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In Memory of

Dr. Glen Irving Earthman

(1927 – 2023)

Professor Emeritus
Virginia Polytechnic Institute and State University

and

Past President of
The International Society for Educational Planning

FROM THE EDITORS

We are in deep sympathy and sorrow to hear the passing away of Dr. Glen I. Earthman, the Publication Manager of Educational Planning. Dr. Earthman was the Professor Emeritus of Virginia Polytechnic Institute and State University and the past President of the International Society for Educational Planning. He was a distinguished scholar and researcher with great contributions to the field of educational leadership and planning. He will forever be remembered with great respect from all his colleagues and students. May he rest in peace.

This issue of Educational Planning is highlighted in exploring technology impact, human diversity and team building in higher education worldwide. The implementation of inclusive education in K-12 education, Malawi, is also reported.

In the first article, Xiao, Shi and Qiu investigated how the technology application in the Internet Plus Era could impact the governance reforms of Chinese universities. The findings of the study indicated that the university leaders perceived the rapid development of technology offering great opportunities for university governance reform.

In the second article, by using a contextual discourse analysis, Assefa was trying to figure out essential reasons as to why human diversity in higher education institutions Ethiopia was beneficial and at the same time challenging. The reviewed literature showed that, despite certain fundamental challenges, human diversity in higher education institutions was extremely useful since it supported knowledge growth and transmission.

The paper by Clegorne, Gruss and Jimenez described teamwork as a leadership-coupled professional competency in post-secondary engineering education. They reported a mixed-method case study which used visual thinking strategies alongside a group project in an elective honors short course. The findings suggested that lower-stakes activities that provide team building functions could increase teamwork skills among undergraduate engineers. The effects of team building were highlighted because it was shown to foster collaboration, communication, and mutual trust among team members, leading to improved productivity, creativity, and innovation.

The study by MacJessie-Mbewe, Ndala, Kamchedzera and Chiwaya was to compare experiences of teachers and learners in the implementation of the National Strategy on Inclusive Education between primary and secondary schools in Malawi. The findings showed that there was no clear difference in the way the National Strategy on Inclusive Education was implemented at both educational levels. Both levels faced challenges of not having a system to identify and assess students for inclusive education; teachers did not have adequate knowledge and skills; training programs at institutions did not offer practical programs; teaching and learning resources for students with special needs were not available; school infrastructure was not disability friendly; and some learners discriminated against their fellow learners.

The articles in this issue have touched on the problems in global higher education planning including technology impact, human diversity and team building. One article also covers the implementation of inclusive education strategies in Malawi. We all can learn from the outcomes of these studies in how educational planning can better be conducted in different parts of the world while taking into account the unique cultural and economic features of the countries.

Editor: Tak Cheung Chan
Associate Editors: Walt Polka and Holly Catalfamo
Assistant Editor: Selahattin Turan

May, 2023

ABOUT THE AUTHORS

Easaw Alemayehu Assefa received his teaching diploma in geography after graduating from Kotebe Metropolitan University, Ethiopia. He continued his education at Addis Ababa University where he received a B.A. degree in Geography and Environmental Studies. In addition, he has a Master's degree in Educational Leadership and Management from Addis Ababa University. He is presently a Ph.D. candidate in educational policy and leadership at the College of Education and Behavioral Studies, Addis Ababa University's Department of Educational Planning & Management. Easaw now has a position as Academic Director at Amigonian International School. At six different private schools over the course of two decades, he has worked as academic director and a teacher. His research interests include diversity management, educational leadership, gender, and school feeding program. Thirteen articles by Easaw have been published in peer reviewed reputable international journals.

Paul Chiwaya is Staff Associate in the University of Malawi, School of Education. He obtained his master's degree in Education Policy, Planning and Leadership (M. Ed. PPL) from the University of Malawi. He is currently pursuing another master's degree in Sociology of Education at the University of Malawi. He worked once as a Research and Evaluation Officer at the Malawi National Examinations Board. His research interests range from education and social inequalities, education and development, to education assessment.

Nicholas Anthony Clegorne is an Associate Professor in the Department of Educational Leadership at Kennesaw State University. Dr. Clegorne's research and scholarship are focused on developing more capable participatory leaders through P-20 curricular design and intervention. Dr. Clegorne's primary areas of study are postsecondary engineering preparation programs and graduate educational leadership programs. Dr. Clegorne's career vision is to become a global leader in research that builds capacity and broadens the participation of P-20 students completing engineering and educational leadership courses of study and entering the workforce. Clegorne seeks to fulfill this vision by shaping practices and policies in retention, informal learning, pedagogy, professional competency, workforce development, and life-long learning. Of particular interest are problem-solving and leadership-coupled professional competencies. Dr. Clegorne's recent research (most recently funded by an NSF REE award) aligns with this theme and investigates professional leadership-coupled competencies and related gaps within Engineering Curricula.

Amy Borello Gruss is an Assistant Professor of Environmental Engineering at Kennesaw State University. Dr. Gruss received an NSF Graduate Research Fellowship Program grant while getting her PhD in environmental engineering from the University of Florida, studying aqueous mercury removal from industrial wastewaters using photochemical processes. Dr. Gruss gained experience in the consulting field working on water and wastewater projects, such as novel disinfection processes at water resource

recovery facilities and alternative disposal methods of treated biosolids in land applications. Currently, Dr. Gruss investigates the fate and transport of microplastics at water treatment facilities and conducts educational research on the development of professional skills in engineering students.

Albert M. Jimenez, PhD, is an Associate Professor of Educational Leadership at Kennesaw State University. His research focuses primarily on teacher and leader evaluation and the improvement of evaluation techniques, the improvement of mathematics assessment for English language learners, and improving school culture through leadership. Dr. Jimenez has a background in many assessment techniques and has served as both a psychometrician and as a Faculty Fellow for Assessment. He recently served on the advisory board of Bridging Theory and Practice: The Rowman and Littlefield Leadership Series. His most recent publications have appeared in the Journal of School Public Relations and the Journal of Educational Supervision.

Elizabeth Tikondwe Kamchedzera is an Associate Professor in the University of Malawi, School of Education. She obtained her Doctor of Philosophy Degree from University of Warwick in United Kingdom. She worked once at Malawi Council for the Handicapped as an Assistant Women and Children with Disabilities Programme Officer. Elizabeth has published in the areas of issues in education, disabilities, special needs education, inclusive education, gender and education, and gender and disability. She has also carried out commissioned research/consultancies.

Samson MacJessie-Mbewe is an Associate Professor in the University of Malawi, School of Education. He obtained his Doctorate of Education Degree (EDD) in Educational Policy, Planning and Leadership from University of Massachusetts and Master's degree in Sociology and Education from Columbia University both from USA. He worked once as a Director of Higher Education in the Malawi Ministry of Education. He has published in the areas of education policy, education and inequalities, gender and education, sociology of education and education and democracy.

Ken Kaziputa Ndala is a Senior Lecturer at the University of Malawi, School of Education. He holds a Doctor of Philosophy Degree from the University of Witwatersrand, RSA, and a Master of Educational Management from the University of Massachusetts, USA. Ken also holds an International Diploma in Education Planning and Leadership from the International Institute of Educational Planning (IIEP). Currently, his research areas are School Based Management, Girls' education, and Inclusive Education.

Mengzhen Qiu is a postgraduate student majoring in higher education at the Institute of Education, Tsinghua University, China. Her main research interests include issues of basic education, higher education from the perspective of philosophy of education, college and department governance, and values education. She earned the bachelor's degree in education from Beijing Normal University. She is currently pursuing a master's degree in the Institute of Education of Tsinghua University. She has studied the use of Internet media labels among Chinese college students. She participated in university-level projects

on college and department governance, national-level projects on values education, and took charge of writing proposal reports, interviewing, analyzing data and writing research reports. She has presented her scholarly work at the Annual Meeting of Philosophy of Education in China and the Annual Meeting of Comparative and International Education in the United States. She plans to continue her research in related fields, strengthen exchanges and cooperation with scholars at home and abroad, and disseminate her scholarly work internationally. Based on her outstanding research and performance during her postgraduate study, she won the first-class comprehensive Scholarship of Tsinghua University.

Zhongying Shi, PhD, is a professor who serves as the Dean of Education at the Institute of Education, Tsinghua University, China. His primary areas of research interests are basic education, values education and philosophy of higher education. He has a significant body of published work in these areas, including more than 200 articles and 10 books. His most significant writings are: The Cultural Characteristics of Pedagogy (1999). Knowledge Transformation and Education Reform (2001, Philosophy of Education (2008), Cross the Gap between High Schools and Universities (2016), Passing Through the Jungle of Education Concepts (2019), Rethinking the Combination of Education and Productive Labor (2022). He has received several academic honors for his major research and teaching achievements.

Hongying Xiao earned her doctoral degree in educational leadership and management (2016) from Tsinghua University, China. She has been honored to be a Global Career Development Facilitator and a China Senior Career Development Mentor. Dr. Xiao is currently serving as a Senior Human Resource Manager of the School of Social Sciences and the Executive Deputy Director of the Center for International Cultural and Science, Tsinghua University, China. She has focused her research on the governance of higher education and has published her work in highly esteemed Chinese and international education journals. Dr. Xiao has also assumed leading roles in significant research grant projects funded by the Chinese Central Government, the Beijing City Government and Tsinghua University.

GOVERNANCE REFORM OF COLLEGES AND DEPARTMENTS IN CHINESE UNIVERSITIES IN THE INTERNET PLUS ERA

HONGYING XIAO
ZHONGYING SHI
MENGZHEN QIU
Tsinghua University, China

ABSTRACT

The purpose of this study is to investigate how the technology application in the Internet Plus Era could impact the governance reforms of Chinese universities. The study takes a qualitative approach by collecting research data through personal interviews with twenty-six educational leaders from fifteen top research universities in China. The data of the study were analyzed by examining the common codes and emerging themes from the interview data to generate the answers to the research questions. The findings of the study indicated that the university leaders perceived the rapid development of technology offering great opportunities for the university governance reform. As part of the governance reform effort, programs of different disciplines need to seriously consider for integration in sharing a big dataset. In the technological development era, the university leaders also urged for practically implementing the authority decentralization policy and the close collaboration between administrative and academic staffs. Recommendations are offered by the researchers to foster university governance reforms in the Internet Plus Era.

INTRODUCTION

"Internet Plus" is a concept first brought up in the Chinese Government Work Report of March, 2015. The Chinese Government made it as a proposal to promote the integration of Internet technology with traditional businesses and industries with the support and encouragement of the Chinese Government. The purpose was to take full advantage of the rapid technology development to booster the growth of businesses and industries to catch up with the world standard. This technological movement as described by the Chinese Government as the "Internet Plus Era" has swept through all levels of higher education in China. With the rapid development and in-depth application of social informatization, internationalization of higher education and organization networking in the Internet Plus Era, profound changes have taken place in higher education in the management and organization of discipline construction, personnel training and scientific research innovation. As a result, industries, universities and research units have worked together collaboratively to educate high caliber talents to meet the social needs. Some universities have started to usher in a new stage of colleges and departments governance to promote the integration of disciplines (Allen & Mintrom, 2010; Birnbaum, & Edelson, 1989). In recent years, Chinese universities have taken the initiative to adapt to the changes in internal and external situations and actively promoted the reform and innovation of colleges and departments governance to meet the challenges of the Internet Plus Era (Xiao, 2017). Centering on the reform measures of "promoting the decentralization of authorities in university governance" and "pluralistic and co-governance", many universities in China have experienced some initial success while at the same time faced many difficulties and challenges (King, 2013; Xiao, 2017). Therefore, China's high-level research universities have taken the lead in the reform of their governance systems particularly at the college and the department levels. This study is intended to investigate the practices of college and department governance reforms in China's first-class universities, the challenges facing them and their ways of overcoming the difficulties in an Internet Plus Era.

REVIEW OF LITERATURE

Governance and Stakeholders of Chinese Universities

Yuan (2012) declared that the charters and the rules of Chinese universities need to be straightly followed and supported by establishing an effective governance system. To reflect on the same point, Liu (2015) and Qin (2013) also claimed that the direction of the governance activities needs to be developed to achieve the university goals. In developing the university governance system, it is essential to stipulate the assignment of responsibilities and the procedures of stakeholders' participation in administrative and academic decision-making (Ouyang, 2008).

Zhao and Yan (2012) stated that the university stakeholders consisting of the administrative staff, faculty members, students and the university cooperative partners need to develop good interaction among themselves for the governance system to be effective. Student participation in decision-making on matters of students' vital interest is an essential part of the university governance (Chen & Chen, 2013). Furthermore, the deans' role in faculty governance, their administrative decisions and their leadership styles have impact on how the university governance works in China (Ren, 2009).

University Governance Reform through Decentralization of Authority

Many universities in the world have recognized the significance of the faculty role in the university governance and have taken essential steps in the decentralization of authorities to the faculty level. The faculty members and their associated schools and departments are highly respected in the governance organization (Schoorman 2013; Tuchman, 2015). Academic committees and administrative task forces have reserved rooms for faculty participation (Maassen, 2000; Schaeffer, 1991). In her study of university governance, Glass (1980) concluded that faculty members, particularly females and non-tenured faculty members, desired to participate in the decision-making processes. However, Han and Xu (2019) observed that the underlying governance logics of Chinese universities were moving from direct to indirect controls and that despite the increasing university autonomy and academic freedom in some areas, the process of decentralization of authorities within the university governance needed to move faster.

Administrative versus Academic Authorities in Higher Education

For every level of university governance, there exist the conflicts between the teaching staff and the administrative staff. However, the two groups of staff understand well that they need to work collaboratively to achieve high efficiency and effectiveness of the governance unit they serve (Allen & Mintrom, 2010; Birnbaum & Edelson, 1989; Brubacher, 1982). The cooperation between faculty members and administrators on university governance is a significant factor contributing to the success of the governance (Del Favero, 2003; King, 2013). The core of the university governance is the rational allocation of responsibilities and effective operation of diversified entities (Corson, 1960; Wang, 2002; Yuan, 2000). Academic staff are held responsible for academic program development and instructional strategies with specific responsibilities to manage academic matters such as student admission, student evaluation and student graduation requirements (Brubacher, 1982; Jaspers, 1960). On the other hand, administrative staff are specialized in their areas of policy and business expertise such as personnel matters, resources, financial and environmental issues.

Big Data and Discipline Integration

Big data are large or complex datasets that cannot be handled by traditional data-processing application software. They contain information assets characterized by a high volume, velocity,

and variety that require specific technology and analytical methods to be transformed to valuable use (Sagiroglu & Sinanc, 2013). Big data currently have a wide array of uses such as finance, education, research, and business analysis. Specifically in the field of education, Baig, Shuib and Yadegaridehkordi (2020) discovered that researchers have been making use of big data to conduct research in the areas of learner's behavior and performance, modelling and educational data warehouse, improvement in the educational system, and integration of big data into the curriculum. At the same time, they also found that the use of big data has reasonably pushed the university programs of different disciplines to closer collaboration. Many university programs have reorganized themselves to work together to avoid the data management mess and upgrade this process to be more efficient in serving downstream analytics, data science and machine learning (Gerard, Martine, & Pentland, 2014). This management process includes data collection, processing, governing, sharing and analysis (Databricks, 2023).

RESEARCH QUESTIONS

Major Research Question:

How does the technology application in the Internet Plus Era impact the governance reforms of Chinese universities?

Research Sub-Questions:

1. How does technological development impact the decentralization of authorities in Chinese universities?
2. How does technological development impact the program integration in Chinese universities?
3. How does technological development impact the collaboration of administrative and academic staffs in Chinese universities?
4. How do the Chinese university leaders recommend expediting the governance reform process to meet the challenges of the Internet Plus Era?

SIGNIFICANCE OF THE STUDY

With the fast development of technology, universities worldwide have been working hard to quicken their paces to catch up with other universities so that they can stay in the forefront of this development to be competitive. The leading research universities in China have launched their effort to face the technological challenges by undergoing university governance reforms to ensure their operational efficiencies. This study is designed to analyze the governance reform effort of these Chinese universities and understand what they have achieved in internal governance reorganization and what they plan for the future development in this continuous technology developing era. What these Chinese universities are experiencing would serve as good lessons for other universities that are planning to meet similar technological challenges.

METHODOLOGY

Research Design

'Research studies that investigate the quality of relationships, activities, situations, or materials are frequently referred to as qualitative research.' (Fraendel, Wallen & Hyun, 2012, p. 426). Based on the descriptions of Fraendel, Wallen and Hyun (2012), the researchers selected a qualitative approach for conducting this study. In the process of this study, in-depth interviews with research participants were conducted and significant files of the respective academic units of the participating universities were reviewed. The researchers intend to seek for a good understanding of the governance reform

activities in the situational perspectives of Chinese universities and their relationship between governance reform and technology development.

Participants

A total of thirty-five university party secretaries, presidents, vice presidents and deans of schools from fifteen top research universities in China were invited to participate in interviews in this study to solicit their viewpoints on the reform of university governance in the Internet Plus Era. Twenty-six of these university administrators agreed to participate in personal interviews to be conducted in this study. This is a good response percentage (74) of university administrators accepting the invitation to participate in the study.

