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SUPERVISORY SUPPORT FOR ETHIOPIAN DOCTORAL STUDENTS ENROLLED IN AN OPEN AND DISTANCE LEARNING INSTITUTION

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ABSTRACT

Aim/Purpose	This article reports on quantitative analysis of students' perceptions on dimensions of augmented face-to-face support. It is built upon the findings from a larger research project that was undertaken to evaluate postgraduate support offered to Ethiopian doctoral students.
Background	Student support is critical for the delivery of any quality Open and Distance Learning (ODL) system. This is because there are numerous challenges that students enrolled especially in global South ODL institutions are faced with, which can impact negatively on their progress and throughput.
Methodology	In this article, the data from a quantitative questionnaire that was collected from a larger research project was used. The questionnaire asked students to respond to questions about their perceptions of the inclusion of face-to-face workshops. The responses were analyzed using the Statistical Analysis System (SAS), version 8.4 statistical package.
Contribution	This research exposes the benefits of supplementing distance postgraduate supervision with face-to-face tutorials.
Findings	The results show that the student-respondents, in general, experienced all five dimensions ('supervision', 'student needs', 'facilitators', 'environment', and 'institutional support/access') of face-to-face student support very positive.
Recommendations for Practitioners	As this inclusion of face-to-face workshops was found beneficial to the students who are geographically distant and at risk of digitally exclusion, the paper concludes by recommending that such approach should not be discarded but strengthened to supplement distance postgraduate supervision.

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Recommendations for Researchers	Replication of this study but focusing on the qualitative aspects of the five dimensions identified.
Impact on Society	Although this study is limited in scope to the Ethiopia project, implications for geographically distant education and support are relevant to Unisa and other ODL institutions in the global South. This may ultimately help inform distance learning efforts globally through augmented face-to-face supports.
Future Research	The study results revealed potential concerns regarding student age and registration timelines. Therefore, more specific research that explores age and registration is required.
Keywords	postgraduate supervision, face-to-face tutorials, open and distance learning

INTRODUCTION

Open and distance learning (ODL) is one of the most rapidly growing fields of education globally. ODL drives open-access education by offering flexible learning opportunities to individuals separated by geographical distance. Since its inception in the 19th Century, ODL has grown extensively due to modern and faster communication technologies, coupled with an unquenched demand for education (Guri-Rosenblit, 2009). Within the ODL context, students learn anywhere, anytime, and anyhow. ODL's pedagogical approach is mainly learner-centred. Students are expected to engage interactively with the teacher, fellow students, institution, and learning materials.

An example of a university-based in ODL is the University of South Africa (Unisa). Unisa is the oldest and largest open distance learning (ODL) institution in the African continent and the first public university to teach exclusively through distance education. Unisa has also evolved with the technological revolution, intensifying the use of e-learning pedagogies, and is now recognized as a global provider of open distance e-learning. Unisa teaches a diverse range of students physically separated from the learning institution and their tutors/teachers, as well as other students (Unisa, 2008). This diversity and separation imply that students require multiple forms of support to succeed in their studies. In response to this diversity and distance, Unisa has established regional centres to focus on supporting students in various ways, including face-to-face. The focus of this paper is to examine one particular centre in Ethiopia, representing the geographic, cultural, and linguistic distance from Unisa's South Africa-based campuses.

Student support is critical for the delivery of any quality ODL system (Arko-Achemfuor, 2017; Brindley, 1995; Lentell, 2003). This is because there are numerous challenges that students enrolled, especially in ODL institutions, are faced with, which can impact negatively on their progress and throughput. Some of the challenges include the requisite academic writing skills, language barriers, and the student-supervisor working relationship. In a study conducted in Swedish universities, Ezebilo (2012) found that doctoral students experience challenges with data collection methods, data analysis, writing publishable research papers, and oral presentation skills. The students raised concerns regarding the inaccessibility of supervisors. These challenges are exacerbated by ODL programme design and increased distances involved. If not appropriately addressed, these challenges may severely limit students' success.

This paper emanates from a larger research project that was undertaken to evaluate postgraduate support offered to Ethiopian students, the majority of whom are enrolled for doctoral studies with Unisa. The results of the larger research project have not been published. The support project flows from Unisa's outreach mandate, which in turn emanates from a memorandum of understanding signed in 2008 between the Government of Ethiopia and Unisa. A consequence of this memorandum is a substantial enrolment of Ethiopian postgraduate students that require an enhanced face-to-face research-based student support, for instance, transfer of postgraduate research methodology

knowledge and face-to-face student-supervisor interactions to address specific research needs. This augmented face-to-face support is necessary because internet accessibility has been recorded as a challenge by media and Ethiopian students (Bekele, 2020; Mbah, 2019). Offering technology-based tools for students to connect with peers and faculty members to create a sense of community is hampered by unavailable or unreliable internet. South Africa-based study supervisors thus often have significant communication barriers with Ethiopian students. Without face-to-face interaction, novice researchers may find it challenging to develop the required research-related skills. Ames et al. (2018) have postulated that holistic approaches need to be developed to increase doctoral retention and to create opportunities for doctoral student growth. For this specific Unisa partnership, these holistic approaches include face-to-face interaction with students marginalized by the digital world.

Although Unisa faculty members conduct annual postgraduate face-to-face research workshops to bridge the distance gap, no study has henceforth been undertaken to evaluate student perceptions of these augmented face-to-face interventions. Measuring student perceptions of face-to-face support has become a critical necessity to identify strengths and weaknesses and strengthen programme delivery. Although this study is limited in scope to the Ethiopia project, implications for geographically distant education and support are relevant to Unisa and other ODL institutions in the global South. This may ultimately help inform distance learning efforts globally through augmented face-to-face supports.

This paper is thus guided by the following research question: What are the perceptions of Ethiopian doctoral students about augmented face-to-face support provided by Unisa?

LITERATURE REVIEW

THE IMPORTANCE OF SUPPLEMENTING DISTANCE SUPERVISION WITH FACE-TO-FACE TUTORIALS

When compared to the Western world, Africa is far behind with technological advancement. Only a small percentage of people in Africa enjoy access to technology compared with other continents. This digital divide is exacerbated by the uneven distribution of resources among racial groups in Africa. Africa's Black communities continue to be most disadvantaged due to the ills of the past, poverty, inequality, low income, and less access to quality schools. Although Orellana et al. (2016) argue that remote students must rely on systems that enable communication management such as email, video, and virtual learning environments, internet accessibility is a challenge to most African countries. The findings of the International Telecommunication Union's (ITU) report ranks countries in Africa at the lowest level in terms of ICT access and affordability (Measuring the Information Society Report, 2015, 2018).

