Commission for International Adult Education (CIAE) of the American Association for Adult and Continuing Education (AAACE)

Proceedings of the 2021 International Pre-Conference

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Commission for International Adult Education (CIAE) of the American Association for Adult and Continuing Education (AAACE) 70th Annual Conference

CIAE Mission Statement

The Commission on International Adult Education (CIAE) of the American Association for Adult and Continuing Education (AAACE) provides a forum for the discussion of international issues related to adult education in general, as well as adult education in various countries around the globe. The following purposes summarize the work of the Commission:

- To develop linkages with adult education association in other countries
- To encourage exchanges between AAACE and associations from other countries
- To invites conference participation and presentation by interested adult educators around the world
- To discuss how adult educators from AAACE and other nations may cooperate on projects of mutual interest and benefit to those we serve

The Commission holds its annual meeting in conjunction with the AAACE conference.

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Acknowledgements

These *Proceedings* are from the Commission of International Adult Education's (CIAE) 2021 International Pre-Conference. This year's *Proceedings* contain 17 papers from 37 authors, representing CIAE's usual diversity of authors and topics.

Researcher and research sites include Belgium, Belize, Burkina Faso, Canada, China, Germany, Ghana, Italy, Nigeria, Norway, Serbia, and the United States. Not surprisingly, a major theme explored is the impact of COVID-19 on learners in a variety of settings, including school teachers, communities, parents, and higher education. A second major theme concerns digital resources and addressing the digital divide. Some papers address practices and research methods that enhance adult learning and others explore professional development, workplace learning, and cultural aspects of learning.

I am immensely grateful all the individuals who contributed and were involved in preparing these *Proceedings*. Abstract reviewers included: Marcie Boucouvalas, Valeriana Colón, Michelle Glowacki-Dudka, Yvonne Hunter-Johnson, Hye-Su Kuk, Anil Lalwani, Annalisa Raymer, Fujuan Tan, Jane Teel, and Jill Zaretsky. Paper reviewers included: Michelle Glowacki-Dudka, Edith Gnanadass, Hye-Su Kuk, Anil Lalwani, Lee Nabb, Anita Samuel, and Fujuan Tan.

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Finally, I humbly and gratefully acknowledge the support of the immediate past directors of CIAE, Mejai Avoseh and Marcie Boucouvalas, for their continued mentorship and support. I would not have the honor of this task without their leadership and guiding lights.

Despite the fine contributions by the individuals above, I take total responsibility for any inadvertent errors in these Proceedings.

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Message from AAACE President

Greetings CIAE Pre-conference Attendees,

It is my extreme pleasure to welcome you to the 2021 Annual AAACE conference in beautiful Florida, the land of endless summer!

We are very excited that you have chosen to represent your various countries around the world as you share your perspectives and insights of adult education. There are 12 countries represented among you this year: China, Belize, Italy, Belgium, Germany, Norway, Nigeria, Canada, U.S.A., Ghana, Burkina Faso, and Serbia.

The Commission for International Adult Education is crucial in helping AAACE draw closer to its vision of "a more humane world made possible by the diverse practice of our members in helping adults acquire the knowledge, skills and values needed to lead productive and satisfying lives."

Dr. Griswold, director of CIAE, referred to CIAE in her last monthly report as the "international arm" of AAACE. I agree. The presentations, scholarly work, and achievements that you will share at the conference provide proof that you contribute robustly to supporting our mission of unifying adult learners.

Your passion for the field of adult education is not only evident in your scholarly work but is glaringly obvious from your effort in attending the conference. I want to thank you personally for the planning, complex decisions that were made, and for letting your zeal for adult education override your concerns in the very real pandemic. Truly, thank you.

It is commonly known that the CIAE is a close group and is very supportive and encouraging of one another. We hope that continues and spreads throughout the conference.

Thank you for all of your contributions to adult education around the world, to CIAE, and to AAACE in general. We would not be who we are without you.

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Commission for International Adult Education (CIAE) of the AAACE International Pre-Conference 2021

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COVID-19, *NEW NORMAL* AND ADULT LEARNING: CHALLENGES AND OPPRTUNITIES IN AN AGRARIAN COMMUNITY

Kofo A. Aderogba, Ph. D.[1]

ABSTRACT: Before 2019, neither SARS-CoV-2 nor its genetic sequences had ever been identified. Retrospective investigations identified human cases with onset of symptoms in December 2019. While some of the earliest known cases had a link to a wholesale food market in Wuhan, China, some did not. But eventually, it spread to all nations of the world, and shutdown economies, social lives, education, and other sectors. This research studied the effects of COVID-19 on adult education in Ibarapa Central Local Government Area of Oyo State, Nigeria. It made recommendations for sustainable adult education in the circumstances of COVID-19 and similar pandemics in the community. It is descriptive and drew data and information from primary and secondary sources. Through a self-structured questionnaire titled *Coronavirus, New Normal and Impacts on Adult Learning in Ibarapa Central Local Government Area of Oyo State, Nigeria*, the community provided insight into its impact generally and on education particularly. They also made suggestions as panacea for sustainable adult learning in the circumstances of COVID-19 and similar pandemics. Records of some international and local agencies and organizations were perused. There were no records of COVID-19 cases in the study area. But the halo-effect was a great threat that devastated adult educators and learners. The community believed in and adhered to science and complemented it with traditional formulations. The community requires massive infrastructures to strengthen course delivery and administration of adult learning at all levels and in the circumstances of COVID-19 and similar pandemics.

Keywords: Coronavirus, new normal, adult learning, challenges, opportunities

Salto (2020) writes that higher education institutions worldwide had to unavoidably switch from face-to-face to online instruction due to social distancing and lockdown measures adopted across the world. Even beyond higher education, educational institutions, among other "non-essential" services, had to close their physical doors to curtail the virus. Even though some countries decided to reopen some services, by July 2020, as many as 110 countries mandated system-wide school closures affecting more than 1 billion learners worldwide (Salto, 2020; UNESCO, 2020). The physical closure of educational institutions, including higher education, led to the adoption of online tools. The move occured in the context of the COVID-19 global emergency. Everyone with more or less resistance and every institution with more or less capacity and experience had to move to emergency remote education (ERE).

Incidentally, there were some isolated communities where the cases of COVID-19 were not recorded. Ibarapa Central Local Government Area of Oyo State, Nigeria is one of the few places that did not have a single case of COVID-19. The community only heard about it on radio and television, front pages of newspapers, and on social media. Children and relations of others who reside in the urbanized centers (and abroad) communicated with their relations and friends and told them about COVID-19. But despite this mere news, it has some devastating effect on socioeconomic activities and pedagogy and andragogy, formal and informal, in particular, in the Local Government Area. Therefore,

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though no cases of COVID-19 were recorded, the work focuses on the effects of the pandemic on adult education in the community.

Objectives and Research Questions

The work examined the effects of COVID-19 on adult education in Ibarapa Central Local Government Area (ICLGA) of Oyo State in Nigeria. It made recommendations for sustainable adult education in the circumstances of COVID-19 and similar pandemics in the community or elsewhere. In order to pursue the objectives, the following questions were answered:

- What is the origin and pandemic nature of COVID-19 around the world and in ICLGA of Oyo State, Nigeria?
- What are the major upshots of the pandemic on education generally and adult education in particular in Ibarapa Central Local Government Area of Oyo State, Nigeria?
- What are the opportunities in the circumstances of COVID-19 on adult education in the community?

Literature

Adult Learning

The principal objective of adult education is to provide another chance for those who are poor in the society and/or those who have lost access to education for other reasons in order to achieve social justice and equal access to education (Margolis, 1970; Nesbit, 2011; Vista College, 2020; Withnall, 2006). Thus, it is sometimes a social policy of governments and corporate organizations. Continuing education can help adults maintain certifications, fulfill job requirements and stay up to date on new developments in their fields and community. Sometimes, the objectives can be vocational, social, recreational or for self-development; or to help adult learners satisfy their personal needs and achieve their professional goals; or to achieve human fulfillment. The goal might also be to achieve an institution's needs - including improving its operational effectiveness and productivity. A larger scale goal may be the growth of society by enabling the citizens to keep up with societal change and maintain good social order (Fell-Chambers, 2014; Merriam & Brockett, 2007; Nojima, 2010). According to these authorities, distinct from child education, it is a practice in which adults engage in systematic and sustained self-educating activities in order to gain new forms of knowledge, skills, attitudes, or values. It can mean any form of learning adults engage in beyond traditional schooling, encompassing basic literacy to personal fulfillment as a lifelong learner. Particularly, it reflects a specific philosophy about learning and teaching based on the assumption that the adults can and want to learn, and that they are able and willing to take responsibility for the learning, that the learning itself should respond to their needs (Fell-Chambers, 2014; Historica Canada, 2000; Selman et al., 1998).

Motivated by individual needs to learn, the available opportunities, and the style in which one learns, adult learning is affected by demographics, globalization and technology (Baumgartner et al., 2007; Nojima, 2010). The learning happens in many ways and in

many contexts (formal, non-formal and informally) just as the lives of all adults differ (Fenwick et al., 2006; Selman et al., 1998). But the World Bank (2019) in its World Development Report on *The Changing Nature of Work* contends that adult learning is an important channel to help readjust skills of workers to fit in the future of work, and it recommends ways to progress its efficacy.

Educating adults differs from educating children in several ways by reasons of the fact that adults have accumulated knowledge and work experiences which can add to the learning experience (Bohonos, 2002; Vista College, 2020). Often, adult education is voluntary, hence, the participants are generally self-motivated, unless required to participate, by an employer (Knowles, 1984; Spencer, 2006). The practice is referred to as andragogy to distinguish it from the traditional school-based education for children, pedagogy. Unlike children, adults are seen as more self-directed rather than relying on others for help. Their motivation to learn is internal (Fell-Chamber, 2014; Knowles, 1984). They frequently apply their knowledge in a practical fashion to learn effectively; and they must have a reasonable expectation that the knowledge they gain will help them further their goals.

A common problem in adult education, even in advanced communities, is the lack of professional development opportunities for adult educators. Most adult educators come from other professions and are not well trained to deal with adult learning issues (Fell-Chamber, 2014; McAllister, 2010). Often, the positions available in this field are only part-time without any benefits or stability since they are usually funded by government grants that might last for only a couple of years. But in some countries professional development is available through post-secondary institutions and provide professional development through self-development, their ministry of education or school boards and through nongovernmental organizations (UNESCO, 2010, 2016, 2019). In addition, there are programmes about adult education for existing and aspiring practitioners offered at various academic levels by universities, colleges, and professional organizations (Nesbit, 2011; Vista College, 2020).

In the Event of COVID-19

Floyd (2020) observed that in the wake of COVID-19, both K-12 and post-secondary institutions had to transition from traditional learning in the classroom to teaching and learning through various online and or e-learning platforms. With such an abrupt transition:

> it is important for educators to explore the effectiveness of e-learning among their student populations. Moreover, …. a programme director who oversees an adult education English as a second language programme located in Atlanta, …. maintained the opinion that various modes of online learning are not the best learning method for all student populations and specifically adult English language learners. (Li & Lalani, 2020)

According to Li and Lalani (2020), distance education has exploded in recent years with more students taking online courses than ever before. However, despite the explosion in online course takers, "the number of students who are not completing their online degree programmes is also growing. Online students reported feeling isolation, and more

disconnect with their classmates and educational institutions." Social media has also experienced explosive growth, including the largest in modern society, Facebook.

Materials and Methodology

The Study Area

The Ibarapa Central Local Government Area (ICLGA) of Oyo State, the study area, is one of the three Local Government Areas created from the former Ibarapa Local Government Area (of Oyo State) as a result of the local government creation in Oyo State to ensure proximity of the government to the grassroots (Awotokun, 2005; Federal Republic of Nigeria, 2018). It is purely absolutely an agrarian community (Aderogba, 2017, 2018). Igbo-Ora and Idere are the only major towns. Igbo-Ora is the administrative headquarters of the local government. Other settlements are farmsteads and makeshifts only. Agriculture is the main stake of the economy.

It is bounded in the south by Ogun State (of Nigeria). Ibarapa East Local Government Area and Ibarapa North Local Government Area (both of Oyo State, Nigeria, and of the former Ibarapa Local Government Area) form respectively the eastern and northern boundaries. The population was 103,243 in 2006, projected to be 145,100 people in 2016, and about 322,189 people in 2018 (National Population Commission, 2018). It has an area of about 440 km^2. The local population is made up of Ibarapa indigenes who are of Yoruba ethnicity.

Over 65% of the people are engaged in agricultural practices, planting cassava, melon, plantain, banana, yam, maize, millet, vegetables and others as food crops, and some cocoa and cashew as economic crops. Until recently, palm trees, shea butter tree, locust tree, mango, and a few other economic plants used to grow wild, and people inherited them from their parents who might have earlier farmed around them. Simple implements such as hoes, cutlasses and machetes are still the predominant implements used. Recently, many of the farmers are assuming part-time status as they engaged in different miniature trade and commerce, and transport and communication services within the community and between the community and the neighbouring urbanized settlements, notably Ibadan, Abeokuta and Lagos Metropolis.

It is of interest to note that the community is the world headquarters of twin births. There is rarely any compound that does not have sets of twins. Twin births are so plentiful so much so that a day is set aside each year as Twins Day, *Ibeji Day* – celebrated with fanfare. Of interest again is that the last Twins Day was celebrated in the wake of the COVID-19 pandemic in Nigeria.

Oyo State College of Agriculture and Technology (established in 2006) is the highest institutions of higher learning. The college, the secondary and primary schools, the Comprehensive Hospital (a campus of the University College Hospital, Ibadan), and the Local Government Council together engaged more than 85% of the white-collar workforce. There is no industry nor any other employer of labourers except the self-employed in miniature trade and commerce.

More than 65% of the adult group aspires to have education either to fulfill job requirements and stay up to date on new developments in their fields (and community), for self-development to help them satisfy their personal needs and achieve their professional goals, or to achieve human fulfillment. A commendable goal is for the growth of their community by ensuring they keep up with community change and maintain good social order.

Apart from the Comprehensive Hospital, and four less-than-ten-hospital-bed private hospitals, there is no hospital that could have catered to the patients of the COVID-19 pandemic or similar contagion. The situation of medical services is horrendous.

Methodology

The work is descriptive and drew data and information from primary and secondary sources. Through a self-structured questionnaire titled *Coronavirus, New Normal and Impacts on Adult Learning in Ibarapa Central Local Government Area of Oyo State, Nigeria*, using a purposive sampling technique, the community provided insight into the impacts of COVID-19 generally and on adult education in particular. In addition, five adult educators and ten adult learners were interviewed on the upshot of the pandemic on their programmes. They made suggestions as panacea for sustainable adult education in the circumstances of COVID-19 and similar pandemics. Reports of some international and local agencies and organizations namely, World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization (UNESCO), Center for Disease Control and Prevention (CDCP), European Center for Disease Prevention and Control (ECDC), and Nigeria Center for Disease Control and Prevention (NCDC) were perused. Hospital records of the Comprehensive Hospital, and the four private hospitals/clinics in the community were examined.

In-depth analysis, tables, and a six-level Likert Scale were used for analysis and presentation of the data and information collected. Medical technical jargons were avoided for ease of understanding by my audience.

Findings and Discussion

The Origin and Pandemic Nature of COVID-19

In December 2020, Coronavirus came into history. It is called Coronavirus 2019 (COVID-19), named after the year it was first discovered. Since its first appearance in Wuhan, China, it has caused large-scale epidemics, and spread to almost all nations of the world. But there was no evidence or analysis that the virus was made in a laboratory or otherwise engineered as propounded by some conspiracy theories (WHO, 2020a). The agent of COVID-19, SARS-CoV-2, was named after the genetically related SARS-CoV (more recently distinguished by some as SARS-CoV-1), which caused a deadly near-pandemic in 2002–2003. Before 2019, neither SARS-CoV-2 nor its genetic sequences had ever been identified in viruses of humans or animals. As earlier noted, retrospective investigations by Chinese authorities identified human cases with onset of symptoms in early December 2019. While some of the earliest known cases had a link to the wholesale food market in Wuhan, China, some did not (WHO, 2020a&b).

Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from its illness. It is thought to spread mainly through close contact from person-to-person. Some people without symptoms may be able to spread the virus, namely between people who are in close contact with one another (within about 1.8 meter) through respiratory droplets produced when an infected person coughs, sneezes, or talks. These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

According to the CDC (2020a), "information from the ongoing COVID-19 pandemic suggests that this virus is spreading more efficiently than influenza, but not as efficiently as measles, which is highly contagious." Nonetheless, in general, the closer a person interacts with others and the longer that interaction, the higher the risk of the spread (CDC, 2020a). It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. This is not thought to be the main way the virus spreads. According to the WHO (2020b) and CDC (2020 a, b), main ways of preventing the illness is to avoid being exposed to the virus, and the following steps could be taken to slow the spread by maintaining social distance, washing hands often with soap and water in the absence of which a hand sanitizer that contains at least 60% alcohol could be used, routinely cleaning and disinfecting frequently touched surfaces, and covering of mouth and nose with a mask when around others.

It affects different people in different ways, and infected people have a wide range of symptoms reported, that is, from mild to severe illness (CDC, 2020a; WHO, 2020b; WHO 2020c). However, as the ripple of COVID-19 careened around the world, it was forcing humanity to innovate and change the way they learn, work and live. The upside of where people found themselves was that individuals and corporations would become more resilient in a post-COVID-19 world (Marr, 2019). Marr predicts what the world may look like, that is, once the world put the pandemic behind, to include more of less contact interfaces and interactions, strengthened digital infrastructures, better monitoring using IoT (Internet of Things) and Big Data, AI-Enabled drug development, telemedicine, more online shopping, increased reliance on robots, more digital events, and a rise in exports and imports.

The COVID-19 pandemic in Nigeria is part of the worldwide pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Incidentally, the first confirmed case in Nigeria was announced on 27 February 2020, when an Italian citizen in Lagos tested positive for the virus (Ifijeh, 2020; Maclean and Dahir, 2020; NCDC, 2020; Ugbodaga, 2020a). On 9 March 2020, a second case of the virus was reported in Ewekoro, Ogun State, Southwestern Nigeria. It was a Nigerian citizen who had contact with the Italian citizen (PM News, 2020; Ugbodaga, 2020a). By 17 December 2020, out of the world's record of 74,887,390 cases, 1,660,281 deaths, and 42,290,685 recovered (CDC, 2020b), Nigeria had 76,207, 1,201, and 67,110 respectively (NCDC, 2020; Odunsi, 2020; Ugbodaga, 2020b). Incidentally, the deadliest unseen enemy of humanity did not infect any resident of ICLGA of Oyo State. But the halo-effect was immense.

What Adult Learning

Andragogy is the practice in which adults are engaged in systematic and sustained self-educating activities focused at gaining new forms of knowledge, skills, attitudes, or values - some forms of learning really beyond traditional schooling that encompass basic literacy to personal fulfillment as lifelong learners. The learning reflects specific philosophy about learning and teaching based on the evidence that adults can and want to learn, and that they are able and willing to take responsibility for their learning. The learning responds to their needs. Their targets are focused on one or more of the following (Bohonos, 2014; Cox, 2015):

- To maintain certifications to fulfill job requirements and stay up to date on novel advances in their fields and or in their community;
- To inspire growth in the community by enabling them keep up with societal change and maintain good social order;
- To help the learners satisfy their personal needs and achieve their professional goals;
- To achieve human contentment;
- To achieve an institution's needs - including improving its operational effectiveness and productivity; and
- For vocational, social, recreational or for self-development.

Interestingly, they reflect specific philosophies about learning and teaching based on the postulations that they can and want to learn, are able and willing to take accountability for learning; and the learnings respond to their needs. As confirmed by an adult instructor, Dr. Sanjo Ariyo Okunlola (from Idere), a learner, Wasiu Aderogba (from Igbo-Ora) adduced the learners benefit generally as follows:

> prosperous career and financial security, increased opportunities and improved overall quality of life, better job opportunities, comfortable lifestyle, and ease of getting ahead in life, among others. In general, to those that take their specific programmes of study serious, the education provides practical benefits of the 21st century that include: economic, health, civic involvement, personal development, better communication, realization of passions, greater sense of discipline, and reasonable sense of accomplishment. …. These are not just career-oriented. Being able to develop oneself is invaluable, and during the learning experiences, new skills are learnt. … listen to instructors (and read books that are written by experts) in your particular field. These encourage us to think better, analyze better, explore new ideas, ask questions, and become more creative. Overall, these allow us to grow and develop even further and provide us with competitive edges in the job market. (W. Aderogba, personal communication, 10 February 2021)

Despite the laudable benefits, the COVID-19 pandemic affects the learning programmes, directly and/or indirectly in different ways. The following highlight some examples.

Foremost and Generic Upshots on Education

According to the United Nations International Children's Fund (UNICEF), the COVID-19 pandemic affected more than 91% of students worldwide, with approximately 1.6 billion children and youngsters unable to attend physical schools due to the closures and lockdowns (Burke, 2020; Murray, 2020; UNICEF, 2020a). Formal schools closed in Nigeria following the final order of the federal government of 29 March 2020 to close all educational institutions and areas which include tertiary, secondary and primary schools nationwide. Over 1.2 million children remained at home and exposed to all forms of abuses and vices, among others. It was an enigma. The Federal Ministry of Education subsequently started close monitoring of developments on the containment of the pandemic.

The school closures impacted not only students, teachers, and families, but have far-reaching economic and societal consequences. The closures in response to the pandemic shed light on various social and economic issues, including learner liability, digital learning, food insecurity, and homelessness; access to childcare, health care, housing, internet, and disability services. The impacts were more severe for disadvantaged children and their families, causing interrupted learning, compromised nutrition, childcare problems, and consequent economic cost to families who could not work because of the prevailing lockdown. In response to the severity of the upshot, UNESCO (2020b) recommended the use of distance learning programmes and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of education.

School performances hinge critically on maintaining close relationships with teachers, particularly students from disadvantaged backgrounds, who had no parental support needed to learn on their own (Business Insider, 2020). According to the News Website and UNESCO (2020 a, b, c & d), working parents missed work when schools closed in order to take care of their children, incurred wage loss in many instances and negatively impacted productivity, and localized school closures placed burdens on schools as parents, and officials redirected children to schools that were opened.

Remarkable Upshots on Adult Learning

As earlier noted, the pandemic did not infect any soul in Ibarapa Central Local Government Area of Oyo State, Nigeria nor in the neighbouring communities (Ibarapa East and Ibarapa North Local Government Areas) to the east and to the north respectively, but they experienced resultant ripples of the halo-effects. This work is not oblivious of the incidences in the immediate southern communities (Ogun State). Only 1.67% did not see the effect on adult education. Only 2.50% felt the impact was mild and 78.33% perceived the impact to be terribly devastating. Cumulatively, 98.33% rated the effects as either “Terribly devastating,” “Very devastating,” or “Devastating.” Inversely, “No effect,” and “Mild,” put together, were just 4.17% only.

Table 1

Outstanding Upshot of COVID-19 pandemic in Ibarapa Central Local Government Area of Oyo State

Scale of Effects	Frequency	% Proportion	Cumulative %	Inverse Com. %
Terribly devastating	94	78.33	78.33	100.00
Ever devastating	15	12.50	90.83	21.67
Devastating	6	5.00	95.83	9.17
Mild	3	2.50	98.33	4.17
No effect	2	1.67	100.00	1.67
Don't know	0	0.00	100.00	0.00
Total	120	100.00		

In all of the challenges, a learner at Idere placed his hope in divinity; and he lamented the uneasy calms perpetrated by the pandemic this way:

> There were uneasy facades of calmness. It was a *sit don look*. So sudden, everybody in his tent. All those that were receiving lessons from outside of this community could not go because there was no transportation. Those that were resident outside came back. External Examinations could not hold … daily routines and even work styles were impacted. …. But not everyone is accustomed to working from home, and getting into work mode from a space that's not your regular one can be a huge adjustment. …. The bright side of working from home is that you save time, …. spend more time with family, and maybe get a few more things done around the house. But the challenges, including loneliness, staying disconnected and or connected, and a heightened penchant for distraction, can have a significant effect on psyche and productivity. Whether you're relegated to working from a spare bedroom, living room or the lobby of your house, you still have issues of setting up, distractions, maintain confidentiality, …. Inability to cope with the Online learning. …. Workshops were closed. We feel isolated. Social media is explosive now; …. Facebook. Anyway, Math became easier with the introduction of …. Instructor-learner's meetings could not hold. Graduation could not be held as scheduled (those that held were on low key). Feeding while on the programme/workshop stopped. We can only pray the plague is over, and never to come again. All is not well. We take a lot of herbal teas without sugar nor milk; and as often as possible. …. can be rest assured, African [native] medicines, no precise measurement. The *Old Normal* cannot be again. (J. Adepate, Jomiloju, personal communication, 10 February 2021)

Both learners and instructors have their stories of the impacts to relate; and so also, indirectly, the entire community. Some opportunities emerged; and the *Old Normal* seems to have gone forever.

Opportunities in the Circumstances

Notwithstanding the challenges, some opportunities, *New Normal* and as panacea for curtailment of COVID-19 and impetus to sustainable adult education emerged; Elaborate graduations that were unnecessarily draining the poor agrarian families were found to be absolutely unnecessary. Online teaching and learning are becoming popular despite the pronounced digital divide (Bozkurt et al., 2017; Council for Adult and Experiential Learning (CAEL), 2020).

Above all, guiding principles, and strategies for community mitigation to reduce or prevent COVID-19 transmission among adult learners, instructors and their families were realized. See Table 2: Ancillary opportunities in the circumstances of 2020 COVID-19 pandemic in ICLGA.

Table 2

Ancillary opportunities in the circumstances of COVID-19 pandemic in ICLGA of Oyo State, Nigeria *

Principle/Strategies	Details
Staying at home order	To stay at home as much as possible, wearing a mask outside homes, socially distancing, and avoiding gatherings of people
Washing hands often	To wash hands often with soap and water for at least 20 seconds especially after visiting public places, or after blowing nose, coughing, or sneezing. Specifically important to wash: before eating or preparing food; before touching face; after using the restroom; after leaving a public place; after blowing nose, coughing, or sneezing; after handling used mask; after changing a diaper; after caring for someone sick; and after touching animals or pets. If soap and water are not readily available, hand sanitizer that contains at least 60% alcohol should be used. All surfaces of the hands must be covered, and rub together until they feel dry
Unnecessary touching	To avoid touching eyes, nose, and mouth with unwashed hands
Inside homes	To avoid close contact with people who are sick. If possible, maintaining 1.83m (6 feet) between the person who is sick and other household members
Outside homes	To put 1.83m distance between self and people who don't live in the household - some people without symptoms may be able to spread virus. Staying at least 1.83m (about 2 arms' length) from other people is desirable. Keeping distance from others is especially important for people who are at higher risk of getting sick
Use of masks	To cover mouth and nose with a mask when around others - Masks help prevent getting or spreading the virus. Everyone to wear a mask in public settings and when around people who do not live in your household, especially when other social distancing measures are difficult to maintain. Masks should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance. Masks meant for healthcare worker should not be used - surgical masks and N95 respirators are critical supplies that should be reserved for healthcare workers and other first responders. 1.83m between oneself and others should be continuously used. The mask is not a substitute for social distancing
Covering coughs and sneezes	To cover mouth and nose with a tissue when coughing or sneezing or using the inside of elbow, not spit. Used tissues should be trashed. Hands must be washed immediately with soap and water for at least 20 seconds. Where soap and water are not available, hand sanitizer that contains at least 60% alcohol should be used
Cleaning and disinfecting	To clean and disinfect frequently touched surfaces daily: This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks. If surfaces are dirty, they should be cleaned. Use detergent or soap and water prior to disinfection; then, use a household disinfectant
Monitoring health daily	To be at alert for symptoms. Watching for fever, cough, shortness of breath, or other symptoms of COVID-19. Especially important when running essential errands, going into the office or workplace, and in settings where it may be difficult to keep a physical distance of 1.83m. Not to take temperature within 30 minutes of exercising or after taking medications that

	could lower temperature, like acetaminophen and Panadol. CDC or NCDC guidance should be followed if symptoms develop
Avoiding gatherings and travels	To be mindful of movement patterns within and between workshops, classrooms, compounds, families and larger communities impact efforts to reduce community transmission. "Coordination" across compounds, families and larger communities is critical – especially between compounds of different levels of community transmission. Travelling in public vehicles involves many individuals at a time. Social distance cannot be maintained. As much as possible, it should be avoided
Others	Getting use to internet, zoom meetings and online classes, etc.

Note: * NCDC offers setting-specific strategies for a variety of sectors that include businesses, schools, institutes of higher education, parks and recreational facilities, and others.

The goals, guiding principles, and strategies for community mitigation to reduce or prevent local COVID-19 transmission among adult learners, instructors and their families (and of course, entire community) were indirectly realized. The mitigation activities are in conformity with the suggestions/recommendations of CDC (2020 c) and WHO (2020 b, c): Individuals needed to follow healthy hygiene practices, stay at home when sick, practice physical distancing to prevent contagion and or lower the risk of the disease spread; and use a cloth face covering (with some exceptions) in community settings when physical distancing cannot be maintained (CDC, 2020c; WHO, 2020c). These universal precautions are appropriate regardless of the extent of mitigation needed.

There were many local traditional herbs that were resuscitated, reinvigorated and came into the limelight. Central to them all is the use of the herbs that were in congruence with the Traditional Chinese herbal medicine (TCM) and Indian formulae (Mandal, 2020). The Ibarapa Traditional Medicine (ITC) and TCM are similar and they have in common:

- Four herbs including *Ephedra sinensis, Semen armeniacae amarum, Glycyrrhiza, Gypsum fibrosum* have been - used for the treatment of lung heat, cough and asthma.
- Two herbs including *Radix glycyrrhizae* and *Rhizoma zingiberis* - used for epigastric pain, acid vomiting, intestinal pain, abdominal drainage, chest and back pain, dizziness, asthma, menstrual abdominal pain, etc.

In addition to these, and sometimes, as alternative, at any suspicion of cold, flu, etc., the combination of lemon peels, pineapple peels, ginger, red onion and others are boiled. The sick person is covered with blanket (or any large and thick clothe); and he will inhale the steam for six to eight minutes. This will be done two to three times a day, and for three days, and the ailment goes. The top-used TCM in COVID-19 treatment contains Glycyrrhiza, Poria cocos, Tangerine peel, Ophiopogon japonicas, Astragalus membranaceus, Scutellaria baicalensis, Saposhniovia divaricata root, Atractylodes macrocephala, Honeysuckle, Atractylodes lancea, Agastache rugosa, Platycodon grandifloras, Fructus Forsythiae, Rhizoma belamcandae, Szechuan fritillary bulb, Semen armeniacae amarum, Yam, Radix glycyrrhizae, Poria cocos, and Menthae Haplocalycis herba (Mandal, 2020). The Ibarapa Traditional Medicine for similar ailment (asthma, stuffy/runny nose, flu, phlegm, common cold, sore throat, pneumonia, and others) are not significantly different. But from literature (Mandal, 2020) and sources (grapevines) emanating from ICLGA, patients were often admitted to hospitals (except TCM and

herbal medications are applied) are primarily treated with western medicines as frontline treatment.

Conclusion

The COVID-19 pandemic did not infect any resident in Ibarapa Central Local Government Area (ICLGA) of Oyo State, and none of the neighbouring communities had any record of it. But the halo-effect devastated the community and adult education in its entirety. There were uneasy facades of calmness. Teaching and learning were indefinitely suspended. External Examinations could not be held. Online learning was introduced but many were incapacitated. Workshops were closed. Both learners and instructors felt isolated and abandoned. Social media including Facebook became more popular. Instructor-learners' meetings could not hold. Graduation could not be held as scheduled. Feeding while on the programme/at workshops, etc., stopped.

Notwithstanding the challenges, the educators and the learners gained insight into the opportunities for mitigation in the circumstances of COVID-19 and similar pandemics. They complied with the scientific dictates of COVID-19. They strongly agreed to the *New Normal*, and believe that the *Old Normal* is no longer fashionable. In addition, though this work cannot confirm the veracity of the medications, the pandemic facilitated and reinvigorated the use of traditional herbs for treatment of flu-like pandemics. The ITC complemented the scientific dictate.

Safe keeping and healthy environment at the venue of an adult education programme is imperative. As complementary to literature in adult education, the adult educators and learners now know how to manage the environment; and keep fit and safe in the circumstances of COVID-19 and the likes.

Recommendations

The agrarian community needs infrastructures for online learning in the circumstances of COVID-19 and similar pandemics. It is the responsibility of the local and state governments, and their agencies to enforce regulations of programmes and ensure infrastructures, namely, healthcare delivery system, electricity and power, and cheap and reliable Internet connectivity.

Further research and development into the Ibarapa Central Medications (ICM) for COVID-19 and the flu-like ailments need to be carried out. The veracity of the concoctions also needs to be verified by the Center for Research in Traditional, Complementary and Alternative Medicine that is for wider applications.

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STIMULATING THE COMPLICATIONS OF DIGITAL DIVIDE FOR SUSTAINABLE ADULT EDUCATION IN A DEVELOPING COUNTRY

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ABSTRACT: **T**here are gaps between those that are able to benefit from the internet and those who are not. There have been powerful global movements, including a series of intergovernmental summits, conducted to close the digital divide. The movements formulated solutions in public policy, technology design, finance and management that would allow all connected citizens to benefit equitably as a global digital economy spreads into far corners of the world population. But the gap remains unabated in the Developing World. This work identified major attributes of the Developing World vis-a-vis the digitalization of the community; and examined the specific impacts of the digital divide on contemporary adult education and its future. Nigeria is used as a case study. The study made commendations for eliminating digital divide to propel advancement in adult education in the Developing World. The study is descriptive. Government policies and programmes on Internet and Telecommunication Technology (ICT) were examined. School programmes and practices on ICT were studied. 25 individual adults drawn across Nigeria were interviewed to determine their level of digital literacy, and challenges. They also made suggestions. The Third World are least connected with no indications for immediate integrated closure. Low literacy, poor economy, poor infrastructures and government ineptitudes, among others, constitute major reasons for the divide. Massive investment in ICT and infrastructures, and tremendously purposeful training of facilitators that will impart the knowledge and skills are desirable. Schools and colleges may have to double the attentions to ICT in their curriculums.

Keywords: digital divide, ICT, developing world, sustainable adult education

The global digital divide describes global disparities, primarily between developed and developing countries regarding access to computing and information resources such as the Internet and the opportunities derived from such access (Ali, 2011; Lu, 2001). As a smaller unit of analysis, this digital gap describes a large inequality that exists on a global scale. The Internet is known to be expanding fast, but not all countries, especially developing countries, can keep up with the constant changes. The term does not necessarily mean that someone does not have technology; it could mean that there is simply a difference in technology. These differences can refer to, for example, high-quality computers, fast Internet, technical assistance, or telephone services. The difference between all of these is also considered a gap.

Undoubtedly, there are gaps between those that are able to benefit from the internet and those who are not. There have been powerful global movements, including a series of intergovernmental summits, conducted to close the digital divide. The movements formulated solutions in public policy, got involved in technology design, finance and management that should allow all connected citizens to benefit

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equitably as a global digital economy spreads into far corners of the world population. But the gap remains unabated.

Specifically, for example, there is large inequality worldwide in terms of the distribution of installed telecommunication bandwidth. In 2014 only three countries (China, United States of America (US), and Japan) hosted 50% of the globally-installed bandwidth potential (Hilbert, 2016), (see Figure 1). This concentration is not new, as historically only ten countries have hosted 70-75% of the global telecommunication capacity. The U.S. lost its global leadership in terms of installed bandwidth in 2011, being replaced by China, which hosts more than twice as much national bandwidth potential in 2014 (29% versus 13% of the global total) (Hilbert, 2016).

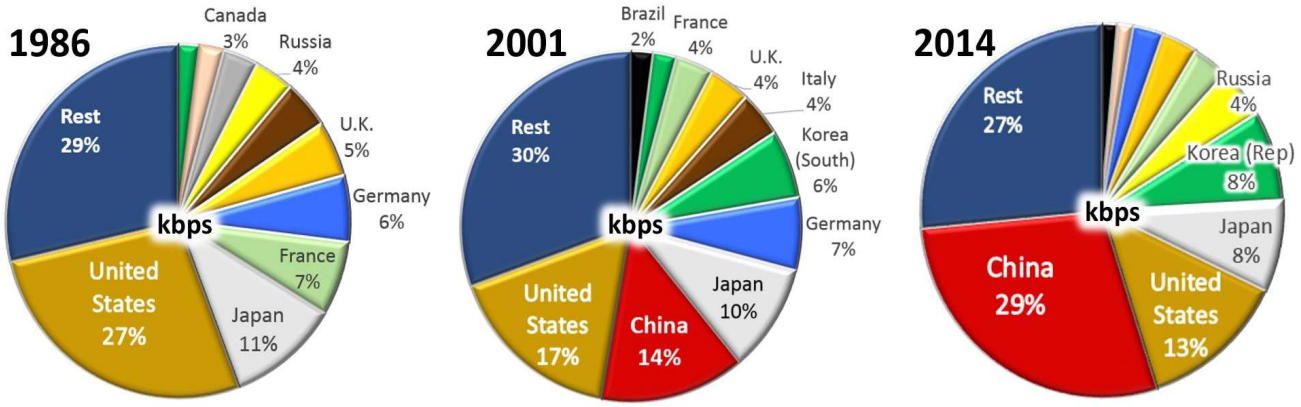

Figure 1: Top Ten countries with most installed bandwidth (in kbps)
Source: Hilbert (2016).

The global digital divide also contributes to the inequality of access to goods and services available through technology. Computers and the Internet provide users with improved education, which can lead to higher wages. The society living in nations with inadequate access are thus underprivileged (Ali, 2011; Krueger, 1993). This global divide is often considered as falling along what is sometimes termed the North-South divide of "northern" wealthier nations and "southern" poorer nations. See Tables 1 and 2, and Figure 2: Worldwide Internet users, Internet users by region, and Internet users in 2015 as a percentage of a country's population respectively. The world development closely follows the pattern.

Table 1

Worldwide Internet users

Year	2005	2010	2017	2019*
World population (In Billions)	6.5	6.9	7.4	7.75
Users worldwide	16%	30%	48%	53.6%
Users in the developing world	8%	21%	41.3%	47%
Users in the developed world	51%	67%	81%	86.6%

Note: * It is an estimate

Sources: International Telecommunication Union (ITU) (2019); U.S. Census Bureau (2004).

Table 2

Internet users by region

Region	2005	2010	2017	2019*
Africa	2%	10	21.8%	28.2%
Americas	36%	49%	65.9%	77.2%
Arab States	8%	26%	43.7%	51.6%
Asia and Pacific	9%	23%	43.9%	48.4%
Commonwealth of Independent States	10%	34%	67.7%	72.2%
Europe	46%	67%	79.6%	82.5%

Note: * It is an estimate

Source: International Telecommunication Union (ITU) (2019); U.S. Census Bureau (2004).

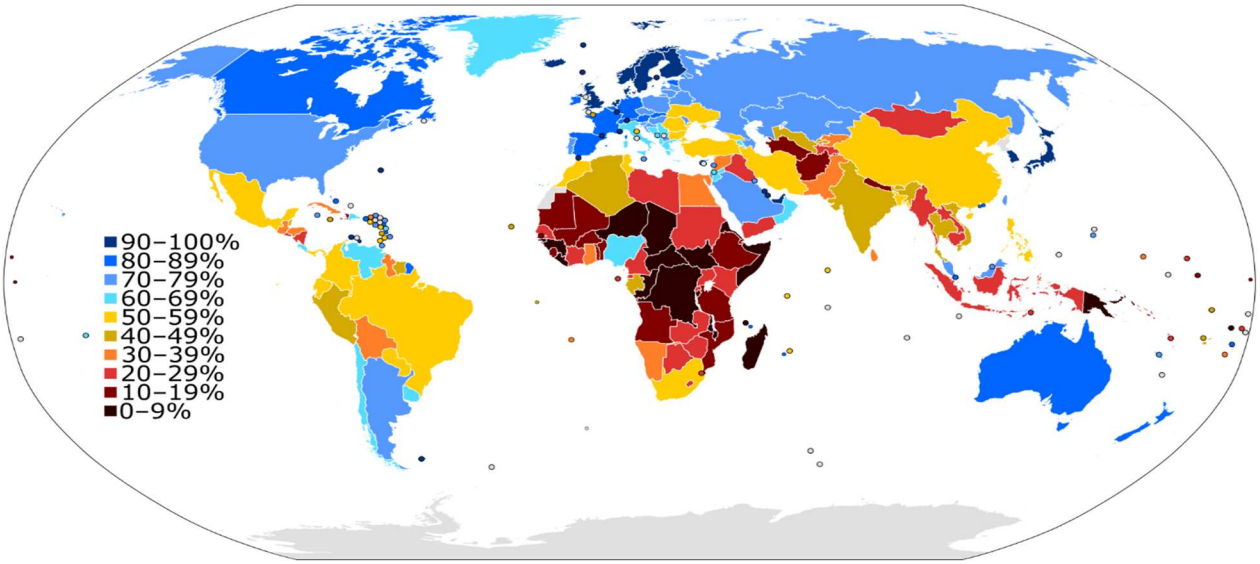

Figure 2: Internet users in 2015 as a percentage of a country's population
Source: International Telecommunications Union (2013).

The low connectivity is negatively skewed to Africa, see Figure 2; and Africa is the least developed compared to other nations and continents of the world. The gaps are still there, almost a decade later; Africa remains a "dark continent," and backward in digital development in particular. These impact and reflect in the community's social capacity, economic disparity, demographic differences and education (ITU, 2019; McLaughlin, 2016; Yung, 2017).

