment may be questioned.

Many global health programs have a foundation based in service, an attractive component of an education

abroad program especially for those in the health professions. However, as Weinberg (2010) states, “All individuals engaged in service learning—students, mentors, and program administrators—have an ethical duty to ensure that global health programs are responsive to local needs, conducted in a way that upholds professional standards, and carried out with safeguards to prevent harm to both patients and participants” (p. 147). Nursing programs abroad, then, should take into account these additional ethical responsibilities they have to the host culture.

In the case of nursing programs, care includes the risk of physical harm to patients and the risk of students becoming sick, hurt or infected with a contagious disease. In this sense, it is key to prepare students to overcome fear by preparation in order to be involved in any kind of clinical service-learning while studying abroad. Students and U.S. faculty directors have to be informed and trained, with substantiating documentation, about what to do in case of biological risks. These include country required vaccinations, PPE availability, needlestick injury, and body fluid exposure. Aligned with bureaucratic caring, “Explore Healthcare in Spain” aims through respect and caring communication, to facilitate education abroad for the good of others.

Conclusion

The Theory of Bureaucratic Caring recognizes that that multiple system inputs are interconnected to form an organization’s caring culture. Making education abroad work in a university system requires knowledge and understanding of bureaucracy, which is by its nature is rigid. The complexity of change driven by the coronavirus pandemic has impacted university legal, technological, political, economic, education, social-cultural, and physical factors related to education abroad. In a rapidly changing world, universities need to adapt to changes, be flexible,

and assume that challenges and risks are part of education abroad. As illustrated in the program example, the structure of university bureaucracy can work in conjunction with a partner relationship to create caring. For this reason, working with a solid host partner with whom deep ties exist is fundamental for the success at mitigating risk in a post pandemic global context. The commitment to caring for education abroad students shared by our organizations was the bridge for our interactions. Collaboration supported by organizational resources is clearly essential to support the faculty director's roles and responsibilities. Effective risk management is a key consideration for all nursing faculty directors to incorporate in a changed global healthcare environment. One best practice is that U.S. higher education institutions and nursing departments collaborate with already known and trusted partners for nursing programs that include academic and service experiences for students. A limitation of this paper is that converging the bureaucratic fields of education abroad and nursing education through Theory of Bureaucratic Caring was applied to only one program example. It is recommended that spiritual-ethical caring for the good of others should be examined in future education abroad program development.

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Authors Bios

Dr. Janet H. Davis is an Associate Professor in the College of Nursing at Purdue University Northwest. She has held faculty and administrative positions at several universities in the Midwest. Her scholarship, teaching, and service focus on nursing leadership development to impact healthcare disparities. She is a Principal Investigator, Co-Principal Investigator, or Co-investigator for six funded studies on diversifying the nursing workforce. Her approximately 50 publications include research, teaching, and public service articles. Dr. Davis was appointed to and currently serve on the Illinois Nurses Association Diversity, Equity, and Inclusion Advisory Council. She is also a peer consultant/evaluator for the Higher Learning Commission.

Davis962@pnw.edu

Dr. Kyle Rausch is an experienced education abroad professional whose work has focused on the oversight of faculty-directed education abroad programs, including the development of program leader training and institutional risk management policies and protocols. Currently serving as the Executive Director of the Study Abroad Office at the University of Illinois at Chicago, Kyle's experience includes helping institutions build capacity for education abroad, specifically for institutions that serve high numbers of underrepresented students. Kyle earned a Doctor of Education from Arizona State University with his research focusing on supporting first-generation college students in education abroad.

Gemma Delicado holds a PhD in Humanities from the University of Chicago. She also obtained a MA at Western Michigan University and attended Kalamazoo College. Currently she is an Associate Professor for the English Department at the University of Extremadura, Spain. She

was awarded the Teaching Excellence in the Humanities in 2017. She was appointed Director for International Affairs and Mobility in February 2019. She was Associate Dean for International Affairs (2012-2016). She is currently the Resident Director of the Purdue Northwest study abroad program and The Integrative Cultural Project Coordinator for the Kalamazoo College (USA) study abroad program in Spain.

Jesús M. Lavado García holds a PhD in Nursing from the University of Extremadura. He is an associate professor at the Nursing Department. He was appointed Dean of the Nursing and Occupational Therapy School in 2014. He is the Vice president of the National Conference of Deans of Nursing. His main topics of research are palliative care and also osteoporosis in women. He has collaborated with Purdue University in several projects since 2016.

A Quest for Decolonizing African Universities

Biruk Shewadeg Dessalegn

Addis Ababa Science and Technology University, Ethiopia

Abstract

African universities have been largely dominated and shaped by the colonial trajectory and organized in accordance with the Occidental model. By remaining epistemologically subservient to the Western hegemony, they have played a great deal in the practice of epistemicide in the continent. Their history of establishment, as an institute that produces the necessary manpower for the smooth functioning of the colonial enterprise, have still kept defining their essence in another form, i.e., alienation. Characterized by a dismantlement of everything that is local, the universities in the continent pronounced the modernization discourse that made Africa lose specificity rather it appeared an entity that needed to be studied by analogy from a center that already assumed universality. Moreover, for its intrinsically alienated underpinning, the type of university that many African countries inherited and developed anew have only used them for being a periphery

on the global stage of knowledge generation. By analyzing relevant literature and deploying a discursive reasoning approach, this article advances the idea of decolonization in the specific context of the African university. It argues that epistemological decolonization of the continent can only be done via its institutions of higher learning, by finding a discursive space where the universities assure subjectivity that allows them to harness the local context and respond to the demands thereof. To this effect, philosophy, and perhaps African philosophy specifically, despite an endless debate about its existence, have assumed an indispensable role in empowering Africans through articulating philosophical locus by taking into account the context and cultural idiosyncrasies of African society. African philosophy must be further tasked in broadening the horizons of subjectivity, decolonization, and independence of the continent at large.

Key Words: African Universities, Alienation, Decolonization, African Philosophy

Introduction

The knowledge economy of the 21st century makes universities more broadly important across all societies. Unfortunately, the very concept of the university a colonial legacy that does not help all societies advance knowledge in their own local interests

Since the early years of Africa's independence, African intellectuals have been engrossed with the question of how to develop higher education within Africa that seeks a research alternative to the dominant western higher education model which understands the rest of the world as either conforming to or deviating from that model. Accordingly, many African countries, though inadequate, have undergone a rethink of their philosophy of university.

Ubuntu or the African “worldview” of higher education, for instance, is one among the perspectives.

Then there is a more insidious emerging challenge that both entrenches the colonial model and also makes localization of the university much more difficult, and that is the spread of neoliberalism. The World Bank and other Bretton Woods institutions’ impact in Africa is a factor that shaped higher education in many countries. It was poverty, Kariwo (2019) maintains, being exploited in the “credit card syndrome” (p. 4). Even the idea of university reform which has been undertaken for the past decades, as to Bekele (2015), is essentially not an African initiative. It is an initiative of the World Bank and its stakeholders that undermines African universities’ walk to subjectivity.

Africa, in the words of Bekele (2015) “is neither poor nor powerless” (p. 30). The inability to use knowledge that is available locally and internationally in an appropriate manner is what is hindering Africa from using its wealth. The absence of subjectivity as it was pronounced by the Hegelian and neo-Marxist traditions of Habermas and critical theory in general, he adds, is crucial in addressing Africa’s problems. Put otherwise, the issue of an agency that can be entrusted with captivating responsibility for Africa’s future and that has to do with subjectivity. The lack of will and determination are the factors that could explain Africa’s enigma if it’s neither poor nor powerless. The African university can play an essential role in contributing to tackling these problems if it is allowed to become ‘university’, in its fullest sense of the term. Both in terms of nurturing the spirit and knowledge required for the development of subjectivity and practical knowledge necessary for development, the African university needs to play an important role.

As is the case of the developing nations elsewhere, higher education in Africa is an artifact of colonial policies and represents the Western model of academic

organization. (Altbach and Selvaratnam 1989; Lulat, 2003). Most of them were established just before the end of colonialism. Training personnel that could be supportive in running the colonial machinery possibly explains their establishment. Their history, Bekele (2015) argues, can therefore “explain their essence” (p. 31). The failure to disentangle themselves from their historical trajectory appears the major challenge that African universities are facing.

The fact that universities in Africa were not independent institutions that were made to tackle real problems of the African peoples is a concern that is still following them like a shadow averting their independence and self-assertiveness. They remained institutions which were “forced to gnaw on bones left by the metropolitan universities” that made them to be ‘extraverted’ by their very nature (Hountondji 2002).

Such a reality has to do with the historical emergence of African universities and continuous pegging to the West, which brought them into existence. Education in general and university education in particular came into existence in one way or another by the agency of the West, particularly at a time when many African countries were colonized. Even Ethiopia which boasts to be the only non-colonized country, established its first college in 1950 just when colonialism was over in African countries too. But even then they were Canadian Jesuit missionaries that were entrusted with the task of establishing and molding an Ethiopian institution of higher learning (Bekele, 2007; Balsvik, 2006; Messay, 2008)

Viewed from a knowledge production perspective, African universities are among the bottom bests. This is the result of many factors. Chief amongst which is the characteristic dominance of a Eurocentric orientation whereby the type of higher education that many African countries developed only enabled them to be marginalized

in knowledge production. This obtained a resultant effect of the education system not to inspire independent thinking and theory building. Moreover, research and teaching in African countries are thought of in such a way that they emulate those of the West which hinders them from addressing the problems of the African countries for which education is primarily designed. Overcoming such a challenge requires redefining the goal of education in an African context with a program that could encourage change. This can be realized, in view of Bekele (2007) is by conspicuous balance between exogenous and indigenous forms of knowledge through an intercultural approach.

Besides this history, one has to be conscious of the content of what was taught, how the curriculum was deliberated, its objective and the knowledge, skills and values that it was anticipated to instill in the 'educated' youth of these countries. These are formidable tasks that need to be answered in order to understand the nature of education and see the condition of alienation as it is.

Alienation

The theoretical basis of alienation has been widely popular in the Marxist reading to illustrate the proletariat invariably loses the capacity to determine life and destiny when deprived of the right to think of themselves as the manager of their own actions; to define relationships with other people; and to own those items of value from goods and services, produced by their own labour. It demonstrates the act of causing someone to become indifferent or hostile: the state of being withdrawn or isolated from the objective world, as through indifference or disaffection. It is used in the African university context as a way of manifesting their extraverted nature.

Taking a look at the material taught in the newly established African universities, one clearly sees its alienated nature. The curricula were designed or directly

copied from those of the universities of the metropole based on which countries the instructors were from. The youth of the African countries thus are expected to be educated on material largely alien to them. It was from the outset designed in a way that can make sure alienating the youth from their culture and identity. It turned out that much of the subject matter that they would obtain both in the theoretical and practical fields were of little or no significance to the objective realities of the country in concern. Hountondji (2009) in this regard writes of African academia as:

Too often do we tend to investigate subjects which are of interest first and foremost to a Western audience ... In this sense, our scientific activity is extraverted, i.e. externally oriented, intended to meet the theoretical needs of our Western counterparts and answer the questions they pose. The exclusive use of European languages as a means of scientific expression reinforces this alienation (p. 8).

Apart from being practically and socially irrelevant, the content of the education was Eurocentric, prejudiced against nearly all the heritage that each one of these countries cherished. The Eurocentric philosophy of education is based on a hierarchy of cultures, in which the home grown values and culture are considered backward altogether. One of its fundamental tasks, Bekele (2007) argues is the realization of detachment - with local values, knowledge and cultures for they are considered to be “backward, particular and even barbarous and invoked a replacement with the progressive and “universal” forms of knowledge and culture” (p. 110). Hence, the mission of such education becomes unambiguous. Predominantly, it aims at mugging the African youth of its identity, pride and confidence when it affirms that your value or identity or culture or history is rather anomalous, not universal. Such

alienation brought what Messay (2008) calls “Cultural Dislocation” among the ‘educated’ youth with reference to Ethiopia. Similarly, strengthening an alienated form of education Balsvik (2005) summed up the nature of Ethiopian education as follows:

Modern education in Ethiopia was imported from Great Britain and the United States, was influenced by various other Western countries, and was not attuned to the country’s needs. Patterns of education, curricula, and texts intended to further the interests of most highly industrialized countries were transplanted into one of the least developed rural countries in the world. There was little relevance to the basic and immediate needs of Ethiopian society. To the average child the school was essentially an alien institution about which his own parents were usually ignorant. What was learned in school could not be related to the environment (p. 9).

Disclosing the alienated nature of the education system in Ghana, Adjei (2007) wrote:

...Western control over what constitutes valid knowledge became increasingly and worryingly noticeable as schools were structured and restructured to validate only Western Knowledge. This knowledge became the cultural capital by which individuals could access employment in both state and private organizations in Ghana”. (pp. 1047-48)

In most Sub-Saharan African states education, Tekeste (2006) argues, “is a phenomenon that has a strong colonial legacy & the curriculum was impervious to local, national or regional specificities” (p. 7). With reference to Zimbabwe, Shizha (2006) has the following to say in manifesting the alienated from of Post-colonial education:

in postcolonial states, like Zimbabwe, the reification of Eurocentric knowledge, which promotes the "superiority" of Western knowledge, is still perpetuated by the education system and schooling practices that negate ideals on cross-cultural education and the role of indigenous knowledge in students' school experiences (p.20).

It is the overall purpose of such an education that ought to be examined. Listening to fascinating statements by political leaders about education is not uncommon in Africa. They often declare the indispensable role of education in development. They unanimously pronounce the fundamentals of education in nation building. Apparently however, nobody thought deep on the kind of education that is suitable for rendering African development possible. The type of education that is exported at best, Bekele (2007) maintains, allows the “young generations to unlearn what they have learned from their cultures and at worst to develop self-hatred that leads to self-denial” (p. 111). It facilitates in the words of Fanon (1967) “epidermalization of inferiority” where colonized peoples participate in their own subjection through internalizing inferiority.

Such an epidermalization of inferiority deprived them of the means and confidence to think independently. Africans committed an original sin when they started to believe that development in a different situation could be helpful as their model, too. This is not undermining the prominence of Western science and technology to Africans. But, a condemnation of the ‘one-size fits all’ approach. It only refers to the weakness of African countries by extension universities, in indigenizing knowledge produced elsewhere to address African problems. This ultimately caused the educational undertaking in the African case largely superfluous since Africans limited themselves to

serving only as Southern garrisons of the metropolitan universities and research institutes. With remaining passive to understand typical problems residing and formulating proper questions regarding the problems, Africans kept on believing that somebody else has already done the thinking and it is only sufficient for us if we could copy from that. With this, African universities kept busy echoing what has been said elsewhere, “something which is not as painful and exacting as trying to find out new methods and approaches to our problems” (Bekele 2007:111)

We are found at a specific juncture with our cultures, languages and the whole breadth of psychosocial attributes that make us what we are. The first expression of imported type of education was an assault on the things and traits that constitute us, as Africans. It was an assault on our very being and we have naively accepted as universal and scientific truth. The uncritical acceptance, including prejudices that others hurled at us, defines the key to our perpetual dependence and economic and intellectual extraversion. With this, Africans started to take important steps towards their alienation and self-denial. African universities remained champions of propagating this alienation, pronouncing the ‘universal’ and ‘scientific truth’ which unduly downgrade the African place.

One of the chief reasons for alienation lies on the fact that African universities' inclination in perceiving truths, the prejudices and abuses of others against Africans, as absolute truths. Following Kant and Hegel, Africans convinced themselves that they were outside of history and humanity. African universities teach that the noble path to achieving history and humanity lay in denouncing the historical heritage and embracing the philosophy of true humanity as the European. The uncritical acceptance led to the destruction of many of our essential attributes. How is it possible then to expect something valuable in a condition where Africa lost its self-respect nor respect for its values

and its essential attributes? This indeed possibly explains, notwithstanding of course other factors, such as economy and other structural issues, the type of alienation in many fields.

The major challenge in this regard is that the elite in these developing countries have not yet realized the importance and development of an independent intellectual discourse. The very education that was received convinced many of them that vital innovations for scientific knowledge have already been achieved. Hence it may not be important to reinvent the wheel and hence possible to catch up by copying from the developed countries. The idea holds water that important breakthroughs have been achieved and that it is possible to reap the benefits of such knowledge as well. But the problem is about the fact that apart from making general statements about the importance of knowledge for development and assuming that what has proved successful in the developed countries would also be useful for African countries, Africans have not seriously thought about indigenizing this knowledge and remold it in such a way that it serves African particular purpose. The universities also took part in the process of indigenization. With this, it seems that we Africans committed a basic error of neglecting the reality in which this imported knowledge was supposed to function.

From the initial process of formulating problem statements, the hypotheses developed, and the data collected along with other attendant issues, African universities Bekele (2007) argues, displayed an avoidance of taking a fundamental departure from the way things were done in the metropolitan universities.

Putting aside the task of actually attempting to formulate the questions that education or science ought to solve in our specific cases we just went ahead to reassert the questions that have already been formulated and for which some answers have already been offered. This is not

suggesting at this juncture that Western knowledge is useless for Africans. For it definitely is useful, but not as a whole package that could be useful. There are undeniably matters that Africans need to copy but there are also others that we should daringly attempt to develop anew. Apparently universities lack the courage to undertake the things we have to develop anew. It might be right in studying and applying the one or the other principle of Western science and method as well. Africans however should also realize that they have obtained their own idiosyncrasy. What is appropriate in this situation must be the question that all concerned should ask themselves. Normally, the acceptance of foreign curricula, for example, incorporates accepting the philosophy of education of the country from which it has been copied. But a country needs a philosophy of education that takes into account its “specific history, culture, identity, needs and goals. It is without taking into account all these that we have been copying: (Bekele, 2007:114).

There is another dimension of this fact that has always been overlooked naively. Africans have copied and incorporated into their education all the prejudices that the erstwhile colonial powers had against their former colonies. There were theories based on the hierarchy of cultures, “races,” and ways of life. How many of the intellectuals doubted the veracity of the racially motivated negative statements that gave a lower status to the non-Europeans? One only needs to recall among many such thoughts and expressions, Leopold S. Senghor’s widely quoted statement that declared that reason was “Reason was Hellenic as emotion was African”. In philosophy, anthropology and other areas of knowledge, when we deal with what are said to be fundamental questions or concepts or principles we do not dare to ask whether these principles or questions are also fundamental for Africans.

Each one of these in one way or another inculcated among the Africans about the prevalence of only one genuinely universal humanity worthy of mimicry and that is the Western one. It followed that other philosophies, religions, cultures etc. were particulars or simply “others” that eventually ought to catch on to the universal. The colonialists’ claim to universalism in all respects is the assault by which they actually denigrate and dehumanize those who have a different identity.

The colonization of the mind through these different avenues has somehow succeeded in convincing many African elites that the prejudices of the colonialists are scientific truths. African universities are not made way out of the aforementioned predicaments. Owing to their birth defect, they remained the advocates of the universalism discourse.

The need for Decolonization

Decolonization captures a resistance from the distinct but intertwined processes of colonization, to endorse transformation and redress in reference to the historical and ongoing effects of these processes, and to generate and keep alive, Stein, & Andreotti (2016) contends, modes of “knowing, being, and relating that these processes seek to eradicate” (p. 2). Colonization undeniably resulted in both material and epistemic dimensions, which together shape social relations and preserve categories that are then used to justify: occupation of the colonized; expropriation and expendability of African life; claims about the universality of modern Western reason; objectification and exploitation of “nature”; capitalist property relations and modes of production; militarism; possessive individualism; and the very concept of race (ibid).

For a better apprehension of such a conceptual decolonization, Fanon’s (1967) work proves useful. Fanon

writes “the juxtaposition of the black and white ‘races’ has resulted in a massive psycho-existential complex” (p. xvi). His book *Black skin, white masks* is meant to liberate the black man from the arsenal of complexes that germinated in the colonial situation” (Fanon 1968, p.14). Put otherwise, Fanon believes that it is “necessary for the black person to overcome the psychological effects of colonialism” (Oelofsen, 2015, p. 131).

Decolonization includes the disruptive effort of ending colonialism in its all frontiers; liberation and de-caging of the colonized is its pillar. It also involves discourses that envisages acknowledging Africa as one of the regional centers of knowledge generation, having its own developmental intricacies, and as such worthy of being viewed as an equal global partner. The attainment of this, Nyoni (2019) argues “requires dismantling of the colonial mentality and its entire social fabric, upon which control and exploitation are based” (p. 2). For it to have a profound effect, the process of destroying the colonial pathogens that have kept the African mind chained must be instituted.

Decolonization of African universities is an expression of the changing geopolitics of knowledge where the modern epistemological foundation for knowing and understanding the world may no longer be interpreted as universal (Mignolo 2011). Thus, the African critical thought on decolonizing universities needs to strive in addressing questions of genuine transformation, such as how radical education curriculum reform at the academic, cultural and psychological levels. The challenge for African academia is to learn how to teach or facilitate beyond the distorted cultural and/or historical imaginary and impoverished subjectivity of the modern horizon of thought where everything is hierarchically ranked according to Eurocentric concepts, standards and epistemological frameworks. Decolonization assures the way in which African content should be one of the “multiples of global

centers of epistemological origins and underpinnings of social reconstruction of reality and dissemination” (Nyoni, 2019, p. 2)

As explained earlier, the west has, for centuries, developed a body of knowledge that the rest of the universities must copy in compliance with the standards thereof. This in turn resulted in the post-colonial curricula of African universities to largely reflect Eurocentric conceptualization and continue to reinforce western dominance and privilege whereby it has been laced with stereotypes, prejudices and patronizing views about Africa and its people. Thus, a thorough rethink, deconstruction, reframing, reconstructing the Eurocentric and colonial curricula as well as teaching methods at universities, for Africa may not be a matter of choice.

Western institutions in practice are deeply involved in the colonial cataloguing of non-western knowledges and the generation of knowledge in support of scientific racism and other racialized and colonial classifications used to justify forcible assimilation, military occupation, and even annihilation of non-western populations (Said 1978; Smith 2012).

As a consequence, some have suggested that the emergence and eventual dominance of the modern, western, secularized, and supposedly universal episteme was only made possible in the context of Europe’s projects of conquest and enslavement (Wynter 2003). Western epistemological dominance in the non-West is highly reflective, where Western institutions are often viewed as the model for the ideal university (Nandy 2000). This has led many to emphasize the importance of “decolonizing the mind” (Thiong’o 1986) and the pursuit of cognitive justice in higher education research and curricula (Sousa Santos, 2007).

History became the sole product of the West in its actions upon others. It simultaneously displaced, in the

words of Nyoni (2019) those actions “promoting and imposing the idea that modernity was endogenous to the West, and therefore removed the very notion of the ‘other’ in history” (p. 4). By so doing, it also naturalized and justified the West’s material domination of the ‘other’. In fact, mental colonization has its ardent prophets and proponents among the Africans themselves. It is an outcome of one-sided education based on the “superiority” of the West. Africans stayed too innocent with receiving all that the Eurocentric education wanted to tell them, as scientific truths, while in reality what was portrayed as depicted only meant to keep us inferior to the Europeans. The assertion of Western superiority might have not obtained a base unless one wants to argue that their current superiority in science and technology attests to this. A metaphysical superiority of the West as it was portrayed by Kant, Hegel, and Hume, Bekele (2007) argues, “is a self-serving myth” (p. 118). How can Africans accept this and keep on denigrating themselves? It is in this area that decolonization of the academia, specifically universities, is needed most.

Decolonization of African universities is ‘about justice that addresses the epistemic violence of colonial knowledge and colonial thought’ (Pillay 2015). It is also a project that many have rightly interpreted as an act of defiance against all Eurocentrism. Derrida (1982) states that, ‘this act of “defiance” is deconstruction itself’. It therefore matters little, Nyoni (2019) contends, “if one is labelled academically dissonant and dissident, if Africa is locating or claiming its own indigenous or native centre for knowledge production and dissemination” (p. 2). African epistemology and underlying philosophies need to underpin African centered developmental efforts as the focus as well as project Africa as one of the centers of knowledge production.

As Africans and their higher institutions continue to experience polygonal socio political and economic shifts of being as influenced by a variety of global ideologies, their voices stayed in regurgitating western epistemologies consistently and impactful decolonization efforts remain negligible and mentally captured. Concerted decolonial efforts therefore are crucial in managing shifts in these matrices of material-social constructs such that contamination and decapitation of true African education curricula, identities, cultures, values, ethos and principles are prevented. African voices should be allowed to correct the toxic, Western inspired nuances and narratives underpinning Western induced education curricula (Nyoni, 2019, P.4).

A constitutive paradox of the colonial construction of knowledge therefore haunts any effort to decolonize existing institutions: claims about the universality of western knowledge can only be sustained in contrast to the particularity and partiality of non-western knowledge. Today higher education institutions continue to reproduce an epistemological hierarchy wherein western knowledges are presumed to be universally relevant and valuable, while non-western knowledges are either patronizingly celebrated as “local culture,” commodified or appropriated for Western gain, or else not recognized as knowledge at all. Curricula remain dominated by Western epistemologies, especially Western sciences and technologies, and research in these areas also tends to be the most heavily rewarded through grants and other forms of institutional support and validation (Stein and Andreotti, 2016, p.3).

Situating African Philosophy in the quest for Decolonization

For, “race” is still essential in our “place”, as a result of the symbolic hierarchy evident in our societies, inferiority and superiority complexes could therefore still

be evident, and philosophy can do much to heal these pathologies in our societies. As Tabensky (2008) captures

The discipline of African philosophy originates in tragedy, out of pain, confusion and rage stemming from colonial destruction; destruction that is responsible for what Fanon calls the 'negro neurosis' caused by what Biko would describe as the unbearable fusion of colonized and coloniser... [T]he birth of African philosophy as an academic discipline is largely responsible for its character and, crucially, for its distinctive creative possibilities (p. 285).

African philosophy thus has a distinctive aim, namely the quest for reclaiming humanity which Tabensky sees as intimately related to the quest for disentanglement from the colonial past. African philosophy, as a consequence, results in empowering Africans through enunciating philosophical positions which considers the context and cultural specificities of African places into account. This empowerment in turn, (Oelofsen, 2015) contends, “Lead to reclamation of the intellectual space denied to Africa during the racist project of colonialism” (p. 136).

What is usually referred to as western philosophy, according to Tabensky, has as its primary aim the search for truth. African philosophy also aims at truth, but puts the search for truth to work in its main project of the restoration of normalcy. Therefore, projects in African philosophy have as their aim the restoration of African normalcy lost by the colonial heritage of violent oppression and exploitation, through exploring truths articulated within the context of Africa. Philosophy ought to cast new light on old issues rife on this continent, problems which arise and are the effects of the continent having had a rupture with its past when the colonial project so violently, yet

indifferently, carved the continent up into pieces of the pie meant for European consumption.

In addition, viewed from the decolonization discourse, African philosophy also has another central and related feature. As Janz (2004) argues:

...the core of philosophy, [is] its ability to bring...life to the surface and reflect on it, creating new territory, extending the range of life by creating new concepts. Concepts do not so much point to the past (or, not only to the past), but also to the future, as they open the possibility of new forms of expression and new self-understandings. And, they also point to the present, to the place on which we stand and the life that matters (p. 111)

African philosophy thus draws and creates concepts from the place of “Africa”. Consequently, it can be instrumental in the decolonization of the African mind. This is possible through providing an alternative framework for knowledge, which “de-centers” the assumed centers of knowledge. Concepts need to be created through an engagement with the African past and present.