Data Collection

Permission was secured from the fifteen participating universities to access their file documents to review their archival data relating to the university's history, organization, governance structure, systematic norms and subject cultures needed for this study. All the interviews with the research participants were semi-structured and completely open. They were invited for personal interviews with the researchers to offer their perceptions of possible and needed reforms in the university governance to meet the technological challenges of the Internet Plus Era. In some cases, follow-up interviews were conducted to fully explore the interviewees' personal experiences on the structure, operation mechanism, characteristic experience, contradictions of the colleges and departments and the relationships between school and university (Bradburn et al, 1979). Conversations during the interviews were audio-recorded. Hand notes were also taken of the questions and answers during the interviews for comparative verification purposes.

Data Analysis

To seek for an understanding of the background of the developmental trend of the different current governance systems used within the participating universities, the researchers examined the relevant archived data of the participating university colleges and departments through a careful documentary analysis (Creswell, 2009). The qualitative data collected during the interviews with the university administrators and scholars were audio-recorded and hand-noted. The hand-noted draft and the audio-recorded draft were carefully compared to check out possible discrepancies. Recurring terms and phrases were systematically coded. Analysis of the interview data involved the careful observation of the emerging themes of the key elements of the interview data. The interview data were triangulated with the archived documentary data to ensure consistency to provide answers to the research questions.

FINDINGS

The selected documentary files of the fifteen participating universities were reviewed with the understanding of their historical developments, their missions and goals of establishment, their trends of development and their community supports. Research participants were invited to personal interviews with the researchers to freely express their perceptions on the issue of university governance reforms in the Internet Plus Era in China. The foci of the conversation were on how rapid technology development has impacted university governance reforms and how Chinese universities need to respond through governance reform to meet the challenges of the Internet Plus Era. The qualitative data cited from the university documents and the interviews were consolidated and itemized for analysis. As a result of data analysis, themes emerged from the interview data

through examination of majority consensus and the understanding of the university backgrounds. The major findings of the study are reported as follows in response to the research questions.

The Impact of Technology Development on University Governance Reform

First, the interviewees agreed that the technology development called for shared responsibilities of the administrative and academic staffs of the university as to the specific roles each of them had to play in support of this rapid development. However, most of the interviewees recognized that the different levels of staff under their supervision were unclear about their roles and responsibilities in support of technology development. Clarification of their specific roles and responsibilities has to be made from the university level.

Second, the Chinese government and the stakeholders of universities have called for universities to reform their governance through decentralization of authorities. (The Chinese term is referring to the "sinking of authorities".) The intent of this effort is to offer opportunities to staff of colleges and departments to participate in decision making. The understanding is that staff at the colleges and departments levels are the backbones of the university operation and that they are in the forefront to make good decisions including technology development in relation to academic growth. However, according to most of the research participants, the effort of authority decentralization in the university governance has started but much has to be done to move forward to achieve the intended "sinking" level. This provides the answer to Research Sub-Question 1: How does technological development impact the decentralization of authorities in Chinese universities?

Third, the trend of social development has demanded universities to prepare multi-talented graduates who are not only experts of their own fields but also are knowledgeable of work in other related fields. Therefore, colleges and departments of universities have many collaborative opportunities to partner with one another to share in their areas of specializations. The building of the big dataset in technology is simply too big a project for any college or department to handle. It makes good sense for colleges and departments to consider academic program integration and collaboration as an attempt of governance reform. Most of the interviewees have observed signs of cooperation among colleges and departments. However, staffs of different colleges and departments need to be encouraged to move toward increased collaboration. This provides the answer to Research Sub-Question 2: How does technological development impact the program integration in Chinese universities?

Fourth, university governance at any level consists of both administrative and academic staffs. While the administrative staffs are usually in the leadership position to take care of policies, strategic planning and business, the academic staffs concentrate on matters relating to program curriculum and instruction particularly concerns for student learning and success. Conflicting interests sometimes exist between them in the daily operation of their work. Many colleges and departments have tried to put the administrative staffs and the academic staffs to work together to make decisions for a common goal. The interviewees agreed that technology development in this Internet Plus Era has offered a golden opportunity for administrative and academic staffs to work towards completing a big dataset project which facilitates the work of both groups. This provides the answer to Research Sub-Question 3: How does technological development impact the collaboration of administrative and academic staffs in Chinese universities?

University Governance Reforms to Meet the Challenges of the Internet Plus Era

In their interviews with the researchers, the research participants examined the impact of technology development in the Internet Plus Era on university governance reform efforts. They were able to identify the loopholes of the governance reforms and expressed their concerns. They

recommended a quicker pace of university governance reforms to catch up with the rapid technology development. They proposed the following strategies to reform the university governance:

- To re-examine the university goals, charters, rules and regulations at all levels to specifically assign technology responsibilities to staffs of colleges and departments.
- To solidify the procedures of decentralization to empower staffs of colleges and departments to make decisions on technology development for the best benefit of their respective units.
- To seriously consider program integration and collaboration to take the best advantage of big dataset in the Internet Plus era. Discipline barriers need to be overcome.
- To organize technology committees and taskforces at all levels to consist of both administrative and academic staffs in determining the best approach to adopt the latest technology development to facilitate the work of each other.

This provides the answer for Research Sub-Question 4: How do the university leaders recommend expediting the governance reform process to meet the challenges of the Internet Plus era?

In answering the Major Research Question: "How does the technology application in an Internet Plus era impact the governance reforms of Chinese universities?", the answers to all the Research Sub-Questions are summarized. The interviewees in the study agreed that technological development in the Internet Plus Era had a significant impact on the university governance reform. It has helped to expedite the governance reform process of program integration, decentralization of authorities and collaboration of administrative and academic staffs of all university levels.

DISCUSSION

The analysis of data has yielded significant findings relating to technology development and university governance worthy of discussion. Some of these significant findings do reflect on the findings of previous literature on university governance.

Ouyang (2008) claimed that in developing the university governance system, it is essential to stipulate the assignment of responsibilities and the procedures of stakeholders' participation in administration and academic fields. The interviewees in this study also recognized that the different levels of staff under their supervision were unclear about their roles and responsibilities in support of technology development. Governance reforms need to be made to clarify their roles and responsibilities in the management of technology.

Han and Xu (2019) pinpointed that even university autonomy and academic freedom in some areas of Chinese universities were increasing, the process of decentralization of authorities within the university governance remained slow. The findings of this study are in agreement with Han and Xu. The consensus of the research participants in this study indicated that the effort of authority decentralization in the university governance needed to move forward to achieve the intended "sinking" level.

Most of the interviewees in this study have observed that staffs of different colleges and departments need to be encouraged to move toward increased collaboration and program integration as part of the university governance reform in the Internet Plus Era. This is in alignment with Baig, Shuib and Yadegaridehkordi (2020) who discovered that the use of big data has reasonably pushed the university programs of different disciplines to closer collaboration. Many university programs have worked together to avoid the data management mess and upgrade this management process to be more efficient (Gerard, Martine, & Pentland, 2014).

The cooperation between faculty members and administrators on university governance is a significant factor contributing to the success of the university (Del Favero, 2003; King, 2013). The findings of this study also agreed that technology development in this Internet Plus Era has offered great opportunities for administrative and academic staffs to work towards completing a big dataset project to benefit the university, the programs and the students.

RECOMMENDATIONS TO FIELD PRACTITIONERS

In order to meet the needs of the Internet Plus and digital era for the modernization of university education, the organizing models of university teaching and research must be reformed. This reform will lead to the reconstruction of multi-dimensional governance systems such as knowledge production, discipline structure, resource allocation, personnel ownership, and soft and hard environment.

It is recommended that big data platforms of interconnection be constructed, opened and shared for different colleges and departments. Furthermore, interdisciplinary organizations with deep integration of different disciplines could be developed to become academic communities with multi-dimensional and extensive interaction among stakeholders and inter-disciplinaries. The big datasets of artificial intelligence could promote the modernization of the colleges and departments governance systems to multi-dimensions and stimulate the development of academic ecology of the university.

The reform of the university governance has been underway for a while. However, the reform process has not been kept up to the speed as anticipated. It is recommended that a supervisory body of independent authority be established within the governance system to check on the reform progress in this Internet Plus Era on a regular time basis and colleges and departments should be held responsible for self-evaluation of the validity and functionality of their innovation mechanism and commitments.

RECOMMENDATIONS FOR FUTURE STUDIES

The impact of technology on the development of higher education is imminent. It offers significant challenges to educational planners of higher education worldwide. Universities could consider reorganizing their internal governance structure to meet the needs of these challenges in the Internet Plus Era. Much research is needed to explore the possibilities to help educational planners for their decision-making.

First, a similar study to explore the impact of technology on university governance can be conducted with participants selected from the teaching and administrative staffs. Since they are in the forefront of the daily operation of the university, they could offer insightful opinions from different perspectives.

Second, preliminary studies can be designed to examine the effects of an experimental reorganization of university governance structure. Observations can be made to how the process of the reorganization works in terms of efficiency and effectiveness.

Third, governance reorganization can be piloted by employing different models with different colleges and departments or programs in participation. A comparative study can be designed to investigate how each governance reorganization model works in meeting the challenges of technology development.

Fourth, the impact of technology development on the governance of a research university and a teaching university could be different. Studies can be conducted in comparing the extent of technology impact on the governance reorganization of the two types of universities.

IMPLICATIONS TO EDUCATIONAL PLANNING

It should be noted that due to the different missions, strategic positioning, historical perspectives, cultural traditions and developmental stages of different universities, the reform effort of governance systems of one university may undergo different formats and follow different steps from other universities. The findings of this study about the governance reforms in Chinese universities in this Internet Plus Era could serve as good references for other universities in the world. Educational planners of higher education worldwide could learn from the Chinese experiences in tailoring their governance reform effort to reflect the characteristics of their own universities. On the contrary, Chinese universities could also draw inspiration from the governance reform experience of other world-class universities, such as Harvard and MIT, and learn from their useful practices.

CONCLUSIONS

The findings of this study have disclosed the interviewees' perceptions of Chinese university governance reforms in light of the Internet Plus Era. The interviewees have clearly made their governance reform recommendations in labelling the specific technological roles and responsibilities of the staffs, decentralization of decision-making authorities, integration of academic disciplines and collaboration of administrative and academic staffs.

The researchers believe that the ideal governance model of colleges and departments is an academic mission-oriented, fully understood consensus by universities and colleges and departments, joint participation of multiple stakeholders, and an organic whole of scientific decision-making. However, such an ideal governance model is difficult to achieve because the backgrounds of universities are different and the university leaders hold their different beliefs. While the future impact of the Internet Plus Era will continue, future planning effort in university governance reform should aim at realizing the university mission through the strategies of balance, harmony, efficiency and fairness of roles and responsibilities.

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HUMAN DIVERSITY IN HIGHER EDUCATION INSTITUTIONS: AN OPPORTUNITY OR A CHALLENGE? A QUALITATIVE CONTEXTUAL DISCOURSE ANALYSIS

EASAW ALEMAYEHU ASSEFA
Addis Ababa University, Ethiopia

ABSTRACT

Human diversity in education, particularly in higher education, has several positive effects on students' intellectual and social experiences as well as it has quite a number of challenges. Globally, numerous empirical studies have been conducted on the opportunities and challenges of human diversity in higher education institutions (HEIs). However, there is a lack of qualitative contextual discourse analysis. The goal of this brief contextual discourse analysis was therefore to figure out essential reasons as to why human diversity in HEIs is beneficial and at the same time challenging. The study was realized using a qualitative contextual discourse analysis method. To this end, a review and reflection of various published books and peer reviewed articles were used to explore the current worldwide condition of the human diversity at HEIs, the opportunities to teach and employ human diversity in HEIs, and the challenges of doing so. The reviewed literature showed that, despite certain fundamental challenges, human diversity in HEIs is extremely useful since it supports knowledge growth and transmission. The educational planners at HEIs should have a framework for human diversity to maximize resource allocation and develop a community of HEIs that is actively engaged across cultures, fostering productivity and outstanding institutional performance. Therefore, to effectively implement their planning in the context of current globalization, educational leaders in the twenty-first century need to seriously consider the findings of this study on opportunities and challenges of human diversity. Policymakers must also create an inclusive human diversity policy that accurately reflects heterogeneous individuals in order to make the HEIs a sector that values human diversity.

BACKGROUND INFORMATION

In academia, the term "human diversity" is used to characterize a wide range of human phenomena connected to differences between and within the HEIs community (Owen, 2009). Human diversity manifests itself in a variety of ways, including variations in physical characteristics, racial and ethnic origins, cultural backgrounds, and sexual orientations. Some of these human diversity-related characteristics are overt while others are covert or imperceptible (Goodman, 2011). While today HEIs have displayed human diversities, university education was only reserved for the wealthy people before the Second World War (Codling & Meek, 2006). However, the diversity situation in HEIs changed following the war. Goedegebuure and Meek (1997), cited by Codling and Meek (2006), have identified five phases of HEIs human diversity development in the post-war years, including: rapid expansion in the 1950s and 1960s; diversification in the 1960s and early 1970s; consolidation and the establishment of more cost-effective alternatives to the HEIs in the late 1970s; a focus on specific issues such as human diversity, quality improvement, efficiency, and internationalization in the 1980s; and reduction in public expenditure and a focus on efficiency in the 1990s. Meek et al. reference Trow (1995) for a helpful and all-encompassing idea of human diversity in HEIs (2000). He described the human diversity of HEIs as the existence of various postsecondary educational programs and institutions within a state or country, each with a distinct mission to prepare students for a variety of lives and careers, as well as different organizational and funding structures, teaching methods, laws and political affiliations (Meek et al., 2000). This

concept is commonly accepted by planners of higher education since it deals with differences across institutions in the global higher education system. Because every organization, public or private, has a different history, geographic location, faculty, and student body, diversity in HEIs is inevitable. When viewed from an international viewpoint, Ashikali and Groeneveld (2015) noted that there are notable differences in how organizations have formally founded and rebuilt themselves. Because diverse people are viewed as supporting various groups and providing a variety of viewpoints on the performance and quality of institutions, diversity among faculty, admin staff, and students is prized (Robinson–Neal, 2009).

Human diversity representation, climate and intergroup interactions, curriculum and research, and differences in institutional principles and structures are the four types of diversity that frequently occur in HEIs across the world (Kezar & Eckel, 2008; Owen, 2009). The four key types of diversity, proportional, relational, curricular, and structural, can have an influence on the structure, mission, pedagogy, extra-curricular, culture, content, and policies of HEIs as well as on the administrators, the faculty, and the students all over the world. Human diversity is also known as multiculturalism, which is the development of a state of being in which a person is able to engage with people from any culture in any environment and feel at ease doing so because they have the knowledge necessary to do so (Ashikali & Groeneveld, 2015).

HEIs diversity is developed differently in a corporate environment due to the particular character of educational institutions where the students are proportionately much more under the organization's control and influence (Stewart & Carpenter-Hubin, 2000). Human diversity in HEIs must also take into account the significance of appreciating students' diverse identities in order to guarantee that educational approaches recognize and legitimize different identities. This may be done by creating learning techniques that consider group diversity as well as how important it is in the learning environment (Talbot, 2003). In addition to attempting to pinpoint the ideas, attitudes, and presumptions they use to respond to human diversity, faculty members need to be aware of and comprehend their own positions in relation to their students (Krishnamurthi, 2003).

One of the largest opportunities and challenges facing the HEIs continues to be human diversity, with its wide range of situations encompassing biology, psychology, and social structures. It is evident that human diversity is a cornerstone of policy-making at the very highest echelons since so many public and commercial organizations now have diversity or equality officers, programs, or committees (Lamb, 2015). All of this suggests the necessity for accurate scientific knowledge on this subject, not sentimental or politically acceptable sociology.

REVIEW OF RELATED LITERATURE

Research demonstrates that human diversity at HEIs improves intellectual engagement, self-motivation, citizenship, and cultural involvement, and academic abilities like critical thinking, problem-solving, and writing for students and faculty members (Milem et al., 2005). According to Williams (2013), there are three broad kinds of themes on the advantages of human diversity: social justice advantages, educational advantages, and corporate advantages.

Theme 1: The Social Justice Advantages

The social justice viewpoint on human diversity is a technique to comprehend how individuals from various origins may collaborate and produce in ethical and inclusive HEIs environments. This viewpoint prioritizes eradicating injustice and balancing dysfunctional power structures and interactions at HEIs (Williams, 2013). A social justice framework is also a style of thinking and

doing that aims to counter unfairness and inequity while promoting freedom and opportunity for human diversity. It focuses primarily on how individuals, organizations, practices, laws, and curriculum may be used to free as opposed to oppress those who stand to gain the least from our choices. The necessity for HEIs to reflect shifting demographic patterns and address both past and current identity-based societal injustices is referred to as the "social justice justification" (Jackson et al., 2003). The relationship between social justice, teaching, and educational leadership is made obvious by Alvarez (2019), who explains that "social justice is about distributing resources fairly and treating all students similarly so that they feel safe and secure—physically and mentally. Working for social justice in HEIs entails assisting human diversity in critically self-reflecting on how they were socialized into this web of unequal connections and its ramifications, analyzing the oppressive systems, and developing the capacity to reject these inequalities (Sensoy & DiAngelo, 2009).