Specifically, on education, the digital divide impact the ability to learn and grow in low-income school communities. Without Internet access, learners are unable to cultivate necessary tech skills in order to understand contemporary dynamic economy, instructor/lecturers cannot give learners homework that demand access to broadband, learners cannot use the Internet to complete assignments as well as connect with teachers and other learners via discussion boards and shared files, and many could not get a computer to use (McLaughlin, 2016). According to McLaughlin (2016), this has led to a new revelation: 42% of students say they received a lower grade because of this

disadvantage; and he concluded that for United States of America "if the United States were able to close the educational achievement gaps between native-born white children and black and Hispanic children, the US economy would be 5.8 percent, or nearly $2.3 trillion, larger in 2050".

Suffice to say, however, that all levels and aspects of education have been adversely affected. Adult education, particularly in the developing world have been massively impacted (Aderogba, 2015, 2020; Yung, 2017). This explains why this work is desirous of the examination of the challenges and complications of digital divide on adult education in the developing world and makes recommendations for bridging the gap to engender sustainable adult education.

Objectives and Research Questions

The objectives of this work are to examine the challenges and complications of digital divide on adult education in the developing worlds; and to make recommendations for sustainable digitalization that will bridge the gap in a spate of time and for sustainable adult education. In order to pursue the objectives, the following research questions were answered:

- What are the salient attributes of the Developing World vis-à-vis digital divide in the communities?
- What are the specific impacts of digital divide on adult education in the Developing World?
- In specific terms, what are the strategies that could be put in place to bridge the digital divide that will propel advancement in sustainable adult education in the Developing World?

Nigeria, the most populous country in Africa is chosen for study.

Concepts of the Digital Divide and the Developing World

On the Digital Divide

Though originally coined to merely refer to the matter of access, that is, who is connected to the Internet and who is not, the phrase digital divide has progressed to emphasize on the division between those who are benefited by the Internet and those who are not (Pursel, 2020). Accordingly, the aim of “closing the digital divide” now refers to efforts to provide meaningful access to internet infrastructures, applications and services. The issue of closing the digital divide today comprises the matter of how emergent technologies such as artificial intelligence, robotics and internet of things (IoT) can help societies (Lee, 2018). As it has become clear that the internet can harm as well as help citizens, scholars studying the digital divide have focused on the matter of how to generate "net benefit" (optimal help minimal harm) as a result of the impact of spreading digital economy (Campbell & Brown, 2003; Simon, 2015).

The ethical roots of the matter of closing the digital divide can be found in the notion of “social contract,” in which there are advocates who state that governments should intervene to ensure that any society’s economic benefits should be fairly and

meaningfully distributed (Bukht & Heeks, 2018). According to Bukht & Heeks (2018), amid the Industrial Revolution in Great Britain, this advocated idea helped to rationalize poor laws that created a safety net for those who were harmed by new forms of production. Later when telegraph and postal systems evolved, many used the ideas to argue for full access to those services, even if it meant high levels of subsidizing to serve citizens. Consequently, "universal services" referred to innovations in regulation and taxation that would allow phone services such as AT&T in the United States work hard to serve and oblige rural users. In 1996, as telecommunications companies merged internet companies, the United States' Federal Communications Commission adopted the Telecommunications Services Act of 1996 to consider regulatory strategies and taxation policies to close the digital divide. This subject rapidly moved onto a worldwide stage. The focus was the World Trade Organization (WTO) which approved a Telecommunications Services Act (TSA), which resisted regulation of ICT companies so that they would be required to serve hard to oblige individuals and communities. In an effort to moderate anti-globalization forces, the WTO hosted an event in 1999 in Seattle, USA, attended by Chief Executive Officers of Internet companies, United Nations' Agencies, Prime Ministers, leading international foundations and leading academic institutions. It was the catalyst for a full-scale global movement to close the digital divide, which swiftly spread to all sectors of the global economy (Smith, 2002).

The "digital divide" is similarly refered to by a variety of other terms which occasionally have similar meanings, though with slightly different emphasis: digital inclusion, digital participation, basic digital skills, media literacy, and digital accessibility (Bukht & Heeks, 2018; Smith, 2002). A United States-based nonprofit organization (National Digital Inclusion Alliance), found the term "digital divide" to be awkward, since there is an array of divides. Instead, it elected to use the phrase "digital inclusion," providing a definition that refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of Information and Communication Technologies (ICTs). This consists of (1) affordable, robust broadband internet service; (2) internet-enabled devices that meet the needs of the user; (3) access to digital literacy training; (4) quality technical support; and (5) applications and online content designed to enable and encourage self-sufficiency, participation and collaboration (Boles, 2018; Bukht & Heeks, 2018).

The divide between differing countries or regions of the world is referred to as the global digital divide, examining this technological gap between developing and developed countries on an international scale (Ali, 2011; Chinn & Robert, 2004). According to Chinn, & Robert (2004) and Ali (2011), the divide within countries (such as the digital divide in the United States) may refer to disparities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories.

Nevertheless, studies show that the digital divide is more than just an access issue and cannot be alleviated merely by providing the necessary equipment. There are at least three factors at play: information accessibility, information utilization, and information receptiveness (Aqili & Moghaddam, 2008; Chinn, & Robert, 2004; Zelenika, & Pearce,

2013). More than just accessibility, individuals need to know how to make use of the information and communication tools once they exist within their communities (Mun-cho & Jong-Kil, 2001). Information professionals have the ability to help bridge the gap by providing reference and information services to help individuals learn and utilize the technologies to which they do have access, regardless of the economic status of the individual seeking help (Aqili & Moghaddam, 2008; Zelenika & Pearce, 2013).

Nigeria, an example of the developing world

The United Nations (2003) admits that it has "no established convention for the designation of 'developed' and 'developing' countries or areas." According to the organisation, the designations "developed" and "developing" are intended for statistical convenience and do not necessarily express a judgement about the stage reached by a particular country or area in the development process (United Nations, 2003, 2014). It implies that developing countries are those not on a strongly definite list of developed countries. That is, there is no established convention for the designation of "developed" and "developing" countries or areas in the United Nations system. In common practice, Japan in Asia, Israel in the Middle East, Canada and the United States in North America, Australia and New Zealand in Oceania, and Europe are considered "developed" regions or areas. In international trade statistics, the Southern African Customs Union is also treated as a developed region and Israel as a developed country; countries emerging from the former Yugoslavia are treated as developing countries; and countries of eastern Europe and of the Commonwealth of Independent States (that is, the former Soviet Union) in Europe are not included under either developed or developing regions (United Nations, 2013a). Certain countries that have become "developed" in the last two to three decades by almost all economic metrics, still insist to be classified as "developing country" as it entitles them to a preferential treatment at the World Trade Organization (WTO). These include Brunei, Hong Kong, Kuwait, Macao, Qatar, Singapore, and the United Arab Emirates that have been cited and criticized for the self-declared status (The White House, 2019).

Still, under other norms, some countries are at an intermediate stage of development, or, as the International Monetary Fund (IMF) put it following the fall of the Soviet Union, "countries in transition". These include all those of Central and Eastern Europe (including Central European countries that still belonged to the "Eastern Europe Group" in the UN institutions); the former Soviet Union (USSR) countries in Central Asia (Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan and Turkmenistan); and Mongolia. By 2009, the IMF's World Economic Outlook grouped countries as advanced, emerging, or developing, depending on: per capita income level; export diversification; and the degree of integration into the global financial system" (International Monetary Fund, 2020).

According to the United Nations Conference on Trade and Development (UNCTAD) (2012), along with contemporary level of development, countries can also be classified by how much their level of development has changed over a specific period of time. In the 2016 edition of its World Development Indicators, the World Bank made a decision to no longer distinguish between "developed" and "developing" countries in the arrangement of its data, considering the two-category distinction outdated. Instead, it

classifies countries into four groups, based on Gross National Income per capita, re-set each year. The four categories in US dollars were: Low-income countries ($1,035 or less); Lower middle-income countries ($1,036 to $4,045); Upper middle-income countries ($4,046 to $12,535); and High-income countries ($12,535 or more) (World Bank, 2019). All definitions are not universally agreed upon. There is also no clear agreement on which countries fit any category (United Nations, 2013b; World Bank, 2015). A nation's GDP per capita, compared with other nations, can also be a reference point. In general, the United Nations accepts any country's claim of itself being "developing."

Irrespective of the controversies and insinuations, African nations and indeed Nigeria belong to the group of a developing country (or a Low and Middle-Income Country (LMIC), a less developed country, a Less Economically Developed Country (LEDC), Medium-industrialized country or an underdeveloped country). It is a categorization of countries with less developed industrial base and low Human Development Index (HDI) relative to other countries (O'Sullivan & Sheffrin, 2003). There has not been any claim to state otherwise.

Methodology

The study is descriptive. Primary and secondary data and information were used. Government policies and programmes on Internet and Telecommunication Technology (ICT) were examined. School programmes and practices on ICT were studied. 25 individual adults (15 males and 10 females) drawn from across the country, Nigeria, were interviewed to determine their level of digital literacy, and challenges. They rated the factors of digital divides on a six-level Likert Scale of “Very High,” “High,” “Average,” “Low,” “Very Low” and “Unacceptable.” Similarly, the severity of the impacts of the digital divide on adult education were measured. They also expressed their views about “digital divide” in the country. Similarly, five adult education centers were visited and the available digital facilities and amenities for teaching and learning were examined. In the same vein, six teachers of adult education, one each from each geopolitical region (Northwest, Northeast, Southwest, Middle Belt, South-South and Southeast), were interviewed on the curriculums they operated, the facilities and amenities and the challenges of digital divide on teaching and learning in their respective regions. They all made useful suggestions for timely closure of digital divide in the developing world. The over fifty years of combined experience in the industry and the situational knowledge and understanding of the authors of the environment were also brought to bear.

The interviews were conducted in July and August 2020 when the COVID-19 pandemic was prevalent and social distancing was mandatory (CDC, 2020; NCDC, 2020). Also considering the cost and risks of traveling in the country, the interviews were conducted through telephone.

Suffice to say that the data and information collected through these sources were coherent and robust enough for the objectives set and for the inferences drawn. Tables, six-step Likert Scales, and in-depth analysis were applied for data analysis and presentation.

Findings and Discussion

There are inequalities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories. There are obstacles to accessibility: physical access, financial access, socio-demographic access, cognitive access, design access, institutional access, political access,and cultural access. They constitute barriers to digital inclusion. Table 3 explains how the obstacles constitute the divide.

Table 3

Causes of digital divide

Obstacles	Details
Physical Access	It involves "the distribution of ICT devices per capita; and telephone per families". Individuals need to obtain access to computers, telephone lines, and networks in order to access the Internet. This barrier is addressed in Article 21 of the convention on the Rights of Persons with Disabilities by the United Nations.
Financial Access	The cost of ICT devices, traffic, applications, technician and facilitator/educator training, software, maintenance, and infrastructures require ongoing financial means. Financial access and the levels of household income play a significant role in widening the gap
Socio-demographic Access	Educational levels and income are the most powerful explanatory variables, with age being a third one. Gender Gap in access and usage of ICT exist, due to unfavorable conditions concerning employment, education and income and not to technophobia or lower ability. Women with the prerequisites for access and usage turned out to be more active users of digital tools than men. Several socio-demographic characteristics foster or limit ICT access and usage.
Cognitive Access	In order to use computer technology, a certain level of information literacy is needed. Further challenges include information overload and the ability to find and use reliable information.
Design Access	Computers need to be accessible to individuals with different learning and physical abilities including certain compliance requirements such as with Section 508 of the Rehabilitation Act as amended by the Workforce Investment Act of 1998 in the United States of America, for example.
Institutional Access	This can be best illustrated as the numbers of users are greatly affected by whether access is offered only through individual homes or whether it is offered through schools, learning centers, community centers, religious institutions, cybercafés, or post offices, especially in communities where computer access at work or home is highly limited.
Political and Religious Access	Certainly, democratic political regimes enable faster growth of the Internet than authoritarian or totalitarian regimes. The Internet is considered a form of e-democracy, and attempting to control what citizens can or cannot view is in contradiction to this. Religious beliefs denied many (mostly women) the ability to access certain websites and disseminate information. There are limits to the television channels that could be accessed in some homes.
Cultural Access	Bridging the digital divide is not sufficient, but the images and languages needed to be conveyed in a language and images that can be read across different cultural lines. A study noted how participants taking the survey in Spanish were nearly twice as likely not to use the internet (Pew Research Center, 2013). There are similar circumstances in many cultures.
Energy and Power Access	Undoubtedly, energy and power are required to energize the facilities and amenities. However, this is not readily available. Energy from the national grid runs 24/7 in less than 1% of homes and states of the country; and it is very costly. Alternatives are generated by individuals and groups with high safety risk and cost.
Others (Specified)	High level of insecurity of lives and properties, low level of literacy, willingness of individuals, groups and governments cannot be over-emphasized.

Table 4 is an array of the measures of digital divide. None of the factors are promising. Disparities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories is very high. The level of

availability of emerging technologies such as Artificial Intelligence, robotics and Internet of Things (IoT) is unacceptable. Community social capacity, economic disparity, demographic differences and education is low. High-quality computers with improved education that can lead to higher wages is very low. Access to goods and services available through technology is very low. See Table 4.

Table 4

A measure of factors of digital divide *****

Factors Measured	Prevalent Likert Scale Measured
High-quality computers with improved education that can lead to higher wages	Very Low
Affordable, robust broadband internet service; internet-enabled devices that meet the needs of the user; access to digital literacy training; quality technical support; and applications and online content designed to enable and encourage self-sufficiency, participation and collaboration	Very Low
Access to goods and services available through technology	Very Low
Emerging technologies such as Artificial Intelligence, robotics and Internet of Things (IoT)	Unacceptable
Information accessibility, information utilization, and information receptiveness – accessibility individuals need to know how to make use of the information and communication tools once they exist within a community	Very Low
Ability to learn and grow in low-income learning communities	Very Low
Community social capacity, economic disparity, demographic differences and education	Low
Disparities between individuals, households, businesses, or geographic areas, usually at different socioeconomic levels or other demographic categories.	Very High
Telephone services including mobile telephone, e-community and social-networking, e-commerce to electronic readers and electronic rendering of government services, and others	Low
"Net benefit" (optimal help minimal harm) as a result of the impact of a spreading digital economy	Very Low

Note: ***** Measures are based on Very High, High, Average, Low, Very Low and Unacceptable

Since the early 21st century, there have been many Internet services in use (Polson, 1993; Talebian et al., 2014; Todd, 2012; Toro & Joshi, 2012). They are not yet widely available in developing communities. Some are listed in Table 5 with an estimate of the status of availability and usage of each. These range from mobile telephone, e-community and social-networking, e-commerce to electronic readers and electronic rendering of government services, and others. The most used are mobile phones and electronic communication devices (54%). Price engines like Google Shopping, which help consumers find the best possible online prices and similar services like ShopLocal which find the best possible prices at local retailers is used by just about 10%. About 25% use Online research systems like LexisNexis and ProQuest which enable users to peruse newspapers, magazines, articles, and journals that may be centuries old, without having to leave home or office. See Table 5.

Table 5

Internet services

Internet/Digital Services	Aver. of Estimated Status (%)	Generic Comment
In tandem with the norms, mobile phones, and electronic communication devices	54	Only in urban areas; few in rural setting; learners have limited services – often used for entertainment
E-communities and social-networking	19	Most common among learners; and in banking and finance sector
Fast broadband Internet connections, enabling advanced Internet applications	23	In Banking and Finance. Limited in learning centers except cybercafes, and at a high fee
Affordable and widespread Internet access, either through personal computers at home or work, through public terminals in public libraries and cafes, and through wireless access points	24	Too costly for majority of individuals; learners /instructors rarely think of it
E-commerce enabled by efficient electronic payment networks like credit cards and reliable shipping services	32	Uncommon among learners. Limited to the affluent business men and women
Virtual globes featuring street maps searchable down to individual street addresses and detailed satellite and aerial photography	24	Partially in few urbanized areas not commonly used for teaching and learning
Online research systems like LexisNexis and ProQuest which enable users to peruse newspaper, magazine articles and journals that may be centuries old, without having to leave home or office	25	Accessibility is minimal and only on few academic campuses; and not reliable
Electronic readers such as Kindle, Sony Reader, Samsung Papyrus and Iliad by iRex Technologies	21	Not common; and not known to many
Price engines like Google Shopping which help consumers find the best possible online prices and similar services like ShopLocal which find the best possible prices at local retailers	10	Not known to most people and used by only few lecturers/instructors
Electronic services delivery of government services, such as the ability to pay taxes, fees, and fines online	13	Often, government services and programmes remain one-on-one
Further civic engagement through e-government and other sources such as finding information about candidates regarding political situations	15	Democratic ethos is low; and e-government is not in practice
E-learning	25	Both learners and instructors/teachers are groaning in inadequacy of facilities and amenities

The divide has some specific impacts on education and adult education in particular: People without access to the Internet and other information and communication technologies are disadvantaged, as they are unable or less able to teach or learn online, shop online, search for information online, or learn skills needed for technical jobs, and others. There is also a reverse divide: poor and disadvantaged learners spend more time

using digital devices for entertainment and less time interacting with people face-to-face compared to the well-off families.

Explicitly, with adult education, the digital divide impacts ability to learn and grow among low-income families and communities. Without Internet access, learners are unable to cultivate necessary tech skills in order to understand contemporary dynamic economy when instructors/lecturers give learners homework that demands access to broadband. Learners use the Internet to complete assignments as well as connect with teachers and other learners via discussion boards and shared files; and many could not get a computer to use as identified with some American families by McLaughlin (2016).

Conversely, and as observed for the United States by Bowles (2018), affluent families, especially the tech-savvy, carefully limit learners' screen time. Wealthy families attend play-based educational programmes that emphasize social interaction instead of time spent in front of computers or other digital devices. Table 6 is a 6-level Likert Scale that measures the severity of the impacts. "Very severe impacts" is 64%. "Very severe impact," "Severe impacts," "Impact" put together is huge, 96%. "Mild impact" is 0%. "No impact" is only 4%. "Don't know" is also 0%. See Table 6.

Table 6

Likert Scale of the adverse impact of digital divide on adult education in Nigeria

Level of impact	Frequency	% Proportion	Cumulative %	Inverse Cumulative. %
Very severe impact	16	64	64	100
Severe impact	6	24	88	36
Impact	2	8	96	12
Mild impact	0	0	96	4
No impact	1	4	100	4
Don't know	0	0	100	0
Total	25	100		

The digital divide has to be bridged by targeting an "Information Community/Society" (Anurugwo, 2020; Stantchev et al., 2014; Talebian et al., 2014; World Submit on the Information Society, 2003). Table 7 summarizes the strategies, namely: Turning digital divide to digital opportunity; a common vision about ICT for all; empowerment of women in the information community; evolving special needs for the marginalized and vulnerable society; generic resolute empowerment; attention to indigenous and cultural heritage; priority attention to characteristic economy in transition; connectivity as central to enabling agent; creation and dissemination of scientific and technical information; and avoidance of, and refrain from, unilateral measures not in accordance with international and national law and charters. Table 7 gives a description of these.

Table 7

Strategies for bridging the digital divide for sustainable adult education in Nigeria

Strategy	Detailed Description
Turning digital divide to digital opportunity	Full commitment by governments, learning institutions and individuals to turning digital divide into a digital opportunity for all, particularly for those who risk being left behind and being further marginalized
A common vision about ICT for all	Total commitment to realizing a common vision of the Information Community for the present and future generations. Young people are the future workforce and leading creators and earliest adopters of ICTs. They must be empowered as learners, developers, contributors, entrepreneurs and decision-makers. Special focus needs be given to the youth who have not yet been able to benefit fully from the opportunities provided by ICTs. The development of ICT applications and operation of services should respect the rights of children as well as their protection and well-being
Empowerment of women in the information community	Development of ICTs will provide enormous opportunities for women, who should be integral part of and key actors in the Information Community. The Information Community should enable women's empowerment and their full participation on the basis on equality in all spheres of society and in all decision-making processes. Gender equality perspective and ICT's use as a tool to that end should be mainstreamed
Evolving special needs for the marginalized and vulnerable groups	In building the Information Community, particular attention should be paid to the special needs of marginalized and vulnerable groups of the society, including migrants, internally displaced persons (IDPs) and refugees, unemployed and underprivileged people, minorities and nomadic people, and people with disabilities.
Generic resolute empowerment	Resolute empowerment of the poor, particularly those living in remote, rural and marginalized urban areas, to access information and to use ICTs as a tool to support their efforts to boost themselves out of dearth
Attention to indigenous and cultural heritage	Particular attention must be given to the special situation of indigenous peoples, as well as to preservation of their heritage and cultural legacy
Priority attention to characteristic economy in transition	Pay attention to the generic needs of the developing country, (with economy in transition, highly indebted poor country, under occupation, recovering from conflict with special needs, and experiencing severe threats to development
Connectivity as central to enabling agent	Connectivity should be a central enabling agent in building the Information Society. The challenges of universal, ubiquitous, equitable and affordable access to ICT infrastructure and services should be the focus of all stakeholders involved in bridging the divide. The connectivity will also involve access to energy and postal services, which should be assured in conformity with the national and state legislation
Creation and dissemination of scientific and technical information	Promotion of universal access with equal opportunities for all to scientific knowledge and the creation and dissemination of scientific and technical information, as well as open access initiatives for scientific publishing
Avoidance of, and refrain from, unilateral measure not in accordance with international and national law, and Charters	States should take steps with a view to the avoidance of, and refrain from, any unilateral measure not in accordance with international and national law, and Charter of the United Nations that impedes the full achievement of economic and social development by the population of the affected country, and that hinders the well-being of the population

Further detailed discussion on these is beyond the scope of this work but, literatures have further argued on why it is important to "bridge the gap" (Hilbert, 2011; 2016; Internet World Stats, 2014): for social mobility, healthy democracies, economic growth and equality, ameliorating demographic differences, educational and literacy differences, enhancement of social and cultural capital, addressing economic disparity, and for bridging the gap between the rural and urban livings, that is beyond specific needs in engendering sustainable adult education. Also, Dintsis (2014), Pavel et al. (2015), Rao

(2014), and Aderogba (2015; 2020) have all observed that the ICT has tremendous educational advantages as it: enables effective education; provides instruction according to student needs; provides educational activities in large geographical areas; encourages individual study; world-wide access to the best teachers, universities and other educational institutions, etc.; real-time updates of training content; fast feedback; virtual collaboration; enhanced control of teacher's qualification and training materials; sharing experiences; increased access; flexibility of content and delivery; combination of work and education; learner-centered approach; and higher-quality of education and new ways of interaction among others.

Similarly, in literature, relevant ICT tools for holistic bridging digital divide and for effective teaching and learning have been identified and classified into: Informative tools - Internet, Network Virtual Drive, Intranet systems, Homepage, etc.; Resignation devices - CD-ROM, etc.; Constructive tools - MS Word, PowerPoint, FrontPage, Adobe Photoshop, Lego Mind storm, etc.; Communicative tools - e-mail, SMS, etc.; and Collaborative tools - discussion boards, forum, etc. (Aderogba, 2015; 2020; Aderogba & Adeniyi, 2020; Anurugwo, 2020; Lim & Tay, 2003).

Conclusion

The digital divide in the developing world is humongous – very wide; and there is nothing to show that it will get bridged so soon. Adult education is directly and indirectly impacted. The work has been able to identify some strategies towards bridging the divide, namely: turning digital divide to digital opportunity; a common vision about ICT for all; empowerment of women in the information community; evolving special needs for the marginalized and vulnerable groups; generic resolute empowerment; priority attention to indigenous and cultural heritage; priority attention to characteristic economy in transition; connectivity as central to enabling agent; creation and dissemination of scientific and technical information; and avoidance of, and refrain from, unilateral measure not in accordance with international and national law and Charters.

Challenges facing adult learners in the face of technological innovations such as lack of literacy which hinders the use of technological tools (computer and computer accessories), Internet, exposure to technological tools, fear of use, and lack of digital literacy need priority attention. These are true of Nigeria and other countries in the developing worlds.

Recommendations

Concerted efforts need to be made within the next decade by concerned bodies to restructure curriculum and textbooks of both adult education and formal schools as a means of reconciling theoretical knowledge with practical knowledge, which is the essence of technology. Also, within the spate of five years, e-learning should be introduced into, at least where practicable, all formal adult education programmes to foster e-services in all its ramifications in cities and towns and in every facet of human endeavour in the society.

It will not be out of place for all levels of government to invest massively in computer and computer accessories with a view to ensure, at least, a computer per household. A substantial part of the 26% of the national budget on education, as recommended by UNESCO, could be expended on computer, computer accessories and Internet connectivity.

Adult education teachers/instructors should be provided with a consistent training programme for e-learning pedagogy; and the curriculum objectives should focus on the use of technology for teaching and learning in and outside of the classroom. E-learning instruction should align with learners' specific learning goals. To overcome barriers to e-learning, programme stakeholders must be committed to expanding the solutions with the expectations that e-learning has the ability to serve effectively, and to every level of education, adult education typically and especially inclusive.

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INTERNATIONAL ORGANIZATIONS AND TEACHERS' PROFESSIONAL DEVELOPMENT IN POST COVID-19 NIGERIA

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ABSTRACT: The outbreak of the Corona-virus created a global health crisis which has affected educational systems globally, resulting in near-total closures of schools with far reaching economic and social consequences. Countries adopted different strategies to ensure learning was sustained using digital technologies. However, the majority of children in Nigeria were not able to benefit from this intervention due to some barriers. Primary barriers included poor knowledge of technology, infrastructural deficiencies, epileptic power supply, and funding amongst others. Teachers Registration Council of Nigeria (TRCN) is the Teachers Regulatory Agency and Centre for policy issue regarding teachers. TRCN, reached out to its critical stakeholders including the World Bank, United States Agency for International Development (USAID), United Nations Educational, Scientific and Cultural Organisation (UNESCO), Foreign Cooperation Development Organisation (FCDO), and the British Council. The focus was how to respond to the disruption caused by COVID-19 to education, through collaboration to help adopt evidence-based strategies and measures. This paper focuses on partnership between international agencies and the TRCN in Nigeria through the "Technology Enabled Learning Futures" framework. It explores focus-creating innovations to reposition teachers for effective, efficient, and transformative teaching. The paper uses secondary data to discuss the various interventions from International Development partners. It further discusses the impact of all the interventions on teaching and learning in Nigeria and its implications for international partnerships in teacher education.

Keywords: international organizations, digital technologies, Nigeria,

The Challenges of Teachers' Professional Development

The 2019 Corona-virus (COVID-19) has remained the most potent disruptive force that went across the globe without discrimination. Several authors have described the impact of COVID-19 in different ways but with thesame message. Boucouvalas (2021) says "COVID-19 presents a potent but basic lesson that what happens in one part of the world can reverberate in other parts" (p.vi). Similarly, Alimigbe (2020) looks at the impact from the perspective of adult literacy and global citizenship. According to her "the advent of the COVID-19, saw to the halt in many countries' adult literacy programmes, so much so that, series of adult literacy programmes that did exist were suspended with just a few courses continuing virtually, through TV and radio, or in open air spaces" (np.). The prominence of the virtual world necessitated by the realities of COVID-19 also throws up issues of unequal access to technology. Roumell et al. (2020) stress the importance of addressing "digital equity, and inclusion as a fundamental basis for human thriving in the 21st century" (p. 317). These impacts and challenges of COVID-19 have had excruciating impacts on education in Nigeria and especially on teachers' professional development.

The quality of teachers to a large extent determines the quality of instruction they will give. The general challenge of teachers' professional development in Nigeria is many unqualified teachers. Awodjii et al. (2020) say this low quality makes teachers' continuous professional development an imperative and the tapestry for attainment of

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quality education. In achieving quality education, there must be adequate quality teachers who have gone through quality training (Lengoiboni, 2013). Wokocha (2013) avows that mastery of content, teaching experiences, skills and dissemination of knowledge are visible evidence of teachers' quality. Thus, to monitor and regulate this continuous training in Nigeria, the TRCN was established.

The Teachers Registration Council of Nigeria (TRCN) was established in 2004 in fulfilment of the quest for the professionalization of the teaching profession in Nigeria. The phenomenal expansion of the education system in Nigeria created a plethora of problems including poor teacher quality and inadequate number of teachers. The TRCN was empowered to control and regulate the teaching profession in Nigeria, (National Policy on Education). TRCN's mandate includes determining who teaches, standards for registered teachers, and quality assurance. TRCN has mapped out several strategies toward the achievement of its mandates, which includes regulations and control of teaching. These activities are expected to enable TRCN to oversee the quality of teachers and teaching at all levels of education including public and private institutions.

One of the ways TRCN ensures quality is through the registration and licensing of teachers to meet international best practices and achieve the professionalization of teaching. Thus, to be qualified for registration and licensing, education graduates must pass the Professional Qualifying Examinations (PQE), which is an entry requirement for registration and licensing. Notwithstanding efforts by the TRCN in the professionalization of teaching in Nigeria, there are still many unqualified teachers in Nigeria. The National Council on Education (NCE) has persistently given deadlines on ejection of unqualified teachers from Nigerian classrooms. Based on the NCE decisions and directives, TRCN mandates states to raise Teacher Investigative Panel (TIP) in each state to help the enforcement of the removal of unqualified teachers from classrooms in Nigeria. The real hindrance, however, has always been the political will and the fact that education is in the concurrent list. The politicking has made it an almost impossible task to eject unqualified teachers. The NCE's directives cannot be effective without the support of the state Governors who are responsible for recruitment and remuneration of teachers in their states.

TRCN and Its International Stakeholders

Partnerships are life wires of progress and development and key for the global community in meeting the targets of the Sustainable Development Goals and Education for All. This explains why Global Partnership in Education (GPE) (2013) is annexing resources together to ensure helping improve national education across the globe by bringing partners together to develop measurable quality education sector plans, by investing in underfunded and strategically important elements and by mobilizing the expertise of country-level partners to leverage their comparative advantages via the Global Learning House initiative. No doubt, partnerships are also crucial for capacity building in developing countries, hence capacity building involves empowering individuals and organizations with the knowledge, tools, and other resources they need to reach their goals. International support is important for strengthening skills in communities around the world. The United Nations Sustainable Development Goal

(SDG) Goal 17 focuses on building and improving partnerships between countries and international organizations. Thus, highlighting that, working together is the plausible way forward to building support networks between developed and developing countries. Similarly, the World Economic Forum (WEF) (2017) identifies that as events continue to unfold across the globe, there is need for government, civil society and academia to make great alliances to bring these different sectors together to manage challenges and make the needed transformations, as one sector alone might not be able to handle the transformations underway. All these making it evident that cross-sector partnership is essential to achieving scale and sustained impact needed in the world of today. The partnerships, the WEF says, have the capacity to unleash innovative ways of working, mobilizing expertise and hard to reach resources, and creating shared accountability in an increasingly complex world.

Although the TRCN CAP T3 of 2004 did not mandate the Teachers Registration Council of Nigeria to liaise with International Development Partners in attaining its mandates and other objectives, the realities of the present times and the recognition by TRCN indicate that partnership is the new way forward. TRCN, though faced with the issues of paucity of funds amidst the growing number of the teaching community, have had to leverage on partnerships since its inception in the year 2000 to be able to meet its numerous responsibilities. These partnerships have been real strongholds of TRCN.

Collaborations have existed between the Teachers Registration Council of Nigeria and its various partners in different projects and interventions based on the focus of the collaborating partners at the time as well as areas TRCN is needing interventions. Amongst these International Development Partners TRCN has worked with are: World Bank, United States Agency for International Development (USAID), United Nations Educational, Scientific and Cultural Organisation (UNESCO), Foreign Cooperation Development Organisation (FCDO) and British Council.

TRCN and Stakeholders

TRCN usually reaches out to stakeholders, acquaint them with the programs and activities of TRCN, and identifies areas of collaboration and support. The initial groundwork for the TRCN Teachers National Conference was born from a fallout from the technical meeting between the TRCN Registrar/Chief Executive and the UNESCO Regional Officer. UNESCO promotes international collaboration with participating countries in education, scientific and cultural activities to contribute to peace and security. UNESCO collaborates and supports policies that enhance educational advancement of participating countries. UNESCO and TRCN have synergized in key teacher policy issues over the years. Amidst the COVID-19 disturbances, TRCN called a meeting with the UNESCO Regional Officer to improve on collaboration and support for teachers' professional development and teachers career advancement. In the course of the meeting, the TRCN Boss communicatated the need for remote learning facilities (platforms) such as radio and television to train teachers, prepare them to cope with the challenges of teaching in rural areas and mitigate the impact of COVID-19 on education. UNESCO indicated interest in continued collaboration between TRCN and UNESCO to

ensure rebuilding education in Nigeria. As a first step TRCN developed a concept note for the first partnership with UNESCO taking into consideration the impact of COVID-19.

The first collaborative effort between TRCN and UNESCO focused on capacity building of teachers in digital literacy through an online conference of registered teachers to share ideas for best practices. This first collaboration aligns with the implementation of a joint work plan between UNESCO and ECOWAS to support ECOWAS member states in their response to the pandemic. The training of master teachers, media personnel and other relevant school personnel on distance learning was in line with the UNESCO and ECOWAS work plan and makes TRCN's concept note very attractive to UNESCO's International Institute for Capacity Building in Africa (IICBA) Addis Ababa.

Key Stakeholders and Partners

In the last two decades of TRCN's existence, through the Federal Ministry of Education, TRCN in strategizing to accomplish its programs and activities has regularly interacted and obtained the cooperation and support of the following international development partners. World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Children's Education Fund (UNICEF), United State Agency for International Development (USAID), British Council, Japan International Cooperation Agency (JICA), Foreign, Commonwealth and Development Office (FCDO), FHI 360, Partnership to Engage, Reform and Learn (PERL), and Save the Children, amongst many other stakeholders. The area of support and co-operation obtained from the above mentioned, development partners vary depending on their own focus at the time. However, highlighted below are some collaborative efforts with some international partners and the TRCN.

UNESCO has collaborated with TRCN on a series of programmes, including capacity building of teachers on digital literacy, online conference of registered teachers and capacity building programs for TRCN state coordinators and some selected Staff. While digital literacy was geared toward building teachers' knowledge of information technology, the virtual online conference helped the sharing of ideas especially in mitigating learning challenges posed by the COVID-19 pandemic. The capacity building for TRCN staff was essentially to train staff on monitoring the TRCN program and pedagogical training. Other programs that UNESCO is bringing TRCN in to collaborate are UNESCO-ECOWAS capacity building for teachers, radio and TV personnel on distance learning. The overall goal of the project is to ensure continuity of learning during school closures occasioned by the COVID-19 pandemic and to prepare schools to be resilient and respond to future shocks to the education system.

FCDO/UKAid, a fundamental part of teacher education in Nigeria, has collaborated with TRCN on some Teacher Development Programme (TDP) to effectively implement the National Teacher Education Policy (NTEP) to train in-service teachers, teacher educators and student teachers. Their technology enabled interventions have been evident in their work with relevant federal and state actors including the TRCN to improve teacher effectiveness across states in Nigeria. Sight Savers is an FCDO program that supports

education for children with disabilities and address the challenges faced by teachers and some ways of addressing them.

UNICEF, the Global Partnership for Education (GPA) COVID-19 response program, is aimed at strengthening Nigeria with a COVID-19 response programme on "Continuing Learning through home-based platforms". The program includes a teacher capacity development component which will enable teachers to utilize flexible digital and remote / home-based learning resources. The project is expected to gather data on the digital needs assessment to enable development of the training program for teachers on how to respond decisively and effectively to disruptions created by conflict or a pandemic.

Global Partnership for Education (GPE) Accelerated Funding on Education in Emergency organized a workshop on a U.S acceleration funding grant given by GPE in Emergency in Nigeria. UNICEF serves as the grant agent in Nigeria. TRCN and NTI, under the GPE projects have the responsibility of training 28,000 unqualified teachers. One of the objectives of the GPE project is to establish robust teacher preparation, professional development and recruitment. Another project goal is the capacity building of head teachers, on leadership development to address the challenges of the out-of-school children.

British Council focuses on and helps with language and education in Nigerian language and numeracy, Reading and Numeracy Activity (RANA) in early grades, teacher development and Kano Literacy and Mathematics Accelerator (KaLMA). KaLMA is a pilot programme aimed at strengthening the foundational skills in literacy and numeracy for children in primary 4 to 6 in public primary schools in Dawakin Tofa and Wudil LGEAs of Kano state. Since 2020, the program has experimented with a variety of models. TRCN is deeply involved with the British Council on this program to ensure only registered teachers are engaged to ensure continuity and sustainability.

USAID funded Northern Education Initiative Plus (NEI plus), a project to improve literacy instruction for primary 1- 3 pupils, as well as operating non-formal learning centres geared towards increasing access for out-of-school children. TRCN was fully involved in the process of the development of a national reading framework with NEI Plus. The project printed and distributed state of the art "Mu Karanta" (Let's Read!) teaching and learning materials in Hausa and English to primary and non-formal learning centres and trained teachers in early grade reading (EGR), providing professional development for teachers.

The Technology Enabled Learning Futures

Prior to the COVID-19 pandemic, learning operated traditionally in the four walls of the classrooms for most places, especially in Africa. As Oyanna (2020) suggests, COVID-19 transformed the education of students across the globe, and the change is an indication of better transformations in education. The pandemic, without a doubt, has re-innovated teaching and learning so much that education is now being re-imagined on virtual platforms. Nevertheless, the real question would be, how ready is the entire world for these transformations? Especially in the developing world where infrastructural and knowledge dearth are issues to contend. All thanks to the Global Education Coalition

(GEC), which is launching the Global Learning House to help mobilize international solidarity and innovative solutions to support learning, especially for the most disadvantaged learners. This platform, that provides supplemental and remedial educational resources and instruction, at no cost, to mitigate COVID-19 induced learning losses, will also provide at least one million learners with new learning opportunities anywhere, at any time.

It has become apparent that learning should be blended to avoid the catastrophe experienced during the first and second waves of the Coronavirus. More so, as Cleveland-Innes et al (2019) posits opportunities have been created for content delivery and administration owing to the shift to an online and blended learning approach. On the one hand, the COVID-19 pandemic no doubt has enabled a nouvelle learning space and technology such as virtual learning. On the other hand, it has reshaped the education delivery across the globe. Rightly so, Oyanna (2020) buttresses that the COVID pandemic, which resulted in school closures, made countries across the globe "take decisive actions to accelerate the learning of school students through" (Oyanna, 2020, p.1) virtual learning.

However, to effectively and productively enable a technology learning future, some core prerequisites like access to technological tools, data availability and accessibility and requisite operational skills, will be needed. Little wonder Cleveland-Innes et al. (2019), retraces that, to a considerable extent, knowledge, expertise, support and leadership styles available for transmission to online and blended learning, determines the success rate. Similarly, Porter et al. (2014) strengthens that academic should take a stand for seeing the Technology Enabled Learning initiatives through. Murphy (2016) on the other hand, feels that the best way to approach the change and opportunities offered by Technology Enabled Learning is investing robustly in capacity building of educators not only to function appropriately in the new phase but to as well remain in control of the teaching process. Talking about a technology-enabled future is to talk about smart futures, e-futures and all the virtual e- modes of learning you can refer to. Although this seems quite a tall dream for Nigeria due to the many inherent challenges that on the face value seems insurmountable. Of the two major identified areas to enable a realistic technology future, just one is prioritizingfor now, "getting requisite skill." The interventions ongoing in Nigeria now are to build educators' learning through adequate training and retraining to ensure that they move learning to virtual platforms. UNESCO (2020) emphasized the fact that "policy-makers must take decisions that carry enormous repercussions for a wide range of stakeholders under time pressures and often with conflicting or incomplete information" (p. 2).

Based on the observations above, partnerships are needed in the aspects of infrastructural development and other issues relating to broad bands. Governments across Nigeria (Federal, State and Local education areas) are practically overwhelmed, whereby leaving all these in their hands will just widen the educational divides amongst the haves and have nots even more.

Conclusion

Partnership is inevitable in a COVID-19 era. The imperative of partnership requires the strong of the world to assist the vulnerable of the world especially in education. Teacher professional development in Nigeria is a good example. There are many other African countries with areas in need of partnership. Because a high percentage of disadvantaged learners are in Africa, partnerships will help ensure no African child is left behind in the new future of technological learning.

This explains the TRCN advocacy for "**ONE TEACHER, ONE LAPTOP.**" Possible collaborations that can see this idea through could be that a company agrees on mass production and supply of laptops to the teachers while the cost is gradually built into the teacher's salary to enable them to pay in instalments without really feeling the pinch of a huge deductions. Education has a direct or indirect impact on all the SDGs, and we can leverage education and assure attaining the 17 SDG goals by 2030.

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EXPERIENTIAL LEARNING IN INTERNATIONAL CONTEXTS: EFFECTIVE TEACHING AND LEARNING STRATEGIES FOR PUBLIC HEALTH AND NURSING STUDENTS

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ABSTRACT: In this paper we will share successful teaching techniques for creating effective learning experiences for adult learners in an international context. We studied the experiences of two groups of Chinese undergraduate students from public health and nursing in short-term study abroad programs in the United States. We used the experiential learning theory described by Kolb (1984) to understand which teaching and learning strategies were considered meaningful by Chinese undergraduate students. We found that they preferred activities which involved opportunities for building relationships with American colleagues such as community engagement, shadowing, and learning English language. They considered lectures about public health topics informative but less meaningful as compared to more interactive and hands-on learning activities.

