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Teacher Education Practices in a Flexible, Higher Education Environment: The Case of the Distance Education Unit of North-West University, South Africa

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Abstract

The Distance Higher Education Unit at North-West University, South Africa, has now been operating for more than twenty years, having been created and crafted in response to the societal and educational context of South Africa. Besides the University of South Africa, this Distance Education Unit is the second largest supplier of distance higher education in South Africa. A substantial part of the unit's activities is teacher education. The coronavirus disease 2019 (COVID-19) pandemic has induced a major reassessment and redesign of the model introduced twenty years ago with the vision to ensure access to growing numbers of students and to supply quality education programmes, making maximum use of available technology to achieve these goals. Against the backdrop of teacher education and challenges surrounding teacher education in Africa and South Africa, this article aims to survey and assess the unit's experience with distance education and the reform induced by COVID-19. The research method used was that of comparative and international education, at the level of the case study. The conclusion reached is that at the North-West University Distance Education Unit, COVID-19 had the effect of accelerating the imperative to harness the best contemporary technology can offer to enhance the teaching-learning effort of the unit. This change has created a new normal, which had a knock-on effect on the contact education sector of the university as well. The majority of students in the Distance Education Unit are education students. This unit constitutes a case study other universities in Africa can learn from in responding to the need to increase teacher education capacity on the continent urgently.

Keywords: Africa; COVID-19; Distance Education; South Africa; Teacher Education

Introduction

The article aims to present the Distance Unit of North-West University, especially regarding teacher education, specifically given its effecting changes induced by COVID-19 as a case study for other institutions of higher education in Africa and beyond to learn from.

The significance of this case study of a South African university engaging in teacher education through distance education, should be assessed against the background of global developments in the higher education sector. For the past thirty-five years, a global higher education revolution has been sweeping all over the world (see Altbach et al. 2010). While the signature feature of this revolution has been massification, one of the other features has been the growth of distance education. Using the technology of the age in creating distance education reaching more students, was one of the major factors making the massification of higher education possible. Noteworthy is that the largest university in the world by enrolment numbers, Indira Ghandi National Open University in India, which commenced as late as 1985 and currently boasts 4.3 million students, is a distance education institution.

In the global higher education landscape, higher education in Africa is, for a variety of reasons, mostly underdeveloped. The global, aggregate, gross, tertiary education enrolment ratio stands at 40 per cent (2020 figure, latest available figure at time of writing) (World Bank 2023). As per region, it stands at 87 per cent for North America, 78 per cent for Europe, 54 per cent for Latin America, and 51 per cent for East Asia-Pacific (Ibid.). By contrast, for the Middle East-North-Africa region the figure comes to 41 per cent, and for Sub-Saharan Africa to 10 per cent (Ibid.). What aggravates the situation is the growing number of young people in Africa. The recently published report of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), setting out a blueprint for education globally in the future, draws attention to the estimation that by 2050 the continent will be home to the world's largest share of youth (UNESCO 2021b: 134).

While distance education seems like the obvious way to accelerate the supply of education in such a disadvantaged continent, the irony is that in Africa distance education is comparatively undeveloped, and literature on distance education in Africa and South Africa is scarce (Janse Van Rensburg and Ogutto 2022: 285). Cheung, Lam, Lau and Shim, (2010) remark that despite the increasing use of web-based distance learning and its potential to revolutionise higher education, the uptake

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of blended learning by institutions in the past has been very slow, not only in Africa but globally. That makes it essential that instances of distance education be subjected to case studies, to be showcased as examples and also as to how to craft the supply of distance education to the societal contextual ecology of Africa, and how to overcome impediments in the supply of quality distance education.

