NORTH AMERICAN UNIVERSITY

Global Challenges & Opportunities in Higher Education

JULY 18-20 2023

CONFERENCE PROCEEDINGS OF NAU'S THIRD

ANNUAL INTERNATIONAL CONFERENCE

Global Challenges and Opportunities in Higher Education

Conference Proceedings of
North American University's 3rd Annual International Conference

July 18-20, 2023

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FORWARD

Dear esteemed participants and contributors,

On behalf of North American University, it is my great pleasure to welcome you to the 3rd Annual International Conference on Global Challenges and Opportunities in Higher Education. It will be held in the vibrant city of Houston, Texas, a hub of innovation, diversity, and academic excellence.

The theme of this year's conference, "Global Challenges and Opportunities in Higher Education," reflects the ever-changing landscape of higher education institutions worldwide. We recognize the crucial role that higher education plays in shaping the future and are committed to addressing the complex challenges and harnessing the abundant opportunities that lie ahead.

During the three days of this conference, we will gather together as a community of scholars, educators, researchers, administrators, and policymakers to engage in rigorous academic discourse, exchange groundbreaking ideas, and share best practices. Our goal is to foster collaboration, inspire innovation, and contribute to the advancement of higher education on a global scale.

The conference program is designed to offer a diverse range of sessions, including keynote presentations, panel discussions, research paper presentations, and interactive workshops. These sessions will cover a wide array of topics, such as usage of AI, cloud learning innovation, student-centered learning, international collaborations, diversity and inclusion in higher education.

We are honored to have renowned experts and thought leaders as keynote speakers, who will share their valuable insights and experiences in addressing the global challenges and opportunities in higher education. Furthermore, the conference will provide ample networking opportunities for participants to establish connections, foster collaborations, and build lasting relationships with colleagues from around the world.

We are grateful to our organizing committee, sponsors, and partners for their tireless efforts in making this conference possible. Their dedication and support have been instrumental in creating a dynamic and enriching experience for all participants.

Finally, I would like to express my sincere appreciation to each and every participant attending this conference. Your presence and active engagement contribute to the vitality and success of this event. Together, let us embrace the challenges, seize the opportunities, and pave the way for a brighter future in higher education.

We look forward to welcoming you to the NAU Annual International Conference in Houston, Texas.

Sincerely,

Faruk Taban, Ph.D.
President of North American University

North American University: Building a Tradition of Excellence

Founded in 2010, North American University (NAU) is one of the newest universities located in Stafford, Texas, near the diverse metropolitan city of Houston which is full of opportunities. NAU is an international institution of higher learning committed to providing a nurturing environment for the systematic pursuit of academic excellence, professional and personal development, responsible citizenship, and global cultural competency. NAU is a private, non-profit, accredited, full-service college offering baccalaureate degree programs in four disciplines with several concentrations: Interdisciplinary Studies in Education, Computer Science, Business Administration and Criminal Justice. NAU also offers six master's degree programs: M.Ed. in educational leadership, M.Ed. in Curriculum and Instruction, M.Ed. in School Counseling (2), MBA and a M.S. in Computer Science. NAU offers a student-centered learning environment where every student is valued and provided with opportunities to grow. NAU has an international staff and student body, representing over 60 countries. It currently has collaboration agreements with several universities globally.

Welcome Letter from Houston Mayor Sylvester Turner

CITY OF HOUSTON

Sylvester Turner
Mayor

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Telephone – Dial 311
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July 18, 2023

Greetings,

As Mayor of the City of Houston, I extend a warm welcome to all participating in the Annual International Higher Education Conference held on July 18-20, 2023, in the Greater Houston Area and sponsored by the North American University. This year's theme "Global Challenges and Opportunities in Higher Education" focuses on critical issues being addressed by universities throughout the world.

The City of Houston welcomes all representatives from more than 20 countries, including from Central and South America, the Middle East, Asia, Europe, and the continent of Africa. The delegations will address issues of Leadership and Management as well as in specific academic disciplines. The purpose is to provide a forum to gain insights into the challenges faced in this era of internationalization of higher education; identify innovative opportunities in the context of recent social, economic, political, and technological changes; and broaden the academic experiences that might help augment academic programs, research, and scholarly collaboration, sharing and learning from cross-border experiences.

Houston is a city that supports international education and the expansion of partnerships between our Houston-area universities and the world. The City of Houston applauds North American University's efforts that increase global education and partnerships, and provide international opportunities for faculty, staff, students, and corporations to advance Houston as a global city.

Best wishes for a memorable event.

Sincerely,

Sylvester Turner
Mayor

Exploring the Dimensions of IT Business Schools: Social and Cultural Activities, Internationalization, Innovation, and Sustainable Challenges

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ChatGPT

Abstract

The paper delves into the various aspects and significance of social and cultural activities within IT business schools. These activities play a pivotal role in cultivating an engaging student life, offering a wide range of clubs, organizations, cultural festivals, guest lectures, and networking events. By participating in these endeavors, students benefit from a holistic development approach and are encouraged to engage in cross-cultural interactions. The study also examines the internationalization efforts undertaken by IT business schools, highlighting the importance of global awareness and intercultural competence. These efforts include fostering diverse student bodies, establishing exchange programs, recruiting international faculty, providing study abroad opportunities, and fostering collaborations with international institutions. Such initiatives are designed to equip students with the necessary skills and exposure to thrive in the interconnected global IT industry, while also gaining insights into diverse academic systems, cultures, and business practices. Moreover, the paper explores the innovative academic experiences offered by IT business schools. It emphasizes the need for curricula to stay updated with industry trends and emerging technologies, placing a strong emphasis on experiential learning through case studies, simulations, and hands-on projects. The establishment of innovation labs, entrepreneurship programs, and industry collaborations further enhances creativity, problem-solving abilities, and entrepreneurial mindsets among students. In addition, the paper addresses the integration of sustainable practices within IT business schools. It underscores the importance of incorporating sustainability-related topics into the curriculum, promoting research and innovation in sustainable technologies, implementing sustainability initiatives within the institution, and nurturing social impact and responsible leadership. IT business schools aspire to develop graduates who possess not only technical skills but also environmental and social consciousness, making positive contributions to a more sustainable future in the IT industry. Overall, the paper provides valuable insights into the multifaceted nature of IT business schools. It sheds light on their focus on IT and business education, the significance of social and cultural activities, internationalization endeavors, innovation in academic experiences, and the integration of sustainable practices. These schools strive to produce well-rounded graduates capable of excelling in a globalized and ever-evolving IT industry while addressing the challenges of society and the environment.

Keywords: Internationalization, challenges, innovative, sustainability

I. Introduction

In today's rapidly evolving world, IT business school play a crucial role in equipping students with the necessary skills and knowledge to thrive in the dynamic and competitive IT industry. These institutions go beyond traditional education by providing a comprehensive academic experience that encompasses not only technical expertise but also social, cultural, international, innovative, and sustainable dimensions. Understanding these dimensions is essential in preparing students to become well-rounded professionals capable of navigating the complexities of the modern IT landscape. This paper aims to explore and analyze the key aspects of IT business schools, focusing on social and cultural activities, internationalization, innovation, and sustainable challenges. Each dimension contributes to a holistic and forward-thinking academic experience that prepares students to succeed in the IT industry and make meaningful contributions to society **[Astin W,1984].** The first dimension of focus is social and cultural activities within IT business schools. These activities foster a vibrant and inclusive learning environment that extends beyond the classroom. Through clubs, organizations, and events, students have the opportunity to engage in networking, collaboration, and cultural exchange. The diversity of experiences and perspectives cultivates an environment where students can develop their interpersonal skills, expand their networks, and gain a deeper understanding of the global IT industry.

Internationalization is another critical dimension of IT business schools. With the increasing interconnectedness of the IT industry, preparing students for a globalized world is paramount. Internationalization efforts encompass a diverse student body, exchange programs, collaborations with international institutions, and language and cross-cultural training. These initiatives provide students with exposure to different cultures, enhance their intercultural competence, and foster a global perspective on IT practices and challenges. Innovation is an inherent part of the academic experience in IT business schools. As the IT industry continuously evolves, schools must remain at the forefront of technological advancements and industry trends. By integrating innovation into the curriculum, offering experiential learning opportunities, establishing innovation labs, and fostering entrepreneurship, IT business schools nurture students' creativity, problem-solving abilities, and adaptability. Through these initiatives, students are prepared to embrace and drive innovation in their careers, contributing to the continued growth and transformation of the IT industry. Lastly, IT business schools recognize the pressing need to address sustainable challenges. Sustainability has become a crucial consideration in all sectors, including IT. By integrating sustainability into the curriculum, conducting research on sustainable technologies and practices, promoting responsible leadership, and adopting sustainable campus operations, IT business schools strive to develop graduates who can contribute to a more environmentally and socially conscious IT industry. Through an exploration of these dimensions, this paper aims to provide a comprehensive understanding of the academic experience in IT business schools. By embracing social and cultural activities, internationalization, innovation, and sustainability, these institutions shape students into well-rounded professionals who are prepared to tackle the challenges and opportunities in the ever-evolving IT industry.

II. Social and Cultural Activities in IT Business Schools

Social and cultural activities play an important role in IT business schools as they contribute to the overall development and well-rounded education of students **[Tinto, V. 2012]**. While the focus of IT business schools is primarily on technical and business education, many schools also recognize the significance of providing opportunities for students to engage in social, cultural, and extracurricular activities. Here are some common social and cultural activities you may find in an IT business school: Clubs and Organizations: IT business schools often have various student clubs and organizations focused on different interests and hobbies. These could include technology clubs, entrepreneurship clubs, cultural clubs, sports clubs, debate clubs, and more. These clubs provide platforms for students to pursue their passions, collaborate with peers, and develop leadership and teamwork skills. Cultural Festivals and Events: IT business schools may organize cultural festivals and events that celebrate the diversity and heritage of their student body. These events often include performances, music, dance, art exhibitions, and food from different cultures. They provide an opportunity for students to learn about different traditions, exchange ideas, and foster cultural understanding.

Guest Lectures and Workshops: IT business schools frequently invite guest speakers, industry experts, and thought leaders to deliver lectures and conduct workshops on various topics. These sessions expose students to different perspectives, emerging trends, and real-world experiences, enhancing their knowledge beyond the classroom.

Social Impact Initiatives: Many IT business schools encourage students to participate in social impact initiatives and community service projects. This could involve volunteering, organizing charity drives, or partnering with non-profit organizations to address societal challenges. These activities promote empathy, social responsibility, and ethical leadership among students. Networking Events: IT business schools often organize networking events, industry visits, and career fairs where students can interact with professionals, alumni, and potential employers. These events provide valuable networking opportunities and help students establish connections within the industry.

Sports and Fitness Activities: To promote a healthy and balanced lifestyle, IT business schools may offer sports facilities, gymnasiums, and fitness programs. Students can participate in sports competitions, fitness classes, or recreational activities to stay physically active and relieve stress. The availability and range of social and cultural activities may vary depending on the specific IT business school. It's always a good idea to explore the extracurricular opportunities and student life offerings when considering an IT business school to ensure they align with your interests and goals.

III. Internationalization in IT Business Schools

Internationalization **[*Braxton, J et al 2000*]** is an important aspect of many IT business schools as it reflects the global nature of the IT industry and prepares students for a diverse and interconnected world. Here are some key elements of internationalization that you may find in IT business schools:

International Student Body: IT business schools often have a diverse student body comprising students from different countries and cultural backgrounds. This diversity enriches the learning experience and provides opportunities for cross-cultural interactions, networking, and collaboration.

Exchange Programs: Many IT business schools have partnerships with universities and educational institutions around the world. They offer exchange **[*Altbach, P et al.2007*]** programs that allow students to study abroad for a semester or a year, gaining exposure to different academic systems, cultures, and business practices. These exchange programs promote global awareness, intercultural competence, and a broader perspective on the IT industry.

International Faculty: IT business schools often have faculty members who have international backgrounds or experience working in various countries **[*Leask, B. 2015*]**. These professors bring diverse perspectives, knowledge, and industry connections, enhancing the quality of education and providing students with a global outlook.

Study Abroad Opportunities: In addition to exchange programs, IT business schools may offer study abroad opportunities specifically designed for IT and business students. These programs allow students to immerse themselves in a different country's educational system, gain international experience, and understand global business practices firsthand.

Global Research Collaborations: IT business schools may engage in research collaborations and partnerships with international universities, research institutes, and industry organizations. This fosters knowledge exchange, joint projects, and the dissemination of research findings on a global scale.

International Internships and Job Placements: IT business schools often have strong connections with global companies and organizations. They facilitate internships and job placements for students in international settings, providing them with valuable work experience and exposure to different work cultures.

Language and Cross-Cultural Training: Internationalization efforts may include language courses and cross-cultural training programs to help students develop language skills, cultural sensitivity, and effective communication in diverse settings.

The degree and extent of internationalization can vary among IT business schools, so it's important to research and inquire about the specific international opportunities and initiatives offered by the schools you are considering.

IV. Innovation in the Academic Experience

Innovation in the academic experience is a crucial aspect of many IT business schools as it enables them to stay relevant in a rapidly evolving industry and provide students with cutting-edge knowledge and skills **[*Knight, J. 2003*]**. Here are some ways in which IT business schools foster innovation in the academic experience:

Updated Curriculum: IT business schools regularly review and update their curriculum to align with industry trends and emerging technologies. They incorporate new courses and update existing ones to ensure students receive the most up-to-date and relevant education. This includes integrating subjects like data analytics, artificial intelligence, cybersecurity, blockchain, and other emerging areas.

Experiential Learning: IT business schools emphasize experiential learning methods such as case studies, simulations, hands-on projects, and real-world problem-solving exercises. These approaches allow students to apply theoretical knowledge to practical scenarios, enhancing their critical thinking, problem-solving, and decision-making abilities.

Innovation Labs and Centers: Many IT business schools establish innovation **[*Deardorff. K. 2006*]** labs or centers that serve as hubs for research, experimentation, and collaboration. These spaces provide students with access to state-of-the-art technology, resources, and mentorship to explore innovative ideas and develop entrepreneurial skills.

Entrepreneurship and Startup Support: IT business schools often have entrepreneurship programs and initiatives that encourage students to explore their innovative ideas and start their own ventures. These programs provide mentorship, funding opportunities, and resources to help students develop entrepreneurial mindsets and launch successful startups.

Collaboration with Industry: IT business schools foster close ties with the industry by establishing partnerships, industry advisory boards, and collaborative projects. This collaboration enables students to work on real-world industry challenges, access internship and job opportunities, and stay updated on the latest industry practices.

Technology Integration **[*Christensen et al. 2011*]**: IT business schools leverage technology to enhance the academic experience. They incorporate online learning platforms, virtual classrooms, data analytics tools, and other technological innovations to facilitate flexible and interactive learning environments.

Hackathons and Innovation Challenges **[*Chesbrough.H.2003*]**: IT business schools may organize hackathons, innovation challenges, and competitions where students can collaborate and develop innovative solutions to specific problems. These events foster creativity, teamwork, and out-of-the-box thinking.

Continuous Learning and Professional Development: IT business schools encourage lifelong learning by offering professional development programs, executive education courses, and industry certifications. This ensures that graduates can stay abreast of technological advancements and industry best practices throughout their careers.

These are just some examples of how IT business schools foster innovation in the academic experience. The specific approaches and initiatives may vary between institutions, but the overarching goal is to provide students with an education that prepares them for the ever-changing IT industry and encourages innovation, creativity, and adaptability.

V. Sustainable Challenges in IT Business Schools

IT business schools offer a range of degree programs, such as undergraduate and graduate degrees in IT management, business analytics, information systems, and related fields. The curriculum usually covers topics like programming, database management, networking, cybersecurity, project management, business strategy, and entrepreneurship **[*Schaltegger,et al 2011*]**. The specific offerings and focus of IT business schools can vary, **[*Pascarella et al. 1991*]** but many of them aim to bridge the gap between technology and business by equipping students with both technical skills and business acumen. They often incorporate real-world case studies, internships, and industry partnerships to provide practical experience and prepare students for the demands of the IT industry. Attending IT business school can be beneficial for individuals interested in pursuing careers at the intersection of technology and business. It can help them develop a well-rounded skill set, gain industry-specific knowledge, network with professionals in the field, and enhance their job prospects in the IT industry or related sectors.

Sustainable challenge

Sustainable challenges are becoming increasingly important in all areas of society, including education. Many IT business schools recognize the need to address sustainability challenges and integrate sustainable practices into their academic experience. Here are some ways in which IT business school's approach sustainable challenges:

Sustainable Curriculum: IT business schools incorporate sustainability-related topics into their curriculum. They offer courses that explore **[*Christensen, C. M. 2010*]** sustainable business practices, environmental sustainability, social responsibility, and ethical decision-making. This ensures that students understand the importance of sustainability and are equipped with the knowledge to address sustainability challenges in the IT industry.

Research and Innovation: IT business schools conduct research and encourage innovation in sustainable technologies and practices. Faculty and students work on projects that aim to develop sustainable solutions, such as renewable energy systems, eco-friendly IT infrastructure, and sustainable supply chain management. This research contributes to the advancement of sustainable practices in the IT sector.

Sustainability Initiatives: IT business schools often have dedicated sustainability initiatives and programs. They may establish sustainability committees or task forces to drive sustainable practices within the school's operations and curriculum. These initiatives can include energy conservation measures, waste reduction programs, recycling initiatives, and the promotion of sustainable transportation options.

Social Impact and Responsible Leadership: IT business schools emphasize the importance of social impact and responsible leadership in the IT industry. They encourage students to consider the social and environmental consequences of their decisions and to develop sustainable and ethical business practices. This helps students understand their role in creating a more sustainable future.

Partnerships and Collaborations: IT business schools collaborate with industry partners, non-profit organizations, and government agencies to address sustainability challenges. These partnerships may involve joint research projects, internships, and community engagement activities focused on sustainable development and corporate social responsibility.

Sustainable Campus Operations: IT business schools strive to make their campuses more sustainable. They implement energy-efficient technologies, promote recycling **[*Lozano, R.2015*]**, and waste reduction, and encourage sustainable transportation options for students and staff. By practicing sustainability on their campuses, they set an example and inspire students to adopt sustainable behaviors.

Awareness and Education: IT business schools organize seminars, workshops, and awareness campaigns to educate students and the broader **[*Carneiro, R.2017*]** community about sustainability issues. These activities raise awareness about the impact of IT on the environment and society and encourage sustainable practices among students, faculty, and staff. By integrating sustainability into their academic experience **[*Wiek, A.2011*]**, IT business schools aim to prepare future IT professionals who are not only technically skilled but also environmentally and socially conscious. They recognize the importance of addressing sustainability challenges in the IT industry and strive to develop innovative solutions that can contribute to a more sustainable and responsible future.

VI. Conclusion

In conclusion, IT business schools play a vital role in preparing students for successful careers in the dynamic and fast-paced IT industry. By incorporating social and cultural activities, internationalization, innovation, and sustainability into the academic experience, these institutions create a comprehensive learning environment that equips students with the skills, knowledge, and perspectives needed to thrive in today's globalized and rapidly evolving world. The integration of social and cultural activities within IT business schools fosters a sense of community and provides students with opportunities for networking, collaboration, and exposure to diverse perspectives. These activities enhance students' interpersonal skills, cultural competence, and global awareness, preparing them for the interconnected nature of the IT industry.

Internationalization efforts within IT business schools further enhance students' readiness for the global IT landscape. Through diverse student bodies, exchange programs, collaborations with international institutions, and language and cross-cultural training, students gain a deeper understanding of different cultures, global IT practices, and the ability to work effectively in diverse teams. Innovation is a cornerstone of IT business schools, ensuring that students are at the forefront of technological advancements and industry trends. The integration of innovation into the curriculum, experiential learning opportunities, innovation labs, and entrepreneurship support cultivates students' creativity, critical thinking, and problem-solving abilities. Graduates are equipped to embrace innovation and drive positive change within the IT industry.

Lastly, IT business schools recognize the urgent need to address sustainable challenges. By integrating sustainability into the curriculum, conducting research on sustainable technologies

and practices, and promoting responsible leadership, these institutions prepare students to make ethical and environmentally conscious decisions in their careers. The adoption of sustainable campus operations also sets an example and reinforces the importance of sustainability in all aspects of the IT industry. Collectively, the dimensions of social and cultural activities, internationalization, innovation, and sustainability contribute to a comprehensive and forward-thinking academic experience in IT business schools. Graduates emerge with not only technical expertise but also the ability to collaborate across cultures, embrace innovation, and navigate sustainability challenges. These well-rounded professionals are equipped to make a positive impact in the IT industry and address the complex and evolving needs of our interconnected world. As the IT industry continues to evolve, IT business schools will play a crucial role in shaping the next generation of IT professionals. By embracing social, cultural, international, innovative, and sustainable dimensions, these institutions are well-positioned to prepare students for the challenges and opportunities that lie ahead.