Theme 2: Educational Advantages

The case for educational advantages is supported by data from studies demonstrating the importance of luring and retaining human diversity from diverse backgrounds in pursuit of educational and human development goals. The practical justification references to the need for HEIs to broaden their appeal in order to compete for the best faculty, staff, and students as well as to better educate them for a diverse and worldwide labor market (Williams, 2013). Additionally, there will be a diversity of personnel, instructors, and students. Because of this, it is possible to argue that human diversity in this specific HEIs' environment has a higher impact and, hence, more significance (Talbot. 2003). This argument supports the notion that human diversity management research in HEIs is particularly relevant and significant. In actuality, multiculturalism seeks to further the value of variety by appreciating and embracing the opinions and contributions of others. Human diversity is only one aspect of multiculturalism. Aguirre and Martinez (2006) expand on the explanation by highlighting the dedication to find, keep, reward, and advance a broad mix of productive, motivated, and loyal workers. Human diversity and multiculturalism have both gained popularity in HEIs and many academics use the words interchangeably to emphasize the importance of the contributions made by various communities to multiculturalism (Oritiz, 2013; Ross, 2014). The authors concentrate on the idea of human diversity because this is not a study on increased multiculturalism. Nevertheless, it is vital to recognize that the idea of multiculturalism and the goal of a multicultural society increase diversity initiatives and lay the groundwork for what the authors refer to as the human diversity in HEIs (Milem et al., 2005).

Theme 3: Corporate Advantages

The business sector continues to prioritize cognitive and social abilities and has given colleges the task of producing such people (Gurin, 2002). According to Hilliard III (2002), it is clear that the business world has learned about the realities of cultural diversity and how crucial it is to create effective answers to this cultural variation. They have acknowledged the need to be prepared via extensive research and training to perceive and respond to cultural realities. While the business community has advanced, the education sector has not yet made the fundamental change that would direct the institutions toward reaching that aim, despite admitting the value of human diversity. Also, the corporate, service, and charity sectors have expressed a pressing need for employees with human diversity who are able to operate in a variety of settings and understand the advantages that come from developing one's critical thinking and creativity in the job. For the last five years, the Ford Foundation has funded a series of international gatherings of delegates from India, South Africa, and the United States, as well as educators, officials, and scholars. These discussions resulted in the publication of two reports: Diversity, Democracy, and Higher Education: A View from Three

Nations--India, South Africa, the United States (Beckham, 2000) and To Form a More Perfect Union: Campus Diversity Initiatives. Understanding the Difference Diversity Makes: Assessing Campus Diversity Initiatives Series (Musil et al., 1999).

THEORETICAL FOUNDATIONS OF THE STUDY

A number of underlying theories have been used to explain the human diversity research, including self-categorization (Jackson et al. 200; Turner et al., 1987), social identity (Tajfel & Turner, 1979), similarity-attraction (Byrne, 1971) and relational demography (Tsui et al., 1992). Individual perspectives on societal and personal identity have been used to differentiate these ideas. Membership in a group has an impact on a person's social identity, but it has less of an impact on their personal identity (Weber et al., 2018). The self-categorization hypothesis states that people join groups based on social comparisons such as status, wealth, and education in order to set themselves apart from their in-groups and others into various useful categories (Turner et al., 1987). Social identity theory states that individuals' viewpoints classify themselves into social groups based on traits including age, ethnicity, and gender (Tajfel & Turner, 1979). People are more drawn to others who share their traits and perspectives than they are to those whose attitudes, beliefs, and experiences differ from their own (Byrne, 1971). The relational demography theory (Tsui et al., 1992) which maintains that demographic factors inside work units have a major influence on a person's behavior and attitudes, is based on these concepts taken together. The drawbacks of HEIs human diversity, such as those related to race, gender, age and country, are also included by these ideas. According to these beliefs, the attraction to in-group members who have similar traits makes homogeneous groups of individuals more productive and less likely to fight than varied ones. These presumptions imply that human diversity has a negative influence on business effectiveness and organizational success.

Some experts are hopeful that human diversity will benefit firms in the long run. Information decision-making, upper echelon theory, and the integration learning perspective supported the optimistic viewpoint (Ely & Thomas, 2001). These theories contend that group members' human diversity encourage the exchange of knowledge, expertise and viewpoints, which fosters creativity and problem-solving skills and enhances group output as well as business and organizational output. The theory has been supported by the upper echelon hypothesis, which claims that senior management team human diversity enhances organizational performance by bringing together individuals with various backgrounds, experiences and beliefs (Knight et al., 1999).

There could be additional theories that try to explain why, after so many years, some people still seem to be opposed to the idea of human diversity. The number of students from underrepresented minorities in colleges may also be challenging to raise for human diversity of other reasons. Although there are theoretical justifications for and barriers to human diversity, the reality of a society that is becoming more diverse and an economic climate that supports human diversity require HEIs to be more proactive in fostering a more diverse faculty and student body.

STATEMENT OF THE PROBLEM

The Latin word diversus, which means "diverse," is the source of the English term "diversity." Hence, human diversity refers to the wide range of distinctions that exist among the many groups of individuals who make up mankind (the human species) (Van et al., 2012). According to the majority of HEIs, creating an atmosphere that broadens students' viewpoints involves recruiting a diverse student body and ensuring that campuses represent a wide range of intellectual and social ideas

(Maruyama et al., 2000). Current data suggested that the HEIs environment is much more diverse, in accordance with several published empirical reports on the exact subject of human diversity in HEIs. When we examine how many HEIs throughout the world have included human diversity into their mission statements, it seems however inadequate. People develop a stronger sense of identity and wellness, and their educational and professional achievements improve when their unique qualities, abilities, interests, and viewpoints are recognized and encouraged. This is why it is crucial to appreciate HEIs' human diversity and study that challenged it (Swann et al., 2004). Also, there have been many empirical studies undertaken internationally on the opportunities and challenges of human diversity in HEIs. Yet, a contextual discourse analysis is lacking. As a result, the shortage of contextual discourse analysis on human diversity in HEIs led to this article writing. This contextual discourse analysis looks at a number of of human diversity-related literature to better understand human diversity's opportunities and its challenges for HEIs. As a result, by offering a high-level overview of human diversity-related opportunities and challenges at HEIs throughout the world, this article contributes to current literature. The findings of this study also demonstrate how human diversity has been a key factor in the advancement of HEIs worldwide. The term diversity inclusive is used to highlight the presence of all human diversity initiatives and great suggestions in HEIs.

OBJECTIVE OF THE STUDY

The paper attempts to examine the opportunities of teaching and learning by integrating human diversity into HEIs. It also aims at exploring the challenges that come with it and underlining the need of human diversity in HEIs. HEIs are also sought as to how they may support human diversity.

RESEARCH QUESTIONS

This study is designed to generate findings to answer the following research questions:

1. What are the opportunities of human diversity in the global HEIs?
2. Does human diversity need to be valued in the global HEIs? If so, how can HEIs help to promote human diversity?
3. Is human diversity in the global HEIs a challenge? If so, how?

METHODOLOGICAL FRAMEWORK

In this study, the contextual discourse analysis technique was employed. It focuses on the long-term exploration of underlying causes and consequences of circumstances, in this case the opportunities and challenges of diversity in HEIs. Contextual discourse analysis, according to Locke (2004), aims to investigate how discursive practices, events, and texts are ideologically shaped by power relations and struggles as well as the frequently opaque causal and deterministic relationships between these practices, events, and texts and larger social and cultural structures, relations, and processes. Discourse analysis focuses on the examination of real texts located in key social institutions like HEIs.

There are three procedures in qualitative discourse analysis. The first primary procedure of the contextual discourse analysis, in accordance with Rogers et al. (2005), is to ascertain the connections between particular texts, interactions, and social practices. The second is to interpret the configuration of discourse practices. The third is to use the description and interpretation to explain why and how social practices are constituted, changed, and transformed in the ways they are. The objectives, potentials, and standards of critical discourse analysis are to monitor theoretical advancement, analytical philosophies, and empirical research methodologies (Van Dijk, 2006).

In terms of methodology, the author utilized a qualitative contextual discourse analysis reflection, which usually falls under the heading of the qualitative inquiry approach. As a result, a number of documents on HEIs human diversity were identified, reviewed and analyzed. An analysis of the current global state of HEIs human diversity issues, the advantages of utilizing and teaching human diversity in HEIs, as well as the challenges associated with doing so was conducted. A total of sixty publications were gathered to search for human diversity's opportunities and challenges at HEIs. A snow-ball referring method was also used to seek other sources that were mentioned by researchers on the reference list.

FINDINGS

Research Question 1: What are the opportunities of human diversity in the global HEIs?

According to some claims, human diversity has an impact on access and justice, instructional strategies and student learning, research objectives, quality, management, social relevance, funding, and other aspects of HEIs (Wood & Meek,1998) Therefore, the value of human diversity research cannot be understated. Human diversity in the curriculum is one of the components of the diversity imperative, which strives to include human diversity into the HEIs' purpose and teaching. This branch, which also offers alternate opinions, strongly emphasizes diversity orthodoxy, or correct methods to see and value every aspect of diversity (Ortiz, 2013). Human diversity curriculum requirements, required trainings for students, professors, and staff, and first-year experience programs are all used to achieve this goal. The goals of human diversity in education go beyond only having a sufficient representation of diverse people on staff and among students to include a better understanding of human diversity and the inspiration for meaningful actions. HEI planners are advised not to take steps beyond immediate solutions and not to ignore the fundamental beliefs and conceptions that underpin the status quo (Brown, 2004).

Many individuals think that rather than being left to chance, human diversity should be deliberately desired, implemented, studied, nourished, and maintained throughout and after implementation (Brown, 2004). Additionally, human diversity is a process that begins with the initial inclusion of people from other groups, but it also calls for institutions that support and encourage their retention by fostering a sense of belonging, as well as strategies that instruct a community to accept and respect human diversity. Students that are exposed to human diversity in the classroom learn about many viewpoints, challenge prejudices, and actively work to alter culture and socially engineer a particular vision for a better society. Because HEIs are tasked with generating the intelligentsia and future leaders of society, their output has an impact on all spheres of life and socioeconomic classes. In a curriculum, human diversity can be taught in one of three ways: addition, integrating, or transforming, according to Krishnamurthi (2003).

Opportunities for Students

According to Ashikali and Groeneveld, there are three main outcomes of human diversity on HEIs. Learning outcomes include active development processes that students engage in while in HEIs, student engagement and motivation, the acquisition and development of intellectual and academic abilities, and the value that students place on these talents after graduation (Ashikali & Groeneveld, 2015). The methods used in HEIs to educate students to participate as active citizens in a society that is becoming more varied and complicated are referred to as democratization results. Students' desire to have an impact on society and the political system, as well as their participation in volunteer and community work, are all examples of citizenship engagement.

A student's level of cultural awareness and appreciation as well as their willingness to participate in activities that promote diversity understanding are both referred to as their level of racial/cultural engagement. Students' comprehension of similar values amongst racial/ethnic groups, the notion that group conflict may be constructive when utilized responsibly, and the realization that differences do not necessarily have to be a bad aspect of society are all examples of compatibility of differences (Kezar & Eckel, 2008).

Gurin's third group of objectives focuses on students' capacity to thrive in a diversified society. This is a reference to how effectively college has prepared students for success in their careers and personal life after graduation, as well as how successfully the college experience has bridged a cultural divide. Two more sorts of outcomes can be added to Gurin's (1999) categories of outcomes. The first shows how students believe that human diversity has improved their HEIs experiences. They are known as process outcomes. Surveys of student satisfaction, assessments of the campus climate, and other data are included.

The majority of human diversity research in HEIs have typically concentrated on how specific students learn and change throughout the course of their academic careers. Recently, a lot of this study has concentrated on how racial diversity on HEIs affect student results. The strongest scientific evidence in favor of maintaining affirmative action in HEIs admissions comes from the area of how human diversity benefits individuals (Robinson-Neal, 2009). The phrase "individual advantages" refers to how having varied HEIs enhances each student's educational results and experiences.

Opportunities for HEIs system

Research suggests that having a more human diversity might be advantageous for HEIs' system. The ways in which human diversity improves HEIs performance are referred to as the institutional advantages of human diversity. Regrettably, there has not been much study on how human diversity in HEIs affects the performance of the institutions. However, there is mounting evidence that shows how human diversity affects HEIs (Ottaviano, 2005). Furthermore, business-related research indicates that human diversity fosters institutional efficiency in a number of different ways (Ortiz, 2013). It is hardly surprising that these inquiries have been led by the corporate sector. Organizations understand that they must find methods to overcome obstacles and embrace possibilities brought by expanding racial, ethnic, and cultural diversity if they want to remain competitive on both a global and local level.

A notable illustration is provided by the RAND Corporation study (Bikson & Law, 1994), which provides important details on the needs for human resources that occur as the global economy expands quickly. In four different geographic locations (Los Angeles, New York, Chicago, and Houston/Dallas), representatives from sixteen multinational firms and sixteen higher education institutions were interviewed for the study. These cities were selected in light of data demonstrating that they were cognizant of and actively reacted to a more global economic environment, and as a result, are likely to be at the forefront of solving globalization challenges. The study centered on four key issues: how these corporations and colleges viewed globalization; the needs for human resources that these perspectives of globalization presented; what corporations and colleges do (or can do) to prepare workers to meet these needs; and what is still needed to produce a diversified workforce that is competitive in a global economy.

When it came to their opinions on globalization, the business and academic groups mostly agreed. They first thought that the nature of economic activity has shifted from a local to an international or global scale. Every economic activity also has to be very adaptable to local circumstances in

order to be successful. These developments have necessitated organizational adjustments as well as quick, adaptable reactions to opportunities and problems. Finally, for all of this to be successful, staff members need to be sufficiently trained to handle these difficulties and the expectations they create (Bikson & Law, 1994). In research on the effects of cultural diversity in workplace settings, Brown (2004) found that three different organizational goals may be achieved by properly managing human diversity. These include the company's legal responsibilities, financial performance targets, and social, moral, and ethical responsibility goals.

According to research results reported by Brown (2004), a person's emotional state and accomplishment results as well as human diversity-related characteristics are related (gender, ethnicity, and age). Levels of job participation, staff turnover, evaluations of promotability, and degrees of value congruence are a few of the stated particular objectives. According to Brown (2004), effectively managing human diversity lowers attrition rates, increases the use of flextime work scheduling, and boosts work team efficiency. There is also a cost advantage for human diversity in HEIs (Brown, 2004).

Research Question 2: Does human diversity need to be valued in the global HEIs? If so, how can HEIs help to promote human diversity?

Human Diversity Needs to be Valued

Human diversity has emerged from obscurity to become a prominent concern of institutions in recent decades. Similar to how numerous laws and initiatives designed to boost the number of individuals who represent various groups and provide an environment that can accommodate this varied population have aided in this shift (Epple, 2008). In a similar vein, HEIs desire to include human diversity into their purpose is frequently stated as a result of changing student demographics, the global economy, a more diversified workforce, and the need for an inclusive educational environment (Krishnamurthi, 2003).

To resist systemic injustice, it is crucial to recognize and undermine systems of power and privilege. These are but a few of the numerous causes (Clarke, 2012; Harvey, 2011; Swain et al., 2013), nonetheless, the great majority of them fit under either the economic or social category. From many angles, human diversity is seen as a direct contributor to economic growth, creativity, and innovation, as a multiplier of worker potential and solidarity, as a need for participation in a global economy, and even as an economic boon to productivity and average pay (Clark, 2012; Ottaviano, 2005). The justifications here on sociopolitical perspective frequently highlight human diversity as a corrective mechanism for historical injustice, a way of maintaining laws and principles, a democratizing force, a multiplier of national potential and solidarity, and the major way to truly ensure fair opportunity (Eppel et al., 2008; Ross, 2014).

The human diversity inclusiveness necessitates taking proactive efforts in order to achieve long-term change. HEIs have played a significant role in this endeavor since, in culture, academic success and economic performance are intricately interwoven. Affirmative action, which is concerned with minorities' recruitment, retention, and economic success, is also an important issue. The pressure that globalization places on HEIs to prepare students for engagement and competition in an increasingly interconnected and dynamic world, as well as problems like rising demographic heterogeneity in the population, are just a few of the issues that a variety of motivating factors address (Swain, 2013).

How Can HEIs Help to Promote Human Diversity?

There are certain parallels that serve to elucidate the issue, even if no two HEIs have the same human diversity policy. Ofori (2000) first classifies the usage of human diversity in HEIs into these four groups: impartiality, commonality, variation, and submariner similarity. Diverse similarity attempts to appropriately take into account cultural differences and similarities in order to better effectively portray the significance of human diversity. Similarity tends to overestimate common ground since it focuses on similarities across cultures rather than differences. By putting more emphasis on difference than resemblance, which can hide common ground, human diversity turns this on its head. HEIs can use any of these paradigms individually or in combination to change how they see human diversity and, consequently, how they behave. A good number of scholars released a comprehensive list of what they believe to be great practices for human diversity that are supported by research based on their experiences in HEIs. To support the human diversity inclusion, they advise HEIs to use a combination of the five human diversity promoting strategies by Fadeeva and Mochizuki (2010) as listed below:

First Strategy: They should start by establishing an institutional commitment to human diversity and inclusion by integrating human diversity into their fundamental mission, creating strategic plans to define goals and guarantee proper budget allocation, and improving data collection and monitoring capabilities.

