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A descriptive study of adult student preferences for technology-enabled learner support amid the COVID-19 Pandemic

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ABSTRACT

Although online distance education provides adult learners with an opportunity for lifelong learning, technology-enabled learner support remains a challenge. The COVID-19 pandemic introduced additional complications. The purpose of the current study was to determine which form of technology-enabled academic learner support students would prefer, and to assess their readiness for information and communications technology (ICT), be that under normal conditions or amid the pandemic. The study collected data using an online survey among fourth-level students enrolled in a research proposal module. The respondents indicated that, under normal, healthy conditions, they would prefer webinars to face-to-face learner support. Under COVID-19 conditions, respondents still ranked webinars first, online question and answer (Q&A) sessions second, vodcasts third, and lecturer-recorded videos made available via YouTube, fourth. The remainder indicated a preference for other forms of learner support. The respondents indicated their timing preference as a month before each of the assignment due dates or alternatively a week prior to the due date, with the remainder preferring more frequent online learner support. The practical implications of the study are that webinars, online Q and A sessions, and vodcasts should be actively considered for use instead of face-to-face classes for students at the University of South Africa (UNISA).

Keywords: *technology-enabled learner support; ICT; online distance education; student-centred approach; COVID-19*

BACKGROUND

On average, students at open and distance learning (ODL) institutions take longer to complete their studies than their counterparts at residential universities (Shikulo & Lekhetho, 2020, p. 1). These researchers ascribe this to a lack of resources, the underutilisation of resources, poor attendance of tutorial classes by students and a lack of collaboration by lecturers and their tutors and/or markers. However, other factors, such as age, home language and the successful completion of assignments also have a significant impact on student success at an ODL institution (Pretorius *et al*., 2009, p. 140).

The provision of learner support services in online learning environments is essential for improving learning outcomes and student satisfaction (He *et al.*, 2019, p. 49961). One may distinguish between academic learner support and non-academic (administrative) learner support. At the same time, some researchers (such as Brindley *et al*., 2008) regarded learner support as all-encompassing and lasting from enquiry about qualifications offered, to graduation and beyond to lifelong learning.

The COVID-19 pandemic, which was declared a pandemic by the World Health Organisation (WHO) in 2020, caused additional complexity for learner support due to national lockdowns, social distancing, and various sanitisation requirements.

The purpose of the current study was to determine which form of academic learner support students enrolled for an honours module in writing a research proposal would prefer, and to assess their

readiness for information and communications technology (ICT) - should they prefer online learner support - be that under normal, healthy conditions or amid the COVID-19 pandemic.

The article is organised as follows: the literature review section provides the context of the study by reporting on research that has been conducted to address learner support in an open distance education setting. The research problem is provided, followed by the methodology section. In the results section, the results obtained in this study are presented, followed by the discussion and conclusion. The final section describes the implications of this study for practice and for teaching and presents suggestions for possible further research.

LITERATURE REVIEW

Numerous definitions of learner support appear in the literature. Some of these were considered to formulate a working definition for this article. This is followed by a discussion of the challenges faced by adult students in online learning, and why it is essential to develop a student-centred approach and technology-enabled support in the provision of learner support. A discussion of the critical success factors for the use of ICT in higher education institutions concludes the literature review.

Learner support

According to Roberts (2005, p. 1), learner support programs became critical to all institutions of higher learning in South Africa because the Higher Education Act 101 (1997) stipulates increased participation and increased graduate output as expected outcomes.

Higher Education Institutions (HEIs), particularly ODL institutions, should provide effective support services that enhance the learning experience and academic success of their students, and empower them to be self-directed lifelong learners (Sánchez-Elvira Paniagua & Simpson, 2018).

According to Tait (2003, pp. 4–5), the rationale for learner support is that such support needs to be cognitive, affective, and systemic. The **cognitive** aspect refers to supporting and developing learning, the **affective** element refers to the emotions that support learning and success, while the **systemic** refers to assisting students in managing the rules and systems of the institution in ways that support persistence.