For universities as suppliers of teacher education programmes, reaching out at the possibility of distance education has at the present junction in history become imperative because of two reasons or developments. First, the COVID-19 Pandemic has resulted in educational institutions harnessing everything modern technology has to offer, to enhance their education effort; actually, precipitating or accelerating a movement towards distance and hybrid forms of education, where the pressure and opportunities had in any case already existed for quite some time. Second (and here the demographic pressure on the continent referred to above should be kept in mind), the existing shortage of qualified teachers and the looming bigger shortage in the near future necessitates using what distance or hybrid modes of education can offer, to supply a corps of teachers in adequate numbers and of satisfactory quality regarding their education. In Sub-Saharan Africa the share of primary school teachers with minimum qualifications declined from 85 per cent in 2000 to 65 per cent in 2020 (UNESCO 2021b: 23)—the UNESCO report on the state of education globally referred to earlier, identifies that as one of the challenges facing education in the world today (*Ibid.*).

This article commences with a clarification of key concepts used in the manuscript, and an explanation of the theoretical framework and research methodology. Then one of the effects of COVID-19, namely to pressurise institutions of higher education to capitalise on the possibilities of modern technology by employing distance education to increase the supply and the quality of higher education, will be discussed. The Distance Unit of North-West University is then presented as a case study.

Three sets of explanations regarding the theoretical framework and research methodology of this article are apt. The first is an explanation of comparative and international education upon which this article is based, then how the single case study fits into the framework of comparative and international education, and finally the epistemology of the case study.

Theoretical framework

Comparative and international education entails threefold perspectives or views on education. These are an education system perspective, a contextual perspective, and a comparative perspective (Wolhuter et al. 2018). Comparative and enternational education focuses in the first place on education *systems*. As, even in this age of globalisation, the most salient education systems are *national* education systems, most studies in the field are about national education systems (Carnoy 2019). However, education systems do not exist in isolation, nor did these systems emerge out of nothing. Education systems have been created by society to fulfil certain functions. Education systems are also shaped by societal and contextual factors or forces. Education systems can therefore only be comprehended within the societal contexts in which they function.

Therefore, the second perspective of comparative and international education is the contextual perspective. It is a field of study that explores education systems and practices in different countries and cultures, with the aim of understanding and analysing the similarities and differences between them. Education systems are being studied in their interrelationships with the societal contexts in which they are embedded. The contextual perspective emphasises that education is not a universal or homogeneous phenomenon but rather a complex and dynamic process that is shaped by local and global contexts. This involves comparing education systems and practices across different contexts and analysing how these contexts influence the development, implementation, and outcomes of education policies and practices.

Third, various education systems in their intertwinement with societal contexts, are being compared with one another. That is the comparative perspective, and is done to derive general and nuanced statements about education systems—societal and contextual interrelationships. The comparative perspective is an important aspect because it allows researchers to identify common challenges and opportunities for improving education globally, and to learn from the successes and failures of different education systems and policies. By comparing education systems and practices across different contexts, researchers can also gain insights into the complex interactions between education and broader societal issues such as inequality, social mobility, and economic development.

Research methodology

From the above comparative and international education has a dual nature: it denotes simultaneously an object of study and a method of study. To understand its value as method of research in the constellation of research methods, it is useful to turn to the scheme of Robson (2011). Robson (2011) distinguishes between research methods at three levels of the research process. These are methods of data collection, data processing, and data interpretation. The value of the comparative method in education comes to the fore at the level of data interpretation, while scholars of comparative and international education can serve themselves from a plethora of methods at the levels of data collection (such as interviews, surveys, documentary analyses, or literature surveys) and data processing (such as coding, inferential statistics, descriptive statistics, and content analysis). In this article, a literature study and the authors' own experience (a combined total of more than forty years) of the Distance Education Unit at North-West University and the case study method figure at the levels of data collection and processing.

Turning to the case study method and how it fits with comparative and international education, as was stated above the most salient geographical level at which comparative and international education research takes place is the national level. However, as the oft-cited and well-known Bray and Thomas Cue (Bray and Thomas 1995) indicate, comparative education research can take place at any of eight geographical levels, being (1) world regions/continents; (2) countries; (3) states/provinces; (4) districts; (5) schools or institutions; (6) classrooms; and (7) individuals. Wolhuter (2008) later extended this level to include a global level at the beginning. At each of these levels, the structure of (an) education system(s) can be detected, as well as a surrounding societal context, with which the education system stands in a reciprocal interrelationship. In this study, the focus is on a single institution (level five in the Bray and Thomas Cube).