Kebede (2001) found that internet-based distance education is particularly ineffective in Ethiopia. Although his findings date back to decades ago, the situation has not substantially improved. A study conducted in Ethiopia to evaluate the challenges of the Curtin-AVU-AAU Distance Learning Program found poor internet connectivity as one of the weaknesses that proved to be fatal for the programme (Belwal & Gaim, 2010). Beyessa (2014) also observed absent internet access when conducting his study to evaluate the status of distance education in Ethiopian public and private institutions. Despite the time since those publications, Ethiopian students still find contemporary barriers to communicating with South Africa-based supervisors. As a result, Unisa thus augmented distance supervision with face-to-face tutorials.

In addition to unreliability and inaccessibility of the internet, the literature highlights several challenges that distance postgraduate students face. Distance postgraduate students, especially doctoral students, are geographically distributed, which further limits access to faculty and peers. They do not have the advantage of face-to-face interactions and coaching from their study supervisors. They have no tangible connection with a physical institution for support. They do not get immediate and clear

feedback as they have less physical access to faculty, and these may lead to reduced engagement and communication problems. They frequently experience isolation during their study journey. This isolation can increase uncertainty and undermines their confidence as researchers (Ali & Kohun, 2007; Dowling & Wilson, 2017; Gardner, 2010; Hutchings, 2017; Lundgren-Resenterra & Crosta, 2019).

Subsequently, participants in a study conducted by Desta (2018) in Kenya and Ethiopia found challenges emanating from socio-economic constraints, including the cost of equipment, cost of access to the internet, digital infrastructure, electric power supply, internet access, and connectivity. Furthermore, these participants underscored, probably the case across many parts of Africa, widespread poverty and rural concentration of the population. The lack of infrastructure, low education, and low income are mainly associated with rurality in Africa. The participants viewed these factors as sometimes impeding the rural communities from accessing high-tech digital products and services. Prior, a study conducted by Rangara (2016) in Kenya reported that, in addition to substantial costs to access internet services, other challenges involve lack of students' skills in coping with learning within distance environments.

Similarly, Arko-Achemfuor (2017) found that many students do not possess the necessary skills associated with distance learning. Also, a study conducted at 27 universities showed that students were confused by the doctoral process and frustrated by slow faculty responses (Terrell et al., 2012). These findings were recently supported by a study conducted with eleven international doctoral students in six Finnish universities. These participants identified the principal sources of stress as intrapersonal regulation, challenges about doing research, and lack of a supportive network (Pappa et al., 2020). Orellana et al. (2016) indicated that these challenges may add a burden to distance students who are still grappling with conducting autonomous research or working independently to develop new research-related skills that may lead to the successful completion of their studies. This burden may also lead to attrition.

In line with the above challenges, Haynie (2015) exposed that many online institutions find it difficult to retain students until completion. The report also alluded to most studies which show that student attrition rates at online institutions are 3% to 5% higher than those of traditional institutions. More specifically, Mouton (2011) revealed the doctoral dropout rate in South Africa as 46%. Other studies on online doctoral programmes had, almost universally, reported attrition rates of nearly 50-70% (Terrell et al., 2012). A study by Maddox (2017) also referred to attrition in doctoral studies as a challenge. Due to such issues, Ouma (2019) advised that distance education providers need to re-strategize and come up with alternative approaches to learner support. Renes and Strange (2011) indicate the necessity for distance education providers to identify and understand their students in terms of their needs and characteristics. In addition, Rangara (2016) says any learning institution that is customer service-oriented needs to understand the culture and characteristics of its students and to offer required support that may enhance the success rate for both the institution and students. Arko-Achemfuor (2017) recommended support through blended learning. Therefore, approaches to address the distinctive needs of distant students are necessary to help mitigate obstacles that may arise.

In this study, the face-to-face interaction between students and faculty members is regarded as a fundamental approach. This is because faculty members play a central role in guiding students to progress successfully with their studies. Newberry and DeLuca (2013) find it advantageous for students to develop relationships with faculty members, as this will ensure that more support is received and may lead to the possibility of degree completion. Literature has shown that if faculty members and doctoral students spend time and have access to each other, students' success becomes more likely (Bagaka's et al., 2015; Hoffman, 2014). A study conducted in Denmark on doctoral programs reported fewer problems when students are exposed to an inclusive environment (Christensen & Lund, 2014). Ames, et al. (2018) also emphasize the development of holistic approaches to ensure student retention.

The next section presents methods used to extrapolate students' perceptions on dimensions of augmented face-to-face support.

METHODS

RESEARCH DESIGN

Although the unpublished original data were collected through a multi-phase mixed methods research design, also known as a multistage evaluation design, this article reports quantitative data and analysis to measure students' perceptions on dimensions of augmented face-to-face support offered by faculty members. The support-dimensions investigated in the quantitative component include support provided by supervisors and workshops presented at the Ethiopian campus. These student support workshops focus on workshop-environments, the extent to which workshops address student needs, and the efficiency/ capability of workshop-facilitators. The third support-dimension regards electronic access to knowledge, communication with supervisors, and access to the Unisa support structures. For short, these support areas are abbreviated to 'supervision', 'student needs', 'facilitators', 'environment', and 'institutional support/access'. The questionnaire (e.g., subset of questions addressing dimensions of face-to-face support) was designed to explore the perceptions of Ethiopian doctoral students about augmented face-to-face support provided by Unisa.

SAMPLING

The target population of a larger research project from where the data of this article emanate consisted of Ethiopian doctoral students, male and female, over a broad age spectrum and who had first registered for their degree at Unisa between 2007 and 2019. The target population furthermore included employed and unemployed Ethiopian students, with employed students coming from Higher Education Institutions (HEIs), Educational organizations, and Ethiopian schools. This target population was initially identified in the Unisa student database. A sample of n=120 doctoral students was subsequently selected. These students had been exposed to several face-to-face contact sessions over the years. Questionnaires were distributed on two occasions, firstly employing simple random sampling (from the database) and also convenience sampling in face-to-face tutorial sessions in Ethiopia (please refer to *Data collection* section below). In total, 87 completed questionnaires were returned, resulting in a 72.5% response rate.