Keywords: public health, nursing, study abroad, teaching, learning, strategies

In the past few years, just before the global pandemic, the number of Chinese undergraduate students in short-term study abroad programs increased substantially, especially in the field of public health and nursing. These programs are designed to enhance skills related to cultural competence (Huang, et al., 2018; Powell & Biederman, 2017). This new trend of study abroad programs in the public health field could transform global health practices. In this study, we sought to develop a deeper understanding of the learning and professional development needs of Chinese undergraduate students who participated in a short-term study abroad program in the fields of public health and nursing at an American university. We studied students' preferences regarding teaching and learning strategies in public health and nursing study abroad programs. This work is particularly important now since the global pandemic has spotlighted the importance of learning from and about different countries' public health systems. This study fills the gap in the literature about cross-cultural learning experiences in the field of Public Health. The findings of this study will help administrators and faculty in organizing effective study abroad programs in the future. Furthermore, this study provides better understanding of experiential learning and how experiential learning can be orchestrated and measured in terms of its effectiveness in international contexts.

Literature Review

Extensive literature has been produced about the experiences of nursing, medical, and pharmacy students in the last two decades (Edmonds, 2012; Kokko, 2011; Kulbok, et al., 2012; Maltby, et al., 2016).

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Many of these are case studies which focused on the impact study abroad experiences have had on students' personal and professional lives (Edmonds, 2012; Fairchild et al., 2006; Gilboy & Bill, 2011; Kokko, 2011; Kulbok et al., 2012; Larson & Allen, 2006; Maas & Ezeobele, 2014; McComb et al., 2019; Scott et al., 2019). Most of these studies focused on learning outcomes and rarely mentioned or discussed successful teaching strategies for creating effective and meaningful learning experiences for health-related fields during their study abroad program. However, the following studies mentioned teaching and learning strategies which were used during these programs. Fennell (2009) discussed a five-week public health study abroad for American students in Europe. Fennell (2009) argued that the program had a profound impact on their worldview. In terms of teaching and learning strategies, Fennell (2009) mentioned site visits, interactive lectures, and discussions. The first two weeks were spent in lectures at a university in France, two weeks were spent on site and cultural visits, and during the last week students prepared short presentations on public health issues. Additionally, students prepared portfolios, and the program concluded with final exam and participation in HIV/AIDS musical festival in Paris. In another study, McComb et al. (2019) presented the study abroad experience of American students from Public Health and Engineering programs in Rome, Italy. The purpose of the program was to create an intercultural immersive educational experience for students. McComb et al. (2019) used online lectures, case studies, hospital visits, discussion sessions with colleagues and faculty, industry and cultural tours, reflection, and team projects in their study abroad program. Dyjack et al. (2001) discussed an experiential public health study abroad program. They focused on developing understanding of public health issues locally and globally, learning about the social and behavioral roots of public health problems, understanding linkages of public health problems with different aspects of life such as technological advancements, urbanization, industrialization, and skill development related to public health. All these studies claim that these experiences had a profound impact on students' worldview and some studies claimed deep learning and transformative experiences for students during these programs. In terms of strategies, all these programs had lectures and site visits in common, however, there was no mention of the effectiveness of these teaching and learning strategies particularly from students' perspectives.

Kulbok et al. (2012), in their extensive literature review about international experiences in nursing, mentioned that research on two-way exchange experiences is lacking and most studies are from Western countries – particularly a larger share of programs and studies originated from the U.S. Many of the studies are about experiences in higher income countries such as Europe and the United States. (Ailinger et al., 2000; Anders, 2001; Carpenter & Garcia, 2012; Charles et al., 2014; Foronda & Belknap, 2012a; Foronda & Belknap, 2012b; Gilboy & Bill, 2011; Hagen et al., 2009; Hu et al., 2010; Larson & Allen, 2006; Maltby & Abrams, 2009; Sandin et al., 2004). There are a few studies where participants from developing countries travelled to developed countries (Wang et al., 2008). Hagen et al. (2009) argued that the literature represents the outcomes of these experiences from "the guest students' point of view, never from the students and faculty from host institutions" (p. 477). This means what we know about study abroad in public health and nursing fields is interpreted and presented from Western perspectives and how students from developed countries perceived and interacted with other countries' healthcare systems and cultures.

In recent years, short-term education abroad programs in the United States and other Western countries have become increasingly popular for Chinese students in the fields of public health, nursing, and medicine (Yue & Wu, 2013; Zheng et al., 2016) in part due to the creation of Chinese policies to strengthen their international education. There are several studies available which compared Chinese learners to Western learners. However, Wu (2015) argues that these studies often contrast Chinese learners with Western learning conceptions and practices. Wu (2015) mentioned that these studies used Western assumptions and notions of learning and as a result the findings present "a distorted understanding of Chinese students" (p. 753). By including Chinese students' perspectives, we address the social justice issue of representation of the student population from the East in a body of literature that is heavily populated with studies presenting student populations from the West.

Theoretical Framework

An important aspect of this paper is our attempt to advance our conceptual knowledge of experiential learning. Kulbok et al. (2012) mentioned that "out of 23 studies reviewed only three included a theoretical framework for analysis of nursing students' experiences during international placements: two used Campinha-Bacote's (2002) model of cultural competence and one used Bennett's (1993) continuum of intercultural sensitivity" (p. 17). Our study will provide clarity and add to our conceptual understanding of experiential learning and how experiential learning is orchestrated and perceived by the students in terms of its effectiveness in international context. Several scholars from the fields of adult education and human resource development have tried to conceptualize the relationship between experience and learning, such as Dewey (1986), Lindeman (1984), Kolb (1984; 2014), Jarvis (2015), and Fenwick (2003). We particularly focus on the experiential learning process presented by Kolb (1984) to understand the cross-cultural learning experiences of our participants. Kolb (1984) mentioned that learning is a process "whereby knowledge is created through the transformation of experience" (p. 38). Kolb (1984) presented four stages of learning: concrete experience, reflective observation, abstract conceptualization, and active experimentation. We used Kolb's (1984) Experiential Learning Theory (ELT) as our theoretical framework and tried to understand how experiential learning works on the ground and how it is perceived by students in cross-cultural context.

Research Design

Participants and Context

This paper explores the study abroad experiences of 29 Chinese undergraduate students from China Eastern Medical University (pseudonym) participating in an eight-week study abroad program in the United States in the summer of 2019. The 15 undergraduate students majoring in public health and 14 students in nursing participated in the healthcare professional program. The students are aged between 18 and 21 years old. There were three male and twelve female students in public health and one male and twelve female students in the nursing program. One student was in her freshman year and the rest of the students were either in their sophomore or junior year. The public health

students came from three majors: public health administration, food hygiene and nutrition, and preventive medicine.

Data Collection

We used a variety of data collection strategies such as program evaluations, surveys, interviews, a focus group, and reflection papers (Creswell & Creswell, 2018). Since this is an ongoing study, our preliminary findings are derived from program evaluation data from nursing and public health students and in-depth interviews from public health students. Merriam (2009) suggested using interviews as the best technique to understand participants' perspectives. We conducted individual interviews with our participants that lasted for 60 minutes each. The questions focused on students' perceptions of teaching and learning activities during their study abroad program. We also collected students' reflection papers and journals at the end of the program. The students were encouraged to reflect on their professional learning experiences in their reflection papers especially during shadowing in the county health department. The reflection papers were written in English and the average length of the papers was five pages. Journals were a record of students' daily activities, including any findings or reflections, and were written in Chinese. Since this was a group experience, it was important for us to understand the group perceptions of learning. We conducted a focus group at the end of the program. Due to busy schedules only six students could participate in an-hour long focus group. All the data were collected in the USA during the eight-week study abroad program. Overall, employing multiple techniques to collect data helped us examine our research participants' experiences and understand their perspectives at various points during the program. Also, the variety of data collection strategies provided students several opportunities to express themselves in different forms both written or spoken in English or Chinese. This was important in a cross-cultural setting especially when research participants were using more than one language.

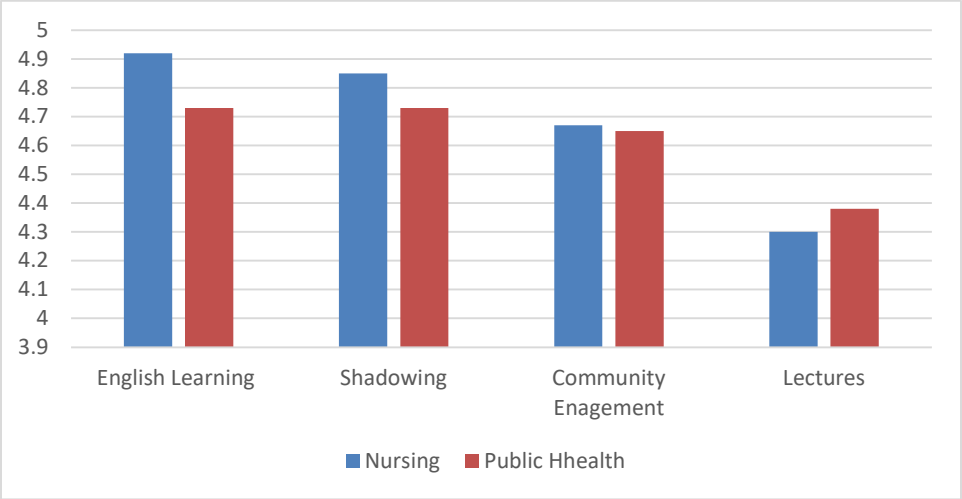
Data Analysis

Qualitative data analysis is an interactive process and starts from the very first interview or observation (Creswell & Creswell, 2018; Merriam, 2009). The data analysis process included the researchers' monthly meetings which continued over a year. In our meetings we discussed initial findings and our impressions to develop our collaborative interpretations. We read and re-read all the data and identified key themes. We used a thematic analysis technique because it is helpful to identify patterns within and across data to better understand participants lived experiences (Braun & Clarke, 2006).

Findings

Students were asked to rate all the activities they participated in during the program. Students rated each activity on a scale from 1 to 5, 1 being the lowest and 5 the highest. Figure 1 shows students' average ratings of different activities. They rated learning English language as the highest, shadowing the second, community engagement third, and lectures fourth as meaningful activities for their learning during the study abroad program.

Figure 1. Teaching and Learning Activity Preferences



Note. Ratings of various teaching and learning activities by public health and nursing students

1. English Learning

Learning English was rated the highest by both groups. Learning and practicing English was an important goal for almost all students. They were provided formal English learning classes to improve their written and spoken English. Since building relationships was an important aspect of their learning, English helped them communicate with others. Zhang shared,

> *Generally, English is an essential language for now. For me, it is English. Use English to understand others. As long as I can understand what other people say, I will be able to converse a bit. I have observed different ways of saying Hello to each other. It is embarrassing if we don't understand each other. It is obvious to me that I was not able to speak anything to Alpha at the beginning, but later on, I was able to chat with him. Zhang*

Also, many students mentioned that this activity greatly improved their writing and speaking skills which increased their level of self-confidence. They also mentioned that learning English improved their sense of self. For example, QiFei shared that he was able to overcome his fear of talking to foreigners. QiFei was also very strategic in his own learning process since he systematically started asking one question a day to improve his confidence.

> *Having overcome the fear of communicating with foreigners, now I no longer think that speaking English is tough work. And I have grown in the following ways. First, I developed my habit of speaking English with my roommates. Second, I started to raise at least one question every day. Third, I tried to speak as loudly as other people can hear and paid attention to my pronunciation to ensure people can clearly understand what I mean. This experience has shaped my good habits and self-confidence. In the future, I will continue practicing my spoken English and encourage myself to interact with people more. Qifei*

2. Shadowing

Shadowing was the second highest ranked activity by the students. They considered shadowing a useful teaching and learning technique because it helped them develop holistic understanding of their profession. It provided them hands-on experience to gain knowledge and skills for their profession. They also mentioned that shadowing provided them an opportunity to learn about American health professionals' values and attitudes towards their colleagues, patients, and health issues in their society. The students considered this important because it helped them to reflect on the public health system in China and think of ways to improve their system back home. Wu mentioned shadowing helped her develop a holistic understanding of her major:

> *Shadowing gave me much valuable experience. Let me jump out of the traditional class and know more about public health. And it helps me realize that my major is not only about medical management, and public health is related to everyone's daily life. Wu*

Binbin mentioned in her interview:

> *Shadowing should be full of five points, because we can learn a lot of knowledge when we include teachers and professors in the textbook, but if the knowledge is not used for practice, only the knowledge in the textbook is just the text. But shadowing gives us an opportunity to see more of the knowledge and written knowledge of these books, how they can be applied to real life by their very experienced staff. So, this is a good opportunity." Binbin*

3. Community Engagement

Community engagement was rated the third meaningful learning activity because it allowed students to communicate with locals and learn about their culture. Public health and nursing students participated in five and two community engagement activities respectively. We analyzed ratings for the two activities in which both groups took part. Public health and nursing students volunteered at county office and presented traditional Chinese medical practices for senior citizens to stay active and healthy. Zhan preferred community engagement activities because he liked communicating with locals and building relationships:

> *This is the best part, I think. We went to the communities, participating in various activities, communicating with the elderly, knowing the life here, some of their experiences and feelings here. Some of their stories are inspirational to me. Zhan*

Fang also shared similar sentiments for community engagement activities:

> *This is an opportunity for in-depth communication. We can reach more people in the local communities, whether it is older adults or other groups. It is a great way for us to communicate with each other. An opportunity to learn, and then gave us a chance to volunteer here in the United States, I feel good about it. Fang*

4. Lectures

Public health and nursing students attended 13 lectures about topics such as global health, aging and living, global maternal leave and childcare, U.S. nursing education and practice, complementary nursing, nursing theory and history, the American health care system, and philosophical and historical perspectives of health and disease. Lectures were rated the lowest in terms of meaningfulness by both groups of students. Although they rated lectures lower as compared to other above-mentioned activities, they considered lectures a valuable teaching and learning technique. They mentioned that lectures improved their knowledge about health issues in the United States and China. It also helped them improve their English language skills and increased their confidence levels. However, they faced some challenges understanding lectures for example:

> *I may give four points, because I am a Chinese student after all, that is, listening to a lot of English information (is challenging). At the time of getting information, there is still a Chinese and English in the brain. The process of conversion. Then, when there is more information, it may be impossible to remember, that is, the meaning of knowing when listening is completely clear, but it may not be left in the mind, just after the lecture or two days later, then when you think about it again, the information you may remember is not as much as that heard in direct Chinese. However, the lectures have a wide coverage and many professional knowledges can be covered, but it is also very good. Bibbin*

Discussion

We found that participating in a study abroad program as an experiential learning as mentioned by Kolb (1984) was a significant learning experience for our participants.

The Chinese students perceived learning from a holistic perspective. They were not narrowly focused on their field of study, rather they approached learning from a broader and lifelong perspective. Their conception of learning was not confined to textbooks or lectures, and they considered learning was beyond textual knowledge. What constituted valuable knowledge was not in books or lectures but in human interactions. They defined "text knowledge" and information "learned in books" as less needed as compared to "real life knowledge" which gave them the opportunity to communicate with others and build relationships.

Additionally, sense of self and emotions were important in the Chinese students' learning process and were deeply interconnected. Many students mentioned different feelings associated with their learning experience such as shame, embarrassment, courage, strength, losing face, feeling uncomfortable, feeling envious, and feeling warmth and respect. Sense of self is also deeply connected with social relations and human interactions.

Furthermore, building human connections and relationships were the most important aspect of the Chinese students' learning process. Communication was important for building these relationships. Understanding others and being understood by others was important for them. The students preferred communal and interactive learning activities

over passive and individual learning activities. They rated learning English as the highest and most effective learning strategy because it provided them confidence and skills to communicate with American colleagues and locals. They ranked shadowing and community engagement as second and third respectively. The common factor in all these activities was the chance to communicate with others and build relationships with different people. Lectures and reflection were rated lower than the above-mentioned activities by the students.

In terms of discussion about Eastern and Western perspectives of learning, Merriam and Kim (2011) compared Western and non-Western perspectives on learning and knowing. Our findings provide empirical evidence and confirm Merriam and Kim's (2011) analysis of Western and non-Western approaches to learning and knowing since they mentioned that non-Westerners have a holistic approach to learning which "recognizes the relationship among an adult learner's body, emotion, and spirituality" (p.386). Merriam and Kim (2011) also mentioned that non-Western perspectives of learning "place more value on learning embedded in everyday life because non-Westerners believe knowledge is embedded in everyday life experiences. They do not value what is learned in formal school setting more than what is learned in daily life" (Merriam & Kim, 2011, p.386). In terms of the communal aspect of learning Merriam and Kim (2011) mentioned that lifelong learning is seen as a journey with community and learning occurs through observations of others and through practicing what is learned.

In a conceptual paper, Trinh and Kolb (2012) discussed Eastern and Western conceptions of experiential learning and argued that Eastern ways of learning are essentially embedded in Experiential Learning Theory (ETL) as presented by Kolb (1984). Trinh and Kolb (2012) mentioned that Confucius believed that learning, thinking, and acting are significant components of learning. Trinh and Kolb (2012) argued that Kolb's (1984) ELT also encompasses all functions of being human such as thinking, feeling, acting, and reflecting similar to the Confucian holistic conception of learning. Although Trinh and Kolb (2012) argued for the similarity between Eastern and Western conceptualization of experiential learning, we argue that Kolb's (1984) ELT does not place strong emphasis on communal learning and building relationships. Also, Kolb's (1984) experiential learning process does not address the emotional aspect of learning particularly in cross-cultural context. We argue it is important to learn about the conceptualization of learning in different cultures and create learning experiences which can be inclusive of all learners. Merriam and Bierema (2014) also argued that it will be more beneficial to merge Western and non-Western approaches to teaching and learning to achieve highly effective learning experiences for diverse learners in cross-cultural contexts.

Conclusion

Our study shows that there are some commonalities in conceptualization of experiential learning between Western and non-Western approaches; however, they may have different philosophical underpinning in different cultural contexts. So, it is important to consider cultural values and conceptions of learning to cater to the needs of diverse learners. We argue that merely participating in a study abroad program is not enough for effective student learning experiences. There is need to further create opportunities for

human interaction through social-cultural engagement, application of knowledge, and deeper reflection. For public health study abroad programs we suggest the following teaching and learning strategies for creating deep learning experience for students in cross-cultural context.

- Provide support for learning and practicing English language for students coming from non-English speaking countries.
- Include a socio-cultural learning component in the program along with professional knowledge.
- Provide opportunities for students to engage with the local community and health professionals.
- Include lectures about important health related issues to provide students background contextual knowledge of the health issue.
- Conduct regular debrief sessions throughout the program to answer students' questions and address their assumptions.
- Provide reflection opportunities in non-verbal forms such as writing journals, papers, art, videos, vlog etc. to cater to diverse learners.

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CULTURALLY PROFICIENT PROFESSIONAL LEARNING: LESSONS LEARNED FROM AFRICA

Corinne Brion, Ph.D.[1]

ABSTRACT: Culture is a predominant force in people's lives that impacts learning and thus culture influences learning transfer. Because working across nations has become the norm and every year billions of dollars are spent on professional learning around the world, it is crucial for organizations to understand the role culture plays on the learning transfer process. Using a multidimensional model of learning transfer as a conceptual framework, this qualitative study used a case study approach to examine the impact of culture on learning transfer in Burkina Faso and Ghana, West Africa. Interviews were conducted with 20 principals who attended leadership professional learning in Ghana and Burkina Faso. Data collection also included observations. Findings indicated that several cultural factors influenced learning transfer in these two nations in the area of pretraining. Specifically, cultural differences pertained to the notion of time, the preference to avoid uncertainties, the importance of formalities and power dynamics. Based on these findings, the author offers recommendations.

Keywords: culture, training, learning transfer, professional learning, pretraining

For this paper, the author defines professional learning as all learning opportunities available to adults working in any settings, in any positions and levels. Such learning may occur online or face-to-face both formally and informally in workshops, classes, courses, and seminars. In 2020, American organizations alone spent $82.5 billion on professional learning (PL) to develop their employees' skills and knowledge base (Statista, 2020). Yet despite the money invested, seminal scholars such as Ford et al. (2011) and Saks and Belcourt (2006) maintained that these investments yield low to moderate results because employees do not often transfer the newly acquired knowledge to their workplaces. Saks and Belcourt (2006) affirmed that in Canada the rate of transferring learning to the workplace is low, with estimates of 38% of trainees failing to transfer immediately after PL events and almost 70% faltering after a year.

Culture is a predominant force in people's lives that impacts learning and the implementation of that learning (Rahyuda et al., 2014; Yang et al., 2009). Because working across nations has become the norm and cultures are not homogeneous among nations, it is crucial for organizations to understand the role culture plays on the learning transfer process in order for organizations to get a return on their financial, time, and human investments (Raver & Dyne, 2017).

Being able to transfer newly acquired knowledge and skills is the ultimate goal of PL, yet it is the most challenging to achieve (Baldwin et al., 2017; Grossman & Salas, 2011). Despite the large amount of research on learning transfer, there are a limited number of empirical field studies (Choi & Roulston, 2015; Rahyuda et al., 2014). There are also few learning transfer models that account for cultural differences on the transfer of learning process (Rahyuda et al., 2014; Yang et al., 2009). To date, learning transfer models have outlined the importance of organizational culture (Ford, 2020; Gil et al., 2018) and

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specifically the role transfer climate plays in enhancing or hindering learning transfer (Blume et al., 2019; Grossman & Salas, 2011; Hughes et al., 2018) but none have taken into consideration the central influence of culture on the entire transfer process. The purpose of this qualitative study was to fill this knowledge gap by examining how, if at all, cultural factors influenced learning transfer. To illustrate the importance that culture has on PL and because there is a lack of studies that offer a practical perspective from developing countries (Rahyuda et al., 2014), this study took place among principals in two West African countries: Burkina Faso and Ghana. If practitioners and PL organizers understood how culture affects learning transfer, organizations around the world would get a better return on their investments because implementation of new knowledge would take place. In addition, employees would feel more empowered which would have a positive impact on the organization's climate and culture.

This research adds to the adult learning and learning transfer literature while also providing some country-specific and practical recommendations that will benefit training organizers and facilitators in Burkina Faso and Ghana. These recommendations will also provide a blueprint that other facilitators, leaders and human resource officers in global organizations and multinational corporations can use to reflect on their learning transfer practices within the culture in which they operate.

Summary of the Literature

Learning transfer, also referred to as training transfer, is defined as "the effective and continuing application by learners—to their performance of jobs or other individual, organizational, or community responsibilities—of knowledge and skills gained in the learning activities" (Broad, 1997, p. 2). Learning transfer has been studied for over 30 years theoretically and quantitatively in the organizational psychology, business and human resource development fields. In their seminal meta-analysis paper, Baldwin and Ford (1988) were first to categorize the enhancers and inhibitors to learning transfer. The authors organized them into three input factors: (1) the factors related to learners' characteristics; (2) the factors pertaining to the intervention design and delivery; and (3) the factors affected by the work environment. The influence of cultural factors on learning transfer was absent from any of the training inputs. Broad and Newstrom (1992) identified six key factors that either hinder or promote learning transfer: (a) program participants, their motivation and dispositions and previous knowledge; (b) program design and execution including the strategies for learning transfer; (c) program content which is adapted to the needs of the learners; (d) changes required to apply learning, within the organization, complexity of change; (e) organizational context such as people, structure, and cultural milieu within the organization, that can support or prevent transfer of learning. "Culture is the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede, 2011, p. 3). Because learning is a social endeavor and knowledge is contextual, people's cultures impact the way they learn, interact, communicate, and resolve conflicts (Lindsey et al., 2018). Culture also impacts learning transfer because if people do not learn due to a language barrier or the non-respect of traditions and preferred learning styles (collectivistic versus individualistic, for example), they will not be able to implement the new knowledge to

their jobs. Currently, there are a limited number of research studies that examine the influence of culture on the learning transfer phenomenon in its entirety (Caffarella & Daffron, 2013; Closson, 2013; Sarkar-Barney, 2004; Silver, 2000; Yang et al., 2009). In this paper, the author reported the findings pertaining to the influence of cultural factors on the learning transfer process in the areas of pretraining only.

Conceptual Framework

On the basis of the literature on the role of culture role on the learning transfer process, some authors argue that there is a need for a comprehensive, multidimensional, and unifying model of learning transfer that considers culture as a key factor (Raver & Van Dyne, 2017). Therefore, the author merged and extended existing models of learning transfer to construct the MMLT (Brion, 2021).

Multidimensional Model of Learning Transfer (MMLT)

The MMLT is a culturally grounded and evidence-based model that developed from data collected, analyzed, and synthetized over six years in educational institutions in five African nations (Brion, 2021). Even though the data were collected in Africa, the findings could be informative to other nations. In MMLT, the author asserts that culture is the predominant enhancer and inhibitor to transfer and that culture affects the entire learning transfer process (Brion, 2021). MMLT is composed of six dimensions: Pretraining, Learner, Facilitator, Material and Content, Context and Environment, and Post-Training (See Appendices).

Pretraining

Pretraining includes the orientation of facilitators and other key stakeholders so that they can support the PL once it has begun. Pretraining also includes communicating expectations to facilitators and learners explaining who will benefit from the PL event, stating that participants are accountable to implement new knowledge and sharing the schedule, goals, and information that is perceived as mandatory (Yang et al., 2009).

Learner

Learners are the participants in the PL program. This dimension refers to understanding the learners' motivation and their background. The learner category also includes understanding differences in learning styles (Lindsey et al., 2018) as well as language and writing differences.

Facilitator

Effective facilitators must understand the adult participants' background as well as their own and how their beliefs may affect learning and the learning transfer (Caffarella and Daffron, 2013). Facilitator also refers to the understanding of language and writing differences, setting goals, and the selection of participants (Yang et al., 2009).

Content and Materials

Content and Materials involves using evidence based, culturally relevant, and contextualized materials (Caffarella & Daffron, 2013). It also involves using a pedagogical approach based on andragogy, or how adults learn best (Knowles, 1980; Mezirow, 2000).

Context and Environment

This dimension comprises the training and work environment and the sociocultural context. It also refers to having enough time to transfer knowledge, the support for action, the resources, the freedom to act, and peer support (Burke & Hutchins, 2008).

Follow-up

Follow-up is often overlooked and is necessary to avoid skill decay and training relapse (Brion, 2021). Follow-up includes tutor-facilitated networks via mobile technology (Brion, 2018), coaching, testimonials, Professional Learning Communities (PLCs), coaching, and E-coaching (Speck & Knipe, 2005). Understanding how culture practically impacts the pretraining dimension in Burkina Faso and Ghana would help PL attendees implement new knowledge, improve organizations' outcomes while also increasing their company's return on investments in these two nations.

Methods

This qualitative study is part of a larger project that used a case study design to better understand the impact of culture on learning transfer. The author opted for a case study approach because it provides the ability to examine in detail a phenomenon as it manifests in everyday contexts (Yin, 2014). In this paper, the author reports the findings related to the following research question: How did the pretraining dimension of the MMLT influence learning transfer?

Selection of Sites

The sites selected for this research study were seven leadership PL events in Burkina Faso and 18 in Ghana over the course of six years. Each PL program lasted two to three days. Participants were school principals of low-fee private schools. These sites were selected because the author had access to them and had forged trusted relationships with the principals.

Selection of Participants

This research relied on a purposive criterion sampling of 20 men and women principals, 10 in each country, working in low-fee private schools in urban and rural areas. Their age ranged from 36 to 62 years old. Purposive sampling allowed the researcher to select participants from whom the author could learn the most to answer the research question

of the study (Creswell, 2013; Patton, 2002). Criterion sampling was also used to select participants.

Data Collection

Data collection included interviews with 20 school leaders in 2019 and observations and field notes pertaining to how culture influenced learning transfer from 70 days of training observation. In 2019, the author conducted 10 one-on-one interviews with principals from Burkina Faso and 10 principals from Ghana during the fifth year of her work in West Africa which allowed her to more deeply understand cultural differences and commonalities among the nations. Interviews were semi-structured and open-ended and lasted 45 minutes. Interviews were audio taped and transcribed verbatim in French and English. The French transcriptions were not translated into English but rather coded in French, the author's native language. These interviews occurred approximately three months after principals received the three-day school leadership PL to allow for reflection and transfer time. The author observed the 20 principals during the PL events. She observed a total of 70 days of training over six years: 25 in Burkina Faso and 45 in Ghana. Per Wolcott's advice (1994), the observations were structured.

Data Analysis

Coding is the base of the analysis (Saldaña, 2009). Due to the large amount of data to code, the data were pre-coded by highlighting significant participants' quotes or passages that related to the research questions (Miles & Huberman, 1994). The pre-coding allowed the investigator to place relevant quotes under the MMLT's pretraining category. Following the pre-coding, the analysis of qualitative data took place over two cycles of coding. In round one, the author used in vivo coding to develop codes for each key point emerging from the interviews, documents, field notes, and journal. Examples of codes that emerged from the data during this coding phase included titles, gender issues, age differences affect interactions. In round two, using axial coding, the researcher grouped the preliminary codes into overlapping categories to create themes. Examples of codes were power dynamics, formalities, group.

Trustworthiness

To enhance the present study's internal validity, the researcher included four strategies into the design of the present study. First, the author triangulated the data using several different sources of data such as the interviews and numerous observations. The different sources of data contributed to achieving saturation and the quality of the data collected (Creswell, 2013). Second, this researcher went back to the participants to ask them to check the accuracy of the findings (Mero-Jaffe, 2011). Third, the author created a data trail (Rodgers, 2008). This strategy helped ensure that sufficient transcript data supported the results reported in this study. Following this process also ensured that the author was not sharing her viewpoint but, rather, the perspectives of the participants.

Findings

To preserve the integrity of the findings, the author used the participants' comments verbatim. She also used pseudonyms to protect the anonymity of the participants. In this paper, the author shared the findings pertaining to the MMLT's pretraining category because this dimension is often overlooked in the learning transfer process.

Pretraining

During the six years that the author worked in Burkina Faso and Ghana, she saw in all principals the following cultural factors affecting the pretraining phase over and appeared to hinder learning transfer: the notion of time, the importance of avoiding uncertainty, respecting formalities and understanding how power is viewed and enacted.

The Notion of Time

In both nations, the notion of time was lived differently. In Burkina Faso, participants arrived one hour early to the PL and the event started on time whereas in Ghana, it was common for the PL to start two to three hours after the scheduled time as the team of facilitators would wait for most of the attendees to arrive. In her journal, the researcher wrote the following comment regarding the notion of time: "Coming from the West, I often wondered if the tardiness was due to the heavy traffic or the fact that participants were school leaders who may have gone to their schools prior to the start of the PL." Curious about the reasons for such dissimilarities between Burkina Faso and Ghana, I sought some explanations from the participants and her Ghanaian local colleagues who explained that "it was cultural." My local colleagues advised the facilitating team to start the PL on time. Agnes pursued: "As participants see the value in the PL, they will come on time. They come late first because they do not know what they can gain from training events, it happens all the time." A Ghanaian principal named Godwin used a joke to make fun of himself, he said: "You Americans have nice watches, but we have the time." Although this joke may be seen as a stereotyped notion of culture, it denoted the unperturbed attitude that the Ghanaians had towards time and was important to facilitators to plan their PL accordingly so that learning transfer was not inhibited.

Understanding the notion of time has important repercussions for the pretraining phase. During this phase PL organizers should orient facilitators on cultural differences, communicate expectations and norms to facilitators and learners, explain who will benefit from training, state that participants are accountable to implement new knowledge, and share the schedule. If participants come late, they miss some training content and thus they will not be able to transfer knowledge they may have missed due to the different understandings of the notion of time. It was also important to know that Burkinabe come early to PL events as facilitators could use this time to bond with their audience, re-explain concepts, and ask participants about their schools.

Preference to Avoid Uncertainty

Understanding that Burkinabe and Ghanaian participants needed to know in advance details about the training was important during the pretraining phase. Participants did not feel comfortable not knowing about the PL event ahead of time. Participants requested clear descriptions of the training and why they should attend, how the training would benefit their schools, who the facilitators were, the PL goals, and a detailed schedule for each day that outlined breaks and lunch times. When the author asked local colleagues in both nations about the need to create an hour per hour schedule, they replied:

> It is part of our culture, you just have to do it, or they will not come. I think it is because it takes a lot of effort to come to a training, transportation in the dust, time, gas, so they want to know if it will be worthwhile.

Martha from Burkina Faso added:

> I like to know what is going to happen in advance, so I can get prepared, get there on time, and get coverage at school and at home. I also like to know where the training is and if there are breaks and food, so I know if it is going to cost me money.

Adwoa in Ghana shared the sentiment of the group when she said: "I think it is nicer when we know all the details and expectations in advance so we can decide to come or not." Reuben noted:

> We also do not often go to hotels for a training, so when we know the location in advance, the detailed content and if we are expected to do something post training, who will be there because we do not want to waste our time with training that are not well put together and do not force us to improve.

As participants mentioned, providing detailed information ahead of time was not only a cultural expectation, but it also increased motivation, attendance, and punctuality. Avoiding uncertainty by preparing a detailed description of the PL allowed participants to decide to attend the PL or not.

Formalities Matter

In both countries, people value and honor traditions. Burkina Faso, however, is more formal than Ghana when it comes to PL. For example, is not unusual for Burkinabe to have an opening and closing ceremony with media, speeches, and special addresses at PL sessions. Being French, the researcher could hear the formality of the French language during these ceremonies. In an excerpt of her journal, the author wrote:

> I could see the conventionalism and importance of these events in the formal traditional attires people wore. During the pre- and post-PL ceremonies, organizers or authority figures gave formal speeches outlining their roles and titles, the importance of the training, and welcoming participants and facilitators.

This custom was essential to understand when planning for PL to plan for more time for speeches and for closing remarks. It was also important for facilitators to prepare a speech. Finally, understanding this tradition helped build trust and rapport with participants, local dignitaries, and officials. Additionally, this cultural practice was significant for PL because time and resources had to be allocated for the ceremonies.

The Importance of Titles, Gender, and Age

Titles, gender, and age played a significant role in the power dynamics between participants and facilitators. This dynamic was particularly apparent in the Burkinabe PL context. Titles were extremely important. If participants were reverends or had any kinds of affiliations with the Church, they were automatically respected and trusted by the rest of the group. People tended to let reverends speak first. Moreover, academic titles and formal educational levels appeared to matter to trainees. Local facilitators holding a PhD were in the eyes of Eli "important people." Emile exemplified this idea when he said:

> You know here, it makes you look like someone if you have a title and you get respect and recognition, so we are more likely to attend a training and use the knowledge learned if people are known and/or have titles.

Ama seconded this perspective when she said: "If there is a famous or semi-known pastor in the room, I will come because if that person sees value in the training, I better see it too." In their own words, Emile and Ama shared that who is in the PL room matters at first and has an influence on transfer. Consequently, during the pretraining, organizers could share the participants names and affiliations of participants if and when culturally and legally appropriate.

Discussion and Implications

When working in Burkina Faso and Ghana, pretraining is particularly important because local and foreign facilitators may not be familiar with the relation between cultural factors and learning transfer. For example, findings from this research outlined that the Burkinabe culture valued opening and closing ceremonies with dignitaries. Without knowing this and respecting this cultural norm, facilitators may unknowingly disrespect participants and their culture. As a result of this cultural faux-pas, participants may not attend the PL or may not be willing to transfer knowledge. In the same way, participants stated the importance of having logistical details ahead of time. Within the pretraining phase, this study provided specific examples of cultural values that can influence learning transfer and hence provided a road map for organizations and practitioners working in these countries or with countries with similar cultural values.

Based on these findings pertaining to cultural factors within the pretraining phase there is a need for a comprehensive, multidimensional, and unifying model of learning transfer that considers culture as a key factor (Raver & Van Dyne, 2017). The MMLT (Brion, 2021) was designed to promote cultural awareness by respecting participants' cultures when planning, organizing, conducting, following up, and evaluating PL events. This model is salient for all institutions and should be of particular interest to organizations who work with a diverse staff population and/or work across countries.

Limitations

First, the sample was limited to low-fee private schools and second, the schools were located in two countries in West Africa, limiting the generalization of the findings to

other contexts. However, these findings may be informative for PL organizers who work in and with people whose countries have similar cultures.

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REFRAMING A CIVIL RIGHTS HISTORICAL PROJECT AS HUMAN RIGHTS EDUCATION THROUGH A COMMUNITY OF PRACTICE

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ABSTRACT: History tells the Civil Rights struggle through the lens of Selma, Alabama. Bloody Sunday, an event that galvanized a generation, provided the background for an interdisciplinary team of scholars, educators, local historians, and community members to focus on place-based learning experiences and explore civil rights education. The Selma event is viewed as an important vehicle for providing a broader context on freedom struggles as part of the global movement for human rights. Furthermore, cross-curricular approaches to professional development of educators provides a framework for mutual understanding and building global competencies. This article describes the significance of Selma as an example of the struggle for human rights, explains the development of a project related to historical research and understanding, and the methods to create culturally relevant curricula. We emphasize the importance of collaborative projects and the significance of interdisciplinary communities of practice that create mutual understanding and competencies. We believe that the professional development of educators can guide learners to become ethical, global citizens – those who support human rights, such as equity and equality, not only in their own communities, but worldwide.

Keywords: Civil Rights, Human Rights, History, Community of Practice, Place-Based Learning

Racial Justice, Racial Equality, Anti-discrimination, Classism, and Civil Rights are all terms associated with attempts to rectify a core issue found across societies in terms of human rights. Unfortunately, these are not new issues in today's world, and no society is truly immune from race-based discrimination or human rights injustices. On a Sunday afternoon in 1965, the stark reality of Racial Discrimination was on full display for the world. For this was *Bloody Sunday*, when millions watched on their televisions as peaceful marchers were brutally assaulted by those sworn to protect all citizens. This tragedy occurred in the small, southern town of Selma, Alabama (Selma) which, as a result, became a significant site that illuminates freedom and civil rights struggles throughout the world. With racial tensions and social injustices again at the forefront worldwide, it is imperative for educators and practitioners to acknowledge current events related to human rights, reflect on their meaning, connect them to factual history, and expand the learning curricula. By effectively integrating current and historical materials into the classroom, educators can guide the development of ethical, global citizens; those who support human rights, such as equity and equality, not only in their own communities and classrooms, but across the globe (Guo, 2014). This article hopes to expand the conversation on human rights, reflect on utilizing history to discuss race and inequality, examine the methods to integrate culturally relevant materials, and to share best practices for professional development across disciplines and international borders.

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Selma Historical Context

To lay the foundation for this article and the development of our Community of Practice (CoP), it is important to recount the historical facts on Selma and the critical moments. On the afternoon of Sunday, March 7, 1965, the Southern Christian Leadership Conference (SCLC) and Student Nonviolent Coordinating Committee (SNCC) organized more than 600 Black activists, large numbers of Black children, and a handful of white men and women in Selma. The murder of Jimmie Lee Jackson by an Alabama State Trooper during a peaceful voting rights demonstration in Marion, Alabama weeks earlier had convinced SCLC leaders to plan a protest march from Selma to the Alabama state capitol building in Montgomery. Their goal was to present Governor George C. Wallace with a petition urging the restoration of Black voting rights (Carter, 2000). While most of the demonstrators hailed from Selma, some had traveled from other nearby counties to join the protests (Combs, 2014).

Leaders led the marchers from Brown Chapel AME Church through downtown Selma where they crossed the Edmund Pettus Bridge. As they crested the bridge, they saw a large contingent of Alabama State Troopers and mounted Dallas County Sheriff's deputies blocking their route. A brief standoff ensued as law enforcement ordered the marchers to "return to their homes and churches" (Thornton, 2002). Undeterred, the marchers asked to discuss the matter with the police. After refusing to engage the protestors in dialogue, commanders ordered the state troopers forward (Branch, 1999). Within seconds, the state troopers began pushing marchers, and moments later, chaos erupted as troopers began striking demonstrators with clubs. During these moments, dozens of marchers were bloodied and injured. Images of this assault, broadcast around the world, were a turning point in the Civil Rights Movement and have been the representation for the historical event across the world.

Documentation of Selma Events

A group of journalists, film cameramen, and photographers had gathered in Selma in anticipation of the voting march. They had been ordered by state police to remain in a small area in front of Lehman Pontiac Dealership on Highway 80 (Martin, 2015). From their positions, they captured photographs and video that have made "Bloody Sunday" one of the iconic moments in civil rights history. Thousands of still images and hours of video were taken that day, and Bloody Sunday remains one of the most heavily documented events in world history (Alabama Law Enforcement Agency, 1965).

Unfortunately, however, the public has rarely seen the full picture of what happened on Bloody Sunday as most documentaries only show heavily edited footage that condenses a lengthier conflict into a much shorter event, focusing on the initial few seconds of state troopers pushing aside and striking protestors. As such, a majority of people believe that the main conflict happened on Edmund Pettus Bridge rather than several hundred yards away along a commercial section of Highway 80 (Gaillard, 2015).

Despite this misperception and a lack of attention from preservation experts, the actual site has managed to retain a significant amount of historic integrity, as much of the highway infrastructure and many of the buildings that appear in the background of the

iconic photographs remain today. However, if steps are not taken soon to identify, document, preserve, and interpret these cultural resources, the conflict site might well be lost to future generations. As such, the historical endeavor to accurately document the site became one of the author's main research projects. A second author was intrigued by the original researcher's project in relation to the historical record; thus, they connected their work and passions for preservation and history. The objective became to use this internationally important landmark to tell a more accurate story of how events unfolded on that historic day. This focus then laid the foundation for a Community of Practice (CoP) described in this article.