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Brief Biography of Authors

Dr. Ines Ben Bouhouch is a professor in the department of Economic and Business Administration at IT Business School in Tunisia, where she has been since 2014. She received her Ph.D. in Finance from the University of Tunis El Manar in 2015. She currently holds the position Dean of IT Business School (ITBS). She is a Researcher at Laboratory for Research on Quantitative Development Economics, Faculty of Economics and Management of Tunis. She is

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ChatGPT, short for Chat Generative Pre-trained Transformer, is a state-of-the-art language model developed by OpenAI. It is based on the GPT-3.5 architecture, which stands for Generative Pre-trained Transformer 3.5. ChatGPT has been trained on a vast amount of text data from a diverse range of sources, allowing it to generate human-like responses to various prompts and questions.

The Challenges of Diversity and Inclusion in Higher Education in The Netherlands

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Abstract

The paper focuses on higher education institutions (HEIs) in the Netherlands that have implemented diversity initiatives to improve inclusivity. Many Dutch universities have created diversity task forces that include students, faculty, and staff to promote diversity and inclusion in all aspects of the institution. The task forces have developed interventions based on diversity perspectives and implemented various interventions and initiatives, including curriculum changes, faculty and staff training, and outreach to underrepresented communities. This paper analyzes the effectiveness of these initiatives and interventions in promoting diversity and inclusion and identifies potential challenges and barriers to their implementation. The insights gained from several studies in the Dutch context will contribute to the development of effective diversity and inclusion strategies in Dutch higher education.

***Keywords*:** Diversity, higher education, Netherlands, inclusion, culture

1. Introduction

The focus on diversity and inclusion in higher education is growing rapidly. Many people are convinced of not only the usefulness but also the necessity of diversity and inclusion in education. It is now mainly about how universities achieve these aims throughout the organization—in curricula, systems, structures, culture, and management—to lead to a culture of diversity and inclusion that makes students and staff feel valued and respected, an educational setting that provides a variety of environments and an inclusive culture where staff and students collaborate to create successful teaching and learning environments.

The increase in diversity in Dutch society, as in many other countries, is now a fact of life that is reflected in the student population. More than one in four Dutch citizens has a migrant background. The background and working methods of students from high schools, international students, and life-long learning professionals differ, which ensures a variety in pedagogical approach and style. Universities and colleges have the social task of equipping people with the competencies they need for their future work in a rapidly changing and multicultural labor market. Educational institutions also want to respond to the wishes and needs of students to help them succeed in their studies and their careers (Kurt, 2021). So, the atmosphere of education and training with cultural competencies gradually prioritizes social, cultural, and intellectual advancement. In order to connect with the diversity of today's students, diversity in staff

composition is regarded as important (Çelik et al., 2014; De Vries et al. 2013; Vos et al., 2016). A high level of diversity within teams or workgroups can lead to more pronounced power relations, differences in social rankings, and less access to the resources that are necessary for good work prospects.

In recent years, numerous universities in the Netherlands have taken proactive steps to establish diversity task forces; that is, dedicated entities focused on promoting diversity and inclusivity. Through their efforts, these task forces have developed a range of interventions aimed at incorporating diversity perspectives into curricula. One notable intervention is the addition of modules and courses specifically designed to address the topics of diversity, inclusion, and policy. By offering dedicated educational opportunities in these areas, HEIs seek to equip their students with a deeper understanding of diversity-related issues and foster a more inclusive learning environment. Furthermore, these task forces recognize the importance of incorporating diverse perspectives into existing courses.

Several studies have been published on exclusion, safe working environments, and unwanted behavior in Dutch higher education (KNAW, 2022; Naezer et al., 2019; RUG, 2021). This makes it interesting to study how universities in the Netherlands view diversity and inclusion. Which interventions and initiatives do they use to improve diversity and inclusivity in their organizations? The Dutch higher education system consists of 14 research universities[1] and 36 universities of applied sciences (UAS).[2] The present study offers baseline insights into diversity and inclusion practices in Dutch higher education and serves as an initial picture of how diversity and inclusion are experienced.

2. Theoretical background

Studying inclusion and diversity in organizations is not easy; it is a complex issue, and dealing with differences is never without controversy. The reality is that diversity not only has benefits but can also lead to a sense of insecurity, increased conflict, and resistance. Theory expresses different perspectives on the phenomenon, including how to achieve diversity and inclusion in the first place. Various definitions are in circulation for both terms. Diversity refers to both visible characteristics in which people differ from one another and invisible aspects like norms, values, beliefs, needs, competencies, work styles, and character traits (Harrison & Klein, 2007). An inclusive culture increases employees' involvement with their employers and prevents unwanted outflows. Eliminating invisible exclusion mechanisms in education needs an awareness of the urgency of that goal (Çelik et al., 2021). Although the terms inclusion and diversity are intertwined, they have different nuances in focus.

Organizations strive for diversity for various reasons (Paradeise & Thoenig, 2013; Podsiadlowski et al., 2013). The most common ones are as follows: 1) *equality*, which focuses on creating equal opportunities and combating discrimination; 2) *legitimacy*, which involves strengthening trust in the organization among different groups in society; 3) *creativity*, which means increasing the variety of perceptions and insights for better performance; 4) the *labor market* perspective, which is about using all available talent and improving the organization's image; and 5)

[1] https://www.universiteitenvannederland.nl/en_GB/dutch-universities.html.
[2] https://www.verenigingh ogescholen.nl/; see also the report of Vereniging Hogescholen (2022).

connection, which refers to responding to constantly changing social issues by sustainably strengthening relationships with citizens and customers.

In this paper we use different theoretical perspectives to understand the practices of diversity and inclusion. For example, social psychology tells us that the identity of individuals comes from the groups to which they belong. Personal identity is formed from dealing with different social groups, where individuals adapt in their own ways and internalize these social interactions in different ways. This creates differences in individuals' personal identity. People are constantly comparing themselves and others as part of these social groups through social categorization, thus dividing people into social groups. People do this not only with others but also with themselves in a process known as self-categorization that helps people create a place for themselves in society or in the organization where they work. It creates the sensation "us" versus "them." Recent research on creating an inclusive work environment has identified six aspects: psychological safety, involvement in workgroups, authenticity, influence on decision-making processes, feeling respected and valued, and recognizing, appreciating, and strengthening diversity (Shore et al., 2018).

3. Interventions and initiatives in Dutch higher education

Recognizing the pivotal role of faculty and staff in shaping the learning environment, diversity task forces at Dutch universities have developed training programs to enhance awareness and understanding of diversity issues among their employees. By providing faculty and staff with the necessary tools and knowledge, organizations seek to cultivate a more inclusive and culturally competent community (Kezar & Eckel 2002). This, in turn, contributes to the creation of an environment where all individuals, regardless of background, feel valued, respected, and supported.

3.1. Interventions and initiatives

In recent years, diversity and inclusivity policies have become increasingly important topics in HEIs around the world. One of the most common diversity initiatives implemented by Dutch HEIs is curriculum adaptation (Morgan et al., 2022), which involves the modification of course materials, teaching methods, and learning objectives to better reflect and accommodate diverse student populations and their cultural backgrounds. The rationale for this approach is that curriculum changes can promote inclusivity, support the achievement of academic success, and prepare students for a globalized and culturally diverse society.

3.2. Adding modules and courses on diversity and inclusion

Among the diversity initiatives implemented by Dutch HEIs are modules and courses focused on diversity and inclusion. These courses may be required or elective and can be offered across a range of disciplines and programs. Adding modules and courses on diversity and inclusion can help students develop a better understanding of the challenges faced by underrepresented communities and gain a greater appreciation for diverse perspectives. This in turn can help prepare students for a future in which they will be expected to work effectively in diverse settings and engage as citizens with people from different backgrounds.

3.3. Addressing biases and creating a more inclusive workplace culture

Addressing biases and creating a more inclusive working culture is another major initiative at Dutch HEIs. A more inclusive working culture entails creating a climate in which everyone, regardless of background, feels valued, respected, and supported (Kiradoo, 2022). To achieve this goal, institutions may provide training and education for faculty, staff, and students on topics such as unconscious bias, microaggressions, and cultural competency. Institutions may also adopt guidelines and procedures that support inclusivity and diversity, like accommodating people with disabilities and using inclusive employment processes. They may also create affinity groups or diversity committees that provide support and advocacy for underrepresented groups. Creating a more inclusive workplace culture can also involve promoting work-life balance and providing resources for mental health and well-being.

3.4. Increasing access to higher education and promoting diversity and inclusivity

Increasing access to higher education for underrepresented groups is another major aspect of the effort to promote diversity and inclusivity at HEIs in the Netherlands. By aggressively seeking out students from a wide range of backgrounds and ensuring their success at school, underrepresented groups can gain greater access to higher education (Rhoades, 2006). To achieve that goal, institutions may engage in targeted outreach efforts, attend college fairs in underrepresented communities, and actively seek out referrals from community organizations. They may also prioritize applicants with a demonstrated commitment to diversity and inclusion and provide support throughout the admissions process.

3.5. Creating partnerships with community organizations

Partnering with community organizations is another effective way for HEIs in the Netherlands to promote diversity and inclusivity (Gidley et al.,2010). These partnerships can provide opportunities for collaboration and outreach to underrepresented communities, along with support for diversity initiatives. Community organizations may include local non-profits, advocacy groups, cultural centers, and other organizations that work to promote diversity and inclusivity. By partnering with these organizations, institutions can gain insights into the needs and experiences of underrepresented communities and collaborate on initiatives that address these needs.

4. Challenges and concluding remarks

In the pursuit of effective diversity and inclusion strategies within HEIs in the Netherlands, it is crucial to acknowledge and address the challenges that are sure to arise. While these strategies aim to create a more equitable and inclusive learning environment, several key issues require more attention and a concerted effort to manage effectively.

One major challenge is the persistence of systemic barriers that hinder the full realization of diversity and inclusion goals. These barriers may include deeply ingrained biases, discriminatory practices, and institutional structures that perpetuate inequalities. Recognizing and dismantling these barriers is essential for fostering a truly inclusive environment where all individuals have equal opportunities to thrive. Another challenge lies in the allocation of resources and funding to support diversity initiatives. Limited financial resources may restrict the implementation of comprehensive programs and impede the scaling-up of successful initiatives. To effectively address this challenge, HEIs should prioritize allocating sufficient resources to support diversity

and inclusion efforts, including funding for training programs, curriculum development, outreach activities, and support services.

5. Discussion and suggestions

Addressing the potential challenges and barriers to the implementation of diversity and inclusion initiatives is vital to creating an academic environment that values and embraces the diversity of its community members. By actively confronting these challenges, HEIs in the Netherlands can cultivate a culture of inclusivity, equity, and social justice. Through collaborative efforts, ongoing education, and continuous evaluation, institutions can overcome barriers, advance diversity and inclusion, and foster a more vibrant and enriching educational experience for all. The interventions employed in Dutch HEIs to improve diversity and inclusivity are multifaceted and reflect a commitment to creating inclusive learning environments. From the establishment of diversity task forces and curriculum changes to faculty and staff training, outreach initiatives, and policy reforms, these interventions collectively aim to address the systemic barriers and challenges faced by underrepresented groups. By continually evaluating the effectiveness of these interventions, institutions can refine their strategies and foster a more inclusive, equitable, and enriching educational experience for all members of the academic community.

One of the key goals of diversity initiatives in Dutch HEIs is to increase the representation of underrepresented groups among the student body and faculty. However, increasing that representation will also face challenges that may include limited resources and funding for diversity initiatives, a lack of support from institutional leadership, and the persistence of systemic barriers that prevent underrepresented groups from accessing higher education.

Sustaining a long-term commitment to diversity and inclusion is essential. Diversity should not be treated as a mere buzzword or a short-term initiative. Instead, it requires a sustained effort and institutional commitment. The evaluation and measurement of the effectiveness of diversity and inclusion strategies present challenges of their own. Developing appropriate metrics and indicators to assess the impact of these strategies requires careful consideration (Hutchins & Sutherland, 2008). Institutions must strive to gather and analyze data related to student outcomes, faculty and staff representation, and the overall campus climate. This data-driven approach can enable institutions to identify areas for improvement, track progress, and inform evidence-based decision making.

Through continuous collaboration, research, and sharing best practices, HEIs can individually and collectively overcome the challenges and build a more diverse, equitable, and inclusive future not only for their students, staff, and faculty but also for Dutch society as a whole. By embracing diversity and inclusion as fundamental pillars of education, institutions can fulfill their role in preparing students to thrive in a diverse and interconnected world while promoting social justice and advancing knowledge.

There is a certain sameness to the structure of the various elements of diversity initiatives at Dutch HEIs: type of effort, benefits of effort, challenges of (or to) effort. We are not sure, given the topic, that there is another way to do that. Sometimes, those kinds of patterns are simply built into the very topic of a study. It is therefore important to promote interdisciplinary research on

diversity-related topics at HEIs in the Netherlands. This involves encouraging collaboration between researchers from different disciplines, such as sociology, psychology, education, and public policy, to address complex issues related to diversity and inclusion. Interdisciplinary research can help provide a more comprehensive understanding of the challenges and opportunities associated with diversity and inclusion. By bringing together different perspectives and approaches, interdisciplinary research can help identify innovative solutions to complex problems. Promoting interdisciplinary research on diversity-related topics can also help create opportunities for students and staff to engage in research that addresses real-world challenges.

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The Most Important Challenges Facing Higher Education in Afghanistan

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Abstract

Higher education can make society's view of life real. Higher education is what makes the development of a country possible because higher education enables a person to develop his triple interest (Interest in dominating nature, Interest in mutual understanding, Criticism of power interest.) that Habermas emphasizes. However, higher education in Afghanistan has its own special conditions, both historically and in terms of the present. For the first time, the core of higher education in Afghanistan was established in 1932 with the establishment of the Faculty of Medicine in Kabul. Kabul University was established in 1946. In 1977, the Ministry of Higher Education was established as the largest cultural body for the integration of the country's higher education institutions, expansion, and development of educational institutions. In 1994, based on the guidance of the government, the Technical and Vocational Education department was joined by the Ministry of Education from the Ministry of Higher and Vocational Education.

This process found a new direction during the first rule of the Taliban in 1996- 2001 in Afghanistan. During this period, an effort was made to move higher education towards a seminary with the content of Islamic education. After the year 2001, at least in form, higher education in Afghanistan was put on a new path, and higher education was mentioned as a part of the national development strategy in the country. For this reason, higher education from 2001 to 2021 took on a different situation from the past, both quantitatively and qualitatively. But now, since the Taliban has taken power, higher education faces many challenges. The most important challenges are as bellows:
1. The Taliban's ideological approach to higher education
2. Lack of policy for higher education.
3. Lack of human resources in the field of higher education.

***Keywords*:** Higher education, Taliban, Taliban ideology, interest in dominating nature, interest in mutual understanding, interest in liberation

Introduction

Addressing the challenges of higher education may be done in different ways. One of the most important methods is to refer to indicators based on which the state of higher education can be understood. Habermas is one of the most famous German philosophers, whose views can help us in this regard. Emphasizing the three interests as the inherent characteristics of humans is one of the most important theories of Habermas. According to him, every human being naturally has three specific interests. The desire to dominate nature, the desire for mutual understanding, and the desire for liberation.

According to Habermas, whenever we can answer those three interests, we can make the fields of development and achieving the goal favorable. Answering those three interests of people shows itself in the form of different fields of higher education. From this point of view, whenever the technical interest of man blossoms and finds a suitable answer, the field becomes favorable for conquering nature. Whether it is with the flourishing of the interest of mutual understanding and the interest of liberation, the foundation of the establishment of human sciences and its consolidation becomes possible. Striving for a common language and inventing various diplomatic techniques and other common mechanisms in social and political relations are all responses to the desire for mutual understanding and the desire for liberation that exist naturally in humans. Trying to understand the complexities related to human relationships at different levels is trying to operationalize the natural characteristics of humans and their interests.

From this point of view, whenever higher education is created in a country to respond to the three interests of people, it can be useful and facilitate the path for the development and progress of society. Whenever the formation of higher education in a country is subjected to other factors, the same amount of ground is provided for creating challenges. The secret that higher education has had different reflections in countries also goes back to this principle. Higher education in developed countries is considered a development factor and a factor facilitating the path of development, while in third-world countries, including Afghanistan, higher education itself is a public problem that needs a solution.

How to form and expand higher education in Afghanistan

Although higher education in Afghanistan was inspired by the experiences of other countries as a factor of development, as time passed, it could not be on the main path. Higher education in Afghanistan has a history of almost a century. The foundation of higher education was laid for the first time on the first date of Aqrab 1311 AH (1932) with the establishment of the Faculty of Medicine in Kabul city (Atai, 1385) despite all the adversities, the process of expanding higher education in Afghanistan has continued until now. Objectively, the conditions of higher education in Afghanistan, like any other country, are subject to different historical periods in Afghanistan. The signs of political disorder and the fragility of the situation and power relations can be clearly seen in the historical course of higher education. In the periods of stability and silence, with the rule of political ideology aligned with the values of higher education, a growing trend has been formed in higher education, but in the periods of stagnation, opportunities for growth have been taken from higher education in Afghanistan and we are witnessing the decline of higher education. For example, higher education in Afghanistan historically goes back to the period after Amanullah Khan (1919-1929) in Afghanistan. Although during the period of Amanullah Khan, due to the modernization that Shah Amanullah had and the modernization process implemented in the country, in the field of education, the situation was somewhat different from the past. Amani secondary school was established in Kabul and several high schools in some cities of Afghanistan. Since these educational measures were considered among the manifestations of the modernization of the Amani period, they faced normative reactions from society. What's more, the principle of the Amani system was challenged using the Sharia fatwa of Mullah Lang. It is very clear that when the political system is faced with the sharia fatwa of traditional mullahs, modern higher education will be the first goal that the traditional

system based on sharia cannot support, as in Afghanistan modern higher education faced such a fate. (Ghbar, 1374) Of course, it should be remembered that due to natural progress and the movement of history, we are witnessing some progress in Afghanistan's higher education, but this progress has never been to respond to the three interests (technical, mutual understanding, and liberation interests). The development of higher education in Afghanistan has been inspired by global waves and imitation dictates outside Afghanistan. To the extent that Afghanistan's relations with the world has expanded, the graph of higher education in Afghanistan has grown, but whenever these relations have been less, a downward trend has formed. The meaning of this growth and decline is that higher education before it was derived from the intellectual system and knowledge of Afghanistan's policy-making centers to operationalize the three interests, was mostly a reflection of external seasonal and temporary waves. The secret of the fragility of Afghanistan's higher education process also goes back to this. In the period of the republic in Afghanistan, when the world is present in Afghanistan, the trend and chart of higher education has been developed more than ever before. The Ministry of Higher Education of Afghanistan has established private higher education centers in Kabul and various provinces of Afghanistan in addition to the government institutions that have reached 39 higher education centers in terms of quantity.

According to the constitution of Afghanistan during the republic period and the recognition of the private sector in the higher education sector, the field was also favorable for the private sector (1382 Constitution). In 2013, the Law of the Ministry of Private Higher Education was approved. In 2021, a total of 165 higher education institutions in Afghanistan have been recognized by the Ministry of Higher Education, of which 39 institutions belong to the Afghan government and 126 are non-governmental institutions. This trend is currently declining, and the number of higher education centers has decreased. The private sector in Afghanistan first started its activity in 2006 and reached 140 institutions with provincial branches by 2021. The private higher education sector grew during the political system of the republic, but after the re-establishment of the Taliban in August 2021, higher education in Afghanistan has faced a decline like the political situation, and higher education centers are supposed to be gradually transferred to seminaries.

Factors of the decline of higher education in Afghanistan

1. Taliban ideology in Afghanistan:
2021 is not only the year of the collapse of the political system in Afghanistan, but also the year of the decline of higher education. Various factors may influence this decline, but the most important factor is the Taliban's ideological view of higher education. Talabani's intellectual paradigm is inherently irreconcilable with higher education. If we consider the knowledge and higher education as the construction of the power network in a country, the Taliban power network considers only religion.

knowledge as legitimate and conflicts with the rest. In Talabani literature, modern knowledge and its products are considered misguided and misleading knowledge and must be destroyed. Inspired by Foucault's genealogy, it can be said that in Afghanistan under the Taliban rule, there is no external and objective independent value that the political system plans to strengthen and

strengthen, but everything is built by the political system, and it is the network of power that consciousness creates and creates value. (Foucault, 2008)

According to the Taliban, as much as the democratic and imported Western political system is unacceptable, in the cultural and educational field, the criteria, principles, disciplines, principles, and values of higher education left over from the past are unacceptable. According to the Taliban, Afghanistan is an Islamic country whose prosperity and salvation should be regulated based on religious and value principles, not based on the standards and principles dictated by the West. Its diagnosis is also defined by a group and is done by the Taliban with authority. Just as in the political dimension, a special group called Shura Ahl -Hal Wa Aqd Amir al-Mu'minin should be appointed for political leadership and other members of the society are not qualified, in the field of knowledge and education resources in the Islamic society such as Afghanistan, only a special group appointed by the Islamic Emirate is obliged to recognize and implement their understanding on the society (Ershad, 2009).