However, arguing that African philosophy ought to focus on African concepts is not advocating a return to a romanticized pre-colonial past and a [re-]”discovering” of old concepts. These pre-colonial concepts may not in a wholesale be relevant unchanged in the world today as a result of the drastic rupture between the pre- and post-colonial states of being. Rather, in engaging with concepts rooted in Africa, we ought to take them as a starting point for reflection. This would mean that concepts such as *ubuntu* should be engaged; “not as a static concept from Africa’s past but rather as a dynamic concept with its roots in the past” (Stein & Andreotti, 2016, p. 137). Concepts should be developed and acknowledged as having meaning

which is fluid and changing in order to take into account present and future situations and contexts.

Conclusion

Yet the university in Africa and higher education in general remain an important part of the overall social, economic, and cultural constitution of societies and nations. Higher education contributes to the formation and deployment of human capital, the cultural and social construction of values and meaning, and the capacity for individual and collective emancipation from ignorance and domination. It provides people with the tools and capacities for their collective and individual self-definition and empowerment, and for interpreting their relationships to themselves, to others, and to nature and their material and other environments. It provides the platform for the advanced study, dissemination, and utilization of knowledge and its products for the benefit of society and its constituents.

For most nations of Africa in particular, given the histories of slavery, colonization, apartheid, and inequitable economic development - often interpreted by some as expressions of collective racial and/or cultural inferiority - genuine intellectual self-determination is a political, economic and cultural imperative. Here, intellectual self-determination refers to relatively autonomous and self-conscious capacities to meaningfully assess one's situation, take positions determined by one's interests and their relevance in particular situations, and to be sufficiently confident about the decisions so as to mobilize and deploy the necessary resources to achieve desired outcomes. Years of colonization, inept and corrupt postcolonial leadership, and different types of collective servitude - and more recently, economic adjustment programs that were neither internally debated nor owned by the citizens - have contributed to undermining and eroding such capacities.

In spite of over a half century of interventions and series of "reforms," today African universities consist of institutions, systems, and practices that lack authentic values and goals, or a mission and vision attaching them to the major challenges of their local and global contexts. What is necessary in African universities, as to Aina (2010) is true transformation, which may encompass practical and epistemological ruptures with the old ways of doing things and a reconstruction of structures, relations, cultures, and institutions.

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Author Bio

Biruk Shewadeg is a lecturer of philosophy at Addis Ababa Science and Technology University. He is currently a PhD scholar at the Center for African and Asian Studies, Addis Ababa University. His areas of interest include issues in African Philosophy and Mental decolonization. He published scientific articles in the issues thereof.

**Spatial Metaphors in Introductory Statements of
Humanities and Stem Disciplines: A Study of English
and Mechanical Engineering Departments**

Olalekan Tunde Adepoju

University of Louisville, Kentucky, USA

ABSTRACT

Advances in higher education, specifically in science and technology, have engendered a significant shift of interest from a mainly liberal arts curriculum to STEM-related fields of study, creating a rift in the value systems undergirding the two academic domains. One of the ways the disciplinary disparity is institutionally expressed is through the language used in describing the core values of these disciplines, specifically in the introductory statements of departments. Using the lens of spatial metaphor to consider how the language expresses distinct realities that align with the public perceptions of the disciplines, this paper examines the metaphorical framings in the introductory statements of two disciplines in three US research institutions, representing the humanities and STEM. It explores how such framings help to establish their core values and have facilitated the ascendancy of STEM in recent times. I argue that by understanding the metaphors underlying these statements, we can better

understand how these fields create a distinct representational frame for expressing and promoting their image. I conclude by offering practical implications of how understanding disciplines define and position themselves can improve the quality of higher education.

Keywords: spatial metaphor, higher education, disciplinary values, humanities, STEM

Metaphors shape our understanding by providing cognitive relations for our language use. Likewise, we shape metaphors by how we interpret and use them. Richards, in fact, notes that “a command (of the interpretation) of metaphors can go deeper into the control of the world that we make for ourselves to live in” (1970, p. 135). This implies that our perspective of the world or aspects of life can be attributed to the ways we interpret and conceptualize language into cognitive domains. From the higher institutions’ perspective, different disciplines describe themselves differently, and that difference is expressed in their use of metaphors. With the ability to unpack more meanings, metaphors allow disciplines to communicate more nuanced perspectives and value systems. This conceptualization holds true for our understanding of the disciplinary divide between the humanities and the science, technology, engineering and math (hereafter referred to as STEM) programs.

Although the language (word choices) used in describing the introductory statements² of these programs has similar linguistic appearance, it expresses distinct realities that align with the public perceptions of both disciplines when considered metaphorically. This

² For this study, introductory statements are those statements that provide information on the overall goals of the department. These statements include mission/vision statement, statement of goals/objectives.

difference in metaphorical representations, therefore, provides a rich ground for the study of various issues about higher education, from how disciplines are positioned in society (and in relation to one another) to how these disciplines approach phenomena, including career, society and life. This article aims to reveal that the disparity between these fields of disciplinary knowledge is a form of social reality that is created not only by the socio-economic demands of innovation but primarily by a language that provides a favored identification to STEM-related programs so much that it could influence the educational choices of prospective students. This language use, particularly in the introductory statements of departments in the humanities and STEM-related programs in select Atlantic Coast Conference (ACC) institutions, will be examined through the lens of the cognitive schema of spatial metaphor as explained in Horn, et al. (2016).

Extant studies have focused on the use of metaphors in different fields and contexts (Fahnestock, 1999; Thonus & Hewett, 2016; Adepoju, 2017). However, little or no attention has been paid to examining metaphoric representations in the descriptions—in the form of introductory statements or departmental goals—of the field of humanities and the field of STEM programs. From a higher education standpoint, studies have analyzed metaphors for their ideological constructions in educational practices (Williams, 2005; Batten, 2012) and government policies (Arcimaviciene, 2015; de Paor, 2021). Batten (2012), for instance, examines the ubiquitous term “learning outcomes” as a metaphorical concept within higher education. Among other things, Batten shows that the term is as an ontological metaphor consistent and coherent with the contemporary development of academic capitalism. Likewise, Arcimaviciene (2015) employs the analytical framework of Critical Metaphor Analysis to analyze the implied value evoked by metaphors in the

mission statements of the first 20 European Universities. The study shows these statements mostly use the commerce metaphors which promotes a consumerist attitude to education and society, thereby ideologically positioning higher education as a business enterprise.

This current study builds on the above discussion by providing intricate detail on how the metaphorical representations of building schema in these introductory statements establish the prioritized values in each discipline. Generally, institutions craft their introductory statements to express their core values and idea of knowledge-making using linguistic forms such as metaphor. Such metaphorical usages create a distinct representational frame of transference for understanding the target domain through the attributes of the source domain (Adepoju, 2017; Chatti, 2020). Specifically, the objectives of this study are to:

- i. examine what constitutes disciplinary knowledge in the humanities and the STEM fields;
- ii. discuss the metaphorical mappings that help to establish the disciplinary knowledge of these fields;
- iii. describe how these metaphorical frames portray these fields' knowledge-making goals as complementary rather than competitive.

To achieve these objectives, I have organized the paper into four main sections. The first section examines the disciplinary divide between STEM-related programs and the humanities with a view to examining what the boundaries are and how they are projected. In the second section, a discussion on how researchers have conceptualized metaphor and its functions over the years is provided. Special attention is given to explaining spatial metaphor (the crux of the analysis in this paper) and the role it plays in understanding the effectiveness of heuristics

in textual analysis. The third section discusses the site for collecting data and presents a textual analysis of some introductory statements of English and mechanical engineering departments—representing the humanities and STEM programs respectively—from the lens of spatial metaphor schema. Finally, some implications and recommendations for rethinking how departments/programs present their core values in institutional documents were offered.

Literature Review: Between STEM Programs and Humanities: A Clear Boundary of Disciplinary Ascendancy?

Disciplinary knowledge in higher education has continued to change over time. Moreover, the advancement in science and technology as well as the uneven social and economic investment in STEM programs over the humanities since the eighteenth century has continued to engender a significant shift of interest from a mainly liberal arts curriculum to STEM-related fields of study. This disciplinary favoritism has nevertheless influenced the perception of students toward their field of study. Bouterse and Karstens, (2015) trace the history of the demarcation between the sciences and the humanities and note that the divide became more pronounced in the second half of the nineteenth century because of the transformations in learning and research at that time. They explain that prior to this period, the divide was centered on the formation of disciplinary knowledge in both fields, noting that because the humanities could not always employ the logical inductive methods of the natural sciences, it had to take recourse to ‘tact’ or artistic means.

Although the literature on the demarcation between the sciences and the humanities discourages a strict boundary between both fields as they exist to complement each other (Bouterse and Karstens, 2015; Wolfe, 2017), the

popularity and preference of the sciences over the humanities continue to enjoy an undoubted ascendancy. Kao (2017) reports that the students majoring in STEM-related programs “exhibit a great deal of apathy and resistance, and usually lack confidence in their abilities to find insightful things to say about literature and art...because of the assumption that that study of literature and art have nothing to do with them” (p. 8). This notion, for instance, attests to the commonplace assumption among students in sciences who privilege drawing conclusions based on scientifically proven means over logical deduction.

Consequentially, higher education has gravitated toward STEM-related programs in recent decades to meet the demands of a competitive global marketplace. At the same time, support for humanities programs, especially from federal sources, has dwindled steadily since the 1970s. This reduction in support echoes Wolfe’s (2017) submission that “the larger challenges on the horizon for the relationship between the sciences and humanities are institutional rather than intellectual” (p. 78). Hence, the STEM field is presently sought after because of its usefulness in the modern world which mostly celebrates progressive scientific and technological development. Likewise, the field is benefiting from the changing philosophies of education which have now seemingly moved away from a liberal arts model toward a more pragmatic and utilitarian model.

Nevertheless, the humanities, though do not receive the same kind of promotion, attention, or funding as STEM, are equally important to better our global world. Following this notion, Nussbaum (1997) insists that humanities competencies play a vital role in cultivating powers of imagination that are essential to becoming global citizens. In a similar manner, Rhee (2018) explains that a “good grounding in the humanities has been heralded in recent

years as integral to success in many professions” (p. 115). This fact holds true in fields, such as nursing, public health and medicine, where professionals and practitioners interact more directly with people to not only better understand them as human beings, but also provide person-centered care, and develop critical thinking.

In his 2013 lecture, Jim Leach, former President of the National Endowment for the Humanities, regarded the disciplinary divide between STEM and the humanities as a false dichotomy. For instance, Ottino and Morson (2016) emphasize in their examination of engineering and arts/humanities that unlike the arts and humanities that promote “creative and metaphorical thinking” (p. 2), engineering departments promote “the production of something new” (p. 3). Nevertheless, these two fields can learn from each other in that STEM advances coupled with greater humanistic understanding are crucial to the advancement of modern society. Essentially, therefore, despite these practical differences in both fields that have led to the ascendancy of STEM over humanities in recent decades, the sciences cannot ignore the humanities any more than the humanities can ignore what science has unveiled because together, STEM and the humanities flourish; apart society is jeopardized (Leach, 2013).

The move toward complementarity encapsulates the current thinking about the disciplinary divide between the fields of humanities and STEM. One avenue for achieving this complementarity, as suggested by Ottino and Morson (2016) is to provide courses that bring different modes of thinking, rather than moving students in parallel, noninteractive tracks. Nevertheless, as this study will reveal, this disciplinary divide as well as the utilitarian usefulness of STEM over humanities is perpetuated by the metaphoric language these disciplines use to present their core values in their introductory statements. The study will make a case for rethinking the composition of introductory

statements in STEM and humanities departments if we are to realize Leach’s idea that the humanities and fields of inquiry related to STEM are complementary rather than competitive.

Theoretical Framework: (Spatial) Metaphor in Use

The conceptual framework of metaphor has continued to transform and adapt to realities over the years. Lakoff and Johnson (1980) show that “metaphors help us create realities, especially social realities, and serve as a guide for future action” (p. 156). This description emphasizes that metaphor is a property of the human mind, thus explaining why they are commonly used in everyday interactions. Following Lakoff’s conceptual model, Fahnestock (1999) explains that metaphor “occupies the ground in language analysis and in studies of the mind” because scholars believe it presents a “window for a fundamental, generative cognitive process” (p. 5). This explains the fact that metaphor is a means of regulating or making meaning of the world of thought, cognition and interpretation which requires knowledge of linguistic codes used in its formation.

Richards (1979) also shares this opinion when he notes that “thought is metaphoric and proceeds by comparison and the metaphors of language derive therefrom” (p. 94). Therefore, language is considered to be metaphoric—the exchange between thoughts and its signification system (language)—as well as the vehicle by which the metaphoric argument is framed. Additionally, metaphor is described as a linguistic concept that provides a conceptual linking of, or movement between, two distinct lexical terms (Adepoju, 2017; de Paor, 2021). Gross (1996) expatiated on this conceptual linking by noting that “metaphor is a figurative reworking of familiar linguistic propositions or as a pre-figurative rendering of raw experience” (p. 360), in that it helps to create new links that

illuminate one term (or concept) by features or senses borrowed from another. This linkage, according to Gross, is what Lakoff and Johnson claim to be a “conceptual structure of metaphorical projection that moves from the physical to the abstract” (p. 362).

Furthermore, Richards has initially discussed that the co-presence of and interaction between the vehicle and tenor are the primary modes of producing metaphor. The vehicle provides the domain for borrowing these characteristics to describe the tenor (the plain meaning of the word). This classification holds true in the sense that any metaphorical production starts with the mind, mapping ideas and words into domains that seem to have shared relationships and conceptual features. Put in another way, Peters et al. (2019) explain that “metaphor is central to human language and cognition, especially knowledge transfer” (p. 222) from one domain to another. Thus, the mind considers/compares the contexts of both the original idea and borrowed idea—these are contexts we have already mastered as humans—and proceeds to map appropriate contexts to produce metaphorical statements. Gross (1996) adds that it is in this form we see how our epistemology (the source-domain) is mapped onto an abstract target-domain via spatial metaphor.

Spatial metaphor is one of the types of metaphors—others including, territorial, and orientational metaphors (Horn et al., 2016) —used to create a representational framework for understanding the underlying meaning of a text. Horn et al. (2016) explain that spatial metaphor is the “use of a concrete or specific space or location—on the lexical, conceptual or textual level—when spatial characteristics are applied to a single word or phrase” (p. 454). Fahnestock and Secor (1991) aver that spatial metaphor is important for creating a “locus for a reality behind appearance” because it provides a vivid image of a topoi with something underneath; and helps to “reach

through or behind the textual façade to a hidden reality” (p. 86) through close reading. According to Peters et al. (2019), spatial metaphors illustrate limitation, structures and processes and can be applied to an extremely diverse range of situations such as institutional documents. In this paper, therefore, spatial metaphor will serve as the lens through which introductory statements of both the humanities field and STEM-related programs are analyzed to see how spatial terms are metaphorically adopted in these statements and how an understanding of such might help explain the disciplinary divide between both fields.

Methods

This study adopts a case study approach for exploring spatial metaphors in the introductory statements of both the STEM and humanities fields of study. Yin (2008) defines a case study as an “empirical method that investigates a contemporary phenomenon (here, the disciplinary divide between STEM and humanities) in depth and within its real-world context” (p. 45). Since, case study’s strength is in its ability to deal with a full variety of evidence such as documents, artifacts, interviews etc, this research design is best suitable for this study that explores how disciplinary knowledge is propagated in institutional documents. As an exploratory case study, this research offers insights into the realizations and functions of spatial metaphoric frames evidenced in these fields’ institutional documents in an effort to not only develop analytic strategies and questions but also provide substantial information on how metaphoric language use can contribute to contextualized meanings derivable in institutional documents. As such, English and mechanical engineering departments constitute the cases purposively studied for both the humanities and STEM disciplines respectively.

Data for this study was collected from the websites of three public research institutions in the United States namely, the University of Louisville (UofL), Florida State University (FSU) and Virginia Tech (VT)³. These institutions are purposefully selected following Patton's criterion sampling approach. As noted by Patton (1990), criterion sampling enables the researcher to identify data sources that exhibit certain predetermined criterion characteristics for in-depth, qualitative analysis (p. 177). Hence, the three institutions are purposefully selected because they are located in the same region (southern region) of the country, and they are peer institutions in Atlantic Coast Conference (ACC). As peer institutions, they not only share similar core values such as academic excellence, development of the total person, innovation, and competitive fairness among others but also promote teaching and learning in the humanities and the STEM-related fields.

In a similar vein, the websites of the English department, which is one of the departments in the humanities, and the mechanical engineering department, a STEM-related program, have been considered as sites for collecting texts for analysis in this paper. The key criterion for choosing the departments for this study was the ease of access to these statements on their respective institution's websites. A combination of these criteria, thus, forms the basis for selecting the data collection site for this study. The respective introductory statements of these ACC institutions are analyzed to find out how spatial metaphors are deployed in composing them. The goal of this analysis is to identify the underlying conditions and to represent disciplinary values that make STEM more sought after than the humanities in recent times.

³ The data for this study were derived from publicly accessible Internet domains of these three (3) institutions.

Data Analysis

This analysis focused on how these institutions describe their academic activities (such as teaching, learning, and research) as well as how they position their students for engaging in the real world. fifty-seven (57) expressions were observed to be framed metaphorically. However, for constraints of space, ten (10) excerpts were purposively chosen for analysis. To identify the metaphors, the entire introductory statements were read to identify the specific concepts forwarded by the statements and assign descriptive codes as appropriate. According to Saldana (2014), descriptive coding summarizes in a word or short phrase—most often as a noun—the basic topic of a passage of qualitative data” (p. 88). Second, the codes are categorized into four (4) broader metaphorical concepts. These four (4) concepts, which include, foundation, key, construction terms and toolbox serve as the source domain references for framing spatial metaphors in the corpus. This frame of reference is illustrated in the tables below:

S/N	Institutions	Metaphorical frames
1	University of Louisville	Foundation Key
2	Florida State University	Toolbox Construction terms
3	Virginia Tech	Foundation Construction terms

Table 1: Representational frame of spatial metaphor in the English department’s introductory statement

S/N	Institutions	Metaphorical frames
1	University of Louisville	Construction terms Key
2	Florida State University	Foundation
3	Virginia Tech	Foundation

Table 2: Representational frame of spatial metaphor in the mechanical engineering department's introductory statement

These representational frames are realized by the building schema of spatial metaphor, in that the frames employ the use of architectural concepts that describe a (or the process of) building. Essentially, understanding the properties of these source domains (the building concepts) provides the frame for understanding the valued disciplinary knowledge in these departmental introductory statements, which is our target domain. Ottati et al. (2014) assert that metaphoric framings are important in the analysis of metaphor because they “activate a root metaphor in the mind of the message recipient” (p. 179). This root metaphor such as *foundation*, *key*, *build*, contains an image or central theme that is associated with the entity, event, or issue being described. Hence, this framing influences the message recipient's attitudes and opinions regarding the entity or issue (Ottati et al. 2014; Ritchie & Cameron, 2014).

As shown on tables 1 and 2 therefore, each institution conceptualizes its disciplinary knowledge using different (though in some cases related) frames of reference. Moreover, when both departments employ the same metaphorical frames of reference as seen in the use of *foundation*, *key* and *construction terms*, their uses and functions differ. That is, though similar in form, those frames not only communicate different disciplinary values but also influence the readers' opinion regarding these values. In the following section, the introductory statements of each department are analyzed and discussed.

Analyzing Spatial Metaphors in Departmental Introductory Statements

Each department at the University of Louisville, Florida State University and Virginia Tech University has

compelling introductory statements on their websites. Flaherty's 2018 publication in *InsideHigherEd* explains that departments in higher institutions make certain rhetorical moves (such as asking 'Why Study English') in their introductory statements to respond straightforwardly to the current crisis in enrollments, largely engendered by the disparity in the knowledge production and prioritized values in the humanities and the STEM-related programs. Hence, the introductory statements are analyzed for how distinct predicators and lexical items used in these statements are metaphorically expressed through the building schema, which is one of the means of generating spatial metaphors.

As Fahnestock (1999) explains, metaphor is a fundamental mechanism in language and thinking whose principle underlies all conceptual systems. Hence, the predicators and lexical items used in these introductory statements are important to our conceptual understanding of the utilitarian values favored by each department. Following from this conceptual view, therefore, we understand the use of language in the development of the introductory statements of these departments as a metaphorical system of the conceptual structure of source domain mapped unto structure of target domain. The following discussion examines the metaphorical frames of target domain reference employed in the introductory statements of both the English and mechanical engineering departments.

Spatial Metaphors in English Department's Introductory Statements

The English departments of the select institutions under consideration in this paper formulate their introductory statements in a similar manner. These departments, although adopt varied metaphorical expressions of space, highlight similar perspectives to

knowledge production. In the introductory statements of these institutions, the frequently used spatial expressions are *'foundation'*, *'key'*, *'construction terms'*, and *'toolbox'* metaphors. In this section, each metaphorical frame of reference in the English department's introductory statement is discussed. The English departments, as a vital unit of liberal arts education, seek to train students to, among other things, be literate, responsible and critical thinkers. As observed in the data, these metaphors (that is, *'foundation'*, *'key'*, *'construction terms'*, and *'toolbox'*) not only align with the liberal arts philosophy but also provide a nuanced understanding of the discipline's academic practices.

Datum 1: In our program, you'll get a strong foundation in liberal arts (VT)

Datum 2: The program for English majors is designed to lay a foundation for careers in writing, teaching, scholarship and research. (UofL)

The conceptual structure of 'foundation' provides a framework for understanding the target domain—which, here, is the English department's valued disciplinary knowledge—in the light of the source domain, a foundation (an example of a spatial entity). The metaphorical concept of building schema is deployed to describe how the English departments of Virginia Tech and the University of Louisville envision and advertise their favored disciplinary knowledge. This metaphorical framing provides vivid imagery—a foundation—of the discursive nature of the English departments of both institutions as an object of disciplinary study. The understanding of the features of the source domain (foundation) as that load-bearing, all-important part of the building sets forth a metaphorical understanding of the target domain, that is, the English department. Moreover, knowing that a foundation, whether done weakly or strongly, determines the durability of the building helps us to conceptualize the English programs as

providing not only stability for knowledge of the society but also a platform for helping the students establish critical intellectual skills for advancing in the society.

Furthermore, Florida State University's English department uses the toolkit metaphor in its introductory statement to position itself as a repository of academic resources, competencies and strategies.

Datum 3: We equip our ambitious, multi-talented undergraduate and graduate students to venture out into every corner of the new creative economies. (FSU)

Using the predicator, *equip*, the English department of Florida State University is metaphorically mapped as possessing the right academic tools with which they prepare the students for the future. The primary aim of equipping the students with these tools is to help them *venture out* with confidence in efforts to resolve issues using best practices. Building on this traditional notion of equipping students with liberal abilities in form of critical thinking, the University of Louisville's English department also portrays itself as the key to unlocking the potential for making a great society.

Datum 4: The overall mission of the English Department is to promote literacy...and skills that are the key to the future of an urban area in an increasingly information-based economy. (UofL)

In the excerpt above, the English department uses another element of the building metaphor, *key*, to establish what it envisions and prioritizes as knowledge-making. As an element of building metaphor, *key* serves as a conceptual frame for understanding the source domain in relation to the target domain. Hence, the *key*, as metaphorically used here, serves the function of unlocking a door in order to gain access to a new space—an urban area that is consistent with modern advances in the society. The English department is, therefore, pivotal in providing a platform for developing liberal skills such as critical thinking and

analytical mind, among others, that literate citizens need to navigate entry or exit points and spaces in the society.

Furthermore, in terms of developing critical thinking skills, Florida State University's and Virginia Tech's introductory statements use construction terms such as *create*, and *build* to map how their respective English departments understand the impact of the knowledge imparted on the students.

Datum 5: We explore the best of the past and present in order to create a better future for everyone who reads (or hears) English. (FSU)

Datum 6: In our program... you will build core skills in critical reading, writing, research, and analysis. (VT)

Construction terms such as *create* and *build* follow from the earlier metaphorical understanding of the English department as a foundation upon which students construct an imagined future for the society. These construction terms are considered process-oriented metaphors because they exemplify the series of necessary actions needed in achieving a better, innovative future. For instance, *build* as a process-focused source domain, is metaphorically used to suggest the crucial impact of the English department to the process of constructing an imagined future through creative activities such as critical reading writing and research.

Spatial Metaphors in Mechanical Engineering Department's Introductory Statements

A cursory look at the introductory statement on the University of Louisville's and Florida State University's mechanical engineering department websites reveals that assertively performative predicators such as *design*, *manufacture*, *develop*, *control* are used as metaphorical frames of target domain reference. For instance, specific objectives of each of these institutions' mechanical engineering department are to:

Datum 7: you will be trained to design, develop, test, and manufacture components or processes that do useful work. (UofL)

Datum 8: ...analyze, design and control thermal-fluid systems, structural and material systems (FSU)

The interesting aspect of this statement is the complementary information which suggests the department's outward-looking approach to solving practical problems of the society. These lexical items are, here, analyzed for their building schema metaphorical representation. As a source domain, *design, develop and manufacture* are construction terms that provide a process-to-product descriptive framework, especially with regards to spatial spaces. This framework provides a heuristic for determining the valued disciplinary knowledge of the Engineering department—the target domain. As descriptive heuristics, these construction terms portray the Engineering department as a platform for innovative practices—which is one of the pull factors that contribute to the ascendancy of STEM-related programs.

Another way the mechanical engineering department at the University of Louisville enacts the building schema of spatial metaphor in its introductory statement is by envisioning itself as:

Datum 9: ... the key to building the cities of the future (even in outer space) ...to quickly bring life-altering innovations to the market. (UofL)

In line with the metaphorization schema adopted in this study, this statement contains a double spatial metaphor—a *key* and a *building*—and the understanding of one depends on the understanding of the other. This metaphorization thus warrants multiple conceptualizations of the source domain-target domain heuristics. That is, to get an understanding of how these spatial metaphors of key and building work, it is necessary to understand the *key* as not only distinctively metaphorical but also a necessary

exigence for the building process. Hence, the *key* is, here, presented as an indispensable device—what Wolfe refers to as “visible, measurable and immediately applicable knowledge” (p. 77) —that provides necessary information for putting different pieces together to form a tangible whole, the building, that is of ‘innovative, life-altering’ value to the society.

Furthermore, the utilitarian functions of engineering departments go beyond designing and fabricating tangible industrial products; hence the need to develop communication, collaboration and business skills, among other skills in students. To frame the development of these skills, both Florida State University and Virginia Tech employ the building metaphor of *foundation* in the introductory statements of their engineering departments. Datum: 10: ... foundation in communications skills, principles of economics, and other fundamentals upon which they will draw in their professional careers. (FSU)

Here, the engineering department of FSU understands its role as constructing a base on which the life skills needed by students to function in the society rest. Similarly, VT’s engineering department’s *strong ties with the university institutes* is mapped as a foundational element for developing these skills in students. describe their valued knowledge. This metaphorical use of *foundation* in the mechanical engineering department provides an understanding that this discipline, though values tangible outcomes, aims to equip their students with tools to effectively put these outcomes to use in the society. This framing of foundation affirms Bouterse and Karstens’ (2015) claim that while STEM discipline is attributed with progressive scientific and technological development, these disciplines can be complemented by the educational philosophies of the liberal arts.

Discussion

This study highlights how institutional documents such as departmental introductory statements are embedded with metaphorical usages. The building schema of spatial metaphors has been adopted to examine how these institutional documents promote their valued disciplinary knowledge by mapping (that is, using the attributes of) the source domain (the building schema) to frame our understanding of the target domain—the valued disciplinary knowledge of both fields. STEM programs have continued to enjoy an unprecedented ascendancy and massive government support because of the direct, practical and tangible benefits it affords the society. In addition, the metaphorical concept of building schema has been described as one that starts from the load-bearing base (foundation) to other parts of a building such as the door. This mapping depicts the fact that education, as conceptualized by both departments, is a process that includes several parts; that is, while the humanities department might provide instructions to set appropriate formative practices for the students—such as what happens with the gateway introduction to college writing courses such as English 101 and 102—the STEM-related program, that is mechanical engineering, focuses on their tangible impact on the society.