International Symbolism and Culture

The Edmund Pettus Bridge has been transformed into an internationally recognized symbol of the American Civil Rights Movement and is synonymous with the events of Bloody Sunday. The numerous commemorations that have been held in Selma since 1965 have drawn enormous attention to the bridge, with many of these events organizing symbolic crossings of the bridge that have included several American presidents and world leaders. The commemorations have successfully kept Bloody Sunday's memory alive and relevant to contemporary civil rights movements such as Black Lives Matter and the International Poor People's Campaign. However, the commemorative processions always stop and observe the events of Bloody Sunday from the Edmund Pettus Bridge and rarely observe the events of Bloody Sunday at the actual conflict site.

Consequently, the public fails to see the surviving historic buildings and landscapes along Highway 80 as critical components of this story and, therefore, less deserving of historic preservation. Furthermore, existing documentaries and historical accounts omit several critical moments in the Bloody Sunday conflict. By assembling various publicly available film footage and photographs from different archives in chronological order, a more detailed narrative of the events of the conflict has been developed that shows the conflict actually lasting several minutes rather than a few seconds. The new documented research shows that after the initial clash with State Police, the marchers managed to reform their ranks a hundred yards down Highway 80. There, marchers led a prayer and braced themselves for a second wave of brutality (Evans, 2012). With marchers huddled together for protection, state troopers released teargas into their ranks. Equipped with gas masks, the state troopers and county sheriff's deputies moved into the defensive position armed with clubs and baseball bats. During this second wave of violence, numerous protestors received serious wounds (Evans, 2012). This expanded narrative shows a level of organizational tactics similar to strategies used by military commanders in historical battles.

By interpreting Bloody Sunday as a conflict site akin to a battlefield, important details about the day's events and motivations emerge that complicate existing public commemorations, cloud the accuracy and historical record, and more importantly distort the culturally relevant significance in relation to human rights.

Understanding, Memory, and Teaching

In this section, we describe how educators can develop deeper content knowledge and understanding in their educational practices by challenging memory. We share the Bloody Sunday in Selma example as a lesson on how to distinguish between understanding and memory. History is defined by the primary source materials that survive an event used by researchers to explain what happened (Bloch, 1964). As such, memory often emerges long after the event as participants and observers try to define an event's meaning to best suit their contemporary needs and justify their past actions (Poole, 2008). The retelling of what happened can lead to purposeful distortions of the facts as it often excludes the full record and thus are inaccurate (Newman & Lindsay, 2009).

The documentary evidence for Bloody Sunday is immense, yet the story continues to focus on a few seconds of the event. In Selma's case, the Edmund Pettus Bridge emerged as the focal point of Bloody Sunday memory because the renowned structure is universally recognizable. Moreover, the symbolic imagery of crossing the bridge matches the larger struggle for civil rights as societies worldwide struggle to leave behind past racial prejudices and cross over into a new post-racial future. The bridge's symbolic value has far exceeded its connection to the significance of Bloody Sunday and the struggle for human rights.

Historical inquiry as both a research and instructional approach can help develop a more accurate framework and bring new understandings in teaching and learning (Hartzler-Miller, 2001). Yet, reshaping how many perceive Bloody Sunday's history and memory requires the creation of a multi-disciplinary team of scholars to find, share, and create resources. As such, no one scholar possesses all the skills required to adequately and fully explore and research this historical event in terms of civil rights, building preservation, documents, and education. Thus, a community of educators across disciplines was developed to enhance the scholarship about this significant event and create an interdisciplinary team for learning and scholarship.

Creation of the Community of Practice (CoP)

The beginnings of our Community of Practice (CoP) began in 2016 with a research team, led by one of the authors, who had begun mapping the sites where the Bloody Sunday conflict occurred. The objective was to develop a map of the site showing the buildings and highway as they were in 1965. This would allow for a better understanding of the events of that day and assist in identifying historic buildings and structures. The team was successful in identifying and charting the location of everything from local businesses, vehicles parked on the road, Alabama State Troopers locations, to the civil rights marchers, spectators and media. Recently several other scholars and practitioners were added to expand the research, creating a multi-disciplinary team of scholars or CoP.

A CoP includes three main components: *domain*, *community* and *practice*. The *domain* is the shared area of interest that transcends professions and disciplines; the *community* is the interest and engagement in discussion, activities, and the sharing of information; and *practice* is the development of shared resources, including experiences, stories, tools, and

problem-solving strategies (Wenger, 1998; Wenger et al., 2002; Wenger, 2011). The value of a CoP in terms of education and scholarship comes from the interdisciplinary context, the ability to connect to information and resources beyond profession or place, and the integration of learning into practice (Wenger-Trayner & Wenger-Trayner, 2015).

Our group of scholars represent the core of the CoP, which has now grown to a larger group of historians, researchers, practitioners, and the greater community in Selma. Going forward, a multi-disciplinary team of faculty and honors students will review primary and secondary historic records and work with the National Park Service at the Selma to Montgomery National Historic Trail. Teachers and students at Selma High School and other local organizations will try to directly identify the marchers from Bloody Sunday research. In addition, the Selma City Council has joined the effort to publicize and expand the search. This CoP and its members hope to give credence to the history, the site, and most importantly, the people of Selma on that historic day. By expanding the conversation and reflecting upon race and inequality in terms of historical experiences, we may hope to be able to advance human rights understanding across the world.

Humanizing the Educational Narrative

The world is a complex learning environment in terms of both historic and ongoing topics such as civil or human rights. Development of a global perspective for these topics requires critical thought and development through diverse lenses available in a CoP. Race, inequality and injustice are moving back to the forefront of a social justice educational movement. Social justice education is defined as the process of developing students in a wide range of disciplines to understand, analyze, and change systems to advance the concept of equity for all people (Hytten & Bettez, 2011). Selma provides an international example to reframe the focus on human rights, integrate factual materials, and give meaning to a historic event that has multiple narrative perspectives. As such, our CoP allows for connections between educators and professionals that go beyond the walls of the higher education community. This enhances the project and creates additional opportunities for scholarship and professional development on social justice and understanding.

Project Growth and Development

One focus for our CoP looks toward broader educational impact and development of the social justice narrative through a teacher professional development workshop. Teacher continuing education, certification, and/or professional development is a regular and required part of the profession. The importance of teacher professional development is critical to society as educators facilitate the narrative and accuracy of the curriculum for learners, along with building global citizenry skills. The overall purpose for professional development is straightforward: to improve competence and broaden perspectives (Knox, 2015).

Teachers as Adult Learners

Educators are key to building mutual understanding in the classroom. Their development should be focused on enhancing skills and competencies using an adult learning framework. In order for adults to learn, there are best practices that transcend disciplines and subjects. According to Knowles (1978) and Knowles et al. (2014), adult learning should:

- incorporate the learners' needs,
- include a safe space for sharing ideas,
- value and respect the learner and their unique backgrounds and experiences,
- engage the learner in practice and application, and
- allow for translation from the classroom into practice and profession.

Our proposed teacher workshop includes several different instructional strategies to engage adults in learning, such as small group discussion, demonstration, role play, and peer feedback (Merriam & Baumgartner, 2020). In addition, we plan to immerse the teachers into the Selma community and several of the historical sites through *place-based learning*. Place-based or experiential learning allows for the learner to process information in the actual environment or community, and develops critical thinking and problem-solving skills in relation to interdisciplinary concepts (Gruenewald, 2003). Although expensive, place-based learning can help adjust the learner's memory and understanding of historical events, allowing for reflective development and change in perspective.

Virtual Experiences

As place-based learning may be impracticable, the connected world allows for virtual experiences that simulate place-based learning (Scavarelli et al., 2021). Using virtual reality experiences allows educators to enhance the content and materials and expand global perspectives and understanding. Fortunately, teachers/educators do not have to develop these complicated technological experiences but can find them freely available through searching the web for resources. Educators utilize the additional sources of materials to bring the classroom alive and humanize the learning experience. Learners can "experience" by listening to interviews, viewing images, maps, and diagrams, or conducting virtual tours through video. These resources provide safe experiences for the learner without the cost, allowing increased accessibility to a wide range of learners, and engaging the learner (Scavarelli et al., 2021).

An example of a digital resource on race and civil rights is the online story map available from the National Parks Service that is called *Discovering the African American Civil Rights Network*. It tells the story of the modern US Civil Rights movement from 1939-1968 through an interactive map, visuals, and images (National Park Service, n.d.). A more global example might be for educators to look at the situation in Afghanistan. Discussion on human rights, especially of women, are at the forefront of the news. An online example is available related to the education of a young girl name Bibi (UNICEF, 2018). Both of these virtual experiences enable a variety of both group and individual

experiences that can develop reflective knowledge, enhance the learning curriculum, and develop knowledge and skills related to human rights.

Culturally Responsive Teaching

Humanizing the learning environment requires educators to enhance the classroom content with culturally responsive materials. *Learning for Justice* (formerly *Teaching for Tolerance*) provides teaching resources related to race and social justice education. These resources assist with humanizing the educational experience with subjects such as race and ethnicity, rights and activism, gender and sexual identity, immigration, and others (Learning for Justice, n.d.). Integration for the topics is supported by lesson plans, printable posters, student designed activities, and film kits. The resources are free to K-12 teachers upon registration at the site.

Pulitzer Center is another organization that provides teaching resources about education as an inalienable human right in relation to Afghanistan (Pulitzer, 2011). Lesson plans, video, images, and reflective questions assist with the idea of access to education that can be discussed for a variety of subject areas and ages. Afghanistan is just one example that educators can utilize to develop a broader perspective on human rights.

Teacher Professional Practice

Once teachers are provided with the tools, resources, and experiences, it is the hope that they will be not only become better educators but will also broaden the knowledge and understanding of their students. For teachers/educators, helping learners discern distinctions between history and memory, along with reflection, can be useful instructional methods in any classroom. Example reflective questions provide opportunities to draw meaningful connections between past and present issues, not only in the classroom but in dialogues across kitchen tables, workplaces, and in everyday life. This can encourage students and others to further develop their observational and critical thinking skills beyond the classroom. A few examples of thought questions related to historical events across the world may be:

- How can research into other artifacts, documents, and images more accurately interpret historic events? Why is the research important?
- Why are certain historical locations valued more readily?
- Why has the narrative of human rights' struggles been neglected or shared from a limited perspective?
- Why have numerous historical human rights struggles not risen to the level of international attention?

These questions may encourage reflection on what has been preserved and commemorated in our own communities. For example, many Black students in Alabama go to class in buildings named in honor of Confederate States of America leaders. A large number of students reside in public housing units or on streets also named in honor of Confederate officers and white supremacists. Ubiquitous bronze historical markers litter the roadways that rarely acknowledge an area's Black inhabitants. Unfortunately, Alabama's commemorative landscape has been dominated by white conservatives for

generations, and is not the only state or region to honor leaders of racial injustice. Encouraging students to think critically about why this has happened and what stories might be missing from the current commemorative landscape is an essential part of connecting history with its users across time. Ultimately, these activities help students and others to discover the power that lies within history as a means to counter distorted commemorations of memory, permit the truth to emerge, and create new understandings and competencies. By effectively integrating current and historical materials into the classroom, educators can guide the development of ethical global citizens.

By finding new resources, organizing and redeveloping materials, and utilizing framing questions and other activities, educators develop a deeper content knowledge and understanding for their educational practices. Using an interdisciplinary focus can expand the curricula and teach students how to develop information literacy, elevate critical thinking skills, and build opportunities to advance social justice across the world for all human beings. By doing so, we create the culturally relevant competencies and skills needed for our global community.

Conclusion and Implications

Going forward, we challenge you to think about Selma as a beacon of the human rights struggle that extends beyond Alabama and the United States. Encouraging learners to think critically about important events is an essential part of connecting history with its users across time. Understanding how to counter distorted concepts history are critical to improving and humanizing education. Ultimately, all history is connected to time and place and connecting those together significantly enhances the understanding of historical events. The bringing together of scholars with the skills to document and interpret both place and history requires a Community of Practice (CoP) to be successful. As such, learners of all ages need to develop more self-directed learning (SDL) and reflective thinking skills in order to create a global, lifelong learning perspective. SDL allows learners to find information when it is not readily available in their normal classrooms or learning environments, and the skills and tools to SEEK the critical resources that are important. Knowles (1975) defined self-directed learning as a process by which individuals take initiative in diagnosing their learning needs, creating learning goals, identifying sources and materials for learning including others, and evaluating the process and outcomes. SDL encompasses the ideas of CoP, culturally relevant teaching and learning, and adult/lifelong learning and is critical to learning today with the expansive amount of and access to information. Humanizing the narrative requires critical thinkers and well-being in the global world. As educators, we need to consider the steps to create self-directed learning in any environment and with any learner to enable lifelong learning, increase understanding, and create ethical, global citizens of the world.

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A TRIADIC WORLDVIEW? THE MISCONCEPTION AND BIAS OF UNIVERSALITY IN KNOWLES' ANDRAGOGY

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ABSTRACT: There is an ongoing debate about the omission of specific learners in modern learning theories. Most learning theories are derived from theoretical works by the dominant culture. This paper argues that despite the criticisms and shortcomings of Knowles' andragogical theory, the instructor can alter the framework as needed to meet the varying needs of adult learners who have different socio-cultural backgrounds. The paper will define andragogy, discuss assumptions, provide a brief multi-faceted review of a triadic culture worldview, a brief literature review, and examine praises and criticism for andragogy. The paper concludes and recommends that further inquiries be administered to learners of various socio-cultural backgrounds to decolonize andragogy. Andragogy is a permanent model for understanding specific aspects of adult learning. Andragogy is not the only way to teach adults from all backgrounds. It is a perspective, one piece of a rich mosaic with many pieces, all with unique qualities and benefits. The instructor needs to adjust it for the "other" learners excluded from the original framework.

Keywords: Andragogy, adult learning theory, adult learning, diverse learners, socio-cultural context, culture, decolonization

Knowles' Andragogy: The Misconception and Bias of Universality

Over the years, adult learning scholars have called for the decolonization of learning theories that are primarily from the worldview of the dominant culture. These learning theories usually address the white, male, middle-class perspectives in Western culture but disregard other worldviews and learning styles (Baumgartner, 2003; Duff 2019; Flannery, 1994). Hence, it is essential to debunk the language of *universality* and individualism in many seminal learning and behavior theories (Flannery, 1994).

Flannery (1994) highlighted that some of the most respected behavioral and learning theories, for example, Maslow's hierarchy of needs and Knowles' theory of andragogy, were investigated using white men exclusively as research subjects; they did not consider female or people of color perspectives (Duff, 2019; Flannery, 1994). The standards of "good theory" are derived from specific theoretical works by a specific group, but they are then applied as generally, if not universally, appropriate (Flannery, 1994, p. 17). An example is a distinction between adults and children in many North American or Western adult learning theories, which assume that adult learners are self-directed, independent, and resourceful (Flannery, 1994).

The dominant Western culture developed the concept of "neutral" adult learning, which assumes learners are self-directed and capable of independent learning. Western culture is used to judge and evaluate what makes good theory, but it does not apply universally to all adult learners (Flannery, 1994). Andragogy has been recognized as a critical component of 'excellent' adult education theories — such as those outlined by Flannery (1994), who claimed that this criterion was taken from works by the dominant culture to

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be considered good adult learning theory. The standards are applied as if they were universally applicable to all learners, which is not the case; instead, these assumptions are derived chiefly from Western individualistic societies that adhere to a single major religion or ideology (Flannery, 1994)

Andragogy: A Linguistic and Historical Background

In 1926, Lindemann released his seminal work, *The Meaning of Adult Education*, which denotes the beginning of the adult education field in the United States. Knowles et al. (2015) found that Lindeman developed critical assumptions about adult learners:

> Adults are motivated to learn as they experience needs and interests that learning will satisfy; adults' orientation to learning is life-centered; experience is the richest resource for adults' learning; adults have a deep need to be self-directing, and individual differences among people increase with age. (p. 71)

Writings on this developing adult learning theory continued from the 1920s. However, they did not resonate with scholars and researchers until Knowles developed it into a series of assumptions in 1970 after "Knowles acquired the term" andragogy "in 1966 from Dusan Savicevic, a leading expert on adult education from Serbia" (Henschke, 2011, p. 34).

Ferro (1997) provided a linguistic background of the word andragogy. The term andragogy comes from the "Greek word aner "man," [sic], and the Greek word agogos "leader" (p. 56). The history of "the term andragogy … dates to 1833, where a German grammar teacher named Alexander Kapp coined it during an explanation of the Greek philosopher Plato's education theory (Peltz, 2018, p. 93). The Greek philosopher described his educational philosophy as *paideia*. Teachers act like midwives who facilitate learning through knowledge transmission instead of direct instruction; they help students figure out what information is relevant for them rather than provide that information themselves. Andragogy is a response to pedagogy, which means literally "leading a boy" (Ferro, 1997, p. 58).

Definition of Andragogy

Gilstrap (2013) clarifies, "Knowles viewed the term" and the theory of andragogy as being "on a continuum where pedagogy moved toward andragogy as children developed into adulthood" (p. 503). Henschke (2011) explains that Knowles "infused andragogy with much of his meaning garnered from his already extensive experience in adult education" (p. 34). Gilstrap (2013) provides "an operational definition, andragogy is a learner-centric approach to learning, whereas pedagogy is dominated by instructor-centric theories" (p. 503).

Overall, "the defining attributes of [Knowles'] theory include acknowledging that learners are self-directed and autonomous and that the teacher is a facilitator of learning rather than [the] presenter of content" (Henschke, 2011, p. 34). However, critics have

pointed out that his use of this neologism has contributed to misconceptions about gender-related differences (Lee et al., 2003). Some suggest he should have used "adult learning" instead (Peltz & Clemons 2018) since it is non-gender specific. Lee (2003) contends that, in Knowles' definition of andragogy, there is no clarification on how learner's "multiple contexts and identities may affect their views of learning and ways of engagement in the learning process" (p. 18).

The Six Assumptions of Andragogy

Knowles originally conceptualized the first four assumptions of andragogy (1975, 1978, 1980); however, over time, he later (1984, 1989, 1990) expanded andragogy to six assumptions (Knowles et al., 2015). Knowles et al. (2015) split the Theory of Andragogy into six assumptions:

1. Self-directedness
2. Need to know
3. Use of experience in learning
4. Readiness to learn
5. Orientation to learning
6. Internal motivation (Chan, 2010; Knowles et al., 2015).

The first assumption is *self-direction* in the individual learner. Knowles posits that "adult learners are self-directed, autonomous, and independent" (Chan, 2010, p. 27). The second assumption is *need to know* that "adults will place more stake in and appreciation for the learning process if there is a clear understanding of why learning should take place" (Duff, 2019, p. 51).

The third assumption is "the learners' experience. Adults understand the years of experience they bring into an academic setting through their age and life encounters" (Duff, 2019, p. 51). Knowles' fourth assumption is *the adult's readiness to learn*. As adults mature, they begin to understand and learn how to cope with their "everyday experiences and activities" (Duff, 2019, p. 51). The fifth assumption is *orientation or adjustment to learning*. Adults who can connect learning to problems they will face tend to be more motivated to learn.

Lastly, Duff (2019) describes "Knowles' sixth assumption of *learner motivation*. Motivation is when adults are internally inspired to learn, sometimes because of "the desire for increased job satisfaction, self-esteem, quality of life" as opposed to "external motivators" provided by an instructor (p. 52).

As asserted earlier, a specific segment of the population helped Knowles develop the assumptions of andragogy. As a result, women, the financially disadvantaged, people of color, working-class adults, and immigrants have suffered exclusion from the andragogical model (Lee, 2003). Lee (2003) describes that self-direction or individuality contributes to "an error of reasoning" that every learner is independent or responsible for their education. Knowles' assumptions do not represent the experiences of all adult learners outside of the broader hegemonic culture.

The Diverse Learner in the Andragogical Environment

According to Flannery (1994), the theory of andragogy states that adults have been generalized to have individualism, linear thinking, and Anglo-European values of self-sufficiency (p. 17). While insightful, if also potentially flawed, andragogy espouses the values of "individualism, self-fulfillment, self-reliance, and self-directedness" while further assuming that these principles are held in high regard worldwide (Sandlin, 2005, p. 28). Before the mid-1990s, the traditional college-aged, 18-24-year-old student was the only learner in adult education. Adult learners have become the new face of formal education. According to Carlan (2001), these individuals are not traditional students but serve as a unique demographic that has gained prominence in the past forty years. Adult learners can come from a variety of backgrounds, experiences, skill sets and cultures. Instructors should be aware of andragogy's assumptions as universal to all learners (Flannery, 1994). Further, Duff (2019) contends that "while Knowles may have had the best of intentions when he developed these assumptions for adult learners, they call to question whether these tenets" apply "to [the] adult black male" or anyone outside of the white, middle-class male culture (p. 52).

A Triadic Cultural Learning View of Andragogy

Peltz (2018) emphasizes that culture plays a significant role in adult learning, mainly because everyone identifies with their culture, so their cultural heritage influences their classroom behavior. Additionally, values and learning processes differ for adult learners from non-Western backgrounds (Duff, 2019; Flannery, 1994; Lee, 2003). Peltz (2018) cites the term "trichotomies" (as cited by Merriam et al., 2007), "noted that the learning dichotomy of Western versus non-Western is itself Western" (p. 101). Within these triadic worldviews, there are several learning perspectives such as Buddhism, Confucianism, Hinduism, Jewish, General African, African Ubuntu, Native American Dine (Navajo), Latin American, and Pakeka and Maori; however, the focus will be on the "learning trichotomy" of Western, non-Western, and Indigenous peoples (Peltz, 2018, p. 101).

Western countries typically include those located in "North America, Europe, Australia, and New Zealand" (Peltz, 2018, p. 101). Western culture emphasizes individuality and self-directness in learning as an adult, with the andragogical model developed through that Western contextual lens (white male sample, omitting females of all races) (Lee, 2003; Peltz, 2018). However, self-directedness in the classroom is not the norm in other worldviews. Non-Western learning perspectives are categorized as "Buddhism, Islam, Hinduism, and Confucianism" generally "viewed as philosophical lenses through which societies merge with certain ideologies" (Peltz, 2018, p. 101).

In non-Western cultures, there is a collectivistic view, and learners are teacher-centric and value the greater community and extol sacrifice for the greater good of their people and their religious beliefs (Peltz, 2018). In non-Western cultures, as a learner matures into an adult, the expectation is that they will make positive contributions to the collective society. Other collectivist cultures are the Indigenous peoples: "tribal Africans,

Latin American, Native American, Māori, and Aboriginal" cultures (Peltz, 2018, p. 101). The Indigenous worldview is that learners will learn by doing and listening to oral traditions and being mentored by an elder to continue traditions that will benefit the culture; these collectivist societies tend to venerate the elder and are teacher centered (Peltz, 2018). First-generation immigrants who are teaching can move between non-Western and Western cultures and can represent the intersectionality of these learning views and move fluidly between the respective worldviews while teaching (Lee, 2003).

Andragogy: A Critical Perspective

Duff (2019) assesses the educational system in the United States as having "existed for the advantage of the dominant culture and the economically privileged" (p. 52). Duff (2019) concurred with Sandlin's (2005) five critiques that "cut through the heart of andragogy and shows how it is dominated with the overwhelming residue of European ideologies that foster an oppressive posture" (p. 53). After reviewing several studies that critiqued andragogy, Sandlin (2005) discovered five core issues that span a wide range of critical perspectives of andragogy:

1. Educational and political views are presumed to be equal in value and have no influence on a person's mind.
2. Andragogy aims to make all adults appear similar. These individuals are indistinguishable, apart from the fact that they have predominantly white, middle-class values.
3. Andragogy disregards different methods of knowing and suppresses other viewpoints.
4. Andragogy disregards the relationship between the self and the social context.
5. Andragogy is a promoter of inequality; it perpetuates existing conditions such as "the status quo" (Sandlin, 2005, p. 27).

Sandlin's (2005) critique of Knowles' theory of andragogy is that there exists a generic adult learner with no context to their background. Additionally, andragogy presents the aspect of the "one worldview," "mainstream values," and the learner's identity and place in society is "decontextualized" with the application of this theory (Sandlin, 2005, p. 28). Sandlin (2005) illustrates that "in andragogy, only one worldview is valued" and "andragogy ignores other value systems and worldviews" and is rigid in accommodating differences in learning styles (p. 28). Flannery (1994) criticized that andragogy as an "adult learning theory [assumes] that adults are self-directed" (p. 18). Previously, Flannery (1994) explains that the "universalizing aspect of andragogy" is "normalizing one way of being and, thus, acting to promote everyday sexism and racism in adult education settings" (Flannery, 1994, p. 22).

Sandlin (2005) had severe reservations about "andragogy's prominence and thought it needed to be supplemented by three other perspectives: Afrocentric, feminist, and critical" (As cited in Henschke, 2011, p. 34). Houde (2006) highlights that while "Knowles discusses andragogy in the context of psychological theory," there is what some scholars perceive as an overreliance "on older theories, such as ones from Abraham

Maslow, Kurt Lewin, and B.F. Skinner" (p. 90). Andragogy's detractors "from the post-modern camp claim that Knowles' model is an artifact from a" bygone era (p. 90). Draper (1998) discussed that andragogy was not a viable theory, as argued by some, and provided data as "strong evidence that andragogy [and] adult education" are unequivocally not to be considered in theories of learning due to Knowles' definition of andragogy (p. 23).

Knowing that andragogy could be used in many ways, Knowles stated that instructors "have the responsibility to check out which assumptions are realistic in a given situation" (Knowles, 1990, p. 64, as cited in Holton et al., 2001). Holton et al. (2001) point out that Knowles "never provided a systematic framework of factors that should be considered when determining which assumptions are realistic when adapting andragogy to [a] situation" (p. 128). Instead, it was up to each instructor to consider these factors when deciding whether certain aspects were applicable during instruction.

Chan (2010) made the following recommendations to improve the effectiveness of andragogical applications while also broadening the scope of their application to other contexts:

> 1. The focus of andragogical practice could expand beyond that of the adult learner to also consider social, political, and cultural contexts. Learners are influenced by the surrounding contexts, which shape their thinking and action.
> 2. Research (or more research) on the application of the andragogical approach in Asian countries could be conducted to examine whether the approach is applicable to those in the Eastern hemisphere.
> 3. Andragogy could address a situation of neither adult nor children, which Marshak (1983) called *adolegogy* to describe the adolescent state.
> 4. Although andragogy is an art and science of teaching adult learners, it is recommended that the approach be applied in the teaching of children and adolescents, as well. It is believed that passivity in a classroom does not help students to learn more effectively. Though children do not meet the andragogical assumptions, it does not necessarily mean that the andragogical approach would not be effective with them. Active learning is more effective than passive learning, regardless of age (p. 33).

Conclusion

Despite criticism and weaknesses of Knowles' theory of andragogy, "multiple researchers and scholars in the United States and abroad have established andragogy as a proven theory and robust method for teaching adults" (Henschke, 2011, p. 35). Knowles' theory of andragogy has elicited a wide range of responses from academics and other researchers. According to the andragogical model, it is up to instructors to adapt their teaching style to meet adult learners' "specific contextual needs" (Henschke, 2011, p. 35). Contextual needs include considering students' socio-cultural backgrounds as well as other factors.

Andragogy and the triadic worldview (Western, Non-western, Indigenous peoples) refer to the process of teaching adults. These models are based on the idea that adults have abilities that differ from children's abilities; therefore, different instructions should be used with these two groups. Sandlin (2005) recommended three perspectives, Afrocentric, feminist, and critical, whereas another recommendation could be adding more intersectionality to andragogy by adding the Western, Non-Western, and Indigenous worldviews.

Andragogy, while presenting itself as being free of bias, holds to mainstream values and ideals, and so is criticized for being regressive because of the content it does not question, namely, "common-sense" assumptions about cultural, sociopolitical, and institutional constraints on learning (Sandlin, 2005). Thus, it reproduces inequalities, sustains oppressive social structures, and bolsters traditional values in learning (Sandlin, 2005). Even though andragogy was developed from a white middle-class male point of view, the theory is still essential for understanding adult learning today. Scholars, educators, and researchers, on the other hand, must make an effort to study a variety of cultures and perspectives in order to develop a better framework for instructors who may have to deal with these different learning styles.

As andragogy is proven to be a helpful learning theory with diverse groups of people in several studies, additional assumptions must be made to account for the excluded groups and worldviews that were not considered in the original theory. Using andragogical principles, instructors can also personalize instruction to meet the motivation of adult learners, develop learning goals and objectives, and address real-world issues that arise in the classroom (Chan, 2010).

An understanding of andragogy and its flaws will help instructors design more effective teaching methods. Andragogy aids in the improvement of correspondence between the student and the instructor; they work as collaborators to design learning techniques tailored to the student's needs and preferences (Chan, 2010). Learning about andragogy and its shortcomings and strengths helps instructors move beyond the misconception and bias of universality in adult learning theories such as andragogy and toward a more holistic and fully developed conceptualization of diverse adult learners. Finally, while andragogy is not a perfect solution for improving adult learning practices, it provides a piece of the puzzle that can be used in conjunction with other theories to improve the field.

Every culture's adult learning theories are a derivative of the hegemonic power structure of the society in which they are developed. Most learning theories in American culture were developed from the perspective of white males (Flannery, 1994). Some of the most well-known behavioral and learning theories (for example, operant conditioning) were only tested on white men. Females and Black, Indigenous, and People of Color (BIPOC) were generally not considered in the studies. These theories do not need to be discarded; instead, they should be evaluated with a variety of groups in order to determine their effectiveness. It is erroneous to believe that the "universality" of Knowles' theory of andragogy is based on a sample of participants from every socio-cultural group.

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PROBING MORE DEEPLY A M AJOR HISTORICAL EPISTEMOLOGICAL FOUNDATION OF ADULT EDUCATION INTERNATIONALLY AND IN THE UNITED STATES OF AMERICA

John A. Henschke, Ed. D.[1]

ABSTRACT: The historical and philosophical foundation of adult education finds its origins and motivations stemming from various sources nationally and internationally. However, one not to be ignored pertinent epistemology source is the overall umbrella concept of piety and devotion including the three elements of religion, spirituality, and a personal relationship with the living God. Many activities of adult education are deeply rooted in the overall umbrella concept of piety and devotion foundations and the God who some of us declare openly that we serve with willing, humble, contrite, and grateful hearts as well as serving many constituencies with whom we are involved. Presently, it may be beneficial to remind ourselves and others that God (whom atheists and anti-theists say does not exist) has influenced some of the operationalization of adult education. From ancient times, the international Hebrew and Christian Scriptures identify Moses, Joshua, Paul, and Jesus (even at the age of 12) being involved in adult education. Long (1991) identifies ten early innovative adult educators (from 1591 to 1920) strongly lacing the religious dimension in their adult education writings. Knowles (1962, 1977) and Grattan (1955, 1959) substantiate that the Church was at the forefront in adult education in the USA during the first two centuries of our existence from 1600 on. Reischmann (2006) from Germany, states that the religious foundation is one source of adult education. Henschke also references may things in adult education he has accomplished are a result of the "Call of God" on his life which he has joyfully enacted.

Keywords: adult education, religion, Knowles, spiritual

The historical and philosophical foundation of adult education finds it origins and motivations stemming from various disciplines, fields of study, and historical sources. One source that seems especially pertinent and should not be ignored may be characterized as a religious, spiritual perspective. This approach, which represents a point of view held by people who declare they have a personal relationship with a God who is alive and active in their life presently, will be discussed in this paper as coming under the same umbrella term as piety or devotion as a source or foundation of adult education.

Many in the field of adult education research and practice recognize that many continuing activities of adult education are deeply rooted in piety or devotional foundations. We serve many constituencies with willing, humble, contrite, and grateful hearts.

From ancient times, the Hebrew and Christian Scriptures provide the following historical teachings that could represent and support the idea of adult education.

- Moses said, "Teach these precepts (from God giving the commandments) to your family when they lie down, rise up, go out, come in" (Deuteronomy 6:7);

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- Joshua 1:8 said, “This book of the Torah shall not depart out of your mouth, for you shall meditate upon it day and night that you may observe to do all that is written therein; then shall you make your way prosperous and then you shall have good success”;

- The Apostle Paul said, “Study to show yourself approved unto God a workman that need not be ashamed, rightly dividing the word of truth” (2 Timothy 2:15); and,

- Jesus, at 12 years of age, even used adult education questioning and discussion techniques in the Temple at Jerusalem to help the doctors, lawyers, and priests learn some new things about God’s business (Luke 2:47-49).

A Few of the Author’s Observations From Various Other Authentic Historical Sources

Adult education played a key role in the Christian Church to educate its members and share the doctrine. Adult education in the USA was greatly influenced and supported by the Christian community beginning in the 1600s (Grattan, 1955, 1959; Knowles, 1962/1977).

In 1925, Yeaxlee (1925) explored all the religious, spiritual, and non-materialistic dimensions of adult education from both historical and analytical perspectives. Over the past century, as the field of adult education has developed, there has been an acknowledgement and presence of religious and/or spiritual adult education. For example, a handbook of adult education in the US has been published every decade since 1960 (1960-2020). In each of the handbooks that describe the state of the field, chapters on religious and/or spiritual education can be found.

Conferences related to adult education and Christian faith were convened in 1959 and 1962. Based on the information shared at these meetings, the conference organizer, Little, published two books: *The Future Course of Christian Adult Education* (Little, 1959) and *Wider Horizons in Christian Adult Education* (Little, 1962).

Houle (1984) offered a unique perspective by enlarging the idea of adult education participation to include the total pattern of learning undertaken by an individual at any one time and the ways that pattern changes as life proceeds. One of the persons he included as a case example is Billy Graham, a Christian evangelist. Billy Graham is known to have had a transformative moment in the early years of his ministry. At that time, he struggled with doubts about the accuracy and authority of the Bible. The story goes that one moonlit night he dropped to his knees in tears and told God that from that point on, in spite of confusing passages in the Bible that he did not understand, he would completely trust the Bible as the sole authority for his life and ministry. It was a transformational learning experience. From that day forward, Billy’s life was blessed with unusual power and effectiveness to reach people across the world. During his life, he preached in 185 countries to over 210 million people.

According to Jarvis (1987), of the 13 adult education thinkers he included in the 20th century list, almost all of them acknowledged that religious belief influenced the growth of adult education. Nonetheless, some were more prominent and articulate in their belief than others.

Long (1991) identified ten early innovative adult educators from 1591 to 1920. The strong influence of the religious dimension is visible throughout with a generous amount of material on religion, evangelism, Sunday School, Chautauqua, prophesying, God, Bible, prayer, and other spiritual topics which are involved in undergirding the advancement of adult education.

Twenty-three (23) religious adult education books are referenced and described in Houle's (1992) bibliographic essay on *The Literature of Adult Education.*

Walter and Jarvis (1992) open their book with a debate regarding the nature of learning as a religious phenomenon. It also includes the relationship between faith and knowledge. Moreover, they document significant research in adult religious education.

Granger and Wilhoit (1993) edited a 24-chapter handbook entitled, *The Christian Educator's Handbook on Adult Education.*

Robinson (1993), an adult education professor, was an active layman in his church and conducted workshops based on his interest in the scriptures and religious topics.

Henschke (1998) suggested that some of the antecedents of andragogy find their deep roots in the Biblical Hebrew contexts. There was the Hebrew language, which explains much about teaching and learning. Some Hebrew scriptures illustrate the closeness of the potential of people for learning and couples it with the process of bringing this to reality. He also explains that the Zaddik Rabbi makes certain that his manner of life exemplifies and models what he is teaching. Henschke concluded with a story of the kind and humane treatment of an Orthodox Jew by a Christian community, thus influencing this Jewish person to devote his research as a university professor exclusively to study the life and teachings of Jesus.

Isaac's doctoral dissertation (1999) at the University of Georgia focused on Motivations of Adult Learners in Church Sponsored Adult Education in three Atlanta Black Churches of different sizes – 10,000 members, 5,000 members, and 1,500 members (*Understanding African American adult learners' motivations to learn in church-based adult education)*.

Elias and Merriam (2004) presented various adult education philosophical schools of thought. Among them, they provide some pros and cons of the religious foundation of adult education.

English (2005), in her *International Encyclopedia of Adult Education,* includes a section on religious adult education.

Reischmann (2006) presented a Keynote Address at the American Association for Adult and Continuing Education (AAACE) in Milwaukee, in which he says that the religious foundation was one of four sources of adult education.

Isaac (2012) opened the dimensions of adult religious education as being rich with opportunities for study, service, program creation, teaching, learning, and adult development. Perspectives of eight different authors are included.

To the Present Time Within the Most Recent Dozen Years

Carr-Chellman et al. (2021) have provided the most extensive article in the 2021 Handbook of Adult and Continuing Education as a framework for the umbrella topic of piety/devotion focusing on human flourishing. However, the scope of their coverage was limited to articles published including 2010 to 2018 from the following seven publications since the 2010 Handbook was published: **1.** *Adult Education Quarterly,* **2.** *Adult Learning,* **3.** *Canadian Journal for the Study of Adult Education;* **4.** *Studies in the Education of Adults;* **5.** *New Horizons in Adult Education and Human Resource Development*, **6.** *Journal of Adult and Continuing Education,* and **7.** *New Directions in Adult and Continuing Education.* They found 42 articles with only 11 drawing on data-based research with a minimum empirical foundation and very little theoretical foundation. They attempted mostly to emphasize religious adult education and spiritual adult education, attempting to separate from each other and then sought to reconnect and bring them back together.

The only reference in the Carr-Chellman et al. (2021) article to 'God' is that God is a "what" (p. 298) a 'thing' that perhaps we may hook to our ideas. Nonetheless, there is no indication in the article that the 'God' who is referred to, is a living being. Maybe that 'god' is dead, as Hamilton in Colgate Rochester Divinity School and Altizer in Atlanta's Emory University Theological School declared about 50 years ago when the 'God is Dead' movement emerged. When I question, "Whose God is Dead?" Maybe their 'god' is dead, but my God is very much alive, since I just talked with Him a few minutes before I wrote this. He was very much alive at that time and is alive this moment when you [the reader] are reading this.

In addition to the above elements of an epistemology, including religion and spirituality referred to above by Carr- Chellman et al. (2021) there is another element (a personal relationship with the Living God) that is covered within the umbrella of piety and devotion – including what Richardson (1977) refers to as the concept of humans having "eternity in their hearts" (Ecclesiastes 3:11). This idea the author of Ecclesiastes sets within the context of the totality of life – the practical aspects of living which God has given to human beings is that good in His sight: wisdom, knowledge, and joy. In Ecclesiastes 3, He says,

> For everything there is a season, for every purpose under heaven, there is a right time – birth and death, planting and uprooting, killing and healing, tearing down and building, weeping and laughing, mourning and dancing, throwing stones and gathering stones, embracing and refraining, searching and giving up, keeping and

> discarding, tearing and sewing, keeping silent and speaking, loving and hating, war and peace.

All this is part of the task God has given humanity to keep us occupied. He has made everything beautiful in its time. Nevertheless, over and beyond all of these practical daily matters, there is another dimension beyond time, and this is accomplished in such a way that human beings can't really, fully comprehend at this time, that God has set "*eternity in their hearts*" (Ecclesiastes 3:11; Richardson, 1977, Back Cover).

However, from beginning to end, all the things God does will last forever throughout eternity. In this life, according to Isaiah 64:4 and I Corinthians 2:9-10 the writer says,

> Eye has not seen, nor ear heard, neither have entered into the heart of us human beings, the things which God has prepared for them who love Him. But God has revealed this treasure unto us by His Spirit: for the Spirit searches all things, yes, the deep things of God.

Nevertheless, the reality is

> …this treasure we have in clay pots, so that the overwhelming power comes from God and not us. In this life: we have all kinds of trouble, but we are not crushed; we are perplexed, yet not in despair; persecuted, yet not abandoned; knocked down, yet not destroyed. II Corinthians 4:7-9

> Nothing or no one will be able to separate us from God's powerful love in Messiah Yeshua: trouble, hardship. hunger, poverty, danger, war…no, we are superconquerers through Him who powerfully loved us – neither death nor life, neither angels nor other heavenly powers, neither what exists nor what is coming; neither powers above nor powers below, nor any other created thing – will be able to separate us from God's love. Romans 8:35, 37-39

Moreover, in eternity, God tells us in Isaiah 65:17 and Revelation 21:1-4

> I create new heavens and a new earth: and the former shall not be remembered or come into the heart…and I (God) will wipe away all tears from your eyes, and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain

for as Psalm 16:11 declares, "I (God) will be present with you on the path of life where there is fullness of joy and pleasures forevermore." According to John 3:16, Romans 10:9-10, and Ephesians 1:19-20, God accomplished this by His loving the world so much that he gave His only Begotten Son (Jesus Christ) to die on the Cross of Calvary to forgive us of all our sins, and He raised Jesus from the dead; if we believe on Him, He will provide us the gift of everlasting life now and eternally in heaven. Moreover, I Corinthians 15:25-26 assures us "God will finally destroy all His and our enemies and the last enemy that shall be destroyed is *death*."

This element of "eternity in their hearts" (Richardson. 1977, Back Cover) began to emerge in the New Testament era (CE) on Mars Hill in Athens, Greece where accomplished philosophers gathered for discussions and there was reference to a vague, unknown 'god' whose name no one knew. Various ancient peoples had a book about that 'god', but they had lost the book, somehow hoping someone would find it and return it to them. Then some people with strange customs and scholars with strange theories thought they were discovering something about this and becoming clearer about the identity of this 'god'. Suddenly the 'book' mentioned above appeared in the hand of some visitor to their location. After reading the introduction to the book, the 'God' that appeared had the name of 'Yahweh', whose initial articulation to a person named Abraham was a promise [in the form of a covenant], "I will make you into a great nation; and I will bless those who bless you, and I will curse those who curse you – you will be a blessing." Yahweh completes the statement to Abraham, by saying, "…all peoples on earth will be blessed through you." Hmm – sounds something like a hint of "human flourishing" going on or at least implied that was included in the title of the Carr-Chellman et al. (2021) chapter mentioned above. This "blessing" of everyone, seemed to be the major purpose and theme of the book, which turns out to be (Genesis 12:1-3) from the Bible.

