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Transitions in Teaching and Learning:
Navigating Shifting Contexts



WEBER STATE UNIVERSITY
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Transitions in Teaching and Learning:
Navigating Shifting Contexts

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From the editors – About this issue

The articles in this issue, Volume 25, Number 1 of the *Journal of the International Society for Teacher Education*, are organized under the theme: “Transitions in Teaching and Learning: Navigating Shifting Contexts”. The authors in this issue provide compelling articles from Bhutan, Canada, Nigeria, and the USA and address questions, challenges and issues related to the transitions many educators are being asked to make as they continue to negotiate shifts brought on by the global pandemic. This open issue offers a diverse collection of critical research, stories, and practices detailing the types of transitions educators are navigating across geographical, cultural, and pedagogical contexts. Together, the authors examine the impact of these shifts on our teaching, learning, and administration of teaching programs.

Early childhood education specialists Lea Ann Christenson and Janese Daniels from the US offer a critical reflection on the ‘pivots’ teacher educators and teacher candidates have had to make in response to shifts to online learning during the pandemic. In their article, “Leveraging Virtual Learning Environments to Strengthen Pre-Service Early Childhood Teacher Preparation: Program Pivots Due to Covid-19” the authors outline lessons learned by course instructors and administrators as they sought to leverage technology and modify a teaching program in a post-pandemic context. The article offers hopeful approaches to technology and instruction that might better prepare future educators and meet the needs of young children.

The article “Living in Transition to Teacher Education in Canada: Personal Reflections and Portraits of Two Vietnamese Female Doctoral Students” offers insight into the shifting experiences of two Vietnamese teachers studying in Canada during the pandemic. Using a collaborative autobiographical approach, Thuy-Hang Thi Tran and Tram-Anh Bui outline shifts in their perspectives, research process, and personal achievements while transitioning to the Canadian educational landscape. Their paper shines a light on the social, cultural and familial factors that can impact international students seeking to adapt to and flourish in educational institutions and landscapes.

In the article, “HyFlex Course Delivery: Addressing the Change in Course Modality Brought on by the Pandemic”, Tonia Wilson and Melina Alexander from the US, explore the advantages of providing a range of video, online, and face-to-face classroom experiences for students. Using a case study design, the article explores a hybrid course delivery method in a post-

baccalaureate special education teacher licensure program. Their study offers insight into the importance of student choice in course delivery and explores benefits of the HyFlex model for institutions seeking to serve diverse learners through a variety of synchronous and asynchronous course modalities.

From Bhutan, Dorji Tenzin, Kinley Seden, and Nima Dorji explore the educational importance of food quality and eating habits. Their article, “Exploring the Relationship Between Nutrition and Academic Learning among Students of Samtse College of Education” reports on data from a mixed-method study on teacher education students boarding at a Bhutanese College of Education. By exploring eating practices, nutrition choices, and food presentation, the authors point to a correlation between student teachers’ perceptions about food quality and their learning experiences. The research highlights additional and often overlooked factors that teacher education programs must consider in their efforts to support student teacher success.

In the article, “Culturally Responsive Practices in a Diverse Elementary Classroom: A Case Study,” Shernavaz Vakil, Lynn Atkinson Smolen, Jennifer Campbell and Melina Alexander from the USA study the impact of English language professional development on teacher practice. Using a single case study research design, the authors detail critical factors involved in implementing culturally responsive practices for English Language learners in diverse schooling contexts. The study details a teacher’s journey toward more culturally inclusive and reflective instruction and communication with English language learners and their families.

In the article, “E-Learning Facilities Availability, Usability and Adaptability as Predictors of Job Effectiveness among Academic Staff of University of Ibadan” Nigerian authors Sunday Nnamdi Okocha and Monica Ngozi Odinko investigate the impact of various technologies on academics’ job effectiveness including teaching, research, presentation, and publication. The study draws attention to the role government and school administrators can play in supporting faculties, institutes and centers seeking to use technological tools to enhance staff job effectiveness.

Personal Statement from the Editor

December 2021

It is my pleasure to introduce this issue of JISTE, the first in my role as Editor. I would like to thank past Editor Karen Bjerg Petersen for her many years of dedication and hard work as Editor in Chief. Karen's contributions have been invaluable to JISTE and to the International Society for Teacher Education. Throughout her tenure as Editor, Karen helped to advance JISTE's reputation as an international journal and ensured JISTE continued to be a meaningful forum for dialogue about teacher education in an international context. I look forward to continuing this work as Editor in Chief and following in Karen's footsteps.

I have been a member of ISfTE since 2010. My journey with the Journal began in 2015 when I first became a member of JISTE's Editorial Board. Since then, I have served as Associate Editor of JISTE (along with my colleague Vera Woloshyn at Brock University) and have co-hosted an ISfTE Seminar in Niagara Falls Canada. These combined experiences have helped me appreciate the value of JISTE to the Society and the hard work involved in bringing JISTE to print twice a year.

Publishing a journal is a collective effort. The success of JISTE depends on the hard work of a group of dedicated volunteers. We are fortunate to have such a strong voluntary base who generously donate their time, expertise, and knowledge to JISTE.

I would like to especially thank our team of Associate Editors, David Byrd and DeeDee Mower at Weber State University. Their hard work and commitment are a key part of JISTE's success. Both work diligently to complete the formatting, English and copy-editing of each issue.

Moving forward, I am excited to announce some exciting changes to JISTE. Beginning with Issue 26.1, JISTE will be published as an Open Access Journal. I know many in our membership will be especially excited to see this shift, as it will streamline the journal publication process and create an easy-to-use system for contributors, editors, and the Editorial Board. The shift to open access will also increase access to a broader readership and audience, including professional researchers outside university institutions. Special thanks to the Editorial Board and to Caroline Huang at Brock University for their assistance in developing the open access site. I look forward to its launch in 2022.

I extend my gratitude to all who contributed to this issue and who continue to support JISTE. Your work is important for us all to learn and understand the various educational conditions, strategies and technologies being implemented globally and locally. I am also grateful for the reviewers and statistical consultants who, on some occasions, provided repeated reviews for submitted articles. We are indebted to the dedicated scholars and members from around the world, both members and non-members of ISfTE, who have generously offered their time and expertise to review manuscripts.

As the articles in this issue reflect, we continue to live in uncertain times. As educators and professionals in the field of education, we are each working to adapt to new conditions, safety protocols, and global concerns. JISTE is one space that allows us to come together and share our collective knowledge, research, experiences, and strategies as we strive to support our students, colleagues, and communities.

Sincerely,

Leanne Taylor
Brock University, Canada

Leveraging Virtual Learning Environments to Strengthen Pre-Service Early Childhood Teacher Preparation: Program Pivots Due to COVID-19 Empowers Future Practice

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Abstract

This critical reflection illuminates the planning, delivery, and evaluation of the ‘pivots’ an early childhood teacher preparation program made in response to the shift to virtual learning necessitated by the lock down measures prompted by the COVID-19 pandemic. The challenge was to shift two undergraduate courses from in person to a virtual format, including an in-person internship to an entirely virtual experience while maintaining a high-quality program which meets the certification requirements and professional standards. The process of moving the courses and internship to a virtual setting gave us the unique opportunity to step back and reflect on the essential conceptual knowledge and understandings necessary for teacher candidates to meet professional standards leading to certification and to becoming competent and caring professionals. Results of our critical reflection include lessons learned by the two instructors and department chair on the effective leveraging of technology to meet the challenges posed by COVID-19 leading to modifications to our program post pandemic.

Keywords: Teacher Education, Early Childhood Education, Clinical Experiences, Virtual Learning Environments

Introduction

March 11, 2020 is a day that will be long remembered around the world; it was the day that the World Health Organization (WHO) characterized the growing number of people infected around the world with COVID-19 as a pandemic. The WHO’s announcement was followed shortly thereafter by the United States when a *state of national emergency* due to COVID-19 was declared. (Holland et al., 2020). Universities across the United States

immediately began to transition to virtual instruction, as did Pre-Kindergarten-12th grade schools (i.e.: schools for 4-18 year-old students). This set of circumstances created a unique set of problems for university teacher preparation programs.

This unprecedented situation created challenges for teacher preparation programs as in this case the PreK-3rd schools in which the teacher candidates were placed in pivoted to virtual instruction and for the 2020-2021 academic year did not allow any type of internship experience in person or virtual. The instructors were not informed until a week before the semester started. Illuminated here are the steps the instructors and department chair took to make systematic programmatic changes in order to leverage technology to deliver instruction and to create meaningful virtual courses and internships. Also included are the lessons learned while making adaptations to the program while maintaining high quality. Our critical reflection revealed changes that support the conceptual strength of the program and those that will be maintained when in person instruction resumes.

Context

The program in the Department of Early Childhood Education, is one of seven programs in the College of Education at a large state university, which is the largest supplier of teachers in the state. The main goal of the department is to prepare graduates to meet the needs of all young children birth to age 8 by providing graduates with a comprehensive knowledge base of all aspects of early childhood (Darling-Hammond, 2000; Cochran-Smith, 2003). This is summed up in the mission of the Department of Early Childhood Education:

Towson University has been a leader in teacher preparation for over 150 years, and its programs are recognized for their high quality and innovation. The Department of Early Childhood Education provides a comprehensive academic program, combined with the valuable internship experiences you need to understand how young children develop and learn. (<https://www.towson.edu/coe/departments/earlychildhood>)

Our Program Before COVID-19

Prior to the disruption related to COVID-19, our program functioned as a fully face-to-face program with in-person internships in Pre-K-3rd grade classrooms. After completing the general education requirements for the university, our teacher candidates spent one semester completing professional prerequisite courses. During this semester, they applied for formal admission into the Early Childhood major, having earned a minimum grade point average and having completed all prerequisite coursework. Upon program admission, our

teacher candidates complete a three-semester sequence of coursework, including clinical experiences in partner schools, which would lead to a full-time 16-week student teaching internship.

Our three-semester sequence was designed to gradually increase the teacher candidate's experiences and time spent in our partner schools. The first semester consists of campus-based coursework and a 1-day/week clinical internship experience in a Pre-K or kindergarten classroom. During this semester, our candidates begin to experience being part of a school culture, learning how to work with other professionals in the building (e.g., resource teachers, special educators, building administrators).

Our candidates also begin to experience curriculum planning, assessment of children, and how to work directly with families. All of this is done under the guidance of an experienced mentor teacher and university supervisor. During the second semester of the Early Childhood program, our candidates continue their campus-based coursework, but they spend two days each week in a clinical experience, working in a first, second, or third grade classroom. Our candidates take on more responsibility and are expected to increase their competence and confidence as emerging early childhood educators. This semester culminates in a week-long experience that we call *Teach Week*. The third, and final semester of our course sequence is what has been traditionally known as student teaching. Our program identifies this as the full-time clinical internship. During this semester, there is a shift from campus-based coursework to eight weeks of full-time work in a Pre-K or Kindergarten classroom and eight weeks of full-time work in a first, second, or third grade classroom.

Our candidates take one course weekly on campus, Senior Seminar. The objective for the seminar course is to provide a space for our candidates to synthesize their experiences from the entire three semester sequence and discuss and debrief the full-time clinical internship experience. Our teacher candidates take on greater amounts of responsibility in their partner schools and take over full instruction from the classroom mentor teacher at the end of each two full-time clinical experience.

Theoretical Framework

Anchored by the National Association for the Education of Young Children's Professional Preparation Standards (NAEYC, 2011), our overarching goal is to ensure that our teacher candidates gain a deep understanding of and experience grounded in early childhood theory and practice of Piaget, Vygotsky, Clay, Bloom, Gardner, etc. (Beloglovsky, M., 2015). The NAEYC Professional Preparation Standards are comprised of seven standards, each of

which has three to six key elements that help clarify what is expected for the standard. The standards and key elements are integrated throughout our Early Childhood Program and provide opportunities for our teacher candidates to demonstrate what they know, understand, and are able to do in relation to the standards.

These theories converge in the NAEYC standards with Developmentally Appropriate Practice (DAP) as the foundation to actualizing the Standards. DAP is characterized by a strength-based lens of young children which builds on their curiosity and interests through hands on instructional strategies and learning activities facilitated by teachers. (NAEYC, 2011). We believe that our graduates leave us prepared to teach all children and to work with all families, regardless of race, gender, ethnicity, or socioeconomic status.

Our program is grounded in the belief that our teacher candidates should understand and be able to apply developmentally appropriate practices when working with young children and their families. As such, our candidates take coursework and engage in deep conversations across our programs about how theory applies to their work with young children, birth to age 8 and look for the application of theory when they are participating in their clinical internship experiences.

COVID-19

COVID-19 changed our program's traditional plans! Midway through the Spring 2020 semester, we began to learn that our campus would experience an abrupt shift to 100% virtual instruction and that our partner schools would also be shifting to 100% virtual learning. This began about the second week of March 2020. Our teacher candidates had only had about four weeks of a 1-day/week internship experiences in their placements. The semester finished with virtual classes and assignments created to make up for lost time in school placements.

Planning for Fall 2020

During Summer 2020, we waited for guidance from our district partners and our university as to how learning and clinical experiences for our 1-day/week teacher candidates would occur during Fall 2020. As we got closer to the start of the semester and the school year, it became clear that our teacher candidates would not be entering public schools for clinical internship experiences either in person or virtually.

Our school district partners began the year with 100% virtual learning and decided to only give virtually placements to student interns in their professional year. This decision was made in mid-August and left Term 6 students without any placement or connection to children

and families in public schools.

After this last-minute decision, the faculty and department chair began to think creatively about how we could provide a meaningful experience to our 1-day/week candidates. The goal was to determine how the early childhood program could support learning for the cohort and how the program could provide a meaningful experience for the cohort in spite of the fact that cohort members, teacher candidates, would not be able to participate in the traditional public school internship experience.

What grew out of these meetings and critical reflection was a collaboration with the university faculty, individual partners from the early childhood profession, and an emerging program in partnership with the University Child Care Center (UCCC). In the next sections, we will describe the outcomes that grew out of our desire to provide meaningful experiences for our cohort and we will share lessons learned as we reimagined our Early Childhood program.

Our Program Reimagined

Planning Process and Shift to Online Learning

So then, what do you do when a few weeks before the semester is to begin, you are informed that the planned internship in public elementary schools for your college students was cancelled due to a global pandemic? After we got over the shock and panic, we began to brainstorm ideas for virtual experiences that would be meaningful for both our teacher candidates and young children.

We were grateful for colleagues willing to walk this walk with humor, integrity, creativity, flexibility, and an ardent desire not to give up, but to create something rich and meaningful. The expression “building a plane while flying it” was something frequently thought and occasionally said at the beginning of the semester. Although we possess experience and background knowledge, this was completely new and changing daily based on the health risks of the pandemic and uncertainty surrounding closures and stay-at-home orders.

Our university began Fall 2020 with the intent of having some classes meet in person. Within days of students returning to campus, and out of an abundance of caution, the university moved all classes online and students living in the dorms returned home. So now, the faculty had no placements for one course and had to pivot to on-line learning with no notice. The campus remained open and faculty who wanted to teach from the technology-equipped classrooms were welcome to report to campus to do so and we decided to come to campus and team teach from our classroom.

We met daily and weekly, before and after class, in person to collaborate and plan with guidance and support from our department chair. The department chair informed us she would report to campus to work in her office on the days we taught on campus. She felt that we, the course instructors, were making an important statement by coming in to work each week to team teach and broadcast from the classroom, and she wanted to demonstrate her support for our efforts by being physically present and available for us.

This provided us with a way to collaborate in person...we missed being around people! Co-teaching from our classroom gave us much needed, safely distanced social interactions and it provided a model for our teacher candidates on how to work with colleagues in the face of what could seem to be impossible circumstances. By November, the COVID-19 infection rate rose to a point where we did not believe it would be safe for even the instructors to meet in person and we moved our planning on-line.

Adapting Course Assignments to Online Learning

One Day a Week Internship.

With schools closed due to the global pandemic and access to our mentors denied, our challenge was to create a meaningful internship experience to take the place of the one day a week internship for our teacher candidates. All of the coursework listed above has a field component where the teacher candidates practice what they are learning in their Term 6 courses under the direct guidance of a mentor teacher and university supervisor. What could be put in place that would be meaningful and provide practical, hands-on experience?

Family Engagement.

In addition, to being placed in school setting during Term 6, one of requirements to meet NAEYC Standard 2: Building Family and Community Relationships was for our teacher candidates to have experience and build confidence working directly with families and design meaningful family engagement events. In the past, our teacher candidates have planned and implemented a variety of family engagement activities based on the school improvement plan and specific goals expressed by school administrators and mentor teachers.

Our students are responsible for all aspects of planning, facilitate the event and follow up to determine the impact this had on families. We have had many successful programs in past semesters. Some examples include “Donuts with Dads”, where student interns worked on take-home packets to increase math skills during the summer break, World Earth Day, where our student interns created a school-wide, community-wide clean-up day to beautify the building grounds, and make & take literacy projects, which were shared with families during

the school's spring festival. However, with school closures these types of in person events could no longer take place. So now what?

Answer: Family Engagement Sessions: A Virtual Internship with Children and Families.

At our university we are fortunate to have a premiere childcare center that serves faculty, children, and the greater community. The director of the childcare center works closely with the College of Education and welcomes our teacher candidates for observations. Many college students work part time at the childcare center assisting classroom teachers. The pandemic drastically reduced the number of young children who could be at the center and at times, the center was forced to completely shut down.

In Fall 2020 the center was open to a reduced number of children. The director explained many of her families who were now at home with their toddlers and preschool aged children had expressed a desire to stay connected with the childcare center even though they were not ready to send their children to the center in person and were looking for enrichment activities for their children. This was the beginning of our partnership and reinvented virtual internship. The decision was made to partner with families from the childcare center and work with them weekly to enrich their experiences while at home with young children during the pandemic. Each of our teacher candidates was assigned to two children and their families and planned weekly learning adventures based on the themes provided by the childcare center and specific needs and interests of their students. We explicitly taught the planning process and provided a guide (Appendix I). This guide was turned in weekly as well as a reflection after the session. The instructors provided feedback on the planning guide and reflection.

How did we accomplish this?

1. Connecting our student interns with children and families by having the childcare center director send inquires to families
2. Once the partnership with families was forged, letters were sent home inquiring about their child's interests and aptitudes. Additionally, we wanted to learn about the families themselves to understand the child's home environment.
3. Limited the time young children were on the computer to 30 minutes. This time included a read aloud and follow-up activities including music and movement. Suggestions for extension activities were provided ahead of time by emailing the families with materials that expanded the learning beyond the 30-minute session.
4. Created a family engagement planning guide for each learning session that included the theme, vocabulary words, aligned with College and Career Readiness

Standards for Math and (English Language Arts) ELA, and documented an interdisciplinary connection.

5. Required teacher candidates to write a reflection after each session documenting their successes and challenges and what they would do differently in future sessions. Additionally, the teacher candidates were required to document their assessment strategies.

6. Followed-up with a survey to families to provide us with feedback for future planning.

7. As a final reflection we had our teacher candidates align their family engagement experience with the NAEYC Standards for Early Childhood Professional Programs.

By the end of the semester, each teacher candidate had facilitated 20 virtual family engagement sessions. They applied technology in a new way to connect with families. They had planned and reflected on the experiences and extended the connections with families by emailing before and after the sessions. They connected with families sometimes during the sessions but always before and after.

We received positive feedback from the families directly to our department and through the childcare director (Appendix II). Many of our teacher candidates went above and beyond and created backgrounds related to the theme for visual appeal and engagement.

Prop Box

Another long-standing assignment which supports all of the NAEYC Standards is the dramatic play prop box, where teacher candidates use raw materials and their imaginations to create engaging Social Studies and Science learning activities built around themes which also support the English Language Arts (ELA) and Math standards. Examples of past prop boxes have been community helpers, gardening and a trip to the vet, all designed for young children to learn more about the topic while engaged in playful learning.

In the past, after an introduction of the prop box and modeling how to use the materials, our teacher candidates leave the prop box in the classroom and allow the children to engage with those materials while observing how they interact and learn from these activities. Our teacher candidates are encouraged to recycle or upcycle, find creative ways to reuse materials that may otherwise be thrown out, or to use materials they find in their homes or places of work, yard sales and other cost sensitive ways to build a thematic box that is safe, authentic and engaging for the young children.

With the current pandemic, this has been a challenge and something else that we have had to reimagine. It has taken on a different form as we want our teacher candidates to stay safely at home and not out shopping or exploring putting themselves at unnecessary risk of exposure to the COVID-19.

We were forced to have our teacher candidates create virtual props boxes and share them with peers and not children. We accomplished this by creating a PowerPoint template for our teacher candidates to complete and asked them to include items they had readily available in their homes or virtual items they found exploring the internet.

Our teacher candidates put together a meaningful assorted of materials and activities centered around the prop box theme. We had our them present to their peers in smalls groups and required them to provide meaningful written feedback to each other. Our teacher candidates took this feedback to enhance their final project that was submitted virtually a week later. Once the PowerPoint and written materials were submitted, the teacher candidates presented their prop boxes to the faculty on an individual basis. This was an ongoing project where teacher candidates used feedback and suggestions to improve their final product. Breakout rooms during our class time enabled us to do this from the safety of home and as instructors we were able to join each group to answer any questions that may arise. Part of the assignment was focused on how these materials could be used effectively in a virtual environment and our teacher candidates used these materials to support their family engagement sessions.