Although some of the excerpted introductory statements of both English and mechanical engineering departments share similarities in their expression of spatial metaphor, the function of these metaphorical frames differs. Whereas the English department's metaphorical mappings express the ways of knowing, the metaphorical expressions in the introductory statements of mechanical engineering—with an extension to STEM-related disciplines—portray practical ways of doing. In essence, the field of humanities is seen to produce intangible products in the form of knowledge creation that helps shape

the world while STEM-related fields most often than not produce tangible products for industrial and technological development of the world. These findings show how the philosophies of both disciplines have been wittingly or unwittingly foregrounded through metaphorical use of language in these institutional documents.

While this exploration is not the panacea for the disciplinary divide, the evidence of this research indicates that it may provide a useful and timely intervention that helps academic departments/programs move toward rethinking how they present themselves to the public through their metaphoric use of language—a necessary step in actualizing the humanities-STEM complementarity. According to Lakoff and Johnson (1980), introducing new metaphors is the most important way to see beyond a metaphor. As this study has shown, the metaphorical framings in these introductory statements reinforce the dominant disciplinary values of these programs, which has unsurprisingly elevated public perception of STEM programs over the humanities. Nevertheless, to achieve the said complementarity, it is critical that departments in the humanities seek and, more importantly, introduce new metaphors for understanding their utilitarian contributions to societal development.

Furthermore, since metaphorical framings influence the reader's attitude and opinion about the issue (Ottati et al., 2014), the findings of this study, especially the metaphorical framings produced in departmental introductory statements analyzed, should compel institutions as well as academic programs to rethink the constituents of their institutional documents. Such rethinking is necessary in an effort to examine how metaphoric language use could have either reinforced or misrepresented the givens of their institutional values and philosophies. While this study is not calling for an absolute re-designing of these institutional documents based on how

metaphors have been deployed, these institutions can begin to reconsider how these statements align with the needs of 21st-century literate society.

Implications

This study also has implications for interdisciplinary potentials of complementing STEM's objects of study with humanities' objects of study. Following Leach's (2013) suggestion that STEM and humanities are more complementary than competitive as well as Carrell et al.'s (2020) recent proposal to place humanities as the driving force and context of STEM studies, the findings of this study reveal that adopting an interdisciplinary framework for discussing and engaging across the fields of humanities and STEM could bridge the STEM-humanities gap. One of the ways of fostering this merger is by creating interdisciplinary programs that connect STEM approaches with humanities thinking.

Moreover, as these programs are created, attention should be paid to what and how metaphoric language is used to present and promote their valued knowledge in their respective institutional documents. As Ottino & Morson (2016) conclude, an educational system that merges humanities and sciences will "foster more than just innovation... it [will] also yield more-flexible individuals who adapt to unanticipated changes as the world evolves unpredictably" (p. 4). Based on this implication, I recommend that humanities scholars, technical/professional writing programs and other writing-intensive program administrators adopt a more informed perspective towards collaborating with STEM scholars, especially in developing materials that enable students to meaningfully engage the complementarity of the two seemingly different academic worlds.

Conclusion

This study discusses spatial metaphors in the introductory statements of English and mechanical engineering departments in select ACC schools. The aim was to examine how these statements have not only fostered the lore of but also reflected public perceptions of the humanities and STEM-related disciplines. Mechanical engineering department envisions its programs as the innovation-driven, service-providing space into which the English language, through its program offerings, trains students to function. This understanding aligns perfectly with the popular thinking about the institutional divide between the humanities and STEM programs in recent years. The spatial metaphor shows how institutions of higher learning conceptualize disciplinary objectives in different ways that reflect their valued knowledge-making practices. Not only do spatial metaphors analyzed in this study impacts how the disciplines communicate their commercializing values in the society to the prospective students, like Arcimaviciene (2015) opine, they also establish what kind of commercial value they provide, especially in STEM programs focused on utilitarian functions.

While this study aimed to better understand the form and function of metaphorical language used in describing the disciplinary values of humanities and STEM programs, it has certain limitations. The study only analyzes the introductory statement of one department per discipline, which cannot be generalized to or represent a larger dataset. However, by focusing on a specific department, this study draws a more contextualized understanding of how spatial metaphors are used to frame disciplinary values in each program. Further studies can expand the data size or focus on determining if the metaphorical language use in these introductory statements is deliberate or non-deliberate. More importantly, future

studies might conduct qualitative research to examine how students connect and respond to the metaphorical framings in these introductory statements to ascertain the influence of those framings on their decision to enroll in a specific discipline.

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Author Bio

Olalekan Adepoju is a PhD candidate in Rhetoric and Composition, English Department, University of Louisville, USA. He obtained his Bachelor of Arts degree in English Education and Master of Arts degree in English from University of Ilorin, Nigeria and University of Ibadan, Nigeria respectively. His research interests lie in discourse analysis, writing studies, educational practices, and ESL teaching. His research has been published in peer-reviewed journals. Olalekan served as the assistant director of the University Writing Center for graduate writing at the University of Louisville, USA.

Observation of teaching approaches in two undergraduate civil engineering synchronous remote classrooms

**Olushola Emiola-Owolabi
Jumoke Oluwakemi Ladeji-Osias
Dia Sekayi
Olusola Adesope**

Morgan State University, Maryland, United States

ABSTRACT

Background: *The sudden switch from in-person instruction to remote instruction during the 2020 pandemic was difficult for engineering instructors and students, especially in practice-based courses as there were limited hands-on activities, which are vital for reinforcing theoretical concepts to the students.*

Purpose: *This observational study investigated how civil engineering students experienced the impact of the shift to remote instruction on active learning, and the way that the experience affected the students' learning process.*

Method: *We employed a convergent parallel multi phased mixed method design to explore the phenomenon. The Classroom Observation Protocol for Undergraduate STEM*

(COPUS) instrument was used to observe two 12-week long courses in the 2020 summer session. Instructors of the two classes were interviewed. A focus group discussion was carried out with seven students. A two cycled inductive analysis process was used to generate themes from the qualitative data. COPUS data were used to visualize how class sessions were utilized by instructors and students. Kolb's Experiential Learning Theory was used to guide the study.

Results: *The data of this study showed that, the faculty lectured for more than half of the class time. Also, the data showed the students were self-motivated inherently through the courses.*

Conclusions: *Findings showed that student-centered instructional practices motivate students. Interview data showed that there was demotivation for students from the teacher-centered approaches exhibited in the class sessions. We provide suggestions to promote student collaboration, active learning, and student engagement in a remote classroom.*

Keywords: Synchronous teaching, Remote learning, Active learning, COPUS.

Undergraduate engineering student success has been a concern for experts in undergraduate engineering courses (Case et al., 2013) since engineering courses have abstract course content which require a student-centered teaching approach such as active learning. Engineering instructional practices that lack student engagement activities, and insufficient prior lesson activity preparation of the instructors are some features that lead to unsuccessful student outcomes (Baillie & Fitzgerald, 2000; Ohland et al., 2008; Zhang et al. 2004). A major problem for undergraduate engineering courses is the predominant,

traditional mode of instruction, that is teacher-centered leading to lecture-based instructional practices (Bonner et al., 2020). We know that the amount of learning that engineering students can attain in the classroom environment depends mostly on the teaching approach adopted by the instructors (Velasco, et al., 2016). Active learning pedagogy encourages students to be active, taking charge of their learning process, by engaging in conceptual discussions as the instructor acts as a guide in the class sessions. For administrators and faculty to fight the high dropout/withdrawal/failure (DWF) rates in undergraduate engineering students, active learning pedagogy should be considered for instructional methods. Undergraduate engineering instructors should include more active learning methods in delivering their courses to enhance undergraduate engineering students' educational experiences.

Active learning pedagogy has shown the ability to increase students' learning gains when compared to traditional lecture-based pedagogy (Owolabi, 2017). Active learning pedagogy aims to transform the students from being passive listeners to engaged student learners (Owolabi, 2017). For example, the students in an active learning environment are encouraged to pose conceptual questions, while also engaging in peer-to-peer constructive discussions in class guided by the instructor. Research has also revealed the need for effective undergraduate engineering instructional practices that fosters students' divergent thinking skills, knowledge making, and creative skills, which are often lacking from undergraduate engineering courses (Bonner et al., 2020). Hence, teaching engineering remotely and in a pandemic presents challenges to engineering teachers and students.

The start of the 2020 pandemic in the U.S, brought emergency remote teaching to teachers across colleges. Both instructors and students were affected by the drastic

change of teaching and learning approach. Instructors teaching college engineering faced specific challenges teaching students in a pandemic because of the applied nature of engineering. However, teaching engineering involves teaching students with hands-on, engineering design or inquiry-based contents which encourages the students in developing problem solving and critical thinking abilities (Bourne, 2005). Engineering teachers in face-to-face classrooms achieve this by employing active learning approaches to teach critical thinking and problem solving (Lima et al. 2017). This was particularly challenging for college teachers teaching engineering remotely and in a pandemic. Employing limited to no active learning remotely will lead to limited teacher guidance with the students which can lead to insufficient metacognitive and cognitive growth for the students' learning process (Brod, 2021). Engineering teachers who taught during the pandemic were forced to create approaches to teach quality engineering remotely. Considerably fewer researchers have investigated active learning approaches in undergraduate civil engineering classes during the pandemic.

This paper presents results of what instructors and students were doing in the classroom during a 12-week summer session, describing how actively students were engaged in the classrooms. Also, this paper presents the students' and instructors' perspectives on active learning in a remote learning environment. The paper further presents insights on active learning from 30 civil engineering students in Summer 2020 who participated in two compulsory classes during a pandemic. We also present insights from the two teachers who taught the two classes in the summer 2020 remotely. We interviewed the teachers three times through the 12 weeklong classes providing depth into the challenges the teachers faced by teaching college engineering remotely. We framed this study using

Kolb's experiential learning cycle. We conclude this paper with what was learned from the unprecedented event of teaching engineering college students remotely in a pandemic and provide recommendations for effective remote active-learning classrooms.

Literature Review

In the decades past, engineering educators and administrators have been working to establish effective standards for engineering instructional practices (Wu et al., 2020). They strive to establish research findings, effective practices, and weigh in on lessons learned. Nevertheless, engineering educators still struggle to give a perfect procedure for ensuring instructional practices that equip engineering students for the current challenges of the engineering profession (Grand Challenges for Engineering, 2016). Engineering education researchers have validated the efficacy of active learning pedagogy over teacher-centered traditional instructional methods. Unfortunately, transferring of empirical educational research into instructors' instructional practice has been slow (Shekhar & Borrego, 2017). For the U.S to attract, retain, and graduate efficient students in engineering, we must improve the students' educational experiences and give more practical and relevant knowledge to the students. The problem for engineering education is in the shortcomings of the traditional teacher-centric nature of the engineering instructional practices where the faculty fails to demonstrate the real-world connections between conceptual topics throughout the engineering curriculum (Maciejewski et al., 2017).

The American Society of Civil Engineers (ASCE) reports that higher education institutions are mostly responsible for delivering foundational concepts, skills, and knowledge to undergraduate civil engineering students for them to get a degree in civil engineering (Cai et al., 2019).

Civil engineering is taught at universities that produce successful students who venture into rural and urban construction industries (Burgher, 2014; Hattinger, Spante & Ruijan, 2014). Civil engineering at most four-year colleges comprises geotechnical engineering, management science and engineering, construction engineering, and environmental engineering. Also, across the globe, civil engineering as a higher education discipline has continued to expand to enroll more students. In 2016 the US awarded 11,464 bachelor's degrees. Between 2017-2018 in the U.S, civil engineering awarded 12,221 bachelor's degrees (Prince, 2004). This increased enrollment should influence changes in civil engineering undergraduate instructional pedagogies for appropriate instructional pedagogy to support the increased enrollment.

Active Learning Pedagogy

Active learning is defined as an instructional practice where students read, write, discuss, or engage in solving problems (Prince, 2004). Students in active learning are engaged in tasks that are higher order thinking such as analyzing, synthesizing, and evaluating (Bonwell, et al., 1991). Hence, active learning is an instructional activity where students are doing things and thinking about what they are doing. Prince et al., (2020) substituted 'active learning' with 'active student engagement'. This study also adopts this switch to include all the instructional methods covered in the definition of Spradely (1980) as active student engagement as an instructional method in which all students are asked to engage in the learning process (Bonwell, et al., 1991). This is to evade the ambiguity of the differing definitions of the term active student learning. This is also adopted because "active engagement" is more practical with asynchronous online instruction, where "in-class activities" in several other

definitions as summarized by Benson et al., (2010) are meaningless (Krahenbuhl, 2016).

Active student engagement in the engineering discipline has been identified in numerous forms over the years. They range from simple tasks (e.g., students momentarily deliberating or having conversations about an instructor's assigned topic) to courses designed as team activities or case studies for student participants to continuously engage with and learn from one another (Kolb, 1984; Krahenbuhl, 2016). Applying active student engagement instructional pedagogies attempt to improve student participants' independence, problem solving skills, and critical thinking abilities. Furthermore, active student engagement pedagogy is an instructional technique grounded in experiential learning theory, which this study uses as a framework to guide the study. The fundamental characteristic of active student engagement pedagogy is to mix the "students' learning activities with the practical application of engineering and give full play to the students' creativity and initiative" (English, 2019). Undergraduate civil engineering instruction that embraces this pedagogy practices the student-centered approach where the instructor plays the role of an organizer and a guide through the students' learning process (English, 2019).

Several pedagogical methods that integrate active student engagement pedagogy involve the following: experiential pedagogy, hands-on learning pedagogy, problem-based learning, flipped classroom learning, case-based learning, internships/industry engagement, and field experience. In evaluating the efficiency of these various pedagogies, scholars' approaches comprise measuring the students' conceptual understanding and attitude after using an instructional pedagogy. An example is the research of Eren-Sisman et al. (2018) where the authors compared undergraduate engineering students' conceptual

understanding with students using active student engagement pedagogy and students using traditional learning pedagogy. The researchers concluded that after controlling the students' university entrance scores, trait anxiety scores and pre-test scores of both the general chemistry concept test and state anxiety, the students that used the active student engagement model were more effective in improving the conceptual understanding in the students' knowledge making than the students without the active student engagement model. The students' experience of constant engagement and peer learning from Eren-Sisman et al. (2018)'s study is a good step in the direction of knowledge making.

Generally, studies done on engineering pedagogy and its effect on engineering students have generally described students' high-performance rates, high satisfaction rates, and measured student outcomes in understanding engineering concepts. Furthermore, in general, studies on active student engagement pedagogy in engineering have reported positive gains in terms of student retention rates, student satisfaction, and an increase in problem solving skills of engineering students [Bhagat, 2016; Chao, 2015; Chen; 2014; Huang, & Hong, 2016; Owolabi, 2017; Strayer, 2012]. However, there are few studies that describe or explore the details of existing active student engagement pedagogy in undergraduate civil engineering classes (Kerr, 2015; Lee, 2018). There is therefore a need for case studies with more details that provide evidence of the potential effectiveness of active student engagement pedagogy in undergraduate civil engineering classes (Kerr, 2015; Karabulut-Ilgu, 2018; Lee, 2018).

Engineering Faculty Adoption of Active Student Engagement Pedagogy

Although there has been valid empirical research on the effectiveness of active student engagement learning over traditional instructional approaches, diffusion of this education research for instructor adoption has been slow (Shekhar, & Borrego, 2017). Studies have also shown that instructor professional development workshops encourage instructor adoption of active student engagement by increasing the pedagogical knowledge of the instructors. The research of Lattuca et al. (2014) showed high levels of positive association between participating in professional development workshops and instructors' adoption of active student engagement practices. The National Effective Teaching Institute (NETI), which provides professional development workshops for engineering instructors, stated that instructors are slow to adopt active student engagement approaches because the instructors have difficulties in selecting active student engagement activities and more importantly, the students resist these activities (Reid, 1999; Ssemakula, 2001). Although studies highlight that instructors' conceptions about teaching affects the instructors' instructional approach, students' resistance is the main barrier for adoption of active student engagement (Cutler, 2012; Finelli et al., 2013; Froyd et al., 2006; Dancy & Henderson, 2010; Marra, 2005).

Suggestions to Avoid Remote Teaching Fatigue

Below are some suggestions to avoid remote teaching fatigue or video conferencing fatigue and to make remote learning active for undergraduate engineering students. Some of these recommendations are similar to the recommendations given in the studies of Prince, et al., (2020). The data in this study also support these recommendations as explained in the recommendations below. Also, the ELT framework used in this study posits

that for the students to attain new knowledge, they should engage in the four levels of the experiential learning cycle from receiving concrete information to testing in new situations. However, from the data in this study, the students did not attain new knowledge in the classroom, as they only experienced the first two steps of the cycle. The recommendations below will encourage teaching practices that will allow active student engagements as students engage in the four-cycle constructs of ELT in the classroom. The result of this study confirms a teacher-centered remote learning environment in the observed classrooms, hence, these recommendations given below.

1. Plan ahead for remote teaching at departmental level: The administrators of the civil engineering department used in this study, organized an active student engagement workshop for the instructors of the courses used in this study prior to resumption. Administrators and faculty in the department should collaborate to make course delivery effective. This sensitizes the instructors in active student engagement teaching. Perhaps, an assessment of instructors' comfort with implementing active student engagement and classroom observations should be done to encourage the instructors to adopt active student engagement.
2. Think- pair- share: This was lacking in the classes observed where the instructors did most of the talking. There was no think-pair-share encouraged by the instructors on screen or off screen. The instructor can start with a challenging question and give the students a few minutes to think about it by themselves (it can be introduced at the start of class, or before class begins). Instructors can create breakout rooms from the main virtual rooms where the students

can be grouped or paired to discuss the question and teach one another what they know. In these smaller breakout rooms, the students can use a whiteboard to teach one another or upload videos. After that, the students can present their results by sharing live video or in the discussion board of the platform being used.

3. Collaboration activities: In the classes observed for this study, students were not encouraged by the instructor to collaborate on-screen or off-screen. Some remote teaching applications can create team building activities in the classroom to encourage the students to connect with themselves. Other tools like Google Docs, Sheets and Slides can be used to allow multiple students to have collaborative documents, working on the same file simultaneously. Instructors can also assess the students before and after collaboration efforts to show students' prior knowledge of a concept and also, show how the students' knowledge has changed after the collaboration work.
4. Wrap up minute papers: Instructors can wrap up the class session earlier leaving out time to ask the students a key question for each student to answer in one minute. Instructors can ask the students 'what is the most important thing you learnt in the session?', 'what questions are on your mind? This would help the instructor know where the students are struggling and plan the next class session to attend to such arrears.

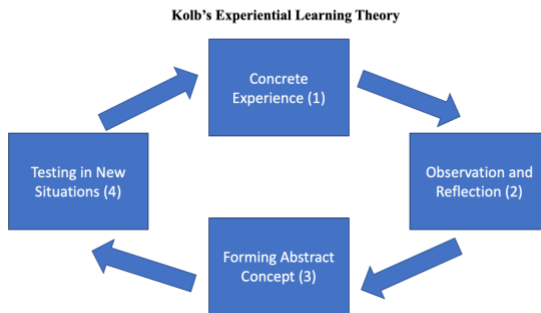
Conceptual Framework

We aimed to understand the process of how students attained new knowledge in the two courses observed using the experiential learning theory (ELT).

Hence, we were interested in using ELT to frame how the process of knowledge making was enhanced using active learning in a remote classroom during a pandemic. The framework we employed to attain this and guide this study uses the levels of experiential learning theory to establish knowledge making in an ideal academic environment for civil engineering undergraduate students (Kolb, 1984). Experiential learning theory (ELT) by Kolb is principally appropriate to this study of active student engagement (Kolb, 1984). The theory postulates that important learning happens better when students pass through a cyclical learning procedure. The process starts with knowledge from a new concrete experience like the student being shown a piece of technology, equipment, or process followed by the student reflecting on that experience and leading to the student having abstract generalizations and conceptualizations of the experience which are tested empirically, and results in another new experience (Kolb, 1984).

Figure 1

Experiential Learning Model cycle



Purpose of the Study

Engineering professors should design their lesson plans to engage their students; teachers share responsibility with students to ensure that the students assimilate the concepts of their lesson plans (Smith et al., 2005). The purpose of this mixed-methods study was to investigate the impact of active student engagement on engineering students in selected civil engineering classrooms, which was explored using experiential learning theory principles. This mixed methods study explored the presence of active student engagement pedagogy in the selected undergraduate civil engineering core courses and the nature of the students' motivation (Connor, A. et al., 2015; Hammersley & Atkinson, 2007). The researchers explored how active student engagement is utilized in the selected undergraduate civil engineering core classes at a Historically Black College/University (HBCU). We observed the emergency pedagogical adjustments used to teach a predominantly black group of engineering students. COVID-19 pandemic is the first crisis to cause a major shift of pedagogical approach from in-person to remote teaching and learning (Gelles et al., 2020). The researchers further explored fertile academic environments for undergraduate civil engineering students to be motivated in the field of civil engineering. The results of this study help inform positive teaching praxis in engineering education.

Research Question

How do undergraduate civil engineering instructors in two 12-week summer classes employ active student engagement pedagogy in teaching students online?

Methods

Participants

The participants in this study are students that enrolled and participated in the two selected undergraduate civil engineering classes in the session selected for this

study. There were 19 students enrolled in class A and 11 students in class B. During each class, observed students ranged from seven to fourteen students as shown in Table 1. The instructors of both classes were also participants in this study as they were observed and interviewed too. Instructor A had over 25 years of full- time teaching experience while Instructor B had over 30 years of full-time teaching experience. Data were not collected in the first two weeks because the instructors explained that they will be introducing the topics and no demonstrations will occur in the initial classes. The days that data were eventually collected were the days the researcher’s collecting data were available. IRB approval was obtained for gathering data from the participants in this study and students had the option to opt out of being observed.

Table 1: *Number of students that participated in each class observed for this study*

WEEK	1	2	3	4	5	6	7	8	9	10	11	12
Instructor A (n=19)	N/A	N/A	13	11	N/A	10	9	N/A	11	N/A	N/A	N/A
Instructor B (n=11)	N/A	N/A	11	11	7	9	11	11	N/A	11	10	11

Research Approach

The approach adopted for this study is a convergent parallel multiphase mixed method design (Creswell, 2013a; Creswell & Plano Clark, 2011; Gall et al., 2010). This approach was employed to answer the research question. The approach involved interviews with the instructors teaching the classes (beginning of the semester, mid-semester, and end of semester), virtual observations, followed by qualitative focus group discussions. This methodology was adopted because using qualitative and quantitative methods provided richer insight into the

phenomenon in this study (Creswell, 2015). The multiphase mixed methods design adopted allowed the researchers to collect data at several time frames, one point concurrently and at another point sequentially. The data sets were analyzed independently with the classroom observations analyzed first using pie charts to describe the results. The last data to be analyzed were the instructor interviews and the student focus group discussion using the inductive content analysis approach. DEDOOSE software was used to facilitate the coding and generating of themes from the qualitative data. The results were compared, triangulated and converged to give a holistic interpretation and findings of this study. (Creswell & Plano Clark, 2011). For example, the pie charts from the observations were used to explain some of the themes generated from the qualitative data.

Classroom Observation Protocol for Undergraduate STEM (COPUS)

The Classroom Observation Protocol for Undergraduate STEM, (COPUS) was used to observe two 12 weeklong summer courses in remote classrooms, documenting what the students and the instructors were doing in the remote classrooms (Smith et al., 2013). COPUS was selected to observe the classrooms because it was the only instrument suitable at the time data were gathered (other instruments were Reformed Teaching Observation Protocol RTOP, Teaching Dimensions Observation Protocol TDOP,) that allows the researchers to describe instructional practices taking place in the classroom without making any judgment on whether or not the practices engaged in the classroom are effective or following a particular learning style or teaching pedagogy (Smith et al., 2013). The authors were particularly interested in classes with laboratory components. The two selected courses were eventually chosen for having a laboratory component and having relatively large

enrollment for summer courses at the selected institution. The two data sources were coded separately and then themes were generated and converged. The COPUS instrument is designed to describe the instructor and student classroom actions; however, it is not intended to be linked to any external criteria (Smith et al., 2013). Thus, the major standard for validity is that observers with the proposed background (STEM teachers) see the instrument as describing the full range of normal classroom activities of STEM students and instructors (Smith et al., 2013). The instrument described classroom behaviors in two-minute intervals throughout the duration of a 50-minute class session. It does not require observers to make judgments of teaching quality, and results can be summarized in graphical forms. COPUS is limited to 25 codes in only two categories (“What the students are doing” and “What the instructor is doing”) (Smith et al., 2013). The observer, after training, observed the two remote classrooms and coded what she observed every two minutes. To determine the prevalence of codes in various remote classrooms, the codes in each category were added for each class session of all sessions observed and then divided by the total number of codes recorded that day. The results are visualized in the form of a pie chart.

The features of the protocol for this study included constructs in COPUS. For instance, during the observations, space was addressed within the context of how participants used it during the remote classroom activities/tasks. In this study, there was no limit to how COPUS was used to gather data during observations; several constructs were combined to show the complexity of the context/environment in which the participant group functioned together to learn (Smith et al., 2013). An example of this is when the instructor is lecturing and within the same two minutes is answering questions, then two codes are coded in the same time frame. When

adopting the instrument online, the researchers tried to observe similar features that students and instructors were doing in-person at the time data were gathered. For example, when students clicked the hand raise function on zoom and the instructor called on them to answer a question. This was noted as the code students asking questions (SQ). Also, listening encompasses everything else the student is doing if they are not performing any other attribute of the COPUS instrument, hence, in an online learning environment, in order to fully engage students, the percentage of listening should be drastically reduced because all other activities are observable and inclusive as active student engagement (O. Owolabi, personal communication, April 16, 2021).

Experiential Learning Theory (ELT) as employed in this study presents a holistic approach to the students' learning process; a part of the COPUS instrument presents how students spend their time in the classroom (Sternberg, & Zhang, 2001). Using ELT to view how students spend their time in the classroom helped the researchers to explore the learning process of students in the classroom and knowledge making process. Since ELT is all about students having experiential learning, using COPUS to observe classroom behavior will expose what forms of experiential learning takes place in the classroom that can lead to new knowledge making. The diagram below shows the flow of this study's convergent parallel multiphase mixed method design to simply organize the process of data collection and analysis in this study. (Attride-Stirling, 2001).

Theme Generation Process

The data used for generating themes were obtained from the three separate interviews done with the two instructors and the focus group discussion done with the seven students from both classes. Initially, about 25 themes

with some of the themes having sub-themes were identified in the coding process. Thereafter, the researchers performed a deliberate procedure of linking, refining, and defining the themes. This process also included the researchers' merging themes that were redundant or repetitive, and changing some themes into sub-themes. For example, codes like 'Virtual Lab Motivated the Students in Learning the Concepts of the Course' which was a major theme was changed to a sub-theme of 'in-person classroom preferred over remote classroom.'

Finally, the process produced a total of four parent themes with some of these themes having up to eight sub-themes. The themes generated from the qualitative data are listed below, with sample excerpts.