Upon these various peoples going through the book, the best they could calculate, about 2000 years later a man named Jesus Christ of Nazareth (a Jewish rabbi/teacher/facilitator of learning, no less) appears on the scene and one day He got up on a hillside and called a gathering of his learners (called disciples) to gather around him and began to teach them perhaps His best lesson ever – to help them learn what we may call it in our parlance of today (Matthew 5:3-12). Again, sounds like another hint of "human flourishing" mentioned previously by Carr-Chellman et al. I quote from Matthew 5:3-12: **"How blessed are –**

- the poor in spirit! for the Kingdom of Heaven is theirs.
- those who mourn! for they will be comforted.
- the meek! for they will inherit the Land!
- those who hunger and thirst for righteousness! for they will be filled.
- those who show mercy! for they will be shown mercy.
- the pure in heart! for they will see God.
- those who make peace! for they will be called sons and daughters of God.
- those who are persecuted because they pursue righteousness! for the Kingdom of Heaven is theirs.
- We [you & me] when people insult us and persecute us and tell all kinds of vicious lies about us because we follow Jesus! Rejoice, be glad, because your reward in heaven is great – they persecuted the prophets before you in the same way.

This section has added the element of a personal relationship with the Living God to piety and devotion as part of an epistemology – *Eternity in their Hearts* by Richardson (1977). If one reads the book, noting all the references that express and describe the kind of learning that was taking place, I found it to be a rich history of adult education (found in no other book on adult education's history). This article does not afford space to

include and articulate the learnings garnered by the people referenced in the Richardson book. Nonetheless, there is a wealth of history and description regarding adult learning that cannot be overlooked if one is serious about garnering another aspect of adult learning.

My Personal and Professional Story

I would be remiss if I only included others' viewpoints regarding the influence of God and religion or spirituality and aspects of piety/devotion upon their adult education research, theory, and practice.

I am in the adult education and human resource development field because the Call of the God and Father of the Lord Jesus Christ is upon my life to do this – it is my motivation!!! The Glory of all this goes to Him, not me. Following are a few of the things that I have done, within my Call from Him, and contributed to the field of adult education and human resource development.

I am grateful for vibrant health and length of life thus far at age 89 years at the present in 2021. I learn continuously as I teach and research. In one article that threaded together elements of adult and community health education, I used the materials to help develop and maintain a long, healthy life (Henschke, 2014). I include many Bible passages in my work as the Word of God. They have helped me learn to live long and healthily. My beliefs, attitudes, values, and stages of life are all central to my perspective on health.

I have developed workshops based on an article from 2007 (Henschke, 2007) that provided materials for a lay ministry group of learning facilitators, working in a church setting. Included were such things as: assumptions concerning adults as learners, processes for actively engaging adults in Modified Instructional Perspectives Inventory (MIPI), a model for preparation of teachers of adults, building blocks for adult learning foundations, a living lecture for a large group of adults to become 'alive' in applying andragogy (the art and science in helping facilitate the learning of adults) as they learn to lead and help adults learn, and evaluate their own learning process.

During the many years of my service to God and the field of adult education as a professor, I have many accomplishments. I have served **61** doctoral students at the University of Missouri-St. Louis, and Lindenwood University, St. Charles, MO by chairing their dissertation committees. I also served as a member of **55** other doctoral students on their dissertation committees at six different universities across the USA and around the world.

The Modified Instructional Perspectives Inventory (MIPI) that I developed and used has been validated with a Cronbach Alpha three times for Reliability with Adult Educators. The field has benefitted from this measurement tool of learning, and it has been employed in **35** completed Doctoral Dissertations at eight different universities around the globe and is in the process of being used in several other dissertations.

Over the years, I have received **36** different awards in adult education, including being inducted with the 1998 class into the International Adult and Continuing Education Hall

of Fame (IACEHOF). These are meaningful recognitions of my work and service and longevity to the field of adult education. Most prominently, I fulfilled the Office of President/Chair for four different Adult and Continuing Education Associations – one each in an International, National, Regional, and a State Organization:

- International – International Adult & Continuing Education Hall of Fame (IACEHOF) 2014 & 2015,
- National – American Association for Adult & Continuing Education (AAACE) 1996-1997,
- Regional – Missouri Valley Adult Education Association (MVAEA), 1988-1989,
- State – Missouri, USA / Para, Brazil Partners of the Americas (MO/PA POA); 1994-1996.

I also have served as a Member of the Board of Directors of the International Adult and Continuing Education Hall of Fame (IACEHOF) for seven years (2007 – 2013) and served as Chair of the Hall for the years of 2014 and 2015.

My publication and presentations have been plentiful and have covered many topic areas. They include 675 different paper presentations and workshops at adult and continuing education and human resource development conferences or events, 323 research articles and book chapters published in adult and continuing education and human resource development literature. In addition, I have co-edited an update of one book and single authored/published a 423-page book entitled, ***Facilitating adult and organizational learning through andragogy: A history, philosophy and major themes***. This is the capstone work of my academic career in andragogy.

Three hundred twenty-three of my research materials and other workshops are posted on the International Adult and Continuing Education Virtual Hall of Fame (IACEVHOF) website. They have been downloaded and shared to **2,249** universities in **182** countries almost **43,199** times from **2/17/15 to 10/3/21.** During **September 2021, 1,109** new downloads were taken from all the papers. There were also **974** referrals from three Henschke websites. The top paper that was downloaded more than **6,331** times is entitled: ***"Considerations of the Future of Andragogy".***

I also have had the fortune to have conducted adult and continuing education and human resource development conferences, workshops and keynotes in **19** countries including the USA, Canada, United Kingdom, Brazil, Egypt, Jordan, Cyprus, Mali, South Africa, Slovenia, Italy, Austria, Germany, Thailand, People's Republic of China, Hong Kong, Australia, Taiwan, and Romania. I also have worked with adult and continuing educators from 97 different foreign countries.

Summary Thoughts and Reflections

This article reflects my perspective of being called by God as well as glorifying Him to joyously devote **53** years of my life doing adult education and human resource

development. My immediate family had a deep, Christian, spiritual impact on me and helped to foster my life call from the Lord.

- Dad's favorite Bible verse was Matthew 6:33 "Seek first the kingdom of God and His righteousness, and all these things [food, clothing, and shelter] will be added unto you."

- Mom's favorite Bible verse was I Corinthians 10:31 "Whether therefore you eat, or drink, or whatever you do, do all to the glory of God."

- My sister Joyce's favorite Bible verse was Colossians 1:18 "…that in all things, Jesus Christ may have the preeminence."

- My sister Doris had her Bible all marked up, which meant that she had many favorite Bible verses; and that was an inspiration to me.

- My wife, Carol's favorite Bible verse is Romans 8:28 "We know that all things work together for good, to them who love the Lord, to them who are the called according to His purpose."

- My favorite Bible verse is Psalm 32:8 "I (God) will instruct you and teach you in the way that you should go; I will guide you with my eye upon you."

Additional evidence could be presented, but this is at least a start to support the idea that God (the one that both atheists and anti-theists insist does not exist) should be included in the foundational history and philosophy of adult education in the USA, other parts of the world, and back into ancient times. This is coupled with scriptural and live illustrations of how this is enacted in the reality of my own long blessed and grateful life.

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IMAGINING NEW WORLDS TOGETHER: LEVERAGING TECHNOLOGY TO DECOLONIZE TRANSCULTURAL LEARNING

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ABSTRACT: This paper describes the work of teachers from United States and Belize, who took the opportunity that COVID's challenges presented to collaborate in building professional development for teachers in both locations. Leveraging both technology and relationships, educators representing a variety of skill sets, schools, and positions in Belize and in the United States, co-created seminars that were live, interactive and responsive to teacher needs in real time. We sought feedback during this professional development in real time as we have continued to follow up with participants regarding the strengths and barriers of this work. We believe the meeting of our minds and screens during these times of COVID is testimony to the power of collective struggle and triumph through our shared vision, our desire to continuously improve our teaching practice, and our commitment to collaborate as we build an increasingly knowledgeable and united teaching coalition that will continue to shape our shared future.

Keywords: professional development, collaboration, remote learning, technology, transnational, COVID

Introduction – Our World, Our Work

The morning of Monday, March 23, 2020, left all of us breathless. While across the globe, over a billion of our planet's young learners walked away from classrooms (UNESCO, 2020), we still grappled with the emptiness of our *own* space.

This is the story of ourselves. We are classroom teachers from Belize and the United States, who took the opportunity which COVID's challenges presented to collaborate in building not only professional development for teachers in both locations, but also to find renewed sense of solidarity in our call. We began our work together in 2007 as classroom teachers from the United States and from Belize through the *Belize Education Project*. It was in this context that William (our third author) was inspired in Belize to co-create professional development via our shared screens. Reaching our students in this strange way was novel for all of us. With the medium as the messenger, we wondered if we could use this newly discovered tool itself, to understand its power to reach our students. With the new potentials, which rested in our fingertips at the keyboard, a camera, a microphone and a commitment to literacy, our game was transformed. Teachers from

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Central America and the United States were on equal ground as we began this new journey.

Our colleagues told us that they wanted to learn this novel platform in a way that was interactive with their peers, a way we could all be in fellowship as we embarked on uncharted waters. Debbie and William drew on a deep knowledge of technology that they already possessed to lead the co-creation of a new kind of professional development. Debbie is *Belize Education Project's* Director of Technology Development, as well as the STEAM (Science, Technology, Engineering, Art, and Math) teacher at her school in Colorado and was recently trained to be a Google Certified Trainer. William had been a leader for technology for his school and colleagues in Belize long before COVID made headlines.

Two weeks of classes were created via Google Meets which ranged from entry levels to advanced levels in a variety of platforms. We also drew on the expertise of Esther Valdez, *Belize Education Project's* Director of Instructional Leadership, to address our response to crises. The sessions were created in Google Meet, which allowed teachers in Belize and the United States to be in real time and interactive. Not only were we receiving new content together, but we were asking questions, sharing fears, challenges, hopes, and triumphs with each other. Each session could build on the previous session with input from our participants clarifying where we were and what we were ready for next, *together.*

Conceptual Framework – Leveraging Solidarity and Technology to Engage in Decolonizing Strategies and to Co-Create New Possibilities

We were clear that the best and most effective learning occurs within a community. While we had developed relationships with each other for over a decade, the lockdown forced us to leverage technology to connect in new ways. Scholars wrote about the power we already found so formidable. Wenger (2002) noted "learning is a fundamentally social phenomenon, reflecting our own deeply social nature as human beings capable of knowing" (p. 3). Yet, even as our work together had predated a decade, we still yearned for more effective collaboration. We were aware that we inhabited different economic realities, life histories, and cultural influences that could inhibit our collaboration. We considered the words of Said (1989) when he wrote that we can no longer ignore the context of colonialism in our work (p. 51). We realized we were still experiencing the effects that centuries of colonialism had, and continued to, create, even in our efforts to create professional development. Shore (2004) wrote that, "adult education is part of the practices of colonialism" (p. 118). Shore (2004) continued to challenge us to consider the implications of colonialism in our own professional development. "The challenge is to identify the workings of colonialism in adult education theories, even when they appear to be absent or cosigned to history" (p. 118). We knew to be most effective- we would also need to work toward disrupting old assumptions of who held what knowledge, and what knowledge had value. In this courageous work, we knew authentic dialogue and relationships along with the vulnerability of COVID's impact on our instruction, were both ways in which we could begin to humanize our work.

While we understood the impact of colonialism/post-colonialism on identity is immense, we also recognized that, so too, is human ability to transform. In this regard, Holland, Lachicotte, Cain, & Skinner (1998) invited us "to respect humans as social and cultural creatures and therefore bounded, yet to recognize the processes whereby human collectives and individuals often move themselves – led by hope, desperation, or even playfulness...from one set of socially and culturally formed subjectivities to another" (pp. 6- 7). That possibility carried tremendous significance in our work. We also found inspiration in Diversi and Moreira's (2009) words as we employed more egalitarian dialogue and collaboration. We hoped that we, too, could embody their definition of decolonizing strategies which, "signifies actions, movement, process, dialogue, and the space between colonial and postcolonial" (p. 207). In this way, the vulnerability we found in these new "playing fields" of COVID lockdown caused our work to become authentic and more egalitarian. We were in this together.

We believe we became what Wenger (2002) described as a "force to be reckoned with," as we had become a group of people who shared visions and passions, and then co-created new learnings, new knowledge, and new practices, which Wenger (2002) explained held the "key to real transformation – the kind that has real effect on people's lives" (p. 85). Within these frameworks of deepened relationships, embracing decolonizing pedagogy, and a commitment to co-creating new spaces to inhabit together, we built effective and transcultural professional development.

Approach – Participatory Action Research

As co-creators of this professional development, we also wanted to better understand our work. In this, we engaged in Participatory Action Research (PAR). Heron and Reason (1997) explained the purpose of PAR is "to join with fellow humans in collaborative forms of inquiry" (p. 276). They continued to explain the "primary purpose" of PAR is for "the service of human flourishing" (p. 281). Put another way, our work together was in the service of lifting all of us. Together, we created this research question in hopes of enhancing future work co-creating professional development:

How can the COVID lockdown restrictions provide opportunities in professional development to deepen relationships, disrupt colonial pedagogy, and transform our practice across cultural lines of difference?

We collected our data through surveys, interviews, and discussion groups via our Google Meets, along with our own field notes of what was happening right in front of us. This data was collected on four separate occasions including: 1) two weeks before our professional development, 2) during our professional development, 3) six weeks after our professional development, and 4) seven months after the professional development in January of 2021.

As we drew on the many voices of our colleagues, multiple perspectives were included in order to achieve what Bazeley (2013) described as the use of triangulation which

involved “independently obtaining one or more alternative sources of data” (p. 406). Just as significant to this research was the attention to “trustworthiness” which Moss (2004) described “as an art …where multiple voices or multivoicedness is allowed to flourish” (p. 363). Using a simple thematic analysis, we compiled the data and noted themes that emerged from our data.

Findings and Discussion

As themes emerged, we came to appreciate the potency that was unleashed in the meeting of our minds, our hearts, and yes, our laptop screens, too. Our colleagues appreciated finally seeing each other after months of lockdown. Utilizing our screens, we crossed borders and cultures to share our frustrations, fears, and disappointments, as well as our greatest hopes and triumphs of teaching in this new way. Seeing faces solidified us as a learning community. As Audra noted, “We were able to see your faces, which I appreciated so much!” (Audra, interview, January 21, 2021). Interacting with each other in real time as we learned together was also powerful. Zilpa commented, “We could communicate with each other! We were helping each other. It was like being in a classroom across the world” (Zilpa, interview, January 20, 2012).

As we leveraged the bonds technology afforded us, we drew on our connections to ensure content was delivered in a way everybody could access the information. Brenda noted, “It was delivered in real time addressing what we needed. If we had any concerns, we could quickly ask and get an answer” (Brenda, survey, January 20, 2021).

New Practices for Teaching

As we appreciated the effectiveness of our virtual professional development, we wondered if these new skills could empower us to more effectively reach our students? Our data suggested it could. Evangelina told us, “With Google Classroom, I learned children can write in a book, share images, collect data, draw, or insert images and download or share!!” (Evangelina, survey, August 23, 2020). Carmita also noted, “These will be of great benefit for our students to make learning more engaging” (Carmita, survey, August 23, 2021). Seesaw (a platform for primary school educators) also captured the imagination of primary teachers. Carmita noted, “Seesaw can help us individualize students’ needs by providing specific instruction and feedback.” She elaborated that “Students can become creative. They can take pictures and videos and include it on their projects. Parents can share or see what the child is learning as well” (Carmita, survey, August 23, 2020). Emy, too, explained her enthusiasm, “I used Seesaw with my students to record their reading. They had fun and enjoyed every part of it!” (Emy, survey, August 23, 2020). New tools were ushering in new possibilities to reach our students.

Seven months after our professional development we collected our last set of data. By then the Belize Ministry of Education began providing “packages” of paper and pencil work for their students and broadcasting radio school with prerecorded lessons at specific times for students (Kirshner, 2020). While these efforts were significant, the teachers

appreciated the additional strategies. Eli explained, "the packages weren't so useful, as they were being returned incomplete. But with Google Meet, students could tell us what the problem is" (Eli, Facebook messaging, January 21, 2021). Eli also commented, "If we didn't have this technology, I don't know how we would even connect with students, since we haven't seen them in a year. At the moment we are reaching more than 50% of our students with technology." (Eli, interview, January 23, 2021). Significantly, Majorie also noted, "…Google Meet - it is a free tool!" (Majorie, survey, January 20, 2021). With creativity, resolve, and new knowledge of technology available to us, we co-created new ways of helping teachers reach learners in quarantine.

Beyond Classroom Practice

As new skills impacted the delivery of instruction to our students, our colleagues leveraged these skills beyond their own classrooms. Emy explained, "I have used my knowledge to teach my husband how to use Google Meet for meetings with his colleagues and family members" (Emy, survey, January 20, 2021). Evette commented, "I am able to teach my son to use these to present his for high school" (Evette, survey, January 20, 2021). Students across borders were also impacted. Young learners who lived on the Guatemalan side of the border could not even get the paper/pencil packages, as nobody was permitted to cross the border. Brenda told us:

> I am using Google Classroom with students across the border. I upload work for them on Mondays and allow then to work, send them tutorials, videos, feedback, and grades. Parents commented that they too are learning alongside their children. Not all is perfect, but everyone is getting there. (Brenda, survey, January 20, 2021)

The content of our professional development was reaching and impacting people beyond those who were in our virtual "room," with us during our summer professional development.

Meeting of the Heart

Finally, the data reflected we were experiencing a meeting of our hearts as well. As Emy noted, "every teacher got a chance to express how we have coped through these times of uncertainty and lockdown due to COVID-19" (Emy, survey, August 23, 2020). The fellowship we found through these sessions not only lifted us, but empowered us to lift others around us, including our students. Angelina explained that the sessions "motivated one another to keep moving along, despite the difficult situation." Evette echoed Angelina's reflections:

> I was able to share some anxiety caused by the changes of these difficult times. Sharing made me feel that I was not alone in being impacted by the effect of these changes happening right now. Being a part of this group discussion helped us comfort each other with faith and assurance that we will get through any challenges. (Evette, survey august, 23, 2020)

That we were not alone became clear to all of us.

As we embarked on this new journey in solidary, we were not only lifted ourselves, but we were also empowered to lift our students. Jesse explained that this

> crisis is exposing kids to some real heavy issues on the news, radio or internet, as well as personal grief of loss. This session helped me know how to help a family, a student, or each other during the grief and loss. (Jesse, Survey, August 23, 2020)

We gained a renewed sense of strength and a feeling that we could better support each other and our students.

As the months of teaching and learning remotely in the midst of COVID restrictions marched on, the impact of our professional development was sustained. Evette explained that she *still* felt transformed by our work, that she still drew from having built, "emotional connections with other teachers" as well as the "ideas of activities that lessen COVID stress" (Evette, Survey, January 20, 2021). Jessy, too, noted that months later she was still integrating, "what I learnt in the Building Emotional Connections session" (Jessy, Survey, January 20, 2021). The results of our work appeared to be significant and sustained.

Barriers and Limitations

As we were inspired by the impact of our work together, we were also clear about the limitations of reaching our learners remotely through technology. We were all too cognizant of the continued lack of internet access and devices in the community, as well as sufficient knowledge and skills for both families and teachers to effectively use technology.

Our colleagues conveyed that internet accessibility, along with access to a device, is a barrier for their remote learners. Emy noted that many "students don't have a device or internet connection." She was dismayed as she continued to explain because of this lack, "I was unable to practice any of the platforms and ideas discussed in the training sessions" (Emy, survey, January 20, 2021). Sonia also noted that "availability of internet" was especially challenging to students who "live in very remote areas" (Sonia, survey, January 20, 2021). Without access to internet or sufficient devices, this platform could not reach all students.

Our data also indexed insufficient knowledge and inadequate know-how for both families and in teachers. Nelia explained, "Parents not able to do 'the digital' and most speak Spanish" (Nelia, survey, January 20, 2021). Areli explained her own challenges coming into the sessions with little background in technology:

> I faced many challenges with using the basic tools - that is forgetting to turn off my mic and camera. I am very shy with cameras. I prefer not to use it and when I do, I feel very uncomfortable with it. Also, I have had problems when using my phone. When the presenter is asking for comments or ideas and I don't know

> where to go to make a comment. I am not a computer literate person. I can learn to use apps and tools but at a slower pace. (Areli, survey, January 23, 2021)

Areli told us, "other participants made so many comments about what is being discussed, and I was so afraid to comment because they made me feel like I was the odd one out." (Areli, survey, January 20, 2021). All of us became vulnerable in the lack of technology skills which were being required from us as teachers.

In that vulnerability, there were painful moments and feelings of inadequacy, incompetence, and frustration. There were moments for ***all*** of us when the challenges felt too great, the discouragement felt too over overwhelming for us to continue.

Future Direction

Despite (and maybe even driven by) our understanding of barriers, we forged ahead. New tools and deepened connections inspired us. Yes, we were still grieving the emptiness of classroom walls. Yes, we were clear on the barriers of connectivity, devices, and our own fledgling skills. Yet, we also still felt the presence of our students. We could feel their tug from within their own dwellings, and the need for learning to continue.

Our data also reflected optimism. Marie declared, "I am learning and exploring with my students. Every day is a new day and opportunity to learn" (Marie, survey, August 23, 2020). Majorie commented, "these tools can help us navigate the challenges of distance learning." She continued, "we're committed to helping students continue learning outside of school" (Majorie, survey, August 23, 2020). Drawing a chuckle from her colleagues, Areli declared, "If God spares life, I will try my best to do at least one or two 'meets' for this term!" Our colleagues entered the school year with determination and emerging skills to reach remote learners. Abel even noted how he was reaching students in Guatemala, "We decided to get our students across the border on board with the Google Classroom" (Abel, interview, January 25, 2021). Eli expanded:

> Hopefully we can build from two days a week now (connecting with students on line). In the near future we can extend it to three days, then to four days! Right now, we are perfecting the system. We know that not everybody can connect. But hopefully as days go by, parents will find a way, because that is what they want. We will move forward in that direction, so we can meet as many students as possible. Right now, from the 60 (students) that we have, sometimes we have 35 or 38 on the Google Meet. Last week we had 45! It gets better all the time! (Eli, interview, January 23, 2021)

The data indicated that not only did the content have staying power, but it also opened new possibilities and even more significantly, new ways of imagining possibilities for us as educators.

Implications of Research: Our Future is Bright

We came to understand two implications of our research. First, we saw the power of so many more partners "in the room" collaborating to build professional development. Second, we cemented our understanding of the importance of fellowship in each other as we transform our practice in the context of decolonizing strategies.

As we were compelled into new ways of collaborating, our eyes opened to the possibilities of who we included in our virtual room. While this technology existed before, now we had no other option besides meeting through our screens. It changed our game. William (the third author) explained the collaboration of this professional development:

> We consulted each other as administrators, as teachers on the field, and as the BEP board. We came together and derived a plan. The teachers gave their input, the administrators gave input, the BEP board gave their visions. So, we built that platform, and put it into place. Everybody did their part, and it was such an effective workshop. Now, I think *that* is the base to continue building. (William, interview, August 17, 2020)

Planning professional development will now be inclusive in ways we never imagined before quarantines and lock downs. Our work will be better for it. We believe other educators involved in creating professional development can also benefit from leveraging technology to more fully include all stakeholders.

As teachers found ways to connect during the crisis of COVID, we witnessed our shared visions within our relationships collectively transform our practice. Teacher educators across the globe can benefit from deepened understanding and commitment to nurturing the cross-cultural fellowship and collaboration between teachers as learning communities. We believe they, too, will find the kind of transformation that has a formidable impact on people's lives.

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A NOVEL TAXONOMY TO ASSESS ENGINEERING STUDENTS: THE FACE-IT PROJECT

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ABSTRACT: Formally describing and assessing the difficulty of learning and teaching material is important for quality assurance in university teaching, for aligning teaching and learning activities, and for easing communications among stakeholders such as teachers and students. This paper proposes a novel taxonomy to describe and quantify the difficulty levels of exam questions and exercises encountered in engineering-related contexts. This paper also describes the development and piloting processes of the new taxonomy. The proposed taxonomy consists of two dimensions which describe the difficulty in understanding/explaining and using/applying a content unit. The piloting phase included ten purposefully selected experts in the field of control engineering, external to the project, who tested the performance, utility, ease of use, and clarity of the new taxonomy. The results indicate that the users were able to provide consistent and coherent assessments of the difficulty levels of 15 selected exam questions. The paper further discusses suggestions for improvement voiced by the participants to promote an even more consistent and coherent assessment of engineering students' mastery of the subject.

Keywords: assessment, taxonomy, higher education, engineering

Introduction

This study is part of an Erasmus+ project titled "Face It: Fostering Awareness on Program Contents in Higher Education using IT tools", realized by Uppsala University, Université Libre de Bruxelles, Otto-von-Guericke University Magdeburg, Norwegian University of Science and Technology, and the University of Padua. It brings together Engineering and Pedagogy to develop new shared methods for defining, collecting, managing, processing and visualizing program content in association with program learning objectives, teaching-learning activities (TLAs), and intended learning outcomes (ILOs). The focus is on improving the common understanding of what is being taught in courses or programs, what is expected from students, and how the courses in a program are connected. Thus, it includes improving the clarity, efficiency, and effectiveness of the forms of information exchange among teachers, students, and administrative staff. Indeed, the educational community involved reported that in the engineering educational field frustration often arises when discovering that different courses teach the same content, assume prior knowledge that has not been provided yet, or the outcomes as intended by the teachers do not correspond with the learning outcomes perceived by the

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students. Parts of these problems can be tackled using constructive alignment, a curriculum design approach that seeks to optimize the conditions for quality learning, as well as building a coherent learning environment where teaching methods and assessment practices are aligned with teaching objectives (McMahon, & Thakore, 2006). It leverages the following: the definition of the ILOs to describe what students should know and be able to do at the end of the course; the definition of TLAs designed to guide the students towards achieving the ILOs; and the identification of criteria and methods of assessment (Biggs, 2003). In this direction, a curriculum development process started within the Face It project. Firstly, a new taxonomy has been developed, having as primary purpose the definition of a shared and clear lexicon to describe the content of engineering curricula and the related difficulty. To introduce the taxonomy and its development and assessment process are the purpose of this paper.

From a pedagogical perspective, taxonomies have their roots in the curriculum design and development movements and their focus on sequential structuring and objective assessment of learning. Typically, taxonomies stem from behaviorist models of task analysis (analysis of the basic requirements for performing a task) and the construction of learning process feedback systems -originating from the cognitivist framework (Bonaiuti et al., 2017). Indeed, Bloom et al. (1956) first introduced the concept of taxonomy of educational objectives with the aim of reducing the ambiguity of teaching activities, and of organizing in a sequential way the process of assessment. The goal was to identify expected behaviors and the required skills for their achievement. In the last few years, curriculum development processes increasingly considered a student-centered approach (Guerrero-Roldán & Noguera, 2018; Vonderwell & Boboc, 2013), which promotes an ongoing assessment process with different goals. In these processes, assessments are seen as events that are useful for learning, as learning, and of learning; thus, they are a combination of different types of assessment, both formative and summative, which aims to support students' learning, promote their self-regulation, and assess competences (Guerrero-Roldán & Noguera, 2018; Hume & Coll, 2009; Masuku et al., 2021; Vonderwell & Boboc, 2013). Furthermore, growing attention is given to active learning (Cooperstein & Kocevar-Weidinger, 2004; Guerrero-Roldán & Noguera, 2018; Khan et al., 2017; Tabrizi & Rideout, 2017), which implicates "instructional activities involving students in doing things and thinking about what they are doing" (Bonwell & Eison, 1991, p. 5). Active learning "is the process of engaging learners with the topic and each other where they are talking, doing, and creating, together" (Fedeli & Bierema, 2019, p. 30); in this way students construct their learning interacting with the context, involving higher order thinking, and delving into their attitudes and values (Fedeli & Bierema, 2019; Matsushita, 2018).

According to the studied literature, the "Taxonomy of educational objectives" (Bloom et al., 1956) is the most well-known and used taxonomy in Engineering higher education. It consists of three domains (cognitive, affective, and psychomotor) each one divided into categories (Bloom et al., 1956; Krathwohl et al., 1964; Simpson, 1971). The cognitive domain is widespread amongst engineering educators as a framework to describe complexity and higher order thinking (Mead & Bennett, 2009; Stotsky, 2017). Some scholars found the taxonomy useful to design and assess software engineering courses

(Britto & Usman, 2015), and to improve the alignment of assessment and learning outcomes in software engineering teaching (Khairuddin & Hashim, 2008). Among the strengths, the extensive analysis of test items, its simplicity, and the distinctness of factors of the cognitive domain have been identified (Fuller et al., 2007). Nevertheless, some critiques have been addressed: It is not suitable for the computing context (Azuma et al., 2004; Masapanta-Carrión & Velázquez-Iturbide, 2018) and does not adequately address the skills and competences needed in engineering (Heywood, 2005, p.28). Other highlighted difficulties concern the differentiation of the cognitive activity involved in each category (Fuller et al, 2007; Masapanta-Carrión, & Velázquez-Iturbide, 2018; Staffas et al., 2020). As a consequence of the above, considering students' cognitive processes can become challenging (Kallia, 2017; Masapanta-Carrión & Velázquez-Iturbide, 2018). Additionally, this taxonomy offers different interpretations (Heywood, 2005; Johnson & Fuller, 2006; Staffas et al., 2020) and overlaps among categories (Fuller et al., 2007) that make some learning goals fit into more than one category (Masapanta-Carrión & Velázquez-Iturbide, 2018; Staffas et al., 2020). There are also disagreements in categorizing knowledge related to higher levels (Azuma et al., 2004; Fuller et al, 2007). In fact, the applicability of these categories to every module has been problematic (Johnson & Fuller, 2006) and therefore not suitable for undergraduate courses (Ardis et al., 2015 p.17). Furthermore, some authors consider the taxonomy not exhaustive, as it neglects operational knowledge (Azuma et al., 2004) and accordingly have proposed the addition of other categories to the taxonomy (Heywood, 2005). Many attempts have been made to standardize Bloom's taxonomy use (Britto & Usman, 2015; Masapanta-Carrión & Velázquez-Iturbide, 2018). Some scholars proposed modifications of the original Bloom's Taxonomy (Azuma et al., 2004; Fuller et al., 2007; Johnson & Fuller, 2006), some others used the revised version proposed by Anderson et al. in 2001 (Amorim et al., 2014; DeMara et al., 2019; Froyd et al., 2012), or a further modification created in 2007 by Marzano and Kendall (Vargas-Mendoza et al., 2018).

Also known in the field is the SOLO (Structure of the Observed Learning Outcome) taxonomy (Biggs & Collis, 1982). According to Biggs and Collis (1982) this taxonomy aims to pay more attention to the authenticity of the evaluation in terms of using "levels that arise naturally in the understanding of the material" instead of a priori ones (Biggs & Collis, 1982, p. 13). The SOLO taxonomy, consisting of five levels of knowledge based on Piaget's stages of cognitive development, aims at capturing adult conceptual development. Intuitiveness and reliability (Stotsky, 2017; Watson et al., 2014), usefulness to analyze student's knowledge (Kallia, 2017; Watson et al., 2014), and the holistic nature (Fuller et al., 2007) are its strengths. On the other hand, imprecision on specific concepts learned (Staffas et al., 2020; Watson et al., 2014) and lack of usage experiences in the field (Fuller et al., 2007) have also been reported. Modifications have been proposed to the original version (Stotsky, 2017) and a priori coding scheme has been adopted to improve its usage (Watson et al., 2014). Other lesser-known taxonomies have also been proposed such us the Taxonomy of Significant learning proposed by Fink in 2003(Man Choi, 2019), or inedited taxonomies (Crawley et al.,2011; Sedelmaier & Landes, 2012).

Based on these considerations, the already existing taxonomies do not meet the educational and assessment need of the Face-It educational community. Consequently, the research group has drafted a new taxonomy that should be intuitive, valid, reliable, and suitable for defining the knowledge and skills required to successfully answer typical questions and exercises in engineering. Therefore, the study is guided by a multiple theoretical framework rooted in curriculum development, which pays attention to the creation of a coherent learning environment in the perspective of constructive alignment and sees in taxonomy a tool that promotes clear information exchange among stakeholders and supports the two just mentioned.

The Proposed Taxonomy

Considering existing taxonomies and inspired by the division of engineering knowledge into procedural and conceptual knowledge, the proposed taxonomy assumes the difficulty of a question as measurable along two dimensions: using and explaining. The taxonomy leverages the concept of content unit (CU), with which we mean an atomic unit of knowledge, e.g., electric potential, Rouché-Capelli theorem. In other words, we assume that each question corresponds to an opportune set of CUs that indicate which content the question covers. The taxonomy level of a question should then indicate how difficult the question is (e.g., using 2; explaining 1). In principle, all combinations are possible apart from the level u0, e0.

The Using Dimension

This dimension is dedicated to measuring the increase in difficulty of the skills needed to compute a correct answer, solve a problem, or derive a quantitative result. The levels are:

- Level u0 (short for "using level 0") are questions that do not require computing a specific output.
- Level u1 are questions that ask explicitly to obtain some quantitative outputs, tell explicitly which CUs should be used to compute the outputs, and tell explicitly how to use these CUs if these can be used in more than one way.
- Level u2 are questions that ask explicitly to obtain some quantitative outputs, only hint at which CUs should be used to compute the outputs, and only hint at how to use these CUs.
- Level u3 are questions that ask explicitly to obtain some quantitative outputs, neither tell nor hint at which CUs should be used to compute the outputs, and neither tell nor hint at how to use the CUs.

The "Explaining" Dimension

This dimension is dedicated to measuring the increasing difficulty of conceptual knowledge and understanding needed to arrive at a correct answer, explain or predict a phenomenon or behavior, or derive a qualitative result. The levels are:

- Level e0, questions that require pure computations without any explanation or reasoning.

- Level e1 are questions that can be answered just through memory recalling operations, such as questions asking the student to define or recall the explicitly mentioned CUs, to recognize the correct keywords or a phrase that defines the mentioned CUs.
- Level e2 are questions that simultaneously clearly mention or hint at both the CUs involved, the technical context, and at least hint at a pre-described or obvious path to reach the solution; they cannot be answered through only memory recalling operations, because they require also performing cognitive/logical connections among the ingredients above to reach an outcome that is explicitly specified in the question and require logical connections among the ingredients above. Such questions may ask the student to do the following: describe the CUs in their own words, add information to the main points characterizing the CUs, interpret and summarize the CUs, construct a symbolic representation of the CUs, and/or translate the CUs from one form to another, for example through figures or diagrams.
- Level e3 are questions that present at least one of the following features: they do not mention explicitly or hint clearly at all the ingredients needed to answer the question, nor do they hint at a pre-described or obvious path to get the solution, or require the student to choose from multiple possible nontrivial paths to reach a correct solution; they require constructing upon previous knowledge, i.e., performing logical connections beyond what is explicitly mentioned in the exercise, and thus require extrapolating information to correctly predict and/or generalize concepts, consequences and/or phenomena in other contexts and/or outside the subject area. Hence, such questions may ask the student to do the following: recognize some relationship like similarities, differences and cause-effect relationships between the ingredients in the question and some nonexplicitly mentioned CUs; identify errors in the presentation or use of some explicitly mentioned CUs; solve questions that require the application of CUs in some specified situations/contexts but at the same time provide only incomplete information, and thus require the student do logical connections beyond what is explicitly mentioned; recognize some organizational principles involving the mentioned CUs; consider some trans-disciplinary aspects of the mentioned CUs; require the student to perform analyses, or form opinions, estimates or predictions that necessarily involve what is beyond what is explicitly mentioned in the exercise.

Methodology

Not having found a satisfactory and validated process of taxonomy development and validation in the literature, we studied the processes previously followed by scholars for the validation of their taxonomies and we took as reference the process for the scale validation of Boateng et al. (2018). Firstly, we identified the domain and generated the items. A content validity assessment followed. According to Boateng et al. (2018) this is best done through the combination of external expert judges and target-population judges; therefore, ten participants with these features were recruited via email. They belonged to the professional network of the authors and were not involved in the crafting

of the taxonomy. Ten meetings (one for each participant) were held using a video-call platform (Zoom) between October 27, 2020, and November 20, 2020, and recorded to facilitate later analysis. The participants (one female, nine male) were academic members (two full professors, two associate professors, two assistant professors, one senior researcher and one postdoc) and other professionals from industry, working in Europe (n=7) and Northern America (n=3) in the same scientific area (Systems and Control) and with teaching experience ranging from 0 (meaning at most limited to assisting with preparing exams) to 30 years. During the meetings, the participants were asked to read the manual created to explain how to use the taxonomy. Secondly, they assessed the taxonomical level of a set of 15 questions according to the directions written in the manual. The aim of this exercise was to measure whether participants were using the taxonomy consistently. Each meeting ended with a semi-structured interview (Trinchero, 2002) to explore the following:

- Clarity, especially regarding the lexicon, structure and purpose, to understand if the taxonomy is described well and unambiguous (Boateng et al., 2018; Mountrouidou et al., 2019; Wolever et al., 2020).
- Exhaustiveness, in terms of completeness (Huff et al., 1984; Mountrouidou et al., 2019; Tett et al., 2000), i.e., being composed by all the dimensions and categories needed to categorize the difficulty of exercises.
- Effectiveness, i.e., if it achieves the established objectives (Alvino et al., 2006; Bezzi, 2007; Pozzoli & Manetti, 2011), that in this case is the classification of the difficulty of exercises and the relative labelling.
- Relevance, in terms of usefulness for the purpose of assessing the difficulty of exercises, and usefulness in the assessment process of teaching (Boateng et al., 2018; Devon, 2007; Huff et al., 1984; Valentijn et al., 2015; Wolever et al., 2020).
- Distinctness between levels (Spangler & Kreulen, 2002), i.e., "whether the categories are mutually exclusive" (Huff et al., 1984, p.31), whether the exercise is "uniquely represent[ed]" in each dimension (Tett et al., 2000, p. 219) and whether each category is decoupled from others (Mountrouidou et al., 2019, p.7).

Critical issues and suggestions were also collected. The digital transcripts of interviews were analyzed with AtlasTi.08 software, a CAQDAS (Computer Assisted Qualitative Data Analysis Software) that supported the text analysis. A statistical analysis was conducted in Excel for the quantitative data gained from the taxonomic assessment of questions.

Results and Discussion

The results are described in two distinct parts, one dedicated to the quantitative analysis of the measured assessment patterns, and one to the qualitative analysis of the user perceptions and recommendations.

Quantitative Results of Taxonomic Assessment of Questions

Out of 15 questions, only in three questions did more than 30% of the participants disagree with the levels assigned on average by peers. This shows a fairly good level of convergence to the same general assessments of the scale. In the average there is a convergence around 80% to the mode level and the adjacent ones (more precisely 80.5% for the u dimension and 81.0% for e). The convergence to a single class is also fairly good (on average 63.1% converged to the same u level and 51.6% to the same e level), especially if one considers that 10 items have an even distribution between two classes. In several questions there exist some outliers (e.g., Q1, Q2, and Q12). By triangulating the data with the interviews, we realized that most of the votes marked as outliers tend to come from participants whose choice was often due to misinterpretations of the taxonomy manual. Thus, further work must be done to enhance the manual clarity. Overall, the quantitative data show encouraging results, which could be improved with some fine-tuning on the manual and wording of the taxonomy levels. We also learned the importance of selecting questions/exercises that are clearly understandable by people coming from different schools and institutional cultures.

Qualitative Analysis of Interviews

The first considered factor is the perceived clarity of the taxonomy. All the 10 participants declared that the purpose of the taxonomy is clear. However, eight of them perceived its structure as clear, and seven perceived its lexicon to be clear. Relative to this, three participants identified some words used in the manual as critical issues. Furthermore, two participants explicitly mentioned that the explaining dimension is noticeably less intuitive than the using one. We believe that this is likely connected to some issues on the distinctness between levels.

The perceived distinctness between the levels is not as accurate as hoped, in fact the participants reported to be unsure in labelling choice while compiling the assessment. The using dimension is associated with noticeably less doubts than the explaining one, and e2 vs. e3 seems to offer the most fleeting discerning boundary. A shared feeling is that the differentiation between levels seems clear on paper (i.e., when reading the manual), but then this clarity diminishes when trying to apply the taxonomy. This calls for adding more examples in the next rewriting of the manual and explaining the levels better.

The next considered factor is the perceived efficacy of the taxonomy. Every participant agreed on the usefulness in labelling exercises; two of them expressed doubts about whether classifying difficulties can be performed in a purely objective way at all. In our stance, it is unlikely that a taxonomy removes all subjectivity effects on indexing difficulty levels, however, having some explicit guide to follow can contribute to reducing that. As for the perceived exhaustiveness of the taxonomy, seven participants found that there were dimensions missing (e.g., the time dimension, in the sense of indicating how much time will be required for an average student to solve it, and the complexity dimension, in terms of measuring how tedious and challenging the exercise

is). Understanding which and if adding dimensions is needed is still an open question and our current research focus. Another considered factor is the perceived relevance of the taxonomy: seven participants said that already in this form, the proposed taxonomy seems useful for their teaching, especially as a tool for aligning the expectations with the students and colleagues, on top of sharing material within the community.
Finally, perceived strengths and weaknesses were analyzed. Among reported weaknesses, the current taxonomy does not promote enough distinctness between the various levels, and it is insufficiently exhaustive, i.e., it lacks dimensions to capture the various shades of difficulty of various exercises. Two persons mentioned that already the existence of this taxonomy is a strength, i.e., already having something that covers a perceived gap is a strength. Moreover, the participants mentioned expected benefits of taxonomy employment as strengths, e.g., the possibility of aligning expectations with the various stakeholders on top of exchanging teaching material, the possibility of checking the consistency of the exams' difficulty levels across the years and promoting teachers' reflections on the exercises.