Learner support may be defined as subsuming all interaction between institutional personnel and students with the intention of assisting them in meeting their objectives, from the point of first inquiry through to graduation and beyond. Teaching and tutoring are recognised as forms of learner support but are often addressed separately in recognition of the centrality of the teaching function to interactions with learners (Brindley *et al*., 2008, p. 9). The definition by Brindley *et al*. (2008) is all-encompassing of learner support. However, a distinction can be drawn between academic support and non-academic support.

Academic learner support is aimed at developing a student's cognitive and learning skills, while non-academic (administrative) support focuses on the organisational and affective skills of students (Sánchez-Elvira Paniagua & Simpson, 2018). The focus of this article is mainly on academic support. Jacklin and Le Riche (2009) suggested a shift from **support** as a mainly reactive response to perceived student problems, to **supportive** (and proactive) cultures and contexts. This raises the question of the challenges students face in an online environment.

Challenges with learner support in an online distance education context

Not all students who commence online learning have the skills to manage their studies, the balance between work and study, and finding learning resources (He *et al.*, 2019, p. 49961).

Kara *et al*. (2019) conducted a review of 36 articles published in journals using constant comparative analysis of the challenges faced by adult learners involved in online distance education. These researchers classified the themes derived from the literature as internal challenges, external challenges, and program-related challenges, as summarised in Figure 1. The researchers noted that not all the challenges listed in Figure 1 can be addressed and overcome using learner support, except for program-related challenges such as low interaction between academic staff (including tutors) and students, and a lack of institutional support.

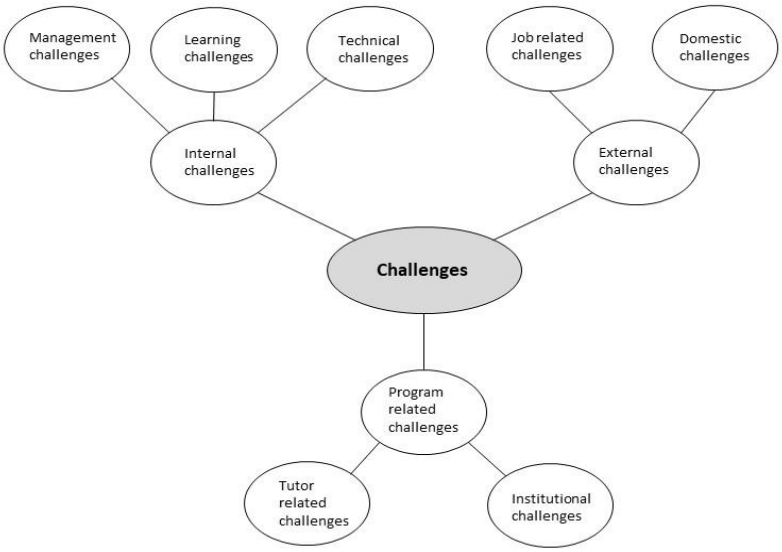

Figure 1: Challenges faced by Adult Learners in Distance Education
Source: Kara, *et al*., 2019.

Kara, *et al*. (2019) classified the challenges adult learners face as internal challenges, external challenges, and program related challenges. They regard management challenges as the inability to balance education and work, an imbalance between education and family or social life, and difficulty in managing time. Learning challenges include a lack of commitment to education, a lack of interest in the programme or study material, an inability to understand the study material, a lack of prerequisite knowledge, concentration problems and low self-confidence. Technical challenges include aspects such as difficulty in communicating over the Internet, insufficient computing skills, and difficulty in accessing reliable information. Job related challenges include work overload, a lack of support by the employer or manager, schedule conflicts, financial problems, and limited time to study. Domestic challenges refer to technical problems, a limited environment to study and a lack of family support. Tutor related challenges refer to low interactions between tutors/faculty and learners, feelings of isolation and unsuitable course requirements. Institutional challenges refer to