Specialist Interview

In past semesters, our teacher candidates have selected one school specialist at their internship and interviewed them to learn more about their job and how they served children and families. One of the unexpected benefits of virtual learning was being able to invite a vast array of guest speakers to join our class. We did not need to worry about parking passes or stipends as speakers joined our class during the workday from their virtual workspace.

Every week of the course we invited an educational professional to share their experience and expertise and giving our students words of encouragement and advice. It was a highlight of the course for both instructors and teacher candidates. We had presentations ranging from a Pre-K-mentor teacher from one of our partner schools, a pediatric nurse, a director of a public childcare center, a school counselor, a principal, a community school coordinator, a music teacher, a private pre-school director, and an outdoor education specialist. We were humbled by how all of these professionals graciously shared their time and expertise

with our future educators. It was evident that they spent time preparing for their presentations and were passionate about the work they do in service of young children.

However, during the pandemic and because so many professionals were working from home, we were able to hear directly from more specialists than ever before. It was motivating to hear from so many people dedicated to improving the lives of children. We were frequently struck by the common themes from all our specialists, echoing what we stress with our teacher candidates. One theme being the importance of building relationships and another theme was to remain positive and surround yourself with like-minded, positive people.

All our specialists conveyed the importance of dedication, commitment, and passion for their jobs. It invigorated us to hear directly from educational professionals working tirelessly to serve children. We hope to continue to include this in our course when we return to in person learning. The use of guest speakers virtually opened the world of teaching to our students beyond the walls of our university and their single classrooms and schools. We were able to bring in a diverse cross section of educational experts in many different contexts: a variety of schools with varying demographics, leaders at the school district and state level and disciplines; music education, speech therapy, pediatric nurse, etc. Technology literally brought the world into our university classroom via zoom and we intend to continue to do so when we return in person.

Lesson Observation Critiques

In addition to modifying assignments created for brick-and-mortar classrooms, we the instructors, added assignments to help our teacher candidates deconstruct in person teaching. Because our teacher candidates would not be in classrooms; Lesson Observation Critiques assignments were added which included asynchronous class time spent viewing videos of exemplary teaching in pre-Kindergarten and kindergarten settings with guided reflections to assist the students in deconstruction of best practices. This assignment was then deconstructed in during synchronous class each week via whole and small group instruction. The discussions included ways in which these best practices could be implemented in the family engagement sessions.

Discussion

The course instructors and the chair of the department met and communicated several times a week over the course of the semester to reflect on how the changes to the program were going and to make changes as necessary as the class was in flight. Due to being notified in late

August that our Term 6 teacher candidates would not have access to mentors in partnership schools, planning for the Family Engagement sessions and Lesson Observation Critiques continued after the semester started in late August until mid-September.

As a result, due dates became more fluid over the course of the semester than they were in the past. Some teacher candidates used the extra time however, most adhered to the original deadlines while maintaining a high level of professionalism completing their assignments. There was a sense of collaboration and cooperation between the instructors and teacher candidates that had not been present in earlier semesters. Herein are the lessons learned over the course of the semester.

Family Engagement Sessions

These sessions met two objectives. First, to take the place of the one day a week internship and second to take the place of the Family Engagement assignment which traditionally was helping with an after-school event such as a Literacy Night or Back to School Night. For all stakeholders, the family engagement activities were a success. The children and families stayed connected to the childcare center and were provided with developmentally appropriate academic support.

The university students were provided with an intimate experience getting to know and serve families. This type of family engagement was much more personal than the traditional Science Nights as they literally had an intimate window to how families operate...during a pandemic! The level of planning the teacher candidates were required to do was much more detailed than in the typical one day a week semester where they pretty much just shadowed a mentor.

This assignment helped build confidence and a sense of efficacy in the teacher candidates. They had much more responsibility earlier in the program and most appeared to thrive under these expectations. We hope to continue these on-line sessions and leverage the learning from them.

Appendix II provides a few of the positive unsolicited comments from some of the participating families. At the time of writing, the instructors are conducting a systematic survey of all the participating families.

As was mentioned earlier, teacher candidates take a total of six courses during Term 6 and in the past, all have had assignments linked to placements in schools. The instructors in most of the courses in the absence of placements due to COVID-19 during Fall 2020 took advantage of the teacher candidates' access to children and families through the Family

Engagement sessions and tailored some of their instruction and assignments to support these sessions. Thus, the work done by the ECED 341 and ECED 343 instructors benefited all of the courses.

In Spring 2021 we expect to still be in an all-virtual environment, so we will continue this partnership with the University Child Care Center. We are also in preliminary conversations with a public school that has a ‘Judy Center’ that serves children and families near the poverty line about how our students can serve that program virtually.

This iteration of Family Engagement better meets NAEYC Standard 2, Building Family and Community relationships and Standard 7 Field Experiences as the teacher candidates were now exposed to the 0-3-year-old setting in ways in which they had not before. In the future, in preparation for going back to a face-to-face reality, we will be in discussion with all stakeholders to investigate the possibility of continuing the partnership during Term 6 with childcare centers.

Prop Box

Although the modifications to the Prop Box assignment were not as extensive as the Family Engagement and the one-day placement, the outcome was quite positive. Overall, there was greater level of creativity and more diverse and meaningful materials found in their homes and virtually on the internet. Providing the time and space during class created a climate of cooperation, not competition and allowed for direct feedback prior to final submission and grading.

In the past, some of the Prop Boxes were very formulaic and cookie cutter. Some teacher candidates spent so much time on making their box ‘cute’ that they lost sight of the purpose of the materials: to teach literacy and math skills through a theme in developmentally appropriate ways.

In this way NAEYC Standard 4: Using Developmentally Effective Approaches and Standard 5 Using Content Knowledge to Build Meaningful Curriculum were met in a much more authentic and meaningful way. We intend to use this more collaborative approach moving forward in a virtual or eventual face-to-face modality.

Specialist Interviews

This new iteration of this assignment is another ‘keeper’! In the past, our teacher candidates got an up-close view of only one specialist in the school in which they were placed. In this virtual format, they learned from no fewer than 15 specialists, located in a wide variety of settings in and out of schools. This provided for a much richer and informative perspective on which to build their final semester in the program and as beginning teachers. Each guest

speaker finished their presentation with advice to those starting out in the profession. Through subsequent discussions both in small groups and whole class, as well as a final summative reflection, the teacher candidates demonstrated a much greater level of expertise about school and communities holistically in support of young children and their families.

This iteration of the assignment gives greater support to NAEYC Standard 1: Promoting Child Development and Learning and Standard 6: Becoming a Professional. Moving forward both in a virtual and face to face platform, we are going to continue with this much more meaningful version of the specialist interview assignment. The challenge once we return to face to face may be able to secure speakers, primarily because they will have returned to their buildings/offices. However, we are now experts at interfacing with on-line platforms so that will be very likely how we will interact with these varied experts into our university classrooms.

Lesson Observation Critiques

The Lesson Observation Critiques were the only new assignments we added to our course. The above-mentioned assignments were revisions of existing assignments. The Lesson Observation Critiques proved to be a valuable addition as they provided a window in on face-to-face classrooms which the teacher candidates will one day be hopefully interning in and most certainly be teaching in as in-service teachers.

We strategically chose the lessons they needed to be exposed and then support the viewing with readings, reflection questions and in class discussions to help our teacher candidates deconstruct what they had viewed. Furthermore, we encouraged them to incorporate these face-to-face strategies where applicable to their virtual Family Engagement sessions to give them immediate practice with these skills.

The Lesson Observation Critiques helped support NAEYC Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families, Standard 4: Using Developmentally Effective Approaches, Standard 5: Using Content Knowledge to Build Meaningful Curriculum and Standard 7: Field Experiences.

Moving forward, even when the teacher candidates are back in schools, we plan on incorporating Lesson Observation Critiques to some degree. These strategically selected videos and reflections helped us systematically guide our teacher candidates to best practices for young children instead of leaving their discovery to chance in their placements. Through these videos the instructors were able to systematically and strategically connect early childhood theory via the NAEYC standards to actual classroom practice. This will assist the interns once they return to in person classrooms to better make these theoretical connections themselves.

When they are back in schools, we will use these videos and reflections to guide and reflect on the practices they observe firsthand.

Conclusion

There is no doubt that the COVID-19 pandemic has presented all of us with challenges and it seems that everyone has lost something important to them during the pandemic and early childhood classrooms (Soltero-Gonzalez, 2021) and university teacher preparation programs for early childhood educators are no exception (Nazerian, 2020). However, along with the loss there was renewal and hope. Through our process of critical reflection, the instructors and chair of the department found solutions to the problems the pandemic created that were in line with the essential conceptual understandings necessary for teacher candidates to become competent educators (Jones, et al., 2021). We used technology in new ways for us, virtual classes and Family Engagement Sessions as well as video.

A solution to a problem however, also a way to continue to be better at preparing future educators for DAP (NAEYC, 2011) instruction to meet the needs of all young children (Egan et.al, 2021). In our program we all: instructors, students and the department chair were in this unique and sometime scary situation together, and we helped one another through the semester while maintaining academic integrity around the content of the courses.

We made shifts to the virtual world of instruction and internships while using the NAEYC Standards as a lens the changes we made. Hopefully, as a university faculty we modeled the strong content knowledge, flexibility, integrity, respect for our students and love of the act of teaching no matter the environment for our students. All of which are the hallmarks of competent and successful educators of young children.

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Appendix I

Family Engagement Planning Guide

Lead Teacher:

Assistant Teachers:

Date of session:

Time of session:

Name, age and characteristics of child:

1. Theme of session:
2. Overall objective:
3. Target Academic Vocabulary (list 5-8 words)
4. MSCCR: (English Language Arts) ELA Maryland Standards for College and Career Readiness English Language Arts OR Maryland Early Learning Standards for Language and Literacy
(list 2-4 standards)
5. MSCCR: Math (list 1 or 2 standards)
- 6.
7. Interdisciplinary connections: (circle those that apply and explain)
Social Studies Science The Arts Other
8. Music/poem:

9. Movement:
10. Learning game(s):
11. List Read Aloud or Shared Reading Book (title and author):
12. List a minimum of 5 comprehension questions for Read Aloud or Shared Reading (easy to complex)
13. What specific strategies will be used to engage children during session?
14. Materials (for you and for the child at home):
15. Extensions for Family at home (explain here and provide guidance in email to family after session) Art, Developmentally Appropriate writing activity, Guided Outdoor Activity, Other:

Appendix II

Sample Comments from Participating Families

These unsolicited comments were collected by the Director of the Child Care Center from participating families.

“We just had our session with the three Towson students and they NAILED IT! My child (age 2 and a half) loved their choice of books, songs, and activities. It was like having his own personalized story-time.”

“My child (age 3) was so excited to be meeting with the Towson students again, she asks in the morning if today is the day. The students were extremely engaging and good at their work. What a lovely idea. Hooray!!”

“Just a quick note to say that our family’s student interns are doing SUCH AN AMAZING JOB preparing for and executing their sessions with my child (age 3 and a half). I

was with them last week and now they are meeting with him and my husband.”

“What they planned both times is super age-appropriate, fun and aligned to her (age 3) interests. They are doing great at communicating warmth, energy and interest via the screen and she loves the experience. So excited to see this in action!”

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Living in Transition to Teacher Education in Canada: Personal Reflections and Portraits of Two Vietnamese Female Doctoral Students

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Abstract

Living in transition while studying teacher education leads to multiple challenges for doctoral students as they situate themselves in the intersections with new sociocultural environments. The navigation process affects their personal and professional self-formation in constructing and reconstructing their multiple identities-making. In this paper, we, two Vietnamese female teachers, examine our life experience transitioning from Vietnamese to Canadian culture while pursuing our doctoral studies. The collaborative autobiography allows us to reflect, retell and relive our stories since we arrived in Canada. Through deconstructing our stories, we were amazed at the resonances of our tensions in new life-making experiences and perspective transformation in learning and conducting research. We hope our experiences are promising to shorten the gap in understanding experiences of those doctoral students composing life in similar education landscapes, which helps ease their difficulties and cultivate their academic and professional achievements. We also contribute more personal, social, cultural, and familial narratives to the dominant institutional narratives of Canadian teacher education.

Keywords: life in transition; international doctoral students; collaborative autobiography; flourishing

Introduction

As two international doctoral students composing lives in transition, we see how our experiences have shifted over time, place and relationship in our teacher education journey. When living, telling, reliving and retelling our stories, our embodied experiences shaped the opportunities for more possibilities in the future of our studying, working, and living journey. Employing collaborative autobiography (Lapadat, 2009), we explored how we could relate to each other's individual experiences and respond to what we shared with openness and respect in capturing our emotions through various ups and downs of life in transition in teacher education. We believe that sharing our understanding of our storied experiences in transition to the teacher education program in Canada may pave the way for deeper understanding toward

experiences of other international students.

Shifting from a “Very Young” Teacher in Vietnam to an Under-Represented Doctoral Student in Canada: Tram-Anh's Experiences

First days I came to teach at a university

I was stopped by a campus guard at the entrance

He asked me, “Where are you going? Where is your student card?”

I said, “Sorry I’m going to my class to... teach.”

On the hallway, some students bumped to me and said,

“Sorry my friend, I am late, and I need to run.”

Later, the same group of students were surprised

When they saw me entering the class and approaching the teachers' desk.

They asked, “are you a teacher?” “Yes, I am”, I answered.

After the class, I entered the teacher’s room

I overheard a colleague's voice, “do you know who is teaching that class?”

“She looks like a student, not a real teacher.”

“I don’t think she could be a teacher; she is too young.”

The conversations above happened when I started my career at a Vietnamese university, where I had earned my bachelor’s degree in English teaching. The experience of first being mistaken as a student and then being identified as a *young* teacher made me wonder who I was in their eyes: a young and enthusiastic teacher or an immature and less experienced one.

I experienced imposter syndrome when I entered my professional teaching career. I learned not to compare myself with experienced teachers but to search for my path building up my teacher identity. I did not react towards the dominant professional teaching stories in which people tend to connect teaching professions with senior individuals. Rather, I silently focused on developing my career through learning and improving my teaching practice and relationships with students. I saw myself in the role of *a companion* sharing learning experiences and knowledge with students, and I kept trying to progress towards the attainment of my academic and professional goals. In return, they saw me as *their sister* or even named me as *a lollipop teacher*, a sweet, friendly, and approachable teacher with whom they could share their academic matters and personal concerns.

I found happiness in teaching at the university; however, I saw myself as *a teaching machine* trying to finish one class and rushing into another one. Sometimes, my teaching

practice was greatly influenced by the international language standardized tests that require students to learn for the specific test-related content to graduate. The test-driven lesson plans made me wonder about the authentic meaning of teaching and learning. In searching for my path of meaning-making, I learned that in-depth knowledge of research and teaching practice through professional development is important. The passion and the need for my professional growth brought me back to my dream of studying in an internationally recognized educational system. These events contributed to my decision to embark on further studies at a doctoral level at a Canadian institution. I was admitted as a PhD student by a Canadian professor, whom I thought would share my interests in English language assessment for Vietnamese teachers.

Before entering my doctoral program, I had married and came to Canada as a newlywed, and my husband and I learned to navigate ourselves and searched for jobs relevant to our professional backgrounds. Our young marriage was also challenged by different obstacles, such as, when my husband found employment in another province, I had to decide whether to support his career and nurture our family life there or stay where my campus was located and maintain my academic commitment. I consulted with my original supervisor, who decided to abandon me when I told him about my dilemma. This was the moment that I most needed his support, and I felt deserted. I wondered if I were qualified enough to further pursue my doctoral work. As a result, I decided to relocate with my husband for a short time and support him in his new endeavours. Later, when I decided to return to campus alone, loneliness soon followed. Tension also intensified when I tried to look for a part-time academic job, but was unsuccessful, due to my lack of cultural experience in Canada. These challenges shifted my positionality from *a very young* teacher in Vietnam to the inferior situation of being a racialized female doctoral student in the Canadian education landscape.

Fortunately, during this process, the instructor of my first doctoral course agreed to be my supervisor. I also received support from her husband, a professor emeritus, who gave me useful academic advice and showed empathy. They were my magic helpers (Campbell, 2008), supporting me over an important academic threshold. The stories and experiences they shared with me in academia raised my confidence to keep moving forward on my academic adventure. They identified themselves as *academic rescuers*. I felt privileged to be among the students they rescued academically and emotionally. Their personal and professional life devoted to supporting students, especially those from under-represented groups, definitely (re)shaped my way of thinking about the meaning of being an educator and a researcher.

As I moved along my path of professional growth, I became enlightened as I explored my transition from being a teacher in my home country to being a life-long learner in a

transnational space. It was in this new space that I shifted my doctoral research interest to explore intercultural competence development of international graduate student leaders who are coping with cultural differences in Canada and who desire to develop their intercultural competence. I accepted the disequilibrium of my teacher education journey as not being a trouble-free path, but a path with heart (Drake, 1991). The disequilibrium and disorienting dilemma I encountered has contributed to my transformation in developing resilience, tenacity, and perseverance (Mezirow, 1991; Thich Nhat Hanh, 2014).

A Mother Living Alongside Young Children Within and Across Doctoral Journey: Thuy-Hang's Experiences

First days in Canada,

*Joey and Sherry were so excited
to see the new school without a fence.*

Cheerfully, they shouted in Vietnamese:

*“Trường học không biên giới”
 (“The school of no border”).*

Time flies and the Learning Celebration comes.

*Mr. S, who was Sherry's Grade One teacher
felt not content with Sherry's reading level.*

He suggested it should be level “E” instead of “C”.

Sherry cried;

I felt hurt.

Mr. S also said to me,

*“You should not use mother tongue often in home places,
but it should be balanced with using English.”*

I wonder

*how he opposed our home language,
and how this helped improve Sherry's reading level.*

*Why did school disengage my child's mother language
and not support her sustaining of Vietnamese culture*

in her identity making and life-composing?

In the summer of 2015, I brought my children to Canada to pursue my dream of a PhD program in teacher education at a Western university. At that time, I carried along my research proposal on Vietnamese teacher professional development that I had nurtured for a long time as a university lecturer in Vietnam. However, it was the experience of a mother living alongside young children that sharply contributed to shifting my doctoral research focus. As seen in the above poem fragment, initially my children were excited to enter their new school which they had named ‘the school of no border,’ because our earlier experiences in Vietnam conveyed images of schools with fences as borders. However, as life unfolded, more and more *borders* became visible in their institutional, cultural, personal and linguistic narratives. The Learning Celebration night at Sherry’s school was an example of this, as my child and I did not experience this event as a celebration of her learning; rather, it was full of tears, tension, and shamefulness when being criticized by her teacher.

Since that unforgettable moment, I kept wondering if I was a failure as a mother, who had been a teacher before transitioning to Canadian education and not able to support my child in her learning. I felt upset and lonely, but at the same time, I became determined to seek ways to understand and better support my children’s experiences. Furthering my thoughts as both a newcomer mother and a doctoral student in elementary education, I wonder about the other Vietnamese newcomer children and mothers’ experiences in relation to their new education landscapes in Canada.

Significantly, my doctoral research passion shifted to a new pathway: I longed to conduct a narrative inquiry into the experiences of Vietnamese newcomer children and mothers who are composing lives in transition to Canada. I longed to understand their institutional, social, personal, traditional, cultural, familial, historical, political, and linguistic narratives to help ease their difficulties and facilitate their flourishing.

As I moved deeper into my doctoral program, I saw vividly that my children had not only been the inspiration for my research but also my great companions. During my coursework, I brought Sherry to my classrooms with my professors’ permission because she attended half-day Kindergarten, and I could not afford her daycare. Although my learning was filled with challenges, going to campus with Sherry could not trouble me. Rather, having Sherry in a classroom corner while attending lectures and discussions about teaching young children strengthened my reasons to become a teacher educator in elementary education. I came to learn that being a newcomer mother who also worked part-time to support her family and a doctoral

student was not impossible and that wearing three hats at the same time was not a deficit but truly an asset for my experiences.

Being alongside my children in an academic journey also paved the way for my understanding of reciprocal learning among us. We had days and nights reading books, learning Vietnamese, painting canvases, doing craftwork, and cooking traditional dishes. Beautifully, these activities not only created joyful moments and mental support for our difficulties amidst transition, but they also helped sustain our home language, traditions and culture. My children taught me new ways of learning when we co-composed our home curriculum. I also learned deeply about Canadian culture at elementary schools from my children's stories shared during walks home after school.

My children helped me to further my emerging professional understanding of the relation among schools, families and communities, and to bring my knowledge from the coursework into practice. Meaningfully, all these experiences increased my awakening to the familial curriculum making world (Huber et al., 2011), which later became a significant theoretical concept and practice of my doctoral research. It also showcased the richness of newcomer children and mothers' experiences in their familial, cultural, traditional, and personal contexts which may create bumping against the dominant institutional and social narratives but importantly contributed to the understanding of their life-composing experiences in the transition to Canada.