Conclusions

The focus of the paper is on introducing a new taxonomy the purpose of which is to enable an objective indexing of automatic-control-related assessment material. Item generation and content validity assessment has been presented. In the latter, ten people were recruited in an indexing exercise accompanied by a semi-structured interview. Both quantitative and qualitative analyses were carried out, highlighting those ill-posed questions are evidently associated with higher-than-normal spreads of the indexing, the taxonomy is still incomplete from a dimensional point of view and has issues on differentiating levels of difficulties. Currently our efforts are in reformulating taxonomy and exercises to address the issues encountered, as well as planning the content validity assessment of the second version. Future work may try to subject the taxonomy to the evaluation of a statistically relevant sample and to introduce the taxonomy in other areas and disciplines. Finally, we believe that a pedagogical research study design could give evidence on how the integration of this taxonomy in the teaching-learning process can support students' learning, giving them a more accurate feedback and assessment on their learning processes and outcomes.

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MICRO-CREDENTIALING IN ADULT LEARNING: INTERNATIONAL CONSIDERATIONS

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ABSTRACT: Micro-credentialing is unique because it spans epistemological paradigms, theoretical frameworks, and research methodologies in every academic discipline. Micro-credentialing and related technologies promote formal, non-formal, and informal learning among global adult learners through public-domain Open Educational Resources (OER) and other online courses that provide standalone enrichment or ancillary post-secondary knowledge and skills. Interests are rising in micro-credentialing as a verification tool. Yet, challenges to international standards, compatibility, language, validation, and efficacy require exploration to address technological issues, limitations, and implications for global adult learning. This paper introduces the foregoing concepts and relates them to concerns of the international adult education community. Educational researchers, instructional designers, administrators, and practitioners in academia, industry, and governments should understand historical details and current statuses to effectively prepare for sustainable creation, deployment, and storage of micro-credentials in the future. Likewise, consideration must be given to measuring and adapting to global adult learners' perceived value of micro-credentialing as an acceptable representation of knowledge and skills procurement through formal or informal, guided or self-directed, task-specific or generalized learning.

Keywords: micro-credentials, digital badges, online learning, global interoperability

Sometimes, *inter-national* does not mean *global* or even *worldwide*. This is the plight where one finds academic micro-credentialing, which Corbeil et al. (2021) define as "bite-sized learning and training in technology-enabled environments" (p. ii). Around the globe, leaders in adult education, the workforce, government agencies, and international nonprofit organizations are endeavoring to respond to rapid technology advancement while simultaneously advancing the recognition and sustainability of micro-credentials, with the implementation of globalized standards marked as a priority. Nonetheless, a plethora of challenges hinder the seamless universal integration of micro-credentialing in adult learning.

A UNESCO-UNEVOC Education Sector Report (2018), focused on cross-border recognition of learning credentials, describes the "new and dynamic landscape" (p. 5) of digital learning and open data sources for storing credentials in terms of pedagogical change, interoperable systems, and aligned standards for the credential and its repository. The world's united lens on lifelong learning requires methods for validating digital learning outcomes to be responsive, accessible, sustainable, and portable across national boundaries.

Global interest in higher education micro-credentialing is extensive. A UK-based strategic analysis consulting firm's 320-member Global Higher Education Executive consortium comprises 55% from North America, 18% East Asia and Pacific, 12% Europe and Central Asia, 7% Latin America, and 8% Middle East, South Asia, and Africa

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combined (HolonIQ, 2021). A search of Google Scholar for the term *international adult education micro-credential* provided 120 relevant results published in the first six months of 2021. Three hundred twenty-four relevant results were published in the preceding four years. Yet, the titles listed span multiple continents and languages, comprising scholarly literature, government and quasi-governmental agency reports, international humanitarian nonprofit position papers, education industry-specific trade journals, corporate white papers, and dissertations.

Growing focus on micro-credentialing from many parts of the world indicates the need for researchers interested in global adult and higher education to better understand its historical details and current statuses. This paper introduces the foregoing concepts and addresses concerns of the international adult education community for effectively preparing future micro-credentials' sustainable creation, deployment, and storage.

Historical Context: Digital Credentials in Online Learning

Massive, Open, Online Courses

Digital credentials, often referred to as "badges," grew from recreational, electronic gaming and quickly were appropriated by massive, open, online courses (MOOCs) around the world as a method to denote achievement (Kato et al., 2020). Following the designation of 2012 as the "Year of the MOOC," the Global MOOC Survey results led to creation of the Quality Reference Framework for MOOC developers (Stracke, 2017). The MOOC format provides a platform for both instructor-driven and self-directed learning on almost any subject through public-domain or otherwise free, online delivery.

MOOC course offerings reflect an unfathomable number of subjects and levels. Instruction is delivered in formats ranging from short, serialized YouTube or TikTok how-to demonstrations to extended virtual, asynchronous or synchronous, multi-part courses that effectively develop a topic and provide opportunities for exploration and discussion among learners with similar interests worldwide. MOOCs are more popular internationally than in the US, where one finds hundreds of adult education MOOCs concentrated within leading providers Coursera®, EdX®, The Great Courses®, and numerous accredited universities (Shah, 2020). Internationally, distributed online learning is handled by a variety of providers.

Open Educational Resources

MOOCs are just one of many modalities deployed for transmitting open educational resources (OER) worldwide. OERs range from informal, single-subject discussions to semester-long, content-heavy courses similar to college curricula, to highly technical skills training. OER drawbacks include inconsistent definitions as to structure and administration, concerns about academic rigor and consistency, and exploiting informal learning to drive scholars toward formal learning. Because OER courses are usually loosely structured and self-directed, user satisfaction is high. However, a study of approximately 3,000 OER learners found users were generally satisfied but did not fully

understand the OER paradigm (Farrow et al., 2015). Alt (2021) likewise notes a dearth of empirical data regarding learners' motivation to utilize OERs. Interestingly, the existing higher education trend toward international acceptance of virtual learning resources made the transition to fully online courses in 2020 successful for many international colleges and universities. One study at an institution characterized as a "leading Chinese university" (Liu et al., 2020, p. 1) found responsive online learning sustainable, even in the midst of an unprecedented global pandemic.

OERs have not been as prevalent in the United States as in other nations, nor has the US benefited from multinational joint ventures and government schemes such as the European Union's Erasmus+ Programme (Fundaţia, n.d.). In 2016, Erasmus+ established the PARADIGMS and e-VALUATE projects focused on assessing online learning platforms (Finocchietti & Lokhoff, 2021). The Open Textbook Initiative, funded by the Libraries of the Australasian Network, increased awareness of OERs in that Pacific region (Ponte & Hurley, 2021). The 58th volume of Springer's series, *Education in the Asia-Pacific Region: Issues, Concerns and Prospects*, is replete with chapters covering OERs, digital credentialing, and similar technology-related learning subjects (Ra et al., 2021).

Micro-Credentialing and Digital Badges

While the concept of OER courses fits modern learning interests, few OER products mesh together to provide a framework for a degree or certification that is recognizable worldwide. Rather, most online courses that provide artefactual proof of completion do so in the form of a micro-credential or digital badge that "acknowledges the achievement of skills and competencies through explicit evidence" (Alt, 2021, p. 1). Oliver (2019) describes micro-credentials as "granular" (p. 1), defining a micro-credential more precisely as "a certification of assessed learning that is additional, alternate, complementary to or a formal component of a formal qualification" (p. 19).

The terms *micro-credential* and *digital badge* are essentially interchangeable today. Traditional educational institutions, however, generally consider the term *micro-credentialing* connotes a higher standard of learning. SUNY (n.d.) offers micro-credentials to show its "commitment to each student's success and the value of individualized learning" (par. 2), describing its "high-quality micro-credentials" thus:

> At the most basic level, micro-credentials verify, validate, and attest that specific skills and/or competencies have been achieved. They differ from traditional degrees and certificates in that they are generally offered in shorter or more flexible timespans and tend to be more narrowly focused. Micro-credentials can be offered online, in the classroom, or via a hybrid of both. (par. 1)

Nonprofit EDUCAUSE (n.d.) uses parallel language in its marketing of courses. OER learning micro-credentials and digital badges are less likely to be awarded by an educational institution than by a MOOC, a proprietary credentialing consolidator such as

Digital Promise, or even corporations such as Disney and government agencies such as US-based NASA (R. Gibson, 2015).

Researchers have recorded a general sense of success among all stakeholders, noting badges provide a common language between industry and education. Soenen and Finocchietti (2021) maintain learner-centered micro-credentials "are not a goal in themselves but are important for the full educational and professional development of individuals" (par. 25). D. Gibson et al. (2013) observe digital badges for learners provide incentives, measures of progress, and visible recognition of accomplishments. Glover and Latif (2013) report an early study at City University of London found learners' enthusiasm for badges projected a positive effect on lifelong learning. Multiple subsequent studies in academia, industry, and government across the globe concur.

Like merit badges earned in scouting and other organizations, digital badges represent the completion of a learning activity. Unlike merit badges, digital badges do not necessarily represent mastery. Fennelly-Atkinson and Dyer (2021) maintain deficiencies in specific knowledge and skills competencies discovered through learning assessment are surmountable through deployment of "tried-and-true processes of instructional design" (p. 96) when developing a micro-credentialing program.

Professional organizations, such as the National Education Association (NEA, n.d.), offer micro-credentials aimed at industry-specific practitioners. NEA describes its micro-credentials as "grounded in research and best practice and designed to be personalized, flexible, and performance-based" (par. 4). Heggart and Dickson-Deane (2021) reiterate the importance of flexibility in their discussion of Australia's implementation of micro-credentials in learning design, providing for breaking courses into smaller components, allowing more course offerings and accommodating the need for "multiple entry and exit points" in curricular structure (pp. 10-11).

Citing Rose (2017) and others, Laughlin (2021) argues in favor of individual agency and personalized instruction, rather than standardization in micro-credentialing, to meet learners' needs for the future workforce. Rossiter and Tynan (2019) promote their "Learner-and-Earner Micro-credential Journey" to underscore learner agency resulting from "stacking desired credentials through lifelong learning" (p. 8). Additionally, individuals can "stack badges onto a core certification to represent a specialization or an advanced designation" (Leaser, 2016, p. 48).

Digital Badges' Roots in Gamification

Digital badges as representations of skill and knowledge proficiency grew from gaming, which was accepted as a reputable method for eLearning about the year 2000 (Sawyer, 2002). Kapp (2016) describes gamification as: "...an emergent approach to instruction that facilitates learning and encourages motivation through the use of game elements, game mechanics, and gamebased thinking" (p. 356). Game-based education has expanded far beyond the 1980s and 1990s' *The Oregon Trail*, *Carmen Sandiego* series, and *LeapFrog*. In fact, "gamification of learning" has grown into a separate instructional

category with standards, dedicated publications, and professional conferences (Ostashewski & Reid, 2015). Gamified learning is assessment-driven, providing simplified measurements for compliance monitoring. Gamified curricula are suitable for everyone and nearly every learning environment, adaptable to users' special needs, and easily portable between instructor-led and self-directed schema transversing languages and cultures, so all learners acquire skills and knowledge in personalized learning spaces.

Storage and Display of Micro-Credentials and Digital Badges

The MOOC badge concept initially fizzled, likely because there was no permanent way to connect a graphic image with the resource it represented (Pastore, 2019). Those who received a badge from a free course on widget-making in the early MOOC years likely asked, "So what?" What did that badge mean to the rest of the world, and how would its earner display the badge to connote its worth? Did the earner print badges and create a quasi-scouting sash on a bulletin board? Social media profiles were not prevalent, so how would learners share their accomplishment, imparting its meaning to all who saw the badge? MacKinnon (2021) posits micro-credentials and digital badges "are a 21st-century solution to the shortcomings of paper certificates in the age of digital, online identity management" (p. 57).

Micro-credentials and digital badges clearly continue to be important in internationalization of adult and higher education because they ostensibly provide a verifiable representation of skills and knowledge acquired by a learner. Traditionally, such representations have been printed documents such as a diploma from an established and accredited institution. Often, however, the granting institution or governing body has ceased existence. Thus, a method for validating learning represented by the certificate may be unavailable. Other credentials, such as a college degree or professional certification, are usually widely recognized and accepted within academia or professions because the rigor and qualification methods are well-established.

Individuals traditionally have maintained a portfolio of certificates to produce if asked by a potential employer or other inquirer. Modern digital backpacks, or eportfolios, are replacing those books and files of physical documents. The Open Badge Passport provides international users free, open storage and display, plus a directory of registered badges for which users can apply. Social media supplies options for badge-earners to display their digital credentials. The professional social media site LinkedIn provides badge display space on users' profiles. Institutional learning management systems usually include optional badge capabilities for courses. Buchem (2016) provides an indepth discussion of digital portfolio collections containing "badges as records or representations of learning pathways" (p. 346) that can ostensibly reflect an individual's lifelong learning.

Standardized Digital Badge Specifications

The digital learning badges movement floundered until late 2011, when Mozilla launched its global Open Badges initiative (Seitzinger, 2015; Pastore, 2019). Mozilla provided

infrastructure, including standardized specifications and programming API's for developers. Mozilla showcased images and provided a repository for storing details about the badges. The MacArthur Foundation simultaneously granted a few million dollars to Mozilla and a "badges for learning" competition (Surman, 2011). How are transcript data transmitted with a badge, and how does a digital badge convey the necessary information in a globally recognizable form? The Open Badges standard requires digital badges to contain metadata "bound" in the image: badge name, description, criteria for earning, issuer, evidence of earning, date issued, standards and endorsements, and tags (keywords) (Clements et al., 2020). Digital badges "serve as a proxy transcript for the [learning] activity" (Leaser, 2020, par. 29).

In 2017, IMS Global took over administering the Open Badges "ecosystem" (IMS, n.d.). The organization reports as of 2018, 24.1 million Open Badges had been issued worldwide under the Mozilla/IMS platform. Mozilla badges migrated to the Badgr system (IMS, n.d.). International technology giant IBM credits its success implementing digital credentialing to adoption of Mozilla/IMS Global Open Badges specifications, which provided a conduit for seamless communication between higher education and industry, especially in technology (Leaser, 2020).

Blockchain Technology and Digital Badges

Blockchain technology is another interesting, trending consideration for the future of digital badges. While most individuals associate blockchain with cryptocurrency, *blockchain* simply refers to a public ledger of database transactions (Belshaw, 2015). A key is required to view transaction details, and that key is held by parties engaged in the transaction – in this case, the badge issuer and earner. Through a fascinating case study, Mikroyannidis et al. (2020) provide an excellent analysis of blockchain technology and its implications for the future of lifelong learning by decentralizing resources ("peer-to-peer infrastructure") and adopting standards for data publication, storage, and retrieval via the World Wide Web. The authors argue the answer lies in their proposed "Semantic Blockchain," pairing blockchain technology with the Semantic Web, which is built on technologies and standards derived from models such as Linked Data, promulgated by World Wide Web creator Tim Berners-Lee.

A digital badge is a commodity with intrinsic value to the issuer and the earner in the blockchain context. BadgeChain was derived as a solution for long-term storage and verifiability of badge information. Affiliating with the global nonprofit W3C consortium that establishes standards for the World Wide Web, BadgeChain supports decentralized distribution of the verification details associated with badges (Lemoie, n.d.). Universities or other public-trust agencies could host blockchains to ensure the data are properly handled (Lemoie & Soares, 2016). As with all international transactions of items of value, the concept of blockchains in conjunction with digital badges provides innumerable opportunities for future exploration.

Verification of Micro-Credentials and Digital Badges

Verifying the legitimacy of a micro-credential or digital badge and specific details such as date, grantor, and course content is crucial to academic and workforce leadership; however, "digital learning records support and challenge the usual credential evaluation systems" worldwide (UNESCO-UNEVOC, n.d., par. 4). Commercial, institutional, and government-affiliated badge data aggregators compete globally for preeminence. Europe, North Africa, and the Middle East embrace the UNICollaboration-administered Open Badge Factory (MacKinnon, 2021). Both New Zealand's and Australia's Qualifications Frameworks provide a foundational method in the Australasian region (Selvaratnam & Sankey, 2020). In the US, for-profit and nonprofit members of the Learning Credential Network compete for acquisition of storable data based on a blockchain platform (Patton, 2019).

Selvaratnam and Sankey (2020) propose a simplified structure for interoperability among micro-credentialing storage systems. The learner completes a desired module in a virtual learning environment and receives a micro-credential (badge) that can be downloaded, posted on social media, or placed in an electronic portfolio online. Often, the instruction is delivered through a Learning Management System where badges can be stored. Institutions with sufficient infrastructure may have internal methods for storing digital credentials connected to each student. Credentialing management systems, both for-profit and nonprofit, provide public-facing third-party storage options. Employers can then access stored, verified credentials when considering a potential hire. Employers may have participated in creation of the credentials, providing instant recognition.

The Future of Micro-Credentialing and Digital Badges

The future of micro-credentialing is nebulous because no one can predict the technological future with confidence. An OECD Working Paper (Kato et al., 2020) encourages policymakers worldwide to address persistent "great uncertainty" despite "an increasing volume of these new credentials" (p. 4). Konert et al. (2017) present an indepth exploration of the requirement for, and methods to accomplish, global alignment of badges from the standpoint of structural standards and matching existing badges to achieve homogeneity. Lemoine and Richardson's (2015) discussion of micro-credentials, nano degrees, and digital badges in global higher education provides an engaging synopsis.

The European Union (EU) is leading globally with its Open Badges Platform (OBP), funded under the Erasmus+ Programme. The OBP's charter is to "assess, develop and promote the common EU platform for digital badges, targeted at adult education organizations, adult educators and adult learners that also represent the main target groups" (Fundația, n.d., emphasis added). The OBP targets seven EU nations' technology advancement for adult educators and standardized development of "soft skills" training in the workplace (Colibaba et al., 2020). The EU's European Higher Education Area comparative analysis of 35 member countries reports several "transversal issues," beginning with "the need for further discussion at national and international levels to

reach a common understanding of micro-credentials" through a "clear and transparent common framework" that balances "standardisation and flexibility" (Soenen & Finocchietti, 2021, pars. 20-22).

Findings from a May 2021 online conference sponsored by the United Nations' International Labour Organization (ILO) focused on adult learners in the Philippines reveal "'an explosion' of online and micro-credential programmes during the COVID-19 pandemic highlights the importance of lifelong learning to upskilling, reskilling and the economic recovery" (ILO, 2021, par. 1). Citing research performed in Malaysian higher education, Soon and Ismail (2021) argue convincingly micro-credentialing can be a "missing bridge" between unemployment and reemployment in the post-SARS-CoV-2 pandemic world.

In the United States, workplace implementation of digital badges is fragmented. Multinational technology corporations, such as Microsoft and IBM, were quick to embrace digital badges, probably because of existing industry certification schemes. In August 2020, IBM awarded its 3,000,000th digital badge since its program began in 2015. The company's announcement reports benchmarks: personalized, portable learning; scaffolded progression of competencies; identifiable pool of skilled employees; workforce democratization; a positive correlation between badges and employee performance and retention; and a common language between industry and education (Leaser, 2020).

HolonIQ (2021) surveyed its expert panel and determined, "There is little evidence that employers are willing to accept micro-credentials as a replacement for the college degree," chiefly a result of "lack of agreed standards and trust in micro-credentials, inability of the institution to keep up with the pace of change, internal resistance and lack of employer demand" (p. 8). Selvaratnam and Sankey (2020) argue learning institutions shoulder a significant responsibility for streamlining micro-credentialing creation, validation, storage, and verification for all parties.

A report from the United Nations through the UNEVOC section of UNESCO (Chakroun & Keevy, 2018) suggests digital credentials are critical for successful advancement of transnational education by providing methods to track skills proficiencies and learning systems across an individual's lifetime:

> There is increasing evidence that the use of digital technologies in education and training is supporting the development of learning materials and close monitoring of teaching and learning processes, changing pedagogies and forms of assessment and certification. Digital learning records and open data sources are complementing traditional qualifications repositories, while challenging the conventional models of credential evaluation... These changes trigger many questions about the trustworthiness of data, interoperability of systems, and most critically the ubiquity of the standards—both learning standards and technology standards—that govern the new and dynamic landscape. (p. 5)

Observing the vast number of countries that lack educational policies in general, Soenen and Finocchietti (2021) maintain, "Internationalisation is a key topic, together with discussions at the national level: the aspect of co-constructing micro-credentials with a transnational approach must be kept in view and taken into account" (par. 24). Ongoing efforts, such as the EU's Erasmus+ DIGI-HE project, which aims to "enhance universities' digitally enhanced learning and teaching strategies," will engage higher education administrators and practitioners (Gaebel et al., 2021, p. 5); however, worldwide industry leaders and workforce training providers' engagement is essential.

Conclusion

The world of learning is bounded by precepts such as a need to respond—or, preferably, predict—the rapid advancement of technology and the increased focus on self-directed learning as learners seek knowledge outside the traditional classroom (Beaven, 2021). Meanwhile, public policy and the workforce require efficacy, veracity, and sustainability of evidence of learning and competencies.

Eventually, truly global agreement must be reached on standards for recognition, definition, creation, validation, and distribution of micro-credentials and digital badges. Otherwise, adult education's present-day goal of a future filled with lifelong learners, whose eportfolios are overflowing with micro-credentials, will not be achieved.

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ADAPTIVE RESILIENCE AND CREATIVITY: LEARNING CITIES MOBILIZING COVID RESPONSES, EXPANDING NETWORKS

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ABSTRACT: Constraints of the pandemic and rolling lockdowns eliminated opportunities to gather in person. Yet, for the learning cities movement, this period of coronavirus curtail was also a time of increased networking and creative collaboration. Where once human energies expended in "process work" left little retrievable trace, now artifacts accumulate apace in electronic clouds. What might a little excavation through material collected since the onset of COVID-19 reveal about ways localities and learning city networks mobilized to address the pandemic? For those on the resourced side of the digital divide, openly available content grants access to a gallery of community responses, transnational strategies, and future forecasting.

Keywords: Learning cities, Covid-10 response, mobilization

Note: as this review references many organizations, we provide a list of abbreviations in order of appearance:

- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- UNESCO Institute for Lifelong Learning (UIL)
- North American Alliance for Learning Cities (NAALC)
- Sustainable Development Goals 2030 (SDGs)
- UIL Global Network of Learning Cities (GNLC)
- Place and Social Capital and Learning international observatory (PASCAL)
- Cork Access Network (CAN)
- Irish Network of Learning Cities (INLC)
- Australian Learning Communities Network (ALCN)
- Education for Sustainable Development (ESD)

Introduction

Considering the combination of the sustainability crisis, climate emergency, and COVID-19 pandemic, this is a pivotal point for humanity and other occupants of the big blue marble, planet Earth. Concurrently, a learning cities movement is gaining momentum, based upon a concept that posits lifelong learning for all as central to sustainable human wellbeing and planetary survival.

The idea of learning cities (regions, communities, etc.) is gaining renewed traction today, due to the United Nations Educational, Scientific and Cultural Organization (UNESCO) and UNESCO's Institute for Lifelong Learning (UIL). Authors of a recent paper elegantly distilled UIL's definition of a learning city down to a single sentence: "UNESCO promotes learning cities and lifelong learning to assure sustainable resilience of community in a fast-changing world" (Teeranon, et al., 2021, p. 91).

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According to UIL a learning city is:

> a city which effectively mobilizes its resources in every sector to promote inclusive learning from basic to higher education; revitalize learning in families and communities; facilitate learning for and in the workplace; extend the use of modern learning technologies, enhance quality and excellence in learning; and nurture a culture of learning throughout life (Valdes-Cotera, et al., 2015, p. 5).

The relationship among lifelong learning, learning cities and sustainable development was outlined in a 2017 guide for action on sustainability:

> More and more cities recognize the importance of lifelong learning and are reinventing themselves as learning cities. They acknowledge that lifelong learning is the key to developing the resources necessary for building cities which are green and healthy, inclusive and equitable and which strive for decent conditions for work, employment and entrepreneurship... It is a people-centered and learning-focused approach, which provides a collaborative, action-orientated framework for working on the diverse challenges related to sustainable development that cities increasingly face (UNESCO, 2017, pp. 5-6).

With sustainability, equity, inclusivity, and well-being as core aims, a learning city perspective is an apt lens for viewing the contemporaneous climate and coronavirus crises. This current moment brings a sense of witnessing history-in-the-making and an attendant desire to capture some of the developments during this pandemic chapter. The accessibility of information (for literally, the well-connected) is both a boon and a challenge, as the amount of content and the number of opportunities can be overwhelming.

The task of framing any review is daunting. For starters, how to delineate the start of the pandemic? At least one study now suggests the coronavirus that causes COVID-19 was already circulating undetected as early as October 2019 (Pekar et al., 2021). Thus, as an admittedly arbitrary parameter, we use that date as a beginning point for this review. A retrospective session hosted by the North American Alliance for Learning Cities (NAALC) in midsummer of 2021 serves as the closing date.

For the more difficult task of delineating what to include, we elect to organize our account with questions derived from reflection prompts of the NAALC retrospective.

I. How have learning cities and the learning city movement responded to the pandemic?
II. What roles have networks and their members played, especially during lockdowns?
III. With respect to the Sustainable Development Goals 2030 (SDGs), how has the pandemic impacted the sustainability efforts of learning cities?

Histories and literature reviews of the learning city concept can be found among open access resources (Osborne, 2014; Wheeler, 2014 Wilson, 2014). For context, we first introduce the two most pertinent organizations active at the global scale in the current

learning city movement, UIL's Global Network of Learning Cities, (GNLC) and the Place and Social Capital and Learning international observatory, PASCAL. Additional associations will be introduced throughout the paper.

UIL GLNC

The contemporary learning city movement is most closely associated with UNESCO's Institute for Lifelong Learning, UIL. The GNLC

> supports and improves the practice of lifelong learning in the world's cities by promoting policy dialogue and peer learning among member-cities; forging links; fostering partnerships; providing capacity development; and developing instruments to encourage and recognize progress made in building learning cities (UNESCO, 2016, p. 4).

New communities are added following an application process involving local governmental commitment and an endorsement from the city's corresponding national UNESCO Commission. Presently there are over two hundred member-cities from sixty-four countries. As the United States is no longer a UNESCO member, American communities are not eligible for membership in the GNLC (Nauert, 2017).

PASCAL International Observatory

PASCAL operates from networked university centers in Oceania, Europe, and Africa. It is described as "a global partnership among policymakers, researchers, analysts, higher education, NGOs and the private sector" (Watson & Wu, 2015, p. 10). PASCAL conducts research, supports communities, collaborates with UIL, and, additionally, coordinates a half-dozen thematic networks of practitioners, scholars, and others interested in different aspects of learning cities.

The Three Review Questions

The three review questions that frame this paper are distilled from a set of prompts addressed in a session hosted by NAALC in July 2021. NAALC began in 2019 with an inaugural convening in Massachusetts organized by John Wooding and his Lowell City of Learning colleagues. The association anticipates the return of the United States to UNESCO and provides a venue for those working to develop learning cities. The fledgling alliance has significantly benefited from the guidance of GNLC members and did so again this summer with speakers from Hungary (Balázs Németh), Northern Ireland (Michele Murphy), and the Republic of Ireland (Yvonne Lane) sharing their reflections.

How Have the Learning Cities and the Learning City Movement Responded to the Pandemic?

Two adverbs serve as a quick answer to the question: promptly and abundantly! As many of us learned to navigate web conferencing tools, reactions and counter-reactions to the pandemic quickly filled the digital platforms. In this section we focus on just two categories of responses, categorized as:

a) information exchange and knowledge generation, and
b) expansion of responsibilities and reconfiguration of endeavors.

Information Exchange & Knowledge Generation

Learning cities were promptly organized for information exchange and knowledge generation as soon as widespread lockdowns began. GNLC launched a series of virtual meetings for cities to share information and pandemic response strategies. Between early March and June 2020, sixteen webinars ensued, beginning with a speaker from Wuhan sharing virus statistics and a plan for maintaining educational programs during the disruption (Huang et al., 2020). Materials from all sessions are available at: https://uil.unesco.org/lifelong-learning/learning-cities/gnlc-webinars-unesco-learning-cities-response-covid-19.

A second series of webinars began soon after the conclusion of the first. This sequence emphasized research applications for learning cities in their post-pandemic recovery. Co-hosted by UIL and PASCAL, the second series ran for a half year and was designed to address the central goal of building the resilience of learning cities. These research-to-practice webinars addressed six different challenges, and materials from this series are available at: https://uil.unesco.org/lifelong-learning/learning-cities/webinar-series-learning-cities-covid-19-recovery-research-practice.

Beyond these webinars, other kinds of convenings ensued. At the fourth International Conference of the GNLC, held in Medellín, Columbia, in October 2019, the delegates adopted a thematic strategy for advancing collaborative work on the challenges most often cited by member cities. A pair of lead cities stepped up to convene cluster gatherings of multiple GNLC cities for each theme. Since the strategy was adopted, more than a dozen convenings have taken place, each hosted by partnered cities from different countries. For example, Hamburg (Germany) and Shanghai (People's Republic of China) are the lead cities for Education for Sustainable Development, while Larissa (Greece) and Yeonsu-Gu (Republic of Korea) are the leads for Strengthening Citizenship Education at Local Level, and Cork (Republic of Ireland) and Osan (Republic of Korea) are the convenors of the cluster of member cities focused on Health and Well-being. A complete list of the seven themes and cluster leaders can be found on pages 17-18 of the conference report (UIL, 2019).

Expansion of Responsibilities and Reconfiguration of Endeavors

The pandemic prompted reprioritization towards attending to immediate community needs. Learning city staff and volunteers took up new responsibilities. In Ireland, for example, COVID-19 Community Response Forums were organized in every local authority area. As government employees, learning city staff members were redeployed to lead and coordinate response strategies. Where learning neighborhoods, defined as an "area that has an ongoing commitment to learning, providing inclusive and diverse learning opportunities for whole communities" (O'Sullivan & Kenny, 2016, p. 2) were already established, those existing social networks and organizational systems readily

served response implementation. According to lifelong learning facilitator Yvonne Lane, some of the insights shared by Limerick and Cork learning neighborhood participants in a 2020 conversation included these:

- Lockdown showed the strength and power of community spirit. Older and younger volunteers worked alongside each other during lockdown, allowing for a greater appreciation for each other.
- While technology does not replace face-to-face interaction, it has been hugely beneficial in allowing people to connect.
- One approach was to use technologies with which people were already familiar so as not to exclude people, e.g., WhatsApp. (Lane, 2020, p. 18).

With exquisite timing, Belfast Learning City and the Northern Ireland Impact Forum on Adult Learning produced a collection of articles exploring the interrelated dynamics of lifelong learning and wellness. In "Learn Well, Live Well: Adult Learning and Health and Wellbeing" (Atkinson et al., 2020), practitioners and academics addressed seven themes (e.g., policy and empowerment) within the context of COVID. The publication is intended to serve as a basis of engagement with multiple constituencies and intersectoral stakeholders and a resource for policymaking.

Other forms of learning city pandemic responses included organizing mutual aid, running health clinics, adapting schooling and non-formal educational programming, and providing access to food and services. Examples of adaptive and creative responses to dynamic conditions in every world region are seen in UNESCO's set of "snapshots" from GNLC cities (2021) and PASCAL's recovery program report from nine learning communities (Kearns & Reghenzani-Kearns, 2020).

What Roles Have Networks and Their Members Played During Lockdowns?

We turn our attention to types of networks and collaborations at other scales. In this section we highlight examples at two levels:

a) Local, intra-community networks and
b) Inter-city associations within a geographic region.

Intra-Community Networks

Two examples of expanded local networks come from Cork and Limerick, the Cork Access Network (CAN) and Learning Limerick Ambassadors.

CAN. This network was established in 2020 to seek ways toward eliminating educational barriers, i.e., to "mitigate against educational disadvantage in Cork City and region" (Cork Access Network, 2021). The local network includes representatives of Cork City Council, Cork Learning City, and institutions of secondary, vocational, professional, and university education. With a quick start, CAN facilitated a consultative process to formulate recommendations for the country's "National Access Plan 2022-2026." CAN's contribution lays out a farsighted, humanistic vision based on five principles:

- learner-centered
- strengths-based
- whole of education
- whole of life
- whole of society (CAN. p. 3).

Learning Limerick Ambassadors. Similar to Cork City, the learning city of Limerick found creative ways to engage their network of learning ambassadors, a body of volunteers who serve as local advocates of lifelong learning. Ambassadors work with Learning Limerick to promote a culture of learning and to encourage participation in the personal and social benefits of educational opportunities. During the lockdowns, ambassadors created video narratives of their journeys and urged others to take part in lifelong learning. The "Learning Ambassadors Videos" are available on the Learning Limerick's YouTube channel.

Inter-City Associations Within a Geographic Region

Moving up in scale from the local community level to networks covering a geographic region, we turn to societies on two large islands: the Emerald Isle's Irish Network of Learning Cities (INLC) and on the continent down under, the Australian Learning Communities Network (ALCN).

The Irish Network of Learning Cities. A partnership among all five GNLC cities from both the Republic of Ireland and Northern Ireland, the Irish Network of Learning Cities (INLC) was launched in 2018 and envisioned as "an all-island network of cities, for support, inspiration, know-how and sharing good practice" (Barrett, 2021, p.2). While the network was quite active when the pandemic struck, COVID-19 prompted additional avenues of exchange, support, and collaboration. In addition to INLC's core channel of cooperation, a community-of-practice emerged among the learning festival planners. In the fall of 2020, the network inaugurated a five-city Irish Learning Cities Day, and a second one is planned for fall 2021 (Barrett, p. 1).

ALCN. Australia has a multi-decade history of learning community initiatives (Cavaye et al., 2013; Wheeler et al., 2015). The Australian Learning Communities Network (ALCN) was founded in 2001and is affiliated with the GNLC (ALCN, 2020, p. 12). In 2020, the learning cities of Melton and Wyndham, in partnership with ALCN and others, organized the first virtual global learning festival. The project sought to "provide unity and connection to communities all over the world, and to give learners a firsthand experience of the benefits that lifelong learning can bring during uncertain times" (Torres-Gomez, 2020, p. 6). Preparing for a second worldwide festival, the planning committee adopted an intentional approach, explaining, "a partnership that supports solidarity during times of adversity and hardship, as well as in more favourable times of prosperity and peace, needs empathy and compassion as its foundation" (2020, p. 20). Organizers of a workshop on "empathy partnerships" in spring 2021 said of the event:

> Transformation requires new ways of working to adapt to uncertainty and achieve success. … we saw that applying an Empathy Partnership approach could help accelerate in the right direction. It is important to strive to link the SDGs to our work in a more overt way, beyond SDG 4 where 'education and lifelong learning' sits, using empathy. It takes more time, but once EPs are set up, we can work smarter, kinder, creatively (Torres-Gomez & Lane, 2021).

On the topic of sustainability, we turn to our final question regarding the SDGs, also known as the UN Global Goals for Sustainability.

With respect to the SDGs, how has the pandemic impacted sustainability efforts of learning cities?

According to the "Sustainable Development Report 2021," the past year was a net loss for sustainability on Earth.

> The COVID-19 pandemic is a setback for sustainable development everywhere. For the first time since the adoption of the SDGs in 2015, the global average SDG Index score for 2020 has decreased from the previous year… The pandemic has impacted all three dimensions of sustainable development: economic, social, and environmental (Sachs et al., 2021, p. vii).

This is a disheartening summation. Nonetheless, sustainability strides among the members of the GNLC may well comprise foundational work for longer-term benefit. For our scan of learning city sustainability work, we are mindful of the movement's central focus on learning. Accordingly, we focus on Education for Sustainable Development (ESD) with examples from Finland and Germany, as well as a commitment pledged at a major ESD conference this year.

Espoo, Finland: A Pacesetter in Sustainability

The SDG report cited above recognizes Finland as the country ranked first for sustainability progress (Sachs et al., 2021, p. 10). The Finnish learning city of Espoo, one of the most sustainable cities in Europe, is committed to being carbon neutral by 2025. Municipal planning is guided by an accessible narrative known as "The Espoo Story," composed through ongoing community consultations. This participatory approach was undertaken to harness residents' perspectives and cultivate ownership of the narrative to create an alternative to long, conventional planning documents "written by civil servants with complicated concepts and language" (Erkkilä, 2014, p. 219). When Espoo prepared to become a learning city in 2015, city leaders linked the Espoo Story with SDGs and the GNLC aims (Erkkilä, 2020, p. 91), and Espoo continues to share its process and progress in education for sustainable development with members of GNLC's ESD cluster. Espoo's "Voluntary Local Review of the UN 2030 Agenda" is inspiring and practical, laying out the city's process and strategies for achieving the SDGs. As Espoo Mayor Jukka Mäkelä wrote:

> For the City of Espoo the United Nations Sustainable Development Goals (SDGs) are a way of measuring our sustainability but also language and a way to communicate our visions, actions and dreams with our citizens, other cities, and

> with all our partners. We also want to use the SDGs as a way of committing our friends close and afar to the shared journey of sustainable development (Taajamaa, 2020, p. 7).

Hamburg, Germany: Hamburg Learns Sustainability and Fights Climate Change

Another UNESCO-Japan Prize laureate, Hamburg was awarded the esteemed ESD Prize in 2019 for the city's large-scale, comprehensive initiative to "bring actors from all sectors together to share and promote education for sustainability in the whole city" (UNESCO Education Sector, 2019, p. 7). A pacesetting leader in German, UN, and transnational sustainability, the city recently adopted the "Hamburg Master Plan: Education for Sustainable Development 2030." This blueprint was developed through an extensive city-wide participatory process, in the making since the launch nearly 15 years ago of the "Hamburg Learns Sustainability" initiative. As a co-leader of the GNLC's cluster on ESD, Hamburg shares the theme group leadership with Shanghai, China.

Berlin Declaration on Education for Sustainable Development. At the UNESCO Conference for ESD held in Berlin in spring 2021, UIL leaders and GNLC members stressed the vital importance of ESD for all lifelong learners, inclusive of, but not limited to, students in formal schooling. This message is reflected in the closing declaration with a commitment to:

> Integrate ESD into all levels of education and training from early childhood to tertiary and adult education, including technical and vocational education and training (TVET), and into non-formal education and informal learning, so that all individuals are provided with lifelong and life-wide learning opportunities for sustainable development…. (UNESCO, 2021x, p. 2).

Conclusion

"Resilience in learning cities—particularly resilience in connection with recovery—has taken on a new significance as a result of the COVID-19 pandemic."

Atchoarena & Howells, 2021, p. 176

Across the material examined, we found abundant indications of adaptive resilience and creativity in learning city responses to the challenges at hand. Staff and stakeholders continued to meet the immediate conditions of the pandemic while moving forward on sustainability and climate change mitigation work. Arts Council England defines the term "adaptive resilience" as: "the capacity to remain productive and true to core purpose and identity whilst absorbing disturbance and adapting with integrity in response to changing circumstances" (Robinson, 2010, p. 14). Demonstrations of this capacity was seen at all levels, from local learning city personnel and volunteers taking up leadership for disaster responses, to global associations rapidly organizing information exchanges and collaborative problem-solving.

Creativity, too, was greatly evinced throughout the content reviewed. In their study of definitions, Puryear and Lamb (2020) recreated and expanded upon an earlier analysis of creativity concepts as found in the peer-reviewed literature of four different fields and found that the definition framed by the researchers in the original study is still widely referenced today: "Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context" (Plucker et al., 2004, p. 90). When systems were interrupted in communities and larger society, creativity abounded around connecting and reconnecting, such as connecting individuals and families to food and services, facilitating social connections to counter isolation, and improvising avenues of linking learners with resources, teachers, and fellow learners. Early in the initial lockdowns clips of Italian neighbors on their balconies making music expressed determined resilience, creativity, and joyful camaraderie.

Yet the same period also saw a steep rise in discrimination, rage, and division: anti-Asian hate crimes (Grover et al., 2020), defiant rebukes of public health mandates (Hodge & Piatt, 2022), and drastic vaccine access inequity (Binns & Low, 2021). If recovery only returns to the status quo the gross inequities so harshly laid bare will undermine resilience and creativity. Years before the pandemic, the authors of the seminal work, "Limits to Growth," published a 30-year update in which they identified two major barriers to bringing human impact into harmony with the carrying capacity of the planet:

> Individualism and short-sightedness are the greatest problems of the current social system we think and the deepest cause of unsustainability. Love and compassion institutionalized in collective solutions is the better alternative. A culture that does not believe in, discuss, and develop these better human qualities suffers from a tragic limitation in its options (Meadows, 2006, p. 175).

We can, and must, do better. The Berlin Declaration closes with a call for transformative learning "as a necessity for our survival… The time to learn and act for our planet is now" (p. 3).