Biographical attributes captured on the administered questionnaires describe the selected sample. The sample consisted of student respondents who proved to be almost exclusively male (96.1%); more mature, with only 25.7% younger than 29 years; 91.3% employed at HEI's and with 68 of the 87 (90.67%) respondents currently registered for their doctoral degrees. A substantial number of student-respondents registered in either the 2010-2012 or 2016-2018 registration-periods (36.84% and 34.21% respectively). Only 15.79% of the student respondents indicated that they had never visited the Unisa-Ethiopian campus for administrative matters; all respondents indicated that they had attended Unisa workshops on the Ethiopian campus and the spread of the frequency of workshop attendance was well represented from a tally of 1-3 (30.99%) to 7-10 workshops (22.54%) attended. Thirty-seven of the 39 respondents who answered the question on satisfaction with *studying at* Unisa, indicated satisfaction (94.87%, missing = 48). The sample, therefore comprised more mature, doctorate-registration male students that work at Higher Education Institutions (HEIs), reflecting the overrepresentation of males across the Ethiopian educational sector.

THE DATA COLLECTION INSTRUMENT AND QUESTIONNAIRE ADMINISTRATION

A closed-ended questionnaire with 35 questions, of which 26 offered 5-point agreement Likert rating scale response options, was designed. As previously indicated, student perceptions on five aspects of face-to-face support were sought. The 26 closed-ended questions consisted of subsets of questions

that address the support-dimensions of 'supervision', 'student needs', 'facilitators', 'environment', and 'institutional support/ access' (refer to *Research Design* section). Typical questions of the 'students' need' dimension, for example, request responses on the statement: "Workshops address my academic needs".

The questionnaire was designed by a group of faculty members involved with face-to-face Ethiopian/Unisa contact sessions. The design aimed to evaluate the five support dimensions towards answering the earlier stated research question. Face-validity and content validity were respectively tested against input from an independent group of lecturers at Unisa (4) and Unisa post-doctoral students (6, non- Ethiopian). Internal lecturer agreement of content- and face-validity was reached. The cover letter whereby participants were assured of confidentiality, anonymity, and that they can withdraw at any stage was attached to the questionnaire. The questionnaire was initially distributed through Survey Monkey to the targeted population. By the due date, very few responses had been received as some students were unable to access the internet (internet unavailability). Due to this problem, the questionnaire was also administered during a face-to-face workshop with students. In this session, students could either complete the survey online or via hard copies distributed to them. Questionnaire responses were captured to an EXCEL spreadsheet and analyzed using the SAS, version 8.4 statistical package (Statistical Analysis System).

DATA ANALYSIS

The quantitative analysis strategy is based on the argument that the quantitative research instrument will measure student-respondents' perceptions regarding aspects of face-to-face student support offered to Ethiopian doctoral students. These include supervisor-support (supervisors); workshop-environment during student workshops (environment); efficiency of workshop facilitators (facilitators); the extent to which student-needs are accommodated at workshops (student needs); and institutional/ electronic access (access). The analysis strategy was, therefore, designed to quantitatively measure how Ethiopian doctoral students perceive the five dimensions of student support. Arguments motivating the analysis strategy (analysis techniques used) included the following:

- An overview of student perceptions, arranged according to the five suggested support-dimensions, was calculated as composite one-way frequency tables.
- Scale reliability tests were conducted on the subsets of response-data of questionnaire-questions that were designed to evaluate the various student-support dimensions. These tests verify internal consistency reliability, which implies that all questions in a subset jointly contribute towards explaining the particular student-support-dimension.
- Perception-support scores (a single, compact measure) were subsequently calculated per support dimension for each respondent. These scores indicate how each respondent perceived an aspect of Ethiopian student support (e.g., a low score value will indicate negative feeling or dissatisfaction, and a higher value a positive perception or satisfaction).
- An (initial) indication of whether biographical properties (e.g., age; registration period) of respondents might affect students' perceptions regarding student support was obtained by way of calculated tables of means per support component and levels of a biographical attribute (e.g., age groups 18-39, 40-49, and 50-69). This indicated, for example, whether student-perceptions tended to be more positive or negative or whether some biographical properties (e.g., age) might affect students' perceptions of aspects of student-support.
- The statistical significance of the effect/s of biographical properties on perceptions regarding the five support dimensions was investigated in different ways, namely,
  (a) firstly, one- or n-factor parametric analysis of variance (the GLM [General linear Model] approach) was conducted to establish the statistical significance of the impact of biographical properties (e.g., age; first registration period) on student support perceptions (separately for each support dimension). These analyses, in conjunction with multiple comparisons of

means tests, informed on the statistical significance of specific biographical properties, as well as the nature of the effect. Anova-assumption of normally distributed data/ residuals and homogeneity of group variances need verification. (Tests in this respect include Levene's test; and Kolmogorov-Smirnov; Kramer von Mises; and Shapiro-Wilks tests).

(b) Nonparametric analysis of variance were conducted to identify biographical properties (if any) that statistically significantly impacted student perceptions of the support dimension (supervision, environment, facilitators, student need, and access), in some instances, ANOVA-assumptions were not met. Nonparametric one-way Kruskal-Wallis tests were appropriate for this study.

(c) Positive versus non-positive perception trends per student-support-dimension over categories of a biographical property (e.g., age, year first registration, workshops attended) were run to investigate the possible effect of a biographical effect on support-dimension perceptions. Perception scores per respondent, per student support dimension, were categorized as either nonnegative (if a particular score is less than 3.5) or positive (if a particular score is > 3.4). Cochran-Armitage trend test was subsequently performed.

By conducting the above measures, sufficient evidence was collected to answer the stated research question.

RESULTS

COMPOSITE ONE-WAY FREQUENCY TABLES OF SUBSETS OF QUESTION RESPONSES THAT PROBE THE DIFFERENT SUPPORT DIMENSIONS

Tables 1 to 5 report the frequency distributions of responses to questionnaire questions that describe the five dimensions of student support, namely,

- workshop environment (4 questions)
- the ability of workshops, as student support action, to address students' needs (5 questions)
- efficacy of workshop-facilitators (3 questions)
- supervision (8 questions)
- institutional support/electronic access (4 questions).

Because low frequencies (<4) were reported for some agreement-categories of the frequency distributions of student-support dimensions, the frequencies for the strongly disagree, disagree, and undecided levels of these distributions were condensed into a non-agreement (or non-positive) category, along with agreement and strong agreement categories. Tables 1 to 5 report these frequency distributions. Sparsely populated cells were removed from the tables, enabling Chi-square tests on each of the frequency tables that represent the support dimensions of the environment, student needs, facilitators, supervision, and access support. In each instance, the Chi-square test investigates whether the response patterns of questionnaire questions (the frequency patterns in each row of a table) for a support dimension differ statistically significantly from other response-patterns for the particular support dimension.