The book "Al-Emareh al-Islamiya and Nizamoha" is a reference book that reflects and confirms the above hypothesis. In this book, Maulvi Abdul Hakim Haqqani, as the judge of the Taliban, presents the basic views of the Taliban in various cases, including education. What stands out as the intellectual basis from Haqqani's point of view and should be emphasized are two things, one is the superficial understanding of religion and the second is the Pashtun Vali of the governor (Haqqani, 2022). The combination of these two defines the Taliban's strategy in the field of politics as well as their understanding of higher education. According to Haqqani, the educational system should be religious and non-religious sciences weaken Islam and Muslims. According to Haqqani, many of the problems in Afghanistan have been produced by modern science. According to the author of the book, women can only learn from their intimates inside the house, women should not leave the house without necessity. The mixed education of men and women is forbidden, and it is also incompatible with Afghan zeal (Haqqani, 2022). Considering women's education as haram shows the Taliban's superficial view. as well it is affected by attention to undeveloped religious beliefs and appeals to Afghan zeal. It seems that it is an indicator of captivity in fanatical traditions and tribal attitude that was built in a political and primitive alienating atmosphere.

2. Lack of policy for higher education in Afghanistan:

Higher education is a consequence of the views and experiences of the modern world. The policy is posterior, and before that, higher education should be understood as a value and necessity to create a policy for it. In the Taliban regime, where higher education is considered blasphemy and modern or modern knowledge is considered the cause of Afghanistan's misfortune, it is very clear that there is no time for making policies aimed at the growth and strengthening of modern higher education. In light of such a situation, it will be meaningless to talk about any policy for higher education. On the contrary, with such a view, efforts to fight against higher education are more on the agenda. as the current situation in Afghanistan confirms this claim. In the Talabani government, there is basically no time for policymaking for higher education in a conventional way. Of course, new policymakers may emerge and create their own policies. What if such a policy is implemented now? Replacing the principles of Islamic culture and ranking people with Jihad criteria and being in the ranks of suicide bombers is a type of shift in criteria that redefines all matters, including people's views in society. The expansion of religious schools and the

movement of Afghan youth to schools are among the policies implemented by the Taliban government. (Today's information newspaper, 2022)

3. poverty and Lack of human resources in Afghanistan:

One of the most important factors that have made higher education in Afghanistan decline is the lack of human resources and poverty. Both in terms of intellectual foundations and in terms of objective experiences, it can be said that it is logically impossible to plan any goal and implement any project without suitable human resources. One of the historical sufferings in universities and higher education in Afghanistan is the gap between knowledge and university. Instead of acting as centers of public awareness and spreading awareness aimed at prosperity, universities themselves became centers of destruction (Ershad, 2009). The absence or shortage of human resources is more evident than in any period, especially in the current situation. After the return of the Taliban, perhaps fewer university professors can be identified in Afghanistan who had the opportunity to leave Afghanistan but remain. Although there are no exact statistics, most university professors have either left Afghanistan or are in the process of leaving.

Conclusion

Higher education in Afghanistan has not been established since the beginning because of a response to the triple interests of the people. The initial look for the establishment of higher education centers in Afghanistan before it was intended to help the development of Afghanistan was influenced by the waves of foreign countries. Higher education in Afghanistan, with a history of about a century, has expanded somewhat in terms of form, but in terms of content, it has not been able to approach global standards in this regard. With the re-emergence of the Taliban, higher education in Afghanistan has faced more serious challenges, and we can talk about the decline of higher education in Afghanistan. Specifically, three factors such as Taliban ideology, lack of higher education policy, and lack of human resources have made this decline possible.

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Global Challenges and the 5 'R's of Transformative Higher Education: Retracing, Retrieving, Reviving, Refreshing and Rebuilding.

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Abstract

From the complexities of mathematics to the simplification of complex philosophies, scholars have always tried to make learning wholistic. This paper argues that when we think of Transformative Higher Education, we must include in it the valuable portions of the intellectual wealth that we have inherited from the past. In this context we could use the following 5 'R's: Retracing. Retrieving, Reviving, Refreshing and Rebuilding. Given the issues of unfair practices like plagiarism etc, and the growing anxiety and depression amongst students, efforts must be made to strengthen academic ethics. This role was always played by spiritually oriented scholars. In fact the life, teachings and interactive model of Hodjaefendi Fethullah Gulen is an excellent example of the same and must be explored in detail. The teaching-learning format could be designed to increase gross enrolment ratio and decrease the drop-out rates. Provision of skill embedded courses and multiple points of entry and exit for the students would motivate; besides others, the disadvantaged groups to continue learning. In the past, scholars were multi-specialists. Many windows of the mind were opened. The Greek philosophers are an example. This paper argues walking into the future in the light of great scholars like Hodjaefendi Fethullah Gulen.

***Keywords*:** Hodjaefendi Fethullah Gulen, academic ethics, Gross Enrolment Ratio, drop-out rate, multiple entry-exit, disadvantaged groups, Retracing, Retrieving, Reviving, Refreshing and Rebuilding.

Abbreviations

1. SEDGs (Socially & Economically Disadvantaged Groups).
2. GER (Gross Enrolment Ratio)
3. HEI (Higher Education Institutions)
4. MEEP (Multiple Entry & Exit points)
5. TEI (Teacher Education Institutions)
6. ODL (Open Distance Learning)
7. OCW (Open Courseware)
8. OER (Open Education Resources)
9. MOOCs (Massive Open Online Course)
10. ARE (Academic and Research Ethics)

Against the constantly shifting backdrop of political, economic and social circumstances the idea of education often finds itself in a shaky situation, and more so higher education. Every generation thought that it is 'modern'. The fixation on being an usherer of restyling often led to changes which were not really required. Like they say that one must know why a fence was put up before removing it. In the current age of micro and macro specialization there is an emerging demand for being interdisciplinary. A lot of the slant towards exploring interconnections has come because of environmental and climatical issues which concern everyone; absolutely everyone. Compartments and chambers don't separate the skies and seas. It is interesting to note that at one point in time it seemed that science is the only subject that is really worth an investment, because that was considered to be the only key for progression. Scientific progress changed human life forever and mostly for good. Its undeniable value notwithstanding it somehow managed to weaken our physical stamina and moral make up. While the discovery of medicines lessened people's physical pain and elongated life span; the constant feedback about the perceived happiness in other people's lives via social media tools robbed a lot of them of self-confidence, gratitude and eventually happiness. Our ability to know everything that is going around the world has brought us closer together, but it has also increased our anxieties and envies.

Time has proven that science has found no cure for hatred, greed, jealousy and no boosters for confidence, politeness, ethical behaviour and professional and personal integrity. As the wars and scientific disasters abounded the 'neutrality' and 'absolute goodness' of science was reconsidered. This shifted the gaze once again to a multidisciplinary approach where together with science the students also know about the purpose of scientific knowledge. It is being increasingly realised that education is only a means to a higher end. The end is to make the globe a happy and peaceful place: disease, distress, duress, disaster and hatred free. It is not plain 'knowledge' that will do the magic here, but the derivation of wisdom from knowledge is in fact the key. Higher Education Institutions (HEI) are pivotal in this derivation. The challenge then is how to spread the distilled wisdom acquired by the masters of various disciplines amongst the largest possible number of people. How to widen the doors of learning and keep them open to as many people as possible. The challenges that lie here are quite layered. Everyone who finds an open door doesn't walk into it! Here comes the issue of motivating people to walk in and then stay and then leave in an enriched state. This is not as simple as it sounds.

Speaking of Higher Education, one is quickly drawn into the memory lane of the massive intellectual achievements of humans since ancient times. From sophistication to simplicity the humans have experimented with it all. Growth of languages: Hebrew, Arabic, Sanskrit, French, Spanish and English etc are just windows to the multifarious magics that the human mind is capable of. From the complexities of mathematics to the simplification of complex philosophies, humans have always been trying to making learning a fuller experience. When we think of self-reliance in the Higher Education we must at once admit that self-reliance is not only associated with manufacturing things, it also is about manufacturing thoughts. The intellectual wealth that we have inherited from our ancestors is indeed massive. It is proposed that besides experimenting with new ideas we should also draw the best from the past practices. In this context we could use the following 5 'R's. They are as follows: Retracing. Retrieving, Reviving, Refreshing and Rebuilding.

The available expertise must be employed to draw an action plan for these steps. Each section of it must have Nodal Officers at the various levels of execution so that all of it is executed with absolute smoothness. All the elements which will make students self-reliant don't always have to be fresh models. We also have to do an inside search to refresh what we already have and put it to popular use.

Any new policies in Education must take into account the interconnections in today's world. Given the economic challenges around the globe a lot of emphasis must be placed on imparting practical, applicable and job-oriented knowledge to the students. This was exactly how students studied in the earlier times. In fact they learned many life skills besides formal education. However, this does not mean that we should have only a past oriented, inward-looking narrow approach. We must get the best from everywhere and blend the best practices in such a way that we have a mix of ideas which suits our own set up the most.
Some of the challenges are as follows:

1. High drop-out rates.
2. Low employability of students after course completion.
3. Disadvantageous student-teacher ratio.
4. Maintenance of Gender and Ethnic parity.
5. Institutional density.
6. Development of soft skills together with technical ones.
7. Provision for multiple entry-exit points to encourage course completions.
8. Variety in the Choice Based Credit Programs for self-exploration by the students.
9. Embedding of internship programs for practical training and skill development.
   In this paper we propose to present some suggestions to make students more self-reliant and to make their learning more fulfilling by teaching them life skills beyond the books. Each student who enrolls for higher education is chasing a dream and as educators we must help him/her live that dream. Some of the possible steps are being explored in this paper.

Retracing: Knowledge is a free-flowing highway. The timeless flow of ideas, techniques and scholarship fill its byways. It is for the traveler to select a direction and traverse the lanes that it leads into. When we think of 'Education' we must remember that languages, digits, facts, figures and memory etc. are the precious tools which are required to dig the real and priceless treasure; which is Wisdom.

When a shambolic system of educating mixes up the tools with the treasure, it produces a lot of 'literate' persons but ignores the fact that literacy itself can be viewed from different perspectives. For example, there could be spiritual, moral, ethical and emotional literacy which is needed to make a person truly literate. Wisdom is made of a mixture of many fine qualities which sometimes don't find a place in a field filled with a stifling fixation on job-oriented or vocational education. Education must be much more than just an exclusive training to run the rat-race.

While self-conceited humans are quite proud of what they have achieved till date it is important to take a reality check from the past as well to evaluate the wholesomeness of our current method of teaching-learning.

Retracing: This would imply corelating the cause and effect of a certain way of imparting education in the past. Educators and learners have enormous potential to possess wisdom, but the latter is guarded by locks of challenges. The right key can be found by the right method of teaching-learning. It is undeniable that patterns of repetition are traceable in human history. Subjective templates like name, place and time might change but the structural construct of a situation may still remain unaltered. Thus, our knowledge of the most advantageous choices made in the past, might actually help us in picking up the best option for the future. The past tips off the present. It is for the present to find the clues. Time tested choices are passed into theory as morals, ethics, values and 'best practices' etc. No wonder it became axiomatic that good begets good! The fact that an individual teacher's teaching experience adds to his professional value, is a proof that experience in itself is a teacher. Thus, retracing the footsteps of stalwart imparters of wisdom might be a good beginning of structuring fresh plans.

Retrieving: In ancient Greek religion the muses were nine sister goddesses. Their mother was Mnemosyne; the goddess of memory. Memories are an elixir which keeps the possibility of retrieving alive. There are boundless stories of exemplary teachers and equally exemplar students in the annals of time. Most of these stories remain untold. However, some are not only told, but retold repeatedly. They survive like clues to guide a seeker. An effort to list and analyze these narratives may help in the creation of some basic structure of educative methodologies. For an example the dissemination of the idea of Humanism has a history of its own. Surprisingly it continues to be an important concern for present day educators to inculcate the qualities of humanity, humility and equity in their students. An inclusive approach in this direction could be to collect narrative on a single theme from various cultures and time frames and then present them to learners in such a way that the universality of the goodness of the ideas present in them is enforced in the minds of students. In the current times; when recruiters evaluate the emotional intelligence of a candidate together with his intelligence quotient an effort to endorse and inculcate good emotional values should not be given a back seat. For an example the Chishti Sufi Shaikh Nizamuddin Auliya who lived in present day New Delhi in the medieval times (13-14 century) is cited in a medieval text *Fawaid ul Fuad* as preaching that forgiveness and patience born of tolerance are some of the biggest virtues. Revenge on the other hand can be one of the most destructive emotions. The Shaikh often prayed that the path of the one who spreads thorns in his way may always be adorned with flowers. The Shaikh said that people can be categorized into three types: The first are the type who don't harm anyone but they don't help either-they are like stones-unmoving. The second type are those who don't harm anyone and also try to help others. However, they retaliate if someone tries to harm them. They are better than the first type, but it is the third type who are the best. They don't harm others, help others and easily forgive those who wrong them. In the modern context too, this teaching can be well implemented in any class-room or office. Some lessons from the past are indeed timeless. For an example in the ancient text the *Bhagvad Gita*, it is recorded that Shri Krishna (a deity of the Hinduism) while preaching Arjuna spoke about 3 types of men: The *Sattvik*, the *Rajas* and the *Tamas*. The first type are the noble men with a positive attitude towards everything and everyone. They also maintain a balance in eating, talking and sleeping. The second type are far too inclined towards

the worldly ambitions and are slightly imbalanced in this sense. The *Tamas*, have an aura of the darkness of ignorance around them. They eat and sleep a lot and are full of negative emotions. The famous Sufi Shaikh Sadi wrote in his Gulistan that one must keep the tendency to overeat and over sleep in check. In fact, he professed that the stomach must be kept a bit empty for the brain to absorb information. If we reevaluate the importance of restrain in eating, sleeping by the body's natural clock and calculate polite speaking we would find that they are as valuable today as they were in the past. Further their value is beyond books and beyond the professional it even seeps into the lived personal experience of humans. Imparting of such values is like bringing learning out of files to faces.

In the same way a lot of drop-outs are drop-outs because they don't get enough of help, guidance and encouragement. A lot of the SEDGs might typically fall in this category. It is important to teach humility and generosity to students. Often students don't ask for help even when they are in desperate need of it. Or else sometimes those who are in a position to help look down upon the seekers and do nothing like the 'stones' mentioned above. Shaikh Sadi very rightly writes that: Man is of the nature of Earth. If he is not humble, he is not a man! The SEDGs must be subtly identified and helped out without making them feel sad or bad about their situation. The Nobel Prize winning economist Abhijeet Banerjee has a theory about Poverty Trap. He argues that if someone gets trapped in the vicious cycle of Poverty help has to be extended without any hesitation or conditions to pull him out. The same is the case with intellectual poverty. Only that intellectual poverty might not be as easily visible as economic poverty is. However both the types of poverty have implications and they need to be addressed.

Reviving: Revival of lessons and teaching strategies from the best practices of the past which can address modern concerns would be a challenge indeed. Some of the goal catch lines could be as follows: 'From files to Faces' or 'Rise of the back-benchers', 'Training the trainers', 'Acceptance of the different', etc. In the ancient Indian culture students left their homes at least for some years to live with their teachers in educational set-ups known as 'gurukuls' (family/home of the teacher). Here they were taught many practical skills of life besides complex philosophies and mathematics etc. If we look at the Sufi Khanqahs (hospices) the situation was quite similar there too. The doors of the hospice were open for anyone and everyone. The norm of celebrating diversity amongst students and a multidisciplinary approach towards teaching was already in place. The possibility of walking into such institutions was not restricted by the limits of age or socio-economic station. Some of the busiest men of the past made time to learn from the masters. For an example, Akbar the great Mughal emperor used to spend long hours in the nights talking to learned scholars. These lessons were discontinued when he was on a military campaign but the classes were resumed as soon as he could find time. This is what the MEEP is for the common man. To be able grab the opportunity to learn whenever he can and to take a break when that is required. However, this break doesn't and shouldn't be a case of dropping out.

Refreshing & Rebuilding: Refreshing is about keeping the enthusiasm to learn alive amongst the students and the teachers. The possibility of studying online has opened many windows for learners. We need to ensure that online teaching is as interactive and alive as the offline one is. This might entail an extra effort on the part of teachers and students but that would be an effort worth making. Recruiters must be encouraged to treat degrees acquired via online classes at par with those acquired offline. ODLS, OCWS, OERS and MOOCs can be the life line for many

students who might have otherwise dropped out. TEIs will be required in very large numbers to train teachers to make the online classes lively and fruitful.

In the current scenario when Artificial Intelligence is posing a serious challenge to the old method of long hours of research; reading-understanding-selecting and then writing we need to underline the value of independent-individual ideas. Ideas and theories which are generated by individuals themselves and are not readymade pick-ups like fast food. The tentacles of Plagiarism are keeping pace with anti-plagiarism software. How wonderful would it be if the human brain on its own rejected the temptation of thieving ideas and words. Refreshing the ideals of academic and research ethics in the minds of both; the teachers and students is an important endeavor. Academic integrity is perhaps the most vital part of the process of teaching and also learning. In this context the focus on the ultimate goal of education must be emphasized. Surely education is noy just about earning more money or having a bigger car and house. It is about being a better human being and the rest of the things that we aspire for will eventually follow if we keep pursuing the path of hard-work and sincerity. Knowledge is a jewel that needs constant polishing to be bright. This implies upgrading and sharing what we know. To put it simply Higher Education should be about making human beings better than the best we currently know. Given that the boundaries of the world are far more permissive now, than ever before the teaching of Humanism must be the global agenda of educators worldwide. The keys to world peace lie within the campuses of the institutions of higher education. They need to be found and duplicated and distributed to each and everyone. Whatever it takes needs to be done.

Brief Biography of Authors

Prof. Farhat Nasreen is a Full Professor and Head of the Department, department of History & Culture, Jamia Millia Islamia, New Delhi, India. She has a teaching experience of over twenty-five years. She has published seven books and twenty-three research articles and reviews from prestigious publication houses like Sage, Bloomsbury, Primus and Rupa Publications etc. Her book: '*If History has Taught us Anything*' has been converted into an audio book as well. She has made presentations in fifty-eight international and national conferences and seminars. As someone who uses her knowledge of History with a multidisciplinary approach she participates in talks and shows on large mass-media platforms, like the radio and television etc. She has delivered hundred and twenty talks till date. She is a well-known expert for Faculty Training programs. She also delivers talk in programs sponsored by the Government of India to train its officers. She has chaired academic sessions in more than fifteen seminars and conferences and organized more than eighteen major academic events.

Dr. Yusuf Rana Kamal is a Full Medical Doctor by profession. Educated in Modern School Barakhamba Road, New Delhi; one of the most prestigious schools in the country, she went on to do her MBBS from the Hamdard Institute of Medical Sciences, New Delhi. Her academic performance has been exemplary right through. Presently she is serving as a Junior Resident Doctor; doing MD from the Safdarjung Government Hospital-Vardhaman Mahavir Medical College, New Delhi, India. She has presented papers of multidisciplinary nature in three national and international conferences. Her last presentation was on the account of Tuberculosis in the ancient text: *Charak Samhita*. She has also presented a paper on the exchange between Arab-

Indian cultures in medieval times. Her article on the Bauls of India and Bangladesh has been published in Diplomacy and Beyond Plus.

Are Countries on Track to Achieve University Education Transformation Agenda 2030? Evidence From a Global Standpoint

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Abstract

The purpose of this paper was to determine whether countries are on track to achieve university education transformation by 2030. This was motivated by the fact that we are only 7-years shy of the target year (2030) and thus, there is need to assess the progress made by various regions across the globe. The paper was guided by three objectives which are: (i) to establish global trends in gross enrolment in higher education, (ii) to establish global trends in inequality in higher education, and (iii) to analyse global trends in education inclusivity in higher education. The study design was a desktop review, which included reviewing empirical literature as well as existing global data sources such as the World Bank, UNESCO, and SDG tracker data bases. According to the findings, Sub-Saharan (low-income) countries lag behind OECD and high-income countries in terms of achievement of SDG 4 and 5, Gross Enrolment Rates (GER), gender parity, and inclusivity in university education. To address existing inequalities in university education, the study recommends the establishment of open universities, open and distance learning, massive open online courses, provision pro-poor funding mechanisms to university education, provision of extra support to students classified as "at-risk" individuals, in terms of academic needs and socioeconomic needs, and other initiatives.