unsuitable study material, too difficult or demanding program, and a lack of institutional support. The current study focusses primarily on the institutional challenges the adult learners face. Liebenberg *et al*. (2012), in their study involving students in an ODL environment, considered the technical challenges indicated in Figure 1. The researchers used both an online survey and a paper-based survey. They achieved a response rate of 8% (22,216 of 282,248 potential respondents) for the online survey, and 33% (474 of 1 400 potential respondents) for their paper-based survey. Students ascribed their lack of access to the Internet, mainly to not having a personal computer at home, affordability of data, and not being allowed to access the Internet at work. The paper-based respondents also indicated that they could not afford the travel costs to a facility where they would be able to access the Internet. Of the respondents, 82% conceded that they had mobile devices capable of accessing the Internet. As indicated in Figure 2, the online respondents indicated a different downloading capability compared to the paper-based respondents (Liebenberg *et al*., 2012). Those who had access to the Internet reported that their main challenge was the slowness of their network connections. At the same time, 60% of those who completed the paper-based questionnaire acknowledged their lack of ICT literacy. This finding corresponds with the research done by Seymour & Fourie (2004, p. 1) about ICT literacy. However, the study by Liebenberg *et al*., was undertaken during 2012 and many changes have taken place (as explained later in this article).

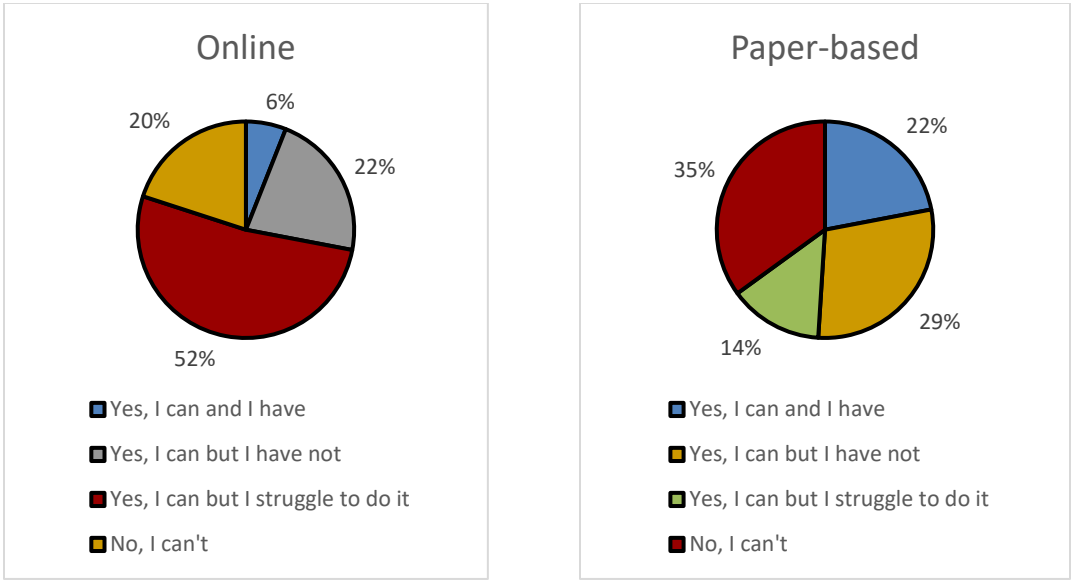

Figure 2: Students' Downloading Ability in 2012
Source: Liebenberg *et al*. (2012).

Seymour & Fourie (2004, p. 6) identified factors that influence ICT literacy in South African HEIs. These factors were social background, network, and role models; school computer training and subjects; income and access to computers; reliance on and usefulness of ICT literacy; home language; targeted information literacy courses; support for ICT literacy; targeted university support for previously disadvantaged students; the choice of university courses, and students' sense of responsibility and confidence. The researchers suggested further research about ICT literacy inequalities in distance and online courses. They also recommended the inclusion of a module with computing content in the curricula of HEIs.