Finding a Place for Flourishing in Academia: Tram-Anh's Hope and Dream

During the summer of 2018, I began to participate in a cohort writing group. We, a group of three female PhD students from different cultural backgrounds, ethnicities, and at different stages in life, came together to support each other in writing our doctoral work and learning the conventions of academic writing. Since we were in the same PhD program, we had opportunities to build trust prior to our writing community establishment. Our group members included an Indigenous person with Objjway bloodlines who was working on integrating Indigenous ways of knowing in teaching and researching. Another woman, who positioned herself in the mainstream culture, explored how her cultural and academic beliefs fit well with her family values. I was the last member of the group, an international student from Vietnam.

We understood that family perceptions, cultural heritage, and native language fluency affect acculturation into academia. We came to academia not only to learn to acculturate but also to bring our values and missions to it, raising our voices for the communities we were from and for whom we were working for. We experienced acculturation into academia differently

due to our diverse cultural and academic backgrounds. We created opportunities to reflect on our personal and cultural values and helped each other develop our academic writing skills through organizing various group activities and by sharing reflections.

Our group meetings typically began with sharing reflections from the previous meeting. To me, this sharing time was very meaningful, as I usually received understanding, encouragement, and empathy from the other members. We then shared our writings and commented on each other's work. Participating in this writing community allowed me to see myself from different perspectives, contributing to my insight of the self and my awareness of Vietnamese culture. I explored my personal and professional self in relation to others. My self-exploration came from diverse cultural interaction and different contemplative practices considering an ongoing self-reflective process forming my professional identity as an emerging researcher in intercultural and international education.

Through these interactions, I sometimes found myself surprised when some of the 'truths' rooted in my way of knowing were seen and interpreted from different perspectives. I continuously contemplated my intercultural experiences to re-self in a new cultural setting and how this understanding could influence my teaching practice to enhance intercultural competence for international students.

In March 2020, when our university became abandoned as COVID-19 spread, we had to stop our in-person meetings, and, like myself, many international students experienced loneliness and uncertainty. We faced the dilemma of staying in Canada or returning to our home countries, which led to feelings of stress and depression. We had invested our time and financial resources to be immersed in the host culture, but the current situation was difficult. Fortunately, it was during the global pandemic that the members of the writing group found ways to continue to support each other, by embracing technology, which allowed us to offer our presence and deep listening.

Significantly, I considered my writing group as a community of practice and a *third space* where I sought purposeful social and academic interactions with diverse intercultural, educational, and enjoyable activities, which, in turn, contributed to an understanding of myself and the others. Moreover, as each member endeavored to create a judgement-free and inclusive space, my voice was heard, and I had a sense of belonging.

Living the Relational and Ethical Responsibilities: Thuy-Hang's Experiences from the Research Issues Table to Becoming a Narrative Inquirer

I still remember the first time I came to campus and joined a weekly meeting at the

Research Issues Table (RIT) at the Center for Research for Teacher Education and Development at my Canadian university. I was jet-lagged, but the excitement of sitting at the same table and having tea with my supervisor, other professors and graduate students invigorated me. That day the table was filled up with stories people shared about their research and their lives. When the Research Issues bracelet was passed to me, I was encouraged to tell my stories. I cried when I talked about my 40 hours flight and a sleepless night on the floor of Vancouver airport. However, my tears were slowly washed away as others at the table asked me about my experiences. I was moved as people showed me that they were not just listening to my stories but also thinking about them.

Through these and many subsequent moments that I have *lived* at the RIT, I learned that lives and narrative story-based thinking mattered. I also learned that the shaping of this beautiful table was inspired by the Indigenous knowledge of the talking circle, a physical and spiritual space where attendants are equal and living/studying with/from others in a spirit of respect. Centered at the table, the research bracelet curates a sharing circle and circulates the Indigenous people's spirit of living in relation around members. Every Tuesday I came early and enjoyed watching people gradually entering the room, lunch boxes in hand. At the table we not only contributed to the ongoing conversations, but also participated in monthly seminars on reconsidering teacher education with speakers who were professors and community members such as Elders and other Knowledge Holders.

Importantly, I learned that people joined the RIT excited to hear stories of people from diverse backgrounds, languages, cultures, traditions and histories. The other participants loved to hear and learn from my stories, and I felt a close connection with the others in the conversation circle. As a newcomer student I found the RIT a safe space where I could share my voice, my stories and wonders of my research, and where I could cry and feel loved and cared for, and where I could flourish.

Further, at the RIT, I found a passion for narrative inquiry, which I had never known before transitioning to Canada. Significantly, the RIT was truly my second home, a home of professional and mental support for me as an emerging researcher and teacher educator, a doctoral candidate and a narrative inquirer. It was the knowledge that I learned from people around the RIT, the lessons from my coursework professors and friends, my response group, and my tirelessly supportive supervisor who made me aware that my experiences in academia were relational and ethical.

Six years have passed, and I am now almost finished with my research journey. As I look back on two years of co-composing the narrative inquiry, I learned that living in relationality

has opened potentials for rooting and sustaining relationships. With three child-mother participant pairs, I have been invited to be alongside them not only as their co-researcher but also as an auntie, a friend, a sister and an advocate. If the relational, ethical responsibilities of a narrative inquirer were not grounded in my journey, I would not be brave enough to stand up and become an advocate for a child and her mother as they moved from a troublesome situation at one school to a new one with better experiences.

It was also during the co-inquiry journey, we checked in on each other's health, safety, and wellness. Many times, we shared smiles, tears and tensions, and supported each other and strengthened our relationships. In living the relational and ethical relationships, I conduct my doctoral research for my people: the current Vietnamese newcomer children and their mothers and families in Canada; the potential-immigrant children, mothers, and families; the Canadian schools, teachers, policymakers, newcomer agents, and cultural brokers who are supporting newcomer children and families.

Retelling Our Stories and Contemplating Our Experiences

We learned from Lapadat (2009) that “in collaborative autobiography, co-researchers cycle through sequences of oral and written interaction to express, witness, understand, and ultimately act on their own and others’ autobiographical narratives” (p. 958). Over four years, we have written our narratives since we first came to Canada as international doctoral students, with much living, telling, reliving and retelling (Clandinin, 2013) toward our experiences.

Our process of sharing and resharing our stories and reflective entries as well as our ongoing reflective conversations, happened through a variety of channels, from video and audio calls to sending messages back and forth, and in-person meetings when we attended national and international conferences together. Data were not our stories, but our understanding of our experiences lived in the stories. Our stories during our collaborative work-in-progress reflected how we learned to navigate, situate, and help ourselves flourish in a new academic and social environment. Revisiting our experiences, we paid attention to the resonant threads that “echo and reverberate with each other” (Clandinin & Connelly, 2004). We came to identify three resonances in our experiences of composing life amidst our doctoral journey as international students and either a wife or a mother.

Entering a Doctoral Student's Life with Borderland – Visible and Invisible

Before transitioning to Canada for our graduate study, we both carried hopes and dreams to our new place. Longing to develop our home country's teacher education, our original

research proposals had focused on language teacher professional development in Vietnam. However, soon after we crossed the Canada border, our feet stepped into many other visible and invisible “borderlands,” which later contributed to shifting our doctoral research passion. With excitement, we had expected to start a good chapter of life in academia and in family, but things happened differently.

As in Thuy-Hang’s stories, she has experienced many of her children’s borderlands in a new language and new culture at their *school of no border*. It was her children’s tears and tension triggering her ambition in conducting research to understand their experience of composing life in transition, and also that of other children and mothers of Vietnamese ancestry, who are newcomers in Canada.

For Tram-Anh, rather than having an exciting family life, the new bride had to overcome various borderlands: the failure of getting an academic job due to her lack of Canadian experience and living distant from her spouse. Struggling more, she faced the hardest time in a doctoral student’s life, lacking supervision from her original supervisor. Staying strong, Tram-Anh deeply contemplated the question to understand herself, and she found meaning in shaping her current research puzzle of exploring the intercultural competence of international graduate student leaders.

Obviously, when we entered our overseas doctoral journey, we had not imagined the many ups and downs in those visible and invisible borderlands, which remarkably impacted our research foci. Writing and telling our stories with smiles as well as tears, tensions, loneliness, silence and fears in relation to visible and invisible borderlands opened a window for our sharing with each other, which, in turn, helped us gain a better understanding of our experiences.

Awakening to Multiple Senses of Self in Academia

Entering our doctoral journeys with obstacles, both of us, Vietnamese female students, told ourselves to never give up, but to keep hope and move forward. We have carried our homeland’s cultural life mantras of ‘Family First’ and ‘Keep Balance’ for Vietnamese women, so that everything we do makes meaning for ourselves and our loved ones. Living in this new country, our partners and children are the only intimate support through all lows and highs of the journey; therefore, we are happy when they are happy and vice versa. Thuy-Hang had to find a part-time job to learn the Canadian ways of working and to secure her family finances. With Tram-Anh, she had been working and encouraged her husband to work in a place far from her, as she believed this was a good opportunity for him to earn his own Canadian work

experience. Significantly, we found meaningful identities either as a mother trying to sustain the homeland's language and culture for children, or as a new bride learning to navigate family life in a new country and a member of a new living community.

As international doctoral students, we either lost our original research initiative or a program supervisor at first. But life found a way when our learning approach shifted from a traditional single way to the reciprocal intercultural one (Soong et al., 2015). As emerging researchers, we learned that research could start from our own selves, and that it could happen when the methodologies chose the researchers. For Thuy-Hang, her research was grounded in experiences (Dewey, 1938) and that was the way narrative inquiry methodology (Clandinin & Connelly, 2004) had chosen her. Thuy-Hang's experiences in sustaining the homeland language, culture, and tradition for the children together with their adaptation to the Canadian landscapes had shaped her understanding of who she was and who she was becoming in the world of academia. It was in her embodied knowing and being in relation that Thuy-Hang pursued the journey of becoming a narrative inquirer. For Tram-Anh, the rigid connection with concentric stories (Drake & Elliot, 1999) and contemplative qualitative inquiry (Janesick, 2016) shaped her research in constructing international students' intercultural competence. Tram-Anh's life-making in transnational space unfolds her experience as an intercultural learner and a cross-border emerging researcher.

Collectively, living multiple selves in our bodies was not troubling our identity making in both family and academic life; rather, this experience contributed to enrich our knowledge during our doctoral journey. As we saw our relationship as *sister scholars* in Canadian post-secondary institutions, "we walk for ourselves; we walk for everyone; always hands in hands" (Thich Nhat Hanh, 1993, p. 174). The more we learned from this walking spirit and learned with each other, the more we were drawn to empathy and compassion to our stories and many stories of others who may have experienced similar walks.

Nurturing an Alone-but-Not-Lonely Doctoral Journey in Teacher Education

Being in our programs with many tensions, we found the essence to look for support resources in our surroundings. As always, our first and foremost supporters were our family members who are always alongside our challenges and rewards during our study. Thuy-Hang had carried her mother's wisdom to Canada, "doing a PhD is a triple difficulty for a mother with young children in a strange country; thus, it is vital to find happiness for yourself, from people in your surroundings and even from smallest things in nature." Tram-Anh's parents kept reminding her of her new-established family which always needed her presence, love, and care.

Many times, we have travelled mentally and spiritually back to our great families in Vietnam to seek for wisdom and insights into ways of navigating and sustaining our family life.

Pursuing our doctoral research, we knew that our pathway had begun during many other events, and we were the independent walkers, but we did not feel lonely. As we *walked* alongside each other and the other people around us, we were, at the same time, also accompanied by our response communities. Thuy-Hang has deeply loved her Research Issues Table as it nourished a non-judgmental, ethical, relational, and caring environment for graduate students of diverse backgrounds, and emerging scholars to feel safe and encouraged to have their stories heard. Accordingly, the table contributed to provide sustainable growth for people sitting around it and help them excel in their multicultural and multilingual strengths. Thuy-Hang also saw the table as paving a new “immediate affiliate”, which potentially gathered the brave people who dared to become the change makers for a world-wide education of diversity, equity and inclusion.

Thuy-Hang’s second response community was her supervisor and other doctoral students under the same supervision. Tram-Anh had long been treasuring the support within her cohort group, who made her flourish in both academic journey and daily life. Blending ourselves in these response communities, we shared research writings, questions, and wonders with other community members to seek their feedback and advice. This experience also happened in reciprocal ways as we were willing to read our peers’ works and share our feedback. It was also a time when we shared with our response communities about those bumping institutional, social, and cultural narratives that we experienced on campus and elsewhere across our doctoral life.

Additionally, both of us grew up in Vietnamese culture and tradition, one that sees females as an inferior gender, landed in Canada with Western culture, and attended doctoral programs where academic English was dominant, and we were awakened to find support from people who speak the same language and live in the same culture. We each looked for a *soulmate* in academia through some international Vietnamese academic networks and international conferences until we found each other and grew our kinship as ‘sister scholars’. It was speaking the same home language, living the same culture, and sharing the same favorite Vietnamese cuisine that brought the two of us closer for better understanding of our experiences in transition. Not only have we supported each other in personal and professional life, but we have also co-composed academic journal articles and furthered collaborative projects in teacher education bridging the two nations: Vietnam and Canada.

Conclusion

Moving beyond the stories in our autobiography, we have been awakened to the possibilities of unpacking our experiences as Vietnamese female doctoral students in Canada. We see the “attentive necessity of recognizing ways of being, knowing, and remembering in our lived, told, retold, and relived experiences of composing lives in transition” (Tran, 2019, p. 15). Our forward-looking thoughts and imaginings shape three meaningful points.

Firstly, we enhanced our understanding of Thich Nhat Hanh’s (2014) idea of ‘no mud, no lotus,’ which suggests that the Vietnamese lotus grows from the mud and blooms with beauty and fragrance. Similarly, our doctoral journey started with unexpected difficulties, but we were gratefully able to receive support along the way that have enabled us in transcending over thorny rocks, transforming our perspectives, and flourishing in our academic and personal life.

Secondly, we allowed our vulnerable selves to be exposed so that we could open doors to receive sharing, empathy, and compassion from others. Walking across our various senses of selves, we made meaning of our identity-making in combination within our mind and body, contributing to our knowledge of who we were in academia and who we were becoming within, between, and across the two cultural spheres.

Thirdly, we came to learn the value of response communities as featured as “playfulness, mutual responsibilities, understanding the multiplicity of tensions, relational ethics/the ethics of friendship, imagination, safety, and staying with ideas in other places” (Caine et al., 2020, p. 1). We were grateful to be surrounded and supported by our supervisors, the graduate students in our cohort, the researchers whom we met on campus and elsewhere.

Indeed, from our experiences, we imagine a space where international doctoral students from diverse cultural, social, academic, and linguistic backgrounds could grow the seeds of hope in their study and receive ongoing support during their programs. The Research Issues Table in Thuy-Hang’s stories and the Cohort Writing Group in Tram Anh’s stories are promising examples of this space, which should be multiplied to the wider community to really listen to and better understand the challenges that minority groups may face during their time being stuck in institutional narratives.

Having a safe and informal space at an institution will also help ease tensions of bumping narratives against the dominant culture in teacher education and facilitate anti-racism. Within this space, every student can offer their full presence and deep listening for one another as ways to be in sharing and being shared. They can also practice ‘world’-travelling (Lugones, 1987) by travelling to each other’s ‘world,’ they can attend to and understand the others’ experiences

and generate understanding from different perspectives. This spirit of ‘world’-travelling is an essential practice between supervisors and graduate students.

Our forward-looking thoughts also promote the images of teacher education flourishing in Canada, where teachers and students make kinship with each other to uplift those in need, especially those from underrepresented groups such as female, black, Indigenous, disabled, 2SLGBTQ+, and individuals coming from low socio-economic status across regions, provinces, and nations of the West and the East.

We are hopeful our experiences open potentialities in understanding the experiences of doctoral students composing life in similar educational landscapes and, thus, pave more ways to ease their difficulties and cultivate their professional and personal achievements. We also long to contribute more personal, social, cultural, and familial narratives to the dominant institutional narratives of Canadian teacher education to shorten the gap between these two landscapes that international and local students are composing their lives with worries and tensions but also hopes for a flourishing future.

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HyFlex Course Delivery: Addressing the Change in Course Modality Brought on by the Pandemic

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Abstract

Teacher preparation programs need quality training courses that offer flexible, interactive alternatives to isolating online courses and classroom-based programs that limit students to a specific place and time. The HyFlex course design provides a solution by combining internet video instruction (such as Zoom), regular online learning, and face-to-face classroom experiences into one course where students can choose the method that best meets their individual learning needs and even alternate between methods throughout the course session. HyFlex aligns with learner centered instruction and offers a unique opportunity for educators to receive quality licensure courses. This article explores existing literature on the HyFlex course delivery method and discusses a case study done to examine student outcomes resulting from its use in a post-baccalaureate special education teacher licensure program.

Keywords: HyFlex, rural special educators, online teaching, course delivery, hybrid course

Introduction

The twenty first century has brought forth many changes to higher education leading to a re-evaluation of course delivery options. Universities across the globe are seeing an increase in student numbers, including higher rates of female students (ICEF Monitor, 2018). This is particularly true for teacher preparation programs. Globally, female primary school teachers outnumber males (Roser & Ortiz-Ospina, 2013). In areas such as the US and the UK these increases include more non-traditional students, those over the age of 21 (Hanson, 2021; HESA, 2021). These demographic changes mean that, in order to be successful, students desire an increased flexibility in course structure. To meet student need, many US universities have felt compelled to increase the number of asynchronous online course offerings (Lederman, 2018).

Compounding this issue, over the past two years, institutions of higher education have had to face the challenges unique to the ongoing the COVID-19 pandemic. Students who had previously taken classes on campus were no longer safe meeting face-to-face (FTF). Many universities instituted rapid change in course delivery to asynchronous online and synchronous virtual modalities in order to keep students healthy and safe.

Unfortunately, for faculty and students, this quick movement to online and virtual formats caused a large amount of stress (Flaherty, 2020; Ghazi-Saidi et al., 2020). Faculty felt pressure to create and administer courses in formats for which they were unfamiliar, and students were required to take courses in modalities they did not choose, some of which were poorly created due to faculty naiveté in course design.

Although some universities are returning to the pre-pandemic modes of instruction, most are maintaining a higher level of alternative course modalities including both virtual synchronous classes and online asynchronous courses. These circumstances create an impetus to design courses that can be delivered in a variety of modalities.

Literature Review

Online and Distance Learning

Changes in higher education student demographics, and the upheaval of the pandemic has made it clear that new modes of course delivery are necessary and here to stay. Course delivery formats usually fall into two distinct temporal categories; synchronous, where all students receive instruction at the same time, and asynchronous, where students can access instruction at a time that is convenient to them (Rehman & Fatima, 2021). From these two constructs a variety of modality offerings have emerged. Instructors can claim to offer courses that use blended learning, flexible learning or a flipped classroom model, they may be labeled hybrid or multimodal, leading to confusion on what these terms mean (Perry & Pilati, 2011). However, the name used usually tries to indicate how the instructor provides learning opportunities, whether it is synchronous or asynchronous, or occurs live or through technology. Consequently, there is a plethora of contradictory research indicating which modalities are more advantageous for students (Reeves & Lin, 2021). Most modalities offer some benefit for some students.

This paired with the changing student demographics indicate that most courses should be offered using a variety of delivery modes. This creates a challenge for higher education programs, particularly those in teacher preparation where courses are determined based on faculty availability and student numbers. Offering multiple sections of one course, each addressing a different delivery mode, proves an impossible challenge. One way to address this challenge is through utilizing blended learning.

Blended Learning. Blended learning consists of combining instructional modalities and methods into one class (Graham, 2006). Blended learning is also known as hybrid instruction where the instructor chooses which material to teach FTF and which to provide

online. The concept of teaching simultaneously in more than one delivery modality is not new, although recent events have caused a resurgence of interest in the topic (McMurtrie, 2020). The need to provide options for students who are unable to attend in-person courses has long driven innovation in course delivery.

Distance education in Australia is a noteworthy example. Due to Australia's widespread population, addressing educational needs in rural areas has been, and continues to be of primary concern to state and federal governments (Stacey & Vissar, 2005). Indeed, the first blended course delivery method may have its roots in the "School of Air" launched in 1951. The "School of Air" provided classes to in the Outback via two-way radio. This was done in conjunction with correspondence materials delivered by mail. Later, content experts in fields such as foreign language and physics who were not available in rural communities would gather around speaker phones and use dial-up modems to link students using classroom computers. Australia continues to meet the needs of their rural populations with the most up-to-date technologies combined in innovative ways (Qayyum, & Zawacki-Richter, 2018).

Australia is not alone in its use of blended learning methods; blended delivery models have risen in popularity over the last two decades. For example, Peirce College, a private institution in Philadelphia catering to adult students, has made all of their courses available in a blended format with positive results (Fabris, 2015). The Université de Sherbrooke in Montreal adopted what they called the "blended synchronous course delivery mode" in 2006 and are still using it today for their graduate level Master Teacher Program (Lakhal et al., 2017). Their structure requires local students to attend in person but gives distance students the option to attend synchronously via internet video. Both modalities are supplemented by online material and assessments. Other institutions worldwide are using variations of the blended synchronous delivery method to enhance student choice in learning (Eliveria et al., 2019).