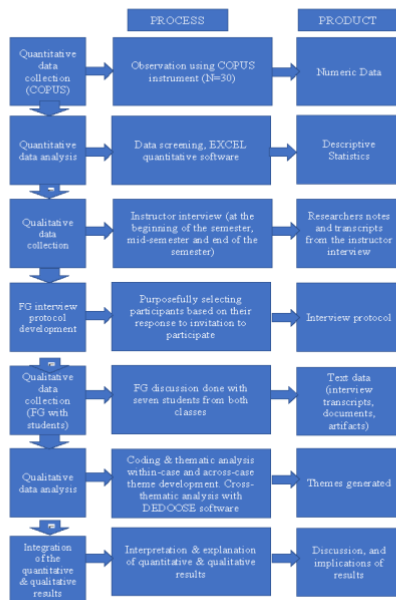


Figure 2
Methods Flow Chart

Focus Group Discussion

Given the focus of the study, focus group discussion was employed with seven students from both classes

observed using an open-ended interview protocol. According to Longhurst (2003), a semi-structured focus group discussion is a verbal interchange where one person, the interviewer, attempts to elicit information from other persons by asking questions. The aim of the researchers was to minimize influencing/interfering what was said as much as possible by facilitating an open expression of the participants' perspective of the phenomenon (Hammersley & Atkinson, 2007). The students were asked to recount specific class sessions where they did active student engagement learning. As Polkinghorne (2007) clarified, personal descriptions of life experiences may give knowledge about ignored, but significant, parts. The researchers cross checked with the participants, so they confirmed they had recorded the data accurately; this was to avoid errors in data gathering (Kivunja & Kuyini 2017). An incentive was offered for participation in the focus group discussion. The researchers raffled off one \$50 Amazon gift card for one of the seven students that participated in the focus group discussion.

Data Analysis

This study employed tables, and pie charts to describe its quantitative data. These charts were used to explore the data gathered in this study (Creswell, 2013b). Also, these measures were used in addressing this study's research question, using pie charts to summarize the observations of the selected courses. Also, we answered the research question with themes generated from the qualitative data for a meaningful analysis, the researchers created a thematic network consolidating of the qualitative data from several sources. This is done to explore and understand the significance of the phenomenon in this study (Attride-Stirling, 2001).

Inductive Qualitative Content Analysis Approach

Inductive qualitative content analysis was used to generate themes from the data of this study (Elo & Kyngas, 2008). The data were coded identifying active student engagement features that manifest from the data, labeling these sections. Descriptive labels were assigned to each unit of meaning and then analytic categories were developed. A sorting stage followed the initial coding stage, re-focusing the codes, merging them into themes. In presenting the results of this study, the researchers synthesized and streamlined the data into themes. For example, a theme titled ‘Virtual Lab Motivated the Students in Learning the Concepts of the Course’ became a sub theme instead of a major theme. The analysis of this study identified key themes in the data that described active student engagement pedagogy and the relationship among these key factors (Saldaña, 2011). The experiences of the students and instructors were analyzed. From the analysis, themes were generated to explore what happened in the undergraduate engineering remote classrooms observed. (Creswell, 2013b).

Results

Findings from this study show that one instructor utilized active student engagement approaches, while the other instructor used little to no active student engagement approach in the remote classrooms. Also, an analysis of the theme ‘Instructor Equipped to Teach using Active student engagement, but Fails to Maximize its Opportunities’, indicates that adoption of active student engagement by a university instructor is dependent on the instructor as a person. This corroborates with the findings of Shekhar & Borrego, (2017)’s study, that transferring of empirical educational research into instructors’ instructional practice has been slow, a reason for this is due to individual instructors' attitude to change. Also, the mindset of the

instructor determines adoption of an active student engagement approach, and instructors with a fixed mindset may not be open to active student engagement approaches. This also aligns with the result of Aragon et al. (2018) where they concluded that instructors with “higher fixed mindsets were less persuaded that active-learning strategies were a good idea and less likely to implement the teaching practices” (p. 1).

The two classes selected were observed in order to record what the instructor and students were doing in a 50-minute class session.

Classroom A and students A

Instructor A’s class was a structural analysis content class that had a laboratory component. The lab was introduced to the students in a class session, and the students were requested to complete the labs individually, outside of class time. Instructor A’s course was designed to give the students the ability to analyze statically determinate and statically indeterminate structures. The course was also designed for the students to learn how to apply the various classical methods of structural analysis in determining deflections, internal forces, and external support reactions for beams, trusses and frames. At the end of the session, the students were to be able to do the following:

- Define basic structural engineering terminology.
- Apply Newton's laws of force equilibrium to determine axial forces, shear forces, and bending moments in statically determinate beams, trusses, frames, arches, and cables.
- Apply calculus and the principle of virtual work determine displacement in statically determinate beams, trusses, and frames.

- Identify symmetry, antisymmetric, degrees of indeterminacy, and degrees of freedom in beams, trusses, and frames.
- Analyze statically indeterminate beams, trusses, and frames by flexibility method.
- Analyze beams, trusses, and frames by the stiffness method.
- Analyze beams and frames by moment distribution.

The pie chart and table 2 analysis below show how the students and instructors spent their time in several 50-minute class sessions. Both classes were synchronous class sessions having set time and set days for students to log on and join the virtual classroom.

Figure 3

Descriptions of the COPUS student and instructor codes.

1. Students are Doing	
L	Listening to instructor/taking notes, etc.
Ind	Individual thinking/problem solving. Only mark when an instructor explicitly asks students to think about a clicker question or another question/problem on their own.
CG	Discuss clicker question in groups of 2 or more students
WG	Working in groups on worksheet activity
OG	Other assigned group activity, such as responding to instructor question
AnQ	Student answering a question posed by the instructor with rest of class listening
SQ	Student asks question
WC	Engaged in whole class discussion by offering explanations, opinion, judgment, etc. to whole class, often facilitated by instructor
Prd	Making a prediction about the outcome of demo or experiment
SP	Presentation by student(s)
TQ	Test or quiz
W	Waiting (instructor late, working on fixing AV problems, instructor otherwise occupied, etc.)
O	Other – explain in comments
2. Instructor is Doing	
Lec	Lecturing (presenting content, deriving mathematical results, presenting a problem solution, etc.)
RtW	Real-time writing on board, doc. projector, etc. (often checked off along with Lec)
FUp	Follow-up/feedback on clicker question or activity to entire class
PQ	Posing non-clicker question to students (non-rhetorical)
CQ	Asking a clicker question (mark the entire time the instructor is using a clicker question, not just when first asked)
AnQ	Listening to and answering student questions with entire class listening
MG	Moving through class guiding ongoing student work during active learning task
1o1	One-on-one extended discussion with one or a few individuals, not paying attention to the rest of the class (can be along with MG or AnQ)
D/V	Showing or conducting a demo, experiment, simulation, video, or animation
Adm	Administration (assign homework, return tests, etc.)
W	Waiting when there is an opportunity for an instructor to be interacting with or observing/listening to student or group activities and the instructor is not doing so
O	Other – explain in comments

Table 2: *Distribution of student time in Instructor A's (excludes weeks for during which no data was collected)*

WK # (# OF STD)		% OF L	% IND	% WG	% ANQ	% SQ	% SP	TOTAL
3 (13)	13	62.5	5	5	15	12.5	0	100

4	11	59.5	4.8	0	16.7	19	0	100
6	10	67.6	0	0	8.1	24.3	0	100
7	9	69.4	0	0	25	5.6	0	100
9	11	60.9	0	7.5	19.5	9.7	2.4	100
AVG.		63.98	4.9	6.25	16.86	14.22	2.4	

Table 3: *Show how Instructor A spent their class time in five class sessions*

WK#	# STUD.	% LEC	% FUF	% PQ	% ANQ	% MG	% 101	DV	ADM	TOTAL
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	13	64.9	1.6	19	6.3	0	0	1.6	1.6	100
4	11	64.6	2.6	17.1	9.2	2.6	3.9	0	0	100
6	10	55.7	0	14.3	12.8	0	0	11.5	5.7	100
7	9	78	0	15.6	4.6	0	0	0	1.8	100

9	11	72.2	0	16.9	4.6	0	0	0	6.3	100
AV G.		67.08	2.1	16.58	37.5	2.6	3.9	6.5	3.8	

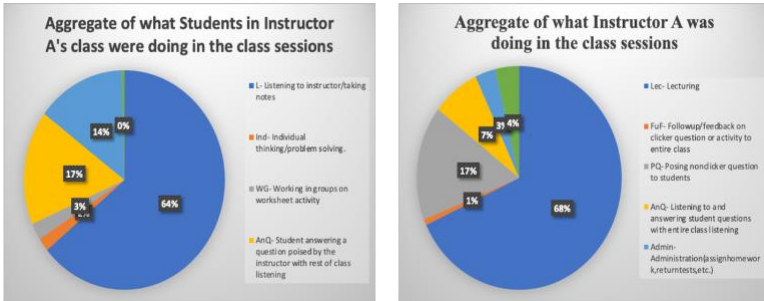


Figure 3: Aggregate percentage of what Classroom A did in five class sessions.

Classroom B and Students B

According to Instructor B's syllabus, the class was designed to introduce the students to the planning and design of elements of water treatment plants and elements of wastewater treatment plants. The course was also designed to expose the students to the design of sewers, water distribution, and system hydraulics. The laboratory for the course was designed to apply general chemistry to sanitary chemical analyses, which includes the various forms of solids, pH measurements, and salinity. Furthermore, the laboratories were designed to expose the students to the use of atomic absorption spectrophotometers. The prerequisite for the course included general chemistry for engineering students, general chemistry for engineering students laboratories, fluid mechanics, and math calculus classes. The students after the course were expected to know the following:

- Recognize the fundamental units and unit systems.
- Apply the concepts of global warming potential, carbon equivalent and carbon dioxide equivalents.
- Derive and use chemical kinetics equations.
- Apply equilibrium expressions for environmental processes such as volatilization, air-water, acid-base, oxidation-reduction, precipitation-dissolution, and sorption reactions.
- Apply the law of conservation of mass to derive mass balance for steady and unsteady state environmental processes.
- Identify the chemical reactors used in environmental processes.
- Apply the first law of thermodynamics in deriving the energy balance equation for steady state processes.
- Apply the relevant mass transport equation in environmental process.
- Define BOD, ThOD, NBOD, CBOD.
- Identify and analyze the unit operations used in water and wastewater treatment plants.

The aggregate table 4 analysis below and pie chart in figure 4 show the description of how students spent their time in Instructor B's class and how Instructor B spent his time in the classroom. Instructor B had more class sessions because the instructor had three synchronous, one hour class sessions a week. Instructor B's class was also a class with lab components. However, the Instructor performed all the labs during the class sessions as opposed to Instructor A. The instructor performed the labs by demonstrating for the students to observe. The students were not asked to perform the labs alongside the instructor; however, the students could practice on the software after

the class session. Hence, the labs were captured in the COPUS as the instructor showing a demonstration (D/V). This feature presented the opportunity for Instructor B and students B to adequately explore active student engagement which was sadly not the case. Also, it is important to note that Instructor B in an interview explained that they have over 30 years of teaching undergraduate engineering experience. It is ironic that Instructor B who performed the laboratories in the classroom had lower student engagement than Instructor A who left the students to perform their laboratory sessions outside of class time. One would expect more student engagement in the class sessions with laboratories in the class sessions. This confirms the assertions of some educational researchers who said that one of the problems of active student engagement is the students' resistance to active student engagement (Reid, 1999; Ssemakula, 2001).

Table 4: *Show how students in Instructor B's class spent their class time in nine class sessions*

W K#	#OF STUD.	% L	% IND	% WG	% ANQ	% SQ	SP	TOTA L
3	11	80	10	0	3.3	6.7	0	100
4	11	100	0	0	0	0	0	100
5	7	78.1	3.1	0	6.3	12.5	0	100
6	9	80.6	0	0	3.2	16.2	0	100
7	11	86.2	0	0	0	13.8	0	100
8	11	89.3	0	0	0	10.7	0	100
10	11	100	0	0	0	0	0	100
11	10	96.1	0	0	0	3.9	0	100
12	11	100	0	0	0	0	0	100
AV E.		90.03 3	6.55	0	4.26	10.63	0	

Table 5: Show how Instructor B spent their class time in nine class sessions

WK#	# OF STD.	% LEC	% FUF	% PQ	% ANQ	% MG	% 1O1	% DV	% ADM	TOTAL
3	11	92.6	3.8	0	1.8	0	0	0	1.8	100
4	11	94.4	0	5.6	0	0	0	0	0	100
5	7	65.6	1.5	5.9	3	0	1.5	15	7.5	100
6	9	71.6	0	1.6	8.6	0	0	16.6	1.6	100
7	11	58.7	0	3.7	7.5	0	0	28.3	1.8	100
8	11	47.5	0	1.8	1.8	0	0	45.2	3.7	100
10	11	100	0	0	0	0	0	0	0	100
11	10	48.1	0	1.3	1.3	0	0	48.1	1.3	100
12	11	92.6	0	0	0	0	0	0	7.4	100
AVE.		74.56	2.65	3.31	4.0	0	1.5	30.64	3.58	

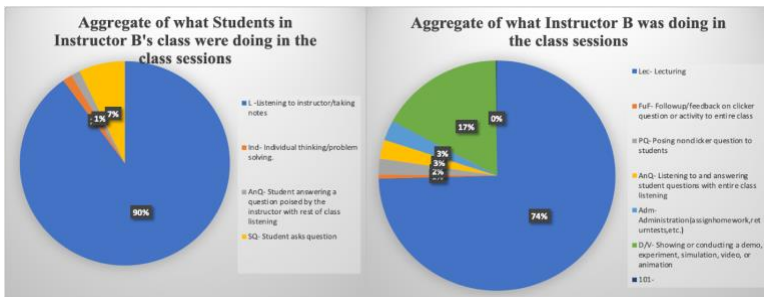


Figure 4: Aggregate percentage of what Classroom B did in nine class sessions.

Theme Discussion

There are four broad themes, with some themes having up to eight sub-themes. The themes are:

1. In-Person Classroom Preferred Over Remote Classroom
2. Instructor Equipped to Teach using Active Student Engagement, but Fail to Maximize its Opportunities
3. Students Motivated by Student-Centered session and Demotivated by Teacher-Centered Class Session
4. Students Intrinsic Motivation Drove their Motivation through the Course

The first two themes discuss the views of both instructors and students. ‘Students Motivated by Student-Centered Session and Demotivated by Teacher-Centered Class Session’ and ‘Students Intrinsic Motivation Drove their Motivation through the Course’ are specifically student themes.

In-Person Classroom Preferred Over Remote Classroom

This theme described the instructors’ and students’ views on in-person classroom and remote classroom. This theme had two sub-themes, ‘Virtual Lab Motivated the Students in Learning the Concepts of the Course’ and ‘Remote Lab cannot Fully Replace In-person Lab’. This theme is linked to the experiential learning model construct ‘observation and reflection’. The connection is made from how face-to-face classrooms enhance the students’ observational and reflection skills. In a face-to-face classroom, students can physically see object lesson items which will in turn encourage observation and reflection of the object lesson. In this theme, the instructor explained that active student engagement thrives in a face-to-face classroom model. The instructors said they preferred a face-to-face teaching style rather than remote teaching online. The instructors described how face to face class sessions motivate the students to learn more on the concepts taught in a face-to-

face classroom than in a remote classroom. Sample excerpts from teachers in this theme are:

“I would definitely prefer to have one face-to-face, especially for undergrad. . . . Of course, face-to-face is easier like for exams and online is just crazy”

“But right now I can say about the labs. Okay? The fluid mechanics labs are basically physically hands-on labs. You have to work with water you have to work with pipes you have to work with and there’s no there’s no shortcut to physically doing all the experiments physically handling all the equipment and it cannot be done like bio or chemistry labs or computer labs, which can be done online or virtually”

A student said:

“but I guess just doing the simulations helped us seeing like, see, visualize it better than he would express it in lecture. But since we weren't able to physically do the labs like in person, I don't think we really got the full effect.”

Instructor Equipped to Teach using Active Student Engagement, but Fails to Maximize its Opportunities

In this theme, the instructors describe how they believe in active student engagement and are equipped to teach with active student engagement pedagogy. However, the instructors failed to maximize opportunities of active student engagement activities in their remote classrooms. This was evident in the pie charts from the classroom observations. Two sub-themes for this theme are ‘Instructors Challenges Using Active Student Engagement Pedagogy in Remote Classroom’ and ‘Limited Class Time Impedes Instructors Adoption of Student-Centered Pedagogy’. This theme is linked to the first stage of the ELT cycle ‘Concrete Experience’. The instructors failed to

maximize the opportunities of providing concrete information to the students using active teaching approaches so that the students can attain new knowledge. Although qualitative data from the first interview with the instructors revealed that the instructors had knowledge of a student-centered classroom, the instructors failed to maximize active teaching opportunities. The instructors attended active student engagement pedagogy workshops prior to teaching the classes and they were taught how to teach a student-centered course. In this theme, the instructors described how they will use active student engagement pedagogy in teaching from the first interview, and that they believe students gain more when the classroom environment is a student-centered one, where the students learn by doing and experiencing the concepts of the class firsthand. It was interesting to note that instructor B acknowledged that he attended an active student engagement pedagogy workshop prior to starting the semester but failed to maximize active student engagement opportunities. A student's excerpt to this theme is "I would say it was mainly PowerPoint, there were a lot of PowerPoint slides." Sample excerpts of the instructor's experience of the theme are: "Yes, I attended a workshop about designing the online course for Canvas and also how to conduct the class using Zoom." The second Instructor also said "Yeah, I did before the start taking this class teaching this course, I attended the online teaching, I had to take the course. So I had to. It was helpful because the module, I didn't honestly know how to prepare the module." However, from the observation results of the pie charts, the teachers had teacher-centered classroom sessions.

Students Motivated by Student-Centered session and Demotivated by Teacher-Centered Class Session

The students in this theme described how active student engagement classrooms motivated them in their learning process. The students further described how teacher-centered classrooms demotivated them. This theme had eight sub-themes; they are: ‘assignment-heavy course,’ ‘unsympathetic professor,’ ‘instructor reads slides only,’ ‘no active student engagement approach,’ ‘lack of teamwork activities,’ ‘teaching pedagogy demotivates,’ ‘pandemic pressure affects motivation,’ and ‘no review or study area guide prior to exam.’ This theme is connected with the constructivist learning model construct ‘concrete experience. The connection of the theme to ‘concrete experience’ is evident when the instructors fail to utilize active student engagement tasks to teach the students the concepts of the course, limiting the students’ exposure to concrete experiences. Instructors in this theme described their class session as more content-driven and more assignments given to students while the students described the class sessions as content driven, heavy assignments sessions as demotivating them to learn the concepts in the course. An excerpt of what an instructor said about this theme is: “I gave them almost I can say a very big in scope big project because I want to push them to learn one software structure analysis software.” A student said: “nothing from this class really motivated me to do much or to pursue or further civil engineering.” Another student said: “And he didn't like, influence my decisions or anything for this class didn't to influence my decision to continue as civil engineer.” The excerpts of this theme described the classroom sessions as teacher-centered classrooms that demotivated the students. More excerpts is a student saying, “Flat rate, he didn't use or teach the labs in class.” Another student corroborated that saying: “[the professor was] talking more closely to the theory and less

to how it applies to things.” A student also said an instructor gave: “six assignments in the span of one and a half weeks.” Another student said: “[the professor] would just go from chapter to chapter just reading off slides, you know.”

Students Intrinsic Motivation Drove their Motivation through the Course

This theme described the students' experiences through the course where they described their motivation as self-driven. Findings of this study showed that in the observed remote classes, students' levels of intrinsic motivation drove the students' learning pace. This means that students with high levels of intrinsic motivation take charge of their learning process to achieve success in the classes. In this theme, students took charge of their learning process by seeking external instructors (YouTube) to learn from. This theme is linked to the constructivist learning model construct 'forming abstract concepts.' The connection of this theme to the construct is apparent when students seek external materials to learn the concepts of the course; doing this means the students took control of their learning process to get the knowledge needed for the course. This theme further describes how recorded sessions and YouTube videos were a go to resource for the students to get answers to their questions. In this theme, the students described how they got answers to their questions from the remote classroom sessions, from other YouTube tutors during homework sessions, and how some of them go back to the recorded session of their instructors. The instructors also corroborated this saying the students requested for the class recorded sessions. A sample excerpt of this theme is a student saying: “well, for me personally, I didn't feel like I could really learn much from the teacher; most of my information was coming from other sources.”

Students Intrinsic Motivation Drove their Motivation through the Course theme showed that the

students' innate motivation drove their knowledge making process. Other excerpts of this theme are as follows: "Guess I do end up doing a lot of my learning, I guess through my homework and stuff like that through self-exploration." Another student said: "We pretty much had to figure everything out in our own time doing our homework assignments, or reviewing notes, lectures, whatever on our own." When asked why the students did not ask questions during the class sessions, a student said: "I guess I am somebody that can do a lot of things like periodic studying, where I'll study for a bit and then go do something else and think about it for a while." Another student said: "I'm kind of motivating myself. I honestly motivated myself the entire time" and another student said "no, it was all on me basically." A student also said, "I think all of those things are on us if we really want to do it or stick with it. The students' intrinsic motivation drove them to seek knowledge in external recorded contents. The students' drive to seek external content was to add more knowledge to what they already knew or to answer questions they had from the class sessions.

Advancing Experiential Learning Cycle in a Remote Classroom

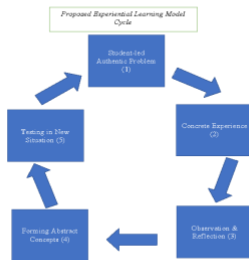
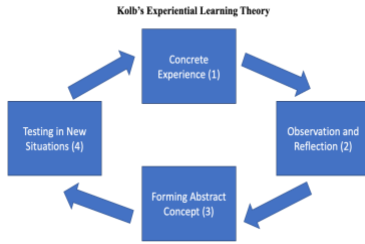
Although Kolb and Fry (1975) suggested that the learning process can start from any point in the experiential learning cycle, they suggest that for optimal learning to happen, the process should start with 'concrete experience.' The findings of this study suggest approaches that will encourage students' engagement which may in turn lead to a student-centered environment in a remote classroom. The researchers of this study propose a new first step in the cycle of experiential learning theory. One of the findings of this study is that students were demotivated by the class sessions because the instructor read more slides than employing active student engagement tools to teach the

concepts. In all the class sessions, the instructor opened the class with slide presentations explaining the concept to be taught in that class session, thereby setting the classroom environment to a teacher-centered classroom. The researchers in this study are proposing a first step in the experiential learning cycle to precede the ‘concrete experience’ with a starting phase ‘student-led authentic problem/task.’ This will be a student-led phase that will set the agenda of the classroom environment to a student-centered environment where the students start the class with an authentic problem/task. Prior to the class session, the instructor would send the students a short video on the concept to be taught for the students to watch and come to class with authentic problem questions to open the class session. This approach is similar to a flipped classroom and problem-based learning. The important emphasis in this particular approach is that the students open the class session with authentic problems and not the instructor giving an authentic problem. The data from this study show that in an online environment, the instructor starting with the ‘concrete experience’ phase with lectures and slides turned the sessions into teacher-centered sessions making the class session ‘slide controlled’ and ‘boring’ to the students. Another theme from this study (Students’ Intrinsic Motivation Drove their Motivation in the Course) supports the students doing prior research on the concept. Most of the students said that after class they went on YouTube/recorded class sessions to find out more on the class sessions that they did not understand from the instructors teaching. Instead of the students going to search for resources after the class session, the instructor will send resources ahead of class for the students to read and come to class to open the class with an authentic problem. This first phase will make the students take immediate charge of the class session and encourage peer learning amongst the

students. (Vygotsky, 1978). See figure below for proposed constructivist learning model.

Figure 4

Old and Proposed Experiential Learning Model Cycle



Discussion

The aggregate results of what both Instructors A, and Instructor B did in their class sessions show teacher-centered instructional strategies. Also, the aggregate results of what Students A and students B did in their class sessions shows passive student engagement. The data of this study further revealed that the students' engagement to stay motivated in the class was intrinsic as they were discouraged by the slide heavy class sessions. Although,

students in Instructor A's class showed more active student engagement in their class sessions than students in Instructor B's class. As noted earlier, both instructors have been teaching undergraduate engineering for over 20 years. Also, in an interview, both instructors said they attended the active student engagement workshop provided for the instructors in the HBCU civil engineering department where this study took place. This was the only active student engagement workshop they had ever attended. Although organizations like National Effective Teaching Institute (ASEE) and the Excellence in Civil Engineering Education (ExCEED) organize several professional developments for civil engineering instructors, some instructors do not have access to these programs due to limited institutional professional funds. Some institutions continue to rely on training from Centers of Teaching and Learning or occasional external speakers and institutional resources for training instructors on active student engagements.

The results from this study highlight the use of active student engagement in the undergraduate civil engineering classrooms observed. While analyzing all the different types of data gathered, the authors believe the data indicate that active student engagement is a pedagogy that can be employed in undergraduate civil engineering education to increase the student's active engagement. This can also increase engagement in the classroom, by encouraging peer to peer students' engagement, this will encourage instructors to consider more extensive student engagement activities in the classroom. Furthermore, the descriptive figures of the findings of this study are evident in the descriptive COPUS pie chart analysis given in the appendix section of this paper below, as most of the pie charts showed instructors had more lecture content than active student engagement activities. According to Smith et al. (2013) lecturing (Lec) student code is the most

indicative code for passive student behavior in response to the faculty lecturing (“Lec”) with or without real-time writing (“RtW”). However, the level of activity increased in class sessions with remote class laboratory sessions. Nevertheless, this analysis brings up the question, how much active student engagement in an undergraduate civil engineering class session is enough active student engagement?

Recommendations for effective remote active-learning classroom

As discussed in the introduction that active student engagement is important for successful teaching and learning irrespective of the delivery approach, we established that active student engagement is challenging in a remote setting. Going forward, depending on how the on-going pandemic plays out and how higher education institutions adapt to the pandemic, there are possibilities of continued remote /hybrid learning. Also, there are possibilities of keeping some of the active student engagement activities used remotely through post pandemic. Universities will see benefits in remote learning as opportunities in response to crisis situations, and remote learning may be an option. Hence, to encourage an active student engagement approach in remote classrooms, the instructor should incorporate several active student engagement activities (Chao et al., 2015). There are several remote learning tools and applications like polling apps, asking questions and getting answer applications, plus reading apps and group messaging applications that help the students to share, solve problems and collaborate together. The instructors will have to learn how to use these applications and be creative in adapting them in their remote classrooms. The only important thing for the instructors is to be consistent with the platform and

applications they adopt so the students know where/how to go about the applications.

Conclusions

Classes observed were teacher-centered, which demotivated the students. This result helps inform undergraduate engineering teaching practices; we further provided some recommendations to encourage student engagement in engineering remote classrooms (Emiola-Owolabi, 2021). Engineering instructors should always find time to design student-centered activities in their classroom. It may also benefit engineering instructors to attend active learning workshops or professional development (Smith et al., 2013). Additionally, educational administrators should establish engineering school departmental active learning pedagogy workshops for students and their instructors. Several opportunities abound to encourage engineering students' collaboration remotely for example, students can present projects by sharing their screens and use google docs to collaborate on projects, and instructors can learn how to use active learning ideas like the breakout on Zoom and other platforms. Importantly, college educational administrators should establish effective periodic classroom observations of undergraduate engineering instructors' classrooms to measure the active learning methods employed by instructors.