Workshop environment

Table 1 reports on the frequency distribution of the workshop environment dimension of student support.

Deductions derived from Table 1. The last row of Table 1, the totals-row, reports that the percentage strongly agree and agree responses to the subset of questions that evaluate workshop environment of student-support amounts to 80.61% ((94+143)/ 294*100) = 80.61%). This majority positive trend implies that student-respondents experienced the workshop environment dimension of student-support, in general, very positive.

Furthermore, the statistically significant Chi-square test in this instance (with a chi-square statistic of 24.36, and the associated probability of <0.0001) implies that for the workshop environment dimension some of the frequency-patterns (over agreement levels) for the different questions/issues constituting this dimension, differ significantly. (In other words, respondents felt more strongly about some issues). For example, perceptions indicated strong agreement (93.24% if the agreement and strong agreement responses are considered) regarding the "appropriate period in which the workshops were presented" (q1), as opposed to lesser agreement (67.24%, if the agreement and strong agreement responses are considered) with q4, "the technical equipment of workshops are effective."

Table 1. Condensed composite one-way frequency table of the subset of issues/questionnaire questions that describe the support dimension of the workshop environment

issues/questionnaire question	agreement level			Total
Frequency Row Percentage	disagreement/ undecided	agree	strongly agree	
Workshop-period sessions, appropriate	5 6.76	38 51.35	31 41.89	74
Session-venue, accessible	10 13.51	37 50.00	27 36.49	74
Session-venue, suitable	18 24.66	31 42.47	24 32.88	73
Workshop technical equipment, effective	24 32.88	37 50.68	12 16.44	73
Total	57	143	94	294
Frequency Missing = 54. Prob (chi-sq = 24.36) = <0.0001				

Student needs

Deductions derived from Table 2. The totals-row in Table 2 reports that the percentage strongly agree and agree responses to the subset of questions that evaluate addressing student needs of student-support amounts to 87.43%. This majority positive trend implies that student-respondents experienced the way student-needs were addressed (dimension of student-support) in general, as very positive.

Furthermore, the statistically significant Chi-square test in this instance (with a chi-square statistic of 33.21, and the associated probability of <0.0001) implies that for the students' needs dimension some of the frequency-patterns (over agreement levels) for the different questions/issues constituting this dimension, differ significantly. (In other words, respondents felt more strongly about some issues). For example, strong positive perceptions were expressed regarding useful workshop topics (q1) and facilitators (q4), and somewhat less agreement regarding the issues of addressing academic needs, q2, and queries and concerns, q3.

Table 2. Condensed composite one-way frequency table of the subset of issues/questionnaire questions that describe the support dimension of workshop ability to satisfy students' needs

issues/questionnaire question	agreement level			Total
Frequency Row Percentage	disagree-ment/ unde-cided	agree	strongly agree	
Workshop-topics, useful to me	6 8.22	29 39.73	38 52.05	73
Workshops address my academic needs	15 20.27	38 51.35	21 28.38	74
Workshops address queries and concerns	12 16.44	42 57.53	19 26.03	73
Workshop-facilitators interact with students	3 4.05	35 47.30	36 48.65	74
Workshop student-presentations, helpful	10 13.89	48 66.67	14 19.44	72
Total	46	192	128	366
Frequency Missing = 69. Prob (chi-sq=33.21) < 0.0001				

Efficacy of workshop-facilitators

Deductions derived from Table 3. The totals-row in Table 3 indicates that the percentage strongly agree and agree responses to the subset of questions that evaluate the workshop facilitators dimension of student-support amounts to 87.38%. This majority positive trend implies that student-respondents experienced the efficacy of facilitators (dimension of student-support) in general, very positive.

In this instance, the Chi-square statistic is not significant, which implies that the response pattern of respondents to the different questions was similar: very positive.

Table 3. Condensed composite one-way frequency table of the subset of issues/questionnaire questions that describe the support dimension of the efficacy of workshop facilitators

issues/questionnaire question	pos/neg level			Total
Frequency Row Percentage	Negative/ indifferent	positive	very posi-tive	
Quality, facilitator, PowerPoint presentation	10 14.08	33 46.48	28 39.44	71
Facilitators research knowledge	10 14.49	30 43.48	29 42.03	69
Satisfied, library knowledge acquired	6 9.09	42 63.64	18 27.27	66
Total	26	105	75	206
Frequency Missing = 55. Prob (Chi-sq = 6.37) = 0.17				

Supervision

Deductions derived from Table 4. The totals-row in Table 4 indicates that the percentage strongly agree and agree responses to the subset of questions that evaluate the supervision dimension of student-support is 82.28%. This majority positive trend implies that student-respondents experienced the way supervision is conducted (dimension of student-support) in general, very positive.

In this instance, the Chi-square statistic is not significant, which implies that the response pattern of respondents to the different questions was similar: very positive.

Table 4. Condensed composite one-way frequency table of the subset of issues/questionnaire questions that describe the support dimension of supervision

issues/questionnaire question	agreement level			Total
Frequency Row Percentage	disagree-ment/ unde-cided	agree	strongly agree	
Satisfied, communication, supervisor	9 21.43	14 33.33	19 45.24	42
Technology enables supervisor communication	5 12.20	23 56.10	13 31.71	41
Receive supervision-support needed	8 19.51	12 29.27	21 51.22	41
Enjoy the working relationship, supervisor	10 24.39	14 34.15	17 41.46	41
Supervisor challenges, cognitive-development	8 20.00	13 32.50	19 47.50	40
My supervisors motivate me	8 19.51	11 26.83	22 53.66	41
Easy, discuss study challenges, supervisor	5 12.20	15 36.59	21 51.22	41
Supervisor advice on study-challenges	6 14.63	12 29.27	23 56.10	41
Total	59	114	155	328
Frequency Missing = 368. Prob (chi-sq=15.87) = 0.46				

Institutional support/electronic access

Deductions derived from Table 5. In Table 5, the totals-row reports 81.33% strongly agree and agree response tally for the subset of questions that evaluate the institutional support dimension of student-support. This implies that student-respondents experienced the institutional support component of student-support, in general, very positive.

In this instance, the Chi-square statistic is not significant, which implies that the response pattern of respondents to the different questions was similar: very positive.