There is research to support the use of a blended model. Blended learning courses have been shown to increase student learning, provide a better sense of classroom community and are preferred by students over FTF instruction alone (Bower, et al., 2015; Irvine et al., 2013; Lakhal et al., 2017). It is interesting to note the majority of studies found in the extant body of research examine outcomes for students enrolled in graduate-level programs (Hall & Villareal, 2015; Lakhal et al., 2017). However, for teacher preparation, the authors have promoted using and shown the efficacy of using blended learning in teacher preparation at all levels, including undergraduate level teacher preparation (Duhaney, 2012; Kimmelman & Lang, 2019; Parra et al., 2019; Pilgrim et al., 2017).

Teacher Preparation and Blended Learning. Blended learning is increasingly being

adopted as a means to prepare teachers, and is seen as a way to integrate instructional technologies' use and proficiency (Duhaney, 2012). According to Duhaney, blended learning classes in teacher preparation must include orientation to the model, use information communication technologies, and be integrated across the entirety of the program. If done well, teachers will adopt the use of technologies that increase opportunities for student learning and engagement. Studies have indicated the effectiveness of the use of blended learning in teacher preparation programs. Blended learning is shown to be effective for virtual internships (Theelen et al., 2020), for teaching explicit instruction and listening techniques (Yoon & Lee, 2012), and for building community during student teaching (Ateş Çobanoğlu, 2018). Student satisfaction with blended classes has been noted for graduate students (Wong et al., 2021) and for in-service teachers as well (Mouzakis, 2008).

Although blended learning has been shown to be efficacious, it is not without its detractors. Oliver and Trigwell (2005) note that blended learning often ignores the position of the learner. They state that the name does not adequately describe what is taking place in the learning environment which is that courses often provide the same instructional methods in both online and a FTF modalities. Pilgrim et al. (2017) also outline the barriers to student success in blended learning. They say that students may grapple with course clarity and expectations and may struggle with issues inherent in online education for those that are not adequately prepared for the online structure. This can include feeling a lack of support, isolation, and feeling unfamiliar with the technology requirements.

In addition to these concerns, blended learning does not allow for student choice in instructional modality. It combines modalities which can inhibit access to students with other life demands. A method for combining the benefits of blended learning while addressing student barriers and course offering limitations is the hybrid flexible or HyFlex Model.

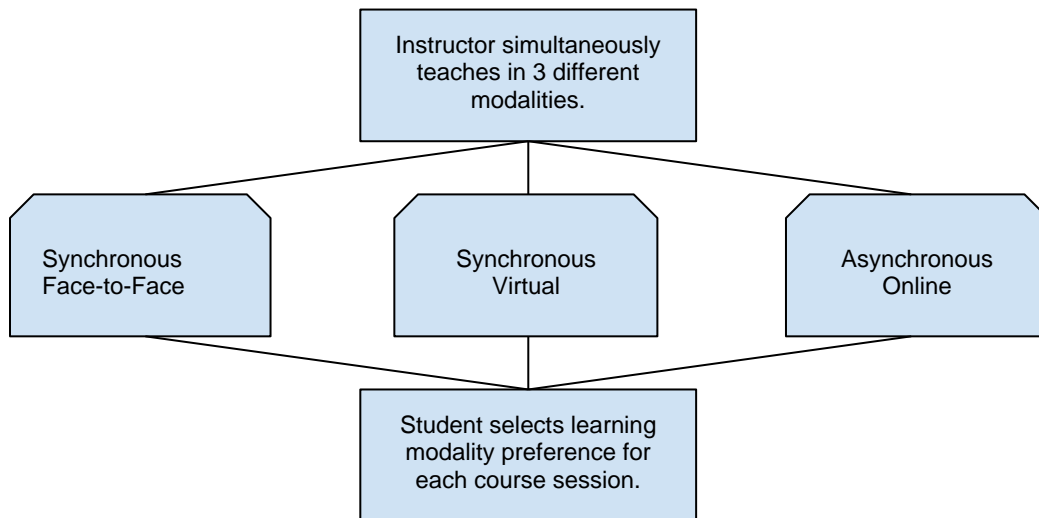
HyFlex Course Design. Utilizing a flexible hybrid or multimodal course design that allows students to choose their learning modality helps address challenges inherent in blended learning. The hallmark of these flexible hybrid course designs is the HyFlex model (Beatty, 2007). HyFlex incorporates synchronous, FTF instruction, live internet video instruction and asynchronous online course delivery all within the same course.

Unlike other hybrid or multimodal courses where all learning modalities are blended according to the instructor or designer's preference, the HyFlex model allows the student to choose which learning modality best meets their needs. Using principles of learner-centered instruction in course design for all modalities, the HyFlex course model claims to maintain the quality and rigor of a traditional FTF program (Beatty, 2007).

HyFlex modalities may include: (a) synchronous, FTF, (b) synchronous, virtual, (for example, Google Meet, Zoom, or Skype) and (c) asynchronous online (Lakhali et al., 2017, Beatty, 2007). Each learning structure is available to all students for any given class meeting (see Figure 1).

Figure 1

HyFlex Course Structure



By including multiple modalities in one class, including traditional FTF and distance options, the HyFlex model addresses many challenges faced by today's students. This is especially beneficial in teacher preparation programs where some students work in primary and secondary schools. When students have unexpected work demands during a given class session, such as parent meetings and after school activities, they can choose the asynchronous option without missing any vital course material. Additional benefits of the HyFlex model are outlined in Table 1.

The HyFlex model has been shown to be preferred over other course modalities by students (Beatty, 2007). In addition, the HyFlex model promotes higher levels of student participation over traditional FTF courses, and higher levels of student satisfaction in their learning experience (Malczyk, 2019). Samuel et al. (2019) found HyFlex increased both enrollment and retention. Other studies demonstrate that blended models such as HyFlex support faculty in their efforts to help students achieve desired learning outcomes (Bower et al., 2015; Fabris, 2015; Kyei-Blankson & Godwyll, 2014). Additionally, instructors are afforded the same flexibility their students enjoy by having all three modalities to draw upon as needed. The rapid movement to asynchronous online and synchronous virtual formats

precipitated by the pandemic was an easier transition for those whose courses already had online and virtual options embedded in their design. While there is research to support the use of the HyFlex model, the authors could find no information about the inclusion of this design in teacher preparation programs.

Table 1

Benefits of HyFlex Courses

	Financial Benefits	Practical Benefits
University or College	Less classroom space needed. Combined sections can mean less instructional wage.	More students. Greater reach into rural communities.
Rural School Districts	No travel expenses to bring quality instruction to educators.	Ability to combine many single learners from rural areas into one interactive course can provide higher quality training.
Individual Students	No travel expenses. Access to a wider variety of courses. Quality interaction with classmates and instructors.	No need to schedule work around course offerings. Flexible attendance options exist throughout the class.

Current Study

The case study under examination involves a 15-week post-baccalaureate mathematics methods course included as part of an alternative route to teacher licensure program at a midsize state university in the Western US. This course was offered using the HyFlex modality option. Students taking this course were all on emergency licensure and teaching K-12 special education and had been teaching special education for 2 years or less.

Participants

A total of 38 students were enrolled in this course. Thirty-three of the 38 students passed the course at an acceptable rate by the conclusion of the course, an additional three students finished and passed the course within a month of the course ending. The remaining two students were required to retake the course. Twelve participants agreed to be interviewed and permit their grade and attendance data to be included in this study. Of the 12 students, survey data indicated five chose to attend only synchronously, two others only asynchronously and the

other five opted to use both asynchronous and synchronous options throughout the course. To honor case study methodology's focus which allows the researcher to "understand behavioral conditions through the [participant's] perspective." (Zainal, 2007, p. 1) only one participant from each of these three attendance categories was randomly selected for an interview.

To facilitate the online portion of the course an online learning management system (LMS) named Canvas, was used. The platform allowed for the creation of grouped content or modules that all students could access at any time during the semester. For example, a module could include an online discussion board, a course reading, an assignment based on that reading and an online quiz. Students would also submit their assignments, email other students and their instructor, and view video content on this platform.

Setting Up the HyFlex Course

The class curriculum was created using the backward design method (Wiggins & McTighe, 2005), starting with the online layout. Backward design involves three stages: (a) identify learning objectives; (b) determine outcome evidence or assessments and (c) plan learning content and instruction. Using this process, learning objectives, assessments, classroom activities and lectures were fully established, prior to structuring the online version of the course.

Next, thirteen weekly content modules were created in the LMS. Two additional weeks were also included where students implemented and reflected upon a math instruction unit taught in their teaching placements. Each module contained information regarding the pre-determined lesson topic for the week. Topics included both instructional methods for mathematic content areas and strategy instruction approaching math tasks. Each content module was divided into three subsections; activate prior knowledge (Activate), gather information on the topic (Gather), and apply what was learned from the gather section (Apply). These sections were chosen based on constructivist theories of learning.

When accessing the Activate section of the module, all students, regardless of modality choice, were required to contribute to an online discussion prior to accessing additional information either asynchronously online, or attending the synchronous session FTF or virtually. The asynchronous discussions were conducted by posting a prompt on the learning management system discussion board where students could then enter their responses and reply to other students' comments. Activate questions varied across instructional content but included probing questions, such as, "Thinking back to your experience as a student in the K-12 classroom, how were you taught about place value?"

After completing the Activate discussions students either accessed information in the

Gather section of the module, or obtained content by attending a synchronous class section. For example, students attending the section asynchronously may access reading materials and videos related to the topic. Those attending a synchronous session would be provided access to activities and materials linked to the same topic.

Finally, for the Apply section of the module students were asked to complete activities related to the topic. For example, in the addition module, students were required to find a lesson plan online and provide adaptations that allowed access to the lesson content for students with disabilities. These activities were completed independently by students attending either the asynchronous or synchronous sessions. All assignments were submitted using the course LMS.

In the course examined here, all students were required to attend the first session synchronously where the HyFlex course delivery model was described to them. They were told they could attend each week in any modality they chose. It was emphasized that there was no instructor preference to their modality choice and there was no need to notify the instructor of their choice for any given week. Additionally, it was made clear grading outcomes would not be reflective of how they decided to attend each session.

Study Design

An exploratory case study was conducted to determine the student participation in and perceptions of the HyFlex model of course delivery (Creswell & Creswell, 2017; Zainal, 2007). These outcomes were examined through class attendance analysis, student grades, and student interviews. Statistical analysis of data was performed using standard linear regressions calculated in Excel. The following research questions guided the analysis:

1. Does allowing students to choose between asynchronous and synchronous learning modalities within a single course affect student learning as measured by grade percentage?
2. What are special educator perceptions and preferences regarding the HyFlex course delivery method in a teacher licensure course according to course delivery method choice?

Procedures

To address research question one, course attendance data were gathered to determine if students participated completely synchronously (FTF or via internet video), asynchronously (online only) or used a mixed selection of both methods for each of the 13 class sessions. A standard regression analysis used percentage of asynchronous courses attended to predict student performance. Percentage of asynchronous sessions was the independent variable and overall course percentage was the dependent variable. Course percentage was calculated by

averaging the scores of three key course areas: (a) activate discussions, (b) assignments and (c) the final unit lesson plan.

Examination of research question two was conducted through student interviews. As a qualitative element of this case study, the results of the interviews were not intended to generalize to other groups; rather, we hoped to gain insight into the particular student needs existing within the context of a teacher preparation course (Creswell & Creswell, 2017). First, students were asked if they would agree to an interview on their perceptions and preferences with respect to the HyFlex course delivery method. Twelve students agreed to the interviews.

Next, the authors examined the course taking practices of those students. It was determined that three categories of course modality choice were represented among the possible interviewees: (a) synchronous only, (b) asynchronous only and (c) mixed. Next, each participant was placed in one of these three categories according to their attendance record. Finally, one student from each category was selected at random for an interview. Participants 1, 5, and 11 were interviewed using the following questions:

1. Which delivery option did you choose?
2. Did you prefer a delivery option?
3. How much time did you spend on course content for each modality?
4. Could you give me some pros and cons of each modality?
5. What could we do to improve the course delivery?
6. Do you have anything else we should know?

Findings

Research Question 1

Participant attendance and grade data are included in Tables 2 and 3 respectively. All participants attended all sessions and twelve out of the thirteen participants received passing grades.

Table 2

Attendance Data

Participant	Sessions	Sessions	Percentage of
	Synchronous	Asynchronous	Asynchronous
1	12	1	8%
2	9	4	31%
3	0	13	100%
4	0	13	100%

5	13	0	0%
6	7	6	46%
7	11	2	15%
8	13	0	0%
9	0	13	100%
10	0	13	100%
11	0	13	100%
12	2	11	85%

Table 3*Participant Grade Data*

Participant	Activate Discussions	Assignments	Final Unit Plan	Grade Percentage
1	100	100	96	99% (A)
2	100	97	55	84% (B)
3	100	47	0	49% (F)
4	100	97	100	99% (A)
5	92	95	89	92% (A-)
6	100	90	96	95% (A)
7	100	100	100	100% (A)
8	100	87	90	92% (A-)
9	100	100	100	100% (A)
10	100	92	100	97% (A)
11	92	90	100	94% (A)
12	100	95	86	94% (A)

Note. Grade percentage was determined by averaging scores from the Activate Discussions, Assignments and Final Unit Plan.

Model summary statistics are found in Table 4. A simple linear regression was calculated to predict student grade percentage based on percentage of asynchronous classes attended. A non-significant regression equation was found $F(1, 10) = 0.41$, $p > 0.54$, with an R^2 of 0.04. Participants predicted grade is equal to $0.95 - 0.06$ (asynchronous classes) percent when asynchronous classes attended is measured by percentage (see Tables 5 & 6). Grade percentage decreased 0.06 percent for each percent increase of asynchronous classes taken.

Table 4*Descriptive Statistics*

Variables	<i>M</i>	<i>SD</i>
Grade Percentage	91.28	14.06
Synchronous	5.58	5.74
Asynchronous	7.42	5.74

Table 5*ANOVA*

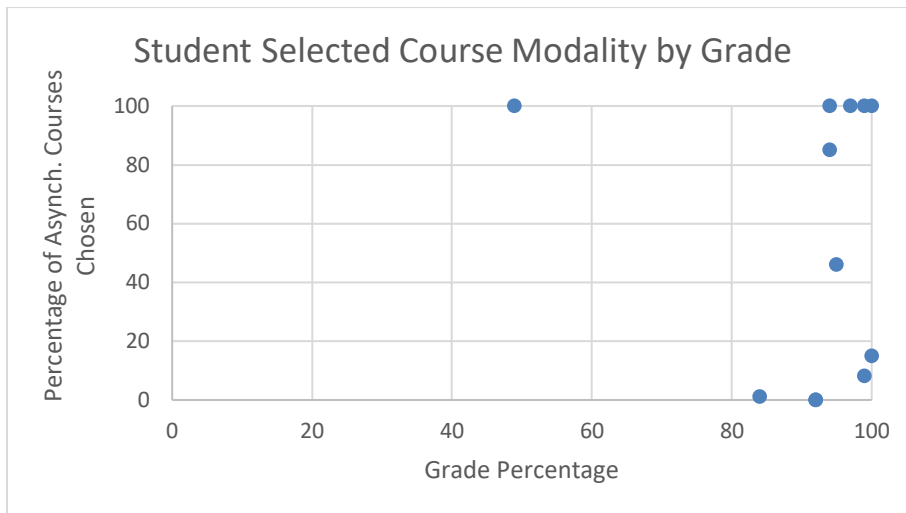
Model	df	SS	<i>M</i>	F	Sig.
Regression	2	84.76	42.38	0.41	0.068
Residual	10	2089.87	208.99		
Total	12	2174.63			

Table 6*Coefficient Estimates of the Model*

Model	Unstandardized		Standardized	<i>t</i>	Sig.
	Coefficients	St. Error	Beta		
Constant	94.86	7.01		13.54	0
Synchronous	0	0	0	65535	-
Asynchronous	-0.48	0.76	-0.20	-0.64	-

Student selected course modality does not appear to impact student learning outcomes. Although there was a slight negative effect from attending more asynchronous courses, it was extremely small (see Figure 2). Students attending synchronously, asynchronously and a combination of both achieved similar success. Importantly, due to the small sample size and limited number of students taking synchronous classes only, results are not generalizable beyond this course. Additionally, the range of scores on the outcome variable was limited, which may be masking differences.

Figure 2*Student Grade Percentage by Percentage of Asynchronous Courses*



Note. The scatter plot shows that student grades were similar regardless of the number of courses they chose to attend synchronously or asynchronously.

Research Question 2

Interview Results. Interview responses regarding the HyFlex model were overall positive and quite informative. Student answers to each interview question are included below. Note: in the comments below, “virtual” refers to synchronous class attendance through Zoom and “online” refers to asynchronous attendance facilitated through the Canvas learning management system.

Question 1: Which delivery method did you choose?

P1: I attended both virtually and online. I was planning on coming to class each time, but we had spring break at the same time as one of the classes and my family decided to take a vacation. I also had an IEP that ran late one night...I guess there were a couple of nights I just couldn't make it.

P5: Virtual, I went to a distance site.

P11: Online

Question 2: Did you have a preference for a delivery option?

P1: Oh yes, I really liked the available help for the assignments (during the synchronous class). I was never a math person and I really needed the peer support.

P5: Yes, I like having other students around so I can talk to them later if I have questions. I don't really learn well online.

P11: Not usually but I already teach math, so I couldn't see why I needed to attend (FTF) class.

Question 3: How much time did you spend on course content for this modality?

P1: I am not sure. I know I only spent class time on the nights I attended. For the online

sessions I think it took me about three hours to read and review the materials in the module, then I had to do the assignment after that, so longer than the nights I attended, I guess.

P5: I came to class, so the two and ½ hours each week, then I did look at some of the online materials for the math areas I am teaching. Do you want to know the time I spent reading the text as well? So, I guess maybe an additional 20 hours. Then there was the math unit, so I accessed the planning module as well, so maybe five more hours?

P11: About five hours a week

Question 4: Could you give me some pros and cons of each modality?

P1: Well, I liked that I could have the option to miss class with the online materials, but I wasn't sure about some of the content. I got really confused on the lesson planning assignment. The standard that it was linked to didn't make sense to me. I guess I liked the virtual classes, but one night my internet kept freezing so it was hard to stay focused. I also didn't like how it took forever for the sites to log in.

P5: As I said, I really like attending with my peers, I also really like that the materials for the online group are available on Canvas so I can look at them. The course recordings are also there, but to be honest I didn't access them. Cons? hmmm, maybe that class started late every week?

P11: If you are asking about the online format not really, it was okay. I mean you checked to see if we knew what we learned each week, which is good. I didn't really see the purpose of the activate activities, but I guess if you didn't already teach math it might make sense.

Question 5: What could we do to improve the course delivery?

P1: It would have helped to take a math class first, it had been years (slight laugh). But you mean the way we access the course, right? Okay, I guess make sure you let people know they need a strong internet connection to access the course virtually, Also I think you should do away with the distance sites, this took way too much time. I am not sure really on the online delivery, maybe more clarity in the assignment instructions? But only some of them, you know the ones that required higher math content knowledge.

P5: Start class later.

P11: I would include more rigorous assignments outside the module assignments. I already had unit plans so that assignment was a piece of cake. I would include an assignment to see if other students know their math, my assumption would be no.

Question 6: Do you have anything else we should know?

P1: Not really.

P5: I guess just that even though I didn't attend online it was nice to know that it was there if I needed it.

P11: Yes, I would take off the requirement of reading all the material. If we already know math some of the readings are too basic.

Based on the comments of interviewees, it is clear that each student's learning needs are highly specific. As indicated, giving students modality choice created flexibility to attend sudden meetings or even go on vacation without missing class. It is also interesting to note that two students appreciated the synchronous interaction of the instructor and peers while the other student did mind its absence. Although it's difficult to say, if both options had not been available, student learning may have been affected negatively for any one of them. Finally, comments of participant 1 on Question 4 emphasize the importance of thoughtful, well-designed instruction when building a HyFlex course.

Discussion

The current case study supports earlier, positive research outcomes associated with providing student modality choice using the HyFlex course delivery method, including enhanced learning quality and higher student satisfaction (Bower et al., 2015; Fabris, 2015; Kyei-Blankson & Godwyll, 2014; Malczyk, 2019). Adding to the extant literature, we found this method to be useful for special education teacher training, a population which has not been previously examined. Because educators in alternative routes to licensure settings may feel overwhelmed by job responsibilities inherent in the first few years of teaching, providing choice in delivery modality proved to be beneficial for students. Overall, participants in this study performed remarkably well, regardless of learning modality choice, shining a light on the HyFlex course delivery model as a viable means of meeting these goals. The authors agree that HyFlex can improve training opportunities in teacher preparation by offering greater flexibility for both students and providers (Beatty, 2007).

Limitations

There were limitations to the research in this case study. As with all case studies, it only provides a snapshot of the research outcomes in question. This study of the HyFlex model took place in a single post graduate teacher licensure course with few participants making results difficult to apply to other course types and institutions. Future studies could replicate these

procedures using a larger population of students, possibly combining results from a complete teacher preparation program with multiple HyFlex courses or using longitudinal data gleaned from repeated courses. Finally, in order to truly understand students' experiences, more interviews are necessary.