***Keywords*:** Inequality, inclusivity, transformation, university education

1. Introduction

It is a well-known fact that a university education generally translates to a higher income and greater economic stability over the course of one's life. However, historically, higher education has been a privilege reserved primarily for the wealthy. Even today, students from higher-income families are more likely than those from lower-income families to attend a four-year university course. Students in the lowest socioeconomic quartile are eight times less likely than those in the top quartile to obtain a bachelor's degree. Even low-income students who excelled in high school and performed well on standardized tests are less likely to graduate from college than their peers from higher-income families. This is because students from lower socioeconomic backgrounds face significant barriers to paying for higher education, remaining in school, and graduating.

These disparities prompted the creation of Sustainable Development Goals target 4.3: which states that by 2030, all women and men will have equal access to affordable and high-quality

technical, vocational, and tertiary education, including university. This entails "*leaving no one behind*", ensuring equal opportunities for all, and serving particularly population groups affected by structural inequalities and often intersectional forms of discrimination on 'prohibited grounds' (UN, 1966). International human rights law recognizes the right to higher education. The 1948 Universal Declaration of Human Rights (UDHR) states that 'higher education shall be equally accessible to all on the basis of merit'. Merit must be considered in context, recognizing students' 'potential to succeed' in any situation. As a result, specific measures preventing discrimination and exclusion are required to ensure a fair distribution of opportunities leading to social justice.

Due to inequities in global higher education during the COVID-19 outbreak, Goal 4 of the UN's SDGs, ensuring inclusive and equitable quality education, may be impractical (Hadjeris, 2021, Faura-Martnez et al., 2022; Trotter et al., 2022). Furthermore, during the COVID-19 outbreak, higher education institutions faced challenges in maintaining curriculum delivery, ensuring quality education (Almazova et al., 2020 and Wang et al., 2022), and developing pedagogies to increase students' sustainability consciousness (Nousheen and Kalsoom, 2022). Crawford and Cifuentes-Faura (2022) also concluded that additional research into the impact of the COVID-19 pandemic on the sustainability of curriculum, teaching and learning processes, and business models in the higher education sector is required.

Gender equality is a mission that is present across all 17 Sustainable Development Goals of the United Nations, but it is explicitly addressed in SDG 5 - "achieving gender equality and empowering all women and girls." To achieve this goal, work and commitment will be required across many policy areas and sectors, but one critical component will be empowering women in and through education, including higher education. Over the last two decades, and especially since the SDGs were published in 2015, governments around the world have significantly increased their efforts to achieve gender equality (SDG 5), which is regarded as a prerequisite for inclusive, robust, and sustainable economies and societies. Governments have developed a wide range of policies that have helped women and societies progress, from eliminating gender-based violence to allocating a specific budget to gender issues or ensuring equal representation of women in politics. Recognizing the pandemic's impact on women, some countries are considering gender-inclusive policies as part of their Covid recovery strategies.

Previous research provides useful insights into some of the international, regional, and national policies and interventions in place to improve gender equality in and through higher education in different contexts. According to the Global Education Monitoring Report, nearly half of all countries have policies and legislation in place to protect women and girls from discrimination, with education ministries supporting roughly half of such initiatives. Furthermore, 105 countries have ratified the 1960 UNESCO Convention Against Discrimination in Education.

While supportive government policies have helped to reverse gender disparities in enrolment, progress in increasing female representation in academics, and especially in decision-making, has been slow. Gender equality and diversity are widely recognized to benefit organizations, institutions, and the economy as a whole. The presence of female leaders influences the amount of emphasis placed on gender equality in policy and practice. Documenting government interventions aimed at increasing female representation in key decision-making positions throughout the economy, particularly in higher education, is therefore critical. This draws

attention to effective and viable good practices while also promoting evidence-based policymaking.

According to a London School of Economics study, doubling the number of universities in a region leads to a 4% increase in GDP per capita (Valero & Reenen, 2016). According to Maslen (2012), global tertiary enrolment is expected to reach 262 million by 2025 and 522 million by 2035. In practice, this means that four new universities with a total capacity of 30,000 will be required every week to accommodate the children who will reach enrolment age between now and 2025. Correspondence courses broadened access to newer constituencies. In 1946, South Africa established the world's first distance teaching university thus, creating an open university

The extent of gender equality within higher education institutions is heavily influenced by general government policies. Some countries, for example, have long had policies that support and promote women in all aspects of society and the economy (for example, the Nordic countries). Other countries, such as Spain, have recently launched ambitious national gender equality strategies, with 141 actionable objectives to empower women through the principles of good governance, economic justice and equitable resource distribution, freedom and nonviolence, and human rights protection. On a global scale, the European Commission encourages and funds the development of gender equality policies in both member and non-member countries. This is accomplished, for example, through the development of equal treatment legislation, the promotion of the incorporation of a gender perspective into all policies, or the design of specific measures of women's progress.

In recent decades, inclusive education has emerged as a central concept in the debate over educational theory. Indeed, various educational systems have considered or implemented policy reforms and changes to encourage the inclusion of diverse and underserved students. Inclusion in education, on the other hand, is not a new concept, having been the subject of international debate as a driver of educational policy progress since the Salamanca Declaration of UNESCO in 1994. Inclusion in education differs from integration in education practices in that it aims to overcome exclusionary or segregator features of educational systems.

Inclusivity in education is defined specifically as a process that assists in overcoming barriers to the presence, participation, and achievement of all learners, regardless of their personal characteristics (UNESCO, 2009). It is about changing the system to fit the student, not the other way round, because inclusive education, in particular, has been shown to benefit all students by improving the quality of education provided. It becomes more child-centred and focused on improving learning outcomes for all students, including those with a wide range of abilities (UNESCO, 2009). Inclusive education can also promote students' socio-emotional development, self-esteem, and peer acceptance, while also assisting in the fight against stigma, stereotyping, discrimination, and alienation in schools and society as a whole (UNESCO, 2020). Another common justification for inclusive education is economic: poverty reduction through improved education for disadvantaged students (UNICEF, 2014)

Indeed, diverse groups of students frequently face challenges in mainstream education systems that limit their achievement and potential, and they frequently report lower levels of social and emotional well-being in relation to their school experience (Brussino, 2020), Rutigliano, 2020),

Mezzanotte, 2020). Gender, geographical location, socioeconomic status, disability, ethnicity, language, migration, displacement, incarceration, sexual orientation, gender identity and expression, religion, and other beliefs and attitudes are all grounds for discrimination (UNESCO, 2020). Discrimination against these groups in education has societal as well as individual consequences. However, there are costs associated with inclusive education reforms in terms of personnel and resources. Due to a lack of evidence on the effectiveness of these interventions, the efficiency of these investments is frequently debated.

The preceding discussion indicates that efforts have been made to increase access to higher education and address disparities in education at that level. One of the interventions is Education Transformation 2030, which aims to make higher education available to all on the basis of merit. As a result, the purpose of this paper is to determine whether countries are on track to achieve education transformation by 2030, as guided by the following objectives.

1.2 Objectives

This paper was guided by the following objectives.

i To establish the global trends of gross enrolment in Higher education
ii To establish the global trends of inequality at higher education
iii Analyse the global trend of education inclusivity at higher education.

2. Methodology

In this paper, the desktop review research design was used, which entails conducting a review of existing literature and data on a specific topic. It's a well-known design in the social sciences, education, and health care. It is well-designed for effective information gathering, new idea generation, and knowledge gap identification. We looked at university education policies, peer-reviewed papers, and an administrative report in this case. The report addresses the dimensions of higher education participation, equity, and inclusion that are critical for meeting SDG target 4.3 and includes some internationally comparable quantitative data.

3. Results

Regarding the progress of achieving SGD 4 on education and 5 on gender equality, the results are as presented in Figure 1.

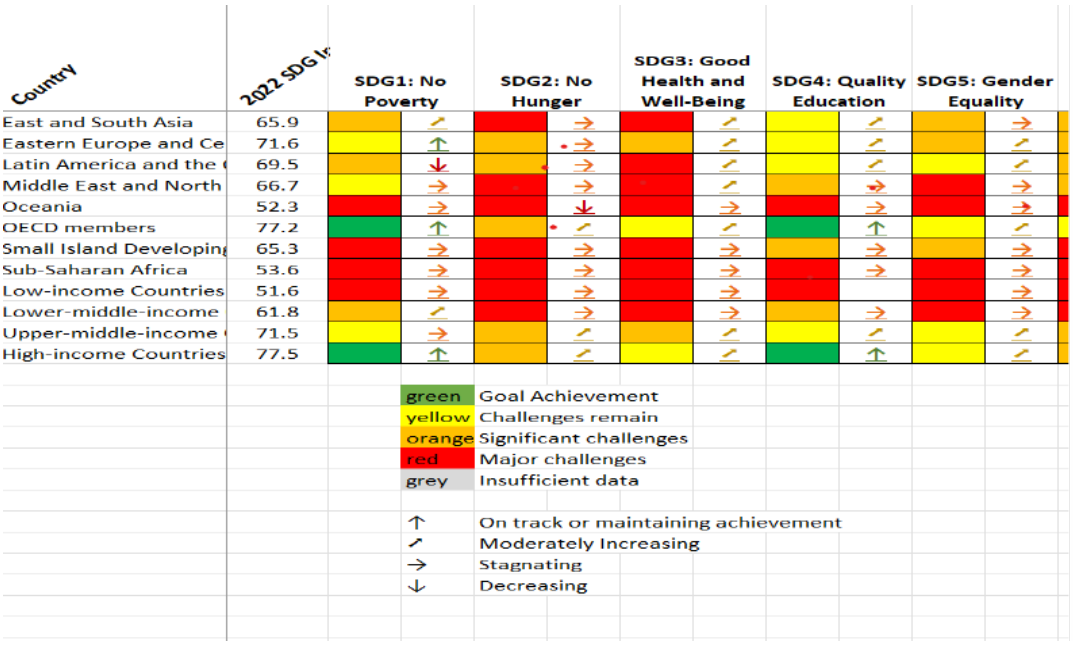


Figure 1 global status of achieving SGDs
Source: global SDG tracker 2022

According to the findings, only high-income OECD members have achieved SDG 4, while Eastern and southern Asia, Eastern Europe, Latin America, and upper middle-income countries are moderately increasing the process of achieving goal 4. However, progress towards SDG4 is stagnating in low-income countries. Other SDGs, such as 1 and 5, related to education, have remained stagnant in comparison to other upper and high-income countries.

One of the objectives of the study is to establish the trends of enrolment in higher education. The results are presented in Figure 2.

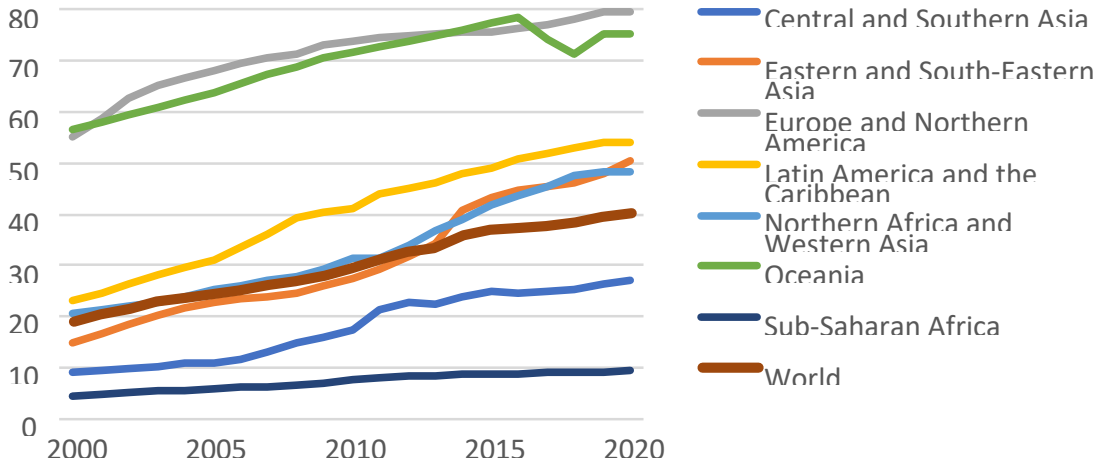


Figure 2 Gross enrolment rates in higher education, by region,
Source: UNESCO Institute for Statistics database

In terms of enrolment, Figure 2 shows that over 235 million students were enrolled in higher education worldwide in 2020, more than doubling the 100 million students enrolled in 2000 (UIS database). In 2020, the global gross enrolment ratio was 40%, but only 9% in Sub-Saharan Africa (UIS database). Between 2000 and 2018, the global higher education (HE) gross enrolment rate nearly doubled, rising from 19% to 38%. In the five-year age group immediately following secondary school graduation, the number of students currently enrolled in tertiary education (university and non-university) is 38% of the total population.

This global increase has wide regional disparities, despite the fact that every region's average number has increased. South-East Asia, Latin America and the Caribbean have seen significant increases, with the three gaining around 30 points in their gross enrolment rate. North Africa and West Asia improved by 25 points, followed by Europe and North America (22 points), Central and South Asia and, the Pacific region (17 points each). South-East Asia multiplied its rate by three during the period, followed closely by Central and South Asia, which increased by 189%. Sub-Saharan Africa, on the other hand, has seen the slowest increase in participation rates, with only a 5-point increase. However, if we consider each region's starting point in the year 2000, we can see that Sub-Saharan Africa has had a significant relative increase, achieving a 125% increase over the period.

The other objective was to establish gender parity trends in higher education. This is as presented in Figure 3.

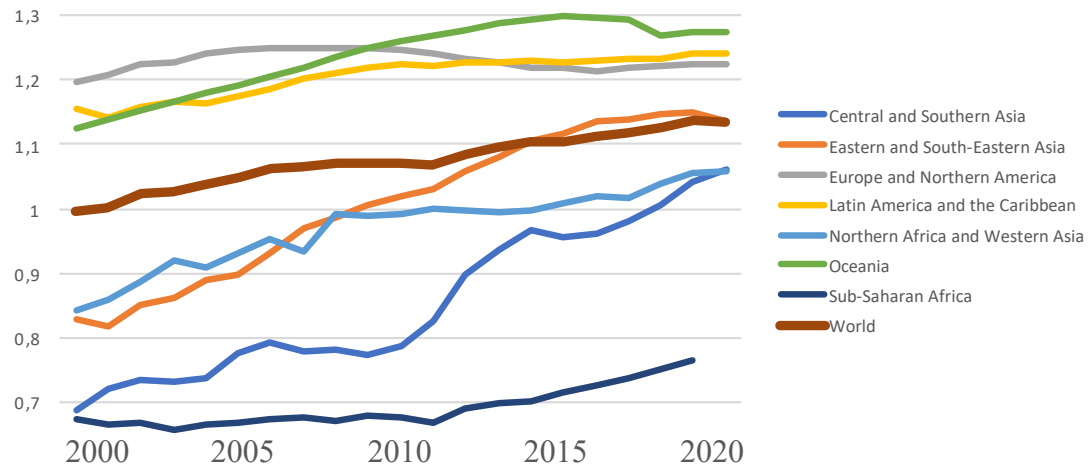


Figure 3: Gender parity index in tertiary education, by region, 2000-2020
Source: UNESCO Institute for Statistics database

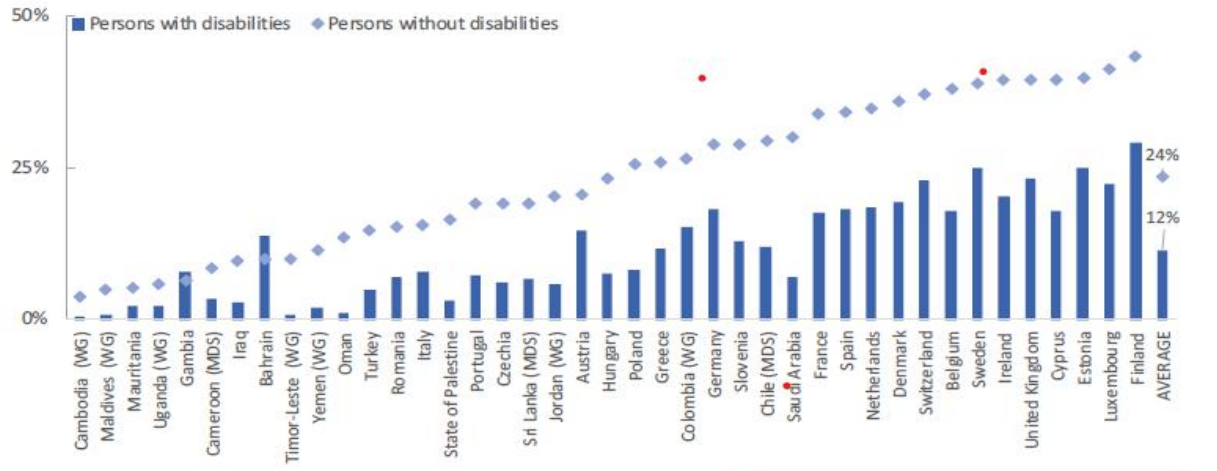
From 2000 to 2018, men's enrolment increased from 19% to 36%, while women's enrolment increased from 19% to 41%, making them the primary beneficiaries of increased access to tertiary education worldwide. This has served to fully or partially compensate for a previously unbalanced ratio against women in some countries. This was the case, for example, in Tajikistan, Cambodia, Lao, The Republic of Korea, Switzerland, Morocco, Bangladesh, India, Nepal, and most Sub-Saharan African countries, with notable exceptions in Mozambique (with a gender

parity index [1] ranging from 0.34 to 0.8), Mauritania (from 0.2 to 0.6), U.R. Tanzania (0.27 to 0.65), Niger (0.32 to 0.63). Mali (0.47 to 0.42) is the only country studied with a ratio less than 0.8 that has remained stable over the entire period (UNESCO 2022).

Except for Sub-Saharan Africa, all regions saw women either become the majority of their Higher Education students or increase their share if they were already a majority. Despite this, only a few countries have achieved gender parity, with the majority of them having one gender overrepresented. Despite the overall positive picture of an increase in enrolment levels around the world, not all segments of society can benefit equally from higher education. There are still significant access disparities, particularly among income groups. The poorest population continues to lag behind, with only 10% having access to higher education in 2018, compared to 77% in the higher income sector.

Regarding inclusivity, which is one of the objectives of the study, the results are presented in Figure 4

Percentage of persons 25 years and older who completed tertiary education, by disability status, in 41 countries, around 2012



Source: Disability and development report 2018 (UN DESA, 2019)

Note: (WG) identifies countries with data produced using the Washington Group Short Set of Questions; (MDS) identifies countries with data produced using the Model Disability Survey. Data from Cameroon were collected in selected regions of the country and are not nationally representative.

The potential to succeed in education of persons with disabilities is hindered by physical accessibility, limitations in teacher training and learning materials, financial restrictions, and prejudice and discrimination against persons with disabilities (UN DESA 2019, ECLAC, 2018)

Figure 4 percentage of 25 years completing university education by disability status.

In accordance with UNESCO (2023), millions of people worldwide continue to be excluded from education due to factors such as gender, gender orientation, ethnic or social origin, language, religion, nationality, economic condition, or ability. Inclusive education seeks to

identify and remove all barriers to education, and it encompasses everything from curricula to pedagogy and teaching. The UNESCO Convention against Discrimination in Education (1960), as well as Sustainable Development Goal 4 and the Education 2030 Framework for Action, all emphasize inclusion and equity as the foundation for quality education.

Figure 4 shows that low-income countries such as Cambodia, Mauritania, Uganda, Timor-Leste, and others have low enrolment for learners with disabilities at the university level, whereas other countries such as Finland, Estonia, the United Kingdom, Sweden, and Denmark have high enrolment. Learners with disabilities enroll in large numbers in Germany and France, among other countries. This implies that Sub-Saharan African countries lag behind in terms of learners with disabilities.

Summary

The findings show that many people around the world continue to face systemic barriers to accessing and completing higher education because of their race, ethnicity, gender, socioeconomic status, and other factors. This leads to low gross enrolment, gender parity, and inclusivity, particularly in low-income countries. This is despite efforts such as the creation of Sustainable Development Goals target 4.3 which states that by 2030, all women and men will have equal access to affordable and high-quality technical, vocational, and tertiary education, including university. The 1948 Universal Declaration of Human Rights (UDHR) states that 'higher education shall be equally accessible to all on the basis of merit and other interventions such as affirmative action, loan systems and admission criteria that favour women.