Table 5. Condensed composite one-way frequency table of the subset of issues/questionnaire questions that describe the support dimension of institutional support/electronic access

issues/questionnaire question	agreement level			Total
Frequency Row Percentage	disagree-ment/ unde-cided	agree	strongly agree	
The online registration system, reliable	4 9.52	21 50.00	17 40.48	42
Technology allows good communication, Unisa	7 17.07	19 46.34	15 36.59	41
Distance learning is challenging	11 26.19	23 54.76	8 19.05	42
Online technology, easy access, library-data-bases	10 23.81	21 50.00	11 26.19	42
Total	32	84	51	167
Frequency Missing = 181. Prob (chi-sq = 7.91) = 0.25				

Summary of results

Results thus far indicate that respondents, in general, perceive the various aspects of student support positive. As indicated in the initial discussion, the question of whether these responses to the subsets of dimension-questions can be used to quantify single, reliable measures of perception for each dimension and respondent needs further clarification: if subsets of responses (designed to measure a support-dimension) prove to all jointly contribute towards assessing the specific support-dimension – to be established in the next section – the way is paved to calculate a single support-dimension score per respondent that measures perceptions on a specific aspect of student-support. After that, the single support-dimension measure is used in advanced analyses to quantify and evaluate the overall perception of the specific support-aspect and, also, to establish the nature of influential biographical attributes on a specific support-dimension. The next section presents the results of scale reliability tests.

Scale Reliability Tests to Assess Internal Consistency Reliability on Response Data of Proposed Support Dimensions

Before the calculation of perception measures for each dimension and respondent, the internal consistency reliability of the proposed support dimensions had to be established. Scale reliability tests were conducted to this effect, and results are presented below. Table 6 presents the results of five scale reliability tests performed on the five subsets of response data that evaluated the proposed student-support dimensions. Each row in the table reports the results of a separate analysis. The first column identifies the relevant support-dimension; the second column lists the subset of questionnaire-question responses used in the particular analysis, the third column indicates which responses – identified in preliminary scale reliability tests – should be excluded from a specific dimension to improve internal consistency reliability. The last column reflects the standardized Cronbach alpha coefficient of the particular analysis.

Deductions derived from Table 6

The Cronbach alpha values for the five support dimensions vary between 0.67 to 0.95. These values are regarded as indicative of internal consistency reliability for the listed dimensions.

Verified internal consistency reliability implies that all questionnaire-items that describe a specific support-dimension jointly contribute towards explaining the dimension. Therefore, a single reliable student-support dimension-measurement (referred to as a score) for each respondent can reliably be calculated. The scores are calculated as the mean rating of the responses (e.g., '1'; '2'; '3'; '4'; or '5') a respondent awarded the subset of questionnaire-items that describes a particular dimension (e.g., supervision). These measurements (scores) open up the way for research to gauge perception-status and -trends in a more parsimonious way than presenting composite frequency tables. The next subsection reports on the mean scores of the five student-support dimensions that were subsequently calculated.

Table 6. Results of scale reliability tests performed on the five subsets of scores that evaluate perceptions on five dimensions of student support offered to Ethiopian doctoral students

Student *support dimension*	subtests/questionnaire items included	subtest/ questionnaire items excluded	Cronbach alpha coefficient
Workshop-environment,	wshop1 – wshop4	-	0.76
Students' needs addressed	needs1-needs5	-	0.84
Workshop-facilitator	facil1, facil2, facil3	-	0.77
Supervision	super1-super8	-	0.95
Electronic access/Institutional support	inst1-inst4	inst3#	0.67
# inst3 refers to the questionnaire question, "Distance learning is challenging".			

Calculation of Perception Scores and Tables of Mean Perception Scores

Tables 7 and 8 report the means of perception scores calculated for each student-support dimension. Table 7 presents mean scores for the sample as a whole, whereas Table 8 reports means for mentioned support dimensions grouped according to age-categories and registration-period categories. Because scores are derived from the rating values (options) specified in the questionnaire, all student-support dimension scores, as well as the scores reported in Tables 7 and 8 are interpreted according to the agreement rating scale of the questionnaire (1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree; 5 = strongly agree). For example, in Table 7, an overall mean score of 3.95 (which rounds to '4') for the workshop environment dimension will signify that, in general, respondents' perception regarding the workshop environment aspect of student support was one of agreement (in other words, a positive experience, '4' = 'agreement'). This finding can be compared to the relevant composite frequency table, Table 1. The comparison indicates correspondence (a generally positive perception).

Deductions derived from Table 7

In Table 7, the overall mean scores for all student support dimensions, (3.95; 4.15; 4.21; 4.15; and 4.09) round to 4 – which indicates an agreement/or positive experience perception. This is in agreement with the findings derived for the respective composite frequency tables, Tables 1- 5.

Table 7. Overall mean scores and other basic statistics for the five student-support dimensions

Variable	N	Mean	Std Dev	Mini-mum	Maximum
WorkshopEnv	74	3.9493243	0.7818354	2.0000000	5.0000000
StudentNeeds	74	4.1531532	0.6317553	2.2000000	5.0000000
Facilitator	71	4.2112676	0.5773212	3.0000000	5.0000000
Supervision	42	4.1496599	0.9082211	1.0000000	5.0000000
InstSupport	42	4.0912698	0.6668723	2.0000000	5.0000000

Mean scores are interpreted according to the following agreement ratings:
1 = strongly disagree; 2 = disagree; 3 = undecided; 4 = agree; 5 = strongly agree

For the facilitator dimension scores are interpreted according to positive/negative ratings:
1 = very negative; 2 = negative; 3 = neutral; 4 = positive; 5 = very positive

Deductions derived from Table 8

Table 8 provides support dimension mean scores per biographical attribute for two attributes, namely, age and first registration period. These analyses provided an initial indication of biographical effects that might affect perceptions of some support-dimensions. (The statistical significance of such initial indications is verified through ANOVA-analysis discussed in the next section).

The mean supervision scores calculated per age category (18-39, 40-49, and 50-69) are reported as 4.42, 4.39, and 3.37 (which rounds to 4, 4, and 3 respectively). This suggests that the older response group seem to be less favourable (a 3 rating signifies undecided) about supervision support than the other age groups (4 signifies agreement). This is the first indication that age might be a significant effect on perceptions.

Likewise, the mean student needs scores calculated per first registration period categories (2007-2012, 2013-2015, 2016-2021) are reported as 3.97, 3.97, and 4.48 (which round to 4, 4, and 4 respectively). This suggests that perceptions regarding students' needs for students who registered during the 2016-2021 registration period seem more positive than other registration periods – a first indication that how long ago they enrolled might influence perceptions.