Conclusion

As the student demographics of higher education and teacher education continue to change, the struggle to accommodate diverse learners will persist. The HyFlex teaching method provides unique access to quality training courses that can support learning. Learners that cannot travel can still attend interactive, flexible courses that are more personal than online only courses. In accordance with best practices of learner centered instruction, students benefit from flexibility and choice in how, where and when they learn (Cornelius-White & Harbaugh, 2009). This model provides options for various synchronous and asynchronous course modalities, and, as evidenced here, the authors have experienced high student satisfaction and learning success when deploying it in teacher training.

The HyFlex model also provides benefits to institutions striving to serve diverse learners by combining modality preferences into existing classes instead of teaching additional sections. However, there are reasons to continue an exploration of best teaching practices for this course format to better understand it's connection to learning outcomes as well as practices to enhance student satisfaction.

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Exploring the Relationship Between Nutrition and Academic Learning among Students of Samtse College of Education

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Abstract

The study was conducted to explore the existence of relationship between the academic learning of college students and their nutritional diets receive from the college mess. The data was collected through a Student Food Survey (SFS) (N =135) and structured interview (N = 6) among college students who had the lived experience of having meals from the college mess. The survey data was analyzed for descriptive and correlational analysis using SPSS. Similarly, the interviews were transcribed and analyzed into three major themes: food quality, eating practices, and recommendations. The data revealed that food quality and nutritional diets served in the mess affect students' eating habits and their academic learning. Further, the findings from survey indicate a significant positive correlation between food quality and academic learning of students. The study concluded by stating that nutritional deficiencies contribute to lack of academic concentration and therefore, recommends the college management devise strategic interventions to improve food quality in the mess.

Key words: Relationship, nutritional diets, academic learning, food quality, and eating habits

Introduction

Anemia and stunting (low length or low height-for-age) are the most evident consequences of under nutrition in most of the country. It was reported that in Bhutan, stunting has a prevalence of 33.5 percent and anemia affects 54.8 percent of women and 80.6 percent of children, which is recorded as the highest in the world (Atwood, et al. (2014). Further, health problems and non-communicable diseases related to lack of balanced diets, micronutrient deficiencies, and lifestyle changes continue to pose challenges to achieve 'zero hunger' which is one of the Sustainable Development Goals (SDGs).

As a consequence of stunting and other nutrition-deficient diseases, children face diverse functional consequences such as poor cognition and educational performance, loss of productivity, and increase in weight which puts more risk to nutrition-related chronic diseases. This study took place at one of the Education Colleges in Bhutan. The teacher students in the college are made up of different cultures with different preferences of foods at different times.

Yet, the college serves all three meals to the teacher students residing as boarders within the campus to maintain uniformity. However, it was observed that teacher students of the college were served with easily available food items instead of a balanced diet which might contribute to students' poor attitude towards their daily learning. Likewise, it was observed that students developed poor eating habits due to the appearance, taste, smell, texture, and quality of the food served in the kitchen.

Additionally, it is uncertain that the proper nutritional guide is followed in providing nutrition-rich food items and adequate amount of nutrients necessary for good health (nutritional diets) to the teacher students. Further, teacher students preferred eating their own choice of food (fast and junk foods) available within the campus than visiting the college mess. Thus, the strong presence of having so many students skipping meals and the lack food quality in the college mess led to the decision that this college would be an excellent area to conduct research on how nutritional diets have an impact on students' academic learning and performance. Moreover, no such studies have been conducted within the Bhutanese tertiary Education setting. Hence, given this issues and gap, this study aims to explore the relationship between students' academic learning and their nutritional diets received from the college mess.

Research question:

1. What is the relationship between nutritional diets and the academic learning of college-going students?

Sub-questions

- a) What are the perceptions of students on quantity and quality of food in mess?
- b) What are the perceptions of students on nutrition of food in the mess?
- c) What are the eating habits of students in the mess?
- d) How do students feel about the importance of good nutritional diets (eating a balanced and healthy diet) and their learning?

Literature Review

Nutrition and Cognition

Studies have concluded that dietary habits affect normal brain functions. Growden and Wurtman (1980) suggested that the brain is not an autonomous organ, instead, it is affected by the nutrition, the concentration of amino acids, and choline (in the blood) which lets the brain create and use neurotransmitters. Colby-Morley (1981) asserted that what we eat directly influences the brain functioning. For example, Rausch (2013) reported that having a healthy, balanced diet improves brain capacity, maximizes cognitive capabilities, and improves academic performance in school-age children.

In addition, a direct correlation between nutrition and performance of children was found amongst the school aged children. Wood (2001) concluded that nutrition has a vital role in the cognitive functioning of children. Additionally, the study also found the role of iron in brain function. It was reported that children with low test scores corresponded to a lower level of irons in their bodies, or rather, children with iron deficiency (Wood, 2001).

Similarly, it was confirmed that the zinc nutrient has a role with memory and students' abilities to remember everyday words. Likewise, a deficit of specific nutrients such as vitamins A, B6, B12, C, iron, zinc, and calcium are also associated with lower grades and higher rates of absenteeism and tardiness among students (Bacsh, 2010; Kleinman et al., 2002; Taras, 2005). Moreover, hunger, due to insufficient foods, resulted in poor grades, high absenteeism, and an inability to focus (Kleinman et al., 2002; Taras, 2005). In addition, it also reiterated that poor nutrition can leave the students more susceptible to illness like headaches and stomachaches, resulting in absenteeism (Brown et al., 2008).

Erickson (2006) mentioned that substances found in all the food are important for brain development and function. The study pointed out that lack of protein will result in Protein Energy Malnutrition (PEM) which leads to poor performance and younger children become lethargic, which affects their social and emotional development. Furthermore, the lack of carbohydrates may cause dizziness and mental confusion which would eventually affect student performance. According to the literature (Bellisle, 2004), Sorhaindo & Feinstein, 2006)), students who are more exposed to proteins, carbohydrates, and glucose have improved cognition, concentration, and energy levels.

Nutrients and Learning

Proper nutritional support is required to allow the brain to function at its highest ability and to enhance learning. It requires a proper adaptation of the Food Guide Pyramid to help children reach their potential. Wolfe et al. (2000) demonstrated that nutrition affects students' thinking skills, behavior, and health that impact academic performance. According to Busch et al. (2014), healthy nutrition and sports participation have positive impacts on students'

academic performance.

Similarly, Wolfe et al. (2000) also highlighted the negative impact of skipping meals. They concluded that children, who eat a good breakfast, have better performance scores as eating breakfast helps in improving attention, retrieving information more quickly and accurately, make few errors in problem-solving activities and concentrate better and also perform better when asked to do complex tasks. In addition, Pollitt and Mathews (1998) and Rampersaud et al. (2005) stated that children skipping breakfast have low academic performance due to the failure in important areas such as alertness, attention, memory, processing of complex visual display and problem solving. Further, students who have access to nutrition, particularly breakfast, can have enhanced psychological well-being, reduced aggression and school suspensions, and decreased disciplinary issues (Brown et al., 2008; Murphy et al., 2005).

Further, Lahey and Rosen (2002) also concluded that students, who showed poor academic performance, had inadequate fruits and vegetable intake as compared to those who had adequate intake of fruits and vegetables. According to MacLellan et al. (2008), lack of adequate consumption of foods such as fruits, vegetables, or dairy products is associated with lower grades among students.

The study also found that students participating in the United States Department of Agriculture (USDA) School Breakfast Program (SBP) exhibited increased academic grades and standardized test scores, reduced absenteeism and improved cognitive development (Bradley & Green, 2013). Similarly, the study on 5th grade students demonstrated that students with low nutritional diets performed worse in a standardized literary assessment (Florence et al., 2008).

Eating habits and academic achievement

There was a small association between a healthier dietary intake and higher academic achievement and vice versa in university students (Whatnall et al. 2019). Similarly, the studies (Mora et al., 2019; Lundqvist et al., 2018; So, 2013) showed positive correlation between the eating habits and academic achievement among adolescents. In addition, there was a relationship between the regular consumptions of the three main meals, breakfast, lunch, and dinner and better academic performance (Kim et al., 2016; Overby et al., 2013). Further, food consumption that is rich in essential nutrients is significantly associated with good academic performance (Kim et al., 2016; Pearce et al., 2018).

Similarly, food can make students become more focused and can ultimately affect their academic performance (Drummond & Brefere, 2001). Nevertheless, it was concluded that

students who are dissatisfied with the service and quality of food in the universities will choose the off-campus dining (Lee & Lyu, 2019).

University food service attributes

Since this study is for university students, evaluating the role of on-campus dining service is critically important. Klasen et al. (2005) stated that food service is a fundamental factor that influences students' satisfaction. Concerning the food quality service, Andaleeb and Caskey (2007) mentioned that the improvement in food quality would retain the students availing the food services provided in the campus. Further, Raman and Chinniah (2011) noted that varieties and diversities of food give students a sense of home while on the campus. The most common complaints regarding the food services in the universities in Malaysian were poor ambience, lack of food choices, and low quality of food (Klasen et al. 2005).

Methodology

A convergent parallel mixed method guided by the pragmatism paradigm was employed for the study. This paradigm enables the researcher to focus on a research problem in social science and acquire knowledge about the problem with an employment of both qualitative and quantitative approaches (Tashakkori & Teddlie, 2010). Further, it allows the researcher to gather more reliable and authentic information (Creswell, 2003).

A Student Food Survey (SFS) was adapted to collect the data which was developed by Malki (2018). This student food survey was developed in 2018 for the thesis paper which was submitted for the partial fulfillment of the requirements for the degree of masters of arts in education in California State University, San Marcos. It has eleven items and one open-ended question. This survey was found relevant and appropriate to be adapted as it covered a wide range of aspects such as quality of food supplied, eating habits and its relationship to learning.

Similarly, the student survey consisted of a 4 level Likert-scale and supplied open-ended questions. The survey covered a variety of areas such as quality of food offered at the college, their usual eating habits, and what impact that might have on learning. Further, as a supplement to quantitative findings, a semi-structured interview was administered.

A semi-structured interview was conducted to enable the participants to discuss their interpretations of campus food, their study habits and how they regard their university situations from their own point of view. This approach gave adequate, reliable, and comparative qualitative data in terms of quality of food served, eating habits of the teacher students, and their perceptions of its impact of their academic performance.

The interview questions were based on the pre-determined themes such as eating habits,

quality of food served, experiences and perceptions on relation between nutrition and academic learning. These themes guided the researcher in understanding and acquiring information through prompting and rephrasing.

Similarly, Cohen et al. (2007) mentioned that this approach helps the researcher in understanding the situations more thoroughly by prompting, probing, and pressing for clarity, rephrasing and summarizing whenever necessary (Cohen et al., 2007).

Prior to the interview, the researcher stressed that – anonymity would be maintained by using pseudonyms. The interview lasted for 10-15 minutes and was conducted to gather each participant's experiences, feelings, trends and opinions about the food served in the college mess. Since teacher students have responded to the open-ended questions on the same issues in the SFS, the time allocated for semi-structured was kept short. The study done by Adams (2015) on conducting a semi-structured interview mentioned that proposing a too long period for the interview can prompt an outright refusal.

Participants

The boarding teacher students of Samtse College of Education, under the Royal University of Bhutan (RUB) took part in the research exclusively in generating data both quantitatively and qualitatively. More than half of the participants have been taking the meals from the college on a regular basis for more than 3 years and some for 1 year respectively.

The participants for the survey questionnaires as well as for the semi-structured interviews were selected based on the convenience sampling (non-probability sampling) method as it allows the researcher to choose based on the convenience and availability of participants in the surrounding environment (Creswell & Creswell, 2018). A total of 135 (75 males, 60 females) teacher students participated for the SFS questionnaires and 6 (3 females, 3 males) participated in the semi-structured interview.

To avoid unexpected circumstances and for the smooth flow of the study in the college, an approval letter was asked from the college research committee. Moreover, to respect the rights and values of the participants, they were assured with the anonymity and confidentiality of the findings. Similarly, prior to the administration of survey questionnaires and conduct of interviews, the researchers briefed the participants on purpose of the research and their rights to withdraw if they have any problem in the process of the study. Subsequently, the researcher distributed informed consent form to only those interested individuals and moreover, the participants' confidentiality was protected through the use of pseudonyms.

Hostel mess in the college

A college premises has a dining facility for the students residing in the hostel. The mess caters to more than 500 students and serves breakfast, lunch, evening tea, and dinner every day accordingly with the food menu adopted. In fact, a group of volunteered students run the mess on a monthly basis with the amount collected from students' monthly stipend. These groups of students are responsible for the functioning of the mess and proper supervision of cooks and other people engaged in the kitchen. Exclusively, they maintain a check and balance of the mess stores, monthly expenditure statements of the mess and the issuance of provisions with proper record book.

Data Analysis

The quantitative data were analyzed for descriptive and correlational analysis using SPSS 22.0. Pearson correlation coefficient was used to determine the relation between nutrition and learning. Similarly, for the qualitative data, Braun and Clarke's (2006) six-phase thematic analysis was adopted to analyze and evaluate the perceptions and experiences of the teacher students regarding nutritional diets they receive from the college mess and their relationship with academic achievement. Thus, the Braun and Clark (2006) six-phase thematic analysis approach was employed in the study in analysing the qualitative data.

Quantitative data analysis

Thirty-eight items were used in the survey questionnaires. The data collected in each item was measured using the Likert-type rating scales in four different levels of agreement: Strongly Disagree (SD) =1; Disagree (D) =2; Agree (A) =3 and Strongly Agree (SA)=4. To determine the overall ratings, the interval mean mid-scores was calculated, based on the number of interval levels each Likert-type scale were composed of, by using the following equation:

$$Interval = \frac{Highest\ Level\ score - Lowest\ level\ score}{Number\ of\ Levels}$$

This score range was divided into 5 categories of agreement level: Strongly disagree, Disagree, Slightly Agree, Agree, and Strongly Agree level as shown in Table 1.

Table 1:

Criteria for level of Agreement on Nutrition and Academic learning

Mean Score	Agreement Level
1.00 - 1.80	Strongly Disagree
1.81 - 2.60	Disagree
2.61 - 3.40	Slightly Agree
3.41 - 4.20	Agree
4.21 - 5.00	Strongly Agree

Students' Perception on Quantity and Quality of the Food

Table 2 shows student's level of agreement on nutritious food provided in the college dining hall. According to the data, students slightly agree that they get enough food in the mess, however, they also claim that they get hungry between meals ($M=2.912$, $SD=0.488$). This indicates that students have access to larger quantity of food, however, the quantity did not suffice their hunger. On the other hand, the majority of students disagree that the college dining hall provided good quality meal in the mess ($M=2.377$, $SD=0.512$). Further, they also denied that food offered in the college mess were Nutritious ($M=2.017$, $SD=0.549$).

Eating Habits of Students

Though students feel that they are not provided with good quality food in the dining hall, they do agree that they take meals from the mess ($M=2.65$, $SD=0.5$). However, students do not agree that they are served with nutritious food in the mess ($M=2.54$, $SD=0.42$).

Nutritious Diet and Academic Learning

It was revealed from the data (Table 2) that students agree that their learning performance in the class is usually affected by the food served in the mess. On top of that, they asserted that nutrition plays an important role in their academic learning ($M=2.95$, $SD= 0.376$). Thus, students indicated that the food served in the mess has less nutritional value, thereby, impacting their learning.

Table 2:

Students Agreement level on food nutrition served in Samtse College mess

	N	Minimum	Maximum	Mean	Std. Deviation
Hunger and Quantity of Food	135	1.70	4.00	2.91	.488

Meal Quality and Enjoyment	135	1.00	3.70	2.38	.513
Dining Room	135	2.00	3.80	2.82	.314
Foods and Nutrition	135	1.00	3.60	2.01	.549
Eating Habit	135	1.50	4.00	2.65	.505
Nutrition and Learning	135	1.67	4.00	2.95	.376
Nutrition and Health	135	1.60	3.80	2.55	.419
<i>Valid N (listwise)</i>		135			

Similarly, Pearson correlation analysis test (Table 3) shows that there exists significant positive correlation between students’ perception towards food nutrition served in the college mess and their learning experience at Samtse College of Education. Specifically, as shown in the table, there exists a significant weak positive correlation between students’ learning experience and their perception towards quantity of food served in the college mess ($r = 0.206$, $p = 0.016$). Similarly, there exists a significant weak positive correlation between students’ learning experience and their perception toward quality of food served in the mess ($r = 0.249$, $p = 0.004$). It was also observed that students’ eating habit in the college mess has significant moderate positive relation with students learning experience ($r = 0.306$, $p = 0.000311$). Further, it was found that there exists positive weak correlation between students’ perception towards nutritious food and their learning experience ($r = 0.181$, $p = 0.036$).

Table 3:
Relationship between food nutrition and students learning

		Food Quantity of Hunger and Enjoyment	Meal Quality and Enjoyment	Dining Room	Foods and Nutrition	Eating Habit	Nutrition and Learning
Nutrition and Learning	<i>Pearson Correlation</i>	.206*	.249**	.246**	.181*	.306**	1
	Sig. (2-tailed)	.016	.004	.004	.036	.000	

Note: Correlation level, 0.00-0.25, *Weak*; 0.26-0.50, *Moderate*; 0.5-0.75, *Strong*; 0.76-1.00, *Very Strong*. Adapted from Sugiyono (2013).

Qualitative analysis

The information gathered from the interview (N = 6) and survey open-ended questions

(N = 135) was constrained into two major categories such as food quality and eating habits in the dining hall.

Food Quality

It was understood that the kind of foods served in the mess do not meet the nutritional requirement of the students and the food quality in the mess has no significant change throughout the year.

The food provided in the mess is less nutritious and it's uncooked most of the time. (S1)

It's quite unhealthy and also, I feel bad for myself for not being able to give nutritious food to myself. (S2)

Moreover, it was revealed that the food served in the dining hall lacked varieties. The same items were served in all three meals of the day. For instance, potatoes curry was found to be served regularly, while green vegetables were rarely served. However, on special days, the greens were served. Although fruits and vegetables are of a great source of fiber, antioxidants, vitamins and minerals, students asserted that fruits were only served for a countable number of days or hardly part of the meal. Further, the findings also revealed that students were served uncooked food quite often which prevented them from eating resulting in hunger and loss of appetite subsequently.

Similarly, a few of the students mentioned that the quality of food provided in the mess does not last for longer durations leading to hunger immediately after the meals. This could be because students are hardly served with food rich in nutrients. Instead, students are served with high calorie food which offers little or no value nutritional value. Students stated:

Food is often of bad quality. And curry is of not good taste either. I feel hungry right after stepping out of the mess. (S3)

Eating in the mess feels like not eating at all because after eating from the mess, I feel hungry while reaching back to the room. (S4)

Eating practices in the mess

Eating in the mess has become quite challenging for the students for numerous reasons. When students were asked, *what makes you eat in the mess?* They exposed various reasons. Students informed the researchers that they enjoy having meals in the mess as they get to interact and eat together with their friends. Similarly, it was understood that there are few other reasons that compel students to involuntarily visit the mess for meals. Firstly, lack of money. Unlike in other countries, Bhutanese students do not have the privilege to generate income or make money by working part-time which makes them to solely depend on their stipend. As a result, the college mess becomes the only source of food for their survival as it at least suffices

their hunger and keeps their stomach filled as stated in this excerpt:

Eating from the mess is just for the sake. I eat for the sake of filling my tummy but it's no use because after half an hour or so I feel hungry. I still eat it with the fear that might get TB. (S5)

The health issues such as fatigue, kidney stress, low blood pressure, headache, constipation and nausea, and dizziness are some of the most common diseases found in people who skipped meals. Hence, although the benefits derived from the mess is zero, they eat from the mess to prevent themselves from such effects and to keep their stomach full. There are no evidences that filling the stomach has helped to overcome these issues, however, students do it with the belief that it may help to a certain extent.

Additionally, another student said that the very reason for eating in the mess is to gain energy to concentrate during class hours. This is in contradiction to other research which points out that lack of nutrition or nutritional deficiencies in foods leads to anemia thereby causing fatigue. The student stated:

Since we have class from morning till evening to concentrate in class it's important is to take meals, if not, the hunger doesn't let us concentrate. (S6)

However, it is questionable whether just consuming food that has no nutritional would help gain energy and allow the students to stay focused in the class. Nonetheless, mess management must find ways to substitute carbs with at least food that would provide some form of protein, fibre and antioxidants.

In contradiction, it was mentioned there are various factors that stop students from eating in the mess. When students were asked, *what prevents you from eating in the mess?* Students indicated some of the common reasons as lack of quality of food, same menu or lack of varieties of food and vegetables, overcooked or uncooked foods, size of vegetables and bad taste of curry. Further, one of the students said, *"The uncooked vegetables, the same menu for the number of days, and the piece of glass that was found on my friend's plate made us more cautious and avoided the meals irrespective of how they taste"*. Similarly, a few of them even revealed that the food served from the mess does not last long and quite often leads to hunger immediately after the meals which eventually resulted in them looking for other fast foods or junk items. It was quite awful to know that some of them have even identified foreign bodies (glass pieces and stones) in their food, which further prevented them from risking their lives by eating it. Hence, proper mechanisms need to be put in place to avoid such mishap that might pose risk to students' health.