Recommendations

This study recommends the following:

- Launching Open Universities to serve as a big boost to university enrolment, for example, there are over 30 Open Universities in the Commonwealth, 17 of which are in India. Each year they graduate over 4 million students.
- Offer well-structured Open and Distance e-Learning (ODeL) in traditional universities to increase enrolment.
- Leverage on Massive Open Online Courses (MOOC), which are flexible in nature.
- Provide extra support to students classified as “at-risk” individuals, in terms of academic and socioeconomic needs to enable them access Higher Education and increase retention.
- Provide pro-poor funding mechanisms to university education.
- Develop a comprehensive data management system on learners at all levels of education for easier identification of poor learners, progression and retention of learning.

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Cloud Learning Applications as a Tool to Enhance Universities Innovative Performance

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Abstract

Cloud learning applications are the most suitable technology that assist universities in a dynamic environment to gain a strategic advantage. It can bring new areas closer to real-life problems and study. Also, It gives us the opportunity to learn from anywhere and anytime. cloud technology is convenient to maintain students' attention and save time on tasks related to using technology to support education.

Innovative performance is described as the capacity to generate new services, processes, management practices, and strategies. The ability to generate innovation inside a university is referred to innovative performance. To maintain a sustainable competitive advantage, innovation is essential. As a result, the key is in how the university will enhance innovative performance. Innovative performance has been identified as an important issue in an universities, little research has focused on Innovative performance. Drawing on resource-based view theory, this paper investigated the relationship between cloud learning applications and Innovative performance in the Jordanian universities.

The Descriptive analytical approach has been used to test the effect of cloud learning applications on innovative performance. The questionnaire was used to collect data, which was built based on previous studies. Moreover, PLS-4 was used to test the hypotheses of the study with covariance-based structural equation modeling (CB-SEM). This method enables the measurement and structural model to be concurrently tested and measurement errors to be removed. Structural equation modeling (SEM) operates on fixed latent scores and aims to maximize the prediction of endogenous components rather than the model fit. Building on the proposed theory, the study concludes that cloud learning applications can facilitate and enhance flexibility in universities. These agility techniques can be used to improve operations and enable them to improve decision-making, facilitate communication, introduce electronic integration and provide digital options. Also, the adoption of cloud computing in e-learning can produce an enhanced learning process that shares the characteristics of the cloud in scalability, flexibility, accessibility and sharing. On the other hand, there is a strong relationship between cloud learning applications and Innovative performance. Implications and recommendations have been discussed.

***Keywords*:** Cloud learning applications, universities' innovative performance, Jordanian universities

1. Introduction

The development of the Internet, online teaching is used as a new form of teaching, on a large scale and forms of education at all levels, such as schools and universities (Cabrilo & Dahms, 2018). Building an online educational resource system, introducing high-quality digital educational resources, and developing online educational courses. Through the online education platform, it will contribute significantly to developing education and overcoming many of the obstacles that face the education (Al Aqasrawi & Alafi, 2022).

Cloud computing is being used by firms to adjust to multiple economic factors which involve application growth, rapid processing (Ahmad & Hossain, 2018). dynamic access and cost savings, which lead organizations to grow into an enormous capability without needing to invest in new infrastructure or hire new employees (Aydiner et al., 2019). and therefore, it is considered as one of the most convenient technologies, providing a common set of IT resources ranging from hardware, applications and storage networks (Cabrera & Cabrera, 2002). which are accessible by organizations on demand (Azevedo, 2011). More significantly, as needed in organization, it offers the recent cloud-based online applications which are accessed by real-time agents, supervisors and executives, embedded with existing enterprise system such as enterprise resource planning (Barakat et al, 2013), in order to enhance value and access to strategic advantage in the competitive environment (Azoff, 2004).

Cloud learning applications came as a direct result of the integration of technology and education, and as a powerful tool of learning, especially by using modern technologies such as cloud computing. with the increasing developments in technology, improvements were made in all areas, such as business, health and education (Cao & Zhang, 2011). As a result, education grew rapidly and became dependent on e-learning, especially with the advent of cloud computing, as a powerful tool of learning, especially in higher education institutions (Calvo-Mora, 2016). because of its ease of use, and effectiveness in providing useful feedback to learners and high performance (Chen & Kuo, 2017). as the introduction of cloud technology is convenient to maintain students' attention and save time on tasks related to using technologies to support education (Chen et al., 2008).

Students' satisfaction is defined as the general attitude that is reflected by the users as a result of the experience accumulated through the use of the behavior of modern systems, and the extent to which users perceive the match between their requirements and the activities of the organization, it is an important indicator to clarify whether the information system is working efficiently. From studies that the size of user satisfaction is related to the amount of user experience with the system (Chen & Siau, 2020), and one of the most important combinations for evaluating the success of information technology and a critical determinant of the success of the information system (Cheng et al., 2020).

There are many obstacles that organizations face when implementing innovative performance, most notably lack of cooperation and lack of time, lack of sufficient resources and capabilities for implementation, failure to respond to change by not allowing diverse and innovative ideas when applied. Hence the role of cloud learning applications and user satisfaction in solving some or all these obstacles. When using cloud learning applications, the organization overcomes the

obstacles by not being able to allocate sufficient time and resources and increases its ability to respond quickly to change to achieve innovation (Conţu, 2020). When using user satisfaction, the organization goes beyond the problem of lack of cooperation and improve in finding innovative ideas for the advancement of the organization (Daradkeh et al., 2023). As a result of all this, universities need system that increase innovation in order to develop and monitor personal and individuals skills through brainstorming teams, to increase the quality of decisions made, to improve the quality of products, to help create and enhance the competitiveness.

2. Literature Review

Cloud computing is a recent technology that enables on-demand access to hardware and software resources while requiring minimal administration work. It allows users to gain access to computing capacity that they would not otherwise have owing to financial or organizational limitations (Conţu, 2020). It is widely believed that cloud computing has the potential to revolutionize a significant sector of the IT industry (Daradkeh et al., 2023).

Cloud operations offer means of capitalizing on cloud scalability (Deng et al., 2021). speed and easy management, through the rental of computing resources, and the avoidance of expensive hardware expenses (Ghasemaghaei, 2019). It is a technology by which internet data and information will be spread as an online service so that the data and applications are not required on the user's device or even on the local servers of the company (Eidizadeh et al., 2017). Data and applications are instead available on the machines of the cloud vendor's servers cloud and supplied if needed (Hayan, 2021). Also, every employee can have access to the company's data through any mobile device linked to the Internet (Hanandeh et al., 2021). Due to the advantages this model offers, we can say that, cloud computing has recently received considerable attention in the industrial community (Khin & Ho, 2018). Access cloud computing resources anytime, anywhere, and this trend continues to be a major trend in information technology, making readers' attention high around the cloud (Keshtegar et al., 2021).It is now the chance to further improve productivity as a major aspect of ICT and help us transform the world into a more sustainable and resource-efficient future (Kavosi et al., 2021). Therefore, it is an IT-deployment system centered on virtualization in aspects distribution of resources, infrastructure, applications and data over the Internet as a service distributed by one or more service providers (Kulkarni et al., 2017). These services can be scaled up on request and priced on a pay-per-use basis (Mbima & Tetteh, 2023).

Through the application of cloud computing in educational institutions, resources can be provided on demand in a flexible and cost-effective manner. Likewise, we can deal with the problem of storage, computing, processing and access to high-demand resources for mobile learning with the application of cloud computing (Kumi et al., 2021). Through the capabilities of distributing computing and storage resources as services, cloud computing has become a desirable technology in teaching and learning in educational institutions, as the adoption of cloud computing in e-learning can produce an enhanced learning process that shares the characteristics of the cloud in scalability, flexibility, accessibility, and sharing (Moyo & Loock, 2021), Cloud computing leads to the convergence of two major IT trends: IT efficiency and business agility for organizations (Olan et al., 2021).

User satisfaction concept of information retrieval system and evaluation, which cannot be ignored in any experience (Panahi et al., 2016). According to this concept, different interaction with the system are taken in users account and self-evaluation, and it is also an indicator of satisfaction with it. Ease of use and personal satisfaction are the most prominent standards of user satisfaction. Satisfaction is one of the most widely used systems of evaluating information system and determining its outcome, because it is closely linked with system effectiveness. Several study findings posit that user satisfaction has a significant influence on system effectiveness, and user's expectations (Al-hazaimeh et al., 2014)

To maintain a sustainable competitive advantage in the market, innovation is essential (Ping et al., 2018). As a result, the key is in how the organization will enhance its innovative performance. The performance of innovation and the factors that impact it in manufacturing firms are critical issues in the study of economics production (Park et al., 2017). Innovative capability is a unique business capability that allows a company to respond to newer ways of doing things and provide new goods / services responded to changes in the market environment (Salimi et al., 2016). Building and upgrading innovation systems, as well as establishing organizational capacities for innovation processes and enhancing inventive performance, are essential to long-term economic growth (Roldán Salgueiro et al., 2015). Technical innovation efforts and knowledge application inside a company are both considered when evaluating innovative performance. This concept has two interpretations. First, innovative performance is the understanding of technology, innovation, and invention. Second refers to the concept of innovative performance processing (Chen et al., 2008). Tallon et al., (2019), describe innovative performance as an organization's success because of innovations like new goods, services, and technology. The inside and outside relationships are essential components of new information, creative thoughts, and visions, may therefore speed up innovative performance (Wang & Noe, 2010). External relationships are becoming increasingly important in the evolving aspect of open innovation (Sangari & Razmi, 2015).

Organizations uses their outside relationships to share risks associated with new goods and to accelerate the innovation process by gaining integrations knowledge and access to new technology and local market that they would not otherwise have (Yan et al., 2023). However, internal businesses relationships and knowledge inside organizational boundaries continue to be critical for organizational innovative performance (Chen et al., 2008). Internal networks harness knowledge and thoughts inside a decentralized firm, assist in spreading innovation skills throughout the company, create innovation leaders within groups, and promote the entire range of innovation activities. Many universities have recognized the value of innovation and have begun to increase investment in R&D to improve innovation. Moreover, the participation of other groups that provide firms with diverse resources is an important method for optimizing innovative performance. Based on this researcher assume that:

H1: There is a positive relationship between cloud learning applications and innovative performance.
H2: There is a positive relationship between cloud learning applications and user satisfaction.
H3: There is a positive relationship between user satisfaction and innovative performance.
H4: Does user satisfaction mediate the relationship between cloud learning applications and innovative performance.

3. Methodology

This study aims to find the relationship between the independent variable represented by cloud learning applications and the dependent variable represented by innovative performance and to find the effect of user satisfaction on the relationship between them. In order to achieve the objectives of the study, the researcher used the descriptive analytical approach, which is considered one of the best approaches that studies human phenomena. The necessary data was collected through questionnaires that were prepared for this purpose, then the data was unloaded, and the results were analyzed using SmartPLS software.

Based on the study's problem and objectives, the population consists of all individuals working in Jordanian universities in the Management, faculties, Human Resources, Accounting, Research, departments, 323 individuals were be chosen at random according to Stephen Thompson's equation.

4. Data analysis and results

4.1 Demographics information of the respondents

The present study comprises 89.6% male employees and 10.4% female employees. 11.0% of the participants were less than 30 years old, 37.8% were between 31-45 years old, and 51.2% were over 46 years of age. As for job type, 25.8% of participants were managers, 18.7% were heads of an academic department, 20.4% were deputies/manager's assistants, 12.5% were heads of departments, 9.9% were deans, and 12.6% were deputies/assistants of deans. Finally, 15.9% of the participants have worked in their present university for less than 5 years, 25.2% for 5-10 years and 58.9% for more than 10 years.

4.1.1 Relationship map

Showing the connection and influencing of specified variable has a multiple links with both categories as shown in Figure 1.

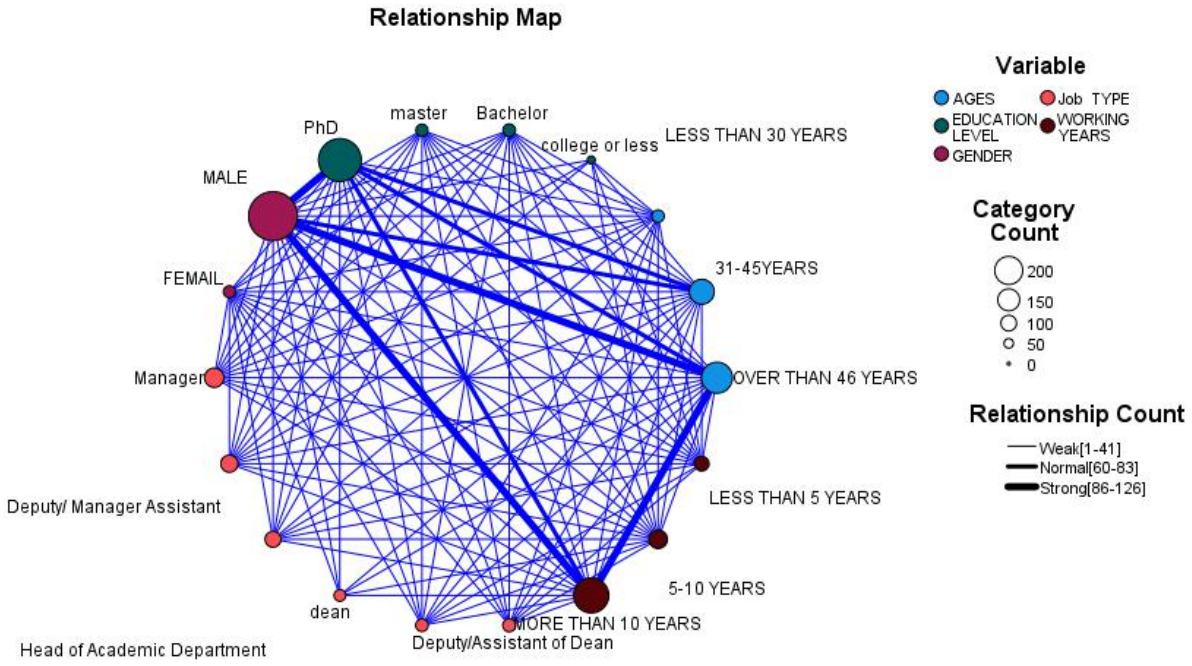

Fig. 1: Relationship Map for demographics information

4.2 Assessment of the measurement model

To check and estimate the interactive relation between the model variables we used a causal-predictive structural equation modeling (SEM) method with PLS 4 software. Covariance-based SEM (CB-SEM) is based on the indeterminacy of item scores. (Rigdon et al., 2017). PLS-SEM, on the other hand, operates on fixed latent scores and aims to maximize the prediction of endogenous components rather than the model fit (Hair et al., 2019). PLS-SEM can deal with very difficult and complex structural models as second-order models, small sample sizes, and isn't strict on data normality. Figure 2 shows the loadings items of different scales and f^2 in the model and shows the significance R^2 of each variable within the inner model. Figure 3 shows the significance level of each of the scale items in the outer model and the significance level of the relationships between the variables within the inner model.

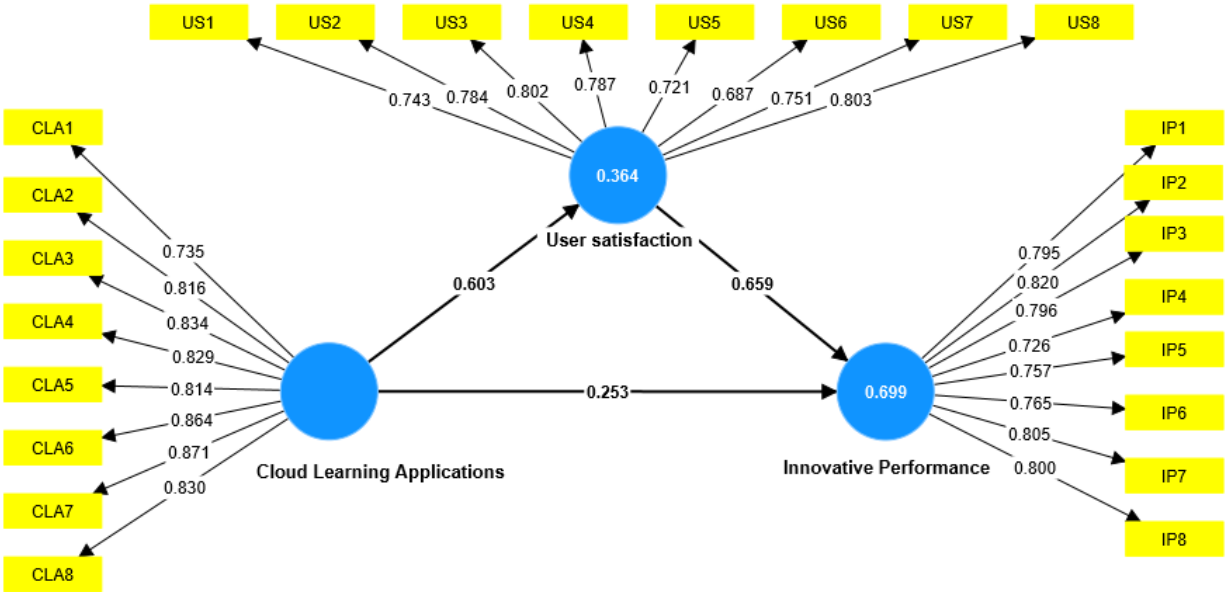

Figure 2 Measurement model

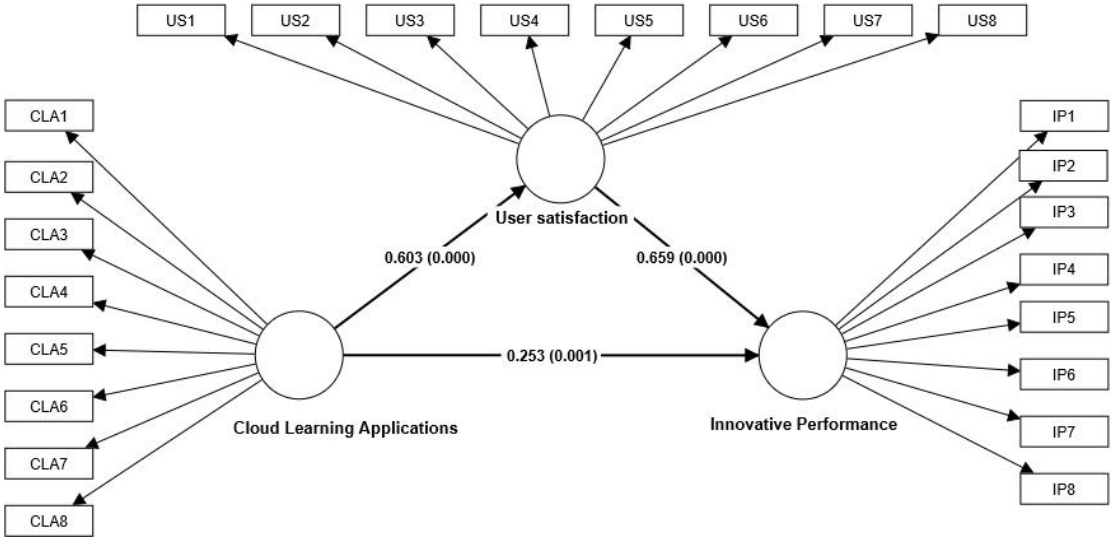

Figure 3 significance level

Table 1 Mean & Stander division (SD)

Measures	**Mean**	**SD**
Cloud Learning Applications	4.14	.470
Innovative Performance	4.11	.502
User satisfaction	4.04	.515

The outer model loadings presented in Figure 2 were mostly above the 0.7 threshold and their respective B-values were vital in Figure 3. together with the Cronbach's alpha (α) >.70, composite reliability (CR) >.70, and average variance extracted (AVE) >.50 values presented in Table 2. furthermore, Table 3 shows that Fornell–Larcker criterion was satisfied as the square of each variable's AVE is greater than the inter-correlations.

Table 2 Reliability & convergent validity

Instruments	α	CR	rho	AVE	R^2
Cloud Learning Applications	0.933	0.936	0.945	0.681	-
Innovative Performance	0.910	0.914	0.926	0.584	**0.679**
User satisfaction	0.896	0.899	0.916	0.579	**0.364**

Table 3 divergent validity based on the Fornell–Larcker approach

Measures	1	2	3
Cloud Learning Applications			
Innovative Performance	0.704		
User satisfaction	0.655	0.890	

The preceding sections established models' reliability and validity. The coefficient of estimation for the structural model are reported in Table 4. The observed direct impact of cloud learning applications on innovative Performance is positive and significant (β = .259, ρ = .001), the direct effect of cloud learning applications on user satisfaction positive and significant (β = .6 04, ρ = .023), also the direct effect of user satisfaction on innovative Performance positive and significant (β = -0.653, ρ = .000. The mediating impact of user satisfaction on the association between cloud learning applications and innovative Performance was a significant (β = .349, ρ = .000). See Table 4.Moreover. The variance explained by the model R^2 is .679 translated as 67.9% for innovative Performance in Table2. Falk and Miller (1992) set a benchmark for R^2 values and argued that the lowest recommended level should be 0.10. The R^2 in our study showed a large effect.