This section indicates that the biographical properties of age and first registration might influence students' perceptions regarding aspects of student support. The results reported in the next two sections, namely, parametric and nonparametric analysis of variance, serve to identify biographical properties that statistically significantly impact perceptions.

Table 8. Mean perception scores and other basic statistics for the five student-support dimensions grouped according to the categories of the following biographical properties

	N	Support dimension	N	Mean	Std Dev	Minimum	Maximum
Age							
	20	WorkshopEnv	19	3.97	0.80	2.25	5.00
		StudentNeeds	19	4.32	0.66	2.20	5.00
18-39 years		Facilitator	18	4.41	0.54	3.33	5.00
		Supervision	8	4.42	0.42	3.63	4.88
		InstSupport	8	3.67	0.40	3.00	4.00
	37	WorkshopEnv	34	4.13	0.83	2.00	5.00
		StudentNeeds	34	4.26	0.48	3.40	5.00
40-49 years		Facilitator	33	4.32	0.50	3.33	5.00
		Supervision	24	4.39	0.71	2.88	5.00
		InstSupport	24	4.39	0.47	3.67	5.00
	21	WorkshopEnv	21	3.64	0.61	2.00	4.50
		StudentNeeds	21	3.84	0.73	2.40	5.00
50-69 years		Facilitator	20	3.86	0.60	3.00	5.00
		Supervision	10	3.37	1.20	1.00	5.00
		InstSupport	10	3.72	0.89	2.00	5.00
First registration period							
2007-2012	34	WorkshopEnv	34	3.94	0.83	2.00	5.00
		StudentNeeds	34	3.97	0.71	2.20	5.00
		Facilitator	34	4.06	0.64	3.00	5.00
		Supervision	21	3.97	0.98	1.00	5.00
		InstSupport	21	4.30	0.69	3.00	5.00
2013-2015	14	WorkshopEnv	13	3.88	0.61	3.00	5.00
		StudentNeeds	13	3.97	0.62	2.40	4.60
		Facilitator	11	4.09	0.58	3.33	5.00
		Supervision	7	3.86	1.20	1.88	5.00
		InstSupport	7	3.88	0.39	3.33	4.33
2016-2021	28	WorkshopEnv	26	3.99	0.83	2.00	5.00
		StudentNeeds	26	4.48	0.36	4.00	5.00
		Facilitator	25	4.47	0.40	4.00	5.00
		Supervision	13	4.55	0.43	3.63	5.00
		InstSupport	13	3.87	0.70	2.00	4.67

PARAMETRIC ANALYSIS OF VARIANCE

Analyses of variance were performed separately for each of the five sets of student-support dimension scores. In each analysis one set of these student-support scores were treated as the independent variable and the biographical properties of age, first registration period, number of visits to Unisa-Ethiopian campus, and number of workshops attended as independent variables. The general linear model or GLM-approach to the analysis of variance was used.

Table 9 reports the results of the best-fit models for the five support dimensions. Each row of the table reports the findings of a separate analysis. The first column indicates the set of perception scores analyzed; the second column indicates the overall F-statistic and associated probability for the test; the third column reports the R-square value of the model; and the fourth column reports the F-statistics and associated probabilities for the impact of the age, first registration, and interaction (i.e., visits to Unisa Ethiopian campus) effects. If the significance is indicated for a biographical effect in column 4, columns 5 and 6 then list mean perception scores per category of the statistically significant biographical effect.

As indicated in the analysis-strategy discussion in the Data Analysis section, certain assumptions have to be satisfied for parametric analysis of variance results to be reliable. Columns 7 and 8 in Table 9, therefore, also report on the results of tests for normally distributed data and homogeneity of group variances (over categories of biographical effects). The relevant tests include the Shapiro Wilks (SW); Kolmogerov-Smirnov (KS); Cramer von Mises (CvM) and Levene's test. Each row in the table presents the results of a separate analysis of variance (as well as tests to verify ANOVA assumptions). The results of Tukey's multiple comparisons of means test are indicated as appended small letters to the relevant category mean scores.

Deductions derived from Table 9

Results in column four of Table 9 indicate that for the facilitator, supervision, and the institutional support/access support dimensions age is indicated as a statistically significant effect on these student perceptions (with F-values of respectively 6.49, 6.66;, and 7.34 all on the 1% level of significance). In each instance, the listed age-categories mean scores (column 5) indicate how age affects perceptions.

Results in column four further indicate that for the ability of workshops to accommodate student needs support dimension, both first registration period and age are indicated as statistically significant effects on student perceptions (Respective F-values of 4.51 (5% significance level) and 4.59 (1% significance level). The age-categories and first registration-period-categories (columns 5 and 6) indicate how age and registration period affect perceptions.

Columns 7 and 8 of Table 9, however, indicate that ANOVA-assumptions regarding normally distributed data and homogeneity of the group (of category) variances are not satisfied in all instances. Although analysis of variance is regarded as a very robust analysis technique, violation of ANOVA assumptions could compromise reliability. It was, therefore decided to execute nonparametric tests to ensure reliable results and deductions.

Table 9. Parametric two-way analysis of variance results performed on the calculated support dimensions scores to determine the significance of the effects of age and first-registration period on student perceptions

Support dimension	F-statistic (prob. F value)	R-square	F_{age} statistic (prob F_{age}) F_{first} statistic (prob F_{first}) $F_{interact}$ (prob. F_{inter})	18-39; 40-49; 50-69 age-category mean scores ##	'10-'12; '13-'15; '16-'21-First reg-str.-category means	Homogeneity: Levene's statistic (F prob.) for age, firstregstr #1	Normality: SW (prob W) KS (prob D) CvM (prob WSq) #2
Supportive environment	0.91 (0.51)	10%	2.43 (0.09) 0.02 (0.98) 0.60 (0.67)	-		0.90(0.41) 0.79(0.46)	0.90(<0.01) 0.16(<0.01) 0.26(<0.01)
Student needs addressed	3.31 (<0.01)**	29%	4.59 (0.01)** 4.51 (0.02)* 2.07 (0.10)	4.31 b 4.26 b 3.83 a	3.97 b 3.97 b 4.50 a	1.50(0.23) 3.28(0.04)	0.92(<0.001) 0.16 (<0.01) 0.25(<0.01)
Workshop facilitator efficient	3.04 (<0.01)**	28%	6.49(<0.01)** 2.21 (0.12) 1.71 (0.16)	4.41 b 4.31 b 3.85 a		0.69(0.51) 5.1(<0.01)	0.92(<0.001) 0.16(<0.01) 0.28(<0.01)
Supervision adequate	3.10 (0.01)**	44%	6.66(<0.01)** 2.78 (0.08) 1.49 (0.23)	4.42 b 4.37 b 3.37 a		3.36(0.05) 1.58(0.22)	0.84(<0.001) 0.17(<0.001) 0.30(<0.01)
Institutional/electronic access adequate	2.53 (0.03)*	39%	7.34 (<0.01)** 1.21 (0.31) 0.79 (0.54)	3.67 b 4.41 a 3.72 b		4.77(0.01) 0.74(0.48)	0.93(<0.01) 0.16(<0.01) 0.14((0.03)