Second Strategy: In order to promote inclusion, human diversity should also be included into all aspects of the HEIs, such as the faculty, curriculum, and pedagogy, so that students may see themselves mirrored in modern society.

Third Strategy: It should be a goal to build relationships with prospective students, support pipelines in the neighborhood from Kindergarten to Grade 12, and provide ongoing and focused assistance at each crucial stage, including test preparation, admissions applications, and financial aid.

Fourth Strategy: Following enrollment, support services including intelligent course selection to minimize remedial requirements, customized mentorship and tutoring, and first-year experience programs should be made available in order to promote success and retention.

Fifth Strategy: HEIs should foster an inclusive environment by implementing cultural competency initiatives, campus climate assessments, human diversity training and coursework requirements, systems for cultural and emotional support, involving students in climate and diversity decisions, and providing additional funding for the most disadvantaged.

Research Question 3: Is human diversity in the global HEIs a challenge? if so, how?

According to Lowe (1999), without the support of the HEI presidents, the conversation on human diversity would devolve into a never-ending philosophical argument. It is also important to acknowledge that the majority of the most famous HEIs in the nation have a long history and culture of exclusion. It is a form of exclusion that is mostly based on race, but in certain cases is also based on gender and disability. Prejudice based on attributes like not being European-American, macho, or 'normal,' to put it another way. History, on the other hand, cannot be changed.

As a result, according to the HEIs study report, several black students believed that their recruiting had little to do with genuine interest in them and their academic pursuits. To have a student body that was varied was the goal of the recruitment process (Hutchinson & Hyer, 2000).

This point of view is not new, and it supports Dilg's (2000) claim that students of color in HEIs with a predominately white student body are conflicted about how to deal with the impacts of these institutions' expanding demographic bases and the realities of their daily experiences there.

Brubacher (1982), who wrote extensively on the history of HEIs in America, was right on the money when he asserted that HEIs were first intended for members of the upper classes. He effectively catches a historical viewpoint in this remark, one that still somewhat shapes how people in contemporary society assess who is deserving of a higher degree. He quoted a 1948 New York Times article on the worries of the president of Fordham University regarding the growth of student enrolment. Paying many poor students into the currency of HEIs will only debase it, evoking a sort of intellectual Gresham's Law, as the president put it. The just-mentioned explanation captures the mental challenges HEIs have while enacting a human diversity strategy. HEIs must deal with the concerns of the "old white boys' club," who make up the majority of academics and, more crucially, may see diversity as a direct danger to their power, in addition to dealing with natural resistance to change (Platt, 1993).

Women and members of minority groups frequently suffer "stereotype threat," or the worry that they would confirm or be evaluated in line with the stereotype, when a negative stereotype pertinent to their identity exists in a subject of interest. Both people entering a new field and those who are currently successful in it face this stereotype danger. Stereotype danger can be triggered by circumstances or actions that make a person more conscious of their minority status (Spencer et al., 1999). Studies have shown that when stereotype threat is generated, stress and anxiety follow, which affects memory, performance, ambitions, and motivation (Burgess et al., 2012). In primarily white HEIs, minority students frequently feel alone and uncomfortable, and many report encountering prejudice and unequal treatment, according to several studies. Race, ethnicity, national origin, sexual orientation, disability, and other factors can all lead to minorities (Crombie et al, 2003). Human brain imaging demonstrates how situational cues impair cognition by causing blood to migrate from the cognitive to the emotional areas of the brain when stereotype danger is activated (Krendl et al., 2008). A lack of prior good encounters with "outgroup members" (minorities) makes "ingroup members" (majority members) nervous about relationships with minorities, according to research. Members of the majority may react hostilely or avoid encounters with minorities as a result of this worry (Plant & Devine, 2003).

Numerous studies have shown that minority and female professors are much less happy with various elements of their professions than are professors who are mostly men. These elements consist of committee and teaching assignments, decision-making responsibilities, professional relationships with coworkers, promotion and tenure, pay disparities, and general job satisfaction (Sheridan, 2006). According to a survey of minority faculty at universities and colleges in eight midwestern states, USA, there is racism, marginalization, and alienation among teachers of color in institutions with a predominance of white students (Turner, 2002).

CONCLUSION

The primary objective of this qualitative contextual discourse analysis was to identify via empirical data acquired from multiple peer-reviewed published sources to assess the opportunities and challenges of human diversity in the global HEIs setting. Because there are not many contextual discourses analysis on the subject of human diversity in HEIs, this reflection was motivated by that fact. The findings shed important light on what opportunities human diversity in the global HEIs has. For instance, it is frequently advocated that one of the key strategies for satisfying student needs

in a HEIs system is to increase the institution's human diversity. It is believed that a more diversified system is better equipped to give access to HEIs to those with a variety of educational backgrounds and intellectual ability. The concept is that each student will have the chance to work and compete with students from similar backgrounds under a diversified system where HEIs function differently. Every student has the choice to decide which educational environment offers the best chances for success for him or her. It follows from the research that have been evaluated that human diversity in HEIs also fosters social mobility. By offering several opportunities for entry into HEIs and various types of transfer, a varied system promotes both dignified upward and downward mobility.

Since human diversity can adapt to the demands of the job market, it is also viewed as helpful. The claim made here is that in order for society to advance economically and socially, a widening range of labor market specialties is necessary. Accordingly, a homogenous HEIs system is seen to be less equipped than a diversified one to adapt to the different demands of the job market.

The author conducted a comprehensive assessment of diversity-related literature to get a deeper understanding of human diversity's opportunities and challenges on HEIs. So, by providing a quick overview of human diversity-related opportunities and challenges at HEIs throughout the world, this short study fills a vacuum in the literature. The findings of this study indicate that managing human diversity presents highly challenging issues. But since HEIs are an environment where knowledge generation and transfer are at the core of the institution, a range of ideas and viewpoints showed that human diversity had significant opportunity.

The results of this literature review report can offer a variety of insights, but because they were limited by the fact that they were based on human diversity in HEIs as a whole, it may not be fully applied to only one human diversity issue in a single HEI. More in-depth study is required to look at how the human diversity's opportunities and challenges may affect teaching and learning processes at a national level given the expanding number of HEIs in particular and their potential concern about human diversity. In this brief discourse, the opportunities and challenges of including human diversity in HEIs were the only ones made clear. Future analyses on the impacts, practices and perceptions of human diversity in HEIs in line with national HEIs policies and strategies would be beneficial. This article calls on the global HEIs to do more, or at the very least be more proactive, in promoting human diversity among its faculty, staff, and student body, as well as in creating an environment that fosters it by considering the opportunities listed.

IMPLICATIONS TO EDUCATIONAL PLANNING

The findings of this study are crucial in helping educational planners at HEIs to promote tolerance and a greater feeling of security in settings where a variety of human diversity is present. They are also crucial in assisting them in understanding prejudice and the consequences of indulging in it. Also, by educating HEIs students about human diversity across languages and cultures, it promotes intercultural awareness. Regarding human diversity, globalization has brought benefits as well as challenges for educational planners. The availability of a sizable talent pool employed for innovation and creation, inter-functional coordination, complexity, and discrimination at HEIs are some of the new concerns in human diversity. Globalization, migration, aging populations, outsourcing, etc. all contribute to these challenges. To maximize resource allocation and foster a multiculturally engaged HEIs community that will foster productivity and excellent institutional performance, HEIs' educational planners should have a framework for human diversity. As a result, educational leaders in the twenty-first century must comprehend current opportunities and challenges with human diversity in the context of current globalization.

IMPLICATIONS FOR EDUCATIONAL POLICY MAKERS

The promotion of HEIs as an industry that values human diversity is something that policymakers, whether at the national or institutional level, are also accountable for. When studying, every student should have good and useful cultural experiences. HEIs must come up with incentives as well as enablers and drives for proactive human diversity management which needs to be backed by the policy document. The community of HEIs should be knowledgeable about human diversity and serve as role models. HEIs are places that need to foster person-centered learning and act as meeting places for a range of learners. The policy should reflect that human diversity in HEIs is helpful as well as challenging. There is growing recognition of students from underrepresented groups and migrant learners as distinct interest groups in their own right which needs policy intervention. Higher emphasis should also be placed on the economic or professional benefits of human diversity in HEIs at the higher policy manuscript too.

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ENGINEERING TEAMWORK: LOW STAKES TEAMBUILDING ACTIVITIES FOR HIGH-IMPACT UNDERGRADUATE EXPERIENCES

NICHOLAS A. CLEGORNE
AMY B. GRUSS
ALBERT M. JIMENEZ
Kennesaw State University, U.S.A.

ABSTRACT

Teamwork has been described as a leadership-coupled professional competency in post-secondary engineering education. It has been listed among the most critical professional skills by engineering industries and professional organizations. Here, a mixed-method case study is reported, which used Visual Thinking Strategies alongside a group project in an elective honors short course. Descriptive statistics and analysis are further supported by qualitative evaluation, which suggests that lower-stakes activities that provide team-building functions can, increase teamwork skills among undergraduate engineers. Implications for planning more team-building activities into engineering coursework are discussed. Effects for team-building are highlighted because it has been shown to foster collaboration, communication, and mutual trust among team members, leading to improved productivity, creativity, and innovation.

INTRODUCTION

Engineering has become inexorably linked to many facets of daily life in the twenty-first century. If society is to navigate a complex world successfully with overwhelming challenges such as globalization, economic competition, the energy and climate crises, and quantum leaps in information technology and its management, engineers must be integral to leadership in education, government, and industry (NAE, 2020). Appropriately preparing engineers for this task requires a holistic approach to developing professional competencies coupled with leadership development within preparatory programs for engineers.

Conflating leadership development - the shared process by which people work together to overcome challenges and meet goals - with the more managerial-focused endeavor of *leader* development can be exclusive and hinder innovative problem-solving (Garahan & Clegorne, 2020). Good leadership requires a holistic understanding of multifaceted problems, including technical, human, and conceptual elements (Mumford et al., 2000), and competencies to engage them all. Teamwork is among the most important competencies within engineering teams (Clegorne et al., 2021). However, how and when teamwork is taught as an element of shared leadership is critical. A student's developmental readiness and prioritization between task and process can determine how they value leadership as a tool for engaging in complex problems. Here we report the findings of a mixed-method case study during a five-week project which used visual thinking skills and art appreciation as a shared experience that scaffolded a team project for high-achieving engineers in a research-intensive university.

REVIEW OF LITERATURE

The Call for Leadership-Coupled Professional Skills

Engineers must grow more cooperatively and innovatively in teamwork to create complex, creative solutions to today's and tomorrow's challenges. The U.S. Bureau of Labor lists engineering as a high-demand need for the nation (Bureau of Labor Statistics, 2023). Organizations within the

engineering field have also expressed a need for a workforce equipped with professional skillsets that match technical competencies (ASCE, 2021; NAE, 2020; ASEE, 2015). Though governmental and professional organizations have voiced the need for engineers with professional competence, developing the competencies within post-secondary preparatory programs has been less than ideal. Clegorne et al. (2021) further identified specific leadership-coupled competencies such as communication and teamwork.

There is a danger in misconstruing the need for more significant development of leadership-coupled competencies in engineering with a need for more positional leaders or managers. Indeed, the administrative arrangements of most organizations are, and will remain, relatively hierarchical, as is structurally necessary. Such hierarchical frameworks were evident during the development of the leadership-coupled competency framework (Clegorne et al., 2021). Simply mentioning the word "leadership" to CEOs and COOs in engineering firms conjured notions of positional authority and/or top-down management despite accreditation standards that suggest engineers have "an ability to function effectively on a team whose members together provide leadership**"** (ABET, 2023). Here we did not grapple with any call for "flatter" organizations or the disruption of current organizational structures (though such calls are essential to consider broadly). Instead, we focused this project's scope on developing better team leadership, specifically through developing teamwork as a leadership-coupled competency.

Given the expressed calls for teamwork and problem-solving from the engineering industry and professional organizations, one might assume that significant curricular interventions would be employed. However, engineering programs typically have far fewer leadership-related objectives than other undergraduate degrees. U.S. post-secondary engineering programs averaged just 1.3 leadership competencies per program (for comparison, education programs averaged 13, and public service programs averaged 18.7) (Seemiller, 2016). Given these data, it is unsurprising that engineering students develop leadership competency at a slower rate than students in all other undergraduate majors (Stephens & Rosch, 2015). Beyond diminished leadership skills, Stephens and Rosch (2015) found that engineering majors predicted lower co-curricular involvement and fewer mentoring experiences in college. These predictors are alarming because co-curricular involvement and mentoring relationships have been identified as two of the most critical high-impact practices for leadership development in post-secondary settings (Priest & Clegorne, 2015).

Distributed Leadership and Teaming in Engineering Practice

Any organizational structure that uses shared ideation and accountability for bringing about or managing change is now commonly referred to as having distributed leadership (Harris et al., 2007). Spillane et al. (2004) have produced the most developed theoretical work on distributed leadership, defining it as a socially distributed activity that "stretch(es) over the activities of a number of individuals and...is completed by numerous leaders" (p. 20). Practically speaking, aspiring engineers' appeals for stronger leadership skills are centered on this workplace ecosystem (Hacker, 2017). Western's (2013) distributed leadership, particularly his notion of eco leadership, is consistent with the industry's objective for young engineers to contribute in various team roles within the workplace and to modern society (NEA, 2020).

The American Society of Civil Engineers (ASCE) echoes the calls from industry and professional organizations for engineers with better leadership and teamwork competency. The ASCE regularly publishes its Body of Knowledge (BOK) which it defines as "the necessary knowledge, skills, and attitudes required of an individual entering the practice of civil engineering at the professional level"

(Civil Engineering, 2019). A recent content analysis of the current BOK showed that the publication frequently espouses the eco-leadership paradigm. However, the precise language employed to define leader training often undermines distributed leadership principles in favor of a larger organizational ecosystem that privileges technical skills above human skills (Garahan, Clegorne, & Simmons, 2020). Regardless of the authors' intentions, the BOK does not promote the human skills associated with teamwork because the vocabulary used to communicate eco ideas still has roots in the 20th-century hierarchical administrative approaches.

Kotter demonstrates the peril of combining management and leadership (Kotter, 1999). He suggests that management mainly concerns processes and materials, whereas leadership primarily concerns people and connections. In such a paradigm, leadership is more distributed, and management is inherently hierarchical. Solely focusing on leader development is challenging because one assumes that the focused training of this elite class of team members will inspire greater benefits throughout the organization. In such a paradigm, leaders aspire to be ideal amalgams of technical expertise and inspirational charisma as described in the early 20th-century notions of the "Great Man" and "Trait Theories of leadership" (Northouse, 2016; Western, 2013). Both perspectives rely on the idea that leaders are born rather than developed.

In contrast, leadership development promotes a shared process highly contingent on context and perspective (Heifitz et al., 2009; Jepson, 2009; Skipper & Bell, 2006; Western, 2013). It follows that creating a leadership culture throughout the engineering workforce (i.e., Robledo, Peterson, & Mumford, 2012) instead of a cadre of leaders could lead to improved teamwork and resilience in addressing complicated technical problems. For most firms, management and positional authority will always be necessary to ensure the systematic operation of the organization. On the other hand, teams of people rather than technical systems carry out the mission-driven work of companies, and the human network feeds on leadership. Organizations need effective management and leadership.

Understanding the varied possible effects of the BOK's discourse requires comprehending the distinction between management training (sometimes tied to leader development in the BOK) and leadership development that is entangled with good teaming. The focus of leadership education should shift from the leader to the systems, surroundings, and, most importantly, other team members. This creates room for practitioners and educators to stress team connectedness and the idea that being a leader might often entail being a follower and vice versa.

CONCEPTUAL FRAMEWORK

Conceptually, this work relies on Marton's (1981) Critical Realism and, to some extent, Alexander's (2007) Philosophical Pragmatism, as it engages both reality and individuals' conceptions of that reality in equal parts. In other words, the internal relationship between the phenomenon and the experiencer is critical. Our case study surrounded a five-week special course for honors engineering students wherein two primary theoretical applications were employed. First, Abigail Housen's (2002) theory of aesthetic development and accompanying Visual Thinking Strategies (VTS) were used to plan activities for the participants, creating a shared experience and offering a non-pejorative and ambiguous environment to engage complex ideas. Second, Driskel et al.'s. (2010) Collective Orientation (CO) scale also served as a limited quantitative component of this mixed-method case study to measure the change in CO. Observations from the quantitative part of the case were then used to frame participants' teamwork experiences during the study qualitatively.

Aesthetic Development and Visual Thinking Strategies

Housen (2002) demonstrated that given an experience with subjective stimulus, in her case, art, there were predictable stages of an individual's distinct interpretation. In subsequent work, she established that viewers' ways of evaluating images predictably change when exposed to a carefully curated series of VTS materials and artworks. Also, increased aesthetic cognition was followed by increased critical and creative thinking. Philip Yenwine (1997) suggests that individuals expanded abilities that were not generally connected with art during VTS sessions. Housen's findings also remain consistent across the boundaries of race and gender (Housen, 2002). The assertion that VTS is a generally applicable pedagogy for expanding creative and critical thinking provided an attractive model for coaxing out dialogue and expression among team members.