Gravani (2018) regards technology as useful for learner support but suggested that supporting adult learners in distance education requires that support must be used in a context that considers learners' needs and experiences.

Garrison & Cleveland-Innes (2005, p. 145) emphasised that mere interaction between academic staff and students – without leadership and structure – is not enough. They held the view that the reflective and collaborative properties of asynchronous, text-based online learning were well adapted to deep approaches to learning. They nevertheless suggested further research to understand the nature of online interaction that will support high levels of learning better.

Pursuing a student-centred approach in online learning

The mission statement of the university studied suggests that, as an ODL institution, it provides higher education, guided by the open learning principles of access, flexibility, and student-centeredness (Koul, 2006; Makoe, 2015, p. 7). A student-centred approach is vital in ensuring student success and retention at ODL institutions. One of the main reasons identified for student attrition in ODL is a lack of student support and a lack of interaction between students and their lecturers (Ludwig-Hardman & Dunlap, 2003, p. 2). According to Qakisa-Makoe (2005, p. 45), most South African students come from homes where they are first-generation learners in higher education. Furthermore, they come from schools that are poorly resourced, and therefore, they are inadequately prepared for higher education. Yet, when these students enter higher education, they are expected to learn complicated new material independently and to adjust to new ways of learning in an ODL environment. Therefore, a student-centred approach to learner support is key to student success and retention.

According to Abrami & Bures (1996), some ODL students reported feelings of isolation, a lack of self-direction and management, and eventually a decrease in motivation levels. Students who lack self-directed inquiry experienced anxiety, frustration, and failure (Knowles, 1975, p. 15).

Slade & Prinsloo (2013, p. 1521) acknowledged that in providing effective and appropriate learning and student support, HEIs need learning analytics, which requires an optimisation of the selection of data harvested and analysed. However, learning analytics creates some ethical issues, such as informed consent, privacy, and the de-identification of data. These researchers defined learning analytics as the collection, analysis, use and appropriate dissemination of student-generated, actionable data with the purpose of creating appropriate cognitive, administrative, and affective support for learners. Clearly, in the absence of such learning analytics or due to imperfect data, one will have to conduct surveys regularly among students to determine their preferences for learner support.

Subotzky & Prinsloo (2011, p. 1513) argued that there is a need for a reciprocal sharing of appropriate and actionable knowledge between the ODL institution and its students. Such knowledge in terms of students may facilitate the offering of just-in-time and customised support, allowing students to make better-informed choices and act accordingly.

Baeten *et al*. (2016) found significant correlations between approaches to learning and instructional preferences. Students adopting an **in-depth** approach (that is, an approach where the student diligently follows all instructions and completes all readings) preferred knowledge construction and cooperative learning, while students taking a **surface** approach (that is, an approach where the student does the bare minimum) preferred teacher direction and passive learning.

According to Thorpe (2002, p. 116), there is no single model of online learner support. Online faculty can anticipate that a variety of roles and titles will continue to develop, incorporating the

range of local needs for support of the communication and discursive requirements of courses and learning groups. Prior to 2020 and the COVID-19 pandemic, the university offered a three-hour discussion class for honours students (including the module Research Project in Financial Management) once a year at their main campus. This annual discussion class was mainly attended by students from one province (Gauteng) because it was expensive for students from outside the province to travel and attend the discussion class. The attendance of the discussion class ranged between 50 and 65 students each year, or 20–25% of the registered students during 2017–2019. Due to cost considerations, discussion classes could not be offered at all the regional centres. Innovative ways of learner support and ways to design for supportive synchronous and asynchronous interaction online created new challenges. However, new ways of learner support to suit student needs had to be designed.