Implications for Future Study

For further research, our recommendations include exploring how to increase instructors' and students' acceptance of active learning approaches in undergraduate civil engineering remote classrooms. Also, it is crucial to investigate the dynamics between the importance of content/concept teaching and having a student-centered classroom (Emiola-Owolabi, 2021). Besides, there should be more investigation on the impact of active learning

pedagogies on remote large structured undergraduate civil engineering class sessions, that will improve online and in-person classroom student engagement. Furthermore, researchers should explore the application of active learning pedagogies on other undergraduate engineering classes and to investigate how active learning pedagogy is successful with specific instructors' and students' undergraduate engineering in other engineering courses. Also, more research is suggested to explore the effect/influence of active-learning instructional pedagogies on encouraging undergraduate engineering students to enroll in more engineering classes, to consider a major in engineering, and continue in engineering programs. Finally, as the engineering education society works to deliver ways of improving the undergraduate engineering course experience for undergraduate students, to decrease attrition in engineering students' majors and to graduate more engineers, further attention to the active learning approach is necessary in realizing these goals (Emiola-Owolabi, 2021).

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Author's Bio

Dr. Olushola Emiola-Owolabi received her first and second degrees in mass communication. Olushola had her PhD in Advanced Studies, Leadership and Policy. She is currently an eFellows postdoctoral researcher at Morgan State University. Her research interests are in engineering pedagogy research, exploring active learning in engineering classrooms and specializing in mixed-methods research on teaching and learning – particularly in remote synchronous learning environments.

Email - olemi2@morgan.edu

Prof. Jumoke Ladeji-Osias, National Science Foundation
ORCID ID: 0000-0002-8645-696X

Prof.. J. 'Kemi Ladeji-Osias is a Program Director, Engineering Education Program Director, Engineering Education National Science Foundation (NSF). Dr. Ladeji-Osias earned a B.S. in electrical engineering from the University of Maryland, College Park and a joint Ph.D. in biomedical engineering from Rutgers University and UMDNJ.

Dr. Ladeji-Osias's involvement in engineering curricular innovations includes adapting portable laboratory instrumentation into experiments from multiple STEM disciplines. She enjoys observing the intellectual and professional growth in students as they prepare for engineering careers.

Dr. Sekayi's career in education began with teaching mathematics and science to elementary students at the Nile Valley Shule; an independent, African-centered school in Buffalo, New York. She earned a Ph.D. in the Social Foundations of Education with foci on qualitative research and the sociology of education from the State University of New York at Buffalo in 1996. Since then, she has held multiple full-time faculty positions, each with a focus on doctoral education.

Dr. Sekayi joined Morgan State University as an Associate Professor in the School of Education and Urban Studies in 2016 to continue her work with doctoral students. She has made regional, national, and international presentations and published books, articles, and book chapters in the social foundations of education and qualitative research. Her current research focuses on the intersections of intellectual humility and doctoral education.

Prof. Olusola O. Adesope, is professor and coordinator of the educational psychology program in the Department of Educational Leadership, Sports Studies, and Educational/ Counseling Psychology, Washington State University. His research is at the intersection of educational psychology, learning sciences, and instructional design and technology. His recent research focuses on the cognitive and pedagogical underpinnings of learning with computer-based multimedia resources, knowledge representation through interactive concept maps, meta-analysis of empirical research, and advancing learning, instructional principles and assessments in science, technology, engineering, and mathematics.

**Learners' Perspectives on Gender Inclusive Practices in
Teacher Education: A case study from a Nepali
University**

**Lina Gurung
Bhawana Shrestha
Roshani Rajbanshi**

Kathmandu University, Kathmandu, Nepal

ABSTRACT

Even though universities advocate for gender inclusiveness, when it comes to giving equal value to female teachers, the university lags. Female teachers have been in the academia for decades; however, female teachers are not given equal space and reward in academia in most countries, Nepal being one of them. This study explores gender-inclusive practices of a university from the learners' perspectives, which is a neglected topic in the universities. It aims to identify the status of the inclusion of gender in curriculum content, pedagogical practices, assessment and research activities, and organizational provisions from students' perspectives in the curriculum. The data were collected from the 2016 to 2019 batch of students from three

different graduate programs through surveys, interviews, and focus group discussions. The data was analyzed to describe the current situation of gender inclusion in content, pedagogy, assessment and research and organizational provisions. Usually, there are discussions regarding gender in universities, it is likely that the discussions are not in-depth for the learners to question their status quo. In line with this thought, the students mentioned that faculty members should bring gender discussion in the classroom and should take it seriously so that the discourse not only contribute towards the gender responsiveness but also based on the discourse, the institution or the university equally value and give space to the voice of the female, may it be the faculty or the student. The study concluded that research, especially the ones that keeps female teachers in the centre are necessary so as to shed light on gender related topics and action to be taken based on gender inclusiveness.

Keywords: Perspective, gender inclusive, teacher education, curriculum practices

Introduction

Education has to address socio-cultural and political factors and consider what is being taught and by whom the students are being taught in the postmodern era (Slattery, 2013). Inclusion in education means an individual's right to belong and participate in the educational system without any negotiation. The barriers perceived on the basis of gender have resulted in differences in the treatment of the students both inside and outside the classroom. One can understand the interdisciplinary nature of gender, the affluence of the domain, and the diversity of approaches by just taking a quick tour of various theoretical perspectives on gender mentions (Grunberg, 2010). However, the inability to understand its sensitivity in itself has become a barrier to inclusive education.

Gender inclusion goes beyond increasing girls'/women's participation in the teaching-learning process. Gender inclusion involves providing equal opportunities, advantages, and outcomes for all. It helps to identify different barriers for different genders to access quality outcomes in learning and bridging the gender gaps by ensuring that the teaching-learning process is designed and delivered in ways that will allow all the learners to participate equally and achieve learning outcomes, and access further study, employment opportunities and better well-beings. Due to gender hierarchical influence in the society (Morris, 2016), higher education also filters the curriculum and sees it with patriarchal eyes without question.

Gender, being a social construct, is in constant change. Women have been able to achieve a lot in terms of equality in relation to higher education, and research shows that gender-based inequality is still a topic that needs further work (Matus-Betancourt et al., 2018). Apart from the uneven distribution of women across various fields, gender-based bullying, sexual assault, and violence are still there. In this scenario, teaching and learning in higher education institutions are very important in shaping the social attitudes of students towards gender (Khan, 2015). Moreover, how the teacher treats the course from gender perspectives is equally important. However, most of the teachers are unaware of it (Mluma et al., 2005) rather than being intentional in reinforcing the gender stereotypes.

The persistent gender inequality in the higher institution needs to be unveiled. The integration of gender is one of the key components to ensure equity (Grunberg, 2010) and inclusion, particularly in Master's Level programs and other curricular activities. However, the hegemony of content is customary in higher institutions neglecting gender. With the increase in access to higher education, the idea that inclusion is no more concern is

rising. Meanwhile, inclusion in education takes into consideration not only the access and the participation, but it also includes the curricula, the teaching-learning methodologies, as well as assessment procedures, and the agency to both the teachers and the learners. Therefore, gender inclusion should be considered in the curriculum.

The rationale of this study is to understand gender inclusion in the curriculum from the students' perspectives and inform the reader about how to make gender-responsive curriculum. The students' experiences show whether the integration of gender is adequate or missing and how gender integration can be improved. So, this study explores whether one of the top universities of Nepal has applied gender-inclusive practices from the students' perspectives or is embracing the traditional norms. For this, the case of Kathmandu University, School of Education has been taken. Realizing the significance of the inclusion of gender in the teacher education program, the study aims to identify the status of inclusion of gender in curriculum content, pedagogical practices, assessment and research activities, and organizational provisions. In addition, by investigating the gender inclusiveness in the curriculum, this study addresses SDG goal 4 to ensure inclusive and equitable quality education and goal 5 to ensure gender equality and empower all women and girls (Desa, 2016).

Through mixed method, this study collected data from students through surveys, interviews and focus group discussions. Through the data, this study analyzed the current situation of gender in content, pedagogy, assessment and research and in organizational provisions. This study found out that universities are content-focused and inclusion of gender in the content is minimal, and the organizational provision needs to be gender sensitive. The study also implies that the universities need to break the normalcy of traditional concepts and be gender responsive

in the university by valuing the females' voices and participation.

Methodology

This study applied sequential mixed-method research, which included quantitative and qualitative methods to collect numeric data using structured questionnaires and narrative text data through focused group discussions (FGDs). The quantitative survey method was done to collect factual data about the inclusion of gender in the curriculum and the pedagogy. At the same time, FGDs were taken to collect the narrative expressions of students about their feelings, experiences, and perspectives about the inclusion of gender in their teaching-learning process as well as their personal lives (Patton, 2002).

The research design layouts the ways to arrange, collect and analyze the research in a way that meets the purpose (Sileyew, 2019). The questions were set to allow the researcher to capture the students' perspectives on how gender was included in the current teacher education program and the pedagogy. The study followed the descriptive research design that utilized the data gathered from the structured questionnaire method. The survey form was sent to three hundred and four students of four different courses from 2017 to 2020 batches of Kathmandu University, School of Education, one of Nepal's top universities. The teacher education graduate program is in four areas: English Language Teaching (ELT), Mathematics Education, Leadership and Management, and Master's in Sustainable Development.

Only 106 students filled the survey, out of which 56.6% were from male students and 43.4% were from female students. There were a maximum number of respondents (35.8%) from Master's in Sustainable Development (MSD), and this was followed by

Mathematics Education (24.5%), Leadership and Management (21.7%) and English Language Teaching (17.9%). For qualitative inquiry, four FGDs were conducted department-wise, and each FGDs had 3 –5 participants. After the quantitative data was analyzed, the qualitative investigations were carried out.

The ethical aspect of the research was emphasized in every research step from the beginning to the end of the research process. The students' values and inputs were significant in understanding the researched topic. The respondents' confidentiality was maintained throughout the study. The respondents were not discriminated against their caste, gender, and ethnicity.

Findings

Through qualitative and quantitative data, this study found some gender practices of universities which are provided below.

Gender Practices in Universities

This research highlights a few gender practices in universities such as gender inclusive pedagogical practices, research and assessment in gender, gender inclusiveness in organization which are described in detail below.

Gender Inclusive Pedagogical Practices. In the survey, 92.4% of the students perceived that gender inclusion is very important in their program, 3.7% said they don't know, and 3.7% felt that gender inclusion is unimportant. So most of the students believed in the relevance and importance of gender inclusion in their program and courses. Likewise, 47% of the students reported that there were gender-related content in their courses, while 53% said there were not. However, when they were asked if there were gender-related issues discussed in the classroom, 84% reported yes, and 16% said no. Therefore, even if

there were no gender-inclusive contents in the courses, the teachers could bring the gender discussion in the classroom. It could be included during illustrations and group discussion as a cross-cutting theme. Out of various courses listed by the students it was found that 8.44 % of the Master in Sustainable Development courses, 5.28 % of the ELT courses, 3.17 % of the Leadership and Management courses, and only 2.11% of the courses in Mathematics Education included gender issues for classroom discussion.

In addition to the survey, the gender revelation in the content was also done through FGD. In FGD, one of the students (Student 1, FGD1) of the ELT department mentioned that *gender was not a part of the content in our class. Whatever I gained knowledge on gender, it was because of self-study. Those who did their self-study, they came to know about it, and those who did not, they missed it. Teachers did not make it compulsory and we also did not take it seriously.*” Another student shared on similar lines, *“I did not find any gender-related content in my course. In my first semester, there was a topic on which the tutor superficially touched some aspects. However, the topic was more in line with females not being considered good in Mathematics as they cannot go deep into Mathematics”* (Student 1, FGD 4). Adding on to that, another participant, also from the Mathematics department shared, *“In other subjects, gender can be incorporated, but in math, it has to be content-based. In the case of Math, the CRP teaching method needs to be followed, which should be innovative and creative”* (Student 2, FGD 4). Another participant also highlighted, *“My topic is Ethnomathematics, and I did my thesis in Ethnomathematics. In this process, I read dissertations by female students of Kathmandu University itself. Maybe because my topic could be related to gender, I found plenty of articles by female scholars. But in the course itself, the articles provided by the teachers used to*

be less from female scholars and more from male scholars. But in the case of the dissertation, I found many dissertations written by female students. So why not bring that into the course contents” (Student 3, FGD 3).

The next component of the survey and FGD was a discussion on gender. In an in-depth interview, one of the respondents in her second semester from the Educational Leadership and Management department mentioned that the female students always initiated discussions related to gender. The student said, *“the number of female students is higher than male students in our classroom. Therefore, directly or indirectly, the teachers are forced to bring women’s perspectives as women themselves start sharing their experiences. However, I haven’t heard of or got enrolled in any courses that are explicitly related to gender” (Student 2, FGD 1).*

A participant of FGD from Mathematics Education stated, *“On women’s day, our teacher told us about the first female mathematician and shared about her struggle. Also, in this pandemic, I attended many seminars, and so far I found talks by only two female mathematicians. That was very disappointing” (Student 3, FGD 4).*

Gender Inclusive Pedagogical Practices.

A teacher’s attitude is vital with regards to fostering the environment of gender discussion in the classroom whenever necessary and relevant. If the teacher is quite democratic and encourages students to put their views in the classroom for healthy discussion, the female students will probably feel more comfortable bringing more gender issues on the table. In the survey, majority of the students (83.8%) reported that they feel comfortable in sharing their ideas with their teachers. Likewise, they found teachers quite liberal in welcoming their views (78.5%) and valuing each student’s opinion in the class (92.2%). But in regard to discussing critical gender issues, the number has reduced to

65.7 percent. Only 53.1 percent of the students said that their teacher reflects on gender-sensitive topics, while 39 percent said sometimes and 7.6 percent said the teacher never does. More than half of the respondents reported that their teachers neither showed any kind of gender discrimination in the class (59.9 %) nor reinforced gender stereotypes while teaching (55.2%). Similarly, a majority (83%) of them said that their teachers used gender-neutral languages in the classroom.

Table 1: Teacher’s attitude in classroom discussion

Student’s Perspective	Never	Some times	Often	Total (%)
I feel comfortable in sharing my ideas with my teachers	2.9	13.3	83.9	100.0
Teacher welcomed alternative ideas in the class	1.0	20.0	78.5	100.0
Teacher equally valued every student’s opinion in the class	2.9	9.5	92.2	100.0
I was encouraged to discuss critically on gender issues	8.6	25.7	65.7	100.0
Teachers reflect on gender-sensitive issues	7.6	39.0	53.1	100.0
Teachers didn’t show gender-based discrimination	27.6	12.4	59.9	100.0
Teachers didn’t reinforce gender stereotypes during teaching	28.6	16.2	55.2	100.0
Teachers used gender-neutral languages in the classroom.	3.8	17.1	83.0	100.0

(Source: Survey Report, 2021)

Upon some serious reflection on this issue during the FGD and the in-depth interview, the students shared that the reason behind the students feeling uncomfortable sharing or discussing gender in their classroom was because of the fewer female faculties.

A student from the ELT department shared on the same lines, *“There was only one female teacher. I did not see any significant difference in teaching between male and female teachers, but I experienced one significant difference. Unlike male teachers, she used to begin class with social interaction and then move towards content. I personally felt comfortable to share my experience that enhanced our relationship”* (Student 3, FGD 1). Only 17.1 % of the respondents mentioned that their teachers reflected on gender-sensitive issues in the classroom.

Similarly, one of the other participants on the FGD from ELT department shared *“those who design courses that influence the learning resources and the discussions related to it. KUSOED advocates gender equality, but there is no gender balance in practice yet. In faculty, male members are higher in number than females. Gender sensitivity is lacking in the learning resources and discussion because of the minority of female faculty members”* (Student 2, FGD 1). Meanwhile, 36.2 % of the students who participated in the survey often had teachers who reflected on gender-sensitive issues, 39 % of them had teachers who sometimes did that and 7.6 % mentioned that their teachers never reflected on the issues sensitive to gender. A very serious revelation was made by one of the participants from the Sustainable Development department in relation to their gender sensitivity, *“Overall all, the teachers who taught me in the university, they are gender-sensitive but oversensitive. There was some skeptical viewpoints. Rather than being gender-sensitive, I think they are over-sensitive for being called insensitive. When I went to talk with those teachers personally, I did not find them to be gender-sensitive. There are some teachers who have embraced gender in their personal life, but there are also some faculties who just pretend to be gender-sensitive”* (Student 2, FGD 3).

According to a student who participated in the in-depth interview from the Leadership and Management department mentioned, *“There were more male teachers than female teachers. We had only one female teacher but I never felt any kind of gender discrimination or anything as such from male teachers as well”* (Student 4, FGD 3). Similarly, another student shared, *“I did not experience any difference between male and female teachers’ behavior. But I experienced domination by my male classmates as they used to debate with us and make us feel bad. They used to bring examples and tried to prove that males are superior to the female. Teachers tried to convince them”* (Student 5, FGD 2). Similarly, 46.7 % of the respondent’s ‘most often’ felt that their teachers used gender-neutral languages in the classrooms, 32.4 % felt so often, 17.1 % felt so sometimes, and 3.8 % of them never felt their teachers used gender-neutral languages.

Gender in Research and Assessments. Five yes/no questions were asked to understand how research has been incorporating the components related to gender (Table 2). In the first question, if the teacher encouraged them to carry out the thesis or research paper on gender issues, 44.8 % of the respondents answered positive while 55.2 % of them answered ‘No’. Similarly, 65.7 % of the respondents answered ‘No’ to the second question that asked if any issues related to gender were discussed in their paper while writing their thesis. However, around half of the students that are 50.2 % of the respondents have done some kind of research projects related to gender in their assignments. The fourth question revealed that 5.7 % of them actually wanted to do research on gender but their proposals were rejected by their teachers. In the final question if the respondents received any research grant for doing gender-related research 15.2 % of the respondents answered ‘yes’.

Table 2: Integration of Gender in Research Activities

Student’s Perspective	Yes	No
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	(%)	(%)
Did your teacher encourage you to carry your thesis or research paper on gender issues?	44.8	55.2
Was there any issue/s you analyzed or discussed within your research paper/thesis related to gender?	34.3	65.7
Did you do any research projects related to gender in any of your assignments?	50.5	49.5
Did you ever write your research proposal on the gender issue and was rejected by the teacher?	5.7	94.3
Did you ever receive any research grant for writing a research paper/thesis?	15.2	84.8

(Source: Survey Report, 2021)

One of the participants from the Masters in Sustainable Development shared her bitter experience regarding how her research interest on gender got discarded from the faculty. She shared, *“When I was in the third semester, I wanted to write about single women. I was told that I was from the ECD sector, so I had to write about child education. My assignment was rejected. So I feel, the teacher tried to impose the topic they are more familiar with. They bound you with their field of expertise and do not let you explore beyond. I felt, few teachers have that kind of mentality. There are few teachers who support in gender issues for research; however, there are also some who completely deny the idea”* (Student 4, FGD 2).

Similarly, gender inclusion and sensitiveness can be measured through the assessment in the course work. There are different activities for the in-semester and end semester assessment, like presentations, essays, group work, review, projects, and group work. During these activities, the students might bring the issues of gender.

Table 3: Integration of Gender in Assessments

Student's Perspective	Never	Some times	Often	Total (%)
I was allowed to make a presentation on gender issues	29.5	24.8	26.7	100.0
I was allowed to related my assigned tasks with gender related issues	24.8	21.9	53.3	100.0
There was no discrimination in grades based on the gender	4.8	13.3	83.0	100.0
The teacher avoided sexist languages during feedbacks	15.2	10.5	74.3	100.0

(Source: Survey Report, 2021)

The survey revealed how the gender aspects had not been given much emphasis in its assessment process. It is not positive when 29.5 percent of the students felt that they were not allowed to make classroom presentations on gender issues while 26.7 said they often were allowed and 24.8 percent said 'sometimes'. More than half of the students (53.3 %) stated that they had discussed gender-related issues in their assignments and there was no objection from their teachers. Students reported that sometimes their teacher had been biased in grading the assignments . When asked the same concern in the survey, the majority of the students (83%) did not feel such biases. About three-fourth of them (74.3%) believed that their teacher avoided sexist language while providing comments or feedback on their assignment. Nevertheless, about 15.2 percent of the students felt such sexist language used by their teacher during their course work. Though this number is less, it is still crucial.

The importance of the assignment related to gender was highlighted by one of our participants from the MSD

by sharing one of the classroom experiences in our FGD, *“We, each had to take one SDG goal and present in the class. One of our friends presented on gender. The presenter related the other 16 SDG goals to the gender perspective. It was an eye-opening presentation so I want to emphasize gender not as a separate subject but it should be included in all other subjects even in the form of some projects or assignments”* (Student 1, FGD 2). Some male students shared that the female students were provided flexibility in the deadline considering their specific needs. One of them from Educational Leadership and Management claimed, *“In my observation, female students were provided extra time to complete their assignments given their extra chores and challenges at home”* (Student 2, FGD 4). While the female students from the same department argued, the flexibility is not enough, especially in the cases when the teaching-learning process is online. She argued, *“I have experienced that studying from home. As you can see, I was around 15 minutes late for this conversation because I was busy cooking dinner and I have realized all of our female classmates share the same feeling given that we have to cook on the background even when the class is running. So these things have to be considered”* (Student 1, FGD 4).

Gender Inclusion in Organizational Provision. When it comes to the organizational provisions, the gender representation of the students in the classroom is an important measure. In the survey, 88.6 percent of the respondents reported that there were no equal number of male and female students in the classroom while 11.4 percent said there were gender representation. Women’s participation in higher education is a means to address gender parity issues (Khan, 2015). In fact all the four programs in Kathmandu University, School of Education had no similar gender balance in the class. The English

Language Teaching program had an encouraging number of female students in the program while it was quite very less in the Mathematics Education program. A participant of FGD from the Mathematics department shared, *“If we see the proportion of female versus male in higher education that determines the availability of learning resources and opportunities for female mathematicians. But unfortunately, we had very few female students in our batch. The ratio was 1:15”* (Student 4, FGD 4).

The survey revealed that only one female teacher taught the respondents throughout their programs. The case was almost the same in three programs, while the female faculty was completely missing in Mathematics Education. In organizational provision, it is vital that the university needs to introduce gender-friendly provisions within its system such as scholarships to needy female students, research grants, gender-friendly premises, and recruitment of female faculties. 50.5 percent of the respondents expressed that the university had gender-friendly provisions, while the other half (49.5%) didn't agree. One of the students from Education Leadership and Management mentioned, *“I feel highly motivated when a female faculty teaches. I look at female faculty and feel encouraged to teach like them. There are issues related to our babies and families that I, being a married woman, feel comfortable sharing with female teachers more easily than with male teachers”* (Student 3, FGD 2).

However, there weren't many gender-friendly provisions from the organizational side as well to bring in more female students. *“I guess this is one area where KUSOED can work. I don't know much but I had heard of an incident where one of our female friends was facing a problem. I don't know if it was a family problem or a financial problem. She was asking about scholarships in the college library to her friend. She was sharing not just as a female but also being someone from outside of the*

Kathmandu valley, she deserves to have some kind of scholarship. I think she dropped out later because I didn't see her in our other semesters"(Student 3, FGD 3). This was shared by one of the students from the Leadership and Management department in our in-depth interview.

49.5 % of respondents felt that the university had some forms of provisions for the female students like scholarships for female students in Mathematics, NOHRED and Nepal Youth Foundation Scholarship for females, the facility of vehicle, separate restrooms for males and females, holidays on Teej and Women's day, and the provision of sanitary pads. However, the students in the in-depth interview and the FGD stressed on the insufficiency of these scholarships. A participant from the Mathematics department shared, *"Out of three female students, two were married. They used to come unprepared in the classroom. This might have been because they could not give time at home. Also, in the classroom, they used to come late, which might be why they could not concentrate. I think making the condition easier on the organization and policy level itself might be a solution"* (Student 2, FGD 4).

Discussion on Findings

These days, informing pedagogy is insufficient in the universities. Being one of the top universities of Nepal, KUSOED aims to transform the educational landscape by providing high-quality teacher education programs (KUSOED, 2017), which might not be the case in all universities. Universities need to bring change in the schools and ultimately the society, bringing gender equity in the university itself is not the ultimatum. Unlike other countries, for example, Spain (Alonso & Lombardo, 2016), Nepal has not mainstreamed gender in higher education, gender is not part of the curriculum and there is no law to implement gender mainstreaming in curriculum in regard to the university.

Analyzing the findings, this study highlights the current practice of one of the universities of Nepal which shows problem in gender inclusiveness in the curriculum. And we cannot escape the fact that this problem might persist in other universities of Nepal. There is a need to integrate gender in all the master's courses. Gender integration, as part of the course in the Master's program, helps to understand the contemporary issues and problems through the lens of gender for the development and betterment of society. This study explored the status of gender in the curriculum in terms of content, pedagogy, assessment and research, and organizational provision and found out that gender should be a part of the course and curriculum. The concept of bringing gender into higher education is to provide gender equality and transform the organizational process (Benschop & Verloo, 2006). Unfortunately, many higher education institutions reinforce the existing structures (Khan, 2015). A study in Pakistan revealed that women were still under-represented, lacked power and status in higher education institutions and their education is still plagued with gender and subject biases for women (Khan, 2015).

Teaching in higher institutions is subject-centric and mainly concentrates on the content without the inclusion of gender. In universities, the textbook as teaching and learning materials are not gender inclusive in terms of content. However, teachers in universities have autonomy for selecting the reading materials and even add to the contents (Gurung & Rajbanshi, 2020). Content includes structures, practices, social relationships within the classroom, what is taught, and the way of teaching, which can be gender inclusive. Armstrong (1999) claim that content is both the processes and the procedures while the “repartitions of physical, social and curricular space are reproductive of social relationships and values in society”, it is not limited to that, “the counter selections and the

development of creative pedagogies can bring a shift of control” in what is taught and also in the cultural spaces (p.83). Therefore, gender inclusion in content holds significance in higher education. In a study done in Saudi Arabia, the author found that the EFL textbooks are gender-biased with less representation of women (Sulaimani, 2017). The integration of gender in the course content and the curriculum in university education should be the prerequisite.

Gender integration not only helps the students understand the gender issues that are prevalent in everyday life, but it also helps them be more participative, reflective, and critical. Even though the teachers in the university portray that they are gender-sensitive and value students’ opinion or ideas on gender, this study showed that teachers stay neutral in fostering gender discussion for critical analysis in the classroom. Snell (1999) had the opinion that the learner’s participation, reflective thinking and emotional satisfaction get heightened through interactive lecturing. Students participate effectively in learning when there is no gender gap in classroom instruction and if teachers’ implementation strategies are gender-sensitive and no sex group is favored or isolated. Moreover, gender-neutral pedagogy reduces consideration of gender and gender stereotypes (Shutts et al., 2017). Promoting gender-neutral pedagogy in the classroom requires endorsing equal participation from all the students and living as well as teaching gender equality.

Gender-inclusive pedagogy values prior experiences and learning while at the same time also addressing current needs, interests, concerns catering to an individual’s preferred learning and assessment styles. Chetcuti (2008) claims that to cater to individual learning styles, gender-inclusive pedagogy uses “multisensory teaching strategies, and multisensory assessment tools through practical, oral, drama, creative writing, and Information and

Communications Technology use” (p. 93). The experiential knowledge that the teacher and the students embody makes it dangerous to overlook gender in any form of discourse in addressing diverse needs. In that context, gender-inclusive pedagogy is a socially constructed pedagogy based on situation and interactional cognition, which helps make the personal constructs explicit and help critically reflect those constructs by constantly evaluating and re-evaluating practices inside the classroom and beyond.

Simply analyzing the content will not help us understand the gender-based social ideology and its stereotypes that have been running through ages. Both the research and assessment process in higher education should promote the notion of choice, rationale, and opportunity for personalization when it comes to being gender-inclusive (Lee et al., 2015). Research and assessment help to improve students’ learning and conceptualizing gender. The inclusion of gender in assessment creates a conducive environment for students to conceptualize gender with the curriculum. Learners also need to consider the existing difference based on gender and the power relations that it is fostering gender difference (Lott, 1977).