Collective Orientation

Driskell et al. (2010) explained that successful team members value collaboration over independence and favor cooperation over individual controls. The two underlying characteristics of Collective Orientation are affiliation (the preference for teamwork over individual work) and dominance (self-interest, dominance, and control vs. other-interest and cooperation). These two general factors within the Collective Orientation model are corroborated by evidence from other studies. *Getting along* (achieving social acceptance) and *getting ahead* (achieving status and power) are two fundamental themes driving social interaction, according to Hogan (1983). Wiggins and Trapnell (1997) refer to these two broad constructs as dominance/agency and nurturance/communion, whereas McClelland (1961) called these two factors the need for affiliation and the need for power. Driskell et al. (2010) quantitatively linked notions of affiliation, communication, and getting along with more successful teams. The Collective Orientation construct was linked to team productivity across various team tasks. It has been demonstrated that Collective Orientation is linked with efficient team performance in decision-making, negotiation, and execution activities.

PURPOSE OF THE STUDY

This study aimed to determine if VTS activities might increase Collective Orientation among engineering students and how educators can plan practical experiences accordingly. We sought to uncover answers to RQ1 using a pretest/posttest methodology with scores on a Collective Orientation instrument (Driskell et al., 2010). Several qualitative sources provided data that was coded using phenomenographical techniques (e.g., Aflague & Ferszt, 2010; Marton, 1986) to explore potential answers to RQ2.

RESEARCH QUESTIONS

Given the reported growth individuals may experience through participation in VTS activities, we wondered if exploring the subjectivity and ability of art together might lead engineering team members to develop human and interpersonal skills towards expanded Collective Orientation. Were this the case, it would have implications for planning educational experiences within post-secondary engineering curricula. To this end, a mixed-method case study was designed to answer two questions:

Research Question 1 (RQ1): What effect will a five-week course employing Visual Thinking Strategies and an engineering group project have on students' measured Collective Orientation scores?

Research Question 2 (RQ2): What can be learned about planning experiences to develop Collective Orientation from students' varied experiences in the course?

METHODOLOGY

We were provided an opportunity to explore how VTS activities might affect Collective Orientation in a five-week exploratory honors course at a research-intensive southeastern university. This short honors course allowed students to explore topics outside their typical program of study with very little risk to their grade point average, time, or primary program. While participation was required to complete the credentials to graduate with honors at the university, students were given various choices to meet these requirements. Thus, the participants in this study were deeply motivated, high-achieving individuals, a trait common to many engineering students (ASCE, 2021).

Research Design

This study employed a sequential explanatory mixed method design that involved sequentially collecting and analyzing quantitative and qualitative data (Teddlie & Tashakkori, 2009). The design began with collecting and analyzing quantitative data using a Collective Orientation instrument to provide a broad understanding of how the VTS experience changes student teaming dispositions. This quantitative exploration was followed by collecting and analyzing qualitative data captured through semi-structured interviews and analysis of student video logs and assignment examples. The qualitative analysis provided a more detailed and nuanced understanding of the topic. This design was beneficial because there was a need to understand the meaning and context behind the numerical data, especially given the localized case (Creswell & Plano Clark, 2018).

Research Participants

Participants self-selected into this study by signing up for the honors course offering and signing informed consent. It was made clear to all students that participation was not required and would not affect their grades. All 22 members of the class chose to participate. Table 1 provides each participant's brief profile and a pseudonym assigned to maintain their anonymity.

A variety of engineering majors were represented, along with one participant who was not an engineer (indicated by asterisks in the table). Participants were relatively balanced between male and female genders, with one student identifying as non-binary. The researchers acknowledge that unbalanced representation should always be interrogated in social science and recognized as problematic. In this case, underrepresentation was found within the racial makeup of the class. White students were overrepresented, as they are in most engineering majors (NSF, 2021). The course also consisted of students who identified as Black, Asian/Pacific Islander, Middle Eastern/North African, and Hispanic. Considering the small size of the case and overarching demographics within the engineering fields, however, this case was relatively diverse. Given the compact size of the course, there was insufficient statistical power for inferential statistics. However, descriptive statistics and qualitative data provided evidence to draw some initial conclusions.

Table 1 Overview of Participants

Pseudonym	Year of Study	Gender	Race	Engineering Major
Alissa	4th Year	Female	White	Industrial and Systems
Zumena	2nd Year	Female	Middle Eastern/North African	Civil
Eli	2nd Year	Male	Black	Public Relations*
Michelle	4th Year	Female	White	Computer Eng.
Darren	4th Year	Male	White	Civil
Henry	4th Year	Male	White	Computer
Shaun	3rd Year	Male	White	Mechanical
Jessica	4th Year	Female	White	Civil
Melissa	4th Year	Female	Hispanic Non-White	Computer
Hailey	3rd Year	Female	White	Environmental
Devin	4th Year	Male	White	Mechanical
Nia	4th Year	Female	Black	Environmental
Bella	4th Year	Female	Hispanic Non-White	Civil
Thomas	3rd Year	Male	White	Mechanical
Ilsa	4th Year	Female	Hispanic Non-White	Civil
Jamie	4th Year	Female	Hispanic Non-White	Civil
Nola	2nd Year	Female	White	Mechanical/Tech
Arman	2nd Year	Male	Middle Eastern/North African	Mechanical
Maggie	4th Year	Female	White	Civil
William	2nd Year	Male	Asian/Pacific Islander	Computer
Terry	3rd Year	Non-Binary	White	Mechanical
Nicholas	4th Year	Male	White	Industrial and Systems

* Indicates non-engineering major

Research Instruments

We used two instruments to collect data for the case. The first was the Collective Orientation Questionnaire (Driskell et al., 2010). The instrument included 15 five-point Likert-type items that, when averaged, produced an overall score indicative of Collective Orientation (1 = lowest Collective Orientation and 5 = highest) for each participant. We administered the Collective Orientation Questionnaire once at the outset of the course and again after all course activities were completed in a pretest/posttest design. A semi-structured qualitative interview protocol was also used to facilitate focus group interviews with each project group after the experience. Further data was gleaned through observations of class meetings and a review of recorded student video logs, presentations, and class discussions.

Data Collection

Over five weeks, students met each Friday and worked on their projects in between. The initial class meeting was designed to orient the students to the project, provide some background on VTS, and group the students into their project teams. Students selected a campus issue that affected their daily life, such as campus beautification, parking reform, etc., for which they would design and propose solutions at the end of the course. Students also completed the pretest of the Collective Orientation instrument at the outset of day one.

On the second and fourth class meetings, the students met at an on-campus art museum where docents trained in Visual Thinking Strategies guided them through several art exhibits and facilitated a discussion using the tenets of VTS. During a five-minute walk back to the classroom after visiting the art museum, students captured their impressions and reflections from the museum using a video log on their phones. They then participated in group and class discussions once arriving at the classroom.

The third and fifth class days were reserved for group work, class discussion, and presentation of the group projects (on the final day). Once the class was over, each group debriefed with a 40 to 60-minute focus group interview with a researcher about the process. All individual reflections, class discussions, projects, and debriefs were recorded and transcribed.

Data Analysis

After the quantitative Collective Orientation data was collected, we summed and averaged the scores for each participant on both the pretest and posttest instruments. The dependent variable related to RQ1 was *change in Collective Orientation*, hereafter *CO change*. Data hereafter are expressed as the raw change on the five-point scale and the percent change relative to a participant's pretest score. Individual CO change scores were grouped using different independent variables to determine if the data had links of interest. Simultaneously, qualitative data gleaned from recordings of reflections, class meetings, group presentations, and focus groups were analyzed. Verbatim transcripts were coded using qualitative analysis software wherein we identified significant text, statements, and phrases, identified meaning, and assigned codes to the statements. We employed Marton's method of phenomenographical analysis (Marton, 1986; Marton & Booth, 1997), which others have further operationalized (Aflague and Ferszt, 2010). This method involves several steps, as noted in Table 2. Given that the objectives of interest in this study were the second-order perceptions of a phenomenon as opposed to the phenomenon itself, phenomenography was an appropriate methodology for this qualitative study. Phenomenography assumes the existence of a single phenomenon or "reality," in this case, the VTS experience in the honors class.

Table 2: Phenomenographic Analysis (Adapted from Aflague & Ferszt, 2010)

Familiarization	Transcriptions were reviewed several times while listening/viewing the recordings.
Condensation	Significant statements were assigned codes that were short but representative of the statement.
Comparison	Significant dialogue is compared to discern similarities or differences.
Grouping	Similar responses are clustered.
Articulating	There is an attempt to draw out the essence of experience noted in statement groups (code clusters). Grouping and articulating may repeat several times.
Labeling	Themes of essential experience are given appropriate titles.
Contrasting	Essential experiences are compared to ascertain a range of experiences within the exploration.

Ultimately, the final product of this analysis is the development of what Marton (1986) refers to as the outcome space. The outcome space represents the relationship between participant responses and the essences within. This representation is how we can examine the whole picture of the collective human experience of given phenomena in the face of variation across participant expressions of those phenomena (Åkerlind, 2005). This process, using multiple observations of multiple groups and individuals over time and across numerous interviews, settings, and instances, lends trustworthiness and credibility to the findings.

FINDINGS

Descriptive statistics from the case provided evidence toward answering the question about the effect a five-week course employing Visual Thinking Strategies and an engineering group project have on students' measured Collective Orientation scores (RQ1). Collective Orientation - the dependent variable in this portion of the analysis - improved across the participants by an average of 6.67%, and there were some interesting differences in group means. When considering quantitative data, we must consider the small size of the case. It is possible that, over the five weeks of the case study, participants experienced other social interactions outside the case that might have impacted the Collective Orientation. Still, measurable increases in Collective Orientation within this relatively short period warrant further examination. Qualitative inquiry assisted in helping unpack the experiences of the participants and how they attributed their development to the course activities and answer the question regarding what can be learned about planning experiences to develop Collective Orientation (RQ2). While each experience was unique, the experience itself was positively discussed by all participants. The notion that a shared experience within the context of a lower-stakes project emerged among the most powerful themes. Below, we share more specific descriptive statistic comparisons and qualitative examination of the research data.

Quantitative Data

In general, the participants in the case group improved Collective Orientation by 6.67%. Table 3 shares the pretest, posttest, and difference for each individual and each score's mean and standard deviation. Individual differences were apparent in the data. Descriptive statistics were examined across independent variables such as race, gender, project team, and college major. Each of these areas of analysis is discussed below.

Table 3 Participant Scores and Descriptive Case Statistics

Pseudonym	Pretest	Posttest	Change (%)	
Zumena	2.47	2.6	0.13	(5.41%)
Jessica	3.13	3.2	0.07	(2.13%)
Hailey	3.20	3.67	0.47	(14.69%)
Nia	3.20	3.73	0.53	(16.56%)
Ilsa	3.27	3.4	0.13	(4.08%)
Nola	3.40	3	-0.40	(-11.76%)
Shaun	3.07	3.53	0.46	(15.11%)
Devin	3.20	3.8	0.60	(18.75%)
William	3.60	3.47	-0.13	(-3.61%)
Terry	3.73	4.47	0.74	(19.73%)
Nicholas	3.93	3.2	-0.73	(-18.64%)
Alissa	2.27	2.53	0.26	(11.62%)
Eli	2.60	3.13	0.53	(20.38%)
Darren	2.87	3.33	0.46	(16.16%)
Henry	3.07	3.4	0.33	(10.87%)
Thomas	3.27	4.13	0.86	(26.43%)
Arman	3.47	3.47	0.00	(0.10%)
Michelle	2.80	3.4	0.60	(21.43%)
Melissa	3.20	3.87	0.67	(20.94%)
Bella	3.27	3	-0.27	(-8.16%)
Jamie	3.40	3.07	-0.33	(-9.71%)
Maggie	3.47	3.13	-0.34	(-9.71%)
Mean	3.18	3.39	0.21	(6.67%)
StDev	0.40	0.45	0.43	

Race and Gender

Race and gender identity information was collected from participants at the outset of the case. Here, we report the group pretest and posttest means and average CO change as scale intervals and percentages relative to the pretest score. Every subgroup sorted by race or gender showed an increase in CO save for one. There was a single participant who identified as an Asian male that showed a decrease in CO (-3.61%). Given the lack of sample size, it is impossible to say if this trend would carry over to others sharing the same identity. Averages across all other race and gender groupings showed positive change. While a larger, more equally distributed sample might have allowed for an inferential comparison of group means and variations, it was beyond the scope of this case and

intervention. Here it suffices to share that an average positive CO change was recorded across nearly all included races and genders. Tables 4 and 5 provide details of the descriptive statistics broken down by race and gender.

Table 4 Race and Collective Orientation Change

Race	*n*	Pretest		Posttest		Change (%)	
		Mean	StDev	Mean	StDev		
Asian	1	3.60	0	3.47	0	-0.13	(-3.61%)
Black	2	2.90	0.42	3.43	0.42	0.53	(18.28%)
Hispanic	4	3.28	0.08	3.34	0.40	0.05	(1.57%)
White	13	3.18	0.42	3.45	0.50	0.26	(8.19%)
Middle Eastern/Northern African	2	2.97	0.71	3.04	0.62	0.07	(2.30%)

Table 5 Gender and Collective Orientation Change

Race	*n*	Pretest		Posttest		Change (%)	
		Mean	StDev	Mean	StDev		
Female	12	3.09	0.38	3.22	0.42	0.13	(4.14%)
Male	9	3.23	0.40	3.50	0.31	0.27	(8.23%)
Non-Binary	1	3.73	0	4.47	0	0.74	(19.73%)

Project Teams and Participant Majors

A team design project was the primary activity in the honors course that framed the case. Participants divided themselves into teams of five or six and were asked to choose an issue on campus that affected their daily lives. Their task was to develop a strategy to improve the issue as a team and present a proposal to the class at the end of the five-week cycle. The products of this work are less important here than the process by which they were developed and their impact on the learners. The teams named themselves, but here we will use deidentified team names to protect the participant's anonymity. Table 6 presents relevant pretest and posttest descriptive statistics and team means.

While each team yielded positive gains on average, team Gamma showed the greatest increase in CO with an average CO change of 0.41 or 14.01% relative to their pretest score. The "Alpha" and "Beta" teams showed substantial gains of 5% and 5.34%, respectively, and the "Delta" team averaged a smaller increase of 2.09%. Of note here is that the three teams with the highest improvement scores also have relatively few members who decreased their individual CO (no more than two members of any team). Conversely, Team Delta had three members who had meaningful negative CO changes (Jamie, Bella, and Melissa with -8.33, -6.67, and -8.33, respectively). These team members accounted for over half of team Delta's membership.

Table 6 Team membership and Collective Orientation Change

Project Team	Participants	Pretest		Posttest		Change (%)	
		Mean	StDev	Mean	StDev		
Alpha	Zumena, Jessica, Hailey, Nia, Ilsa, Nola	3.11	0.33	3.27	0.43	0.16	(5.00%)
Beta	Shaun, Devin, William, Terry, Nicholas	3.51	0.36	3.69	0.48	0.19	(5.34%)
Gamma	Alissa, Eli, Darren, Henry, Thomas, Arman	2.92	0.44	3.33	0.52	0.41	(14.01%)
Delta	Michelle, Melissa, Bella, Jamie, Maggie	3.23	0.26	3.29	0.36	0.07	(2.09%)

It was also noted that positive CO change increased as teams became more disciplinarily diverse. Team Delta was the least interdisciplinary, with only civil and computer engineers. All three civil engineers (Jamie, Bella, and Melissa) showed decreases in CO – as noted above - while both computer engineers showed large increases (Michelle with 15% and Maggie with 16.67%). The relationship of CO change and major is further discussed below but appeared to intersect with other teams in this case. For instance, team Alpha and team Beta (the teams with moderate average CO increases) represented at least three different engineering disciplines. Further, team Gamma, the team with a very high CO change, boasted five different disciplines, including one public relations member who was not in the engineering or technology fields. Disaggregating CO change data by major (Table 7) helped further unpack this connection.

Table 7 Participant Major and Collective Orientation Change

Major	*n*	Pretest		Posttest		Change (%)	
		Mean	StDev	Mean	StDev		
Civil Engineering	7	3.12	0.35	3.10	0.26	-0.02	(-0.62%)
Computer Engineering/Sci	4	3.17	0.33	3.54	0.23	0.37	(11.63%)
Environmental Engineering	2	3.20	0	3.70	0.04	0.50	(15.63%)
Industrial & Systems Engineering	2	3.10	1.18	2.87	0.47	-0.23	(-7.58%)
Mechanical Engineering	6	3.36	0.23	3.73	0.52	0.38	(11.26%)
Public Relations	1	2.60	0	3.13	0	0.53	(20.38%)

We will note, again, that the small size of this case does not yield the statistical power to conclusively demonstrate a relationship between diverse teams and their ability to affect individual Collective Orientation. However, the team means within this case suggest the relationship to interdisciplinarity should be considered. Some notable differences were observed when the data were disaggregated according to major. Computer, environmental, and mechanical engineering participants averaged substantial gains in CO change relative to their pretest scores (11.63%, 15.63%, and 11.26%, respectively). The public relations student saw even greater improvement, with a CO change of 20.38%. The civil and industrial, and systems engineers in the case, however, showed reductions in CO change. Civil engineers averaged a CO change of -0.62% and industrial and systems engineers averaged a reduction of -7.58%. The trend with civil engineers in the case intersected with group membership as every member within Delta with a reduced CO change score was a civil engineer.