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DIGITAL MEDIA EDUCATIONAL PROCESSES OF HEALTH AND NURSING PROFESSIONALS. CURRENT DEVELOPMENTS IN GERMANY

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ABSTRACT: In the age of the industrial revolution 4.0 the question arises as to how far digitization, which is taking place in all areas of life and work, can help meet the challenges of caring for patients or relieve the burden on nursing staff. In the health sector, including professional care, digitization is taking place at a rapid pace. In hospitals, digitization means demand-oriented support by means of information technology or artificial intelligence. Nursing staff in Germany, but also in other countries, are required in occupational everyday life to repeatedly engage in the implementation of new digital technologies and to use these appropriately. So, what is needed is digital competence which leads to responsible and independent handling of digital technologies. Due to the rapid digital progress, this digital competence must enable every working person to react to technical innovations in everyday working life. This requirement of a formal education in view of these digital competences leads to the question, to what extent the curriculums in the training and continuing education of nursing staff are already geared toward digital literacy training. The following article describes the results of a document analysis. The documents are a variety of legal and curricular regulations from the area of training and continuing education in the care sector.

Keywords: digital competence, health sector, vocational training, computer-related self-efficacy, document analysis, curricula

Shortage of Skilled Labor in the Care Sector

In Germany (approximately 83,000,000 inhabitants), there are currently 4.1 million people in need of care, in accordance with Volume XI of the German Social Security Code (Federal Statistical Office, 2020, p. 2). Eight hundred thousand people in need of care are being cared for by trained nursing staff in long-term care facilities (Federal Statistical Office 2020, p. 3). The number of people in need of care, including the care recipients being cared for in care facilities, continues to rise steadily in Germany. Additionally, there is an annual number of cases of almost 20 million patients who are receiving treatment in hospital. The demand for nursing professionals is thus very high solely on the basis of the large number of care recipients to be cared for. The nursing professionals doing their work in the various service areas are, however, under a lot of physically and psychologically strain in some cases. The pressures lead to subjectively different levels of stress. This stress, in turn, leads to a high number of sick days or to exit of the nursing profession. The nursing professionals staying in the profession are additionally burdened by the departure of their colleagues and by the constant training of new nursing staff.

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There are already various strategies in Germany to counteract this shortage of careers. Firstly, trainees are specifically recruited. Secondly, nursing professionals are to be kept in the profession ("Training and qualification campaign care of the elderly"). In the introduction of a new caring profession, it is endeavored to do justice to both of the above strategies at the same time: The three vocational qualifications in the areas of pediatric care, nursing of adults, and geriatric care, have been replaced by the training to become a nursing specialist (f/m) since 2020. With this, the aim is to

- strengthen the nursing profession,
- extend the area of responsibilities, and
- to achieve vocational competence for people of all ages in all service areas (acute inpatient, long-term inpatient, outpatient).

This new vocational training will not, however, be able to solve the shortage of skilled workers on its own. In the age of the industrial revolution 4.0, however, the question arises as to how far digitization, which is taking place in all areas of life and work, can help meet the challenges of caring for patients or relieve the burden on nursing staff. This question directly leads to the question to what extent digitization is a substantive element in the training and continuing education of nursing specialists.

Digitization: Solution for a Structural Problem?

In the health sector, including the professional care, digitization is taking place at a rapid pace. In hospitals, digitization means demand-oriented support by means of information technology or artificial intelligence. A digitized hospital, for example, includes the following areas:

- human-machine interaction for the diagnosis, treatment, and aftercare of patients;
- digital documentation of the care process;
- digital communication between the various medical functional areas and care units of a hospital;
- digital goods management (medical therapeutic products and aids, catering, etc.);
- digital patient information system; and
- digital employee information system, etc.

Such digitization has, however, not yet reached all institutional subsectors. Nursing staff in Germany, but also in other countries, are required in occupational everyday life to repeatedly engage in the implementation of new digital technologies and to use these appropriately. Therefore, what is needed is digital competence which leads to responsible and independent handling of digital technologies. Due to the rapid digital progress, this digital competence must enable every working person to react to technical innovations in everyday working life, without the specific innovations having been addressed in training and continuing education in each case.

Development of Digital Media Literacy as Preparation for a Digital Working World

To prepare the next generations for the digital challenges in the world we live and work in, the Conference of Ministers of Education (the consortium of the ministers of

education of the 16 German federal states) have issued the policy document “Education in the Digital World” (Secretariat of the Conference of Ministers of Education [KMK] 2016, Version 2017) as a recommendation framework for all educational institutions. It contains six areas of competence, in which starting from the year 2018/2019, children, young persons, and adults are to be trained from the time they start school:

1. Searching, processing, and storing;
2. Communicating and cooperating;
3. Producing and presenting;
4. Protecting and operating safely;
5. Problem solving and taking action; and
6. Analyzing and reflecting (KMK 2016, Version 2017, pp. 16-18).

This requirement of a formal education in view of these digital competences leads to the question, to what extent the curriculums in the training and continuing education of nursing staff are already geared toward digital literacy training.

Aim and Research Issue

The following article describes the results of a document analysis. The documents are a variety of legal and curricular regulations from the area of training and continuing education in the care sector. The aim is a survey of the extent to which curricula for training and continuing education address digitization in the care sector and the extent to which the use of digital methods is incorporated in curriculum.

The results of the systematically performed analysis of curricula also serves as the basis for the evaluation of interviews with teachers and trainees in nursing in the research project “DiMediCa.”: The project “Digital Medical Care - Digital Medical Care. Digitization processes in the training and continuing education in the health and care sector” (DiMediCa) tracks, among other things, the objective to generate conditions for the implementation and use of digital media from the perspective of teachers and from the perspective of trainees by means of qualitative and quantitative research. On this basis, recommendations for action for schools and teaching are then to be developed. From 2018/10 to 2021/09, the project is supported by the Federal Ministry of Education and Research (BMBF) (Bünning et al, 2019). As professional pedagogical action must always be analyzed in the context of curricula, the analysis of relevant curricula is the basis for the DiMediCa project. If, for example, no professional competencies for digitally supported nursing action are the subject of a nationwide or statewide curriculum, individual teachers cannot be accused of failing to take digitization in nursing into consideration. The result may, at best, record that the curricula fail to do justice to digitization in the world of life and work and therefore provide training and continuing education that does not meet the demands. In this case, the problem lies at the macro level with regard to the fit between societal development, occupational needs, and vocational training. The analysis of the curricula serves to uncover these interdependencies.

Theoretical Foundation

Competent handling of digital technologies in the care sector and the use of digital media in training and continuing education are indirectly connected: Dealing with specific digital technologies can only be addressed to a limited extent in theoretical and practical lessons - especially since the development of digital technologies is taking place at a rapid pace. The next generation can only be successfully prepared for the vocational challenges by the development of digital competencies in general.

A yardstick for digital competence is the computer-related self-efficacy. Computer-related self-efficacy identifies the confidence of a person to cope with computer-related challenges. Computer-related self-efficacy is based on the concept of self-efficacy expectations, as defined by Albert Bandura (Bandura, 1977). Self-efficacy has an influence on frustration tolerance, motivation, stamina, and the time it takes a person to recover from failures. Self-efficacy also has an influence on whether actions are initiated pro-actively. Self-efficacy therefore reflects the extent to which a person assesses him/herself in terms of coping with challenges in life and work. Accordingly, computer-related self-efficacy means one's own confidence in being able to meet challenges connected with computers. Computer-related self-efficacy can be measured by predictors: the number of known applications, the duration of digital media use, computer ownership. Furthermore, with increased expectation of computer-related self-efficacy, persons independently initiate and carry out more actions at the computer and manage to deal with failures more effectively.

In an analysis of the DiMediCa project (Arndt & Seltrecht, 2021), trainees for the care profession were surveyed with the help of a questionnaire. Three-hundred and sixty questionnaires were received in response. The validated number of returns is 255 questionnaires. The result shows that the expected computer-related self-efficacy correlates with the number of the known computer application and the duration of the computer use. In relation to the gender-specific differentiation it can be noted that there is no significant difference regarding computer-related self-efficacy expectation between male and female trainees. However, trends are emerging in the data that female students tend to rate themselves worse than male students. It also reflects that self-assessment of computer self-awareness is dependent on one's own reflective ability: If the reflective ability is higher, the self-awareness in terms of dealing with the computer is more pronounced. It is also shown that the expectation of computer-related self-efficacy is connected to the computer ownership. There is a significant difference between persons who own a computer and those who do not own a computer: Owners of computers have a significantly higher expectation of computer-related self-efficacy than persons not owning a computer to which they have access at any time (Arndt & Seltrecht, 2021).

If digital competencies are related to computer-related self-efficacy, work can be done in training to increase expectations of computer-related self-efficacy: by providing trainees with their own terminal devices, by internal differentiation between trainees, and by promoting self-assessment (Arndt & Seltrecht, 2021).

The question remains whether digitization should be part of the curriculum at all, or to what extent, and to what extent digital media should be a means and method of training.

Methodical Concept

The restructuring of the vocational training for the caring profession requires the examination of the federal curriculum recommendation and examination of state-specific curricula. This work is a prerequisite if schools are to meet their statutory obligation to prepare an internal school curriculum for training. As the training to become a nursing specialist in Germany takes place at various learning facilities, the different curricular requirements must also be analyzed as distinguished from each other. After completing a three-year training program, nursing specialists have the opportunity to take part in a wide range of specialized training courses. For this purpose, there are curricula available in the individual Federal states.

In the analysis of the curriculum as basis of the analysis of qualitative interviews, the following statutory and curricular regulations were included:

- Pflegeberufegesetz (PflBG) (Law on nursing professions),
- Ausbildungs- und Prüfungsverordnung für die Pflegeberufe (PflAPrV) (Vocational School Training and Examination Regulations for nursing professions),
- Recommendation of the expert commission in accordance with Section 53 PflBG for a framework curriculum,
- State curriculum Part 1 and Part 2 of the Federal State of Saxony-Anhalt, and
- Recommendations of the German Hospital Federation (Deutsche Krankenhausgesellschaft (DKG)) for further nursing education.

The curricula mentioned were subjected to a deductive analysis. Firstly, the curricula were examined with regard to content-related references to digital technologies. Secondly, the curricula were analyzed for methodological indications regarding the use of digital media within teaching and learning processes.

Empirical Results

Law on Nursing Professions: Digitalization in the Care and Digital Media in Training

The Law on nursing professions (PflBG) contains only one reference to digital technologies within professional care. Only higher education is intended to enable students to "access areas of research in professional nursing based on the latest validated findings and to be able to transfer research-based solutions to problems as well as new technologies to their professional activities" (Law on nursing professions [PflBG], Section 37 (3), Item 3). This legislation does not explicitly refer to “digital media literacy”. The training imparts the "professional and personal competencies required for professional nursing activities, including the underlying methodical, social, intercultural

and communicative competencies and the underlying learning competencies as well as the ability to transfer knowledge and to self-reflect." (PflBG, Section 5).

Vocational School Training and Examination Regulations for Nursing Professions: Digitalization in the Care and Digital Media in Training

The Training and Examination Ordinance for the Nursing Professions (PflAPrV) also provides for the documentation of nursing measures and observations in the nursing documentation with the aid of digital documentation systems as proof of acquired competencies for the intermediate examination in accordance with Section 7 PflAPrV. With reference to Section 9 PflAPrV, competencies in the use of digital nursing documentation systems are also tested as part of the state examination.

Recommendation of the Expert Commission in Accordance with PflBG for a Framework Curriculum: Digitalization in the Care and Digital Media in Training

The framework curriculum for the training to become a nursing specialist (f/m) is a recommendation of an expert commission that was set up on the basis of the Nursing Professions Act, among other things, to develop precisely such framework curriculum. The framework curriculum relates to the theoretical and practical lessons at a school of nursing. In the framework curricula of the expert commission, there are already references to digital technologies in nursing in several curricular units (CE):

- CE 01: Reflection of prior nursing experience and learning biography, including digital competencies;
- CE 02: digital documentation systems, digital tools to assist in mobility support and positioning, digital nursing documentation systems, digital measuring instruments, digital patient records;
- CE 04: digital tools for digital tools for health-promoting/preventive information and counseling services, knowledge research and evaluation using digital information and communication technologies;
- CE 06: digital emergency information systems and emergency call systems, digital early warning systems;
- CE 07: digital assistance systems, e.g., exoskeleton or computer with a voice synthesizer;
- CE 08: digital companion/smart home technology;
- CE 09: Digitization, digital assistance systems, digital networks in the social environment; and
- CE 10: situational application of digital tools, accessing scientifically based knowledge and epidemiological data from pediatric care using digital information and communication technologies (see also Federal Institute for Vocational Education and Training [BIBB], 2020, pp. 33-198).

There are no explicit references to the use of digital media in theoretical and practical lessons.

State Curriculum Part 1 and Part 2 for the Federal State of Saxony-Anhalt: Digitalization in the Care and Digital Media in Training

The Federal State of Saxony-Anhalt has developed its own state curriculum pursuant to 53 PflBG, based on the framework plan of the expert commission (BIBB). Part 1 and Part 2 of the state curriculum relate to the first two years of training. This state curriculum contains learning fields (LF) that correspond to the curricular units of the framework curriculum of the expert commission, pursuant to Section 53 PflBG. The learning fields are subdivided once again into learning field units (LFU). The learning field units contain references to digital technologies in the following way:

- LFU 01.01: Reflection of the (learning) biography (incl. digital competencies);
- LFU 02: Trainees prepare to participate in the organization and implementation of the care process and the associated digital or analog documentation;
- LFU 02: Documentation of implemented care measures and observations in the care documentation also with the assistance of digital documentation systems and participation in the evaluation of the care process on this basis (I.1.f);
- LFU 02 A.01: Technical and digital tools to support the mobility support and positioning and regulations on their availability (e.g., Medical Devices Act);
- LFU 02 A.01: Provision of mobility support to people in their day-to-day activities and, if required, use of technical and digital tools;
- LFU 02 A.02: Technical and digital tools to support the mobility support and positioning and regulations on their availability (e.g., Medical Devices Act);
- LFU B.01: Use of care documentation systems (analog/digital), obtaining information on the skin condition and documenting implemented body care and oral hygiene;
- LFU B.02: Use of care documentation systems (analog/digital), obtaining information on nutritional status, and documenting the care provided;
- LFU B.03: Use of care documentation systems (analog/digital), obtaining information on elimination and documenting the same;
- LFU B.04: Use of care documentation systems (analog/digital), obtaining information on health condition, and documenting the care provided;
- LFU B.04: Competent use of digital measuring devices and technical aids;
- LFU 04.01: Use of technical/digital tools for health-promoting/preventive information and consulting services (e.g., health apps, telecare, etc.) and critical, professional reflections on the services offered;
- LFU 04.02: Use of technical/digital tools for health-promoting/preventive information and consulting services (e.g., health apps, telecare, etc.) and critical, professional reflection on the services offered;
- LFU 05.01: Knowledge research and evaluation, including the use of digital information and communication technologies;
- LFU 05.02: Knowledge research and evaluation, including the use of digital information and communication technologies;
- LFU 06.01: Digital emergency information systems and emergency call systems, digital early warning systems;

- LFU 07.01: Implementation of targeted training to support coping with everyday life, taking into account biographically determined habits, circumstances, and social support systems, as well as using technical and digital assistance systems;
- LFU 07.01: Exploration or excursion with regard to situationally suitable technical and digital assistance systems (e.g., exoskeleton, computer with a voice synthesizer);
- LFU 07.02: Exploration or excursion with regard to situationally suitable technical and digital assistance systems (e.g., exoskeleton, computer with a voice synthesizer);
- LFU 07.02: Observation and reflection task of a training course in the use of selected technical and digital assistance systems (if necessary, also analysis of a videotaped example in compliance with data protection);
- LFU 09.01: Social developments influencing people's lives and health progressions (behavioral and situational prevention): Technological upgrading, digitalization, abundance, poverty, food availability, delimitation of work, cultural and religious diversity; and
- LFU 09.02: Social developments influencing people's lives and health progressions (behavioral and situational prevention): Technological upgrading, digitalization, abundance, poverty, food availability, delimitation of work, cultural and religious diversity (Burchert et al, 2020a, pp. 13-62; Buchert et al 2020b, pp. 10-74).

The state curriculum for the training to become a nursing specialist (m/f) in the Federal State of Saxony-Anhalt does not contain any explicit references to the use of digital media in the theoretical and practical lessons.

Recommendations of the German Hospital Federation (Deutsche Kranken-hausgesellschaft) for Further Nursing Education: Digitalization in the Care and Digital Media in Continuing Training

The German Hospital Federation (DKG) issues recommendations for specialty training for selected areas of professional nursing. If a Federal State does not provide its own regulations for further training, the recommendation by the DKG may be used as a model for state legislation. There is no state legislation for further training in the Federal State of Saxony-Anhalt, so that the recommenda-tions by the DKG are used to formulate further training.

The recommendation by the DKG does not contain any references to digital technologies in the care sector, nor any references to the use of digital media in further nursing education.

Discussion

Professional nursing activities are barely conceivable today without knowledge of digital technologies. In accordance with the professional challenges, the training for nursing specialists contains a large number of references to the areas in which the next

generations must also be trained with regard to digital competencies. The references listed under Chapter 5 in this article refer explicitly to *digital* technologies. The framework curriculum of the expert commission according to Section 53 PflBG and the state curriculum contain further references to prepare trainees for the use of modern technologies, technological developments or modern information and communication technologies as they occur in professional nursing.

The extent to which teaching and learning processes reflect the digitization taking place in society through the use of digital media in theoretical and practical lessons is not provided in the statutory and curricular regulations. A suggested professionalism of teachers, supported by collective and individual professionalization, assumes that lessons include engagement with digital media as a learning object and as a learning tool. The connection between the use of digital media in lessons and preparation for using digital technologies in professional care must be reflexively produced by teachers. A scientific course of studies, in which nursing professionals are scientifically trained to become nursing teachers, offers the opportunity to a) recognize these connecting lines and b) consider them pedagogically in the preparation, implementation and follow-up of lessons.

The confidence of nursing professionals to deal with new digital technologies on an ongoing basis can be scientifically captured with the concept of self-efficacy. Such self-efficacy is independent of specific digital technologies. If someone dares to use new technologies, the specific digital tool is subordinate. In this respect, the use of digital media in lessons is already contributing to the promotion of self-efficacy regarding digital technologies.

Teachers, in turn, must learn to understand these connections themselves in academic studies a) with their trainees in mind and b) with themselves in mind. Teachers who, at times, belong to the generation of the *digital immigrants*, but at least to the generation of the *informal digital natives* (Seltrecht, 2020), must themselves work on their own digital competencies throughout their lives in order to professionally develop pedagogical digital and other competencies in trainees. A university didactic concept that considers the dual logic of action of nursing teachers and starts with the training of digital competencies forms the basis for teachers to enable them to prepare their trainees for technologically advanced professional care.

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TEACHING PRACTICES IN A LANGUAGE SCHOOL IN SERBIA: PRACTICAL CONSIDERATIONS BASED ON THE ANDRAGOGICAL PROCESS DESIGN

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ABSTRACT: In this paper, we outline English language teaching practices from a private language school in Serbia. We use data from qualitative interviews with six English language instructors from one private language school in Serbia to understand how these individuals prepare for and teach adult learners. We discuss these based on the andragogical process design, which offers a step-by-step approach to teaching adults, and highlight key elements and challenging issues from the perspectives of six language instructors. Finally, based on our findings, we outline practical implications related to teaching English as an additional language to adult learners. As the focus of this paper is on practical implications, this paper will be useful to instructors who teach adult learners, especially those who teach English as an additional language or administrators in charge of organizations in which such teaching occurs. As we discuss issues related to both linguistics and adult learning, scholars and practitioners from both fields will also benefit from reading this paper.

Keywords: English language teaching, language school, Serbia, adult learners, andragogical process design

Introduction

Considering the popularity of the English language globally, the number of adults who need this skill to effectively communicate in international settings is constantly increasing. This is especially true for adults who work or aspire to work for multinational organizations. In fact, due to its prominence, English has been proclaimed the global language of business and is required of workers in numerous companies worldwide (Borzykowski, 2017; Neeley, 2012). Given the high likelihood of the persistence of this trend, the number of adult English language learners will also likely remain high.

With a growing need for individuals to develop English language skills in adulthood, especially if they come from countries and areas in which English is not spoken as an official language or was not taught as part of their elementary/formal education, there is a need to understand how to effectively teach this age group. This is also the case because, despite the breadth of our theoretical knowledge about how adults learn (see Knowles et al., 2020), practice-informed research and knowledge about teaching adults, especially with regard to specific content areas (such as language), is still scarce (Blondy, 2007; Jung, 2013; Knowles et al., 2020). With this in mind, the overarching research question that guided this qualitative inquiry was: *How do instructors in a private language school in Serbia prepare for and teach English to adult learners?* An additional question we

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sought to answer was: *Which practical considerations regarding teaching English as an additional language to adult learners can be drawn from the experiences of English language instructors from a private language school in Serbia?*

In existing literature, English language teaching is explored either in the context of English as a foreign language (EFL), specifically with the focus on the Asian context, or English as a second language (ESL), as taught in countries in which English is the dominant language (e.g., Canada, the United States). There is much less research done in other contexts/locations, such as Europe, which boasts the highest English language proficiency of any region (Education First, 2020) and where English is the most frequently taught additional language (Devlin, 2018). By examining the situation in Serbia, which falls into the category of European countries whose speakers have high proficiency in English (Education First, 2020), we hope to contribute to the research on the topic. Further, by conducting the study in an adult education setting, our goal is to extend the academic dialogue related to adult English language teaching, currently mostly situated in the context of higher education.

Despite being narrowly focused on certain contexts, existing literature reveals important issues pertaining to teaching adult learners. One specific concern is that English teacher preparation programs often focus exclusively on pedagogical principles used in the K-12 context (Deveci, 2007), leaving those individuals who go on to teach adult learners unprepared. Further, research has shown that in some locations, such as China, educators opt for using pedagogical principles even when teaching adults (Wang, 2006). This preference is explained, among others, by the fact that using andragogical principles takes more time, which is why educators may follow only select andragogical principles, even when they decide to use that approach in their teaching.

On the other hand, learners often have opposite preferences and opt for an approach more tailored to their needs (Biryukova et al., 2015; Deveci, 2007; Rismiyanto et al., 2017; Syamsuddin & Jimi, 2018), which is what they get when andragogical principles are followed. This approach can positively influence learners' language proficiency (Coker, 2013; Syamsuddin & Jimi, 2018) in both EFL and ESL contexts. Still, although researchers have highlighted the benefits of following the andragogical approach in teaching adults, more research is needed on how the principles of andragogy are used in practice.

Theoretical Framework

Considering that we examined English language instruction in an adult education setting, we used andragogy (Knowles, 1980; Knowles et al., 2020), specifically, the andragogical process design to frame this study. In defining andragogy, Knowles described adult learners based on six core assumptions including the learner's need to know why/what/how learning happens, learner's self-directedness, the use of prior experiences

in learning, learner's life-related readiness to learn, learner's problem-centered orientation to learning, and learner's intrinsic motivation (Knowles et al., 2020). These six assumptions, in addition to learner's goals and purposes, and individual and situational differences, form the *andragogy in practice model* (Knowles et al., 2020).

While discussions of andragogy typically focus on the andragogy in practice model and six core assumptions, Knowles also outlined specific steps in the adult learning process, called the *andragogical process design* (Knowles et al., 2020). While the andragogical process design may not have attracted as much research attention as the andragogy in practice model or specifically Knowles' six core adult learning principles, the andragogical process design is equally important for practice because it lists the steps of the adult learning process, from preparing learners to evaluating learning outcomes. The andragogical process design is comprised of eight steps which can help practitioners design adult learning experiences. In chronological order, these include:

1. Preparing adult learners by providing information about the learning process and content and developing realistic expectations.
2. Establishing a positive learning climate based on andragogical principles. Such climate would be characterized by trust, respect, and collaboration.
3. Involving learners in the planning process.
4. Involving learners in diagnosing learning needs.
5. Involving learners in setting learning goals and objectives.
6. Involving learners in designing learning plans.
7. Facilitating learning activities which allow for learner autonomy.
8. Involving learners in evaluating learning outcomes. (Knowles et al., 2020; see also Holton et al., 2001)

Specifically, our findings will shed light on the crucial steps in the process model when applied in an English language classroom and highlight possible challenges if the adult learning process is based on this model.

Methodology

Guided by our overarching research questions, we conceptualized this qualitative study as an instrumental case study (Stake, 2005). This means that our focus was on the phenomenon itself, in this instance teaching English as an additional language to adult learners, and that the case, one private language school in Serbia, was instrumental to understanding this phenomenon. Based on this design, we selected a typical case which would allow for transferability of the findings across similar settings (Stake, 2005).

We chose to focus on teaching English to adult learners because of the prominence of the language in global communication (Sonntag, 2003) and the importance of knowing and speaking English for academic and professional success in a global environment. We narrowed our focus to English teaching in Serbia because of the popularity of private language schools in which adults develop language skills needed for further education or

for working abroad. Another reason was the large number of individuals who leave the country due to socio-economic reasons (Radonjić & Bobić, 2021), signaling their need to obtain language skills needed to live and work abroad.

Focused on the most popular additional language learned in Serbia and the world – English – and on understanding typical practices of English language instructors in the selected setting, we analyzed data collected through interviews and examined documents (notably, the school's website and the teacher handbook) which included the school's mission and the descriptions of the teaching method used by the instructors in teaching adults. Six instructors from the selected language school participated in this study; we facilitated a focus group with five senior instructors (each had at least 12 years of teaching experience) and interviewed one novice instructor (with two and a half years of teaching experience at the time of the interview) from the school.

Table 1.
Participants' Demographic Information

Pseudonym	**Bobby Fisher**	**IP**	**Little Napoleon**	**Melissa**	**The Witch**	**Wallflower**
Age range	36-45	36-45	36-45	26-35	36-45	26-35
Ethnicity	White	White	White	White	White	White
Gender	Male	Female	Female	Female	Female	Female
Highest degree	MA, Philosophy	BA, Spanish	BA, English	MA, English	BA, English	MA, English
Years of teaching experience in the school	17	20	16.5	12	15+	2.5

Both researchers participated in interviews and took detailed notes which captured key ideas and participants' expressions and reactions to our questions. At the beginning of the interviews, participants were asked to select pseudonyms (which we use in reporting our findings and which are included in Table 1). We also asked the participants for permission to record the interviews, which we later transcribed verbatim. We used in-vivo and descriptive coding (Saldaña, 2016) in our analysis, opting for participants' own words as codes whenever possible, but using descriptive phrases where necessary. Codes from both the focus group and the individual interview transcripts were then organized into themes keeping in mind the eight steps of the andragogical process design.

We used the information from the document analysis to support the interview findings and to ensure triangulation (Marshall & Rossman, 2016; Merriam, 2009), a defining characteristic of case study research (Yin, 2018). This information helped us understand the school's teaching method and expectations from their instructors. By sharing our

analysis with peer researchers, we also employed peer-debriefing (Marshall & Rossman, 2016; Merriam, 2009) as a strategy of ensuring credibility of our findings.

Findings and Discussion

In this section, we first describe the context of the study and then discuss each theme. We present and discuss the findings based on the steps from the andragogical process design that were relevant for the examined case. In some instances, depending on our findings, we group several steps from the andragogical process design under a single theme.

The Context – Research Site and the School's Teaching Method

The case that we focused on was a private language school in Serbia, which has been doing business in the country for almost 30 years. The school offers different language courses (English being the most popular) and has students of different age groups (both children and adults). The school boasts a good reputation, having had more than 20,000 students successfully complete a course and prides itself on word-of-mouth referrals. The school offers both individual and group learning experiences, with the average size of the group being four to five students and the maximum being nine. The groups are formed based on students' entry level language proficiency (A1 to C2) as described in the Common European Framework of Reference (Cambridge Assessment English, 2021). Given the greater student interest in group than individual-based learning, possibly partly because of the lower cost, the findings we discuss are focused on teaching adults in group settings.

Regardless of the students' language proficiency level, teaching in the school is focused on communication in the target language, which is why the instructors are trained to teach the target language without using students' mother tongue in instruction. This strategy is supported by a three-stage approach to teaching adults prescribed by the school, which Little Napoleon described as student-centered. In chronological sequence, these stages are presentation, practice, and production, the first stage being the shortest and the last being the longest. Interestingly, the students are not passive even during the first stage, when they are engaged in elicitation of words and expressions and provided with the context in which to use the elicited words. During interviews, the instructors noted that the context is usually selected based on the students' experiences and interests. The next stage offers students guided practice, as instructors prepare prompts which students use to create complete structures in the target language. During the last stage, student-centered activities, such as paired discussions and role plays, are used to offer students realistic situations in which they can utilize the target language.

Preparing Learners and Establishing a Positive Learning Climate

While it seemed that not much time is devoted to preparing students for the learning process, given that there is no formal preparation period prior to the course start, all participants agreed that it is important to use the first few classes to get to know their students and establish a trusting relationship. For most, this meant purposefully memorizing students' experiences, interests, and hobbies, which they later use to modify classroom activities, because, as IP noted, "they're happy when you remember something that they said [because that means] 'you've been listening to me…I'm important here'". Wallflower summarized the importance of a positive learning climate in the following way:

> I think the main points of teaching adults are, you know, to make them feel comfortable, personalization as much as possible, and that's basically it. They need to feel, it has to be like a therapy to them…they have to relax and overcome any anxiety they have in order to be successful and in order to be able to make progress.

Wallflower and her colleagues highlighted that their students appreciate activities tailored based on their experiences and that such personalization helps students overcome any learning anxiety.

The Witch, who suggested that it is easier to help students feel relaxed in class and overcome learning anxiety if the students in the group have similar personalities, interests, and goals, also pointed out that she uses assessment interviews to prepare potential students for the learning process. She stated that:

> I always tell them when I do assessment interviews, "You are all here because you want to learn something. There is nothing to be ashamed of." And, I mean, maybe they feel like that the first class, and the second class, we throw them into fire, they have to speak, there's just no choice. And they're just taken by the group and the atmosphere and everything, and I guess they get used to, it helps them break the ice a little bit and they really get friendly, and nobody is like "Haha, you don't know that" that's not usually what happens.

The sense of connection and support among group members may be further increased when, as Melissa suggested, students often socialize after class.

Involving Learners in Planning, Needs Diagnosis, Design, and Goal Setting

In the case we examined, involving learners in the planning process may not be done easily or frequently, given that even instructors are not engaged in curriculum or syllabus development. Yet, when it comes to specific classes and topics, instructors "have the

freedom to modify and deliver according to the needs of the group" (Bobby Fisher). Wallflower is proactive about this, and she has a strategy which somewhat helps her engage her students in planning and which she uses at the beginning of every course. She said, "I always ask students if there is any need for me to adjust the vocabulary items or anything to include that is more relevant" and that she may "actually skip some targets that are not relevant to [students'] profession in any way." Asking students to identify their vocabulary needs helps Wallflower understand her students' key learning goals and plan instruction accordingly.

Involving students in diagnosing their needs may be somewhat easier during assessment interviews, because questions asked in those interviews are targeted at understanding students' needs. As Melissa indicated, "we have a questionnaire, actually, where we ask the students 'which level do you think you are? How do you feel about your knowledge?' So, we also take that into consideration." However, all participants agreed that students are likely to overestimate their knowledge and that only few ask to join a lower-level group to "brush up" what they know or start actively using the target language before moving further.

Facilitating Learning Activities Which Allow for Learner Autonomy

Expectedly, participants had most to share about how they prepare for and facilitate classes with adult learners. While the teacher handbook listed various activities that instructors can use to increase student autonomy (e.g., pair work, role plays, discussions, debates, projects, presentations), participants shared descriptive examples by recounting situations in which their students showed autonomy. Little Napoleon shared the most illustrative example:

> They made a video as part of the project; they were filming the school and everything; they were supposed to make a video about their English language experience and when I realized how many good things they said about the school, the teachers, the group… they contacted people who were not in the group anymore to say something…that was for me the most rewarding, realizing, yes, this school matters to them and whatever we are doing here, we're doing a good job.

Given that the students were required to think beyond formal project requirements set by the instructor and engage in self-directed learning by developing and completing the project outside the classroom, Little Napoleon's example shows how independent adult learners can be, and it aligns with a remark made by Wallflower that, throughout the course, student independence only increases. She indicated that "you can increase [adult] Student Talking Time by showing them how to communicate in pairs or how to use that time effectively, while with children, you have to be fully focused on each and every one of them." This is why, as she said, the instructor "gradually becomes more of a facilitator,

so to say. I only enable them to, you know, I give them some clues and they use them in their own ways."

As expected, adult learners' autonomy in the classroom was linked to their language proficiency and the Witch indicated that "the lower the level, the less independent they are." Still, an important finding was that the participants recognized their students' need to be independent and they tried to foster that. The Witch said that even at lower levels

> adults still try hard; and the higher the level, we actually encourage them to be as independent as they can with tasks and topics that we cover, they have to, you know, say what they think and to justify their opinions as well as they can.

The participants also acknowledged the benefits of adult learners' autonomy in unforeseen circumstances in which even class facilitation is in students' hands. For Melissa,

> there was this class, I had a sore throat and by the time that class came, I would've lost my voice and it was a group of absolute beginners and I was actually using mimics throughout the whole class, 90 minutes, or just writing some words on the board, and they practically held the class, and it was so much fun, that just by tactile, movements, we had a very successful class.

This example shows that, even in situations in which it is not expected of students to be fully autonomous, they can be entrusted with that role, and they can compete the role well even with minimal instructor support.

Involving Learners in Evaluating Learning Outcomes

While participants engaged their students in formative assessment as part of entry assessment interviews, there was less student involvement at the end of the course. Given that these courses were held in a formal, "school" environment, this was expected. The students were given ample chances to develop their language skills during practice and production stages of the learning process that included game-like activities, role plays, discussions, debates, and independent projects; still, as in a "typical" school, end-of-course assessment was more structured and in written form. Given the efforts the instructors were making during the course to cater to their students' needs and goals, in spite of the predetermined curriculum, it seems that their evaluation process might need restructuring to better fit the adult learning process.

Implications

In this paper, we presented information regarding English language teaching practices used to teach adult learners in one private language school in Serbia. Specifically, we

described the English language teaching preparation and instruction process through the lens of andragogical process design, discussing specific steps which the instructors deemed necessary for successful language learning, as well as those which were more challenging to incorporate in a formal language classroom in which a predetermined curriculum is used.

Because of the unique characteristics of each adult learner and the distinctive features of different adult learning contexts, as Holton et al. (2001) suggested, it would be "unrealistic" to expect that all andragogical principles or process model steps be equally applicable in all adult learning settings. Our findings suggest that, in a formal English language classroom in Serbia, the steps of the andragogical process design considered most relevant were establishing a positive learning climate, involving learners in determining target structures to be covered during the course, and implementing activities that allow for learner autonomy.

Our findings offer several practical implications for similar contexts. Specifically, when instructors have little say in curriculum and syllabus design, they should make effort to adapt those syllabi or tailor individual lessons whenever possible based on their students' needs. This may mean placing greater focus on those units more relevant to their students' needs, including additional activities which help learners practice concepts they need most, or using students' past experiences in developing learning tasks, in accordance with core andragogical principles (Knowles et al., 2020). Additionally, considering the importance of fostering adult learners' intrinsic motivation (Knowles et al., 2020) as well as the fact that adult learners' views of the instructor and the course are powerful factors that impact student persistence (Evans & Tragant, 2020), fostering a positive classroom climate is just as important as course content and method. As such, English language instructors who teach adult learners should focus on establishing rapport, promoting friendly peer relationships, and expressing and fostering positive emotions. Practicing these and similar strategies continuously would promote a positive climate which would benefit the instructor as much as the learner.

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EMOTIONAL ABUSE AND NONTRADITIONAL FEMALE ADULT LEARNERS: MOVING THE NEEDLE FORWARD: A SYSTEMATIC REVIEW

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ABSTRACT: This systematic review of the literature on emotional abuse and women's experiences in higher education explored current and foundational literature to gain a better understanding of how nontraditional female adult learners who previously experienced emotional abuse manage their journeys in higher education. No literature was found specifically focused on emotional abuse and how the nontraditional female adult learner who previously experienced emotional abuse manages her journey in higher education. Much literature exists from a multidisciplinary and historical perspective using various language to define different social contexts and forms of abuse. Understanding how emotional abuse is situated in the larger abuse literature was central to this study. An exhaustive systematic review with selected citations was conducted finding a gap specific to emotional abuse and women's experiences in higher education. Challenges exist today for any student in higher education, yet further qualitative research is needed to better understand the narratives of the nontraditional female adult learner who previously experienced emotional abuse. Dominant culture ideology informs both the concept of abuse and our understanding of the nontraditional female student in higher education.

Keywords: systematic review, emotional abuse, nontraditional female adult learner, higher education, intersectionality, positionality

Violence and abuse occur globally across contexts and time in all societies. Violence and victimization in any form is a widespread public health concern with negative and long-term health consequences (Breiding et al., 2014; Felitti, 2002; Felitti et al., 2019). Violent behavior and domestic violence are reportable crimes and against the law (Black et al., 2011). The development of what we know about emotional abuse in the literature today is considered from a historical and foundational perspective. It is important to understand the context in which abusive behavior occurs and the language that varies around different types of abuse. It is also critical to understand the many nuanced ways violence in society is perpetuated especially as we consider the intersection of the nontraditional female adult learner (NFAL) who previously experienced emotional abuse (WPEEA) and how this student manages her journey in higher education.

To better understand the NFAL-WPEEA, we go back several decades and draw from a large body of work both within the United States and from a global perspective. The literature on emotional abuse emerged around childhood abuse and domestic violence. We also must consider the combination and implications of two co-occurring trends and their intersectionality in higher education in which a high prevalence of abuse in the general population is known (Jennings et al., 2017; Kelly, 2004; Rhatigan et al., 2005), along with data that shows more female nontraditional students are in college (Robertson, 2020). Data from the National Center for Educational Statistics (2018) indicates a steady increase in numbers and percentages of female students and students 35 and older over the last 50 years (Robertson, 2020). This suggests that the probability of a female adult learner who has experienced abuse in some form, or across relational, work, or academic contexts is high.

Loring (1994) wrote that emotional abuse is a form of psychological abuse in which the effects are difficult to detect. In the literature, emotional abuse is often part of a continuum of abuse in which a woman might experience physical, sexual, or verbal abuse for example, and/or be a victim of childhood abuse, neglect, or maltreatment (Loring, 1994). Emotional abuse in the literature is often associated with other forms of abuse or violence such as childhood (O'Hagan, 1995; Rees, 2010), childhood maltreatment (Hall et al., 2009), courtship violence (Makepeace, 1981), dating violence (Amar & Gennaro, 2005; Gover et al., 2008; Iconis, 2013; Jennings et al., 2017), domestic violence (Graham-Bermann & Hughes, 1999), intimate violence (Porter & Williams, 2011), intimate partner violence (Black et al., 2011; Breiding et al., 2014; Doyle, 2020; Jennings et al., 2017; Porter & Williams, 2011), marital violence (Straus, 1980), partner violence (Coker et al., 2000; Rhatigan, 2005), physical (Doyle, 2020;), psychological (Doyle, 2020; Follingstad, 2011; Follingstad & DeHart, 2000; Gormley & Lopez, 2010; Kelly, 2004), sexual violence (Oswalt et al., 2018), and in its broadest form abuse and abusive relationships (Loos & Alexander, 1997; Min, 2018; Northway et al., 2013).

Yet, emotional abuse can occur and be experienced without other forms of abuse (Loring, 1994). A rich body of multi-disciplinary literature exists on childhood, physical, sexual, and psychological abuse, along with domestic violence, intimate partner violence and other forms of violent behavior including harassment, lateral violence, and workplace bullying; however, it is difficult to find current literature on emotional abuse separate from other forms of abuse. It is even more difficult to find current literature on emotional abuse and the NFAL and her experience as a student in higher education.

This integrative literature review was organized and structured conceptually and thematically (Torraco, 2016). As topics both abuse and nontraditional female students as adult learners in higher education (Mezirow, 2002) are “mature and well-developed topics” (Torraco, 2016, p. 414); however, emotional abuse and the NFAL-WPEEA are not. Therefore, the purpose of this inquiry was to “review, critique, synthesize” and reconceptualize (Torraco, 2016, p. 412) 1) what we know about emotional abuse as it is situated in the abuse literature to date, 2) how this intersects with the NFAL, and 3) how this student manages her journey in higher education. The research question leading this review of the literature and for future study was how the NFAL-WPEEA manages her educational journey in higher education. Many questions emerged. For example, “What is her experience as an adult learner? What are the challenges or barriers for her as a student in higher education? How has she overcome, persevered, changed, or grown? How has higher education impacted her personal journey? And importantly, for the scope of this paper, to define what emotional abuse is since emotional abuse is often referred to as psychological abuse. To better understand how emotional abuse is situated in the abuse literature, we look at emotional abuse across disciplines and time, as well as the statistics, demographics, and needs of the NFAL from a multicultural and systemic perspective, considering their stories as we move the needle forward. Finally, with relevance to the field of adult education, we ask, “How does the experience of emotional abuse intersect with learning for the nontraditional female adult learner and impact her journey in higher education?”

Nontraditional Female Adult Learners

Over the last several decades in the adult education literature and from a social constructionist viewpoint, work began to emerge cross-culturally around marginalization, victimization, and bullying with adult learners in the workplace, in higher education, and in relational settings (Sheared et al., 2010). Alongside the abuse literature and in the field of adult education, significant work emerged as well in the 1970s, 80s, and 90s around feminism and women's studies. Twenty years ago, as an emerging theme regarding women as nontraditional learners, Hayes and Flannery (2000) found "a dearth of literature, and what does exist frequently offers very limited insights" (2000, p. 19). They added, "Much of the literature fails to go deeply into what women as women are saying about their learning" (Hayes & Flannery, 2000, p. 19). Adult women learners as nontraditional students whether returning to college or first-time attendees encompass a statistically significant and growing number of students on college campuses (Brown & Brown, 2014; Vaccaro & Lovell, 2010).