Table 4 Direct effects

Relationships	β	M	SD	T	ρ
Cloud Learning Applications -> Innovative Performance	0.259	0.262	0.075	3.470	0.001
Cloud Learning Applications -> User satisfaction	0.604	0.612	0.050	12.089	0.000
User satisfaction -> Innovative Performance	0.653	0.649	0.069	9.485	0.000
Cloud Learning Applications -> User satisfaction -> Innovative Performance	0.394	0.396	0.045	8.672	0.000

Note: β, beta value; ρ, ρ-value; T, T-value

Conclusion

cloud learning applications can facilitate and enhance flexibility in universities. These agility techniques can be used to improve operations and enable it to improve decision-making, facilitating communication, introducing electronic integration and provide digital options. Also, adoption of cloud computing in e-learning can produce an enhanced learning process that shares the characteristics of the cloud in scalability, flexibility, accessibility and sharing. On the other hand, there is a strong relationship between cloud learning applications and Universities innovative performance. The study results revealed the following: There was a significant impact of cloud learning applications on universities innovative performance. Another significant effect was observed regarding the impact of cloud learning applications on user satisfaction. In terms of user satisfaction, there was a significant effect of user satisfaction on Universities innovative performance. Another significant effect was proven related to user satisfaction on the association between cloud learning applications and universities innovative performance. In light of the study results, the researcher recommend beneficial for universities working in the same field to employ the use cloud learning in all departments with their applications. The presidents of communication companies are also recommended to carry out training courses to enhance teachers performances. In addition, it is also important that the presidents at universities should perform all transactions in the basis of exactness and in a speedy process to ensure success of cloud learning applications.

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Brief Biography of Author

Prof. Dr. Mohammed Taleb Obaidat is the President of Jadara University in Jordan since Sept. 2019 and former minister of Public Works and Housing in Jordan (Dec. 2009 - Feb. 2011). He is a professor of Civil Engineering at Jordan University of Science and Technology (J.U.S.T.), Jordan, since 1993, where he is teaching courses in geomatics, photogrammetry, surveying, GIS, remote sensing, transportation engineering, and computer vision. He received a B.Sc. in Civil Engineering with honors from Yarmouk University, Jordan in 1983. He received his first M.Sc. with honors in Transportation Engineering from J.U.S.T. in 1988. He joined the University of Illinois at Urbana-Champaign, U.S.A., in 1990 where he received both M.Sc. and Ph.D. with honors in geomatics, transportation and computer vision in 1994. He was awarded the Leica Inc. Fellowship from the American Society for Photogrammetry and Remote Sensing in 1992; the Medal of Research and Academic Achievement from his majesty late King Husein Ben Talal of Jordan, 1997; and the Scientific Foundation of Hisham Hijjawi for applied science award, 1998. His research interests include computer vision, GIS, transportation engineering, geomatics, and new technologies applicable to Civil engineering.

Prof. Obaidat published about 99 scientific articles; and he published eight books in the areas of engineering, IT, politics, youth, social, education, and economy. He was the dean of student affairs at J.U.S.T. (1999-2004). He was also an advisor to the minister of higher education and research for student affairs, Ministry of Higher Education and Research-Jordan (2004-2008).

He was the Chairman of the Board of Irbid District Electricity Company (IDECO) from April 10, 2016- July 31, 2016; and was the Chairman of the Board of Directors of Irbid Development Area (IDA) since August 1, 2016- July 2021. Currently, in leave as a President of Jadara University. He was also a member of the Higher Youth Council, the chairman of the youth committee and a member of the Olympic Committee in Jordan during the years 2003 through 2004. Currently, the chairman of the consultative committee of Al-Hassan Youth Award since August 2020. He was the Chairman of Jordanian Universities Sports Federation during the years 2001-2004.

Can Servant-Leadership Skills Enhance the Role of Teachers to Address Tanzania's Rural Educational Challenges?: The Case of Edu-Heroes Initiative

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Abstract

This qualitative tracer study of 14 teachers explores the benefits of servant leadership skills in enhancing teachers' role in addressing rural educational challenges. The study was conducted as a leadership skills training for prospective teachers in their last year of the teacher education training program, followed by online training for a 1-year duration after their graduation and having been posted in the rural areas as teachers. The study found that the servant leadership training provided to teachers was of paramount importance as it offered the skills that enhanced them in addressing rural educational challenges faced in and around the school contexts. The participants demonstrated a high level of engagement in finding local solutions to the local problems in their rural areas as soon as they were posted in their school stations. The rural educational challenges depicted were school infrastructure deficiency, students' real-life challenges, and poor academic performance. Conclusively, all the teachers showed a strong inclination towards making a difference and touching the lives of students in their schools in rural areas. They also used servant leadership skills to build a positive relationship with important rural community members and stakeholders in finding solutions for the students and the school. However, the study also found that providing teachers with continuous professional development opportunities to empower their servant leadership skills is equally important. It is also essential for other school community members with a growth mindset, including the school heads and peer teachers, to support the new ideas and innovations.

Keywords: *Servant leadership, rural educational challenges*

Introduction

Ensuring inclusive quality education for all, under the auspicious of 2030 sustainable development goals (SDG4) ideals and the Tanzania national development vision 2025, has raised the demand for all education stakeholders to find solutions to tackle the rural education challenges (TGPSH, 2006). thousands of rural children have been devastated through gender-based violence, girls' deprivation of education, early pregnancies, school dropouts, drug abuse, and other insecurities at schools (Machimu & Minde 2010). With such a huge demand placed in schools and the persistently multiplying rural education challenges, the problem arising is that what role have the teachers ought to play? Are the teachers well equipped with servant leadership skills to defend these fundamental rights of children and find local solutions to the

rural education challenges? Therefore, this study was built upon the following research questions; What are the real-life challenges students face in their day-to-day school life in rural areas? How can servant leadership enhance teachers to address students' real-life challenges to ensure quality education to rural school children?

Literature Review

The reviewed literature for this study supported servant leadership as a guiding theory and a practicable style and proved its uses in the educational settings. In addition, it was found that several studies having been conducted to seek how servant leadership skills has impact on students' achievement, students' finding meaning in education, productivity in education, students' self-esteem, school climate and others. However, less is known about how servant leadership skills can be useful in addressing rural education challenges and no research has been conducted on servant leadership skills specific on Tanzania's school context.

Servant Leadership as a Concept and Practice

The term "servant leadership" was coined by Robert Greenleaf (1904-1990) in his work "The Servant Leader," first published in 1970 in which he portrayed a servant leader as a servant first; it begins with the natural feeling that one wants to serve, to serve first (Ekinci, 2015). Spears (2010) managed to extract ten characteristics that he proposed to be of great significance for the development of servant-leaders. These characteristics include listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to people's growth, and building teams.

This study was guided by those ten characters applicable in the school setting because few studies have been done so far in that respect. Figure 1 as adapted from Spears (2010) illustrates further:

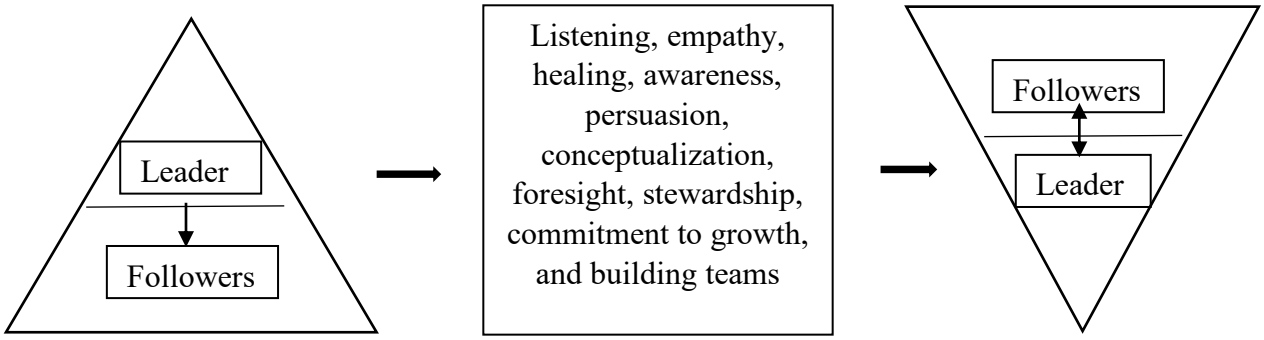

Figure 1: Operational Visualization of Servant Leadership Theory

Method

This was a qualitative study, guided by constructivism philosophical orientation. The research was a tracer study design that, with Edu-Heroes Initiative program being the case studied. The study was conducted as a 1-week workshop on servant leadership training followed by a series of

online training and material sharing that spanned a period of 1 year. Reflective journals, focus group discussions and semi-structured post interviews were used and analyzed thematically.

Research Findings and Discussion

The findings of this study can be categorized into two main aspects. First category includes the findings about the depicted rural education challenges facing students and schools in rural areas as recorded from the participants. The second category is about the findings about how servant leadership enhanced teachers to address students' real-life challenges to ensure quality education to rural school children.

A. Depicted Rural Educational Challenges

Depicted rural challenges that were most common can be categorized into three main groups: school infrastructure development, students' real-life challenges and academic performance.

School infrastructure development

The study found that most anticipated barrier to the education in rural areas is the lack of availability of necessary school buildings and infrastructure. Lack of hygiene and enough toilets, well equipped libraries, safe water sources, sufficient classrooms, staff rooms, laboratories, and others. These are components of school that requires budget and monetary support to develop them. One of the participants noted:

> In the school I am stationed, we have a serious problem when it comes to enough and hygiene toilets. According to the regulations 1 toilet pit must suffice to a maximum of 40 students, but we have 1 toilet for 200 students. The moment I came I tried to talk with the head of the school so that we can write a project write-up and ask donation from the bank, because they are part of community and might help. I am happy to say that the bank supported our project. I think through the leadership training we had I got the courage to write that proposal, and it worked. (Participant)

Here, the findings reveal that teachers if trained with servant leadership skills, they can help in building mutual coexisting communities and induce sustainability through caring and sharing among the community members or institutions. This type of mutual coexistence can be helpful in rural areas where resources are scarce.

Students' real-life challenges

The study depicted many factors that lead to barriers for students to continue with their education in a conducive environment. Themes such as Gender-based violence, Girls' deprivation of education, Early pregnancies, HIV Aids, School dropouts, Truancy, Drug abuse, lack of proper guidance and counselling, and other insecurities were common in most of the interviews done with the participants. During the follow up post semi-interviews it was found that, the participants tried to use what they learned in the servant leadership training to address those challenges. Some tried to establish student clubs to create awareness against HIV Aids, some

tried to establish guidance and counselling teams where each student can have an adult to consult with when it comes to issues such as adolescence and drug abuse. One of the participants noted:

> Most of the challenges facing our children can be intervened if right measures are taken in a right time. I think all students need a trusted adult that they can talk to and a room to get peer support and gather knowledge. I decided to establish a students' club at school to create awareness against HIV Aids, Early pregnancies, and the importance of girl's education. (Participant)

From the above quote of the participant, it was revealed that after the training, the participants applied listening, healing and stewardship skills of servant leadership in their respective schools of post. The study revealed that teachers with servant leadership skills can act as trusted adults that students can reach out and talk out their problems and challenges such as HIV Aids and drug abuse and give proper guidance to the students and specially students with special needs.

Academic performance and quality education

Rural schools were labelled as poor performers by all the participants. They described their schools that have a milestone to go to achieve quality education. They mentioned many factors, but most common ones were, lack of enough teachers, big class sizes, truancy, and lack of textbooks and other facilities. Using the skills from their training one of the participants responded on how she tries to borrow ideas and teaching aids:

> My school does not have enough facilities such as those found in private schools, which could be the reason for our poor performance. Therefore, I try to keep myself up to date with current developments from peer teachers especially those in urban and in private schools, so that I develop myself professionally as a teacher and help my students get best education for their future careers. (Participant)

It was revealed that participants were aware of the challenges they might face in education systems in rural areas and could conceptualize beforehand. The participant credited such servant leadership skills of Awareness and Conceptualization as being fundamental in their quick adaptation to the new context. Thus, through Awareness and Conceptualization servant leadership skills, teachers can also harness adaptation and creativity. The proof of such adaptation was revealed through the enthusiasm the teacher showed towards personal professional development endeavors.

B. Findings about the leadership training and its implementation

The findings in this category includes servant leadership as a new term but its skills practiced without awareness, how those skills enhanced teachers' roles in addressing rural educational challenges, how servant leadership skills need continuous professional development support to thrive, and how servant leader mindset increased teachers' community engagement. In addition, the findings showed that servant leadership skills are best practiced when there is a collective support and a growth mindset in all school community members.

Servant leadership as a new term but its skills practiced without conscious or awareness

The study found that most participants acknowledged that the term "servant leadership" is relevantly new in their prior knowledge about leadership. However, as the trainings were done and servant leadership well introduced, participants affirmed that most of the servant leadership skills are innately used but without participants being conscious or aware or have a specific purpose out of it. One participant was noted saying:

> Although I have never taken much attention to the terminology servant leadership, but I definitely have used most of its characteristics such as listening, persuasion, stewardship and commitment for others' growth. What I learned from the leadership training is that; if I purposely use those skills towards a well-defined objective, the chances of success are high. (Participant)

Another teacher, after having been given a chance to speak about their prior knowledge of servant leadership, was noted saying:

> It seems that as teachers we automatically serve others, but the question is, how conscious and purposeful are we? (Participant)

From the above information, it is understood that despite the unfamiliarity of the term "servant leadership", the participants were aware and do practice the skills encompassing servant leadership such as listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to people's growth, and building teams. Servant leadership, just like other types of leadership, is a social construct as advocated by Gergen (2005), therefore participant needed to purposefully create the construct and then implement it for improvement.

Servant leadership skills enhanced teachers' roles in addressing rural educational challenges:

The study found that, the servant leadership training provided to teachers was of paramount important as it enhanced them some skills in addressing rural educational challenges. For instance, one of the teachers who participated on the program proclaimed the following.

> From the Servant leadership program training I developed a lot of skills, and new style of leading. Also, I have learnt how to form networking as a leader with various institutions to achieve the school goals. I have gained more skills on how to lead, manage and administrate the pupils and mobilizing the staff members. (Participant)

These findings reveal that listening, persuasion and empathy servant leadership skills helped teachers to form positive relationship and forge teamwork and alliances with their colleagues, students, and other community members. Thus, teachers who empathize and who fully accept those who go with them on this basis are more likely to be trusted, and using persuasion they can reach out to parents and persuade them to be involved further in the education of their children.

Servant leadership skills need continuous professional development support to thrive:

Most participants revealed that servant leadership skills alone cannot be enough unless they are continuously improved through professional development. The 1-year follow up training that provided participants with online content material support and experience-sharing opportunities seemed to have empowered the teachers more. Some participants even shared their fears that if the program ends in 1-year, their servant leadership skills might remain redundant because professional development opportunities are very rare for teachers especially in rural school. One of the teachers had the following to ask:

> I learned quite a lot from the training, but the reality in my school had many surprises and far more challenges than I expected. If I had not had the opportunity to hear what other Edu-heroes program participants were facing and their proposed solutions, life would have been tough. When I am at my school, I feel like I am far from civilization, the opportunities for my growth are very rare. This Edu-Heroes online group has given me a lot. Are we at least going to continue with this group even after the program just to share ideas and support? (Participant)

However, servant leadership demands for people's personal growth. One of its ten characteristics is commitment for growth. Although this is directed to other's growth, but it starts with one's personal growth (Spears, 2010).

A need for collective support and change towards a growth-mindset:

Participants raised a concern about the importance of collective support for them to succeed in their endeavors to address the challenges faced by the students and the school. They referred to first and foremost the big need to get the support from the school-head and buy-in from peer teachers. Some initiatives they wanted to introduce would not even come to the surface to be realized because of the lack of support. Sometimes the school-head was unwilling to change some of the traditions, sometimes the peers thought that the participant had different agendas. Persuasion as one of the servant leadership skills seemed to be more important at such kind of moments as noted by one of the participants:

> It is very easy to be mis-understood. The school-head and my colleagues would sometime not put much trust in my proposals. Sometime people were afraid of changes and the underlying risks they bring about. Everyone was comfortable in their old traditions. (Participant)

Thus, the study found out that a growth mindset is essential to be instilled in school-heads, teachers and supporting staff so that they are ready to leave their non-functional old traditions and embrace new innovations.

Servant leader mindset increased teachers' community engagement:

The study found out that in rural areas, the teacher is one of the very few educated persons present. Thus, the servant leadership training created an enthusiasm for the participants to be engaged more in finding local solutions to the local education problems because if they do not intervene, it seems no one else has the capacity to do it. One response from the participants goes as follows:

> In the 1 year that I have been working in my village, I have happened to know almost all the villagers because I know their children who are studying at my school. The village is a small place where gossip goes around, and probably everyone knows about everyone else. I see this as an opportunity because I am one of the few educated persons. I think I can do something to transform lives. (Participant)

Another participant mentioned about the existence of potential bright students who needed just guidance to reach their potential:

> One of the students had very good curiosity and was very talented in drawing art. I have seen many potential students, but because they are in the rural area, their possibility of success is very narrow. I can try to show him the way, maybe connect him to some good Samaritan. I don't know if my efforts will yield any results, but I am willing to do whatever it takes. (Participant)

These statements suggest that after the servant leadership training, the participants were keen to commit towards the growth of people and developed foresight in future transformational of lives of people and identifying their hidden potentials. The two servant leadership skills portrayed by the participants are namely, commitment to the growth of people and foresight.

Conclusion

From the findings and the discussion, the conclusion could be drawn in the view that it is apparent that; The study purposely intended to impart servant leadership skills to teachers to find local solutions to educational challenges facing their communities, especially in rural areas. The study has been designed under the belief that sustainable solutions are possible through investing on human capital. The program promotes inclusive education, a focus on Sustainable Development Goals, and connecting to local communities through civic engagement. Apart from depicting the current educational challenges facing the rural Tanzania, the study's results also show that all the participants have shown a strong inclination towards making a difference and touching lives in their schools in the rural areas. Participants have used the servant leadership skills to build positive relationship with important community members and stakeholders to benefit the children. However, it is also equally important to supply participants with continuous professional development opportunity to empower their servant leadership skills, and it is essential for other school community members including the school-heads and peer teachers possess growth mindset to support the new ideas and innovations.

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Brief Biography of Authors

Serving in the field of education for more than 14 years, as a young emerging leader and a PhD Candidate in Educational Leadership specializing in Servant Leadership**, Ibrahim Yunus Rashid** is passionate and dedicated to the provision of quality education to the people of his nation, Tanzania. Mr. Rashid is a 3 years member of the International Leadership Association (ILA) and has attended as a presenter in 3 ILA conferences. Mr. Rashid, as a Mandela Washington Fellow 2018 alumni (an initiative by the US Department of State), a Global Schools Ambassador (an initiative by the UN Sustainable Development Solutions Network), and a Mwalimu Nyerere Fellow 2022 (an initiative by The Government of Tanzania), has embarked on a journey to introduce a new hero in the Tanzanian society, The EDU-HERO, a concept focusing on leveraging leadership skills to quality teachers to champion the SDGs and transform lives, for he truly believes that NO educational institution EXCEEDS the quality of its teachers.

Dr. Gennes Shirima has been working in the academia for more than a decade. He began his career in 1994 as a primary school teacher where he served for 14 years. He has a bachelor's degree in education, master's in educational management and Administration, and a PhD in Educational management and Policy Studies. His research areas gravitate around management of adult and non-formal education (ANFE) programs and educational leadership AS PART OF INCLUSIVE LEADERSHIP ADVOCACY. As a lecturer in the School of Education of the University of Dar es Salaam, he teaches policy, planning, management, and educational leadership at both undergraduate and postgraduate level. Dr. Shirima has been working as a supervisor of Rashid's work on SERVANT LEADERSHIP ADDRESSING RURAL EDUCATIONAL CHALLENGES.