Quantitative Summary

One further note that can be shared has to do with the pretest score and subsequent change in CO. Participant pretest scores were arranged from lowest to highest, and the sample was divided into three balanced strata (7 participants in the low group, 8 in the middle group, and seven in the high group). When we stratified the sample based on pretest scores (Table 8) it became apparent that those with lower initial CO benefitted the most from the case study activities.

Table 8 Pretest Strata and Collective Orientation Change

Group by Pretest	*n*	Pretest		Posttest		Change (%)	
		Mean	StDev	Mean	StDev		
Lower Pretest	7	2.73	0.30	3.13	0.41	0.40	(14.56%)
Moderate Pretest	8	3.22	0.05	3.60	0.37	0.38	(11.92%)
Higher Pretest	7	3.57	0.20	3.40	0.51	-0.17	(-4.76%)

Participants scoring in the middle of the sample also benefited substantially. However, among those with the highest test scores, only one individual increased their CO score, another remained the same, and the remaining five had meaningful losses in Collective Orientation.

Ultimately, we can only address the extant data in this case to address RQ1. Within this small exploratory case, the activities generally increased Collective Orientation among most participants (72.7%). Some individual aspects, particularly college major and the interdisciplinarity of the project team itself, seemed to influence participant CO change more than others. Additionally, the case activities appeared to substantially improve the scores of those with lower and moderate pretest CO (only one of fifteen participants across these groups showed a negative change). However, case activities appeared less successful with high pretest scorers (only one of 7 participants in this group showed a positive change). While the latter may result from compression at the top of the CO instrument's scale, we posit it is unlikely, as even the highest pretest score (3.93) still had plenty of capacity to grow within the scale. Given the smaller size of the study and related lack of statistical power, we will share the findings with the case's qualitative data below.

Qualitative Themes

Theme 1: Subjectivity as a Shared Experience

As might be expected, individual experiences with the art museum and VTS reflections varied widely from participant to participant. Personal reflections of the art exhibits were descriptive of the art and whether they, as an individual, liked it or not. Some participants immediately saw connections between the museum visits and the course objectives. The most interesting responses, however, were discussed with regards to how the experience helped participants to hear different opinions on a given issue. William explained, "When it comes to art, you have to think very abstractly, and you have to think about other people's views and their perspective." Arman was struck by the "different perspectives that people could have on the same piece of art" and went on to share:

> "I really did not like the museum...but what I really enjoyed about it is how everybody's else's thoughts are completely different. They can be completely random, completely unique, but you can kind of see where they're coming out from. And it's really unique how people come up with these ideas because like, it's definitely from like, past experiences and everything."

Alissa agreed saying, "It shows how we would all work together as teams in our future careers...you kind of have to figure out how to work together within that to come up with the best possible product that you can offer." Terry summed up the points that his peers were making by saying:

> "You can just stop personalizing your own ideas...anyone not liking this idea isn't a reflection of their thoughts on me, you know, kind of starts to fade away as we just start to argue about something kind of arbitrary. Like in the museum, you know, deciding one person thinks this, [another] person thinks this...it's entirely subjective and there is no, like, qualitative answer that is anymore correct than another. Then the boundaries kind of go away and we stop personalizing."

This theme was one shared across participants. While, as illustrated above, the personal connections were varied, the core theme was evident. In short, the VTS experiences at the museum provided a shared understanding of subjectivity that carried over into group work and meaning-making as a team.

Theme 2: Participant Thoughts on Group Work

Participants' views on group work could be sorted along a spectrum within the case. At one end, we found participants who were repulsed by group work. In the middle of the spectrum were those amenable and those excited about it on the other side. Those who identified with the first group shared sentiments with participants like Alissa who captured the feeling in two words, "Oh, no!" Zumena expanded the feeling sharing:

> "I usually resent [group work] and I'm immediately like, Oh my God, no, I don't really want to do group work as much....trying to form a group of people who maybe you don't really know as much because you [don't know] their work ethic is you don't know if they're gonna help with the group at all."

Shaun attributed the distaste for group work to a lack of experience, saying, "I think just in general, just a lot of those upper-level classes don't have that many presentations with group members. So you're not always comfortable with working with other people or not." Taking up a position in the middle of the spectrum Michelle simply stated, "like the idea. Usually...I work better just working alone, but my first reaction was it'll be a good chance to kind of help with [teamwork

skills].” In a quote more representative of the side of the spectrum that was excited about group work Nola said, “it’s really cool to just see different people’s perspectives and work to put them all together and create one thing.”

Far more participants than not were dubious of group work, but most also were open to the potential for skill development. The primary source for the openness was a recognition that teamwork was a desired skill within the profession. Devin highlighted this recognition:

> “I attended a talk recently with some engineers from Lockheed Martin, and one of their big focuses was also the professional skills was just making sure that we knew how to properly communicate and work effectively with other people and not just have those other skills of the technical knowledge.”

Despite the discomfort with group work, participants collectively shared that the group project experience was better in the honors course than in past experiences. Zumena concluded her statement above by sharing “But this time it was this time it went really well because everyone had their own ideas, and everyone helped.” Zumena’s statement was representative of most participants, and the sentiment was, “This time was better because everyone pulled their weight”. Given the overwhelming response that the group projects were better received by participants in conjunction with then generally raised CO scores, interview questions sought to further uncover why participants felt the experience was different this time.

Theme 3: Shared Language and Lower Stakes Were the Difference This Time

The theme echoed across every focus group, and all individuals was the VTS experience as a point of departure and its function in the group expectations of the course’s product. The VTS activities at the museum provided a shared experience and explicit example of subjectivity when observing the same scene, whether it was a piece of art or a campus issue. This was discussed earlier in the first theme, but it bears need for repeating because it was such a thread through participant responses. Participants regularly discussed the foundation the experience set for their work. There was no evidence that VTS, specifically, was the operative experience. Rather, VTS served as a shared experience highlighting individual subjectivity.

Rooted in the participants’ shared experiences, the final project in the class was a group PowerPoint presentation on their proposal. The participants agreed that the lower stakes nature of the project and less involved product allowed them more time and freedom to engage with one another. This was compared to the project experiences typically found in their engineering classes, where the products were so extensive, and timelines were so short that they did not have time to come together as a team. Henry captured the point of departure for the theme, sharing, “Well, again, like there wasn’t as much pressure here because it wasn’t like we were trying to make some real, formal, long essay.” Devin summed up the challenges with typical capacity issues in class projects, saying, “You have one person step up very quickly, and then everyone else needs to fall in line and have a part to do and actually do that in that short period of time.” Terry agreed and contrasted the typical experience with the case’s project: “It didn’t feel like that time crunch was on us...we really got the chance to sit and think about it and decide, talk, and communicate.” Zumena drove the point home when she shared, “Having the light workload definitely helped with like throwing out like there was a bigger or larger portion of living out ideas so we could ...find a topic...because we had like a bunch of different ideas at first. If it was maybe a heavier workload or [faster timeline], we may not have found the idea that we did, and it may not have been as completely thought out”. In

short, the quotes above found enthusiastic agreement with all group members in the focus groups and highlighted an emphasis on lower-stakes projects for increasing practical teamwork.

The illustrative comments shared so far in this theme have come from the membership of teams Alpha, Beta, and Gamma. Team Delta's responses to the same interview questions (general questions about how they felt about the project) yielded a different perspective. While the other teams seemed to engage more collaboratively throughout the experience, Delta set aside some time in the beginning to collaboratively plan the project before dividing tasks and operating more independently towards a shared goal. Bella shared:

> "Of the five days, we used three of them solely for collaborating... there was no real rubric to it so it was supposed to be a simulated to the real world as possible...that sometimes came with...lack of communication. And I know that I, as a person...need a lot of structure."

Michelle picked up from there, adding:

> "I agree. Because...you didn't really have a set guideline like you usually do for a lot of projects. [In the honors class] you are kind of able to kind of explore what you wanted to do and how you wanted to do it with this project. But I thought that was nice - the freedom that we had."

Despite the emphasis on early communication, team Delta ended up dividing tasks in favor of personal accountability rather than teamwork. Bella explained, "I think splitting the work into different tasks and like specific goals for everyone individually helped because it created like accountability, and it also made the end goal clear. And like the bigger picture, by separating it into smaller parts." Team processes from that point were described more in terms of feedback and evaluation on individual efforts and pulling together the presentation.

Team Delta's approach, as compared to that of the other teams, is notable because Delta was the team that had the lowest CO change relative to their pretest scores (see Table 6 above). While Alpha, Beta, and Gamma described collaborative processes, contrasting this approach to the division of labor strategy used in their previous engineering team projects, Delta applied their earlier methods in this course instead. Looking back to the quantitative data, the comparison is interesting. Some members of team Delta increased their CO decidedly while others showed substantial losses. We suspect Delta's choice to employ more individualistic strategies is a potential contributor to some members' negative individual change scores and lower average change scores when compared to other teams.

DISCUSSION

The findings above discuss the quantitative and qualitative evidence from this 22-participant mixed-method case study. Ultimately, the quantitative data suggest a general improvement in CO within the case and has highlighted some identity-based and experiential differences in CO change. The qualitative analysis has provided contextual evidence that shared experiences, explicit attention to individual subjectivity in groups, and low-stakes introductory team tasks were appreciated within group projects. Both the quantitative and qualitative data support the notion that educational experiences can be planned to facilitate better teaming in post-secondary educational experiences.

We conducted this case study because we were interested in the applicability of VTS in educational experiences designed to improve leadership-coupled competencies, particularly those associated with teamwork. The exploratory findings of this case suggest that engineers are no different than others when it comes to team-building. However, participant responses illustrate that we often do not plan educational time to develop teams before thrusting them into production tasks.

The result was apparent in the participants' distrust of group work and the rationale they provided to support their concerns. We posit that participant statements about the shared VTS experience, gaining comfort with subjectivity, and positive experience with the lower stakes projects are tantamount to a team-building exercise. It is unsurprising, then, that most (72.7%) of the participants increased their Collective Orientation.

Team-building is widely accepted in the workforce as an essential element of group performance and productivity. Team-building has been shown to increase trust, communication, team effectiveness, and job satisfaction (Little & Luebbe, 2016; Capurro & Britain, 2017; Steffens et al., 2018), and has also been demonstrated to improve the individual outlook on several psychological factors such as optimism, hope, resilience, and self-efficacy (Park & Lee, 2019). Overall, these studies suggest that team-building can positively affect trust, communication, job satisfaction, team effectiveness, and employee well-being. This is further supported by Stumpf and Edwards' (2021) meta-analysis that synthesized the findings of 67 studies on the impact of team-building interventions on team outcomes. Though the meta-analysis found that team-building interventions significantly positively affected team cohesion, communication, and task performance, these effects were more potent when interventions were targeted at specific team processes and contextualized to the team's goals and needs.

IMPLICATIONS FOR EDUCATIONAL PLANNING

Following the discussion above, it is important to note that the effectiveness of team-building interventions can vary depending on the context, task, and individuals involved. This case study provides some limited evidence that one particular pedagogy – Visual Thinking Strategies – and a low-stakes team project supported the development of teamworking skills among a small case of undergraduate engineers. We suggest that finding opportunities to employ low-stakes team-building strategies – those with a minimal impact on students' grades - early in engineering programs and coursework requiring new teams is essential.

Across all participants, group work was a challenging subject. While different individuals were more or less comfortable performing in groups, the participants all shared that high-stakes projects with significant impacts on their course grades were deterrents to team-building. VTS activities appeared useful in helping students recognize subjectivity within problem-solving tasks and catalyzed conversation and team-building. However, we suspect that various other team-building strategies might be equally effective, provided that students are given the freedom and time to explore teaming without the threat of permanently damaging their grades or career aspirations. Taking time to plan the scope and sequence of these interventions carefully is something post-secondary engineering programs should consider.

Providing space to develop collective or team orientation and specific relationships with a given team requires dedicated time and space within college coursework. Engineering curricula are traditionally saturated with the technical skills that the field demands. One might argue that finding the space for proper team-building is impossible given the long list of technical skills required to produce a competent engineer. We posit that more effective teams are more efficient.

The exercise in this study was completed in five 90-minute sessions across approximately one month. Faculty and curriculum designers in post-secondary engineering should consider the overall time savings in the curriculum if human skills are given even the most rudimentary attention in a safe space. Planning such experiences before important group projects will likely have powerful implications. Effective teams spend less time arguing and more time collaborating to produce results.

Corporations in the United States connected to industries that hire engineering graduates understand this (Steffens et al., 2018) and devote time and funds to develop - or remediate - human skills that emerging engineers lack (National Academy of Engineering, 2020). Perhaps higher education institutions should plan for foundations of human skills development with leadership coupled with competency preparation towards teamwork. If industries primarily concerned with production recognize how effective teams save time, so should engineering programs.

CONCLUSION

A quote attributed to Abraham Lincoln reads: "Give me six hours to chop down a tree, and I will spend the first four sharpening the axe." While the tasks at hand for early career engineers are primarily technical, most of the problems they will face require complex and diverse teams to address. Preparing for the work is about more than having the right technical skills. We must plan time to "sharpen the axe" – in this case, develop the human skills – that allow competent technical personnel to flourish, both inside the classroom and beyond.

As team-building approaches are applied in various engineering courses, this line of inquiry would be supported better with further research. Different team-building methods and shared experiences might be explored across different contexts to determine the most effective approaches. Additionally, larger cases with greater samples may provide more generalizable findings. Taking time to explore and plan these experiences within post-secondary engineering curricula may support the development of professional skills that have remained elusive in the curriculum.

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A COMPARATIVE STUDY OF THE IMPLEMENTATION OF MALAWI NATIONAL STRATEGY ON INCLUSIVE EDUCATION BETWEEN PRIMARY AND SECONDARY SCHOOLS

Samson MacJessie-Mbewe
Ken Kaziputa Ndala
Elizabeth Tikondwe Kamchedzera
Paul Chiwaya
University of Malawi, Malawi

ABSTRACT

The purpose of this study was to compare experiences of teachers and learners in the implementation of the National Strategy on Inclusive Education between primary and secondary schools in Malawi using a qualitative methodology with a phenomenological approach. The findings show that there is no clear difference in the way the National Strategy on Inclusive Education is implemented at both educational levels. Both levels face challenges of not having a system to identify and assess students for inclusive education; teachers do not have adequate knowledge and skills for inclusive education; training institutions do not offer practical programs on inclusive education; teaching and learning resources for students with special needs are not available; school infrastructure is not disability friendly; and some learners discriminate their fellow learners with special needs. These findings imply that there is a need to have all teachers trained in inclusive education; teacher training colleges and universities must offer both theoretical and practical inclusive education programs; there must be a system in schools to identify and assess learners; teaching and learning resources for those with disabilities must be provided; and conducive environment in schools that is disability friendly must be created.

INTRODUCTION AND BACKGROUND

The United Nations' 2030 Agenda for sustainable development goals indicates equity and inclusion as key to the socio-economic development of any country. Evidence has shown that education has the potential to transform lives and reduce inequalities. Numerous international declarations recognize education as a right for all children (UN, 1948; UN, 1962; UN, 1989; UN, 2009; UN, 2015; UNESCO, 1990; UNESCO, 1994;). The philosophy of inclusive education (IE) is that each learner should belong to a school, be valued and have a right to learn (UNESCO, 2012).

The 2020 Global Education Monitoring Report warns that education opportunities continue to be unequally distributed and barriers to quality education are still high for many learners (UNESCO, 2020). Globally, 59 million primary school-age children, 61 million secondary school-age children and 130 million upper secondary-age youths are out of school. The report indicates that half of these children and the youth are in Sub-Saharan Africa and that the global share in exclusion for Africa has increased from 24% in 2000 to 38% in 2018.

IE is "a process, actions and practices that embrace diversity and build a sense of belonging, rooted in the belief that every person has value and potential and should be respected" (UNESCO, 2020, p. 11). This agrees with the Malawi Disability Act's definition of IE as "a process of addressing and responding to the diverse needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion from and within education" (2012, p. 3).

In Malawi, IE began in 1950 under the guidance of faith-based organizations. The 1962-1967 Primary Education Development Plan indicates that the quest for Universal Primary Education

(UPE) started during that planning period. Educational plans for the districts indicate that it was impracticable to achieve UPE due to numerous challenges (Nyasaland Ministry of Education, 1963). The commitment of the government then was on learners with disabilities but later embraced IE agenda.