Jack Mezirow's transformative learning theory took "center stage in research and writing about adult learning" (Merriam & Bierema, 2014, p. 101) when he introduced disorienting dilemmas, transformational growth, and believed the goal of adult education was to help adults reach their potential (Mezirow, 2002). In 1999, Ntiri studied older college students as tutors for adult learners in an urban literacy program and found that sensitivity for an adult learner was important to their success. Darkenwald and Novak (1997) wrote that 45% of the students on college campuses were aged 25 years and older and that a significant percentage of the students were women. In a study by Brown and Brown (2014) using Mezirow's transformative learning theory and nontraditional female students returning to school, they found that women represent most students who return to school in midlife. Statistically, more nontraditional female students return to college (Brown & Brown, 2014Vaccaro & Lovell, 2010). Robertson (2020) published a 50-year look at adult student participation in the United States in higher education. Robertson (2020) stated that according to the National Center for Education Statistics, patterns changed in the 1970s and 80s and that nationally the percentage of students 25 years or older went from 27.8% in 1970 to 38.3% in 1980 to 44.1% in 1990 and stayed above 40% meaning that approximately two of five students in American colleges and universities are adult students. In fall 2017, nearly one in ten students was 40 years or older (Ginder et al., 2018).

Historical Context of Abuse

Emotional abuse as a concept and type of abuse fits within a long and broad framework that is interdisciplinary in scope and begins with researchers interested in child abuse and neglect alongside dating and marital violence. Trauma, violence, and abuse encompass various perspectives in the literature from fields that include medicine, nursing, psychology, sociology, criminal justice, law, education, family studies, women's studies, social work, and counseling. The definition of abuse then depends on the context, slant, field, or discipline. For example, when looking at the abuse literature, we find variances in how one might explain the difference between psychological and emotional abuse.

O'Hagan (1995) wrote, "Child abuse literature often gives the impression that the authors regard the terms *emotional abuse* and *psychological abuse* as synonymous, or that the latter, psychological abuse, subsumes the former and many other types of abuse" (p. 449). O' Hagan (1995) in the previous statement cited Brassard et al., (1993), Burnett (1993); Garbarino et al., (1986) Garbarino and Vondra (1987); and Hart and Brassard (1987) as support of his thinking. Navarre et al. (1987) wrote, "The terms psychological abuse, emotional abuse, and mental cruelty have been used interchangeably, and without clear definition" (p. 45).

Around this time, the Adverse Childhood Experiences (ACE) Study began to emerge as a landmark research study conducted jointly by the Centers for Disease Control and Prevention (CDC) and Kaiser Permanente in San Diego, California from observations in the 1980s around obesity and links to child abuse (CDC, 2020; Felitti, 2002). Two waves of data collection from 1995 to 1997 with 17,421 adults answering questions comparing their current health status to eight categories of adverse childhood experiences make the ACE study one of the largest and most significant studies to date on child abuse (CDC, 2020; Felitti, 2002).

Emerging in the literature around dating and marital violence, James Makepeace published *Courtship Violence Among College Students* in 1981 in a journal titled *Family Relations.* This publication set the tone for a wave of research that would follow over the next decades in which the dating behavior of young college students came into focus for the first time. Makepeace's exploratory quantitative study was conducted "at a medium size midwestern state university in the spring of 1979" (1981, p. 97) with 202 primarily (81.3%) freshman and sophomore students enrolled in introductory sociology and family sociology as an initial approach to developing an instrument for measuring courtship violence. The students were given class time to complete a questionnaire anonymously that took about 20 minutes (Makepeace, 1981). Male students comprised 49% of the sample and female students 51% (Makepeace, 1981). Examples of types of violence included "threat, pushed, slapped, punched, struck with object, assault with weapon, choked, and other" (Makepeace, 1981, p. 98). Makepeace found, "It appears that violence is a common, albeit neglected, aspect of premarital heterosexual interaction. If our results are typical of college students in general, more than one student in five has had direct personal experience in courtship violence" (1981, p. 100). Makepeace stated, "Recent concern with family violence has focused on child abuse and wife battering, while other forms have been relatively neglected. A need to recognize and focus on violence that occurs during the dating and courtship period is suggested" (1981, p. 97).

Along with this, Murray Straus in the Department of Sociology at the University of New Hampshire wrote in a paper presented as part of a series of the Family Violence Research Program in 1980, "The family is the most violent institution, group, or setting that a typical citizen is likely to encounter" (p. 229). His research focused on what he called "the paradox of family violence and family stress" (Straus, 1980, p. 229).
Richard Tolman, who was involved with the Domestic Abuse Project in Minneapolis, Minnesota, published an article in 1989 writing, "This study describes the initial development of a scale of measurement of psychological maltreatment of women by their

male partners" (p. 159). Tolman's initial 58-item scale was administered at intake to 407 men and 207 women in a domestic violence program (Tolman, 1989). From there studies began to emerge primarily quantitative using assessment measures and scales such as Tolman's to better understand the phenomenon of abuse focused mainly on physical, sexual, and psychological abuse. Most of the earlier quantitative studies were conducted at mid to large four-year colleges and universities with primarily White, heterosexual 18 and 19-year-old freshman and sophomore undergraduate students who qualified to participate in the studies if they were currently in a dating relationship or had been in the past. The participants would answer questionnaires during class time for course credit, as part of their research grade, or as extra credit.

In 1977, about a decade before Tolman, Lenore Walker first defined battered woman syndrome, a precursor to *The Battered Woman* published in 1979 and her iconic "Cycle of Violence Theory (Walker, 1979; 1984). The topic of women, abuse, and emotional abuse began to surface in the 1970s followed by a flush of books in the 1980s and 1990s and spurred by a rise in educational and sociocultural influences, feminist thinking, and prominent female authors. Carol Gilligan (1977, 1982), Mary Field Belenky and colleagues (Belenky et al., 1986), Jean Baker Miller at the Stone Center, and Dana Crowley Jack were each writing about women. Lenore Terr wrote about childhood trauma and Bessel van der Kolk and Bruce Perry emerged as experts around childhood abuse, complex trauma, and neuroscience with implications for consequences throughout one's lifetime.

It is important to understand a brief chronology of abuse literature for three reasons: 1) to situate emotional abuse within the abuse literature, 2) to consider the context in which the experience of abuse occurred, and 3) to explore through further study the research question of how the NFAL-WPEEA manages her journey in higher education. To understand how emotional abuse fits into the larger picture one must understand the larger picture. Using an ecological systems perspective (Bronfenbrenner, 1979), the lives of women are seen as interconnected in microsystem, mesosystem, exosystem, and macro systemic ways. Women as adult learners live in relationship to self, others, and the world. Women's lives do not exist in a vacuum and neither does the experience of emotional abuse, or any other form of violence.

Positionality

Reflecting on the work of Misawa in Sheared et al. (2010), if we consider the experience of emotional abuse as an "invisible sociocultural" (p. 196) aspect of positionality like sexual orientation for example, then a student may never disclose this experience in the classroom. Yet, even if not disclosed the experience of emotional abuse like other aspects of positionality hidden to view exist (Sheared et al., 2010). Misawa in Sheared et al. (2010) wrote, "It is not possible for educators in adult and continuing education to create safe environments or achieve social justice in practice without thinking about the hidden aspects of positionality" (p. 196). It is important to consider that an adult learner with a history of emotional abuse may have as Tennant (2012) referred to as a repressed self, which could potentially impact the student as a learner. In a recently published qualitative

study on adult daughters of abused women and the completion of postsecondary education, Anderson and Connors (2020) reported that few studies specifically explored the impact of childhood exposure to domestic violence on academic outcomes in postsecondary education. Their study focused on the impact and exposure of domestic violence as witnessed by the daughters of women who were victims of domestic violence with implications for their learning and perseverance toward academic success later in postsecondary education.

Min (2019) looked at risk factors of abusive relationships for nontraditional students using a study in which the data from 10,762 participants was compiled from the American College Health Association National College Health Assessment II (ACHA-NCHA II) survey. The dependent variable was categorized to emotional, physical, and sexual abuse (Min, 2019). Descriptive data included the average age of the nontraditional student as 32 years old in contrast to the average age of the traditional student as 21 years old (Min, 2019). The study found that the nontraditional student was 40% more likely to experience emotional abuse (Min, 2019). In conclusion, Min (2019) stated, "This study attempted to understand nontraditional students' abusive relationships compared to traditional students, as an abusive relationship was one of the important public health issues among college students" (p. 6). Min (2019) wrote, "Current literature, however, did not provide us comprehensive understanding on this issue for nontraditional students" (p. 6). Therefore, across contexts and disciplines, it appears that even though emotional abuse was acknowledged as a problem decades ago it continues to be an underrepresented construct in the abuse literature as does the experience of the nontraditional female adult learner.

Conclusion

In conclusion, the following systematic review of the literature on emotional abuse and women's experiences in higher education for the NFAL took me on my own researcher's journey. I found much good foundational work on abuse over the decades that occurred alongside significant markers in history, politics, society, culture, and education. Solid contributions in adult education around the nontraditional student and women were also found. In moving the needle forward, future qualitative research can provide insight into a topic that has long been overlooked. Though significant strides have been made across disciplines and through feminist pedagogical work, women as nontraditional students in higher education with histories of emotional abuse, along with other marginalized populations will continue to emerge to shape, influence, and change how we see not only ourselves, but others.

As a researcher, I initially thought that I needed to isolate emotional abuse in the literature, yet through a reflexive process, I came to see how important it was to gain a deeper understanding of how emotional abuse fits conceptually and historically into the very rich and larger body of abuse literature. Emotional abuse is one piece of a very large systemic puzzle. Without at least a foundational knowledge of the broader social context in which emotional abuse resides within we would be amiss. Future research in adult education around emotional abuse and the NFAL in higher education has

multidisciplinary and global implications that impact sectors such as education, mental health, and medicine as well as in shaping policy, pedagogy, and decision-making.

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COVID-19 AND IMPLEMENTATION OF ONLINE LEARNING IN GHANA: PERSPECTIVES OF UNDERGRADUATE STUDENTS IN HIGHER EDUCATION INSTITUTIONS

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ABSTRACT: The COVID-19 pandemic has impacted teaching and learning in higher education institutions globally and Ghana is no exception. Educational institutions have had to adapt to new models of teaching as well as engagement of students through the use of technology with a purpose of enabling continuity in academic work. Using the connectivism learning model and a purposive sample of eighteen undergraduate students from six public and private higher education institutions, this paper explored their perspectives about institutional adaptation of online learning during the COVID-19 pandemic. Data collection procedures included in-person or phone semi-structured interviews. The findings of the study indicate that though the majority of higher education institutions did not have adequate structures to smoothly transition teaching and learning online during the COVID-19 pandemic, they were able to adapt and make do with available technology that suited a majority of students for teaching and learning to continue. Participants revealed challenges encountered during online teaching and learning to include inadequate network bandwidth that was further impacted by one's location, data insufficiency, and inconsistent online scheduling by faculty members which affected student availability. It was also noted that there were variations in the ways higher education institutions implemented online learning to aid student academic engagement, teaching and learning during the COVID-19 pandemic. Ultimately, there is therefore a call for the promulgation of a policy to standardize the delivery of online learning in higher education institutions in Ghana.

Keywords: academic engagement, Ghana, higher education institutions, online learning, undergraduate students.

Introduction

The global COVID-19 pandemic has impacted institutions in varied ways and educational institutions have not been spared. The outbreak of the COVID-19 pandemic started in December 2019, in Wuhan, Hubei Province, China. This led to a declaration of a public health emergency by the World Health Organization on January 30, 2020 (Sohrabi et al., 2020). This virus has negatively impacted the strategic plans of every country leading to border closures, movement restrictions across borders and sensitization of citizenry on preventive measures that needed to be put in place to halt its spread (WHO, 2020). Globally, the COVID-19 pandemic has affected about 91 percent of students (UNESCO, 2020). The ravages of the COVID-19 virus have not yet subsided since most countries that were affected by the first and second waves are now being impacted by the third wave (UN News, 2021).

Importantly, the global effect of this virus has not subsided and for a second year running, though vaccines have been formulated for this virus, the variants keep adapting to the environment resulting in institutions (higher education included) having to

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emphasize the keeping of COVID-19 protocols at all times to halt the spread of the virus. The Ghana Health Service, in a statement on July 21, 2021, enumerated the rising numbers of COVID-19 cases and associated mortality in the various regions of the country of Ghana. The statement further reiterated the need for citizenry to abide by the COVID-19 protocols in order to halt the effects of the third wave in its track (Tawiah, 2021). As of July 19, 2021, Ghana has cumulatively recorded 100,250 cases of COVID-19 and 819 deaths since March 2020 (Ansah & Nukunu, 2021). The onset of COVID-19 has resulted in institutions of higher education implementing online learning and teaching engagement in varied forms for undergraduate students. A definition of e-learning under which online learning is a subset, is provided by Selim (2007) as "the delivery of content via electronic media, such as internet, intranet, extranets, satellite broadcast, audio/video tape, interactive TV, and CD-ROM" (p. 397). E-learning is divided into different forms ranging from web-supplemented courses, through web dependent to mixed mode courses and to fully online courses (OECD, 2005).

In Ghana, higher education institutions in both the public and private sectors were allowed to reopen and resume academic work in May 2020 after lockdown announced by the government was lifted. As a result, various models of teaching as well as engagement of students either through the use of technology or a blend of face to face with online learning has been adapted. During the pre-COVID-19 era, online learning has been touted as the answer to the problem of access to quality higher education in Sub-Saharan Africa (Asunka, 2008). The onset of COVID-19 has precipitated the use of digital technologies accessible in Sub-Saharan Africa (SSA) to facilitate student learning and engagement. Research has also shown the preparedness of public higher education institutions in SSA generally and Ghana in particular to focus on online distance education (Forson & Vuopala, 2019), and the perceptions of students about mobile learning (Edumadze et al., 2019; Obeidat, 2020). Others have examined the perceptions of students about incorporating e-learning into teaching and learning in Ghana (Tagoe, 2012), and attitudes about students engaged in online learning during COVID-19 (Agormedah et al., 2020; Hussein et al., 2020). The results of research indicate that convenience, time effectiveness and safety were some of the favorable outcomes indicated. On the other hand, some outcomes that undergraduate students noted as negative were inability to focus, internet instability, and cost of data (Agormedah et al., 2020; Hussein et al., 2020). Using the connectivism learning model, this study explores the perspectives of undergraduate students in six selected public and private higher education institutions in Ghana about institutional adaptation to online learning in an era of COVID-19. This paper examines how connectivism is important to online learning as a theory that links previous information to current information, and integrates technology within the realm of knowing by guiding students to look beyond their own understanding to information.

Review of Literature

Research indicates that the current integration of information and communication technologies in instructional activities at the tertiary level in SSA, indicates increasing access in the higher education sector through online learning (Asunka, 2008). Before the onset of COVID-19, technology-enabled instruction had been recognized as the

economical means of increasing access to higher education in SSA. However, it is acknowledged that as a result of challenges such as unstable and unreliable internet connectivity in the higher education sector the use of technology in most higher education institutions in Sub-Saharan Africa had been minimal (Gakio, 2006). In a study by Agormedah et al. (2020) about the learning experiences of college students, the outcome of the study indicated that participants described technology usage to include WhatsApp, Telegram, Zoom, Google Meet and Google Classroom. Participants also indicated that lecture notes were sent as PowerPoint slides, portable document format (pdf) or as Word documents to their email addresses. They also noted the high cost of internet data. The authors' findings corroborated with the results of Owusu-Fordjour et al. (2020) and Entsie (2020) in Ghana, who found that most students accessing e-learning platforms due to the closure of educational institutions complained of the high cost of internet data and disruption of academic activities by household chores. The findings on college students' overall perceptions of online learning revealed that the majority of college students wished online learning would be suspended due to its associated challenges such as device inequality among students, poor internet connectivity and high cost of internet data. This study further suggests that a better understanding of online learning experiences of college students may enable relevant stakeholders to put in place measures that would ensure a better online learning experience.

Forson and Vuopala (2019) sought to find out University of Cape Coast distance education students' readiness, capability to collaborate, as well as interact, in an online learning environment. The outcome of the study indicated that respondents were of the opinion that conditions were ripe for universities in Ghana, especially University of Cape Coast, to focus on online distance education models. Tagoe (2012) in his study on student perceptions on incorporating e-learning in teaching and learning at University of Ghana noted that its acceptance depended on three critical factors. These were computer ownership, prior experience and perception of students about e-learning. Invariably, those who did not have these acquired skills may address the shortfall through the university, friends, and family members, who may assist them with opportunities to acquire computer skills.

Research has been done on online learning in higher education (Asunka, 2008; Edumadze et al., 2019; Forson & Vuopala, 2019; Obeidat, 2020; Tagoe, 2012). While others have gauged the experiences of level 200 undergraduate students (Agormedah et al., 2020), this study is unique in that it examines the perspectives of all levels of undergraduate students about their learning engagement and experiences in both public and private higher education institutions using the connectivism learning model. The implementation of online learning initiatives in SSA has to be informed by in-depth empirical studies purposefully designed to unravel all the circumstantial factors that influence the efficacy of such learning activities. The main research question guiding this study is "What are the perspectives of undergraduate students about institutional adaptation to online learning during COVID-19?" The findings from this study will inform policy makers in the higher education sector among others about online teaching and learning as well as about what works best in the higher education sector.

Conceptual Framework

This paper draws on the connectivism learning theory to formulate the conceptual framework. Connectivism combines previous information with current information to create novel meanings. Thus, in online learning students may be able to indicate a link between, for example, the use of technology to an earlier knowledge about computing and ability to connect them during the new phase of engagement using technology. Undergraduate students may find linkages between the social media handles that they use such as WhatsApp, and other Google apps including Google Meet and Google Classroom and the online technology aimed at learning during COVID-19.

Connectivism learning theory has been associated with the work of Downes (2005) and Siemens (2004). It was mainly developed to address the impact on teaching and learning by new technologies (Siemens, 2004). The new technologies of the digital age such as 'blogs' and 'wikis' have influenced learning engagement in higher education institutions globally. Further, the digital age has caused a massive growth in knowledge that has a brief shelf life and is measured in a shorter duration period of months or a shorter span of years as opposed to previous eras when knowledge could remain relevant for centuries. As a result, students now have to quickly adapt to the hybrid approach in their quest to learn. Similarly, faculty members will have to adapt hybrid methods in their engagement with students. More so, with the onset of the COVID-19 pandemic, both faculty members and students have noted the need to adapt in their mutual engagements in order to make the most out of the situation. Knowledge acquisition has been linked to the theory of connectivism where an individual will not be able to work independently but rather acquire it through connections with others (Marhan, 2006). In a connectivism learning space, higher education students will learn efficiently within a network of connections as information is distributed. Thus, learning occurs when the student is able to construct and traverse these networks (Downes, 2007).

Through connectivism, learners use available technology to create networks such as students using WhatsApp platforms to access information from each other and keep abreast with faculty engagements. These networks have information sources that the student chooses and acts upon. Learning also occurs when peers collaboratively share opinions, viewpoints and critiques through conversation and dialogue on a mutual basis rather than the traditional teacher/learner relationship (Friesen & Lowe, 2011). With the connectivism learning model, students are able to learn both in class and out of class because of the usage of mobile digital technologists (Guder, 2010) such as the Telegram, WhatsApp and Twitter.

Methodology

This study employed an in-depth interview framework to address the research question. Data collection procedures employed were semi-structured interviews that were held in-person or by phone (Maxwell, 2005; Rubin & Rubin, 2005). The purpose of the study was to explore the perspectives of undergraduate students about institutional adaptation to online teaching and learning during the COVID-19 era.

Participants

Eighteen undergraduate students from six public and private higher education institutions were purposively recruited (Maxwell, 2005). These 18 students have indicated that they have had some form of online engagement in relation to teaching and learning during COVID-19. Before the interviews, approval for this study was received from the Institutional Review Board of the researcher's university. Participants were informed about the nature of the study and each was assigned a code to foster confidentiality among them. Data collection continued until sample saturation was reached at 18 participants where additional interviews did not bring up any new information (Strauss & Corbin, 1998).

Data Collection

Eighteen in-depth face-to-face or telephone interviews were conducted with participants in Ghana. The sample was purposively selected from six public and private higher education institutions. Specifically, three students from varied levels in their undergraduate programs were purposively selected from each institution. The interviews were personally conducted by the researcher and the risks and procedures for participating in the study were explained to the participants before the data collection started. After reading and signing consent forms, all participants were asked open-ended questions about their perspectives of the implementation of online learning during the COVID-19 pandemic in the selected higher education institutions. The interviewer also sought permission from the participants to audio record. Subsequently, the transcripts were transcribed verbatim and analyzed immediately. However, after the transcription of the first interview, the analysis informed the subsequent data collection (Glaser, 1992). Some of the major interview questions include the following: Before COVID-19, what online platform was your institution using? During the COVID-19 pandemic when higher education institutions (HEIs) were asked to transition online (in May 2020) what did your institution do in terms of online engagement? Were you using a Learning Management System such as SAKAI, Blackboard, Google Meet and Zoom? Further, participants were asked clarifying questions based on the responses given. The duration of each interview ranged between 30 to 40 minutes and at the end of each interview, participants were given the opportunity to express their views on any related issue that was not addressed.

Data Analysis

Data analysis included transcription of interviews, preparing memos, coding data, and summaries (Maxwell, 2005; Rubin & Rubin, 2005). Each interview was transcribed verbatim and subsequently coded. This study applied content analysis of the primary data in addition to using both the inductive and deductive approaches. According to Lauri and Kyngas (2005) the inductive approach is used when previous research is minimal or non-existent. On the other hand the deductive method is applied when a theory is to be tested and analysis is based on previous knowledge (Boyartis, 1998; Kyngas & Vanhanen, 1999).

The researcher examined themes that emerged from the interviews both deductively and inductively, and further looked for linkages and patterns among themes. The coding was done manually by reading through the interview transcripts several times to look for repeating ideas that were relevant to the research questions. Each interview transcript was read at least three times to acquaint the researcher with the themes that would emerge from the coding process. The first level of the coding process began with open coding which enabled the researcher to accurately determine which thematic category to apply to the transcripts. The codes were applied to sentences/statements in the interview transcripts and themes were generated from repeating ideas (Auerbach & Silverstein, 2003). A second coder also reviewed the data and identified major categories and themes which helped to determine the accuracy of the identified categories and themes.

The researcher also addressed the issue of validity by being cognizant of threats. Maxwell (2005) defines validity as a "straightforward, common-sense way to refer to the correctness or credibility of a description, conclusion, explanation, interpretation, and other sort of account" (p. 106). Two threats to validity in research are noted as the bias of the researcher, and the impact on interviewees, known as "reactivity." Thus, when the researcher affects what the participant says, that could impact validity (Maxwell, 2005). Notably, the researcher was cautious about "reactivity" in data obtained from participants.

Results

This section examined the themes generated from the data analyzed from the 18 participants. Eighteen undergraduate students were purposively sampled for this study. The resultant themes indicated differences in the implementation of online learning processes in the public and private higher education institutions, implementation of blended format, challenges encountered, benefits of online learning, and recommendation by participants. All the participants in this study at both the public and private higher education institutions agreed that they were all engaged online.

Differences in Implementation of Learning Engagement in Private and Public Higher Education Institutions

Data analyzed indicated that before the onset of COVID-19, the selected private higher education institutions had neither invested in infrastructure to enhance online learning nor deployed robust infrastructure. Thus, during pre-COVID-19, instructional activities at the selected private higher education institutions were mainly face-to-face and the online learning component was non-existent. Conversely, the selected public higher education institutions had some level of online engagement with students prior to COVID-19. With the coming of the COVID-19 pandemic, the selected private higher education institutions deployed the use of media tools such as Zoom, Google Meet, Google Classroom and WhatsApp, while the public higher education institutions escalated their online engagement with students. Notably, each private higher education institution was unique in its engagement of students when permitted to reopen.

A participant at a private institution that I will call BAY indicated the following:

> After the lockdown was lifted in May 2020, we started using Zoom, Google Classroom and Google Meet for our online learning. The technology selected depended on the Lecturer. We also used Google Classroom to submit our assignments. But before COVID-19, the university was not using any of these technologies for teaching.

The above comment resonated with majority of the participants from private higher education institutions who affirmed similar tools for their online engagement.

A participant called JY from a private higher education institution indicated that though most students were new to the usage of some of these technologies for learning, they had "to quickly learn from their colleague students who were conversant with their usage." The previous assertion also resonated with the other two selected private higher education institutions. This ties in with research conducted by Asunka (2008) indicating that during the pre-COVID era, SSA did not have the full complement of infrastructure to start online learning. Further, data analyzed indicated the public universities varied in their implementation of online learning though they had adequate infrastructure set-up.

Implementation of Blended Form

Data analyzed indicated that some of the private higher education institutions implemented the blended approach to student learning after educational institutions were allowed to re-open though there were some variations in the details. A participant known as AB reiterated the fact that her institution implemented both the online and face-to-face components of student engagement. She noted the following:

> … level 100 and level 200 undergraduate students will attend a face-to-face component for a number of weeks and then switch over to the online mode for another number of weeks. Then levels 300 and 400 will also attend the face-to-face component for a number of weeks and then switch over to the online version.

With the mutation of the COVID-19 virus, especially as the Delta Variant was still active in the country, these measures have been taken out of an abundance of caution so that students and staff will abide by the protocols in place and be kept safe. A number of participants from private higher education institutions that did not have huge student numbers indicated that they continued with the face-to-face engagement while taking cognizance of all the COVID-19 safety precautions. Invariably, the public higher education institutions also varied in their implementation of the online learning and engagement of students. The public institutions used diverse methods. All three selected public higher education institutions for this study also engaged their students using technology such as Google Meet, Google Classroom and Zoom among others. Two out of the three public institutions selected, engaged the students with similar methods implemented by the private higher education institutions. These methods include a section of the undergraduate student populace having a face-to-face component while

another group of undergraduate students had the online version simultaneously. However, one of the public higher education institutions, according to data analyzed, was very unique in its implementation of online learning engagement with undergraduate students. This particular institution engaged students by implementing the online modular system of teaching and learning, with very limited face to face interaction for programs demanding that type of engagement due to the unpredictable nature of the COVID-19 virus. In this modular system, levels 100 and 400 undergraduate students are engaged online for six weeks after which a month's break was given. While the first group of undergraduate students are on vacation, levels 200 and 300 undergraduate students are then engaged for their six weeks' module.

Challenges Encountered

All the participants were unanimous in the varied challenges encountered and the type of problems that they had to address as a result of their involvement with online learning on their various campuses. A majority of the participants noted that the expensive cost of data was a major hindrance. Unanimously, a majority of the participants in both the public and private higher education institutions indicated difficulty in obtaining funds to buy data for their online engagement. Other challenges enumerated include "low online class attendance and participation" by participants since they did not feel obliged to do so. A participant with a private higher education institution indicated that he had health issues such as waist pain which emanated from sitting for long periods of time during online class sessions, as well as improper blood circulation. A unique challenge at a public higher education institution was elaborated on by a participant called JON as follows:

> There was an instance where during an online class session, some participating students who were having sex at the time, had forgotten to switch off their video and the recording went viral on Twitter.

Benefits of Online Learning

Majority of participants were of the view that they have gained a lot from participating in online learning during this era of COVID-19. One participant with a public higher education institution noted: "Online learning has helped us a lot. If it has not been for this online engagement, a lot of us would have had the virus since my university was one of the first to record a positive case." Another participant called AMA further stated,

> Online learning has also provided an opportunity for shy students to make contributions during class sessions. It has also helped us become more dynamic in the use of technology as we have had the opportunity to learn about technology usage from friends.

A participant from a private higher education institution indicated some benefits to include "sitting in the comfort of your home while having a class."

Recommendations By Participants

A number of recommendations were made by participants with some indicating that since online learning places a lot of responsibility on students, participants should hold themselves accountable in class. A participant who identified himself as a course representative for his class noted, "As a course representative (class rep), I have to call members of my class using my phone at my own expense anytime an online class is scheduled to remind them of the class. When I am unable to call some of them at certain times because I do not have call credit, they rather get upset."

Other participants at public higher education institutions recommended a blend of online and face to face engagement during this period of COVID-19 instead of solely going fully online for some courses. In addition, since there are sometimes unstable WIFI on campus even for participants who go there to access stable internet, institutions should increase the robustness of their internet infrastructure to enable internet stability.

Discussion

The objective of this study was to explore undergraduate student's perspectives about institutional adaptation to online learning during the COVID-19 pandemic. Results of this study suggest that both public and private higher education institutions used social media tools such as Google Meet, Google Class, Zoom, and WhatsApp among others as well as learning management systems to engage undergraduate students in teaching and learning which corroborates with research (Agormedah et al., 2020; Hussein et al., 2020). Based on the connectivism learning model, the results of the study indicated that undergraduate students who were not well versed in the usage of online media tools connected with their friends or course mates who had the know how to assist them (Downes, 2005; Siemens, 2004). Ultimately, the findings are consistent with existing research (Edumaze et al. 2019; Forson & Vuopala, 2019). Despite the challenges enumerated such as high cost of data and inappropriate behaviour of some students during online class sessions, participants lauded the benefits of online learning. These benefits include acquisition of technical skills in the application of social media tools, a benefit which otherwise would not have been acquired. The findings associated with technology usage are consistent with the connectivism learning model.

Limitation And Conclusion

One noted limitation of this study was that graduate students were not part of the study sample. Thus, a quantitative or a comparative study using graduate students as a sample could indicate whether the results from this undergraduate study could be confirmed by a different heterogenous sample size. In spite of the benefits accruing to undergraduate students who were engaged in online learning to ensure continuity of engagement, policy makers, and administrators of higher education institutions must ensure that relevant and robust infrastructures are put in place so that issues related to internet stability are resolved. Also, administrators could also consider subsidizing the cost of data so that students can easily take full advantage of online learning. Ultimately, there is a call for

the promulgation of a policy to standardize the delivery of online learning in higher education institutions in Ghana.

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EXPLORING TRANSFORMATIVE LEARNING AMONG CHINESE IMMIGRANT MOTHERS IN CANADA AND THE US DURING THE COVID-19

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ABSTRACT: The purpose of this study is to explore the experience of Chinese immigrant mothers in Canada and the US overcoming the challenges through adult learning during the COVID-19 pandemic. Transformative learning theory is utilized as a theoretical framework. Transformative learning, as an important component of adult learning theory, emphasizes the expansion of consciousness through which an individual can critically reflect on their personal experiences and feelings (Mezirow, 2009). Based on this theoretical framework, we aim to understand how Chinese immigrant mothers as adult learners experience the pandemic and learn mothering during these uncertainties and at the same time, reorient their self-consciousness and self-directed learning skills in the new normal. Adopting qualitative research, we have conducted 50 semi-structured interviews among Chinese immigrant mothers in Canada and United States. This study reveals that Chinese immigrant mothers are increasingly marginalized as a result of the global pandemic and capitalism, which accelerate their motivations for enhancing their self-consciousness and self-directed learning.

Keywords: The keywords are: Chinese immigrant mothers, transformative learning, mothering, lifelong learning, and COVID-19.

Introduction

The Coronavirus Disease 2019 (COVID-19) has brought a global financial recession, and immigrant mothers are facing unprecedented times. While facing these uncertainties, immigrant mothers as adult learners are disproportionately impacted in their life and work by the pandemic overall. They not only need to take care of their families, work and personal life, but also need to learn some new skills, such as online learning, working at home, and taking care of children during the pandemic for integrating themselves in the new normal.

Chinese immigrants have become one of the largest immigrant groups in North America. According to the United Nations Statistics, there were nearly 2.43 million Chinese immigrants in the United States and 930,386 Chinese immigrants in Canada (United Nation, 2020). With the large populations, Chinese immigrants contribute to local economies and policies in multicultural societies of North America, simultaneously experiencing challenges such as race, gender and class inequalities (Zhu, 2020). The purpose of this study is to explore the experience of Chinese immigrant mothers in Canada and the US in overcoming these challenges through adult learning during the COVID-19 pandemic. In this paper, we explored the challenges that Chinese immigrant mothers faced and how they learned mothering skills during the pandemic. Transformative learning theory was adopted to guide this study. Based on this theoretical framework, we aim to understand how Chinese immigrant mothers as adult learners

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experience the pandemic and learn mothering during these uncertainties and at the same time, reorient their self-consciousness and self-directed learning skills in the new normal.

Two research questions are explored in this study.

> RQ1: What challenges have Chinese immigrant mothers faced in their mothering and learning practice during the Covid-19 pandemic in Canada and U.S.?
>
> RQ2: How do Chinese immigrant mothers face the challenges during the Covid-19 and learn mothering skills during the pandemic?

This paper contributes to the theory of adult learners and transformative learning. It diversifies adult learners' experience, identity, and knowledge, and highlights Chinese immigrant mothers' transnational learning experience is important to understand how women of color as adult learners learn mothering skills in different living conditions. It has implications for social services, immigration policies, schools, and adult educational programs for immigrant mothers.

Theoretical Framework

Transformative learning, as an important component of adult learning theory, emphasizes the expansion of consciousness through which an individual can critically reflect on their personal experiences and feelings (Mezirow, 2009). Hoggan (2015) highlighted that the theory of transformative learning should be understood at the individual level "along with those structural changes for substantive social change to occur" (p. 59). He also pointed out that transformative learning theory could be utilized as an *analytic metatheory* that provides parameters around the phenomena for adult educators/researchers to understand "a number of ways that learners experience a significant shift in their sense of self" (p. 66).

Transformative learning theory is deeply rooted in Paulo Freire's (2005) critical pedagogy that understands "education as a practice of freedom" (p. 14). He highlights the oppressor-oppressed relationship in education and suggests that it is urgent to consider the students as knowledge producers rather than knowledge receivers. Following these roots, Allman (1999) discusses Gramsci's theory of hegemony and ideology. She points out that Gramsci's term "hegemony" describes that Western democratic power is operated not just "through the political state," but becomes an ideology experienced everywhere (Allman, 1999, p. 88). By understanding Freire and Gramsci, Allman (2001) points out that Marx's writing in terms of dialectical conceptualization, theory of consciousness and concept of ideology that provides possibilities to develop a revolutionary praxis in education, which she called *transformative learning* (p. 178). She further addressed the importance of suggesting a practice of critical education and self transformation for revolutionary social transformation. Based on this idea, Carpenter and Mojab (2013) criticize critical or radical adult education by carefully examining Marx's ideas. They claim the importance of raising a revolutionary consciousness for developing a transformative learning practice in our society.

Based on transformative learning theories, we argue that individuals' self-directedness of adult learning is extremely important for social transformations. During the Covid-19 pandemic, immigrant mothers are facing new challenges in these uncertainties. Their self-consciousness and self-directed learning during the pandemic would help researchers to clearly see how women of color are marginalized under different social conditions.

Methodology

This study used in-depth, semi-structured interviews with 20 Chinese immigrant mothers in the US and Canada. During 2020 to 2021, we interviewed 20 Chinese immigrant mothers in Canada and the United States and explored their mothering practice, learning experience, career development, identity construction, knowledge production, and civic engagement. This study particularly focused on their learning and mothering experience during the pandemic. The interviews were audio recorded. Each interview lasted from 60 to 90 minutes. The interviews were conducted in Chinese. We translated the interviews and coded the interview data by using Nvivo software.

In the data analysis, we adopt a Grounded Theory Method (GTM) in data analysis. The GTM is a research methodology that could help researchers to systematically derive theories of human behaviour from empirical data (Urquhart, 2013). With the help of GTM, we could link our empirical data with concepts and theories. By looking at Chinese immigrant mothers' interview data, we found that several key concepts were merged, including transformative learning, identity construction, uncertainty, and knowledge production.

Findings

Through our data analysis, we have found five major dimensions in terms of immigrant mothers transformative learning experiences. They are: 1) learning in uncertainty; 2) self-directed learning during pandemic; 3) learning mother-child relationship and self-consciousness; 4) challenges for mothering and learning; and 5) supports for immigrant mothers.

Learning in Uncertainty

In our study, we found that many immigrant mothers learned mothering skills during the Covid-19 pandemic under a lot of uncertainties. While the Covid-19 pandemic fundamentally changed the society, it destroyed their normal life and recreated a new life within immigrant mothers' families. These uncertainties created fears, which accelerated immigrant mothers' learning practice in order to maintain and secure their family life.

Jenn is a Chinese immigrant mother in the US. She talked about that the biggest motivation for her learning during the pandemic was about "uncertainty". She said:

> During the worst time of the epidemic, all my son's classes were cancelled. There were a lot of workshops during the transition period from face-to-face to online instruction. I have participated in it once or twice. It's a kind of online workshop to

> teach you how to help your kids study online…About the motivation, I think it was mainly about uncertainty. I wanted to learn it because the pandemic makes me feel anxious and want to have more information, which can help me make sure that my life are stable.

Self-Directed Learning During Pandemic

Self-directed learning is considered a common practice among immigrant mothers. During the Covid-19 pandemic, the immigrant mothers not only reoriented their mothering practice and self-directed learning, but also increased the time for learning activities. They took self-directed learning as an opportunity for enriching their skills and reconnecting themselves to the new normal.

Xi is a new immigrant mother who immigrated to Canada in November 2020. She told us that self-directed learning plays a very important role in her life in Canada. She said:

> My current time is indeed not enough. I have to study and do some things on my own every day. I am also using some spare-time for my educational work…That's for sure. As I just said, I have to continue to learn in the process. For example, sometimes I do some reading, I want to learn the methods of reading or learn English language. I treated them not as skills, but as majors. It should be beneficial to some of my own professional knowledge. I always make up some lessons for myself to learn.

Learning Mother-Child Relationship and Self-Consciousness

During the Covid-19 pandemic, many immigrant mothers experienced a crisis between themselves and their children. During the time staying at home, most of the mothers have to rebuild the relationship with their children.

Miz is an immigrant mother in the United States. She has two young children. She talked about how she found the mother-child relationship was changing during the pandemic. She told us,

> It is about the relationship with the child during the epidemic. During the pandemics, I think I spend more time thinking about how I should deal with the different stages of the relationship with my child. During the epidemic, I could see him every day at home for such a long time. I could communicate and interact with him, so I could see his changes or differences every day. For example, if he did some unusual behaviors and said something wrong, it would let me think about if our relationship is changing and how to deal with it. When everyone is busy at ordinary times, we don't have time to observe or reflect on these things. For me, the epidemic help me to re-learn the relationship between me and my sons.

Challenges for Mothering and Learning

The immigrant mothers have faced more challenges since the Covid-19 pandemic began. Some of the mothers found they have challenges in terms of physical and mental wellbeing. Others said their challenges are about reorienting their mothering skills and relearning to parent their children.

Yan is a Chinese immigrant mother in Canada. She has immigrated to Canada for two years. She told us about the challenges that she has experienced during the pandemic, which she thought were about time management. She said,

> It's not very persevering. It is equivalent to replacing the role as a teacher if you are at home. As a mother/teacher at home during the pandemics, you have to schedule the time yourself. I think it's more tiring. If you send your kids to school, you will have more personal time. During the epidemic, you will find that you can't leave him alone, so you have to arrange things for him. Arranging things for him is equivalent to arranging things for yourself, because you have to accompany him. That's too much for me. I think I am very tired.

Supports for Immigrant Mothers

In our study, we found that there is little support for immigrant mothers in both the US and Canada. Summer is a Chinese immigrant mother in Canada. She told us that there is almost no support from the government during the pandemic. She said,

> I don't receive any support. But my family will help me. There were some changes during the pandemics because the contacting time with my children is much longer than before. There were more emotional time because no one was helping you here. I was more suffer, and I was looking for a better way to get along with him.

Discussion and Conclusion

This study set out to explore Chinese immigrant mothers' learning and mothering experience during the pandemic. It revealed that Chinese immigrant mothers are increasingly marginalized as a result of the global pandemic and capitalism. Their learning and mothering experiences can be classified as a kind of transformative learning that transcends boundaries of being a mother and being themselves. The pandemic brought them a lot of uncertainties and new challenges, which accelerated their learning practice and helped them to better understand their children and themselves.

The findings of this study have important implications for adult educators and immigration policymakers and practitioners. Understanding the challenges and experiences of immigrant mothers could help the host countries, such as the United States and Canada, recognize immigrant mothers' needs. For adult educators, it is important to realize immigrant mothers' motivations for learning, which might closely relate to their work-life balance and desire of living in the new countries. For example, while the mothers mentioned "uncertainty" as the biggest factor of their learning motivation, it is

necessary to provide sufficient learning supports in terms of parenting, job-seeking, language education, and time and financial management for matching their needs. In addition, since these Chinese immigrant mothers mentioned the biggest challenge is time management, adult educators could find better ways to facilitate meeting the learners' needs, such as using online and offline communications with the learners and adopting synchronous and asynchronous instructions based on their time and needs. Finally, it is also critical to acknowledge immigrant mothers as adult learners. Through their self-directed learning process, we could find that they had "a shift in their identifications or self-locations" (Hoggan, 2015, p. 66). These immigrant mothers started to reconstruct their sense of belonging and relearn their relationship between their children and family.

For immigration policymakers and practitioners, it is key to understand how immigrant mothers as individuals practice mothering and learning under uncertainties. While the government does not provide enough social and economic supports for these immigrant mothers, these immigrant mothers have to find resources and support by themselves in order to balance work, life, and mothering with their family and children. This will push them to another pole of marginalization. As a result, we suggest that the government should provide more support particularly focusing on childcare services, financial, physical, and psychological supports.

In conclusion, this paper explores Chinese immigrant mothers' mothering and learning experience during the pandemic. It suggests adult educators and immigrant policymakers acknowledge immigrant mothers' needs and taking the individuals' transformative learning experience to develop social supports and learning programs for social transformations.

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