Improving Resource Management in Universities Through Embedded System Integration with ERP

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Abstract

This research paper aims to explore the benefits of enterprise resource planning (ERP) systems and embedded system integration in improving resource management in universities. The focus is on Paragon International University in Cambodia and its implementation of a cloud-based ERP system with embedded systems integration. The system includes a mobile ERP system, allowing students and faculty to access academic resources on the go. This paper analyzes the implementation of the system, including security measures and reducing electricity usage, and discusses human resources, project management, library management, and campus management. The paper demonstrates how the ERP system has transformed the academic and administrative processes of Paragon International University. The system has streamlined course scheduling and registration, improved student and faculty communication, and automated third-party software products such as Google Classroom. It also highlights the modules managed by the ERP system, which includes finance, and administrative tasks, and provides real-time access to academic resources. The paper examines the challenges and opportunities associated with implementing ERP systems in higher education, as well as best practices for successful implementation. The benefits of the ERP system are evident in the improved efficiency, better utilization, and enhanced learning outcomes for students. Overall, this research paper shows the value of ERP systems and embedded system integration in universities, contributing to improved resource management, decision-making, and learning outcomes. The paper concludes that the ERP system has become an essential tool for Paragon International University in Cambodia, in helping to provide quality education and continuous success.

***Keywords*:** University ERP System, LMS, education, embedded systems, cloud computing, digitalization, system implementation

INTRODUCTION

Enterprise Resource Planning (ERP) systems have been widely adopted by businesses and organizations to streamline processes and improve data visibility in various areas such as finance, project management, and manufacturing. Similarly, Higher Education institutions have also adopted ERP systems to manage administrative functions and streamline workflows. However, as the use of technology continues to evolve, there is a growing need to integrate ERP systems with embedded systems to provide additional functionalities and capabilities. Embedded

systems, specialized computer systems designed to perform specific tasks, can be integrated into Higher Education ERP systems to manage campus security, laboratory equipment, classroom technology, and library operations. Moreover, cloud computing has emerged as a cost-effective and reliable platform for integrating embedded systems with ERP systems in Higher Education.

One Higher Education institution that has successfully implemented this integration is Paragon International University in Cambodia. Paragon International University has integrated embedded systems into its ERP system to manage campus security, laboratory equipment, classroom technology, and library operations. The university also uses cloud computing to enable this integration, providing a scalable and flexible platform for managing these systems. The purpose of this paper is to examine the integration of embedded systems into university Enterprise Resource Planning (ERP) systems and to explore the challenges and benefits associated with this integration. Specifically, this paper will address the following questions:

1) What is the significance of integrating embedded systems with university ERP systems, and how does it contribute to the overall efficiency of university operations?
2) What are the key challenges that universities face when integrating embedded systems with their ERP systems, and how can these challenges be addressed?
3) How does cloud computing facilitate the integration of embedded systems into university ERP systems, and what benefits does it offer in terms of efficiency, security, and scalability?

The paper also presents the case study of Paragon International University as an example of a successful implementation of this integration, showcasing how it has enhanced operational efficiency, improved security, and provided better services to students and staff.

ENTERPRISE RESOURCE PLANNING IN HIGHER EDUCATION INSTITUTIONS

The corporate sector has been successful in adopting ERP systems over the past two decades, resulting in benefits such as improved operational efficiency and reduced costs (Fisher, 2006). This success has encouraged higher education institutions to invest in ERP implementation to improve institutional business processes (Mehlinger, 2006). Universities have spent over $5 billion on ERP investment in recent years (Abugabah & Sanzogni, 2010). ERP vendors have also expanded their product scope to include new products in response to relatively new market needs, such as student lifecycle management software from ORACLE and SAP.

However, implementing ERP systems in Universities has been challenging (Rabaa'i et al., 2009). A study found that in 60 to 80 percent of higher education contexts, ERP implementation failed to meet expected outcomes, and the results of implementation were found unsatisfactory (Mehlinger, 2006). Customization options may increase the risk of failure by increasing the scope of work and cost of implementation, as well as delaying implementation schedules. ERP implementations can also create tension and affect the identity of universities, raising new organizational issues based on the perceived uniqueness of specific universities (Pollock & Cornford, 2004). Feemster (2000) described the difficulties experienced with an ERP system implementation in a U.S. college as "merging a system of decades-old databases and re-educating campus employees" and causing "enormous cost and pain."

Despite these challenges, universities have considered ERP adoption as a way to achieve greater integration of their management systems and manage increasingly complex operations while meeting higher expectations from stakeholders (Frantz, 2002). Universities are currently under pressure to deliver higher-quality educational services for lower costs due to decreasing government funding and increasing stakeholder expectations. For these reasons, ERP systems can be very appealing to higher education institutions as a potential route to meeting these standards.

THE ROLE OF EMBEDDED SYSTEMS IN ERP DEVELOPMENT.

Enterprise Resource Planning (ERP) systems are widely used by firms to integrate business processes and achieve operational efficiencies. However, the successful implementation and utilization of ERP systems depend on various factors, including the availability and effective utilization of Information Systems resources. In this regard, J.Karim et. al (2007) emphasized the crucial role of Information System resources in building ERP capabilities that can deliver positive business process outcomes. Business software systems or in other words ERPs have two interfaces with the physical world: the environment and the platform. The environment encompasses various elements such as human users, other application software processes that interact with the system, and possibly a physical plant that is controlled by the system. On the other hand, the platform includes both hardware and software components that execute a virtual machine on which the system operates. This encompasses the operating system, network, and communication mechanisms that are specific to the system. As a result, non-functional requirements of embedded software systems can be categorized into two types: reaction requirements, which deal with the interaction between the system and the environment, and execution requirements, which focus on the interaction between the system and the platform (Henzinger & Sifakis, 2007). As the demand for embedded systems integration with ERP systems increases, there is a growing need for a middleware solution that can effectively manage the integration of these systems. A. Katasonov et al. (2008) proposed a middleware solution that could meet the integration needs of embedded systems with ERP systems. Their vision was to create a next-generation middleware platform capable of facilitating the development of self-managed complex systems in the industrial sector, composed of various distributed, heterogeneous, shared, and reusable components. The solution was designed to provide a seamless integration of embedded systems with ERP systems, improving the efficiency and effectiveness of business processes.

METHODS OF INVESTIGATING THE CHALLENGES AND BENEFITS OF EMBEDDED SYSTEMS INTEGRATION IN HIGHER EDUCATION ERP SYSTEMS

The methodology for this research paper involved a combination of qualitative data collection methods, including interviews and document analysis. A total of 40 students, 2 university administrative staff, and 3 developers were interviewed. Additionally, data was collected and analyzed from documents such as error logs by developers, improvement suggestions by stakeholders, and interview results.

The interviews conducted were semi-structured, allowing for flexibility to explore emerging themes while also covering a set of predetermined questions (for sample questionnaires for each relevant stakeholder refer to Appendix A,B and C) related to the integration of embedded systems into the university ERP system. The questions covered topics such as the benefits and challenges of integration, the role of cloud computing in facilitating integration, and the impact of integration on operational efficiency and user experience. The interviews were recorded and transcribed, and the data were analyzed using qualitative content analysis to identify common themes and patterns across the different interviews.

The developers and development team interns of the ParagonIU ERP system integrated various systems, including the ParagonU Core System, Finance System, AC Control System, and Security Access System, through API endpoints. The system follows the Spiral Model in its development life cycle, encompassing system analysis, UI design, implementation, testing, and release. To overcome the challenge of limited developers, a student-intern strategy was employed, training students for different roles. Data security is ensured through best practices and adherence to security guidelines. Feedback from end-users is collected and analyzed to improve the system, while future plans involve incorporating automation and AI platforms and enhancing the Finance System.

Students provided positive feedback on the ERP system, emphasizing its efficiency and convenience. The system facilitated easy access to information, improved accuracy and timeliness, and helped manage academic schedules. Embedded systems like smart attendance and security access systems had a positive impact, with room booking and automated air conditioning being particularly useful. Students found the system user-friendly and suggested incorporating features such as library management.

Administrative staff noted that the ERP system significantly transformed academic affairs management by centralizing information and streamlining processes. Essential features included comprehensive records, efficient search, course section management, user schedules, and online surveys. Collaboration with the development team involved feedback through communication channels, with prompt issue resolution. Data accuracy and security were ensured through personal measures, and the system extended its impact beyond academic affairs. The future involves further integration, automation, and continuous feedback for improvement.

IMPLEMENTATION

In the development of Enterprise Resource Planning (ERP) for Paragon International University we used the phased implementation approach.

The phased implementation approach involved the development of the core system, which comprised the administrative, academic, and human resource modules. This was followed by the development of the library management system, the integration of smart embedded systems to the core and library system, the development of the university finance system, and finally, the development of the campus support management system.

One of the requirements of the phased approach used in implementing the ERP system for Paragon International University was to initially connect the first developed system to the old system to obtain relevant data. Subsequently, when new parts of the system were completed, the first developed system had to be reintegrated into the newly developed parts of the ERP system. As subsequent parts of the system were being developed, the first finished system had to rely on the old university management system to obtain corresponding data. This resulted in several issues such as data inconsistencies, duplications, and errors.

To address these challenges, the PIU project team had to develop a robust data migration strategy that ensured the seamless transfer of data from the old university management system to the new ERP system. The team had to carefully map out the data fields, clean up the data, and ensure that the data was compatible with the new system.

This study highlights the importance of careful planning and management in implementing ERP systems. While the phased approach may offer benefits such as reduced risk and improved control over the implementation process, it also requires significant effort to integrate the different parts of the system. Therefore, it is essential to consider the potential drawbacks of the chosen approach and to evaluate the impact on the overall success of the ERP system implementation.

Smart Embedded Systems have become a crucial tool for energy and cost-efficient control of air conditioning systems in educational institutions, particularly universities. The integration of Smart Embedded Systems with the University's ERP system provides a practical and effective solution for energy and cost-efficient air conditioning control. This system ensures comfortable learning and working environments while reducing energy consumption and cost, making it an excellent tool for educational institutions seeking to enhance their sustainability efforts.

The Smart Embedded System works by controlling the AC turn on/off according to class schedules and room bookings. The system is integrated with the University's ERP system, which provides the necessary data on scheduled classes and room bookings. If a room is scheduled for a class or booked for a meeting or extra class, the AC turns on only during those hours, resulting in a significant reduction in electricity consumption and associated costs, as the AC remains off during the rest of the time.

For instance, if a room is scheduled for four hours, the AC will operate only during those hours, resulting in a significant reduction in electricity consumption and cost. This approach also helps reduce the carbon footprint of the University, contributing to a more sustainable environment. Paragon International University has implemented the Smart Embedded System to control the AC turn on/off according to class schedules and room bookings, resulting in only four hours of AC operation per day for each classroom. Based on the previous calculation, the cost of running a 1 kW AC for 4 hours per day in an area with an electricity cost of $0.32 per kWh would be around $1.28 per day for one classroom.

Paragon International University has 30 classrooms, the total cost savings per day would be $1.60 per classroom per day. Therefore, the total cost savings per day for 30 classrooms would be $1.60 x 30 = $48 per day. This translates to an annual savings of $48 x 365 = $17,520. This

calculation demonstrates the potential cost savings that can be achieved through the implementation of Smart Embedded Systems in educational institutions.

The University has successfully integrated Embedded Systems with the ERP system, specifically Raspberry Pi, into its infrastructure. These devices are connected to the electric panel on each floor and are programmed to send requests to the server every 60 seconds to read the current status of the rooms on the floor. The Raspberry Pi operates based on the information received from the University's ERP system through its API.

The Raspberry Pi's are designed to open the contactor for classroom power supply only when a classroom is active. By reading the data every 60 seconds, the Raspberry Pi minimizes the continuous load to the server.

The use of Raspberry Pi provides a cost-effective solution for implementing the Smart Embedded System, and the real-time updates on classroom status enhance the system's effectiveness even further. The integration of this technology aligns with the University's sustainability efforts and reduces its carbon footprint.

CONCLUSION

The integration of embedded systems into higher education ERP systems brings forth immense potential for improving operational efficiency, enhancing the student experience, and advancing sustainability efforts. This integration enables automation, streamlines processes, and provides real-time data for informed decision-making. While challenges surrounding compatibility and interoperability need to be addressed through innovative strategies and careful planning, success stories like the implementation at Paragon International University offer valuable insights and lessons. By embracing embedded systems integration and leveraging the capabilities of cloud computing, universities can optimize their operations, meet the evolving needs of students and staff, and remain competitive in the ever-changing technological landscape.

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Embracing the Community College Framework: City College of San Fernando Pampanga's Track Towards Social Inclusivity

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Abstract

This paper discusses the track of a local college in embracing the community college framework as a means to realize inclusive education. It utilized the qualitative approach and highlighted the essence of legislations, leadership and commitment in providing access to quality tertiary education. Its findings revealed the connection of political will and the realization of the very purpose of the establishment of local colleges and universities; that is, to address the higher educational gaps in their respective communities. The paradigm shift of the featured institution presented in this paper is one its major contributions to the dearth research undertakings that explores and bravely bares a LUC's journey in realizing an inclusive education through the community college framework. Another major contribution of this paper is the creation of a Community College Framework of Local Higher Learning Institutions that is geared towards the realization of inclusivity in education. It revolves on the experience of the City College of San Fernando Pampanga (CCSFP). Since its establishment in 2008, the College catered only those "poor but deserving students"; however, with the assumption into Office of the new Mayor, Honorable Vilma Balle-Caluag, who is an advocate of social inclusivity, the restrict admission policy was abolished. In as much as policy change is radical and the process alone exposes the CCSFP administration to more challenges, it cannot also be denied that this change created opportunities and diverse innovations for the College to improve its operations, practices and processes. The institutional change made CCSFP more accessible, fair and equitable. It has also leveraged its way towards achieving quality education through a more stable connection with its community as well as with its local and global partners.

Keywords: Inclusivity, local college, Community College Framework, quality, higher education, policy

Introduction

Citing his previous research in 2006, Ainscow (2020) suggested that inclusion in education is seen as a process and explained that it is a never-ending search to find better ways of responding to diversity. It is also concerned with the identification and removal of barriers, which involves collecting, collating and evaluating information from a wide variety of sources within particular contexts, in order to plan for improvements in policy and practice.

To realize inclusion in education, policies are very significant. In the school setting, this starts from the admission policies that should stipulate access for learners. However, access to education has been a global challenge for decades now. Inclusivity was very difficult to achieve.

The marginalized, the indigenous peoples and the underprivileged perpetually suffered from discrimination even if they wanted to uplift their lives through education. In fact, "more than a quarter of a billion children and young people have been *left behind* and are totally excluded from education systems around the world", World Economic Forum (2020).

In the Philippines, access to education has been a long-standing concern particularly in tertiary education. State Colleges and Universities cannot accommodate all students who cannot afford to go to private school. Aside from financial challenges, policies of higher education institutions bar interested incoming first year students from being admitted. This scenario led to the creation of local universities and colleges (LUCs). Such creation was made possible through Republic Act (RA) 7160. The Department of Interior and Local Government (DILG) also issued its Memorandum Circular No. 2009-67 related to this.

A LUC is "a public higher education institution established and provided for operation by a municipality, city or province", (CHED Memorandum Order No. 18, s. 2022). According to Pernia (2017), the existence and presence of LUCs contributed greatly to governance, higher education and public policy. Pernia cited various authors on how significant the existence and presence of LUCs are. Citing Dayrit's (2005) argument, it was emphasized that LUCs are the only hope for underprivileged children of poor Filipino families for acquiring a college education. He also mentioned the assertion of Chao (2012) who stated that LUCs resolve the higher educational gaps at the local level. But access and quality of higher education remained seriously inadequate (Pernia, 2017).

Aim and Major Contributions of the Paper

The above discussions on inclusion and access to education is the focus of this paper. Specifically, it aims to present the paradigm shift of a local college in order to fulfill the very mandate of its existence; i.e., "to provide tertiary education for the less fortunate Fernandino youth who wish to pursue a college education" (CCSFP, Faculty Manual, 2021). The paradigm shift of the institution presented in this paper is one its major contributions to the dearth research undertakings that explores and bravely bares a LUC's journey in realizing an inclusive education through the community college framework. Another major contribution of this paper is the creation of a Community College Framework of Local Higher Learning Institutions that is geared towards the realization of inclusivity in education.

Method

Ainscow (2020) asserted that school leaders should be selected in the light of their commitment to inclusive education and must consider the external policy environment which must be compatible with the inclusive developments to gain support of the school's efforts. With this emphasis on management, this paper utilized the qualitative approach which combines narrative inquiry, document and literature review that is anchored on educational leadership and management in research.

Education: A Means to Emancipation from Poverty

"Education is the key to success", is an old adage which poor Filipino families cling to. This is affirmed in the World Economic Forum (2020) report titled, "This is why many young people have no access to proper education" where a mother of three was mentioned as an example of acknowledging how difficult life is because of being in a poor family. The mother believes that education is the best way to secure her children.

The same article articulated that "not every person without an education lives in extreme poverty, but most adults living in poverty missed out on a basic education."

This is why local government units (LGUs) also recognize that poverty alleviation can be addressed through education. For instance, the legislation that created the Charter of CCSFP, Ordinance No. 2008-018, which was authored by Councilors Nelson Lingat and Jaime Lazatin, noted that "…education is a vital tool in emancipating the underserved sector of our society from the bondage of poverty".

Legislations Establishing LUCs as Mechanisms for Social Inclusivity

The above discussions highlighting education and poverty alleviation paved the way for the creation of LUCs. In their discussion, Montemar, et. al. (2017) regarded LUCs as poverty alleviation intervention and crime-curbing mechanism of local governments. Their creations were made possible through legislations and policies of government agencies.

For instance, the Local Government Code of 1991 made the creation of LUCs possible. Two decades after, a revolutionary law changed the landscape of higher education in the Philippines as the Universal Access to Quality Tertiary Education Act (Republic Act 10931) was signed into law in 2017. It provides for free tuition and other school fees in state universities and colleges, local universities and colleges, and state-run technical-vocational institutions, establishing the tertiary education subsidy and student loan program, and strengthens the Unified Student Financial Assistance System for Tertiary Education (UNIFAST).

Having been granted a government recognition as a local college, CCSFP has become one of the recipients of UNIFAST in 2018.

As previously cited, CCSFP was established in 2008 through Ordinance No. 2008-018. As stated in the ordinance, all sectors, both public and private, have favorably expressed support for the creation of the College noting that such legislative undertaking shall not only serve as an important legacy but a way in building a brighter and better lives for the youth and the generations yet to come. However, since its creation, CCSFP catered only those "poor but deserving students". This policy did not allow academically challenged students to be taken in and be provided with the education that they deserve. As the lens was focused on this, a question on addressing social inclusivity emerged.

This kind of challenge offers an interesting prospect for educational change and educational policy (Pernia, 2017). Reiterating Ainscow (2020), school leaders should be selected in the light

of their commitment to inclusive education, and for LUCs, the local chief executive serves as the Chairperson of the Governing Board (GB) and therefore leads the policy making for the LUC's operations.

With the assumption into Office of the new local chief executive of the CSFP, Honorable Mayor Vilma Balle-Caluag, who is an advocate of social inclusivity, the restrict admission policy was abolished in order to cater more Fernandinos who want to be admitted at the City College. De Leon (2022) wrote that Caluag wants CCSFP to be "inclusive" so that more Fernandino students could get quality education and secure a good future."

This initiative of the local chief was followed by her pronouncement to reassess the more than 200 applicants who were initially declined because of their academic capability [CSFP-City Information Office (CIO), 2022]. Per Registrar's data, the number of enrollees as a result of the re-assessment and admission of new applicants, almost doubled for the 1st Semester of Academic Year (AY) 2022-2023; i.e., from 792 to 1, 365.

This created both a challenge and an opportunity for CCSFP. First, is the immediate recalibration of the admission policy which gave birth to the Open Door Policy through CCSFP Board Resolution No. 1, Series of 2023. This policy was contextualized to mean that CCSFP is opening its doors to the City of San Fernando community to be admitted in the program offerings they applied for and where they are aligned to. With this policy, a massive increase in enrolment is expected by AY 2023-2024. This posed a challenged on the crucial elements that fuel systems and processes of the institution --- the academic policies.

Taking action on this, the CSFP-CIO (2023) reported that the City College already bared its more socially inclusive policies in a consultation on May 10, 2023. The consultation attendees interposed no objections to the presented academic policies. Hence, CCSFP is set to present these policies to the Board of Trustees.

CCSFP also saw the opportunity to fill some of its vacant positions in its faculty plantilla. The challenge has become a clear justification for the approval of the additional manpower. Upgrading of equipment and facilities are also being worked out.

In as much as policy change is radical and the process alone exposes the CCSFP administration to more challenges, it cannot also be denied that this change created opportunities for the College to improve its operations, practices and processes. The implementation of the Open Door Policy of the Institution is also expected to lead to the fruition of acquiring a diploma for every Fernandino Family. The diploma earned symbolizes a great achievement for poor parents whose dream is to be able to send their children to college as education since time immemorial has been regarded as the indispensable means to emancipate people from poverty.

CCSFP on its part has to realize its leadership's vision and ensure, as a local college, that there will be a 'No Degree epidemic' in the City.