- ##: category mean scores appended by different small letters differ statistically significantly from one another. (Tukey multiple comparisons of means test)
- Legend for significance levels:
  *: 5% level of significance; **: 1% level of significance
- #1Levene's test suggests heterogeneity when the probability associated with the test statistic is significant on the 0.1% level of significance
- #2The Shapiro-Wilks, Kolmogerov-Smirnov; and Cramer v Mises tests questions normal-distribution of data if probability associated with X-, D-, and W-sq statistics are highly significant

The next section presents nonparametric analysis of variance.

NONPARAMETRIC KRUSKAL-WALLIS ONE-WAY TESTS

As indicated in the previous subsection, nonparametric analysis of variance was conducted when parametric ANOVA assumption could not be met for all dimensions of student support data. In the nonparametric approach, it was, however, not possible to conduct two-factor analyses (Friedman tests) similar to the parametric approach reported in Table 9, the reason being that a prerequisite of the two-way Friedman test is an equal number of observations per level/category of the biographical properties. In the present research category-frequencies are unequal (refer to Table 8 for example). One-way Kruskal-Wallis ANOVA tests were therefore performed.

Separate Kruskal-Wallis tests were performed on each set of perception scores for the five dimensions of student support (as dependent variable) and a biographical attribute as an independent variable (age, first registration period, number of visits to Ethiopian campus). Table 10 presents the analysis results of the impact of the biographical properties of age, first registration period and number of visits to Unisa Ethiopian campus. Each row reports results of three separate Kruskal-Wallis tests using the same set of perception scores of a support dimension as the dependent variable and consecutive biographical properties (age, first registration, visits to Unisa Ethiopian campus) as the independent variable. Columns 2 to 4 of each row report the Chi-square statistic and associated Chi-square probability of a particular Kruskal-Wallis test with, respectively, age, first registration, and number of visits to the Unisa Ethiopian campus as the independent variable. If biographical effects are indicated as statistically significant (probabilities < 0.05 or < 0.01), columns 5 to 7 then list the mean scores per age, or first registration, or number of visits to campus categories. Means that differ significantly are affixed with different small letters. **Effect size estimates** for differences in category mean scores are indicated in parenthesis.

Deductions derived from Table 10

Results indicate that, similar to the parametric analyses, age presents as the most statistically significant effect on perceptions of all dimensions of student support (parametric analysis excluded age as a significant effect on perceptions regarding workshop environment). The effect of age on perceptions (for all student support dimensions) becomes apparent when the perception mean scores in column 5 are studied; the lowest category perception mean score for each support dimension is listed each time as the 50-69 category (except for Inst. Support/access dimension), in other words, older respondents tend to perceive aspects of student support somewhat less positive than the other age groups.

The first registration period was indicated as a significant effect on perceptions regarding workshops that address students' needs and workshop facilitators (parametric analysis excluded significance in the last instance). The effect of period of first registration on perceptions is further informed by the category mean scores (in column 6) for the support dimensions of workshops ability to accommodate student needs and workshop facilitators' efficacy. The 2016-2021 registration period proves to be the period with the most positive perceptions regarding the aspects of student needs and facilitator efficacy.

The number of visits to the Ethiopian campus was indicated as a significant effect on perceptions regarding workshops that address students' needs. (Parametric analyses excluded this significance). The number-of-visits-category mean scores for the dimensions of students' needs addressed in workshops indicate that perceptions in this respect are highest the more students visit the Ethiopian campus (> two times).

The biographical property of the number of workshops attended did not prove to be a significant effect on student support perceptions and was omitted from analyses presented in this document. The final analysis results presented below aim to graphically illustrate the perception trends discussed in this section (Kruskal-Wallis results).

Table 10. Results of nonparametric, one-way Kruskal-Wallis tests to determine the statistical significance of the impact of the biographical properties of age, first registration period, number of visits to Unisa Ethiopian campus. Mean perception scores, calculated according to categories of statistically significant biographical effects, are listed in Column 5 to 7

	Nonparametric Kruskal-Wallis (one-way)			**Mean scores for relevant s*upport-dimensions* arranged according to categories of biographical effects indicated as statistically significant** *(Cohen's D effect size)*		
Support dimension	**Age** Chi-sq (prob Chi-sq)	**First regstr.** Chi-sq (prob Chi-sq)	**Visits Ethio** Chi-sq (prob Chi-sq)	**Age 18-39 40-49 50-69**	**First regstr. 2010-2012 2013-2015 2016-2021**	**Visits Ethio none one/two >two**
Workshop environment	8.79 (0.01)**	0.63 (0.73)	3.56 (0.17)	3.97 b 4.13 b 3.64 a *(0.67)*		
Student needs	6.23 (0.04)*	10.59 (<0.01)**	7.24 (0.03)*	4.31 b 4.26 b 3.83 a *(0.69)*	3.97 b 3.97 b 4.50 a *(0.91)*	3.71 a 4.02 a 4.33 b *(0.98)*
Workshop facilitator	10.22 (<0.01)**	7.89 (0.02)*	2.96 (0.23)	4.41 b 4.31 b 3.85 a *(0.96)*	4.06 a 4.09 a 4.47 b *(0.76)*	
Supervision	7.12 (0.03)*	3.23 (0.20)	2.92 (0.23)	4.42 b 4.37 b 3.37 a *(1.17)*		
Inst. support/access	11.51 (<0.01)**	4.08 (0.13)	2.87 (0.24)	3.67 b 4.41 a 3.72 b *(1.65)*		
Effect size in the region of 0.5 to 0.8 regarded as medium; effect size > 0.8 regarded as large						