In the corpus of published literature in the field, at all levels most studies are single-unit studies (see Wolhuter 2008). Although this is an apparent annulation of the comparative in comparative education, comparativists frequently cite several reasons why single-unit studies still qualify as comparative research. These include the fact that such studies contribute to the total stock of knowledge of education in particular contexts, and that such studies tie into general concepts used in comparative

educational scholarship. Their value also lies in the fact that these studies contribute to the refinement and modification of existing theories and ultimately to the creation of new theories when existing explanatory frameworks prove to be inadequate (Arnove 2001). The general belief is further that, rather than meaning the study and comparison of two or more education systems, the term 'comparative education' denotes the study of reciprocal education and society relations in particular contexts. This is evident in David Wilson's (1994) analysis of definitions of comparative education and Erwin Epstein's (1992) study on the meaning of the term comparison in comparative education.

This article then reports on a case study. A case study can be defined as a research approach that is used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context (Crow et al. 2011). It is an established research design that is used extensively in a wide variety of disciplines, particularly in the social sciences.

One of the purposes or roles of comparative and international education is to learn from foreign or other education projects, to improve the domestic education project (for example, see Milne and Mhlolo 2021; Sappleton and Adams 2022). One proviso for such an exercise, speaking from the perspective and corpus of knowledge of comparative and international education, is that contextual similarities and differences between the exporting system or project and that of the importing system or project should be thoroughly accounted for (Li and Pilz 2019: 613-614; Schweisfurth and Elliot 2019)

The impact of COVID-19

At the beginning of 2020, the world was caught off-guard by the unexpected and sudden outbreak of the coronavirus (SARS-CoV-2) pandemic. Two years after the outbreak, by April 2022, a global life loss of over six million had already been reported, and more than 491 million cases of which 426 859 271 people have recovered (Worldometers 2022).

Schools are among the worst institutional casualties of complex disasters (Ensign and Jacob, 2021). When the immediate response to COVID-19 of governments around the globe was to impose (often hard) national lockdowns, the immediate reaction to the outbreak of COVID-19, in the field of education, followed suit and

and closed education institutions. Statistically, this has affected about 91 per cent of the global student population (UNESCO 2020a, 2020b). At its peak, COVID-19 forced 1.6 billion students out of school, the largest education disruption since World War II. Even a full year after the outbreak, by March 2021, the education institutions of 26 countries were still fully closed (UNESCO 2021a). The general response, particularly at the level of higher education, was that education should move towards a distance education model, with teaching taking place online and learning taking place at home.

It should now be noted that technology to enhance higher education employing a hybrid model of teaching and learning, has existed for a long time, but the uptake was slow. Education is known to be a notoriously conservative sector of society, showing itself and its institutions to be resistant to change. This dinosaur-like depiction of education institutions was perhaps best publicised in Benjamin's satirical book *The Saber Tooth Curriculum* (1939), which has assumed classical status in education because he brought to the fore what he saw as the obsolete and anachronistic features of institutions of education. One example to illustrate this—pertinent to the theme of this article—the dominance of traditional lecture theatres, with students sitting at desks or in rows facing a professor behind a lectern, characterising the architecture of even those institutions regarded as leading world-class universities. The word 'lecture' is derived from the Latin word lectura, meaning 'to read'. Ironically, this was an arrangement predating even the invention of the printing press in the mid-fifteenth century when the only way to duplicate literature was for the lecturer to read the text word for word, and for students to copy the text verbatim. Already becoming obsolete with the invention of printing in 1453, more than five hundred years later, today, it is still the dominant mode of teaching at universities. Thus also, while technology was available for the movement towards distance and hybrid models, and while there was much pressure to do so from the point of view of the social and economic demand for higher education, the uptake had been slow. The reasons are manifold and the obstacles in the societal contexts of higher education were certainly many (these obstacles are enumerated by Van Rensburg and Ogutto 2022). COVID-19 precipitated a movement that had to be made by necessity to these modes of teaching and learning in higher education sectors all over the world (see Reimers et al. 2022). For the exercise to succeed and to maintain the momentum using technology to enhance the effort to supply African education systems with quality educated teachers using technology-supported distance and hybrid models, institutions and systems

must learn from each other's experience. While in Africa the University of South Africa has been the pioneering distance higher education institution, the second largest such supplier of distance and hybrid higher education in South Africa is the Distance Unit of North-West University, South Africa. This unit has thus far been very poorly represented in the literature on distance higher education in Africa. This article aims to fill that gap.