One of the options available for interactive learner support at an ODL institution is webinars. Sypsas *et al*. (2015, p. 227) regarded webinars as a synchronous, technological tool that may be used to reinforce interaction and communication among educators and learners in blended learning environments. However, since a student-centred approach is required, the students involved in the study by Sypsas *et al*. indicated that they viewed webinars as a supportive educational tool, but they would still prefer face-to-face lecturing. These researchers concluded that webinars should be used as supplementary and supportive tools in blended learning modules. However, their study was done in 2015, prior to the COVID-19 pandemic, and different results may be achieved if surveys were conducted under the circumstances prevailing at the time of the COVID-19 pandemic (2020-2021). According to Li & Lalani (2020), education as we know it before COVID-19, will not return. This points to the need to study what adjustments need to be made to use ICT effectively and efficiently in providing learner support to students.

Critical success factors for the use of ICT in higher education institutions (HEIs) in developing countries

A study by Vululleh (2018) among Liberian students found that their behavioural intention to accept and use e-learning in developing countries was significantly affected by their perceived usefulness, perceived ease of use, quality of life, and being socially influenced by their peers and instructors.

Bhatt *et al*. (2021) studied the impact of COVID-19 on the educational system in Nigeria which faced deficits in technological infrastructure and faculty who could adopt a swift transition to emergency remote learning during the pandemic, as well as a lack of a policy framework and direction. These researchers recommended greater support for asynchronous learning, equipping educators with the required hard and soft skills, greater autonomy, and devolution of power to institutional authorities, as well as the adoption of the private-public partnership model to address the budgeting and competing needs of ICT-based learner support.

In her study of faculty, Dintoe (2018) found that the majority used a teacher-centered approach instead of a student-centered approach. The faculty used specific compatible technologies relevant to their teaching experiences in response to university mandates and in a limited way due to a lack of infrastructure in the rural areas of Botswana. The research recommended that the management of the university should empower faculty to apply a bottom-up approach and allow them to drive transformation at the university.

In converting from face-to-face teaching to online learning during the pandemic, participants involved in online content development aimed to develop dynamic and authentic learning experiences by ensuring social, cognitive, and facilitator presence (Moodley *et al*., 2022). The participants recommended the use of clear instructions and rubrics not only for guidance, but also to provide learners with a sense of comfort and confidence in completing activities. Additional

information and scaffolding videos were used to assist students with technical challenges. Personalised videos and e-mails were used to establish a social and emotional connection with students, whilst discussion forums enabled students to interact with one another and to seek assistance from the faculty. A glossary of pertinent phrases and educational terms is recommended to bridge the gap between students from different educational backgrounds.

Barclay, Donalds & Osei-Bryson (2018) studied Caribbean universities and summarised the literature about critical success factors in online learning as institutional (electricity, technical support, quality management, accessibility, and training), e-learning systems (system quality and browser compatibility), learners (user satisfaction and encouragement by others) and instructors (teaching materials, faculty encouragement, instructor attitude, and instructor characteristics). South Africa is experiencing an electricity crisis (Associated Press, 2022). This creates challenges for both UNISA and its students.

Shrivastava & Shrivastava (2022) studied the readiness of students in India for the use of information and communication technology (ICT) as part of blended learning in response to the COVID-19 pandemic and found that they are ready for blended learning as the next normal.

Hadullo, Oboko & Omwenga (2018) focussed on the quality assurance of asynchronous e-learning in developing countries and identified the significance of quality in course design, course support, social support, administrative support, assessment, institutional factors, learner characteristics, instructor characteristics, and e-learning systems. For the current study, course support, institutional factors, and learner characteristics are particularly pertinent for UNISA. UNISA has provided students who could not afford laptop computers with such devices since March 2019 (UNISA, 2019) and all students with data since May 2020 (UNISA, 2020). UNISA also had its Open Distance e-Learning Policy revised in December 2018. However, it was not clear what students' preferences for learner support using ICT are because no research had been conducted about it yet. Students' preferences play a significant role in student satisfaction, retention, and success (Nortvig, Petersen & Balle, 2018).