“Doing gender” is a norm of everyday life and is unavoidable (West & Zimmerman, 1987), and higher institutions are not left alone. Gender is done in the classroom, during discussions, while choosing learning materials, and while doing assignments as well as research. Though the students acknowledge that there are discussions regarding gender when they are studying certain courses, they also think it is not enough if the university’s goal is to be more gender-responsive. In this study, even though the male teachers have adopted gender-balanced pedagogy, the students felt a lack of female faculty in the university. Lack of female faculty reduces diverse pedagogy in academia. The inclusion of females and marginalized people increases

diversity, which likely enhances innovative pedagogy in the university.

Furthermore, Valian (2004) mentions innovations is acceptable where there is diversity rather than in a homogenous group, for which university needs to embrace diverse people. As mentioned by the students that there is domination by male students in the classroom. Domination by a homogenous group is usual, so the inclusion of diverse students as well as diverse faculty can break this normalcy. Therefore, there is a need to have diversity in the faculty as well as students in the university.

Given that the integration of gender is being overlooked in the university curricula and needs a long time to revise all of the courses, change can be brought by simply increasing the number of female faculties and also by including the gender concepts in different projects, assignments and research. Providing female students with encouragement from the women faculty enables females to draw upon the unique and individualized aspects of their personhood to overcome subtle barriers to attaining leadership roles in academic settings (Hill & Wheat, 2017). With very few female students in some of the departments, the increment in the number of female faculties will serve as a role model. Lack of female faculty leads to a lack of female role models (Cassese et al., 2012). Furthermore, without female bodies in higher education, female students feel excluded and marginalized. As Fotaki (2013) mentioned, the females feel as “object outsiders in academia” (p. 1270), their voices and experiences silenced by patriarchal discourse and representation of females as ‘other’. The absence of females in academia also discourages female’s participation. Increasing the number of females in any institution will not help eliminate the gender disparity, but it definitely encourages the female students to hope for betterment. This fosters self-confidence, self-awareness and assertiveness (Khan, 2015).

There is evidence that more publication is one of the requirements for promotion in academia and females produce less publication than males (Long, Allison, & McGinnis, 1993). Therefore, it is necessary to encourage females to research and write papers for knowledge production and information dissemination. Research in education uses scientific analysis methods to produce information needed to make improvements in educational planning, decision making, teaching and learning, curriculum development, understanding of children and youth, use of instructional media, school organization and education management (Boykin, 1972). The students believe that both the students and the faculty members should engage in the research work in the topics related to gender so that these issues get enough attention in the classroom discussion as well as in larger academic discourse, making the organization provisions stronger. There is also a need of gender inclusion in the courses to understand the real problem of the societies. The more research in the issues related to gender is done, the more it enables substantial progress to be made in curriculum development and reform, educating diverse learners, understanding the psychological traits of the learners and in adapting pedagogical approaches to meeting the needs of diverse learners.

Some of the barriers to women's career advancement to leadership positions have been identified as: "lack of mentoring; fewer opportunities for training and development, low aspiration level of women managers and gender stereotypes" (Okafor et al., 2011, p. 6722). Fotaki (2013) also mentions women's exclusion is "continual, reiterated over time and therefore involves a continuous process of exclusion that is never final" (p. 1270). The participation and access of women in higher education has been taken only as a number count (Khan, 2015), but it is also about acknowledging their capability and providing

equal priority in all aspects. Given the multiple layers of struggle that women go through even when they are enrolled as a student in the university, the university must improve on their organizational provisions as per the respondents' opinion if the university wants to play a role in removing the structural barriers from the women students. The higher institution should not make females, both the faculty and students, feel marginalized, which is often the case in developing countries like Nepal. To adjust females usually adopt masculine behavior or females become a showpiece when they work in a male dominated organization (Van den Brink & Stobbe, 2009) or females are kept as outsiders in organizations and males takes the lead for the reproduction of male norms in policymaking (Benschop & Verloo, 2006), due to which, the topic on gender equality and inclusion could not be mainstreamed. Thus, we think that higher institutions/universities need to break this norm and establish an example by appraising females and enhancing gender equality.

Conclusion

There is hierarchical superiority of males in every organization and this study unveils as well as challenges the gender inequality in higher institutions. This study concludes that even though one department explicitly includes gender, all the departments still need to be more mindful of integrating gender on all the fronts: content, pedagogical practices, research and assessment, and organizational provisions. The higher institution needs to focus on the content and make students proficient in their subjects. However, gender should not be neglected and higher institutions should make space for gender in the curriculum. Having gender discussions is not enough if a university aims to be more gender-responsive.

Furthermore, research is a way to expose the truth. Higher institutions need to engage in research focusing on

gender and highlight gender discussion in the class to make students aware of gender inequality in society and education. Similarly, the number of female students in a class also plays a huge role in integrating gender issues in the class. The more female students, the more the discussions will be around gender issues. Improving gender equity in the university means investing more resources on gender, making content gender-inclusive, adopting gender-neutral pedagogy, researching on the gender issue, and improving organization provision.

Gender norms are based on history and culture. History cannot be changed; however, the culture on which this society is based can be changed. There is a need to bring change in the culture and, ultimately, the gender norms. This is to begin from the second home that is an educational institution. For this, educational institutions need to educate the students on gender through content, pedagogy, assessment, and research, or through organizational provision. Furthermore, to make the students gender-responsive, the curriculum needs to be gender inclusive, for which the curriculum needs to be revisited time and again with gender lens.

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AUTHOR BIOS

Lina Gurung, PhD completed her doctorate degree in areas of learner's experiences in online and distance education from Kathmandu University School of Education (KUSOED). Dr. Gurung works as an Assistant Professor in the department of Development Education in KUSOED. She has altogether two decades of teaching experience in schools, colleges and universities in social science discipline. She worked as a journalist for six years from 2006-2011 B.S and as a 'Gender Coordinator' in KUSOED under NORHED QUANTICT project from 2016-2020. She has done several quantitative as well as qualitative

researches for one and half a decade . Her research areas of interest are online and distance education, curriculum assessment, digital pedagogy, gender analysis, women and development, mentoring, project evaluation, digital divide.

Bhawana Shrestha is an Echidna Global Scholar 2022 of Brookings Institution. She is also a Ph.D. scholar of Educational Leadership at Kathmandu University School of Education and is the founder of the organization ‘My Emotions Matter’ that works on fostering Emotional Intelligence in Nepal. She also works as a faculty member at King’s College Nepal and teaches undergraduate, and graduate students. The author’s major fields of study are emotional intelligence, educational leadership, gender, educational equity, critical self-reflection.

Roshani Rajbanshi, Ph.D. is working as an Asst. Professor in the STEAM Department, school of Education. She was a post-doctoral fellow candidate under NORHED fellowship at School of Education, Kathmandu University, Lalitpur, Nepal. She earned her Ph.D. in Curriculum and Instruction from New Mexico State University with a major in Educational Learning Technology and a minor in Biology. Her area of interest are inquiry approach to teaching and learning, participatory action research, afterschool and STEAM

**Exploring Residential Experiences of
Undergraduate Students During COVID-19
Pandemic: A Case Study of a Historically
Black University in the United States**

Juana Hollingsworth

Virginia L. Byrne

Krishna Bista

Uttam Gaulee

Tracy Rone

Glenda Prime

Morgan State University, Maryland, USA

ABSTRACT

The COVID-19 pandemic caused higher education institutions to pivot to online instruction and forced residential students to vacate on-campus housing. Most students moved in with family or friends, but other students did not have access to safe and supportive housing options. This paper explores the experiences of students who requested to live on-campus because of housing insecurity or the need for independent space. Specifically, this paper reports on the types of support and resources that 20 residential undergraduates at a Historically Black College

and University (HBCU) relied on to navigate challenges brought on by the pandemic and to cope with the isolation of living on a nearly empty campus. Resources include faculty relationships, student networks, and campus culture. Implications for higher education practitioners include reexamining students' capital and adopting trauma-informed approaches into reopening plans.

Keywords: College Students, COVID-19 pandemic, Faculty mentorship, Historically Black College and University, sense-of-belonging

Introduction

In the aftermath of the COVID-19 pandemic, undergraduate students navigated new policies such as remote instruction, social distancing, roommate separation, and independent living (Hodges et al., 2020; Smalley, 2021). As a result, undergraduate students reported suffering from heightened anxiety, stress, loneliness, fear, and isolation (Association of American Colleges and Universities, 2021; Lederer et al., 2020). While most college students chose to complete the 2020-2021 school year at their family home or in an off-campus living arrangement, a small population of students requested to live in campus residence halls (e.g., Firozi et al., 2020; Goldrick-Rab et al, 2020). Reasons for living on-campus during the pandemic include housing and food insecurity, lack of a supportive home environment for learning, lack of Internet access, affiliation with a campus-based program that required residential living such as athletics, or a discipline requiring in-person classes, such as nursing.

Our study explores the experiences of a small group of undergraduate students at a Historically Black College and University (HBCU) who chose to live independently in university-managed housing for the Fall 2020 academic

semester and how they navigated the uncertainty and isolation. Using a qualitative approach, we explored the forms of capital students relied on to support their mental and physical safety, academic success, and personal development. In this paper, we answer the question, *What forms of cultural capital helped HBCU residential students cope with the isolation, stress, and uncertainty of the Fall 2020 remote semester?*

Literature Review

The COVID-19 pandemic forced colleges and universities to close campuses and adopt modified academic schedules to protect students, faculty, and staff from contracting the virus. As a result, college students were faced with heightened financial and psychological hardships (Jones et al., 2021; Lederer et al., 2020). Black and African American students experienced disproportionate financial hardship and COVID-19 mortality (Dyer, 2020; Hardy & Logan, 2020; Millett et al., 2020) and struggled with heightened levels of illness, stress, and social setbacks during the pandemic (Fetter & Thompson, 2020). The present research study centers on the voices of Black and African American students who attend one HBCU located in an urban area on the East Coast of the United States. In this section, we review the existing literature on cultural capital, the impact of sense of belonging on college students, the HBCU college experience, and the importance of faculty mentorship on colleg student success.

Cultural Capital Framework

During challenging times such as these, students draw from their existing resources (or capital) for strength and resources such as guidance from parents or mentors, reliable meals and housing, a loving community, and transparent and trustworthy leaders. Our research builds

upon Yosso's (2005) prominent cultural capital framework to explore which types of capital students drew from during the pandemic to cope with uncertainty, stress, and isolation. Cited over 7,500 times in the education literature, Yosso's (2005) framework adopts a critical race theory lens to construct an anti-deficit framing of the cultural and community capital of Students of Color. Cultural capital is a collection of cultural expertise, abilities and talents acquired. More specifically, cultural capital is manifested in six ways: aspirational capital (e.g., students' optimism), linguistic capital (e.g., students' communication skills), familial capital (e.g., students' personal networks), navigational capital (e.g., students' ability to navigate systems), social capital (e.g., students' social networks that aid in navigational capital), and resistant capital (e.g., a foundational legacy of fighting for equity and justice; Yosso, 2005). Ultimately, the capital that students possess impacts how they navigate higher education and life overall.

Sense-of-Belonging

As students navigate the ups and downs of college and life transitions, sense-of-belonging and community affiliation impact students' mental well-being (Hagerty et al., 1992; Maslow, 1954; Spanierman et al., 2013). Students characterize their sense-of-belonging in higher education as a psychological sensation that is validated by feeling like a "valued member of the college community" (Hausmann et al., 2007, p. 804). The impact of sense-of-belonging on college students' emotional well-being is positively associated with increased feelings of self-worth and self-efficacy (Pittman & Richmond, 2007). As students develop a sense-of-belonging at their university, it leads to increased educational achievement, perseverance, confidence, and greater academic performance (Garvey et al., 2020). Establishing and fostering an environment that

leads students to feel a sense-of-belonging is extremely important to the college experience in curricular and co-curricular spaces.

The HBCU Student Experience

The first HBCUs were founded in the 1830s in the United States with the intent to bridge the gap of education and gain upward mobility among Black Americans. The need for creating colleges for and by Black Americans was to counteract the exclusion of Blacks in higher education that widely segregated Black people from white people. These academic and cultural environments were initially reserved for the advancement of Black scholars but have now produced scholars of all racial, social, and economic backgrounds (Allen et al., 2007). Despite HBCUs only constituting three percent of U.S. higher education institutions, they continue to serve as a hub for Black scholarship (Allen et al., 2007) by producing more than a tenth of Black bachelor's degree holders in the Nation (National Center for Education Statistics, U.S. Department of Education, 2020).

As the enrollment of Black students at HBCUs continues to rise in comparison to Predominantly White Institutions (PWIs), Black students who attend HBCUs express unique feelings of community and belongingness (Davis, 1991; Fries-Britt & Turner, 2002; George Mwangi, 2016; Outcalt & Skewes-Cox, 2002). The existing research suggests that this increased feeling of community is a result of genuine determination to nurture an atmosphere that spotlights, commemorates, and showcases Black accomplishments, tradition, and unity (George Mwangi, 2016). The unique institutional atmosphere that is fostered at HBCUs (e.g., the engagement and education of Black culture and community cohesiveness) has been found to positively influence sense-of-belonging among Black students (Davis, 1991; Fries-Britt & Turner, 2002; George

Mwangi, 2016). The institutional factors that impact student success and belonging at HBCUs can lead students to gain social capital (Williams, et al., 2019).

Studies have shown that Black students select HBCUs as their college choice because they desire to be surrounded by individuals with shared ethnic backgrounds and to further learn about their ethnic heritage (Awokoya & Mann, 2011). The widely available opportunities for Black HBCU students to build relationships with same-race individuals at an HBCU compared to the limited opportunities at PWIs have led students to feel increased confidence in their identity and ability (George Mwangi, 2016). Additionally, the cultural affinity that is normative and embedded within HBCU communities has led students to feel a heightened sense of ethnic pride and sense-of-belonging (Freeman & Cohen, 2001).

Faculty Mentorship

Research suggests that faculty mentorship among undergraduate students has been associated with increased levels of satisfaction with their college institution and sense-of-belonging (Strayhorn & Terrell, 2007; Strayhorn & Saddler, 2009). Noted throughout the literature, mentorship is defined as an official or unofficial agreement between an expert or highly skilled person and a novice or beginner with the purpose of assisting in the advancement of their evolution (Lee 1999; Luna & Cullen 1995; Roberts 2000; Strayhorn & Saddler, 2009). HBCUs have established a reputation for affording the opportunity of lower student-to-faculty ratios that permit students to feel encouraged by faculty during their college career (Awokoya & Mann, 2011). Some HBCUs, however, reportedly suffer from conservative and paternalistic cultures which can result in pervasive heteronormativity and the subordination of students beneath faculty (Harper & Gasman, 2008).

This literature review as gathered to study a specific group of students navigating a crisis: residential HBCU undergraduates who are living along during the COVID-19 pandemic. This study seeks to examine, if students' capital and resources help them cope with crises, and if students' sense of belonging and community affiliation support student perseverance and resilience, then students' access to capital and community may inform their coping strategies and their ability to cope in times of crisis. Therefore, the research question for this study is, *What forms of cultural capital helped HBCU residential students cope with the isolation, stress, and uncertainty of the Fall 2020 remote semester?*

Methodology

A collective case study (Stake, 2010) of 20 HBCU undergraduate residential students' experiences during the COVID-19 pandemic is presented below. A collective case study methodology enables us to conduct a contextual study of the unique phenomenon of living on an HBCU campus during the isolating and traumatizing pandemic (Mills et al, 2010; Yin, 2003). The data presented was obtained from an IRB-approved study of HBCU undergraduate students' experiences during the pandemic.

Data Collection

In Fall 2020, approximately 350 students moved into university-managed residence halls at a Mid-Atlantic HBCU. These students applied for this opportunity based on their extenuating circumstances such as involvement that required campus residence (e.g., athletes, ROTC, residence advisors, nursing majors) or because of unsafe or distracting living situations at home (e.g., homelessness, overcrowded homes, lack of Internet access).

Survey. In October 2020, the research team recruited students who were living on-campus to complete

an online survey. Participants were asked to complete a brief online survey of Likert-scale and open-ended questions about their experiences with residence life, online classes, the campus' pandemic-related safety procedures, and demographic information. Of particular interest to this paper are the nine items regarding students' feelings of anxiety and or fear reported in Table 3. Students were asked to self-report the extent to which they experienced these fears on a scale of 1-4 (common for anxiety instruments; Spitzer et al., 2006) in which 1 represented None or Not at All and 4 represented a Severe feeling. Students were paid \$10 for completing the survey.

Interview. Students who fully completed the survey were invited to participate in a one-hour Zoom-based interview with researchers in November 2020. During these semi-structured interviews, students were asked how they felt about the sudden change to remote instruction and how they have been coping with the circumstances. Questions included, *What factors did you take into consideration when making the decision to attend an HBCU? How has the pandemic impacted you socially? How has the pandemic impacted your health (mental, physical)?* Interviews were audio-recorded and transcribed. Students that completed the one-hour Zoom-based interview were paid an additional \$25 for completing the interview.

Participants

We collected 121 survey responses and conducted 21 interviews. In this paper, we present findings from the 20 undergraduates who completed both the survey and an interview. One student was removed from our initial sample who self-identified as a graduate student. As presented in Table 1, the majority of our participants identified as Black or African American and as women. Students represented all four traditional undergraduate

years (5 first-year students, 2 sophomores, 4 juniors, 9 seniors).

Table 1

Participant Demographic Characteristics

Variable	Group	<i>n</i>	% Sample
Gender Identity	Man	5	25%
	Non-binary	1	5%
	Woman	14	70%
School Year	First-year/Freshman	5	25%
	Sophomores	2	10%
	Junior	4	20%
	Senior	9	45%
Racial Identity	Black or African American	17	85%
	Multiracial	3	15%

Data Analysis

Quantitative Data. We conducted descriptive analyses using SPSS 25 to determine the frequency of students' self-reported anxiety and fears in regard to the COVID-19 pandemic. We report the frequency and mean of each.

Qualitative Data. Interviews were audio recorded and transcribed through Zoom. The interview transcripts were reviewed and edited for machine-generated errors. The participants' interview transcripts were combined with their survey responses to create 20 distinct cases. We reviewed each students' case and wrote analytic memos to document emergent themes.

An initial codebook was developed to reflect both the challenges students faced during the pandemic and the resources they relied upon to overcome these challenges

including specific people or groups. Then, we independently coded two random transcripts. We discussed our coding, revised each codes' definition, and established interrater reliability. We added a code to explore students' sense-of-belonging on campus. Our final codebook can be found in Table 2. We then double-coded an additional eight random transcripts. We again discussed our coding and rectified any discrepancies. Then one author coded the remaining 10 transcripts using the final codebook.

Table 2
Interview Analysis Codebook

Code	Definition
Challenges During & After Pivot to Remote Instruction	Hindrances related to the pandemic including <ul style="list-style-type: none"> ● Sense of isolation ● Lack of resources (supportive people, programs, finances, etc.) ● Mental health challenges ● Social Challenges
Resources During & After Pivot to Remote Instruction	Supports related to the pandemic including <ul style="list-style-type: none"> ● Campus Programs & Affiliations ● Access to knowledge, materials, etc. ● Faculty and/or Peer relationships ● Family and/or Friends ● Work

Optimism & Belief in Leadership	Demonstrated positive outlook or resilience <ul style="list-style-type: none"> ● Attempts to positively reframe the situation ● Expressing satisfaction/making do
Sense-of-Belonging	Sense-of-belonging or feeling a community or being at home <ul style="list-style-type: none"> ● Connection to campus ● Use of “we,” “our,” or “us” ● No longer feeling a sense of isolation

The coded excerpts were reviewed and compared across transcripts to determine themes in how students’ resources and perspectives aided their coping with the pandemic-related trauma. These themes were then discussed, and an additional round of coding was conducted to verify their accuracy. Participant quotes and findings are presented below using pseudonyms.

Recognizing how our paradigms, experiences, and identities inform our interpretation of the participating students’ lived experiences, we acknowledge our position as researchers and practitioners at an HBCU who study trauma responses among college students. Our research team is comprised of faculty and graduate students from an HBCU School of Education.

Findings

The residential HBCU students in the study sample reported feeling severely isolated and shared that their on-campus peer networks, co-curricular affiliations, and faculty mentors supported them in coping with the isolation and stress of the COVID-19 pandemic. Additionally,

students' trust in the university's leaders and their strong sense of community was a source of support that might have alleviated some stress. In this section, we first present the descriptive survey results. Then we present the case study findings in the form of thematic summaries and anonymized participant quotes.

Quantitative

Participants self-reported moderate levels of anxiety as well as feeling bored, isolated, and stuck (Table 3). The COVID-19 pandemic impacted the sampled students to differing degrees: some reporting severe stress, financial issues, and housing and food insecurity, while other students reported having less of a negative experience during the pandemic. These 20 students did not have a universal experience and, likely, had different forms of financial and familial capital from off-campus sources. What they did share, however, was a unique residential living experience at an HBCU that pivoted from face-to-face to fully online instruction and co-curricular activities.

Table 3

Frequencies and Means of Items Related to Feelings and Fears

Items	None	Mil d	Moder ate	Seve re	Mea n
Nervous or anxious	1	3	10	6	3.05
Lonely	4	4	6	6	2.70
Bored	2	4	5	9	3.05
Happy	0	9	5	5	2.70
Isolated	1	2	8	9	3.25
Stuck	3	2	6	9	3.05
Fear of getting sick	5	8	2	5	2.35
Food insecurity	9	4	4	3	2.05
Housing insecurity	7	1	9	3	2.40

Qualitative

On-Campus Networks and Resources

We found that students directly mentioned campus departments and programs that served as a resource to their success and retention at the university. For example, students mentioned an on-campus center that is designed to increase academic success and retention. During the pandemic, this center leveraged online meetings and group chats to continue its work. Adio stated, “I have a relationship with [the program] because they have always propelled us to go further, and they always pushed us to go harder.” Brianna elaborated, “...they have tutoring that we have to go to.” Not only did the program serve as an academic resource and motivator but it also created opportunities for peer connections. Brianna shared that “In our academy group, we have a lot of the same classes...we have our [students] separate group chats and we have one teacher for everything.” Students shared that participating in this student program afforded them with a community and mentorship that continued throughout the pandemic.

Several students mentioned that having group chats helped them stay connected to their peers in an online environment. Monica stated,

I feel like [online learning] has challenged me to connect with my classmates in a more creative way. I have a thousand GroupMe chats for every class I have...we meet through GoogleMeets to work on stuff and that is a good thing.

Students often took the lead in creating these group chats among their peers not required or monitored by their faculty. “The first class I went to, I said Hey everyone, I am going to make a GroupMe. Can I get everybody's number?... I did not have them [classmates' numbers] before, but I do now,” stated Monica. Elijah also echoed similar sentiments stating,

One of my classmates set up the entire thing. They looked up everybody that was in the class and sent

out...a message that included everybody that was in the class to say, 'I started a group chat. Send me your number and I will add you.'

Elijah also mentioned that the creation of group chats not only helped him stay connected to peers but served as an accountability platform to be successful academically.

Elijah stated,

...If someone misses something, they will ask in the group[chat] and find out. Or one person gets a question answered from the professor and disseminates the answer to the whole class. That has been a major help, not just for me, but for my classmates as well...Everybody is interacting pretty well in there, we joke, we laugh, stuff like that.

As students mentioned their unique ways of connecting to their peers in an online environment, one student mentioned how it was easier to socially connect and develop a relationship with their peers online than it normally would be in an in-person environment. Aaliyah stated,

Online you connect more with your classmates. In that aspect, I like it [online] better. Because I'm kind of a shy person I wouldn't walk up to you [in person] but online in a group chat, if I were to text message my classmates and ask some questions, they would give it to me right away. That's how we make friends.

Academic spaces were not the only space that students were able to develop or maintain peer connections. Several students joined or were already involved in student organizations during the pandemic. Asia stated, "I joined [during the pandemic] the [cultural based] club. They've been doing online events like versus battles...checking up on each other throughout the semester in the group chat that we have." Students also held leadership roles during the pandemic that not only provided them with peer

connections and support but gave them a sense of purpose and access to resources during a difficult time. Myra stated, “I am a RA for freshmen males. I chose to be an RA to make a difference in students' lives.” Elija stated,

Being on the basketball team really played a part in it[being connected to campus and academically accountable]...The athletic department has the athletic student center and the gym and that was a big boost for me in terms of being able to buckle down and make sure all my work is done...Having people like [Associate Director of Athletics] and the other staff was helpful.

Maintaining some sense of normalcy such as retaining employment was important for these students because it helped them cope with the adverse social and financial impacts of the pandemic. Skyler stated,

I work at the bookstore. So, that's been my socializing and my financial security. As frustrating as it is to work and go to school, if I did not have a job, I would have been in a completely different mental state. It would not have been good. I did not have my job over the summer, and it was terrible, I was so sad. Having a job here is a big plus.

A major influence that added to these students' optimism and helped them cope with the effects of the pandemic was having family members such as cousins or siblings and high school friends that attend or attended the university. Adio stated, “My older brother goes to school here with me. I have somebody to talk to and when I need to, go spend time with him.”

Faculty Relationships

Students often noted that they relied upon their existing relationships with faculty members as a source of support during the pandemic. For example, Sabrina shared that “All of our professors know us pretty well and they

want to have that social interaction with us, but the camera and the computer are in the way.” Students noted that they looked to faculty they already knew and purposefully enrolled in their classes perhaps as a way to create community and connection to campus. Elijah said, “Just based off of last school year, the relationships I was able to build with some of my professors were helpful...” Sabrina echoed this sentiment stating,

I have the same professors that I had last year. The same professors in education teach multiple courses. You see them often and they say things like ‘If we were in person, I would be hugging on you guys’.

Students drew upon their existing relationships with faculty and noted it as a source of support not just for learning the course content. Instead, students noted that they sense that these faculty members cared for them and thus their courses were intentionally sought out.

The pandemic was the first time many faculty taught online, and students understood that this would be a difficult adjustment. Several of our interviewees shared that they recognized that faculty were doing the best they could to be supportive of them; “I know the teachers are trying” (Monica). In particular, the students observed that the faculty were being more accommodating and providing more support for learners to work through the material at a slower pace than would be expected before the pandemic. Andrew shared,

...I can't generalize all professors ... my ones with my major are actually trying to really look out for students. Accommodate them in terms of going over material outside of their usual hours ... And really just talking slowly so that we all get it.

Asia echoed, “I liked that some professors were gracious towards students because it's like really a messed-up situation, this whole pandemic.” The undergraduates in our

study talked about their relationships with the faculty and the support they were getting from faculty as sources of support.

Trust in University Leadership and Campus Safety

When the students in our study were asked how they felt about the plan to pivot to remote instruction, several students shared that, while they were disappointed to have to take classes online, they understood the university's rationale for making the decision. When talking about the decision to be fully remote instead of hybrid, Aaliyah shared, "I feel the school is trying its best and everything." Students compared their campuses' low rate of COVID-19 cases as a sign that the university's administration was making the right decisions. Tyler shared, "I understand like circumstantially, it's difficult...even though I think [my college] is still doing pretty well with...negative confirmed cases... compared to a lot of other schools." Students attributed the university's safety protocols to alleviating some of their stress in coping with the pandemic: "I think that definitely helps out -- just to know that I am safe"(Elijah).