The Distance Education Unit at North-West University

Measured by student numbers, North-West University is currently the third largest university in South Africa (after the University of South Africa and the Tshwane University of Technology). North-West University came into existence on 1 January 2004, from an amalgamation of two universities, Potchefstroom University and the University of North-West. North-West University has eight faculties situated at three campuses. The faculty of education's contact programmes are being offered at the Mahikeng, Potchefstroom, and Vanderbijlpark campuses and the faculty's administration of distance programmes is being managed by the Distance Unit of North-West University (UDL). With the onset of COVID-19, the faculty embraced synchronous and asynchronous teaching and students must have an electronic device (e.g. computer) linked to the internet to fully participate in academic programmes.

After the University of South Africa (an exclusive distance education institution) North-West University has the largest distance education unit of all universities in South Africa. In the 2023 *Times Higher Education Global University Rankings* North-West University is graded in the 600-800 position of all universities in the world (Times Higher Education 2023), meaning it is among the top three per cent of the roughly 31,000 universities in the world.

In 2020, 11,640 of the total student body of 56,425 were distance education students (North-West University 2023). The distance education unit is located in Potchefstroom, and commenced in its present form at the Potchefstroom Campus at about the same time as the merger in 2004. The distance education unit teaching and learning model is based on an electronic web-based platform (named e-fundi). Students communicate with lecturers by means of emails; telephone calls; mobile telephone calls; the electronic teaching-learning platform; and personal, physical consultations with lecturers.

According to the UDL Statistics of April 2023 diagram 1 shows the 2020 enrolment of the actual first time entrants (FTEN) (students that enrolled for the first time at a higher education institution) and the decrease of actual FTEN students in 2021. This is a direct effect of COVID-19. In 2022 the numbers picked up and in 2023 the actual FTEN students were more than the number that was planned for (North-West University, SALA 2023).
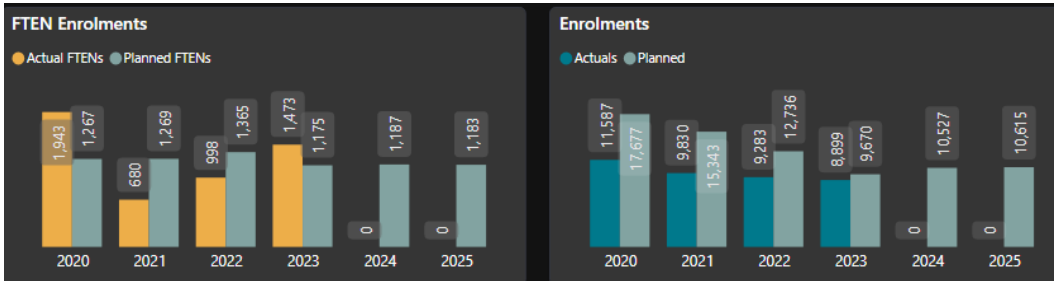
**Diagram 1:** UDL statistics 2023

According to the UDL Statistics of April 2023, diagram 2 shows the FTEN students for the faculty of education distance students as 1,374 enrolments and the total education distance students for the Faculty of Education is 7,777 for 2023 (North-West University, SALA 2023).
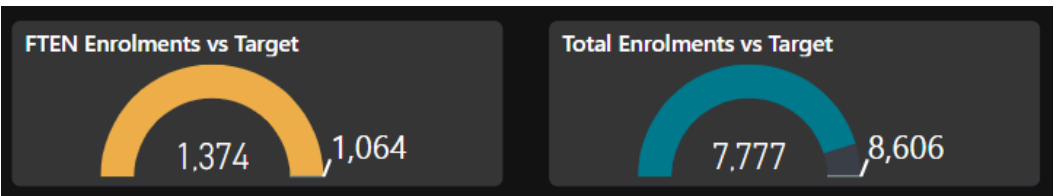
Diagram 2: FTEN enrolments for the Faculty of Education