Malawi's commitment to IE became more evident in 2016 when it developed the National Strategy on Inclusive Education to implement the inclusive policies stipulated in the National Educational Policy of 2016 and strategies provided in the National Education Sector Plan of 2008 to 2017. Guided by the principles for embracing IE, the strategy aimed at promoting access, participation, and learning achievement of diverse learners at all levels by 2022. The goal of the strategy was to ensure that learners with diverse needs have equitable access to quality education in inclusive settings at all levels. Therefore, key areas in the strategy are: capacity for IE; learner identification and assessment; teacher education and motivation; enabling environment for teaching and learning; IE management information system; partners for IE; financing IE; and governance and management of IE (Ministry of Education Science and Technology [MOEST], 2016). For the purpose of this study, we considered three key areas as our conceptual framework to understand the experiences from the teachers and learners about the implementation of the National Strategy on Inclusive Education in both the primary and secondary levels. These are: (1) learners' identification and assessment; (2) teachers' knowledge and skills in IE; and (3) promotion of conducive environment for IE.

STATEMENT OF THE PROBLEM

Promotion of IE is a global agenda and Malawi is not lagging behind in championing this agenda. Guided by international protocols, Malawi has developed a number of policy documents and strategies for enhancing IE. One of the policy documents is the National Strategy on Inclusive Education which specifically mentions the need to ensure that learners with diverse needs have equitable access to quality education in an inclusive setting at all education levels. The strategy stresses learner identification and assessment, capacity development for the teachers, a conducive environment, and the commitment of stakeholders in promoting inclusive education at all levels. Little, however, is known on how implementation of the strategy at both primary and secondary levels is being carried out.

PURPOSE OF THE STUDY

The purpose was to understand and compare the implementation of the National Strategy on Inclusive Education between primary and secondary schools in Malawi focusing on the experiences of teachers and learners.

MAIN RESEARCH QUESTION

What is the difference between primary and secondary schools in the way they implement the Malawi National Inclusive Education Strategy?

SPECIFIC RESEARCH QUESTIONS

1. How do primary schools compare with secondary schools in the way learners are identified and assessed for IE?
2. How do primary schools compare with secondary schools regarding the teachers' knowledge and skills in providing IE?

3. How do primary schools compare with secondary schools in promoting conducive environment for IE?

LITERATURE REVIEW

This section presents a review of related literature on the study and it is based on the priority themes from the research questions.

According to UNESCO (2019), inclusive education (IE) is considered a fundamental human right and a key component of the Sustainable Development Goals (SDGs), especially SDG4 which ensures inclusive and equitable quality education and promoting lifelong learning opportunities for all. At both global and national levels, promotion of IE is influenced by international declarations and conventions, including human rights declaration on education (UN, 1948) and the convention against discrimination in education (UN, 1962). The World Bank (2021) notes that many countries have made progress in IE, but there is still a long way to go.

Teachers are usually at the locus of successful implementation of IE and several studies have examined the impact of teacher training on IE practices. For example, Loreman et al. (2021) found that teacher training programs that include practical experience working with students with disabilities can lead to more positive attitudes towards inclusion among pre-service teachers. Similarly, Ainscow et al. (2019) found that teacher education programs that focus on IE can have a positive impact on teacher attitudes, knowledge, and skills.

Another factor in promoting IE is the use of appropriate teaching materials and resources. Schools must ensure that their curriculum and teaching materials are accessible to all students, including those with disabilities (World Health Organization, 2020). This involves using alternative formats, such as braille or audiobooks, or providing assistive technology.

UNESCO (2020) positions IE as critical for promoting equitable and quality education for all children in Sub-Saharan Africa. However, there are challenges to implementing IE in the region like lack of resources, inadequate training, and negative attitudes towards children with disabilities. For example, Kalyanpur and Harry (2020) found that many schools in the region lack basic resources such as textbooks, instructional materials and assistive technology.

Moreover, many teachers in Sub-Saharan Africa have not received adequate training on IE practices which also affects their attitude. For example, Namusisi et al. (2021) found that teachers in Uganda lack knowledge and skills related to IE, which limits their ability to effectively teach children with disabilities. Mbaegbu (2021) adds that, in some cases, both teachers and students have negative attitudes towards learners with disabilities.

In Malawi, IE has recently received considerable attention. According to MOEST (2018), IE is seen as critical for promoting equitable and quality education for all children, including those with disabilities. However, a number of studies have unearthed challenges to implementing IE in the country. Many teachers lack knowledge for identifying learners with diverse needs, in particular, those that cannot be seen by eyes and in turn, such learners receive little or no attention during teaching and learning process. According to Banks et al. (2015), many schools lack basic resources such as textbooks, instructional materials, and assistive technology. Studies conducted in some primary and secondary schools by Chataika et al. (2017), Kamchedzera (2010), and Mbewe et al. (2021) reported similar findings. Another challenge is that many teachers in Malawi have not received adequate training on IE practices. According to Chikasanda (2020), teacher education programs in Malawi do not adequately prepare teachers to teach children with disabilities. These corroborate

earlier findings by Makoko and Chimutu (2007), Chavuta et al. (2008), Kamchedzera (2010) and Mbewe et al. (2021). Their findings also revealed inaccessible infrastructure as additional challenges to IE. In addition, Chataika et al. (2017) found that most teachers claimed to lack knowledge and skills in the use of appropriate methods in inclusive classrooms, which may imply that the needs of learners with special needs in inclusive classrooms were not met.

Negative attitudes towards children with disabilities also pose a significant barrier to IE in Malawi. According to Banks et al. (2015), negative attitudes towards children with disabilities are common in Malawi, which limits their access to education and other services.

Research Design and Methodology

Based on the interpretative paradigm, the study adopted a qualitative methodology with a phenomenological approach. According to interpretivism, individuals try to understand the world they live in and they develop subjective meanings of their experiences (Creswell, 2013). He further stipulates, "the goal of research, then, is to rely as much as possible on the participants' views of the situation" (p. 25). As such, this study intended to uncover how participants interpret the implementation of the National Strategy on Inclusive Education in primary and secondary schools. The main characteristic of qualitative research is to view the world through the eyes of the participants so that the phenomena can be described in terms of the meaning that they have for such participants (Maree, 2007). Qualitative research uses naturalistic inquiry and enables the researcher to generate data in a natural setting (Newby, 2010).

Furthermore, the aim of the interpretative phenomenological analysis is to provide an examination and an account of individuals' lived experiences as an interpretative task since humans can make sense of their environment (Smith & Osborn, 2015). In support, Creswell (2013) asserts, "a phenomenological study describes the common meaning for several individuals of their lived experiences of a concept or a phenomenon." (p. 76) Therefore, in this study, lived experiences of teachers and learners as a group were examined to understand the implementation of IE in primary and secondary schools.

Sampling

Purposive sampling was used to sample schools and participants for the study. Purposive sampling is the process of intentionally sampling a group of people who can provide the best information about the research problem under examination (Creswell, 2013). Therefore, the following were the characteristics that were used in sampling: (1) region which were north (N), centre (C) and south (S); (2) school levels which were primary and secondary; (3) types of secondary schools which were conventional secondary schools (CSS) and community day secondary schools (CDSS); (4) students characteristics which were those with and without special needs; and (5) teacher characteristics which were mainstream teachers and special needs education (SNE) specialist teachers. Table 1 shows how sampling was done.

Table 1: Sampling

Region	No. of Schools Sampled			No. of Headteachers Sampled			N0. of Teachers Sampled			No. of Learners Sampled			Total
	P	S		P	S		P	S		P	S		
		Conv	CD SS		Conv	CDSS		Conv	CD SS		Conv	CDSS	
N	2	1	1	2	1	1	10	5	5	16	8	8	60
C	2	1	1	2	1	1	10	5	5	16	8	8	60
S	2	1	1	2	1	1	10	5	5	16	8	8	60
Total	6	3	3	6	3	3	30	15	15	48	24	24	180

P = Primary Schools; S = Secondary Schools; Conv= Conventional

Note: out of the 30 teachers sampled in primary schools, 6 were SNE specialist teachers. Out of the 30 secondary school teachers sampled, 8 were SNE specialist teachers and all were from CSSs and none was found in the CDSSs.

Data Generation

According to Willing (2013), "data collection in qualitative research is aimed at creating a comprehensive record of participants' words and actions." (p. 91). In order to capture these words and actions, face-to-face interviews, focus group discussions (FGDs) and observations were the techniques used in this study. Researchers were divided into three groups to collect data in the three regions within the same period. Table 2 shows what was involved in data generation.

Table 2. Data Generation

Schools	No. of Headteacher Interviews	No. of FGDs for Teachers	No. of Teachers per FGD	No. of FGDs for Learners	No. of Learners per FGD	No. of Schools whose Environments were Observed
Primary	6	6	5	6	8	6
CSS	3	3	5	3	8	3
CDSS	3	3	5	3	8	3
Total	12	12	60	12	96	12

Interviews for headteachers, and FGDs for teachers and learners were conducted. The items to be observed in the instruments were to identify the differences and similarities. Each interview guide and FGD guide had three sections: (i) learner identification and assessment; (ii) capacity for inclusive education; and (iii) enabling environment for teaching, learning, and assessment. The observation guide included checking for the availability of special resource room and special teaching and learning materials, special toilets, ramps, and general infrastructure accessibility. Twelve headteachers were involved in face-to-face interviews and 12 teacher FGDs were conducted with 5 teachers in each FGD. In addition, 12 learner FGDs were conducted with 8 learners in each FGD. Finally, the environments for 12 schools were observed. The research instruments are included in the Appendices.

Data Analysis

This study followed the data analysis steps presented by Rossman and Rallis (2003) and Creswell (2013). These involve organizing the data, reading the database repeatedly, coding and organizing themes, representing the data, and interpreting the data. In this study, data were first organized from the notes and recordings following the research questions and thereafter, data under each research question were read repeatedly and coded to determine categories or themes. The data were presented in discussion and interpreted to tell a coherent story about the implementation of the National Strategy on Inclusive Education. Even though these steps look linear, there was a process of moving back and forth in order to understand the data and the themes that were emerging. As commented by Creswell (2013), "to analyze qualitative data, the researcher engages in the process of moving in analytic circles rather than using a fixed linear approach" (p. 182).

ETHICAL CONSIDERATION AND TRUSTWORTHINESS OF THE STUDY

Before conducting the study, permission to access the schools was sought from the Ministry of Education (MoE). The MoE then wrote an introduction letter to the schools to introduce the researchers and the study. In addition, permission was sought from headteachers to interview teachers and learners. All participants were informed of the purpose of the study and consent was sought from them to participate in the study. They were also informed that they were free to pull out of the study at any point or that they were free to refuse to answer any question if they felt uncomfortable with it. Furthermore, participants were assured of confidentiality and that their names and the names of their schools would not be revealed in the results of the study.

Accordingly, data collection instruments were piloted with a small sample which was not included as participants of this study and necessary corrections were made to the instruments before data collection. And again, triangulation of sources of data, for example from learners, teachers and school environment, was made to make sure there was consistency in the data generated.

RESULTS AND DISCUSSION

The purpose of this study was to carry out a comparative analysis of the implementation of the National Strategy on Inclusive Education in primary and secondary schools in Malawi focusing on the experiences of teachers and learners. For a comprehensive understanding of this qualitative study, the results and the related discussions are presented together focusing on three major areas (1) learners' identification and assessment; (2) teachers' knowledge and skills in IE; and (3) promotion of a conducive environment for IE.

Learners' Identification and Assessment

The first research question is aimed at finding out how learners were identified and assessed for inclusive education (IE) in primary schools as compared to secondary schools in Malawi. There were a number of themes that emerged in data analysis.

Learners Identified by Teachers in Class

First, the commonly mentioned way of identifying learners for IE was when they were already attending classes. Most of the respondents mentioned that teachers identify the learners in class through their behavior, performance and general observation of their physical characteristics, and there was no difference in the responses of the research participants between primary and secondary schools. For example, secondary school teachers in the center agreed that, "learners most of the times do not avail themselves but during classes when we teachers observe their conditions" (TFGD

1 SSC – 30/05/22). This was concurred by secondary school teachers in the south: "we observe how they behave in the classroom" (TFGD 2 SSS – 01/06/22). This was not different from what primary school respondents said. For example, in the north, they agreed that, "we identify some by their behavior and performance in class" (TFGD 1 PrSN – 31/5/22). Even primary school headteachers in the south agreed that "Teachers help with the identification of IE students during classes but it does not really work because we are talking about teachers that have no skills" (HT2 PrS – 02/06/22).

Learners also agreed that they were identified "through observation of every student's behavior during classes" but they also continued to say, "this is not a good way to identify someone with special needs because there are some you can't find out through observation" (LFGD 2 PrC – 02/06/22).

Learners Identification by Parents

Some respondents explained that parents inform the schools about the condition of their children. For instance, one secondary school headteacher in the centre explained, "Parents at the enrolment stage report the conditions of their children to the headteacher" (HT2 SSC – 01/06/22). In agreement, secondary school teachers in the south said, "Parents report to the school management" (TFGD 1 SSS – 30/05/22). In support, primary school teachers in the south agreed that, "During enrolment or the first time the students attend classes at this school, their parents are asked to provide information about their children" (TFGD 1 PrS – 31/05/22). Similarly, one of the primary school headteachers in the north iterated, "We get information from parents" (HT2 PrN – 02/06/22). This was repeated by primary school learners in the north who agreed that, "learners with special needs come with parents to be enrolled" (LFGD1 PrN – 31/05/22).

Learners Identification by Hospital and Ministry of Education

Very few respondents indicated that learners for IE are identified by the Ministry of Education and hospitals and these were mainly from secondary schools. For example, secondary school teachers in the center indicated, "Others are identified by the Ministry during Standard 8 (Grade 8) exams for selection to secondary schools" (TFGD 1 SSC – 30/05/22). This was corroborated by secondary teachers in the south who stated, "The students are selected from government schools and they come here already identified" (TFGD 2 SSS – 01/06/22). Furthermore, it was only in secondary schools where respondents indicated that learners are identified and assessed by hospitals. For example, secondary school teachers in the center elaborated that, "Doctors also help in identification of IE students. For example, when a visual problem is noticed amongst students, they are sent to hospitals for eye testing" (TFGD 2 SSC – 01/06/22). This was supported by secondary school teachers in the south who indicated, "They (leaners) come already classified" (TFGD 2 SSS – 01/06/22).

Established System for Identification and Assessment of Learners

Nine out of ten respondents in primary and secondary schools agreed that there was no established system for identifying IE students. For instance, secondary school teachers in the south agreed that:

> Even though learners with special needs are identified by teachers, the school does not have an established system of identifying and assessing such learners. The identification is at the discretion of teachers. Thus, they may decide to identify them or not. (TFGD 1 SSS – 30/05/22)

In support, one secondary school headteacher in the south emphatically said, "Honestly we do not have a system. We do the identification of learners unsystematically and there is no assessment" (HT 2 SSS – 01/06/22).

This was concurred by primary headteacher in the north who complained, "No! we do not have! We just do it haphazardly" (HT 1 PrN – 31/05/22). In agreement, the primary school headteacher in the center said, "There is no established system of identifying and assessing learners with special needs at this school" (HT 1 PrC – 31/05/22).

Results under learner identification and assessment show that, in both primary and secondary schools, teachers are the ones who mainly identify children for IE by just observing the behavior, performance and physical characteristics of the learners, especially in class. Sometimes the schools learn about the condition of their learners from parents. While respondents talked about identification, they did not mention any procedure that was used to assess learners for IE. There is therefore no established system of identifying and assessing learners for IE in both primary and secondary schools. This agrees with the quantitative study in South Africa by Matolo and Rambuda (2022) which indicated that even though there was a system put by the policy, but:

> Educators do not effectively use the screen resources such as the learner profile to screen barriers and the Support Needs Assessment is not effectively used to identify and assess the barriers experienced by learners. As a result, support of learners was found to be inadequate. (p.11)

Furthermore, the involvement of the Ministry of Education and hospitals in identifying and assessing learners for IE is very limited to a few secondary schools and this hardly happens in primary schools.

Teachers' Knowledge and Skills in Inclusive Education

The second research question addresses how teachers in primary schools compare with those in secondary schools regarding the knowledge and skills that they have to implement IE.

General Teaching Knowledge and Skills versus Inclusive Education Knowledge and Skills

Apart from teachers of two secondary schools and two primary schools (out of 6 primary schools and 6 secondary schools) who indicated that they had the knowledge and skills of IE, most of the teachers in both primary and secondary schools (4 primary schools and 4 secondary schools) indicated that they did not have adequate knowledge and skills of IE. For example, secondary school teachers from the center agreed that, "We have no knowledge. We need to be trained" (TFGD 1 SSC – 01/06/22). This was supported by secondary school teachers in the north who agreed, "This is why we earlier suggested that teachers need to be trained on IE. We do not have enough knowledge and skills" (TFGD 2 SSN – 01/06/22).

Similarly, teachers in primary schools indicated that they did not have adequate knowledge and skills of IE. For instance, primary school teachers in the center indicated that "We don't have adequate skills because we haven't been trained properly" (TFGD 1 PrC – 31/05/22). In support, teachers in the north said, "Teachers have little knowledge on how to handle different learners with different needs. The learners have different disabilities and teachers might have general knowledge on dealing with all learners" (TFGD 2 PrN – 02/06/22).