General suggestions from the students

It was learned that proper monitoring is required to ensure that quality and nutritious food is served to the students since the willingness of the students to eat in the mess is entirely dependent on the quality and nutritional diets served, not the quantity. It was mentioned that such practices can reduce the food wastes in the mess. Likewise, the students have suggested management body and mess coordinators to kindly focus on providing nutrient-rich foods including milk, meat, and egg, vegetables, and fruits and focus on a balanced diet instead of serving the same items throughout the seasons. In contradiction, students also emphasized that students do not have to be served with meats and eggs all the time but preparing what is available in the best way possible is required.

The presentation of food must also be taken into consideration and monitored frequently as presentation eventually indicates the sanitation and hygiene of the meals. Most of the students interestingly pointed out that the green veggies were overcooked, leading to the loss of nutrition. Further, passion and interest of the people involved in cooking plays a vital role in the quality of food served, irrespective of their experiences. However, it was observed that those working in the mess lacked interest and motivation to work. Thus, the management must develop a plan to ensure that those people possess such qualities which would eventually result in making a huge difference including the quality of food being served and provide a form of motivation for the enhancement of the preparers' interests. In this regard, we suggest cooks to be trained in order to enhance their cooking knowledge and skills.

Discussion

The findings from both the quantitative and qualitative data revealed that the food served in the college mess does not meet required quality and nutritional value. It was also revealed that students often get hungry in between the meals which eventually resulted in lack of concentration in the class. These findings were in sync with studies done by number of researchers that indicated that poor quality and less nutritional food may result in poor grades and inability to focus in the class and learning (Kleinman et al., 2002 & Taras, 2005).

Similarly, Wolf et al, (2000) reported that nutritional diets students receive affects their thinking skills, behavior and health which has impact on students' learning and performance. Likewise, the current study also found that there was significant positive correlation between food nutrition and students learning experiences in Samtse College of Education. There exists a significant positive correlation between students learning experiences and their perceptions towards the quantity to food served.

Moreover, the findings revealed that there was a significant positive correlation between the students' learning experiences and their perceptions on quality of food served. Further, it was found that there exists positive relation between student's perceptions towards nutritious food and learning experiences. These findings are consistent with the literature (Kim et al., 2016; Pearce et al., 2018) that the food consumption that is rich in essential nutrients is significantly associated with good academic performance. The researchers such as Kleinman et al. (2002) and Taras (2005) also supported the findings that insufficient food served affects the learning through higher rate of absenteeism and inability of focus.

Similarly, Wolf et al. (2002) and Bush et al. (2014) highlighted the importance of nutritional foods for the brain to function at its highest ability to enhance academic learning. The survey data found that there was significant positive relation between students' learning experiences and eating habits ($r = 0.306$, $p = 000311$). These finding align with the findings of Rampersaud et al. (2005), who stated that children with poor eating habits have poor academic learning as well as performance due to the failure in alertness, attention and problem-solving skills. Similarly, this finding corroborates with the studies (Mora et al., 2019; Lundqvist et al., 2018; So, 2013) who found the positive correlation between academic learning and eating habits. Additionally, Brown et la. (2008) and Murphy et al. (2005) put forward that that students with better eating habits, particularly breakfast, can reduce aggression and suspensions and decrease disciplinary issues which would eventually contribute in better learning.

However, the findings from the open-ended questions and interview revealed various factors which prevent them from taking food in the mess such as poor quality of food, same menu, and existence of foreign bodies in the meals. This finding is consistent with the literature (Klasen et al. 2005) which concluded that poor ambience, lack of food choices, and low quality of food were some of the complaints regarding the food services in universities in Malaysia. These factors have largely attributed to students' inability to concentrate in the class, thereby hampering their academic learning.

Conclusion and Recommendations

This study focused on finding the relationship between nutritional diet and academic learning of college going students. The findings revealed that there exists a positive correlation between teacher students' perceptions about the quality and nutritional diets and their learning experiences. Additionally, the results indicated that those students who are exposed to poor quality and poor nutritional diets are more susceptible in developing poor learning habits and behaviour.

Thus, the study illustrates the need to aid students in maintaining a healthy lifestyle and the management to review and develop plans to ensure that a balanced diet is served in the student dining hall. Moreover, we recommend the college administration to determine strategic interventions in the area of resource support and capacity development of cooks as such intervention would subsequently help the cooks in fostering their interest and enthusiasm in doing the work and simultaneously contributing to the well-being of college students and their learning.

This study is limited in terms of sample size. Therefore, the findings cannot be generalized to all Royal University of Bhutan (RUB) colleges. Thus, a further study on the same topic involving more sample sizes from RUB colleges is recommended.

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Culturally Responsive Practices in a Diverse Elementary Classroom: A Case Study

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Abstract

The population in the US continues to grow more diverse leaving schools to face the challenge of meeting the needs of students from varied linguistic backgrounds. In order to create successful learning experiences for English learners from culturally and linguistically diverse backgrounds, teachers need to be educated in culturally responsive pedagogy including understanding their students' backgrounds, creating positive learning environment, using culturally relevant strategies, and fostering positive home school relations. This article presents a single participant case study as described by Merriam (2009), where one teacher provides her experience implementing culturally responsive practices in her classroom after participating in a TESOL (teaching English to speakers of other languages) professional development program.

Keywords: English learners, culturally responsive pedagogy, case study, diversity, learning environment

Introduction

As the US population grows more diverse, public schools face the challenge of meeting the needs of an increasing number of culturally and linguistically diverse (CLD) students. This is especially evident in urban inclusive classrooms where the number of students from diverse backgrounds is increasing, but their educational performance remains below their potential (Ford et al., 2014; Hoover, 2012). Addressing students' diverse needs is a challenging task no matter where the children are educated or what types of strategies are used. Despite these circumstances, many educators and other professionals are striving to make improvements to benefit CLD children in the classroom. Placing diverse students in the general education classroom will not translate directly into effective learning for children unless appropriate

responsive practices are implemented by educators. To be effective, educators need to create meaningful learning experiences (Lerner et al., 2003).

A single case study research design (Merriam, 2009) was used for this study in order to gain an understanding of critical factors impacting culturally responsive practices for English language learners in the general education classroom. The study was conducted in a diverse school district in the midwestern United States. Interviews and observations were conducted in order to understand the experiences of one classroom teacher's implementation of culturally and linguistically responsive practices after participating in a federally funded TESOL (teaching English to speakers of other languages) program.

This study employed a constructivist theoretical framework based on the belief that people create meaning by filtering new information and reconciling it with their current ideas and experiences (Meyer, 2009). The constructivist perspective was suited to this case study because the authors sought to determine how one teacher reconciled her previous professional knowledge and new learning to make changes to her classroom. The constructivist approach is also compatible with the researchers' beliefs that human beings develop knowledge and make sense of the world when comparing new experiences with their existing schemata (Appleton & King, 2002).

Case Study

This case study focuses on the experience of Ms. Smith, a 4th grade teacher in a school district located in the midwestern United States. This district has four neighborhood elementary schools, a middle school, an intermediate school, and a high school. There are 3,685 students enrolled in kindergarten through twelfth grade. The racial demographics in this district consist of 85.7% White, 2% Black, 6% Hispanic, 6.3 % Asian, and 1% Indigenous. Five percent of the students are classified as English learners primarily with native languages of Arabic and Spanish. At the time of this project, Ms. Smith had been a teacher for ten years. She received her teaching license in elementary education and had taught grade levels P-K through 4th grade.

Ms. Smith participated in a five year long national professional development grant established by The US Department of Education. This grant included a TESOL endorsement program for preparing general education teachers to use research-based content pedagogy addressing the needs of English learners (ELs). The program balances theory and practice, uses the Sheltered Instruction Observation Protocol (SIOP) model as a framework, and emphasizes national standards and research-based practices for teaching academic language and subject areas (Echevarría et al., 2013). The program was designed to focus on preparing content area

teachers and special education teachers who teach Els to develop effective instruction using culturally responsive practices to meet their needs. The program is organized to meet the critical need to prepare teachers to accelerate the language development and academic achievement of Els.

During this program, Ms. Smith's 4th grade general education class consisted of 27 students with the following racial backgrounds: 20 White, three Hispanic, one Asian, and three mixed race. There were 14 boys and 13 girls in the classroom. According to Ms. Smith, in her interview, this group of students was sociable, active and inquisitive. They loved to use creative avenues to express their knowledge (3D projects, posters, and plays) and enjoyed using technology to support or demonstrate their learning. For this case study class, Ms. Smith used several strategies such as explicitly linking background knowledge and past learning to lesson content, using visuals from their native country, paraphrasing, contextualizing definitions, and slowing speech, learned through the TESOL program to create a culturally responsive classroom.

Culturally Responsive Pedagogy

Culturally responsive pedagogy (CRP) is based on the foundation that learning, rather than occurring in a void, is most effective when learned through the lived experiences of the student. The characteristics, prior experiences, cultural knowledge and perspectives of diverse students form the frame of reference through which learning is most effective (Gay, 2002). Culturally responsive teaching offers ways to best support diverse learners in the classroom by looking at the whole child. Students are empowered intellectually, socially, emotionally and politically by using cultural and linguistic referents to impart knowledge, skills and attitudes (Ladson-Billings, 2009). CRP enhances the learning experiences of CLD students by focusing on their cultural knowledge, prior experiences, frames of reference and performance styles.

However, teachers often do not recognize the impact of diversity and the need for culturally responsive practices in their interactions with CLD students (Dray & Wisneski, 2011).

While diversity itself is not an issue, the potential cultural mismatch and dissonance between teachers who are largely white (American Association of Colleges of Teacher Education, 1999) and CLD students can be a concern (Dray & Wisneski, 2011; Ford et al., 2014). This dissonance often results in lower expectations and the disproportionate representation of minorities who have academic failure, resulting in placement in special education (Ford et al., 2014; Sorrells, et al., 2004).

It is imperative for teachers to move beyond approaches such as simply celebrating holidays to deliberately planning and integrating culturally relevant practices in the classroom (Gay, 2010). This is especially relevant to linguistically diverse students who not only speak another language but who may also contextualize information from a different frame of reference (Gay, 2002; Klinger & Gonzalez, 2009; Worrell, 2007).

Case Study: Culturally Responsive Pedagogy in Context

Having taught 4th grade for four years in her district, Ms. Smith became aware that the school population was becoming more diverse with immigrant children and Els. With this change in the school population, she became more aware of the differences between her sociocultural background and that of the diverse students in her classroom.

Ms. Smith was aware that to be culturally responsive she needed to be critically conscious of her own cultural socialization and its impact on her attitudes and behaviors that shape the classroom. To be critically conscious she reflected on her own attitudes and biases, recognizing that these may impact of her assumptions, resulting in the inequitable treatment of CLD students in inclusive classrooms (Weinstein et al., 2004). Thus, she knew that in order to be culturally competent she needed to acknowledge her own positionality while honoring students' cultural backgrounds. She became more aware of how her expectations were guided by her own culture and that her expectations may differ from those of CLD students in their classroom. It was therefore critical that she not only had knowledge of her students' backgrounds, but also integrated this knowledge into her instruction (Ford et al, 2014; Gay, 2010).

Ms. Smith came to this realization when she heard two students talk in Arabic with excitement and interest. She realized that she did not allow her Els to speak in their native language unless it was to communicate in the classroom. She also realized that she spoke about their history and historical figures from a US perspective rather than inviting them to share their knowledge.

Acknowledging the mismatch between her background and her students' backgrounds, Ms. Smith recognized that she needed to learn more evidence-based strategies to support them. This included educating herself about her students' cultures, languages, and perspectives; and how to best create a culturally responsive environment in her classroom that affirmed their cultures, language and experiences. She recognized that learning key concepts in the school curriculum would be most effective and meaningful if she connected the concepts both through the students' cultural perspective and at their ability level.

Culturally Responsive Learning Environments

Culturally responsive teaching creates learning environments that affirm students' cultures and experiences and encourages them to value cultures and experiences different from their own (Ladson-Billings, 2009). This implies that the learning environment created by teachers meets students at their point of need rather than at their grade level (Worrell, 2007). According to Hoover (2012), to maintain cultural integrity in the classroom, the guidelines determined by the Center for Research on Education, Diversity and Excellence are: (a) functional language in the classroom to promote academic competence, (b) home community partnerships to optimize contextual learning, (c) cooperative learning, (d) verbal interactions and communications which encourage academic/instructional conversations and I a challenging curriculum which holds everyone to high expectations. These form the basis for connecting instruction to students' frames of reference.

The challenge for teachers is not the content itself, which is often factual, rather, it is the ability of teachers to teach content through the cultural lens of the students thereby enhancing their understanding of content (Gay, 2002). Creating culturally responsive learning environments begins with infusing a rich multicultural education reflecting the diversity of the classroom and the uniqueness of its students.

Culturally responsive teachers (CRTs) connect with learners by using their experiences to differentiate and scaffold instruction, and to encourage verbal interactions and discussions to promote understanding of key concepts (Klinger & Gonzalez, 2009). CRTs value the connection between new learning and prior knowledge and experiences of their CLD students (Ford et al., 2014; Ladson-Billings 2009). Additionally, instruction is supported through various delivery modes including teacher modeling using think alouds, demonstrating completion of tasks and including visual representation of content rather than lecture alone. Diversity is affirmed through books by authors representing the diversity in the classroom, bulletin boards with multicultural displays, activities that support culturally responsive practices such as promoting conversations on the impact of diversity and its influences on the students (Ford et al., 2014).

Case Study: Creating Culturally Responsive Learning Environments

First of all, Ms. Smith's classroom was designed with the students in mind. A section of the classroom was dedicated to whole group learning, two large tables allowed for smaller group learning, and individual desks were provided. The room also included a quiet corner for

individual breaks, a variety of stools and seats that could be moved around the room to encourage partner work and a technology corner.

A classroom library consisted of a large bookcase against one of the classroom walls which included many nonfiction and literature books at various reading levels available for students. Visual supports including the Daily Schedule, I Can statements, classroom and group expectations, a math word wall and reading strategies were posted on the walls. The positive environment that she created allowed the students to feel respected, responsible, and safe to share ideas and opinions.

Further, an example of creating a culturally responsive learning environment came from an observation during Ms. Smith's 4th grade unit on immigration that was related to the State Social Studies Standard: *Various groups of people have lived in [this state] over time including American Indians, migrating settlers and immigrants. Interactions among these groups have resulted in cooperation, conflict and compromise.* To address this standard, her goal with this unit was to teach about immigration in the past as well as immigration today. She not only wanted to teach the students their state's history involving immigration but also to incorporate into the unit how people are still immigrating to the state. Thus, this unit made a meaningful connection to the immigrant children in her classroom and helped the other students develop awareness and appreciation of the immigrant experience.

To introduce the unit, Ms. Smith activated students' background knowledge and pre-taught subject specific and general academic vocabulary. She began by focusing on the word *immigrant* (immigrating, immigration). She asked the students to discuss with each other what they knew about immigration. To deepen the students' understanding, Ms. Smith showed a short video about people traveling to the United States in 1903. The video helped students visualize what the word immigrant means and encouraged a lively discussion. When she asked if immigrants still travel to America today, many students were unsure. Half of them said yes and the other half said no or did not know the answer. She then proceeded to show another short video about a young girl who recently immigrated to the United States (http://teacher.scholastic.com/activities/immigration/young_immigrants/taylor.html). Having been presented with a specific example of an immigrant, the students then compared their own experiences to those of the girl and shared personal stories of people they knew who had immigrated to the United States. The depth of these responses and student participation clearly exemplified how engaging in CRP leads to increased student achievement.

Next, Ms. Smith introduced students to a newspaper article on immigration which formed a key part of a nonfiction lesson on text features; main idea and supporting details; and

summary writing. These activities were followed up by discussion of non-fiction articles on immigration in differentiated groups. The students also played “What’s my Title?,” a game in which they matched titles of articles to the main idea, rewrote titles from short articles from *National Geographic for Kids*, and created Wordle designs on the computer for the main idea and supporting details in the articles they read.

Throughout the unit, Ms. Smith had students work with partners. For example, she had students work with a partner to mark the headings and subheadings of the newsletter, to complete the graphic organizer and to discuss the text features they found in the newsletter. Ms. Smith had learned about the effectiveness of peer interaction when studying the SIOP model in the TESOL program. She believed that it provided her students with valuable opportunities to practice their listening and speaking skills and found pair work was particularly beneficial for the CLD students in her classroom.

Additionally, Ms. Smith grouped students in a variety of ways based on the objectives being presented. In math, students were grouped based on their pretests for each unit. Activities within the math class were then based on the activity planned and the outcome wanted. Groups were based on ability, student support, random grouping, and interest. Ms. Smith also gave students opportunities to teach and reinforce concepts. In language arts, students were also grouped in various ways. Reading groups were based on reading abilities which allowed for differentiated reading material and higher order thinking questions to be incorporated. Whole class instruction included opportunities to model activities, pair and share, provide opportunities among teacher and students, and encourage content discussion. Small and large group activities were randomly selected or carefully configured to include different reading and speaking abilities within groups to support language and content goals.

Ms. Smith also altered her daily lessons based on the results she saw by using the SIOP model. She made sure she explicitly taught vocabulary words and elicited background knowledge. She also made sure many opportunities were available for students to practice and apply both the academic content and language objectives and included scaffolding into the lessons. CRTs provide students with the language and content objectives for a lesson so that they know what the purpose of the lesson is and what they are expected to achieve in the lesson, thus helping them to develop more independence as learners. When teachers provide English learners with the objectives of a lesson, they empower them to be more self-directed and have a positive mindset. This connects to an important tenet of CRP: teachers simultaneously support and challenge students (Snyder & Staehr Fenner, 2021). Instruction Checking

Questions (ICQ's) and additional visuals were incorporated into her lessons, and objectives were made clear and were referred to often.

Assessments were created to meet the objectives and lessons were planned around them. She found that posting content and language objectives throughout the entire lesson benefited both her and her students. She referred to the objectives more often and was able to show how and why the activities and lessons connected to the curriculum goals and standards. Including language objectives, also allowed students to focus on how they would convey what they had learned and show how they applied the new information. A component of CRP is allowing students to take ownership of their learning (Gay, 2010). By allowing students the opportunity to show how they apply new information, Ms. Smith gave students dominion over their knowledge acquisition, establishing a learning environment grounded in culturally responsive practice.

Prior to the TESOL program, Ms. Smith often offered examples that reflected or represented diversity in general but were not specific to the diversity of the students in her classroom. While she often shared a picture book that included characters or photos of people from different races she did not read or show any multimedia materials that included any aspects of their culture.

When trying to activate background knowledge, she now deliberately searches for examples in the Els native language or uses photos that explicitly link the new concepts to the students' background knowledge. For example, she tried to link the word "plantation" to the classes' background knowledge by building off the word "farm." Two of her Els did not have any prior knowledge of the word "farm" so she altered her lesson to include photos of "gardens" with flowers from their land of origin. The students were then able to build off the word "garden."

Additionally, for the Spanish speaking students, she built off the Spanish word *granja* (farm) to gain understanding. It was not that those students did not have any background knowledge of a farm, but that they just were not familiar with the English word "farm." By incorporating photos and words from student's native languages, she assisted the Els to have a clear and meaningful understanding of the vocabulary and support them with linking new concepts to their own background experience.

Culturally Responsive Strategies

Teaching and learning do not occur in a vacuum and are cultural processes occurring in social contexts which are influenced by teachers' and students' values, beliefs and attitudes

and influence the decisions and actions teachers and students take (Gay, 2002). Culturally responsive strategies empower students academically and socially as educators deliberately integrate cultural references into instruction and the curriculum (Ladson-Billings, 2009).

Lucas et al., (2008) have identified linguistically responsive pedagogical practices teachers need to use to facilitate learning of the curriculum by ELs (pp. 366-370). These pedagogical practices are the following:

1. Teachers need to learn about ELs. They need to know about the backgrounds and languages of their ELs. They also need to understand that ELs are not a homogeneous group. They enter U.S. schools with varying levels of oral proficiency and literacy in English as well as prior knowledge of different subject matter.
2. Teachers need to identify the language demands inherent in classroom tasks. They need to be aware of the language proficiency levels of their ELs and the challenges inherent in the tasks they give their ELs. This is essential for them to know in order to be able to determine if scaffolding is necessary, the extent to which scaffolding is necessary, and how best to scaffold language and content for their ELs.
3. Teachers need to know about a variety of different strategies and tools they can use to scaffold learning for ELs. This includes ways to minimize ELs' anxiety about being a second language learner in a mainstream classroom. "They can do so by establishing and enforcing classroom rules that respect all students, minimize competition, and encourage cooperation" (Lucas, et al., 2008, p. 369).

In addition to pedagogical practices described by Lucas and colleagues, teachers of ELs need to know how to use CRP for linguistic, sociocultural and academic purposes (Staehr Fenner & Snyder, 2017). Staehr Fenner and Snyder developed a model that synthesizes characteristics of CRP into four overarching guidelines. They discuss this model in relation to the importance of providing ELs with an equitable education. The guidelines are summarized below.

Guideline 1: Culturally responsive teaching is assets-based. Often educators have a deficit view of ELs, seeing them as students who have hurdles to overcome. They frequently think their home languages and cultures are impediments they need to surmount. This viewpoint is likely to produce low-self-confidence and lack of motivation.