Diagram 3, according to the UDL Statistics of April 2023, shows the FTEN students for all the other faculties that enrolled FTEN students in distance. There are only 99 FTEN students. The total enrolments of all distance students for 2023 are 8,899 (North-West University, SALA 2023).
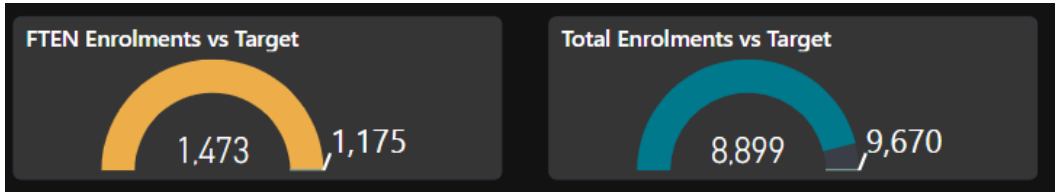
Diagram 3: FTEN enrolments of all distance programmes

Originally the unit was paper-based as far as study material and assignments of students were concerned, but during recent years there was pressure to move towards online, computer-based teaching, in line with technologial developments. However, when COVID-19 broke out, the mode was still predominantly paper-based. Classes are presented in English via interactive whiteboards (IWBs). For each module, there were typically three contact sessions scheduled during a semester or six for a year module. These lessons, typically on a Saturday to accommodate part-time or working students, can be attended at one of the many learning support centres where computers with internet access are available or may be downloaded from there. Highly qualified academic staff from the three campuses present these lectures and students are urged to attend these broadcasts/online sessions—or download the lectures the following week—as they will further assist students to navigate their studies with greater success. Our academic staff members are experts in their respective subject disciplines and they are best equipped to support students as they fully understand the challenges faced by students studying in the distance mode.

COVID-19 and the hybrid mode tuition at North-West University

COVID-19 had a major impact on the UDL at North-West University, as it had on universities elsewhere. As the original hard lockdown rendered the submission of hard-copy assignments impossible, the unit had to make contingency plans very quickly. The move to online submission and grading of assignments was made. A decision was taken that an assessment submission and a downloadable page will be created for submission of the first assignment as well as a COVID-19 continuous assessment that would replace the examination assessment for both semesters—the hard lockdown also ruled out the historical end-of-term examinations, which were always high stakes summative assessments.

At learner support centres (LSC's) which the ODL unit has across South Africa and Namibia, technology/equipment has been installed that will enable students to link to Wi-Fi free of charge, that will enable students to download resources and recorded sessions. However, to make provision for students who had no access to the internet, to Wi-Fi, or data to use the electronic platform, an additional hard copy assessment had to be slotted in at the end of the hard lockdown; this also doubled up as a second opportunity assessment for those students who failed the first round of assessments or who could not attend to their assessment assignments because of the disruption brought by COVID-19. The same protocol was applied to the second semester.

After the contingency plans were made a pilot group was put together for a trial run to determine if an upload and download of assignments would be possible through NWU's e-fundi platform. For the phasing-in period, students could make use of the technology/equipment that have been installed at some LSCs, that could enable students to link to Wi-Fi, free of charge, which could enable them to download resources and assessments and upload assessments after having completed. Turning to the teaching side, the unit resorted to video recordings during COVID-19. The lecturers could record all their lectures through whiteboard sessions—that is, PowerPoint voice-overs, etc.—from home and upload them on the video platform, Panopto. Lecturers were welcome to make use of the whiteboard media rooms on campus at the UDL but had to arrange this before their arrival. In the absence of a scheduled interactive whiteboard timetable, students might be more inclined to feel uncertain, especially during the ongoing COVID-19. Therefore, instead of the timetable, lecturers had to make sure they drew up a semester programme that indicated when they would upload lecture recordings as well as assignments due dates. This benefited both the lecturer as well as the students. This new contingency set-up system became a new normal.