SUMMARY OF ANALYSIS DEDUCTIONS

In short, the findings indicated that

- A general impression of positive experience/perceptions could be confirmed for the five proposed dimensions of student support. This was derived from the rows of totals of the composite one-way frequency tables.
- Internal consistency reliability could be established for the five proposed dimensions of student support. This implies that the subsets of questionnaire items designed to evaluate/describe each student support dimension jointly contribute towards the evaluation.
- Established internal consistency reliability furthermore imply that perceptions regarding dimensions of student support can be quantified using a single score per respondent per support dimension.
- Tables of mean scores per support dimension quantified perceptions and verified the positive perceptions observed in the five mentioned composite one-way frequency tables: the dimensions of student support.
- Tables of mean perception scores per support dimension grouped according to categories of biographical properties offered the first indication of biographical effects that might affect perceptions of student support. (Initial suggestions include age, the period of first registration, number of workshops attended, and number of visits to the Ethiopian Unisa campus).
- The five sets of perception scores were used to run a parametric and nonparametric analysis of variance to identify which biographical properties statistically significantly affect student support perceptions concerning the five support dimensions. Since parametric ANOVA assumptions could not be met for all sets of support-dimension scores, the findings of the nonparametric analyses were used to make final deductions. (The findings of the two approaches agreed in general). It was found that:
    - Age proved to be a statistically significant effect on perceptions of all dimensions of student support (with older students' perceptions being the least positive)
    - First registration significantly impacts perceptions regarding the student needs dimension and efficacy of workshop facilitators dimension (the 2016-2021 period reported the most positive perceptions)
    - Number of Ethiopian campus visits proved to significantly impact perceptions regarding accommodation of students' needs at workshops (the most positive perception was held by the >2 visits group of students)

Cochran-Armitage trend tests and bar-graphs that were conducted on perception data (per student support dimension) classified as either nonnegative (scores < 3.5) or positive (scores > 3.4) visualized trends and results and also verified the findings of the nonparametric analysis tests.

Overall, the findings of the parametric and nonparametric analyses are very similar. It can be highlighted that the nonparametric approach to the analysis of variance reliably verified that the biographical effects of age, registration period, and visits to the Ethiopian campus statistically significantly affect perceptions regarding the value of student support offered primarily to Ethiopian doctoral students. These findings directly address the research question of the study.

DISCUSSION OF FINDINGS

The research question of this study sought to determine the perceptions of Ethiopian doctoral students about the augmented face-to-face support provided by Unisa. As a result, the five dimensions of student support, namely, workshop environment, the ability of workshops to address students' needs, efficacy of workshop facilitators, supervision satisfaction, and institutional support/electronic access were investigated.

The research found that the responses to the subset of questions that evaluate the workshop environment of student-support amounts to 80.61% (Table 1). This majority positive trend implies that student-respondents experienced the workshop environment dimension of student-support, in general, very positive. This finding supports previous research by Ouma (2019), who emphasized the importance of alternative approaches to learner support. Arko-Achemfuor (2017) as well accentuated the need to provide support through blended learning. Additional analysis found that the responses to the subset of questions that evaluate addressing student needs of student-support amount to 87.43% (Table 2). This majority positive trend implies that student-respondents experienced the way student-needs were addressed, in general, very positive. This supports research by Renes and Strange (2011), who highlighted the necessity for distance education providers to identify and understand the needs and characteristics of their students. In addition, Rangara (2016) called for any learning institution that is customer service-oriented to understand the culture and characteristics of its students to offer the necessary support.

The research also found that the responses to the subset of questions that evaluate the workshop facilitators dimension of student-support amounts to 87.38% (Table 3). This majority positive trend implies that student-respondents experienced the efficacy of facilitators in general, very positive. This finding supports research conducted by Newberry and DeLuca (2013), who found it beneficial for students to develop relationships with faculty members to ensure that more support that may lead to degree completion is received. Furthermore, the research found that the responses to the subset of questions that evaluate the supervision dimension of student-support is 82.28% (Table 4). This majority positive trend implies that student-respondents experienced the way supervision is conducted, in general, very positive. Previous research has indicated that if faculty members and doctoral students have a mutually beneficial relationship and access to each other, it is likely that students will complete their studies (Bagaka's et al., 2015; Hoffman, 2014).

Furthermore, the response for the subset of questions that evaluate the institutional support dimension of student-support also tallies with similar results (Table 5). This implies that student-respondents experienced the institutional support component of student-support, in general, very positive. This finding supports a study conducted in Denmark on doctoral programmes that reported fewer problems when students are exposed to an inclusive environment (Christensen & Lund, 2014). Moreover, Ames et al. (2018) made a call that holistic approaches need to be developed to increase doctoral retention and to create opportunities for doctoral student growth.

The overall deductions of the research show that student-respondents, in general, experienced all five dimensions of student support very positively. These research findings are in line with literature that proclaims diverse student support as critical for the delivery of any quality ODL system (Arko-Achemfuor, 2017; Brindley, 1995; Lentell, 2003; Saide, 1995). This affirms that diverse approaches to address the distinctive needs of doctoral students who are registered in distance learning institutions are necessary to provide optimal and required support.

CONCLUSION

This article reported the results of a study conducted to measure students' perceptions on dimensions of augmented face-to-face support offered by faculty members. The literature revealed that although ODL offers flexible learning opportunities to individuals separated by geographical distance, some challenges persist. Internet accessibility, in particular, remains a significant challenge hampering Ethiopian doctoral students, limiting connections with peers, faculty members, and South Africa-based study supervisors. As a result, Unisa considered various holistic approaches to increase doctoral retention and to create opportunities for doctoral student growth. One of these holistic approaches included face-to-face interaction with students marginalized by the digital world. This study thus evaluated student perceptions of these augmented face-to-face interventions. The study results

provided empirical evidence that face-to-face support is beneficial to students and offers several important nuances, including student age and registration timeliness, as potential concerns moving forward. Therefore, more specific research that explores age and registration is required.

Lastly, it is essential to note that although the study results cannot be generalized, as they are purposeful for the context in which they take place, they have significance for other ODL institutions in the global South and may ultimately help inform distance learning efforts globally through augmented face-to-face supports.

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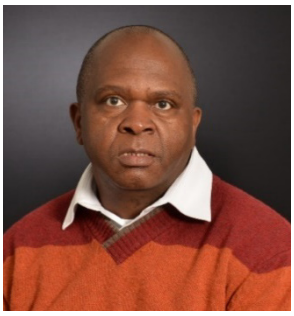

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