Students noted that they agreed with the on-campus safety protocols like masking and COVID-19 testing. Andrew said,

I do feel as if I have an obligation to uphold policies. Just because ... it's just maturity. They're not asking you too much. That's the biggest thing for me. [Our university] isn't asking us to cut off an arm and a leg just to get something done. It's just simple things we need to comply to. So, I would say, in that sense, I do feel like I have an obligation. I am going to adhere to certain ... things like anything in regard to COVID.

They recognized that these safety measures were in place to protect them and that it was their "obligation to uphold

[the] policies” as Andrew said to keep everyone safe. Students also felt like the university had set them up for success by providing them with a fanny pack of branded gear like hand sanitizer and face masks. Talking about this gift, Alexis said,

...I like to wear the masks because it says [our university name] on it so it’s just like ‘OK, I can rep my school...staying safe...’ And it came with some mints because, you know, mask breath is real. So, I feel like that was good. They, [the university president] did that. And then hand sanitizer because you got to stay clean. I just feel like it was like... how, like, workers have, like, their tool belt? I feel like that's what it was. It was like a fanny pack for, like, the little essentials for this pandemic.

Students appreciated the “tool belt” gift because it supported their safety while also allowing them to show their school spirit.

These students were thankful that the university let them stay on campus. Some students found the campus to be a safe place to meet their goals, such as Monica who shared, “I came here so that I could focus and get good grades and I feel like I am doing that despite the challenges.” When sharing her story, Sabrina said,

I think [college president] is trying to do as best as he can. I think that we were fortunate enough to have those students who do come from extreme circumstances, be able to stay here because that speaks volumes. I do not know any HBCU that is doing that. [Other colleges] told everybody come get your stuff and go [home]. [My college] said let us try to make something work. Let us try to do something, for those who cannot or are not able to go home. Everybody does not have good people around them to even push them to even be here. I look at the residents here, they are strong enough to

not have that support system but to still be here. Not every school is cautious about those things and [my college] did that.

Sabrina expressed how she views the actions taken by her college to be above and beyond what other schools are offering and she attributes it to both individuals and an administration who cares more about providing a safety net for students.

Sense-of-Belonging and Connection to Culture

Throughout this study, we found students repeatedly used group-related words (we, our, us) when sharing their feelings about campus. The student participants continued to mention this shared community or unity with their peers based on the premise that they all were affected or going through some sort of struggle whether personally or academically because of the COVID-19 pandemic. Andrew shared,

In regard to our campus and everything that's going on in the world right now, it kind of keeps us engaged as one unit, as students. We no longer look at things [individually] but as one. Like we are all affected and impacted.

Skyler shared similar sentiments of a sense of unity and sympathy among peers.

...a lot of us live apart in different states so everyone is at home grinding trying to figure it out. But even in a group chat, we are all helpless, it does feel better to not be helpless by yourself. None of us know anything!

Asia also stated this collective orientation to coping with the pandemic and feeling that “we are going to get through this together.”

I feel like, if anything, it helped unite the classmates because we're all in the same situation where we can't show up to the class. Oh, we can't do this

assignment. Our Internet went out like we all have some type of situation going on.

Alexus echoed similar sentiments,

I feel like it [relating to classmates in an online environment] hasn't [changed] only because we are all in the same situation. We are all sitting here [saying] yeah, this is a change. So, we're going to have to rise to the occasion. And there's no telling when everything will go back to normal, so for now, you just gotta kind of push through.

The shared sense of community during the crisis expressed among these students seemed to promote a heightened sense of optimism about their future. All the students expressed hopefulness and confidence about the future despite the distressing times. Even further, knowing that health officials have determined that the path to normalcy will be long and hard, these students still displayed a noticeable amount of positivity about their adverse circumstances.

Students also mentioned other sources that led them to feel a sense-of-belonging and community at their college. One source was having a shared cultural connection to the HBCU mission and history. Elijah shared, "It is really the tradition and the culture. I think you have bragging rights going to an HBCU just because of the history behind a lot of these places that a lot of people do not know about." More specifically, students expressed that by attending an HBCU it gave them an opportunity for self-exploration and discovery of diverse cultural experiences. Myra shared "One thing I will say at [my university] is I have learned what it means to be African American here on the campus. When I tell you, I did not know who I was before I came here." Alexis echoed similar sentiments stating, "I definitely wanted to go to an HBCU just because I feel like it's a good cultural experience. And I like that it helps you learn more about yourself."

Students felt that being at an HBCU afforded them a space of community in which they can stand in solidarity and unity with those from shared backgrounds, demographics, and experiences. Janae shared “Really seeing Black people stand together I just felt it was right to be at an HBCU.” Students mentioned that their institution being an HBCU was a big factor in why they decided to attend. Adio shared “I just wanted to be around my people. I wanted to learn more about my history...” Students shared that seeing successful Black scholars in high-achieving roles and certain fields of study was inspiring. Myra shared “I got to be around Black doctors. That was something I never even heard of. I grew up in the inner city, you do not see those role models...It is so important to be at an HBCU.” Andrew shared similar feelings, “Coming to an HBCU and seeing the amount of Black lawyers, Black dentists, and Black business owners was a really big thing for me.”

This feeling of being surrounded by individuals that look like you, share similar values as you, and love and support you like family by being at an HBCU was expressed by students. Myra shared, “But the thing that makes the HBCU experience better is just the environment and stuff; it is the energy that the campus brings. It is just how we support and love each other and stuff like that.”

Additionally, the researchers found that students felt some sort of shield of protection against directly experiencing racialized incidents or coping with racialized incidents that were happening in the broader society by attending an HBCU. For example, many students referenced the unwelcoming environments of PWIs as being environments of racism or exposure to racist experiences. Savannah shared, “One of my friends said it is really hard at a PWI like you think about racism. She has been in countless racial situations. Me making the choice of an HBCU was a great choice.” Another student stated,

I went to a primarily white community college before I got to [my university]. Being at [my university] It just feels like being home. But being at a PWI, I feel like I wouldn't know the people that I know now. I wouldn't have learned so much about myself. My hair wouldn't be natural like it is right now. My experience would have been very different. (Amber)

Lastly, students noted that their decision to attend an HBCU, and particularly this HBCU, was greatly influenced by being socially connected to someone that was attending or had attended the university or another HBCU. This predisposed connection with the university or HBCU culture that students were exposed to before enrolling may have had an impact on their heightened sense of connection and community to their university. For example, Enam stated “My cousin went [here] and graduated. I think he was a major influence in my decision to come to [HBCU].” Another student (Andrew) echoed similar sentiments,

I'm the youngest. My brother and sister both went to HBCUs. They went to [another HBCU]...And there were a lot of motivational things behind me, going to an HBCU, but that was overall it.

In conclusion, the findings from our present study explored the resources that HBCU residential students drew from to cope with the stress, isolation, and challenges brought on by the COVID-19 pandemic. Presented below are the findings from this study framed around the theoretical framework of cultural capital and its relevance to the field of higher education.

Discussion

To answer our research question, we frame our findings around Yosso's six forms of cultural capital (2005). Specifically, in this section, the findings from this study are outlined drawing parallels between Yosso's forms

of capital (2005) and the experiences of the study participants. As a result of our study, it was found that HBCU residential students coped with the isolation, stress, and uncertainty of the Fall 2020 remote semester by leveraging four forms of capital (Yosso, 2005): aspirational, social, familial, and resistance.

Aspirational Capital

Aspirational capital is the capacity to envision the future (Yosso, 2005). As students navigated continuous alterations to their academic plans and college environment, these students still expressed a glimmer of hope. Their optimism stemmed from their trust in the university and its leaders. Students such as Sabrina expressed faith that the decisions the university made thus far - and would continue to make - would be in their best interest. They often compared their university's decisions and COVID-19 campus protocols to that of other institutions in the geographical area, more specifically the local PWIs. A few students such as Tyler felt surrounding PWIs were being negligent in their response to COVID-19. In contrast, the HBCU students reported that a shared understanding and commitment of faculty, staff, and students to the HBCU mission protected them at their institution, which further increased their assurance in their university. The accommodations of this HBCU during the COVID-19 pandemic reaffirms the HBCU mission of extending opportunities to those who have typically been denied access to resources and support (Allen et al., 2007).

The safeguarded protection that the participants felt that the university provided (e.g., the approval to live in residence halls) further contributed to their optimism. Furthermore, students such as Elijah expressed gratitude for having the opportunity to live on campus and have access to dining halls (i.e., food), twice-weekly free COVID-19 testing, etc. Although students such as Skyler expressed

feeling physically lonely as a result of isolation, they reported a sense-of-belonging and shared struggle with their peers. Students' sense of optimism seemed to be bolstered by the acknowledgment that their struggles were not unique, and that the pandemic was a shared experience with their peers.

Resistance Capital

Resistance capital is the ability to understand and defy discriminatory systems and practices (Yosso, 2005). The students in our sample shared that they noticed and appreciated how they had shared backgrounds, demographic identities, and experiences as their HBCU faculty and peers. Students such as Savannah found the HBCU environment to be empowering as they coped with pandemic-related challenges as well as off-campus racist incidents such as unjust police killings of unarmed Black people. In particular, students highlighted how the HBCU culture fosters a sense of family and collective identity that negated adverse circumstances.

Students recognized that their HBCU environment positively showcased and educated them about Black culture, tradition, and scholarship (George Mwangi, 2016). Students such as Amber attributed this environment to discovering more about their ethnicity and identity than in their previous educational contexts. Students such as Andrew and Janae also acknowledged the mission of the institution being built for and by Black scholars (Allen et al., 2007), further contributed to their sense of confidence and safety with the university's decisions in response to the pandemic to be in their best interest. The findings from this study suggest that the cultural empowerment students felt because of their HBCU enrollment equipped them with intangible tools, skills, and resources to navigate oppressive structures outside of the university and challenges within the university.

Social capital

Social capital is the network of relationships and supports an individual possesses or has access to (Yosso, 2005). Asia, Monica and other students frequently mentioned their reliance on peer support and the use of group messaging apps to help them navigate their socially distanced social lives. Students not only used their peer group messages as means to achieve success in their courses but also as an opportunity to make new friends. Students also leveraged student organizations and their roles as campus leaders to find community - despite organization meetings and events being moved onto video conferencing platforms. Many of the participants were actively involved in campus life and positions that gave them access to other students such as Myra being a residence life paraprofessional (an RA), Skyler being a campus bookstore employee, or Elijah being an athlete. With this access to social connections, despite the pandemic-related restrictions (i.e., social distancing), students still found ways to find social connections to their campus either online or in-person.

Familial capital

Familial capital is defined as the knowledge and resources obtained through kinship connections with kinship encompassing extended family and non-blood relatives (Yosso, 2005). Students in our study repeatedly used terminology that suggested that they felt like a part of a collective group or community such as “us,” “we,” and “our” as they referred to their classmates, faculty, and the broader HBCU campus. Even if they had not met their classmates in person, students still felt a sense of community with their peers, and they appeared to use that as a positive reinforcement to persevere through the pandemic. Reports of perceptions of collective group unity

were highest among students whose presence on campus was also associated with a pre-existing community such as an athletic team, nursing students, or ROTC students.

Academically, students such as Sabrina and Elijah leveraged their pre-existing connections with faculty that they knew before remote learning began to cope with the academic effects of the pandemic. Some students specifically mentioned intentionally enrolling in classes with faculty they previously knew to maintain a sense of normalcy and receive compassion-based teaching. More specifically, a few students in this study mentioned the “loving” atmosphere [Sabrina] fostered by faculty such as receiving hugs from their professor if they were in person as an expression of the care-taking environment and role that is often unique yet normal at HBCUs.

Lastly, students in our study expressed the importance of attending an HBCU and, for some, continuing the legacy in their family lineage to attend an HBCU. Adio and other students mentioned having siblings, parents, or close friends that attended HBCUs who informally exposed them to the HBCU atmosphere. We believe that this HBCU-related kinship was a source of strength and hope as students navigated the pandemic.

Limitations

This study sought to document the experiences of HBCU students living in residential housing during the COVID-19 pandemic. More specifically, how HBCU students living in isolated housing coped with the stress, isolation, and challenges of the pandemic. As with all research, this study is not without limitations. First, we realize that our analysis of the experiences of HBCU students is not generalizable to all HBCU students. Students at this university were influenced by institutional factors (e.g., campus culture, resources, location). Our analysis did not account for students’ gender or sexual

orientation identities which may have limited our understanding of the potential impact of heterosexism and cisnormativity that has been found to be prevalent on HBCUs campuses (Harper & Gasman, 2008). We also recognize that our limited sample size and investigation of exclusively residential students restrict our study findings to apply to non-residential HBCU students who also navigated the COVID-19 pandemic.

Second, although our study was conducted with a student-facilitator to alleviate power dynamics, participants may have overemphasized or performed their optimism for this study to potentially express a more socially desirable response. Third, we did not complete any follow-up data collection or further explore any of the themes discussed throughout this paper with student participants. Additionally, we did not specifically inquire how their experiences relate to the six types of capital used as a framework for this study (Yosso, 2005). Lastly, we did not collect any financial data to explore how socioeconomic status, access to economic resources, or financial aid impacted their experiences.

Considering the limitations of our study, future research examining the pandemic's impact on college students attending minority-serving institutions, such as HBCUs that primarily enroll Black students could strengthen the literature (Kimbrough, 2020). Additionally, future studies could examine the relevance of trauma on college students during the COVID-19 pandemic and incorporating trauma-informed practices into higher education re-opening strategies (Davidson, 2017). Particularly, our findings and implications point towards the adoption of trauma-informed practices on college campuses particularly in times of crises (Davidson, 2017; SAMHSA, 2014). Students in our study were seeking safe environments (online and in-person), transparent university leadership, peer networks, familiar trusting relationships

with faculty and staff, and the chance to keep their community safe by adopting the pandemic-related safety protocols (i.e., masking, testing, distancing). Therefore, examining formal adopting of trauma informed practices on college campuses during times of crisis could inform future emergency responses.

Conclusion

The present study aimed to investigate the types of capital HBCU residential undergraduates relied upon to cope with the stress and isolation of the COVID-19 pandemic in Fall 2020. Our qualitative findings demonstrate that students relied on their peer networks, existing relationships with faculty and staff, campus-based positions and activities, and their sense-of-belonging with the campus community. Framing this work in Yosso's (2005) cultural capital theory, we found that students particularly drew upon four forms of capital (Yosso, 2005): aspirational, social, familial, and resistance.

Of importance to higher education professionals, is to understand how critical the impact of the COVID-19 pandemic is and was on students' academic performance, social integration, and overall persistence. For example, faculty, staff, and researchers in higher education should understand how the pandemic has exacerbated short- and long-term inequities that exist among minoritized student communities. Our findings suggest that students' sense of community, collective identity, and cultural bond with their HBCU campus contributed to their adherence to pandemic-related protocols. While we cannot make causal claims, there is reason to believe that students in our sample were more likely than students at a PWI to adhere to pandemic-related protocols because the safety concerns were bigger than just school rules - it was tied to protecting the Black community. Journalistic work has documented such claims

(Valbrun, 2020) but more rigorous research is needed to better explore this connection.

Furthermore, in times of crisis, instead of creating new programs and resources, higher education professionals should consider investing more energy into longstanding and familiar programs. Our findings suggest that students relied on existing campus connections with programs, organizations, peers, and faculty for support. Potentially, through unfamiliar times, students wanted to feel a sense of normalcy, so they turned to spaces, relationships, or programs in which they already felt safe. Building off this finding, we recommend that, instead of creating new programs to support students in crises, campus resources should be intensified and channeled through existing trust structures.

The findings from this study shed light on the value of HBCU culture and climate as well as building multi-semester faculty-student relationships. This study draws attention to the potential differences between HBCU and PWI students in coping with the stress of the pandemic and adhering to pandemic-related safety protocols. Further work is needed to understand the impact of the pandemic on students at Minority Serving Institutions (MSIs) and institutions with special missions.

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Authors Bios

Juana Hollingsworth, Ph.D. student studying Higher Education Administration at Morgan State University in Baltimore, Maryland. Her research interests include exploring the experiences of marginalized populations at historically and predominately white institutions. She also investigates the prevalence of cyberbullying on college campuses. Juana earned her bachelor's and master's degree in Social Work with an emphasis in trauma-informed care from the University of Northern Iowa.

Corresponding Author Email: juholl10@morgan.edu

Dr. Virginia Byrne, Assistant Professor of Higher Education & Student Affairs at Morgan State University in Baltimore, Maryland. Her work investigates how social media and instructional technology are changing how we teach, learn, and connect in higher education. Virginia earned her Ph.D. from the University of Maryland, College Park, and her Master's degree from Florida State University.

Dr. Krishna Bista, Professor in the Department of Advanced Studies, Leadership and Policy at Morgan State University. His research focuses on college student experiences related to classroom participation, perceptions of academic integrity, faculty-student relationships, the role

of advisors, and cross-cultural teaching and learning strategies in higher education.

Dr. Uttam Gaulee, Professor in the Department of Advanced Studies, Leadership and Policy at Morgan State University. His research interests include the community college, diaspora studies, interdisciplinary perspectives on education policy, global citizenship, and cross-cultural issues in international development and geopolitics. A professor in the Community College Leadership Doctoral Program at Morgan State University, Dr. Gaulee is an advocate of community college as a vehicle for social progress and economic development in and beyond the U.S. He recently edited a volume on Global Adaptations of Community College Infrastructure.

Dr. Tracy Rone, Interim Director of Innovation and Community Partnerships, and Associate Professor in the Department of Advanced Studies, Leadership, and Policy in the School of Education and Urban Studies at Morgan State University. Her research aims to illuminate urban education issues in high-poverty, resource-challenged contexts through an anthropological lens. She is especially interested in how identity informs academic performance, the intersection of health and educational disparities, and how narrative can be used to illuminate lived experiences in urban communities.

Dr. Glenda Prime, Dean for the School of Education and Urban Studies at Morgan State University. Dr. Prime earned a bachelor's degree in chemistry, biology, and statistics, a master's degree, and a Ph.D. all from the University of the West Indies in St. Augustine, Trinidad. Her research and publication in science education and technology education have received international recognition leading to numerous invited presentations and

keynote addresses at scholarly venues in the UK and several other European countries.

***Corresponding author:** Juana Hollingsworth,
juhol10@morgan.edu

ORCID: Juana Hollingsworth: 0000-0003-3586-0871;
Virginia L. Byrne: 0000-0003-2080-6522; Krishna Bista:
0000-0002-7841-9069; Uttam Gaulee: 0000-0001-7728-
6834; Tracy Rone: 0000-0001-7901-4090; Glenda Prime:
0000-0002-1873-1536

II. BRIEF ESSAYS ON THE PANDEMIC

Perspectives on Technical and Vocational Education and Training: are the young people prejudiced against it??

Benu Prasad Dahal

Griffith University, Brisbane, Australia

ABSTRACT

In contemporary workplaces, people must adapt to the dynamics of the market. The Covid-19 pandemic highlighted this fact as people had to learn new skills, upgrade existing ones, or relocate to new jobs for sustenance. Technical and Vocational Education and Training (TVET), offering quick skilling, up-skilling, and re-skilling opportunities to people, fits in this scenario. However, TVET's poor image relative to academic pathways is presumed to result in low enrolment in TVET. A focused-group discussion with students and recent university graduates in Bhutan revealed that while TVET's image problem exists, the image itself is a composite of other factors. In particular, the young people's interest in TVET (or lack thereof) is defined by lack of advocacy in schools for TVET, supply-driven TVET with limited

choices, and TVET careers accruing poor economic returns to individuals. Thus, some recommended interventions are effective social marketing and career advice services in schools, a demand-driven approach to TVET development, entrepreneurship and qualification tracks and collaborative efforts to incentivise and offer mobility in vocational careers.

Keywords: TVET image, focused-group discussion, supply-driven TVET, Career advice, Entrepreneurship Education, Bhutan.

During the 2008 global financial crisis, job losses among the skilled people were less than among the unskilled (OECD, 2012, as cited in Badawi, 2013). With global scale shocks increasing, skills protect people from the adverse effects of these shocks as well as accelerate economic rebound (Rolfe, 2020). Such events bring TVET to the spotlight as it concerns skilling people. Amid the Covid-19 pandemic, characterized by widespread livelihood and economic disruption, TVET is supplying critical skills to manage the situation as well as helping people cope with job losses by relocating them to other sectors (Hoftijzer et al., 2020). Whether people can return to their previous jobs once the pandemic abates depends on the rate of economic rebound (Trésor, 2021). However, some sectors may not make a quick rebound. The travel and tourism sector, for example, besides having experienced one of the highest job losses (Kristiana et al., 2021), is less likely to make a quick rebound. Therefore, people will need to acquire new, additional, or specialized skills to relocate to other sectors. Many of these short- or long-term coping strategies through skill acquisition and upgradation will be provided by TVET. Thus, TVET as a

higher education pathway is an important safeguard for people in dynamic job markets.

In Bhutan, a country dependent on imported labourers, the pandemic brought about major job loss, primarily in the tourism sector, one of the biggest employers in the country. The country is addressing their stresses by creating short-term and need-based training opportunities in TVET. The goals of this initiative are twofold: to help people cope with job losses and address the supply shrinkages created by the stoppage of importing Indian workers.

However, TVET as a higher education pathway has its share of challenges. TVET has a poor image, and young people regard it as a secondary option catering to the post-school educational needs of the less academically inclined students (Ratnata, 2013). The question then is: How can TVET be a relevant higher educational pathway for young people? The first step, of course, is to understand the aspirations of the young people and the motivation that drives their decision regarding post-school pathways. As part of the TVET reform exercise in Bhutan, we conducted focused-group discussions (FGDs) between May and June 2021 with school students, recent university graduates, and TVET graduates to enlist their perspectives on TVET and understand the motivation driving their educational choices. Though detrimental effects of TVET's poor image is a global phenomenon (Billett, 2020; Aarkrog, 2020; Brennan, 2014), a thematic content analysis of the FGD data revealed that lack of, or dominating academic ethos in, school-based career advice, limited choices in TVET, and vocational careers lacking incentives are stronger determinants of young people's choice of post-school pathways than the image itself. This essay discusses the findings and proposes recommendations to make TVET an

attractive higher education pathway for people after they complete basic education.

Lack of advocacy for TVET in schools and academic ethos in career advice

The discussion revealed that students form their perceptions about higher education and choose post-school pathways based on the information they receive from teachers, parents, or elders. These influential social actors pass on their views of higher education to the students. While the TVET sector does not conduct advocacy for TVET in schools; the academic colleges and universities visit schools annually to market their courses, thus creating a vital pull factor toward them:

People from RUB (Royal University of Bhutan) came to our school for advocacy. They would share about the courses they offered. But TVET doesn't have anything like that; many students in school even don't know what TVET is. They don't know about future opportunities in TVET. If there were advocacy, bright people would join TVET too. These people would perform well and inspire their juniors in schools to join TVET too. We need advocacy in schools regarding TVET (university graduate).

The academic ethos of school-based career guidance, frequently provided by teachers rather than professional career counsellors, places a university degree as the most important – and often only – route to successful careers. As a result of a dearth of information about TVET and the skewed attitudes of career advisers favoring academic pathways, students are compelled to make post-school decisions without self-awareness or understanding job prospects. We observed that the university graduates

form a renewed appreciation for TVET after they graduate and understand the job market:

Having experienced that the job market is strongly skewed towards skills and having unsuccessfully tried to get a job myself, I realized marketable skills are a part of contemporary workplace. If I were given an opportunity to start my education again, I'd certainly go for TVET (university graduate).

On the other hand, student participants expressed a strong desire to go to universities for academic degrees. Their views of TVET are strongly influenced by the general notion about TVET being an inferior educational choice. While schools do not necessarily denigrate TVET, though they do not promote it either, parents exhort their children to get a university degree. “To live by the might of the pen”, an expression that describes parents’ wish for their children, underpins the strong societal orientation toward the so-called white-collar jobs and academic education as an escape from physical work typical of largely agrarian country like Bhutan. So, to the students, TVET is what they see— drudging work in construction, automobile workshops, and furniture houses – and their upbringing does not favor strenuous and challenging work they think TVET entails:

Till now, we have been pampered by our parents, and we have a comfortable life. We don't even have to cook our food; our parents do everything for us. We go to school in a car. We have grown used to an easy life. It would be difficult to take up careers in TVET...It doesn't look like I'd be interested in construction work (student participant).

Limited, supply-driven TVET

The discussions’ subtext revealed that youths’ and young people’s interest are varied but within the purview of a well-developed TVET system, although they do not think

TVET can deliver those qualifications. For example, the participants showed an inclination toward jobs in information and technology because they see prospects in the sector. Moreover, the young people's idea about contemporary work is influenced by advances in technology, whereby they anticipate integration of IT in even those sectors (such as agriculture) that are currently in the traditional mold. The following quote, representing a consensus in the discussions, provides a vignette of young people's expectations:

The agriculture sector has opportunities. We import food, although we have sufficient fertile land that is underutilised. So, integrating agribusiness, e-commerce, and remote sensing technology for precision agriculture would make a profitable venture. I'd be interested if these options are in TVET (university graduate).

However, Bhutan's TVET system is largely supply-driven, dominated by TVET providers' interests. It does not address and integrate young people's interests and aspirations in TVET courses. This model of TVET developed and implemented by what Billett (2014) called the "powerful others" – including bureaucrats, policymakers, academics, and other social elites – is limited and confined to the traditional courses in engineering and construction and a few services sector trades. Therefore, students have only a few options to choose from. As the options available do not represent their interests, this creates a complex: students join academic education *en masse* and promote the impression of TVET as a narrowly focused educational pathway that restricts innovation and enterprise.

Unincentivised work lacking innovation and enterprise

The young people, especially students, associate TVET with poor wages and challenging menial work.

Inadequate financial recognition for such jobs offers a significant deterrence to them. Several participants observed that if wages for vocational work is good, Bhutanese people will take up careers in TVET. One participant noted that Bhutanese, of all age groups, qualifications, and social status take up vocational work abroad where they are paid decent wages for such work:

To improve TVET, I'd suggest wages must be increased. Many Bhutanese go abroad to work and take up menial jobs because there they are paid well. In Bhutan, the wages are low; besides, companies do not give employees incentives and social security schemes. If TVET has to change, this needs to change too (university graduate).

Generally, participants showed an entrepreneurial mindset. However, they believe TVET does not offer this as TVET is concerned with equipping people with trade skills for employment in industries.

TVET and job opportunities during economic stress

On the other hand, the TVET graduates in the FGDs underscored the importance of technical skills and the safeguards they offer during economic stresses. They specifically mentioned the relevance of the hands-on skills gained through TVET, not generic technical skills like engineering. The investigators observed that all participating TVET graduates were still working, although a substantial portion of workforce had lost jobs due to the disruptions that came about with the pandemic. Bhutan is highly dependent on the imported workforce, especially for the construction sector. The pandemic resulted in supply shrinkage from India, creating a demand for the local workforce. One multi-skilled construction professional said:

I would consider someone joking if he says a TVET graduate with construction skills could not find a

job; there is currently a high demand in the sector. Even employed people like us get offers to work overtime in private worksites. So there are opportunities in construction (TVET graduate).

Generally, TVET graduates did not mention TVET's standing or image as a challenge that mattered. They instead focused on the need for quality training, opportunities for qualification and career mobility, and multiskilling. Participants highlighted that an eclectic set of technical skills pays off better in workplaces.

When you say you have skills in electrical work, there are many things to do as an electrician. When you are in the workplace, you will need to do IT-related work. You touch everything. I have worked in the civil sector, plumbing, even electrical. Multiple skills help even in getting jobs...Employers will ask you if you can do a range of work. If you say yes, you can – you get the job; if you say no, you can't – the job goes to someone who can (TVET graduate).