Institutional Change: Building CCSFP's brand anew

From catering only youth with high academic performance in their basic education, CCSFP now has provided a true access to quality higher education to Fernandinos, particularly those economically underprivileged. The administration and faculty had pledged to nurture learning to ensure that quality is not sacrificed. The College is also set to open its doors to adult learners, professionals and other lifelong learners. This is why the institution saw the need to have strong allies in making this set-up work; an opportunity towards collaboration, which was initially sought as a solution, is now in place. These collaborations are seen as support in embracing the community college framework wherein partners are expected to provide assistance in strengthening the CCSFP workforce, students and lifelong learners. This support includes micro-credentialling, research collaborations, capacity building and other efforts on upskilling and reskilling in order to meet not just local but also the global demand of industries and businesses.

This paradigm shift makes the institution an instrumental arm of the local government. The College is now geared towards the full realization of the community college framework. This is again another great challenge because the way community colleges operate in other countries is on a different context. CCSFP, as a local college offers bachelor's degree programs and is also aiming to offer graduate programs. This is not how community colleges in other countries operate. Hence, in this context, the term has been operationalized into becoming a socially inclusive institution benefiting its community by producing employable graduates and creating a positive social and economic impact. This now involves a greater community involvement and establishing stronger ties within its community.

Emerging Framework

Based on the presented facts of this paper, an emerging framework was crafted. Figure 1 illustrates how a local college can embrace the community college framework. Centered on fulfilling the very mandate of LUCs to provide access to tertiary education, the new paradigm goes beyond just mere access to college but access to quality education based on 1.) dynamic methodology of academic leadership and teaching pedagogy; 2.) technology-driven; 3.) policy that is socially inclusive without sacrificing quality; and 3.) curriculum that is industry-based and globally competitive. The realization of this focus is brought about by the *drivers of change* which comprise of the *commitment of school leaders to inclusive education* and *political will of the chief executive*. The implementers themselves should be fully committed to the track of embracing the community college framework. As school leaders, they are responsible in creating strategic initiatives towards the realization of inclusivity in education. Such realization could also be primarily attributed to the political will of the chief executive. A local college or university, being a creation of an LGU is under the chief executive who is also the chairperson of the LUC. As the head and prime mover of any enabling mechanism for the institution to advance and fulfill its mandate to serve its community, the chief executive should have a strong political will. Hence, both actors should be *mission driven* and inclined to adopt a *policy change* in all its processes; and the first step is to revisit the policy on *admission towards inclusivity.* This requires the recalibration of other existing policies and creation of supporting mechanisms that are associated and relevant to the attainment of inclusive education. This is where *diverse innovations* come into play wherein *policies and interventions towards retention and completion*

must address the sustenance and sustainability of excellent operations and performance of the higher learning institution. This task is left to the implementers, the direct actors in the local college. All innovative policies and interventions must therefore be crafted as pro-active actions that should safeguard the academic performance of the students admitted in the college to ensure retention and completion. These policies do not only include those academic but also re-organization, partnerships & collaborations with various stakeholders and continuous capacity building of educators and other manpower complement. All these aspects are expected to result to excellence and quality in education as *institutional change* has been established and infused by the drivers of change.

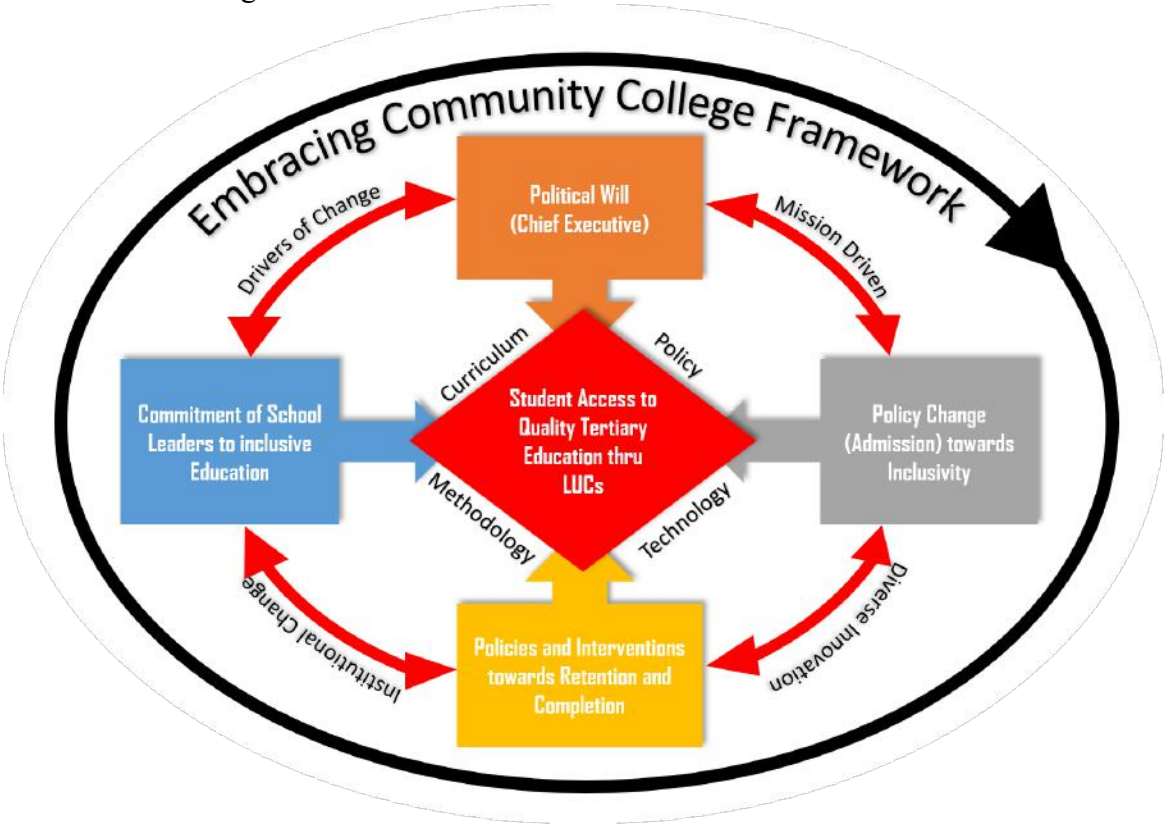

Figure 1. Community College Framework of Local Higher Learning Institutions

Conclusions

Embracing the community college framework has better positioned the City College into an institution that fulfills its true mandate as a local college, i.e., to serve its community. The challenges and opportunities it encountered on its journey in embracing the community college framework resulted to its rebranding; it is now more accessible, fair and equitable. It has also leveraged its way towards achieving quality education through a more stable connection with its community as well as with its local and global partners. Through a more equipped manpower and units that will be created, CCSFP graduates will be able to face the battlefield of work with enough, appropriate and strong ammunition to achieve success, both in their career and individual lives, making them productive members of the community.

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Exploring Usage of Artificial Intelligence in Higher Education: Opportunities, Challenges, and Recommendations

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Abstract

This position paper explores the challenges and opportunities of integrating artificial intelligence (AI) in higher education. The following study examines how AI may alter higher education by reinventing the learning experience for students, teaching methodologies for instructors, and operations for institutions. It draws on research articles, reports, and expert perspectives. Many universities find it challenging to integrate AI despite its enormous potential. Educational leaders must address the following potential issues before implementing AI: (i) faculty readiness; (ii) gaps in equity and access; (iii) ethical and privacy concerns; (iv) faculty readiness; (v) legal issues; and (vi) financial constraints. This paper offers suggestions for organizations, decision-makers, and researchers to overcome these obstacles to guide ethical and responsible AI implementation. According to the findings, artificial intelligence (AI) has the power to transform higher education entirely, but advanced preparation, cooperation, and proactive measures are crucial. The article finishes with practical recommendations for educators, administrators, politicians, and researchers interested in the convergence of AI and higher education.

Keywords: Artificial Intelligence, higher education, global, challenges, opportunities, ethical considerations, future prospects, recommendations

1. Introduction

This paper examines Artificial Intelligence (AI) in higher education by drawing on recent research articles, essays, and expert opinions. The report is divided into five sections: introduction, opportunities, challenges, recommendations, and conclusion. The first section describes the historical perspective of AI use in higher education. The second section describes how AI can rapidly transform higher education by offering new opportunities for personalized learning, improved student outcomes, and enhanced research and innovation. The third section discusses the anticipated challenges and barriers to overcome in adopting and implementing AI in higher education, including ethical concerns, data privacy issues, equity and access disparities, faculty readiness, and financial constraints. The fourth section provides actionable recommendations for institutions, policymakers, and researchers to navigate the future of AI in higher education. The fifth section gives summary remarks of the topic.

The use of AI in higher education has a long history that dates back to the 1950s, when academics and researchers first began investigating the use of computers in the classroom (Skinner, 1958). In the beginning, rule-based expert systems that replicated human expertise in particular fields, like mathematics, science, and language learning, were the main focus of AI in

higher education (Smith & Sherwood, 1976). Those systems required substantial human programming and had limited capabilities (VanLehn, 2011).

With the advent of more powerful computing technologies and advancements in machine learning algorithms in the 1980s and 1990s, AI in higher education began to evolve rapidly (Graesser et al., 2001). Intelligent tutor systems (ITSs) emerged as a prominent application of AI in education, providing students with personalized feedback, guidance, and adaptive learning experiences. ITSs paved the way for other AI applications, such as natural language processing for automated essay scoring, recommendation systems for personalized course suggestions, and data analytics for predicting student outcomes (Xeriland, 2018).

In recent years, systems like IBM's Watson and Open AI's ChatGPT can gather enormous amounts of global data. Through massively parallel processors, it can generate hypotheses, collect large bodies of evidence, analyze data, and infer relationships (IBM Pearson, 2016). These new systems using deep learning, big data analytics, and cloud computing have gained increased attention and momentum in higher education. Academic institutions and researchers are leveraging AI to create novel solutions for problems including student engagement, retention, and success, individualized learning, assessment, academic advising, and faculty support for teaching and research. If universities are to successfully integrate AI into higher education, they must carefully manage the ethical, social, and legal challenges.

2. Opportunities

Artificial intelligence (AI) has the potential to significantly improve teaching, learning, and research in higher education institutions. The following five points highlight some of the key opportunities for using AI in higher education:

2.1. Personalized Learning and Assessment

AI-powered technologies can enable personalized learning experiences tailored to an individual student's needs, preferences, and progress. Adaptive learning systems can analyze student learning styles, performance, and feedback to provide personalized recommendations, flexible assessments, and feedback (Xeriland, 2018). This granularity can optimize learning paths, promote self-directed learning, and support students in achieving their academic goals.

2.2. Enhanced Student Engagement and Retention

AI can enhance student engagement and retention through various means. Virtual learning assistants, chatbots, and intelligent tutoring systems can provide instant support and guidance to students, promptly addressing their queries and concerns (Xeriland, 2018). AI-powered analytics can also analyze students' behaviors, interactions, and feedback to identify early warning signs of disengagement or attrition and enable proactive interventions to improve retention rates (Xeriland, 2018).

2.3. Greater Effectiveness and Productivity

AI may automate routine operations like grading, content curation, and administrative procedures, saving faculty and staff time and effort and enabling them to concentrate on more strategic and worthwhile endeavors. AI can also automate institutional processes like scheduling,

resource allocation, and student services, boosting production and efficiency throughout the organization (Kuleto et al., 2021).

2.4. Improved learning Outcomes and Student Success

AI can improve learning outcomes and student success (VanLehn, 2011). Adaptive learning systems can dynamically adjust learning content and strategies based on a student's performance data, leading to more effective learning experiences. AI-powered analytics can also provide insights into students' learning behaviors, performance patterns, and intervention effectiveness, which can inform evidence-based decision-making to improve teaching and learning strategies.

2.5. Advancement of Research and Innovation

AI can also advance research and innovation in higher education by analyzing large datasets, identifying patterns, and generating insights. These capabilities help inform research hypotheses, develop experimental designs, and perform data analysis (Alam & Mohanty, 2022). Additionally, AI can promote interdisciplinary research and innovation by facilitating collaboration and knowledge discovery through recommendation systems, natural language processing, and data visualization.

3. Challenges

The higher education field could realize a massive transform because of artificial intelligence (AI). To ensure this technology's responsible and efficient use, decision makers must handle several difficulties that arise from integrating AI into higher education. The following six complications deserve special attention:

3.1. Lack of Comprehension and Awareness

According to researchers one of the biggest obstacles to deploying AI in higher education is the lack of comprehension and awareness among key constituencies, such as educators, administrators, policymakers, and students (Dwivedi et al., 2023). Many people might have inflated expectations or misconceptions due to their incomplete understanding of the potential and constraints of AI. This lack of awareness may hamper AI's adoption and successful deployment in educational settings.

3.2. Uneven Access to AI Technology and Resources

Another challenge is that access to AI technology and resources varies across higher education institutions and regions. Some institutions may lack the necessary infrastructure, resources, or expertise to leverage AI effectively, resulting in a digital divide and exacerbating existing educational inequalities (Božić, 2023). This can limit the potential of AI to improve learning experiences and outcomes for all students.

3.3. Ethical and Privacy Concerns

Using AI in higher education creates ethical concerns, such as the limits that work produced by AI can be considered one's own. For example, is submitting work done entirely through AI considered plagiarism? Additionally, privacy, consent, and security concerns arise when collecting and using student data for AI analytics. Furthermore, biases or discrimination may be reinforced by AI systems, resulting in unfair treatment or outcomes for particular student

populations (Akter et al., 2021). Ensuring the ethical and responsible use of AI in higher education is essential to protect the rights and interests of all university members.

3.4. Resistance to Change

Resistance to change can significantly challenge integrating AI into higher education. Faculty, staff, and students may resist the adoption of AI due to concerns about job displacement, loss of human touch in education, or fear of change (Zirar et al., 2023). Meredith Broussard, associate professor at New York University, says, "AI is just math. I don't think that everything in the world should be governed by math. Computers are really good at solving mathematical issues. But they are not very good at solving social issues, yet they are being applied to social problems. This kind of imagined endgame of *Oh, we're just going to use AI for everything* is not a future that I cosign on" (Ryan-Mosley, 2023).

3.5. Legal and Regulatory Issues

Using AI in higher education also raises concerns with legal and regulatory challenges. There may be issues with data protection laws, intellectual property rights, and liability for content produced by AI (Ebers & Tupay, 2023). Institutions need to navigate complex legal and regulatory frameworks to ensure that their use of AI in education complies with relevant laws and regulations. Surveys show this is a common sentiment among stakeholders (Zirar et al., 2023).

3.6. Cost

Implementing AI in higher education can come with significant costs, including investments in infrastructure, software, and expertise (Williamson, 2023). Institutions, especially smaller or resource-constrained institutions, may face challenges securing funding and resources for AI initiatives. Managing the costs associated with AI implementation and ensuring sustainability over the long term can be a significant challenge for higher education institutions.

4. Recommendations

Artificial Intelligence (AI) in higher education is rapidly increasing, potentially transforming learning and research. However, developing recommendations for AI use is essential to ensure practical and ethical implementation. This section covers data privacy, transparency, fairness, bias, and student engagement based on current research articles and expert opinions. The recommendations highlight the importance of involving stakeholders, establishing clear policies, promoting faculty development, and providing ongoing evaluation and improvement. By implementing the following five recommendations, universities can harness AI's power to enhance student learning and research while ensuring responsible and ethical use.

4.1. Data Privacy and Transparency

If a higher education institution uses AI to collect and analyze large amounts of data, it raises concerns about privacy and transparency (Akter et al., 2021). To ensure responsible and ethical AI use, it is essential for administrators to develop four recommendations for data privacy and transparency:

1. Obtain informed consent from students and faculty, clearly communicating how data will be collected and used.
2. Prioritize data security, implement encryption, provide access controls, and perform regular backups.
3. Maintain transparency about the algorithms employed in AI systems, including their development, validation, and testing processes. This information can help promote understanding and trust in AI use.
4. Establish clear data privacy policies, outline stakeholders' roles and responsibilities, and provide guidance on compliance with regulations such as GDPR and FERPA.

Institutions may ensure that the use of AI is transparent, ethical, and responsible by putting these ideas into practice.

4.2. Fairness and Bias

The employment of AI in higher education raises concerns regarding fairness and prejudice. Biased data produces biased algorithms. In other words, AI algorithms are only as objective as the data developers use to train them (Akter et al., 2021). To ensure that AI is used fairly and without bias, institutions should develop four recommendations to achieve neutrality:

1. Ensure that data used to train AI algorithms is diverse and representative, including data from underrepresented groups.
2. Evaluate AI systems regularly for fairness and bias, using methods such as bias audits and testing for disparate impact.
3. Provide information about how developers designed algorithms in their AI systems to avoid bias.
4. Establish clear policies outlining the roles and responsibilities of stakeholders and guide compliance with regulations such as the Fair Credit Reporting Act and the Civil Rights Act (Fernández et al., 2023).

By implementing these recommendations, higher education institutions can reduce bias in AI algorithms.

4.3. Faculty Development and Engagement

The successful integration of AI in higher education requires professional development and engagement (Kaliraj & Devi, 2023). Four proposals should be developed by institutions to ensure that faculty members have the abilities to employ AI in their teaching and research:

1. Provide opportunities for faculty and staff to learn about AI through conferences, workshops, and training sessions.
2. Persuade instructors to incorporate AI into their research and instruction by providing support through money, resources, and technology access.
3. Deliver ongoing support for faculty, including technical support, coaching, and mentoring.
4. Establish clear policies for faculty development and engagement, outlining the roles and responsibilities of stakeholders and providing guidance on best practices for using AI in higher education.

By implementing these suggestions, universities may assist faculty members to have the tools to integrate AI into their teaching and research, encouraging innovation, and enhancing student results.

4.4. Student Use and Empowerment

AI has the potential to enhance student engagement and empowerment in higher education (Xeriland, 2018). To ensure students using AI are active participants in their learning and are empowered to take ownership of their academic journey, institutions should develop the following four recommendations:

1. Provide students with lessons on AI by including it in the curriculum through assignments and projects on the subject and giving them access to tools and resources for exploring AI.
2. Create options for students with the choice to participate in AI-based tutoring (Intelligent Tutor Systems), personalized learning experiences, and AI-based extracurricular activities, among other alternatives.
3. Empower students to take control of their academic journey by allowing them access to their data, encourage openness in AI systems, and involve them in the decision-making processes surrounding the use of AI.
4. Establish clear regulations that define stakeholder roles and duties, encourage student empowerment, and provide advice on implementing AI in higher education.

By implementing these recommendations, institutions can aid students to become active participants in their learning and entrust them to take ownership of their academic journey, promote engagement, and improve learning outcomes.

4.5. Evaluation and Improvement

To ensure the effectiveness of AI in higher education, institutions must engage in continual evaluation and improvement. These five recommendations can help universities set proper protocols:

1. Establish clear evaluation criteria for AI systems, including metrics for assessing effectiveness, fairness, and privacy (Akter et al., 2021).
2. Evaluate AI systems regularly to ensure they meet established criteria and identify areas for improvement.
3. Involve all stakeholders in the evaluation process, including faculty, students, and IT professionals (Fernández et al., 2023).
4. Assess results to inform improvements to AI systems and future AI use in higher education.
5. Designate clear guidelines for evaluation and improvement, defining the stakeholder roles and responsibilities and offering advice on the best ways to use AI in higher education.

By implementing these suggestions, institutions can adequately evaluate and improve AI used in higher education.

5. Conclusion

AI has benefits and drawbacks for higher education. It has excellent potential to enhance how universities operate. In contrast, implementing AI is more complicated than other technological advancements, and many universities need help with challenges. It would be valuable to conduct further research on the factors that encourage and impede the adoption of AI.

The broader consequences of AI technology, such as fairness and responsibility, should be preserved by universities. Last but not least, AI should be used for the correct purposes. It is tempting to invent problems for AI to solve. However, administrators, staff, faculty, and students in higher education should employ AI to solve previously unresolved issues.

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Brief Biography of Author

Dr. Tim Xeriland leads the educational technology department at North American University (NAU). Dr. Xeriland's research broadly focuses on Intelligent Tutor Systems (ITSs), which use artificial intelligence to tutor students. ITSs model students' cognitions and prior knowledge to personalize instruction. Specifically, he developed an intervention strategy (Formative Reappraisal) for when students become disengaged while using ITSs. His paper, Intelligent Tutor Systems Addressing Student Disengagement: Adding Formative Reappraisal to Enhance Engagement and Learning, suggests the effectiveness of this strategy.

Dr. Xeriland received his Ph.D. from Michigan State University, where he worked with a team from Carnegie Mellon University to investigate ITSs. Before coming to NAU, Dr. Xeriland worked for Dallas College and was on a committee studying the efficacy of students using an ITS (ALEKS) to learn developmental mathematics.

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