In contrast, an assets-based perspective views students' cultures and languages as valuable foundations for learning the new language and academic content (González, 2005; Staehr, Fenner & Snyder, 2017; Valencia, 1997; Valenzuela, 1999). In a similar way, an assets-based perspective recognizes that ELs' parents support their learning and value their education

even though it may not be evident to the school. In addition, an assets-based perspective opens teachers' minds to including students' background knowledge, experiences and knowledge into the curriculum (Staehr Fenner & Snyder, 2017). For example, assigning students to interview a family member and then writing a biography on the family member based on the information that was collected, is one-way students' background experiences could be included in an English language arts unit on writing biographies.

Guideline 2: Culturally responsive teaching places students at the center of the learning.

Student-centered learning provides opportunities for students to learn from each other, rather exclusively from the teacher. One important way that this can occur is by explaining learning goals in ways students can clearly understand them so that they can participate in setting their learning goals and assess their own progress in reaching those goals (Stiggins et al., 2006). An excellent example of student-centered learning is cooperative learning.

Guideline 3: Culturally responsive teaching values students' languages, cultures, and backgrounds.

This guideline emphasizes the importance of teachers valuing and respecting students' cultures, languages and experiences and looking for opportunities to include those assets in teaching and learning in the classroom. Teachers can use this guideline by incorporating multicultural literature into the curriculum. For example, ELs can learn more about issues related to immigration by reading novels, such as *Day of the Pelican* (Paterson, 2010), *Inside Out & Back Again* (Lai, 2013), *Star in the Forest* (Resau, 2012), and *Shooting Kabul* (Senzai, 2011), or picture books such as *How Many Days to America?* (Bunting, 1990).

Another way is for teachers to value the native languages and cultures of ELs (Staehr Fenner & Snyder, 2017). This can be done by supporting them in using their native language as a bridge to learning English by teaching them how to identify and use cognates (democracy, *democracia*), showing them how to use knowledge of their native language to build their proficiency in English, by learning the structural similarities between the two languages such as the similarities in morphology (nation, nación; dentist, dentista) and helping them seek support in the native language from peers when they struggle with learning a concept or skill in English.

Guideline 4: Culturally responsive teaching simultaneously challenges and supports students.

This last guideline emphasizes the importance of teachers having high expectations for ELs and challenging them to do grade level work while at the same time providing the necessary scaffolding for them to be successful (Staehr Fenner & Snyder, 2017). A good

example of why this guideline is critical is the tendency for teachers to give ELs an easier text to read than the grade level text.

The problem with this strategy is that ELs will not learn how to tackle a challenging complex text unless they are taught how to do this and have practice doing it. A better approach than always giving ELs an easier text to read is to teach ELs how to do a close reading of a complex text while showing them how to use strategies that will help them successfully tackle the complex issues of the text. For example, the teacher could select a juicy sentence (complex sentence) from a text and show students how to chunk the sentence into parts, then use a graphic organizer to examine the parts and finally summarize each part. Teachers could also show them how to find the main clause of the complex sentence and interpret its meaning before they try to understand the dependent clauses and phrases in the sentence.

Case Study: Using Culturally Responsive Strategies

Ms. Smith learned that it was important to integrate culturally responsive experiences into regular lessons and to connect students' cultural backgrounds to teaching and learning. This represents Guidelines two (student-centered learning) and three (cultural foci) of Staehr Fenner and Snyder (2017) culturally responsive teaching model.

To help students feel that they were an important part of the learning community, she often asked them to share their personal knowledge and make connections to the content being taught. Recognizing that the concept of immigration was a social studies standard, she believed it was imperative to connect it with current immigrants to make it relevant to the immigrant children in her classroom. Before she began the immigration unit, Ms. Smith reached out to the newcomer EL boy in her classroom and asked if he would like to share his experiences coming to the US. Having no confidence in his English-speaking skills, he chose to do a PowerPoint that explained his viewpoints and experiences as a recent immigrant.

Ms. Smith worked one-on-one with him and used the opportunity to help him with some of the difficulties he had with English grammar, such as the confusion of *he* and *she* and verb tenses. This is an excellent example of Staehr Fenner and Snyder's (2017) Guideline one for CRP, an assets-based perspective, a view that honors students' cultural and linguistic backgrounds and integrates what students know and have experienced into the curriculum. Additionally, Ms. Smith encouraged extended time and the use of a language dictionary during both instruction and testing. This allowed her to focus on content knowledge rather than mastery of language.

Cooperative learning, an excellent example of Staehr Fenner and Snyder's (2017)

Guideline two for CRP, provides opportunities for students of various abilities to work together to solve a problem. It involves small groups of different abilities assisting each other. When used appropriately, results can be positive, especially as it reinforces the skill for the student who has mastered the task. Crucial to the success of cooperative learning is that students work together in their group towards a common goal with differing roles assigned for participation (Berk & Trieber, 2009). This provides students with diverse needs and abilities an opportunity to interact with other students in academic activities to learn from each other. It also helps them feel included in class activities. Ms. Smith used small groups to instruct throughout her lesson. This allowed her to differentiate her instruction to meet the needs of her students.

Based on what she learned, Ms. Smith revised her lessons to include a guided teaching component that used group or partner work as a scaffolding approach to prepare students for independent practice. By adding this step, Ms. Smith was able to check for understanding through observation, give individual support, and help students meet language and content objectives as they learned new academic vocabulary and concepts.

Another strategy that Ms. Smith found beneficial to all her students was how to teach and provide practice and review for vocabulary instruction. Earlier, Ms. Smith would go through the text and verbally provide the definition for the key vocabulary words and would also provide a few sentences that included the word. She realized she did not explicitly teach academic vocabulary, nor did she connect the words to prior knowledge or past learning. She began front loading vocabulary and then paraphrasing them throughout her lesson. While this strategy is not specifically addressed in Staehr Fenner and Snyder's (2017) model, it is a component of SIOP (Echevarría, et.al., 2013), a protocol used when working with students who are culturally and linguistically diverse.

Ms. Smith used both informal and formal assessments to guide her instruction and monitor student progress. She constantly checked for understanding through repetition, observations, conversations, and "thumbs up." Another strategy Ms. Smith learned was the importance of incorporating language objectives into the lesson and reviewing and assessing them at the end of lessons. She came to realize that constant checking for understanding of key vocabulary is just as important as checking for key concepts (Echevarría, et. al., 2013).

Building Productive Home-School Relations

Parent-school relations are socially constructed (Abrams & Gibbs, 2002). Often, parent teacher interactions are based on the premise that teachers are the experts and parents are passive recipients of the interactions (Turnbull et al., 2015). However, for the most part parents

are the first teachers for their children. With that in mind, schools need to access the knowledge parents bring to the school environment as well as the local community resources (Ford, 2004; Moll et al., 2005). When home-school collaborations deliberately emphasize equitable culturally responsive communications, there is respect, clarity and trust by both parties. Most importantly, it reflects a value for cultural and linguistic differences.

Meaningfully engaging with families through acknowledging their funds of knowledge strengthens the cultural competency of teachers with a positive impact on ELs (Díaz-Rico, 2013). Meaningful participation of CLD families of students in the learning process necessitates teachers critically reexamine their existing practices to identify overt and subtle patterns of exclusion of family engagement (Ford et al., 2016).

Strengthening teacher-parent communication and engagement begins with the need for teachers to reflect on their own biases and assumptions while recognizing the strengths of CLD families (Ford, 2004; Geenen, et al., 2001; Kim & Morningstar, 2005). For example, many families from CLD backgrounds place greater value on non-verbal communication rather than verbal communication, which is often emphasized by teachers (Díaz-Rico, 2013). Rather than regarding communication and engagement from their own perspective, school personnel need to be willing to attend carefully to not only attend to the verbal messages given by parents, but also their non-verbal behaviors. Careful attention to these builds on parent-teacher collaboration and trust.

Case Study: Fostering Positive Home School Relations

Upon reflection, Ms. Smith realized she had an unconscious bias with respect to parent communication in her classroom. She assumed that everyone, including the CLD families preferred written communication shared either in print or by email. As a result, she often relied on her students to translate written communications for their families when it came to important documents. Both options did not allow for direct communication and information sometimes became skewed or lost in the translation. Reflecting on this, Ms. Smith realized that many of her CLD families understood the information better when communicated face to face which allowed them the chance to read non-verbal cues. When given the opportunity for verbal communication, she found them more responsive to supporting their children in the classroom. If written communication was necessary, Ms. Smith found CLD families responded better to written communication in text form as it allowed for information to be presented in small segments. Additionally, when required to provide written communication, Ms. Smith attached pictures or icons to support the content provided. This strategy followed guidelines

recommended for facilitating communication for linguistically diverse students.

Another unconscious bias with Ms. Smith had related to her communication with CLD families was that she assumed that students and their families understood American national holidays and when they occurred. While her classroom newsletters included scheduled days off for holidays, the CLD students and families did not always understand the significance of the event or why it was an important day. Many did not understand the customs associated with the holidays such as “Turkey Day” referring to Thanksgiving Day. She also found that many CLD families were confused by the concept of “Teacher Work Day,” a day often used for teacher professional development, and students do not attend school, since it literally means “the teacher is working.” In addition, recognizing that written communication needed to be clearer for linguistically diverse families, Ms. Smith began to use more precise and simpler language with fewer idioms.

Conclusion

The population in US schools today is rapidly changing to include more CLD children. Given the documented benefits of culturally responsive practices for optimal student success, especially among ELs, teachers should be proactive in implementing culturally responsive practices which reflect the diversity of their schools and classrooms. Educators, who include all children in the learning process, promote a climate that increases sensitivity and acceptance of diversity while recognizing the wide range of abilities and learning needs of the diverse students in their classroom. In this article we have used a case study to demonstrate a teacher’s deliberate journey towards being more culturally sensitive, inclusive and reflective in her instruction and communication with ELs and their families.

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E-Learning Facilities Availability, Usability and Adaptability as Predictors of Job Effectiveness among Academic Staff of University of Ibadan

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Abstract

Preliminary investigations reveal that some academic staff find it difficult to adapt use of e-learning facilities for delivery academic duties which could lead to job ineffectiveness. The study, investigated the extent to which e-learning facilities availability, usability and adaptability predict job effectiveness among academic staff of University of Ibadan in order to ensure effective delivery of academic duties. Non-experimental design of correlational research type was adopted. Population comprised lecturers in Faculties, Institutes and Centres in University of Ibadan. Purposive sampling technique was used to select 14 Faculties (48 Departments), 3 Institutes and 2 Centres which are academic units. Five lecturers were randomly selected in each unit, given sample of 265 lecturers. Data was collected using four instruments developed and content validated and ordinal alpha reliability estimated. Three research questions were raised. Data analysis was done using PPMC and Multiple regression. Results showed that availability, usability and adaptability of e-learning facilities had positively significant influence on job effectiveness among academic staff of the University of Ibadan. The study recommended that academic staff should adapt the use of e-learning facilities into their academic work to enhance job effectiveness.

Keywords: E-learning, Adaptability, Acceptance, Proficiency, Training

Introduction

The application of Information and Communication Technological (ICT) tools in teaching and learning is not new innovation. Other countries, especially developed ones, have been employing its usage. ICT refers to many technologies such as: electronic boards, internet, projector, computer, application software, radio, television, cell phones, hardware, satellite, video conferencing among others. In Nigeria, experience and observation has shown that academic institutions like the National Open University (NOUN) and University of Ibadan Distance Learning Centre as well as other higher institutions who run Distance Education (DE)

have used a blended learning approach. This approach has potentially made ICT a powerful tool for educational change and reform (Akarowhe, 2017). ICT in education, which is the focus of this study, involves adaptability to the use of electronic learning facilities for delivery of academic duties by academic staff of higher institution.

The ever-dynamic trends in education encourage greater job effectiveness through better content delivery. There are pressures for universities to adopt e-learning facilities. This requires staff and faculty to adapt to new skills and techniques in teaching, presenting, researching and publishing.

Adaptability is contextualized in this study as acceptance, proficiency, and engagement in training and retraining of academic staff of higher institutions in the use of the e-learning facilities. Bai and Ertmer (2008) establish that effective use and integration of ICTs in teaching by teachers depends on the teachers' attitude towards computer technology.

Acceptance of technology could influence the way teachers use it. In other words, if they have negative dispositions towards ICTs, they are unlikely to integrate and adapt ICTs in their teaching, researching, presenting and publishing activities. Acceptance of e-learning facilities is as a result of the emergence of ICTs and internet connectivity have improved user's ingenuity and opportunities. Societies now depend on real-time information for proactiveness given the effects of environmental changes (Zhang, *et al*, 2010; Al-Gahtani, 2016; Eze & Chinedu-Eze, 2018). Rosnaini and Mohd-Arif (2010) show that a minority of teachers were knowledgeable in basic ICT. However, some of them only averaged a minimal knowledge in ICTs. This scenario clearly shows that the key factor in making ICT programs successful in school is to upgrade the level of ICT knowledge among teachers (Moganashwari & Parilah, 2013).

Proficiency in use of e-learning facilities has emerged as an important tool for university lecturers' efficiency in the teaching-learning as well as more effective social interactions that are valued by employers. According to The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2011), ICT skills are very important and are used as gate-skills by employers when evaluating job applications. E-learning facilities skills are therefore important for lecturers in order to utilise software tools and flexibly adapt to change in ICT infrastructure and applications (UNESCO 2014). It is expected that lecturers should not only be able to use ICTs but become comfortable in using them if they are to participate fully in the contemporary tertiary institution life and perform their everyday tasks and be satisfied on their job.

Lecturers at higher education institutions can become more effective in their daily

academic activities while training in an e-learning facility. Staff members have to be trained to deal with different opportunities made possible by use of ICTs in education, including virtual universities, and distance education, which become feasible alternative platforms for HEIs (Al-Wehaibi, K., Al-Wabil, A. Alshawi, A., & Alshöankity, 2010). Adequate professional development for lecturers on the adoption of technology in their academic activities will empower them to use the tool to improve their job effectiveness.

Job effectiveness is very important in maintaining human resources and academic activities.

The activities could be enhanced through adapting to the use to e-learning facilities. Akpan (2014) submits that the effectiveness of lecturers is enhanced with e-learning facilities. In academia, job effectiveness could be seen as a cornerstone for a healthier university system. Academic staff are seen as great assets as well as one of the major stakeholders in the university industry whose main work is to teach young generations of students to acquire skills and knowledge for growth and development, carry out research to inform and uncover solutions to problems, do presentations to enlighten and train the societies regarding their discoveries through research and publish their findings at conferences, seminars, trainings and workshops for large dissemination and consumption.

Statement of the Problem

Even though there is a constant advancement of technologies, academic staff, who are accustomed to not using new ICT tools, tend to avoid using the e-learning facilities. However, it is not clear if some of the academic staff, who opted to use the e-learning facility but are not proficient, seek adequate training to be more effective in their ICT usage. Previous studies on adaptability to e-learning facilities and job effectiveness among academic staff in higher institutions appears to be limited, except on open and distance learning education and secondary schools. None of the studies examined the extent to which availability, usability and adaptability of e-learning facilities could predict job effectiveness of academic staff in tertiary institutions. This study, therefore, investigated the extent to which e-learning facilities availability, usability and adaptability could predict job effectiveness (for teaching, researching, presenting and publishing their academic write-ups) among academic staff of University of Ibadan.

Research Questions

1. What is the strength and direction of relationship among e-learning facilities availability, usability, adaptability (acceptance, proficiency, training and retraining)

and job effectiveness of academic staff in University of Ibadan?

2. To what extent would e-learning facilities (electronic board, computer, internet, projector, application software) availability, usability and adaptability jointly predict job effectiveness of academic staff in University of Ibadan?

3. What is the relative contribution of e-learning facilities availability, usability, and adaptability to job effectiveness of academic staff in University of Ibadan?

Literature Review

The study was anchored on Technology Acceptance Model (TAM) by Davis (1989) with two important variables, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), as both determine the adoption of technology and user intentions to develop new skills and adaptability to the use of e-learning facilities as a motivating factor to job effectiveness.

Tertiary institutions are welcoming the use of ICT in more proficient and competitive processes for both administrative and services delivery (Suryawanshia & Narkhedeb, 2015). These days, ICTs for education have incorporated a wide range of technologies such as virtual reality, video-conferencing, handheld computers, digital cameras, World Wide Web (WWW) and digital libraries (Mathevula & Uwizeyimana, 2014). Also, networking of computer devices has provided a method of sharing knowledge locally and internationally such as electronic learning (Asabere, N., Togo, G. & Acakpovi, A., 2017). According to Abbad, M. M., Morris, D., & de Nahlik, C. (2009), e-learning is any learning that is enabled electronically. Electronic learning facilities could be described as the use of digital technologies such as electronic boards, internet, projector, computer, application software for delivering teaching, presentation, research and publication activities particularly in higher educational system.

Technology today has increasingly become a vital element for universities. As such, teachers need to equip and acquaint themselves with the necessary skills needed to adjust to the changes brought about by technology (Philip, A., Oluwaghema, C. & Oluwaranti, A., 2010; Voogt 2010; Voogt, J., Fisser, P., Pareja Roblin, N., Tondeur, J. & Van Braak, J., 2013). In recent times, the limitations of distance have been bridged by e-learning facilities.

Interactions can go on between teacher and several students simultaneously through virtual classrooms. The use of modern technologies such as electronic boards, computers, application programs, becomes easy for teachers and students to get connected, thereby making teaching and learning more interactive in innovative ways. It could be difficult, if not impossible, to achieve job effectiveness among academic staff without the use and adaptability of e-learning facilities. Learning processes and the introduction of ICT in schools was driven

by global forces beyond school-based decision making (Voogt, 2010; Voogt *et al* 2013).

The expansion of technology in wide areas including educational institutions was an intention to improve teaching and learning environment (Al-Qahtani & Higgins, 2012). Yet, the development of ICT policies in Africa, particularly Nigeria, often strives to match international ICT policy in education. Despite the huge investments in the integration of ICT by numerous higher institutions, the practical use of ICT facilities by teachers was in preliminary stages with little significance in the educational outcome (Howie, 2010).

The introduction of e-learning facilities in Nigeria universities has been focused on equipping teachers and students with the technological knowledge to use ICT (Ndongfack, 2015). This could result in an improper usage of electronic learning facilities in education. The integration of e-learning facilities properly for teaching, presentation, research and publication processes among academic staff of Nigeria universities seems to be at elementary stage. It is therefore necessary to find out how e-learning facilities are used as a tool to facilitate or enhance job effectiveness among academic staff in the university system. Academic staffs of universities still actively resist the use of modern technology in teaching (Ndibalema, 2014). This could suggest that they are more comfortable with the orthodox instructional method of teaching and find no relevance for the use of ICT facilities, which could also be that they find it difficult to adapt to the use of e-learning facilities.

The term adaptation could also be referred to as adaptability which is the possibility for lecturers to personalize e-learning facilities to their own academic activities. Adaptability to use of e-learning facilities has to do with the process of change by which lecturers become better suited to the use of electronic facilities. Nyika (2015) found that many lecturers lack ICT competencies. As a result, they do not prepare students adequately for the use of ICTs as teaching, learning and communication tools. It is necessary to adapt to the technicalities of e-learning facilities such as the electronic board, computer, projector, application program, internet in order to carry out specific activities that will ensure job effectiveness among academic staff. Adaptation to e-learning facilities in this study was defined in terms of acceptance, proficiency in, training in and retraining in the use of e-learning facilities.

Acceptance of e-learning facilities could refer to consenting to receive or accept the innovations of electronic learning facilities for carrying out academic activities. Organizations have attempted to cope with differing and updating technologies by making huge investments in state-of-the-art ICTs. Essentially, organizations need to create a competitive advantage amidst often decreasing costs of technologies in the contemporary information systems market (Maldonado, *et al*, 2011; Awa, Eze, *et al*, 2011; Bhuasiri, *et al*, 2012; Eze, *et al*, 2013).

According to Sharma, *et al.* (2009), e-learning places a high demand on learners who have to be more proactive and disciplined than traditional face-to-face education. This is true for lecturers in higher institutions as well. However, limitations in bandwidth, access to network resources, as well as development and retention of human resource involved in ICT, poses a key challenge especially in African tertiary institutions (Khan *et al.*, 2012).

Proficiency for universities is the extent of advancement of innovative skills by instructors for using e-learning facilities when delivery academic activities. Proficiency in use of e-learning facilities has emerged as an important tool for university lecturers' efficiency in the teaching-learning as well as for social interactions, which in turn, leads to job effectiveness. According to Bordbar (2010), teachers' computer competence is a major predictor of integrating ICT in teaching. In the same vein, the advantage of virtual learning environments like the interactive whiteboard and the computer, projector, application software, etc., which injects flexibility in university teaching and learning, calls on academic staff to be ICT proficient. The effectiveness in use of e-learning facilities as a means of delivery of academic activities becomes necessary for academic staff when they are making presentations to a group or audience that require these processes to be used in 21st Century universities. It was argued that fear of failure and lack of ICT knowledge have been cited as some of the reasons for teachers' lack of confidence for adopting and integrating ICT into their teaching (Balanskat, *et al.* 2007).