From experience—before the lockdown and mostly online studies—the lecturers started to use the three scheduled classes as feedback sessions. According to the attendance registers, few distance students attended these scheduled classes in real-time. They normally downloaded the recordings at times that suited them better. In this respect, the new system benefitted lecturers and students, as students could now at any time convenient to them use the pre-recorded classes, which are available on e-fundi.

For the duration of COVID-19, these online lectures were made available to contact students too, through e-fundi.

Although not always easy, the lecturers prefer to have the whole site ready at the start of the semester, or at least within the first month of the semester. Distance students should be able to have online access to everything at times which suit them. Serious distance students would do their planning ahead and would spend time on their studies in a self-directed manner, therefore teaching resources should be easily accessible and available to distance students. This enabled students to plan and pace their studies, tailored to their situations. After COVID-19, the contact wing of the university commenced to investigate the implementation of these elements into their mode of teaching and learning as a permanent arrangement.

The UDL has ten multimedia venues onsite (Building 11a) and an additional three venues offsite (Building 14). These venues are equipped with relevant technological and physical infrastructure that allows for hybrid learning. There are learner support centres (LSCs) across South Africa and Namibia that support the hybrid learning model. The e-learning unit at the UDL has implemented the use of the Microsoft Teams platform as the medium for synchronous learning and is responsible for the maintenance of the multimedia venues. During COVID-19, the UDL immediately responded and rolled out its own device use for lecturers to record video/lecture content and share with students via e-fundi. Lecturers further have the option to schedule additional online synchronous 'connect' sessions with their students and share digital material via e-fundi. Some of the UDL's programmes are offered fully online via e-fundi and bichronous learning is deployed via the same platform because e-Learning is responsible for video capture management platforms and training lecturers on the use of relevant teaching and learning technologies. The UDL lecturers have the option to book one of the multimedia venues to record lecture content or host a live session with online participants with the e-learning unit that facilitates the bookings and provides support to lecturers using the multimedia venues.

The findings gathered and lessons learned about the submissions and online tuition during COVID-19, illustrate the resolve of the process to move the paper-based programmes of North-West Univerity Distance Education Unit to online distance programmes in 2024. Due to various logistical challenges and the upcoming implementation of a new Student Information System program, we proposed that the mode of delivery for the paper-based programmes be changed from distance paper-

based to distance online. These programmes already rolled out e-fundi sites for the first- and second-year students and in 2023 all year groups will be able to download and upload assessments on e-fundi. The move to an online mode of delivery will enable lecturers to better meet the needs of our students as they will have the opportunity to provide additional resources to students, be in frequent communication with students, promote collaborative learning, and increased student engagement. If the programmes were to move online, students would also receive more timely feedback on their assignments, have more opportunities to be assessed and can monitor their progress more efficiently throughout the semester. The decision was taken that the phasing out of the paper-based students who must repeat a module will still be served with hard copies as they were originally registered. These students will not be required to transfer to the electronic platform. If these students should prefer to make use of the online platform they will be accommodated. It will be a two to three-year phasing-out process before it will be a completed online programme.

Conclusion

At the North-West University Distance Education Unit, the COVID-19 pandemic had the effect of accelerating the imperative to harness the best contemporary technology can offer to enhance the teaching-learning effort of the Unit. This change has created a new normal, which had a knock-on effect on the contact education sector of the university as well. The majority of students in the Distance Education Unit are education students.

In the beginning of the article, mention was made of the shortage or deficit of teachers in Sub-Saharan Africa. South Africa is not an exception, at least not if the best of projections for the near future are also brought into the picture. Van der Berg, Gustaffson and Burger (2020) came to the conclusion that by 2025 South Africa will need approximately 39,500 new teachers annually, and this can rise to 52,000 by 2030. By contrast, the current higher education system can supply at present only 25,000 new teachers per year, of which only 17,000 accept appointments as teachers in South Africa (*Ibid.*). Extending the capacity of on-campus physical mode teacher education is time-consuming and difficult. This makes it imperative that other universities in South Africa also consider the extension of their teacher education by means of distance or hybrid education models. It is in this regard that this case study is offered

as an example and inspiration to scholars and teacher educators at other universities in South Africa and Africa.

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