The teachers who indicated that they had some knowledge of IE indicated knowledge of teaching in general but lacked knowledge and skills to deal with learners with special needs in

an inclusive manner. For instance, secondary school teachers in the south said, "We teach using methods which are learner centered like role play and discussion where all learners are given a chance to participate" (TFGD2 SSS – 01/06.22). These are general learner centered methods that are accepted but teachers could not come out clearly on how they facilitated discussions with leaners of low-level intelligence.

However, there were a few teachers who showed ability to reach students with special needs when teaching. These were mostly from the south and it was observed that their schools were closer to a special needs education college and probably they had some knowledge through interaction with members of this college. For example, one secondary school teacher in the south indicated that, "When you are teaching and you want to ask a question, you also write it on the board so that some of the students who are deaf should see" (TFGD 1 SSS – 30/05/22). Another primary school teacher added:

> We differentiate. For low vision we use large print; for total blindness we use brail. We also change the questions. For instance, instead of the learner drawing or labeling parts of a grasshopper, we tell him or her to mention parts of the grasshopper. (TFGD 1 PrS – 31/05/22)

Apart from learners without special needs, most of the learners with special needs lamented that they were not satisfied with how teachers taught them. They gave various reasons that showed that teachers did not have adequate knowledge and skills to handle learners with special needs. For example, learners agreed that, "We are not satisfied because most teachers say that they don't spoon feed if you ask them to repeat, hence leaving students with special needs behind" (LFGD 1 SSS – 30/05/22). Other leaners said, "Not satisfied especially to those with visual impairment; they can't see properly on the board but teachers continue to teach without regard of them" (LFGD 2 SSC – 01/06/22).

Furthermore, in another group, learners said, "They (Teachers) speak through the mouth and the deaf do not hear" (LFGD 1 PrC – 31/05/22). Another member with special needs painfully added, "The sign language teachers should be coming to teach us so we could pass in class too" (LFGD 1 PrC – 31/05/22).

Moreover, learners felt that their teachers did not have adequate knowledge and skills of IE because "They write small letters on the board and do not change even if we complain." They also added, "Harsh treatment of students is portrayed by some teachers because they don't have knowledge on how they should handle students with special needs" (LFGD 1 SSC – 30/05/22).

Theoretical Teaching of Inclusive Education in Teachers' Training Colleges/ Universities

Both primary and secondary school teachers' inadequate knowledge in IE was reflected in the way they responded regarding what they learned while in teachers training colleges/universities. All of them indicated that teacher preparation for IE in colleges/universities was inadequate and theoretical. For instance, primary school teachers in the center stated, "At TTC only IE theory was taught with no details. It was just like an introduction to IE" (TFGD 2 PrC – 02/06/22). Teachers in the south agreed. One teacher said, "No hands-on experience. I only learned it theoretically" (TFGD 1 SSS – 30/05/22).

From the results on the knowledge and skills of teachers in IE, it is clear that teachers in both primary and secondary schools did not have adequate knowledge and skills in IE. Those who

claimed to have skills, they referred to general teaching methods which mostly cater for general students and still leaving learners with special needs behind, and no wonder that it was only those students without special needs who were satisfied with how these teachers were teaching them. This inadequacy is a result of not having a deep and practical IE in the teachers' training colleges/ universities and lack of in-service training on IE. These results concur with a mixed method study in Saudi Arabia by Alkahtan (2022) who found that teachers had no sufficient knowledge and ability to teach students diagnosed with Emotional and Behavioral Disorder. Similarly, a quantitative study in Ethiopia by Moti, Merdassa and Dessalegn (2016) found that primary school teachers had slightly moderate knowledge about IE and they rarely practiced IE.

Promotion of Conducive Environment for Inclusive Education

The last research question is intended to investigate how a conducive environment for IE is being promoted in primary schools as compared to secondary schools. Data analysis indicated that, in both primary and secondary schools, the environment was not very conducive for the implementation of the Strategy on IE.

Availability of teaching, learning and assessment resources

One of the provisions for a conducive environment for IE is the availability of resources. However, all the participants interviewed in both secondary and primary schools indicated that there was no adequate teaching, learning and assessment resources for all learners in schools. For example, secondary school teachers in the south agreed that, "The availability is very low." (TFGD1 SSS – 30/05/22). In support, secondary school teachers in the center stated, "Not enough resources." (TFGD 2 SSC – 01/06/22). In agreement, the teachers in the north explained, "We have no resources to cater for all learners" (TFGD 2 SSN - 01/06/22).

The sentiments by secondary school participants were not different from those in primary schools who also indicated that there were inadequate teaching, learning and assessment resources in their schools. As indicated by one of the primary headteachers in the north, "We lack most of the teaching and learning materials for learners." (HT1PrN – 31/05/22). Primary school teachers in the center also agreed that, "The resources are not sufficient at all" (TFGD 1 PrC – 31/05/22).

While all the participants agreed that there were inadequate teaching, learning and assessment resources for all learners in both secondary and primary schools, they bitterly complained that resources for learners with special needs were totally not available. One secondary teacher in the south angrily stated, "We do not even have a resource room but we have almost 41 students with disabilities," and others agreed, "The resources for students with special needs were most of the times forgotten" (TFGD1 SSS – 30/05/22). Learners in secondary schools also concurred that, "No! They are not available and even the teachers for these students are not available" (LFGD1 SSS – 30/05/22).

Similarly, teaching, learning and assessment resources for students with special needs are also not available in primary schools. As stated by one primary school headteacher in the north, "The school does not have teaching and learning materials necessary for learners with special needs" (HT 2 PrN – 02/06/22). In agreement, central primary school teachers stated, "No resources, it's really difficult for students with disabilities" (T FGD2 PrC – 02/06/22).

Our physical observations agreed with what the participants said as the majority of the schools observed had no resource rooms. For the very few schools that had resource rooms, these rooms

do not have resources. Even in school libraries, there are no resources specifically for students with special needs.

As a result of data analysis, it is clear that in both secondary and primary schools there are inadequate teaching, learning and assessment resources for all learners even though they are required to implement IE. Furthermore, most of the schools have no specialist teachers and for those that have them, they are not sufficient to meet the various special needs categories in schools.

Challenges in Accessing School Infrastructure

The study has found that a conducive environment for the implementation of the Strategy on IE is deterred by challenges that students with special needs face in accessing school infrastructure.

In both primary and secondary schools, infrastructure cannot be easily accessed by students with disabilities because they are not disability friendly. Secondary school teachers in the center agreed that, "The wheel-chaired and the visually impaired students use long routes to get to another point just because the school corridors are in bad shape." (TFGD 1 SSC – 30/05/22).

This was further elaborated by primary school teachers in the north who said, "The infrastructure is not user friendly because many classrooms don't have ramps" (TFD 2 PrN – 02/06/22). In addition, primary school learners in the south agreed with their group member with disability who complained, "We bump into one another sometimes and the campus has a lot of steps." (LFGD1 PrS – 31/05/22). Our physical observations found that out of the 12 schools we visited, only three had ramps with the third one only having two ramps for the whole school campus.

There are also no special toilets and bathrooms for learners with disabilities. Primary school learners in the center agreed that, "The toilets and bathrooms are made for regular students. There is no special toilet for those with special needs." (LFGD 2 PrC – 02/06/22). Secondary school teachers in the south agreed that, "Our bathrooms and toilets are for students without disabilities. Some students with disabilities crawl in the unhygienic toilet." (TFGD 1 SSS – 30/05/22). Secondary school learners in the north concurred that "there are no handrails or special seats for those with physical impairments" (LFGD 2 SSN – 01/06/22).

Our physical observations confirmed that there were no special toilets and bathrooms in both primary and secondary schools. In addition, some secondary schools and all primary schools had pit latrines that would make it difficult for students with disabilities to use.

Furthermore, participants indicated that some classrooms have poor lighting hence learners failed to see what teachers wrote on the chalk board. One secondary school headteacher in the center explained, "Poor lighting in classrooms is not favourable to those visually impaired" (HT 1 SSC – 30/05/22). In support, primary school learners in the north agreed, "Even those who sit close to the chalkboard are unable to see" (LFGD 1 PrN – 31/05/22). Our observations also confirmed that some classrooms in both primary and secondary schools had cemented blocks with holes that acted as windows and could not allow enough light in.

Students Safety

When the participants were asked how they ensured safety for students with special needs bearing in mind that some get attacked due to the mystical beliefs that their bodies can make people rich, participants from both primary and secondary schools showed strong commitment to making their students safe.

The commonest way that schools use to keep students with special needs safe is to allocate fellow students to look after them or to encourage them to walk in groups. For instance, secondary school teachers in the south explained, "Those students using wheel chairs with albinism have fellow students are assigned with them to look after them." (TFGD1 SSC – 30/05/22). In support, secondary school teachers in the south said, "We encourage them to be coming to school as well as going home in groups." (TFGD2 SSS – 01/06/22).

Primary school teachers in the north supported, "For example, we have a student with albinism and her friends escort her from home to school and back to home." (TFGD 2 PrN – 02/06/22).

The other ways of protecting students that participants indicated were: Giving students with albinism gadgets like alarm to sound when in danger and providing them with special lotion for their skin; discouraging teasing and bullying; and some schools without fence are considering to construct fences.

However, there were some few learners who indicated that they did not feel safe "because the school is not fenced." (LFGD 2 SSC – 01/06/22). Others indicated that, "We don't feel safe, like the toilets are not clean. We who use wheel chairs use the ordinary toilets. We crawl on dirty floors." (LFGD 2 PrS – 02/06/22).

Learners' Interaction with Students with Special Needs

Most of the respondents in both primary and secondary schools indicated that learners with and without special needs interact freely and do help one another. For example, teachers in the center explained, "They do interact with each other in a good manner; they protect each other. The relation is just good." (TFGD 1 SSC – 30/05/22).

Teachers in the south added, "They (The learners) are used to each other. Some are even learning the sign language." (TFGD 2 SSS – 01/06/22). Even in primary school, some learners indicated that, "We interact with them (the learners with special needs) very well." (LFGD1 PrN – 31/05/22).

However, while most of the teachers and few learners indicated that learners with and without special needs interact well, most of the learners indicated that there are some discriminations of learners with special needs by their fellow learners. For example, some learners in the center said, "There is some discrimination portrayed by some students." (LFGD2 SSC – 01/06/22). Other learners especially those with special needs added, "Some chat with us because they just want to learn sign language, but when we ask them sometimes to interpret for us certain things they don't answer us." (LFGD1 SSS – 30/05/22).

One primary school learner with special needs in the north lamented, with a somber face:

> No! Some learners without special needs tell me openly that 'there is no way you can be chatting with us.' So, I just isolate myself because other learners do not want to interact with learners with special needs…Many learners do not want to chat with me. (LFGD2 PrN – 02/06/22)

Other learners in the same group concurred, "One day during class quiz, some friends without special needs prevented her (learner above) from participating. They said, 'what can you tell us?' She did not participate in that quiz, I remember!" (LFGD2 PrN – 02/06/22).

Even though schools try to promote conducive environment for the implementation of IE, the environment in both primary and secondary schools is still not very conducive. Teaching, learning and assessment resources, especially those for learners with special needs, are not available; learners

face challenges to access school infrastructure; learners with special needs are discriminated against by some fellow learners without special needs. While most of the learners feel safe, there are some who do not feel safe at school. These results agree with the study by Faizefu (2018) in Cameroon which assessed the learning environment of learners and found that it was not conducive to implementation of IE and this affected the performance of students with different disabilities.

CONCLUSION

The purpose of this study was to compare the implementation of the National Strategy on Inclusive Education at primary and secondary school levels in Malawi by exploring experiences of teachers and learners. This was based on the policy direction in the National Education Policy that states that promotion of IE shall be at all levels. This study concludes that there is no remarkable difference in the way the strategy is implemented in both primary and secondary schools. Furthermore, in both levels, the implementation of the strategy has not been successful because it is impeded by a number of challenges. The first challenge is that in both levels of schools, there is no established system to identify and assess learners for IE. Teachers just do what they think can help them identify learners, and assessment is hardly done. The ability to identify learners for IE is recognized in Malawi by the country's Disability Act and IE Strategy as instrumental in ensuring the success of IE. So, it is clearly worrisome to note that at the school level, which is the main implementation locus of IE, systems for identifying learners for IE are deficient. Second, teachers in both education levels do not have adequate knowledge and skills to handle students in an IE manner. This is aggravated by lack of deep and practical IE programs in teacher training colleges and universities. This seems to go against the spirit of the UN convention against discrimination in education which upholds the provision of suitable education that is responsive to the needs of students. Third, the environment in both primary and secondary schools is not conducive to implementing the Strategy on IE. Teaching, learning and assessment resources, especially those for learners with special needs are not available; learners face challenges to access school infrastructure; learners with special needs are discriminated against by some fellow learners without special needs; and while most of the learners feel safe, some do not feel safe at school. This contravenes the agreement of the parties (including Malawi) to the UN convention against discrimination in education and the UN convention on the rights of children to undertake concrete steps in creating schools that offer quality IE to all children.

IMPLICATIONS FOR EDUCATIONAL PLANNING

There are four implications for planning based on the results of the study. First, for effective implementation of IE policies and strategies, planning should be done to establish a system of identifying and assessing learners with diverse needs at the entry level of primary education. The system, among others should provide training to all stakeholders in identifying and assessing learners with diverse needs. The system should trace and follow up the learners as they move to the next level of education, that is, secondary and higher education. The second implication for planning is making sure all teachers receive preservice training that includes aspects of IE and continuous professional development (CPD) for teachers who are already in schools to acquire skills to implement IE agenda. In addition, teacher training colleges and universities should plan to review their curricula to include comprehensive and practical preservice IE to prospective primary and secondary school teachers. This recommendation is rooted in the realization that teachers are a critical ingredient in the successful implementation of IE (UN, 1962; MOEST, 2016; UNICEF, 2012). The third implication for planning is the provision of teaching and learning resources to schools and special attention should be given to resources to cater for learners with different disabilities.

Finally, planning should be done to sensitize learners and communities on how they should handle and interact with learners with special needs to avoid discriminatory tendencies towards them. The need to involve multiple stakeholders in ensuring the success of IE is also promoted by the National Strategy on IE in Malawi. Moreover, the school environment including infrastructure must be made friendly to suit all types of learners' needs. Rendering school infrastructure accessible to all types of learners is recognized as a necessary concrete step in ensuring the success of inclusive education (MOEST, 2016; UNICEF, 2012).

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APPENDICES

Appendix 1: Focus Group Interview Guides for Teachers

Learner Identification and Assessment

i. How are the learners identified and assessed for the special needs?

ii. Do we have an established system of identifying learners with special needs? If yes, describe it.

Capacity for Inclusive Education

i. How would you comment on the knowledge and skills you have to assist learners with special needs?

ii. At the TTC, when you were doing your pre-service training, did you receive enough training on how to teach learners with special needs in your teaching approach? (If not, what is your suggestion? If yes how adequate was the training)

iii. How would you rate yourselves as having the capacity for inclusive education? To a greater Extent or smaller extent? Explain your answer

Enabling Environment for Teaching, Learning and Assessment

i. How would you describe the availability of teaching, learning and assessment resources for IE at this school?

ii. What challenges do students with special needs face when accessing infrastructure at your school?

iii. How do you ensure safety for students with special needs at your school?

iv. How do students with and without special needs interact?

Appendix 2: Focus Group Interview Guide for Learners

Learner Identification and Assessment

i. How were you identified as learners for IE?

ii. Did you follow any established system to identify and assess your learning difficulty?

Teacher Training for Inclusive Education

i. Do you think your teachers have necessary knowledge and skill to help you with your learning?

ii. Out of all the teachers who teach you, how many teachers do you think have the necessary knowledge and skills to handle special needs students at this school?

iii. What other skills are lacking in the teachers to teach well students with special needs?

Conducive Environment for inclusive education

i. How would you describe the availability of teaching and learning materials for your learning at this school?

ii. What challenges do students with special needs face when accessing infrastructure at your school?

iii. Do you feel safe when you are at school? Explain.

iv. How do students with and without special needs interact?

Appendix 3: Key Informant Interview Guides for Head Teachers

Learner Identification and Assessment

i. How would you describe the identification process of learners with special needs at your school?

ii. Do we have an established system of identifying learners with special needs? If yes, describe it.

Capacity for Inclusive Education

i. How would you comment on the knowledge and skills for teachers to assist learners with special needs?

ii. At the TTC, when you were doing your pre-service training, did you receive enough training on how to teach learners with special needs in your teaching approach? If not, what is your suggestion? If yes, how adequate was the training?

iii. How would you rate yourself as having the capacity for IE? To a greater extent? or a smaller extent? Explain your answer.

Enabling Environment for Teaching, Learning and Assessment

i. How would you describe the availability of teaching, learning and assessment resources for inclusive education at this school?

ii. What challenges do students with special needs face when accessing infrastructure at your school?

iii. How do you ensure safety for students with special needs at your school?

iv. How do students with and without special needs interact?

Appendix 4: Observation Guide

Name of the School: _____

Region: _____ **District:** _____

To be observed	Comments
Special Needs Resource Room	
Special toilets	
Ramps	
General infrastructure accessibility	
Special needs teaching and learning materials	

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