Training in the use of e-learning facilities could either be sponsored by the institution or personally to enable academic staff to learn and be able to adapt to using the e-learning facilities in order to improve their ICT knowledge and productivity. Competencies that need to be developed at the early stage of ICT could include: production of multimedia course materials, data analysis, e-library, video conferencing, networking and e-payments etc. Archibong *et al* (2010) in a study on ICT competence among academic staff in universities found that majority of the academic staff were funded for their ICT training and funding was made available for inadequate ICT facilities, but excess work load and funding were also identified as major challenges to ICT usage among academic staff.

Similarly, Saekow and Samson (2011) found a significant relationship between the activeness of ICT training programmes and lecturers' self-perception of competence in working with computers and noted that strong training programmes were necessary to equip lecturers with appropriate ICT skills, as well as training on course delivery and administration skills within the new environment.

Methodology

This study adopted a non-experimental design of correlational research. This was decided because the researcher had no direct control on the independent variables as their manifestation has already occurred. The study was comprised of lecturers in faculties, institutes and centres at the University of Ibadan. From the existing strata, a purposive sampling technique was used to select 14 faculties which consisted of 48 Departments, 3 Institutes and 2 Centres which are academic units. Five lecturers (from all cadres) were randomly selected in each unit, for a given total sample of 265 lecturers used as the samples for this study. This was done during the University of Ibadan 2016-2018 Calendar.

Instrumentation and Data Collection

Four instruments were used for data collection: Electronic Learning Facility Checklist (ELFC) which contains eighteen (18) items with a response format of Not Available (NA) 1 and Available (A) 2, to ascertain the types of e-learning facilities at the disposal of the academic staff. The Electronic Learning Facility Usability Rating Scale (ELFURS) contains eighteen (18) items with a response format of Never (NV) 1, Seldom (SM) 2, Often (OF) 3, and Very Often (VO) 4, to ascertain the types of e-learning facilities often used by academic staff. The Adaptability to Electronic Learning Facility Use Questionnaire (AELFUQ) has three sub-sections with a response format of Not Very Like Me (NVLM) 1, Not Like Me (NLM) 2, Much Like Me (MLM) 3 and Very Much Like Me (VMLM) 4.

The first sub-section contains twenty-two (22) items used to elicit information on a acceptance level of e-learning facilities. The second sub-section contains thirty-nine (39) items used to elicit information on level of proficiency in the use of e-learning facilities while the third sub-section contains nine items used to elicit information on the extent of training and retraining that was engaged in by academic staff. The Job Effectiveness Lecturer's Questionnaire (JELQ) contains twenty-three (23) items with response formats of Not Very Like Me (NVLM) 1, Not Like Me (NLM) 2, Much Like Me (MLM) 3 and Very Much Like Me (VMLM) 4.

These instruments were developed and trial tested by the researcher on a smaller sample different from those of this study to ascertain validity and reliability of the instruments. Ordinal alpha reliabilities of ELFURS is 0.86, AELFUQ is 0.97 and JELQ is 0.95 (These reliabilities estimates show excellent consistencies). The researchers visited the academic staff in the sampled academic units to administer the instruments and the data collected were analysed using Pearson Product Moment Correlation for research question 1 and multiple regressions

for research questions 2 and 3.

Results

Research Question One: What is the strength and direction of the relationship among e-learning facilities availability, usability, adaptability (acceptance, proficiency, training and retraining) to e-learning facilities and job effectiveness of academic staff in University of Ibadan?

Table 1 presents the result of Pearson Product Moment Correlation coefficient for the relationship among e-learning facilities availability, usability, adaptability to e-learning facilities acceptance, adaptability to e-learning facilities proficiency, adaptability to e-learning facilities training and retraining and job effectiveness of academic staff in University of Ibadan.

Table 1:

Intercorrelation Matrix of E-Learning Facilities Availability, Usability, Adaptability to E-Learning Facilities and Job Effectiveness

Variables	EL _{FA}	EL _{FU}	A _{ELA}	A _{ELP}	A _{ELT}	JE
EL _{FA}	1					
EL _{FU}	0.458**	1				
A _{ELA}	0.234**	0.442**	1			
A _{ELP}	0.262**	0.400**	0.743**	1		
A _{ELT}	0.164**	0.254**	0.392**	0.388**	1	
JE	0.362**	0.535**	0.665**	0.646**	0.448**	1

** Significant @ p < 0.01 and 0.05; N = 265

Note: EL_{FA} = E-learning Facilities Availability; EL_{FU} = E-learning Facilities Usability; A_{ELA} = Adaptability to E-learning Acceptance; A_{ELP} = Adaptability in E-learning Proficiency; A_{ELT} = Adaptability to E-learning Training and Retraining; JE = Job Effectiveness

From Table 1, it can be observed that there is no multi-collinearity ($r > 0.90$) among the variables of the study, as no variable(s) provide linearly or correlated relationship. Also, the intercorrelation matrix showing the correlation coefficients of the predictors (EL_{FA}, EL_{FU}, A_{ELA}, A_{ELP}, A_{ELT}) and criterion variable (JE) reveals moderate significant positive relationship between e-learning facilities availability and job effectiveness ($r = 0.362$; $p < 0.05_{(0.001)}$). In the same vein, results reveals that e-learning facilities usability had moderate significant positive relationship with job effectiveness ($r = 0.535$; $p < 0.05_{(0.001)}$). Likewise, results reveals that adaptability to e-learning acceptance ($r = 0.665$; $p < 0.05_{(0.001)}$) and adaptability to e-learning

proficiency ($r=0.646$; $p<0.05_{(0.001)}$) had high significant positive relationships with job effectiveness. Also, results reveal that, adaptability to training and retraining was moderately significant with job effectiveness ($r=0.448$; $p<0.05_{(0.001)}$).

This implies that all the variables considered correlate and may influence job effectiveness of academic staff. Again, Table 1 reveals that e-learning facilities availability ($r=0.164$; $p<0.05_{(0.008)}$); e-learning facilities usability ($r=0.254$; $p<0.05_{(0.001)}$); adaptability to e-learning acceptance ($r=0.392$; $p<0.05_{(0.001)}$); and adaptability to e-learning proficiency ($r=0.388$; $p<0.05_{(0.001)}$) had weak significant positive relationships with job effectiveness. This implies that all the variables considered may influence adaptability to training and retraining in the use of e-learning facilities among academic staff.

Also, in Table 1, it could be observed that, e-learning facilities availability ($r=0.262$; $p<0.05_{(0.001)}$), e-learning facilities usability ($r=0.400$; $p<0.05_{(0.001)}$) had weak significant positive relationships while adaptability to e-learning facilities acceptance ($r=0.743$; $p<0.05_{(0.001)}$) had high significant positive relationship with e-learning facilities proficiency. Thus, the availability, usability and acceptance of e-learning facilities are major influencing factors for being adapted and becoming proficient in the use of e-learning facilities among academic staff at University of Ibadan.

Furthermore, it could be observed from the results that the e-learning facilities availability ($r=0.234$; $p<0.05_{(0.001)}$) and e-learning facilities usability ($r=0.422$; $p<0.05_{(0.001)}$) had weak significant positive relationship with the adaptability to acceptance of e-learning facilities, which implies that when e-learning facilities are available and adequately used by academic staff, there would be a wide acceptability of the use of such facilities.

Lastly, results reveal a moderate significant positive relationship between availability of e-learning facilities and its usage ($r=0.458$; $p<0.05_{(0.001)}$). This implies that the provisions of e-learning facilities will greatly increase the usage of e-learning facilities among academic staff in the University of Ibadan.

The results in the intercorrelation matrix table on the strength and direction of relationship among e-learning facilities availability, usability, adaptability (acceptance, proficiency, training and re-training) and job effectiveness among academic staff in University of Ibadan revealed that there is no multi-collinearity among the variables. The result of the relationship between availability of e-learning facilities and job effectiveness among academic staff indicate significant positive relationship, which implies that provisions of e-learning facilities in the Faculties, Institutes, and Centres will increase the job effectiveness of academic staff. This result is in line with that of Akinnubi, *et al.* (2012) which affirmed that, availability

of computers and other ICT facilities in selected secondary schools in Kwara State showed a significant relationship with teacher's job effectiveness.

Also, the result of the relationship between usage of e-learning facilities and job effectiveness among academic staff revealed significant positive relationship. This suggests that the more consistent use of e-learning facilities for academic activities, the better or more effective academic staff will become on their job. The result is also consistent with that of Osman (2014) who investigated the use of Information and Communication Technologies (ICTs) and factors that influence use of ICT among staff members of Khartoum State Universities in Sudan which revealed that ICT was widely used by most staff members.

In like manner, the result of the relationship between adaptability to e-learning acceptance and job effectiveness among academic staff indicated a high significant positive relationship. This is an indication that academic staff sees the acceptance of e-learning facilities as key to their academic work in order to be able to cope with the trends of the 21st Century. This result supports that of Guma *et al*, (2013) who revealed that teaching staff and administrators had a strong desire to integrate ICT into teaching learning processes.

Similarly, the results of the relationship between adaptability to e-learning proficiency and job effectiveness had a high significant positive relationship. In other words, for academic staff to be proficient in the use of e-learning facilities in carrying out academic work, such staff would become effective in the discharge of academic duties because of the skills and expertise they learn in using e-learning facilities. However, according to the study of Nyika (2015), many lecturers lack ICT competences, hence, they do not prepare students adequately for use of ICTs as teaching and learning communication tools.

Furthermore, the result of this study support that of Guma, *et al*. (2013) who affirmed that there was a significant relationship between computer literacy and teacher job effectiveness. The relationship between adaptability to e-learning training and retraining and job effectiveness among academic staff revealed a significant moderate positive relationship. It is expected that the more training and retraining on e-learning facilities, the more dynamics and effective the user becomes in using it for various activities. This was in line with the result of Ogundele and Etejere (2013) who revealed that computer literacy encourages appreciation and utilisation of computers during teaching processes which in turn aid teachers' job effectiveness. Their study also revealed that computer literate teachers perform better than non-computer literate teachers in schools, as this aroused interest in teaching.

Research Question Two: To what extent would e-learning facilities (electronic board, computer, internet, projector, application software) availability, usability and adaptability

(acceptance, proficiency, training and retraining) jointly predict job effectiveness of academic staff in University of Ibadan?

Table 2 presents the results of joint effect of all the independent variables: e-learning facilities availability, e-learning facilities usability and adaptability on job effectiveness of academic staff in University of Ibadan.

Table 2

Regression Summary and ANOVA of Availability, Usability, Adaptability and Job Effectiveness of Academic Staff in University of Ibadan

Multiple R	=	0.764			
R Square	=	0.583			
Adjusted R Square	=	0.575			
Standard Error	=	7.264			
Analysis of Variance					
Source of Variance	Sum of Square	Df	Mean Square	F	Sig.
Regression	19142.997	5	3828.599		
Residual	13664.980	259	52.761	72.566	0.001
Total	32807.977	264			

Significant @ $p < 0.05$; $N = 265$

From Table 2, the joint effect of all the independent variables on job effectiveness of academic staff in University of Ibadan, reveals multiple correlation coefficients of $R=0.764$, $R^2=0.583$, $Adj R^2=0.575$. The multiple correlations (R) of 0.764, indicate a high positive relationship among the independent variables (Availability, Usability and Adaptability) to e-learning facilities and job effectiveness of academic staff. Hence, the predictor variables are highly relevant in predicting the job effectiveness of academic staff in the sample academic units of University of Ibadan.

More so, as shown in Table 2, the combination of all the independent variables ($Adj R^2$), accounted for 57.5% of the variation observed in job effectiveness among academic staff in the sampled academic units in University of Ibadan. The remaining 42.5% could be due to factors and residuals in the model that are not considered in this study. Furthermore, the ANOVA results from the regression analysis also show that there was significant effect of the independent variables on the dependent ($F_{(5, 259)}=72.566$; $p<0.05_{(0.001)}$).

Research Question Three: What is the relative contribution of e-learning facilities availability, usability, and adaptability (acceptance, proficiency, training and retraining) to job effectiveness

of academic staff in University of Ibadan?

Table 3 presents the results of relative contribution of e-learning facilities availability, usability, and adaptability to job effectiveness of academic staff in University of Ibadan.

Table 3:

Relative Contribution of E-Learning Facilities Availability, Usability, and Adaptability to Job Effectiveness of Academic Staff in University of Ibadan

Variables	Unstandardised		Standardised		T	Rank	Sig.
	Coefficients		Coefficients				
	B	Std. Error	Beta				
(Constant)	-4.674	6.094			-0.767		0.444
E-learning Facilities Availability	0.475	0.211	0.102		2.254	5 th	0.025
E-learning Facilities Usability	0.264	0.060	0.215		4.380	3 rd	0.001
Adaptability to E-learning Acceptance	0.325	0.068	0.297		4.750	1 st	0.001
Adaptability in E-learning Proficiency	0.148	0.036	0.249		4.068	2 nd	0.001
Adaptability to E-learning Training and Retraining	0.470	0.128	0.163		3.680	4 th	0.001

Significant @ $p < 0.05$; N = 265

From Table 3, it appears that all the predictor variables: adaptability to e-learning acceptance ($\beta=0.297$; $t=4.750$; $p<0.05_{(0.001)}$); adaptability to e-learning proficiency ($\beta=0.249$; $t=4.068$; $p<0.05_{(0.001)}$), e-learning facilities usability ($\beta=0.215$; $t=4.380$; $p<0.05_{(0.001)}$), adaptability to training and retraining ($\beta=0.163$; $t=3.680$; $p<0.05_{(0.001)}$) and e-learning facilities availability ($\beta=0.102$; $t=2.254$; $p<0.05_{(0.001)}$) contributed significantly to job effectiveness of academic staff of University of Ibadan.

However, adaptability to e-learning acceptance was the most influencing predictor, followed by adaptability in e-learning proficiency, followed by e-learning facilities usability, followed by adaptability to e-learning training and retraining and lastly by e-learning facilities availability to job effectiveness of academic staff in the sample academic units in University of Ibadan.

The result on the composite contribution revealed a very high positive influence of the

predictor variables (availability, usability and adaptability of e-learning facilities) to the criterion variable (job effectiveness). The result further showed that variance observed on the criterion variable due to the influence of the predictor variables accounted for more than fifty percent. The results on the relative contribution of e-learning facilities availability, usability and adaptability to job effectiveness of academic staff in University of Ibadan revealed that all the predictor variables significantly contributed to job effectiveness of academic staff with adaptability to e-learning acceptance contributing most significantly, followed by adaptability to e-learning proficiency, usability, adaptability to training and retraining and availability of e-learning facilities respectively.

This corroborates the assertion of Bai and Ertmer (2008) that effective and integration of ICTs in teaching by teachers depends on the teachers' attitude towards ICT technology. In other words, their acceptance and proficiency in technology influence the way they use it. This implies that, if they develop positive acceptance towards ICTs, they are likely to integrate and adapt ICTs into teaching, research, presentation and publication activities. The result of this study also affirmed with that of Bordbar (2010), that teacher competence is a major predictor of integrating ICT in teaching. The result also supports that of Archibong and Effiom (2009) who submits that academic staff ICT usage is of much help to them in the areas of upgrading their knowledge, research and publication.

Implication for Tertiary Institutions

The findings of this study revealed the need for lecturers to be dynamic and flexible in the use of e-learning facilities in order to have maximum productivity in their academic pursuits. School administrators should see the need to increase productivity of academic staff through the introduction of e-learning facilities in faculties, institutes and centres in the University.

Conclusion and Recommendations

This study has been able to establish that the availability and usability of e-learning facilities can ensure adaptability in the use of these facilities among academic staff in enhancing their job effectiveness in higher institutions. The main inference drawn from this study was that availability, usability and adaptability in terms of acceptance, proficiency, training and retraining on e-learning facilities has positively and significantly influenced job effectiveness among academic staff of the University of Ibadan.

It could be concluded therefore, that availability, usability and adaptability of e-learning

facilities has been revealed to be potent predictors of job effectiveness among academic staff in teaching, research, presentation and publication. Based on the findings of this study, it is recommended that academic staff should recognise the importance of adapting to the use of e-learning facilities in order to enhance their job effectiveness and that government/school administrators should endeavour to support faculties, institutes and centres within the institution with funds to enable them acquire technological tools that could enhance job effectiveness of staff.

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PUBLICATION GUIDELINES

The journal (*JISTE*) publishes articles by members of the International Society for Teacher Education (ISfTE). Exceptions are made for a non-member who is a co-author with a member, or who is invited to write for a special issue of the journal, or for other special/specific reasons.

- Articles submitted to *JISTE* must be written in English, following manuscript guidelines (see below) and will be anonymously reviewed by referees. Each article must pass the review process to be accepted for publication. The editors will notify the senior author of the manuscript if it does not meet submission requirements.
- Articles are judged for (a) significance to the field of teacher education from a global perspective, (b) comprehensiveness of the literature review, (c) clarity of presentation, and (d) adequacy of evidence for conclusions. Research manuscripts are also evaluated for adequacy of the rationale and appropriateness of the design and analysis. Scholarly relevance is crucial. Be sure to evaluate your information. Articles should move beyond description to present inquiry, critical analysis, and provoke discussion.
- Articles pertaining to a particular country or world area should be authored by a teacher educator from that country or world area.
- All manuscripts accepted for publication will be edited to improve clarity, to conform to style, to correct grammar, and to fit available space. ***Submission of the article is considered permission to edit to article.***
- The final decision, to publish an article, rests with the associate editor(s).
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- Writing and editorial style shall follow directions in the *Publication Manual of the American Psychological Association* (7th ed., 2020). References MUST follow the APA style manual. Information on the use of APA style may be obtained at www.apa.org.

Manuscript Guidelines

- Manuscript length, including all references, tables, charts, or figures, should be 3,000 to 5,000 words. **Maximum length is 6,000 words.** Shorter pieces of 1500-3,000 words, such as policy review or critique papers are welcomed.
- All text should be double-spaced, with margins 1 inch (2.5 cm) all around and left justified only.
- Paragraphs should be indented using the “tab” key on the keyboard. No extra spacing should be between paragraphs.
- Tables, Figures, and Charts should be kept to a minimum (no more than 4 per article) and sized to fit between 5.5 x 8.5 inches or 14 x 20 cm.
- Abstract should be limited to 100-150 words.
- Include four or five keywords for database referencing. Place keywords immediately after abstract.
- Cover page shall include the following information: Title of the manuscript; name(s) of author, institution(s), complete mailing address, email address, business and home (mobile) phone numbers, and fax number. Also on the cover page, please include a brief biographical sketch, background, and areas of specialization for each author. Please do not exceed 30 words per author.

Book and Other Media Review Submission

Reviews of books or other educational media are welcome. Either the review or the item reviewed must be by a current member of ISfTE. Reviews must be no longer than 1000 words.

Annotation of Recent Publications by Members Submission

ISfTE members may submit an annotated reference to any book which they have published during the past three years. Annotation should be no longer than 150 words.

SUBMISSION REQUIREMENTS

Articles may be submitted directly to the editor, Leanne Taylor at leanne.taylor@brocku.ca. To submit an article by email, send it as an attachment using MS Word. Please note that JISTE will be moving to an Open Access Format. Once open access is available, all submissions will be made through the online open access system.

Manuscripts and editorial correspondence for JISTE 26.1, 2022 and JISTE 26.2, 2022 should be directed to:

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Future Issues and Submission Deadlines

2022 (Volume 26, Number 1)

Open issue Members of ISfTE and scholars outside the ISfTE organization are invited to submit articles for this issue. Members are encouraged to co-author articles with their students or colleagues who may not be members of ISfTE. Authors who are not members of ISfTE may submit articles for this open issue. In case their articles are accepted for publication, the authors must pay membership fee to ISfTE. Book reviews and reflection papers are also invited.

Submission deadline: February 15, 2022 – Publication by July 2022

2022 (Volume 26, Number 2)

Theme – *Education in fast times: Sustainability, virtuality, and pedagogical practices in a post covid-19 context.* This theme is chosen by the conveners of the 2022 seminar for ISfTE hosted by La Salle University, Brazil, May 2022. For JISTE publication, participants are invited to revise their seminar papers, attending carefully to the manuscript and publication guidelines, and submit them to the journal for consideration. Book reviews on the theme are also invited.

Submission deadline: August 15, 2022 – Publication by December 2022

Front Cover

These institutions' logos appear on the front cover of this issue: University of Brock University, Canada sponsored the ISfTE seminar in 2019. The other institutions – Weber State University, and Aarhus University – support JISTE with their on-going sponsorship and/or the support of the work of the editors, officials of ISfTE. If other institutions would like to participate, please contact the journal's editor, Leanne Taylor.

Brock University is a public research university in St. Catharines, Ontario, Canada. Brock offers a wide range of programs at the undergraduate and graduate levels, including professional degrees. Brock was ranked third among Canadian universities in the undergraduate category for research publication output and impact indicators in 2008.

Aarhus University is the second oldest university in Denmark. It is also the largest university in the country with over 43,000 students. It offers programmes in both undergraduate and graduate studies. Although the main campus is in the city of Aarhus, Denmark, the university has small campuses in Copenhagen and Herning.

Weber State University in Ogden, Utah, United States, was founded in 1889. It is a coeducational, publicly supported university offering professional, liberal arts, and technical certificates, as well as associate, bachelor's, and master's degrees. Currently, over 25,000 students attend the university.