The TVET graduates identified the lack of linkage between higher education and TVET as a major challenge they face. TVET graduates look forward to acquiring specialised skills but are offered limited opportunities to do so. Therefore, they want a link between higher academic education and TVET. That, they believe, will help TVET graduates acquire higher-order skills not offered at TVET as well as solve some of the image issue.

Discussion

Though TVET's poor image is its major challenge, it cannot be treated in isolation. Other factors, including poor advocacy and career guidance, supply-driven TVET, careers lacking in incentives, innovation, and enterprise, contribute to TVET's unattractiveness. Indeed, image and these factors are mutually reinforcing; poor image

discourages enterprising and innovative students from choosing TVET as post-school pathway, thus creating a shortage of TVET practitioners who innovate and venture into entrepreneurship.

However, as economies are becoming complex, the demand for “technical resources” (Winch, 2013, p. 96) increases. Also, the frequency of economic and livelihood disruptions by major global events, like the current pandemic, hints that the future of work is dynamic, and people will need to quickly adapt to new realities and relocate to other sectors for sustenance. TVET provides this unique platform where people can acquire skills in a relatively shorter time than academic education and pursue life-long learning through attachments, apprenticeship, and workplace-based training (Kanwar et al., 2019). Thus, government and TVET promoters must recognise the factors contributing to TVET challenges and address them innovatively. One immediate intervention required is to take TVET to the prospective TVET takers in its complete package as a pathway that provides marketable skills that can be translated into entrepreneurship and innovation. The following interventions are proposed for Bhutan, and developing countries with fledgling TVET systems in general as their challenges are common, including supply-driven model and relative unattractiveness of TVET compared to academic pathways (Tyagi, 2017).

1. Effective social marketing: Since social actors perpetuate TVET’s unfavourable image, raising awareness about the salience of TVET among parents, school teachers, and other influential individuals is necessary. Advocacy programs must showcase TVET as a viable pathway for employment and address the general public antipathy toward TVET.

2. Diversify TVET courses: The supply-driven TVET limits choices to prospective TVET takers. Therefore, TVET systems must increase the courses by carefully considering the aspirations and interests of the future TVET takers. Essentially, TVET development must be democratized by involving industries, practitioners, and young people so that TVET becomes demand-driven in terms of both the demands of the industry and economy and the aspirations of the young people and TVET takers.
3. Career counselling in schools: Professional career counselling services must be established to help students transitioning from compulsory education to post-school pathways make informed decisions based on their interests and abilities. The existing academic ethos that defines school-based career advice must be counterbalanced by appropriate, specific, and correct career information and advice regarding TVET. Career counselling must include market information, job demand and supply, and available educational and career pathways.
4. Promote innovation and enterprise in TVET: Instead of overtly focusing on trade skills to produce workers to run the mills of industry, entrepreneurship education (EPE) must be integrated into TVET curricula emphasising innovation and enterprise. EPE alone does not, however, suffice. Post-training support, business incubation, and micro-finance support must be made available to unlock TVET's potential as a driver of economic growth and self-employment. Thus, TVET's dead-end nature, lack of career mobility, and limited financial gains from vocational careers can be addressed by making TVET entrepreneurship oriented.

5. Create linkages between academic tertiary education and TVET so that there is mobility for TVET graduates to acquire higher-order skills not offered in TVET. This is also important for creating specialisation tracks. Such a link will close the gap between TVET and academic education as post-school pathways.

Conclusion

TVET's relevance in contemporary workplace has been put in the spotlight during the pandemic as it is offering quick skilling and reskilling opportunities and creating a need-based workforce. However, TVET suffers perceived low social standing, which is a composite of other factors. Young people's perceptions of TVET are influenced more by these factors than by the image itself. Thus, conscious efforts must be made by the government, schools, TVET system, and other key social actors to address these factors to make TVET careers rewarding and attractive.

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Authors Bios

Benu Prasad Dahal: Department of Occupational Standards, the Ministry and Labour and Human Resources, Thimphu, Bhutan. He was a member of a taskforce that developed a national strategy to transform TVET in Bhutan. He is pursuing postgraduate studies in Griffith University, Australia. His interests include sustainable development, climate change, and Human Development.

Email: sdbenu92@gmail.com
<https://orcid.org/0000-0003-2147-9578>

From Disruption to Recovery: A Global Perspective

Sami B. Mejri

Northcentral University, USA

ABSTRACT

There is no doubt that the Covid-19 Pandemic has disrupted many aspects of life, including higher education and its complex and rigid structures. The disruption of university functions and the transition from in person to virtual instruction has revealed deficiencies and posed logistical and pedagogical challenges. However, the Pandemic has also led to popular and scholarly discussions about innovation and ways of reimagining the university of the future. This short essay, provides a global perspective on the Pandemic 's disruption and sheds light on the role of IT in creating space for resilience and innovation and, more broadly, in reimagining the university.

Keywords: Higher Education; Global Pandemic; Information Technology; Teaching Innovation; Microteaching.

Ready or not, the Covid-19 Pandemic forced colleges and universities worldwide to transition abruptly from face-to-face to online instruction. While that emergency transition was not permanent, it disrupted critical structures and processes, teaching many lessons for those who want to seriously reflect on the Pandemic's effect on higher education and what we might do with those lessons moving forward. Online and distance education have been around for some time, but no one would have predicted that it would become the primary platform for learning and collaboration. Depending on the subject matter and nature of interactions in the classroom, the usefulness and efficacy of remote instruction have been the focus of many scholarly discussions (Guth, 2020; Linde, Clay & Johnson, 2021; Mian & Khan, 2020 & Thornton, 2020). More broadly, what systems and processes were able to adapt to modern technology, and what broke down in the face of the crisis? How could a global disruption become a sprinting board for innovation and reimagining a university of the future?

The global Pandemic's impact has become a catchphrase in popular and scholarly discussions (Bayliss & Kletter, 2020; Feldman, 2021). In a recent study about Canadian higher education and the impacts of the Pandemic, Martinec (2020) acknowledged the importance of technology in helping the academic community cope and stay connected but described the approach as a Band-Aid solution, particularly for ensembles and music education. In the United Kingdom, numerous medical schools have suspended all clinical placements and classes, threatening medical education in the country (Mian & Khan, 2020). COVID-19 has also significantly disrupted all systems of education in the United States (Kuhfeld, Soland, Tarasawa, Johnson, Ruzek & Liu, 2020a). In modern U.S. history, Hurricane Katrina was the only other disruption to higher education, but the interruption was limited to 20 colleges in the South (Lorenzo, 2008; SchWeber, 2008). In the United

States, online learning has traditionally been geared toward adult learners who have daytime jobs but look for opportunities to build professional capital through the convenience of online programs (Lohr & Haley, 2018). However, due, in part, to limitations in State and Federal funding for higher education, coupled with the decrease in enrollment numbers, more and more universities have joined the competitive race for offering online education.

According to the 2017 distance enrollment report by the Digital Learning Compass, the number of students enrolled in online courses has surpassed six million nationally, continuing a growth trend that has been consistent for 13 years (Allen & Seaman, 2013). Additionally, more than a quarter of higher education students (29.7 percent) in the United States have enrolled in at least one online course (Allen & Seaman, 2017). The agility and efficacy of moving from face-to-face to online instruction were not unique to American institutions.

In the Middle East and within the Gulf Cooperating Countries (GCC), Qatar University and Khalifa University are considered leading examples of public research institutions in the MENA region that responded adequately and effectively to the disruption. For example, in the spring of 2020, Khalifa University shifted from in-person to synchronous online learning using blackboard collaborate as the platform for videoconferencing and instructional continuity. The shift from face-to-face to online was abrupt, but the transition for faculty and students was less disruptive for institutions with reputable online programs like Purdue University, the University of London, and the University of Southern California.

Overall, the transition has allowed instructional continuity during the spring semester of 2020. However, it was evident that interaction within the virtual spaces has limitations for some fields, such as the arts, athletics, and experimental inquiries. For example, during the Spring 2020

semester, the University College London suspended all in-person classes and clinical trials (Thornton, 2020). Additionally, the transition from face-to-face to online instruction during the COVID-19 Pandemic forced students, instructors, and college administrators to adapt to a new ecology of communication and teaching (Linde, Clay & Johnson, 2021). Colleges and universities across the world have turned into platforms like Google Classroom, Zoom, Kaltura, and other video conferencing tools as a new method of teaching and collaboration. Software companies like Adobe, Google, and Microsoft are rendering free services to support the needs of academic institutions and businesses during these unforeseen disruptions (Bayliss & Kletter, 2020).

Educators around the world sought to identify a variety of platforms for maintaining instructional continuity. One such platform is Blackboard Collaborate, a video conferencing tool within the learning management system Moodle (a Blackboard product), allowing instructors to record lectures and conduct administrative meetings. This tool is much like Adobe Connect and Google Hangout, enabling users to switch from moderator to presenter to participant instantaneously. Blackboard Collaborate allows presenters and moderators to place participants into groups, share files and videos, and conduct audience polls. This tool allows for up to 250 participants. However, for optimum user experience, everyone should switch to the muting mode except for the moderator, which was ideal for conducting faculty meetings and workshops. Other faculty members have used Zoom for group projects and other academic functions (Guth, 2020; Feldman, 2021; Linde, Clay & Johnson, 2021).

The Disruption

Given these pre-Pandemic teaching and learning experiences, social interactions bound in the physical space, particularly within the academic spheres, had redefined the roles and behaviors of learners and educators alike. However, virtual learning spaces offer a new platform for envisioning a different ecology of cognitive development. But a measure of cognitive development ought to consider the students' views, satisfactions, and dissatisfactions with the remote learning modality. For example, a study about student satisfaction with course delivery and assessment methods in the pre-Pandemic era revealed similarities and differences across modalities of instruction (Dziuban et al., 2015). Students in the general satisfaction category identify essential differences in engaged learning and agency but not so much with the assessment method (Dziuban et al., 2015). The findings of Dziubin et al. (2015) echo those of earlier studies, and that students' satisfaction levels with online instruction, feedback, and assessment are linked to a predetermined instructor and student expectations (Allen & Seaman, 2013; Ke & Kwak, 2013). For now, the virtual learning spaces have ensured a relative continuity to academic and administrative functions, but there is more room for customization. For example, Just-In-Time learning using Artificial Intelligence offers a unique approach to catalyzing collaboration while simultaneously rendering individualized, engaging, and practical learning experiences (Sattar, 2017; Vrba & Mitchell, 2019).

To this end, a reasonable assessment of the usefulness and efficacy of virtual learning spaces should consider the cognitive dimension of student learning instead of focusing solely on its social and spatial constructs. The cognitive-behavioral theory explains human behavior as the individuals' views of themselves, the world around them, and their perceptions of the future. Cognitive development is then associated with and dependent on events and changes

within the learner's social spheres. To this end, the human mind is one of the most sophisticated devices there is. It can gather new information, process it, analyze it, and make decisions based on such analysis. Through experience and formal training, the human brain transitions from learning through social cognition to learning through cognitive behavior (Mayer, 2019). Over the past 24 months, we have witnessed how the academic community has come together to carry out its intellectual mission outside the boundaries of the physical classroom. The transition from face-to-face to online delivery was neither new nor perfect but reflects, yet again, the resilient and adaptable nature of human aptitude.

The Pandemic has also unveiled other deeply rooted issues within the systems of higher education, particularly in the United States. For example, the cost of higher education is not a new debate, but the pandemic's disruptive nature has shown the current educational model's vulnerability and unsustainable nature. For example, virtual simulation labs provide students with easy and unlimited accessibility, which could offer a reduction in logistical costs, and ultimately, a reduction in tuitions and fees. Besides, remote operations reduce commuting time to and from campus, increasing productivity and overall work-life balance for faculty and students. Additionally, the effective use of office and classroom space through hybrid and online teaching becomes an excellent incentive for reducing energy consumption and other related services.

For students who enjoy the in-person learning and those who lack the intrinsic motivation to work independently, the transition from face-to-face to hybrid or fully online instruction was depressing and far from what they signed up for. Some students have gone as far as suing their colleges and universities and demanded a full refund for tuition and fees for moving to online instruction. However, change is inevitable, and in the case of the global Pandemic, change has created a new and innovative

mindset that defies physical proximity in all aspects of human connections.

The Innovation

The academic community has diverted from its traditional functions and operations to adopt a semi-irreversible structure of a flexible and innovative ecosystem. The Pandemic has reduced the level of social interactions inside and outside the classroom, but the availability of digital resources like Google Classroom, Zoom, Kaltura, and other Screen casting and video conferencing tools has created a new ecology of learning and interaction (Guth, 2020; Feldman, 2021; Linde, Clay & Johnson, 2021). Emergency response teaching, which aimed at maintaining instructional and administrative continuity, has redefined the university's role towards the learner and the larger community. It has also generated an authentic assessment of a college degree's perceived and actual values, given the increase in tuition cost and, ultimately, the accumulation of student loan debt.

In mitigating the transition from in-person to online instruction during the Pandemic, information technology services (ITS) have played an indispensable role in providing training for stakeholders, diversifying instructional delivery methods, and enhancing the overall student experience (Feldman, 2021; Linde, Clay & Johnson, 2021). And while IT services and roles within academic spheres have often been reduced to technical support and troubleshooting, the role has now grown to encompass and intertwine with other academic and non-academic departments. The transition from in-person to hybrid and/or online instruction required collaboration with digital librarians, instructional designers, the office of communication, and the office of disability and accessibility (Linde et al., 2021). Working collectively in coordination with ITS, these cross-institutional departments

have created a culture of proactive planning and agility in decision-making that was conducive to instructional continuity and the campus community's safety (Filomena, Palompon, Garcia, & Michelle Olvido, 2021; Guth, 2020). To this end, the Pandemic has brought about a new structure of collaboration and synchrony between university functions and departments like never before.

The alliance between ITS and other academic units, including the library, office of disability, and other student support services, has created a culture of collaboration and bridged the gap between the operational and instructional functions of the university (Bayliss & Kletter, 2020; Guth, 2020; Linde et al., 2021). To this end, ITS has created a new ecology of institutional collaboration and delivery of course content. As the global community moves through and beyond the Pandemic, colleges and universities will continue the path of rediscovery and searching for efficient, cost-effective, and flexible degree and program offerings.

However, the strategic and procedural reimagining of a university of the future extends beyond the scope of ITS and online learning. What lies ahead should be a period of teaching and learning innovation that enhances the notion that university education produces knowledgeable, adaptable, skilled, sensitive, and socially-engaged citizens rooted in their locality but thinking and able to act globally (Filomena et al., 2021; Linde et al., 2021). Additionally, research training requires careful calibration of processes and procedures that stretches from doing disciplinary-based research to multi-, inter- and transdisciplinary research aimed at addressing the complex challenges caused by the age of disruptions and crises (Reimers, 2021).

Conclusion

Recent scholarly discussions call for reimagining the university of the future and reforming education in the post global Pandemic (Reimers, 2021). In a similar study, Taberski (2020) argued that the Pandemic should prompt the global community to reimagine education not relocating it. For example, by virtue of emergency response to the Pandemic, the academic community around the world has transitioned into a culture of teaching and learning that sets the foundation for a new path to virtual presence and collaboration (Filomena, Daisy, Garcia, & Olvido, 2021; Reimers, 2021). It is a call for imagining institutions of higher learning where faculty and administrators function in structures that are less bureaucratic and managerialists, and more adaptable, flexible and enabling.

Based on recent scholarly discussions, it is evident that digital technology has made possible what was deemed impossible, and while the Pandemic has been disruptive to higher education, it created pathways for innovation and the restructuring of outdated and inefficient educational practices (Taberski, 2020; Feldman, 2021). For example, the instructional and disruption caused by the global Pandemic has provided university stakeholders with an opportunity to narrow the digital divide that once existed between those who preferred in person interactions and those who saw the advantages of operating in virtual spaces (Correia, 2020). In many ways, the global Pandemic has exposed the digital divide and inequalities in educational accessibility, thus compelling the education community to reimagine how teachers and educators teach and support students regardless of their physical location and the tools they can access.

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Author: Sami B. Mejri, Ph.D.

Dr. Sami Mejri serves as the manager of pedagogical enhancements at KU. He is a passionate educator with 15 years of teaching and administrative experience in higher education. He specializes in Diversified Instruction, Online and Distance Education, and 21st Century Skills and Global Education. In 2009, he received the Faculty of the Year award from the Ohio Association of Career Colleges and Schools. In 2021, he was acknowledged by the office of the White House of the U.S. government for his forward thinking on enhancing public education in high need schools.

Longing for Home and Nurturing Hope: International PhD Students' Experiences of Disrupted Mobility during COVID-19

Anh Ngoc Quynh Phan

The University of Auckland, Auckland, New Zealand

ABSTRACT

This essay explores the emergent precarity of not being able to go home of a Vietnamese doctoral student in New Zealand when the COVID-19 pandemic hit the globe in early 2020, resulting in banned international travel. The longing for home became a new source of strength for the student to grow more resilient and calm amid the global crisis and reinforced her sense of belonging to both the home and host countries. This article provides a story of an international doctoral student that may resonate with a large number of international students who have been influenced by the global crisis for the past two years. It adds an international student voice to the pandemic discourses revolving around mobility and immobility, precarity and hope.

Keywords: international doctoral students, home, hope, (im)mobility, COVID-19

The COVID-19 pandemic has turned many of the world's human mobility dynamics upside down. People's attempts to protect themselves from the virus have reversed popular patterns of mobility, leading to new trends of mobility such as cross-border return migration (Martin & Bergmann, 2021). Due to the outpacing public health efforts to contain it, "many everyday human mobilities were brought to an abrupt halt, while others were drastically reorganised" (Adey et al., 2021, p. 1). A group of population that is among the most adversely affected by the abrupt immobility caused by the global crisis is international students. When the COVID-19 started to hit the globe in early 2020, it was predicted that international students in general would likely experience social and psychological issues, "including (1) emotional distress, (2) impaired sense of personal self-worth, (3) loss of inter-personal contacts, and (4) impaired task (academic) performance" (Firang, 2020, p. 2). The temporary residence and non-citizen status of international students cast them out of the conventional framing of migrant populations (Fouron & Schiller, 2001) and may even "marginalise them in a different way from settled migrants" (Durance, 2016, p. 3). What emerges from the pandemic is 'fragile transnationalism' (Nehring & Hu, 2021), or the retrenchment of transnational social spaces and processes due to the nation-states' countermeasures to calm the tide of the virus.

The unprecedented measures taken to cope with the global crisis have disrupted the very characteristic of international education: mobility. Worldwide travel restrictions, border closures, quarantine regimes, mobility surveillance through location tracking software have been used to regulate cross-border mobility (Liu & Bennett,

2020). In Xu's (2020) comment, "student mobilities, no matter daily commutes to and from universities, or transnational movements from one country to another, have been curtailed, unduly reinforced or coerced" (p. 750). Mobility now is less a desired privilege than a fear-invoking, risky and infectious possibility (Phan, 2022). It is even a pathology (Cresswell, 2020). Furthermore, the COVID-19, as a cultural artifact, has resulted in two phenomena: the reassertion of Western elitism dominance, and the hostility towards those who appeared Asian, including and mainly international students (Xie & Shaheen, 2021). Unprecedented societal lockdowns happening in many countries challenge international students with the emotional and economic negative influences besides pre-existing vulnerabilities related to funding shortages and restrictive migration policies that have been cited as what cross-national students frequently encounter (Sherry et al., 2010; Lomer, 2018). In many cases, international students, from being perceived to be educational consumers contributing to the growing economies of destination countries, to being seen as virus carriers. In a sense, their bodies are disciplined by borders, racism, and health insurance insecurity.

This essay reports the experiences of being stranded in the study country, New Zealand, of a Vietnamese doctoral student whose name is Ha (pseudonym). When the news of border closure broke out and the whole nation went into its first national lockdown in March 2020, Ha just started her fourth year of candidature at the time. Right before that, Ha had booked a flight to Vietnam for a conference and family visit. The pandemic shattered her hopes and plans. I interviewed Ha in June 2020 via Zoom meeting when she was still in lockdown in New Zealand. The interview lasted around 45 minutes in which I asked Ha about her feelings, her anxiety, her communication with friends in New Zealand and home in Vietnam, and the

support she received from her institution. This article is part of a large research project that investigated Vietnamese doctoral students' lived experiences during their doctoral journeys abroad. As the pandemic occurred during the data collection of the project, this article, focusing on the experience of one Vietnamese doctoral student, potentially addresses a critical gap of the extant literature on international Vietnamese doctoral students and their coping strategies with the COVID-19 crisis. An elucidation of Ha's emic meaning-making of her situation will contribute to the pertinent literature by illuminating these under-researched, yet important facets of the topic of the COVID-19 impact on international graduate students. Although the article outlines the experience of one student only, it may resonate with the experiences of many international students, regardless of race and level of education. It adds an international student voice to the pandemic discourses revolving around mobility and immobility, precarity and hope.

Longing for home

Ha started her study in New Zealand in 2017. She sojourned by herself, leaving her husband and two children of seven years old and one year old in Vietnam. Right after New Zealand had first COVID cases and subsequently did not allow non-citizens to enter the country, flight routes were cancelled. Ha, among thousands of international students, "felt trapped" as in her words. Ha detailed her emotional reactions to the New Zealand border-closure announcement.

When I heard the news of shutting borders, I felt as if I was struck by a lightning. Border closure meant I would be far away from my husband and my children until...I don't know when. Every day after getting up, I asked myself when I could go home. I found the reality difficult to accept. It took me

several months to feel better, and only until recently have I accepted the new normal. It has been so difficult for me to be far away from my husband and my little girl. It is not easy to just describe that feeling in words. But that feeling is helplessness, something like helplessness.

The halt in movement came as a shock to Ha, leaving her in a state that she described as “struck by a lightning”. When borders were closed, international students in New Zealand and elsewhere in the world were put in an (im)mobility crisis because the route home was now suspended. In that sense, an additional form of precarity to international students has emerged out of the pandemic: the fear of not being able to go back home that might lead to an extended, indefinite stay in the host country. Ha, as well as many other international students, were put in a state of in-betweenness, a ‘fragile and emotional space’ (Palmer et al., 2009).

I had a flight ticket but I was not allowed to travel. I kept hoping. [...] But the situation was still the same. [...] I was stuck in New Zealand. I couldn’t escape to be home with my family [...] When can I come home?

The question that Ha asked herself every day “When can I come home?” reminds us of what Bissell (2007) terms as the “promise of the event-to-come that necessitates and brings about this experience of waiting” (p. 289). The day of her return to Vietnam was an event-to-come, but when-to-come was unknown and uncertain. That was why Ha kept feeling in-between.

As Calvo et al. (2021) notice, Global South students face specific challenges due to their third country national status, particularly during a pandemic. Ha’s longing for home and anxiety when the route home was terminated and the indefinite suspension of mobility was generated highlights a new and pre-existing forms of precarity for

international students. This issue invites further debate in the field of international student mobility. Ha's experience also leads us to revalue and rethink about her mobility. While she engaged in border-crossing education to be mobile for academic pursuit in the first place, the immobility entailed by the global health crisis turned her border-crossing activity to be less desirable. At the same time, as Ha had wished to be mobile for education away from her home country, she now wished to be mobile to be with her family in her home country.

Nurturing hope

Ha talked to her family every day, and she had other doctoral student friends who were in the same lockdown situation to mitigate the loneliness feeling. Ha also received the encouragement from her supervisors and institutions during the hard time. She then started to appreciate the 'safety' she had while the coronavirus was sweeping the world. Regardless of the stranded situation filled with uncertainty and anxiety, Ha carved out an opportunity to renew her connection to the host country while sustaining the longingness to her home country.

I planted a Vietnamese coriander. I took care of it as if it was my child. Then I planted a lemongrass. At first it looked weak. I thought it would not survive, and my flatmate also said it couldn't. But I took care of it, watering it every day, asking myself when it would grow. And it survived. It grew and there was a new branch. [...] They reminded me of home. They were my hope. They were the image of Vietnam in the moment when I felt so lonely.

In times of extreme uncertainty like the COVID-19 pandemic, homesickness is intensified to the extent that international students like Ha had to find ways to feel as connected to home as possible. Ha's recreation of a sense of home by planting a Vietnamese coriander and

lemongrass was not only to bring the sense of home of Vietnam to New Zealand, but also to help her gain the sense of home in New Zealand, making New Zealand her temporary home. The herbal plants reminded Ha of her rootedness, strengthened her belongingness to her home country, and restored her connection to her host country.

Ha continued “I told myself everything needed time. My lemongrass needed time to adapt to the new environment. Me too. I was the lemongrass. I needed time to accept the new reality.” In a sense, Ha was aware that mobility was contagious, similar to the comment by Linka et al. (2020) that mobility is a strong contributor to the global spreading of COVID-19’. By recognising the “ambiguous, unsettled, or unresolved” of the particular situation (Emirbayer & Mische, 1998, p. 998), in this study the new situation of banned international travelling, Ha learned to be patient and counter the challenges to be as strong as her lemongrass and to survive. Her acceptance of reality was not an act of surrendering. It was her self-transformation to be resilient against the pandemic. Ha learned to embrace her temporary immobility, reminding us that under these exigencies of the crisis, we need to adopt new routines, new habits, and new ways of stilling ourselves (Bissell & Fuller, 2011). With the ongoing pandemic as a backdrop of thought, Ha’s experience shifts our attention to international students not as subjects and victims of the crisis but as agents to transform their individual context. Ha’s acknowledgment of her vulnerability and fear was the first step to grow resilient. Her ‘nurturing hope’ activity was in fact an act of ‘stillness’, understood “as state of contemplativeness and introspection re-energised by the pandemic” (Lipura, 2021, p. 254). The coriander planting was not only a symbolic anchorage of home for Ha, but also a way for her to embrace the present in order to go past it and wait for the future.

Concluding thoughts

Corporeal travel has been highly problematised during the COVID-19 pandemic, leading to the curtailment of many previously taken-for-granted mobilities such as the circulation of international students (Cairns et al., 2021). The global health crisis, in international higher education and to international students, has been a global mobility crisis. The global spread of the coronavirus and the suspended mobility by border closure is an example of falling into a ‘territorial trap’ as a response to something that is not territorial (Wang, Zou, and Liu 2020; Agnew 1994). As international students have been thrown into a turbulence, new precarities may emerge, making them feel unsafe and uncertain about the future. International students can be a group that are most vulnerable to the new normal situation. Favourable study destinations such as English-speaking Anglophone countries may become less desirable to students because of traveling limitations and the distance between students and their family during a global turbulence. The heightened precarity among international students who found themselves cut-off from emotional support at a time of vulnerability calls for more attention to their lived experiences and their struggles with major social, emotional, educational and mobility challenges. As everything is constantly changing and unpredictable, “the one certainty among all the uncertainties is that it will not be a return to *normal*, but rather that it will be a *new normal*, which will be quite different from anything that we have known before” (Neuwirth et al., 2020, p. 3, *original emphasis*). What the new normal appears to be based on is a view of the world that is suspicious of mobility and rooted in a sedentarist view of the world. On a positive note, while the COVID-19 pandemic represents an influential external upheaval that potentially destabilises people’s lives, strength and resilience will arise and triumph. The paper illustrates the need for educators to

broaden the scope of their support strategies to better ascertain the holistic student experience, especially both off-campus during the critical time. It is important to note that Immobility and mobility are no-longer taken for granted, or neither of them should be marginalised. They are both meaningful and emotionally felt.

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Author Bio

Anh Ngoc Quynh Phan, is a PhD student at The University of Auckland, New Zealand. Her research interests focus on international students, mobility, transnationalism, sense of belonging and sense of home. She works with qualitative methodologies including autoethnography, narrative inquiry, and poetic inquiry. Email: anh.phan@auckland.ac.nz