RESEARCH PROBLEM

COVID-19 resulted in a need for alternative forms of learner support other than the prevailing face-to-face group discussion classes held at UNISA once a year prior to 2020. No learning analytics about the module involved are available. Many ICT and other developments have made other forms of academic learner support than face-to-face group discussion classes possible.

The primary purpose of the current study was to determine which form of academic learner support students enrolled for an honours module in writing a research proposal would prefer, and the secondary purpose was to assess their readiness and ICT literacy (should they prefer online learner support), be that under normal, healthy conditions or amid the COVID-19 pandemic.

METHODOLOGY

The target population was the students enrolled for a module in writing a research proposal in the financial sciences at the fourth level of study, in other words, at the BCom Honours level. Ethical clearance was obtained from both the Ethics Committee of the College of Economic and Management Sciences and the Senate Research, Innovation, Postgraduate degrees, and Commercialisation Committee (SRIPCC) for this purpose.

An online survey using LimeSurvey was conducted during the period 25 May to 10 June 2020. At the time of the survey, there were 366 students enrolled on the module. Each student received an

e-mail with the uniform resource allocator link (URL) to the questionnaire. The questionnaire gathered biographical data, such as gender, age, home language, home province, and whether they studied full-time or part-time. The questionnaire asked respondents to indicate:

1. Under normal and safe circumstances (with no COVID-19 pandemic or civil unrest), which one of the two listed alternatives would you prefer for learner support: face-to-face group discussion classes or webinars?
2. Under the current circumstances, the COVID-19 pandemic has caused a national lockdown and social distancing. Rank the following options according to your preference. (The questionnaire provided respondents with the following types of academic learner support that could be offered, as indicated in Table 1.)

Table 1: *Forms of Learner Support that could be offered by the university*

	Forms of academic learner support
1	A webinar (web-based seminar) where students connect via the Internet to look and listen to a half an hour lecture at a time (the webinar will be recorded so that students can watch it at any time during the rest of the year)
2	Downloading PowerPoint slide shows (including voice recordings) from the university's LMS
3	Downloading voice recordings from the university's LMS (no PowerPoint slides provided)
4	Lecturer recorded videos, made available via YouTube
5	URL (links) to YouTube videos about topics covered by the module
6	Live question and answer webinars, where students e-mail the lecturers their questions, and these are discussed during a webinar
7	WhatsApp messaging among the students

The questionnaire also asked respondents about their access to and competency in using ICT systems, and whether they had access to ICT equipment to assess their ICT literacy and readiness for any of the ICT-enabled learner support options.

RESULTS

The number of completed questionnaires received totalled 234 out of a potential 366 students: thus, yielding a response rate of 64%. The response rate may be ascribed to the significance of the topic in ensuring their success with the module during 2020 amid the COVID-19 pandemic, the fact that to date the university offered only one discussion class per annum for this module and at the main campus only; yet the students reside in all the provinces of South Africa and even beyond the borders of the Republic of South Africa. The assistance of the students due to their voluntary encouragement of one another via their self-established WhatsApp group to complete the questionnaire was a contributing factor to the response rate. The biographical details of the respondents are summarised in Table 2 below. Of the respondents, 93% (218) of the 234 respondents attempted the module in writing a research proposal for the very first time, 5% (12 students) for a second time, and 1.7% (4 students) for a third time.

Table 2: *Participants' Self-Reported Demographic Data*

Variable		Number	Percentage
Gender	Male	151	64,5%
	Female	83	35,5%
	Total	234	100%
Age	Average 32 years	Minimum 21	Maximum 58
Province	Eastern Cape	10	4.27%
	Free State	4	1.71%
	Gauteng	149	63.68%
	Kwazulu Natal	18	7.69%
	Limpopo	11	4.70%
	Mpumalanga	12	5.13%
	Northern Cape	3	1.28%
	North-West	2	0.85%
	Western Cape	23	9.83%
	Other: I stay outside the borders of South Africa	2	0.85%
Language	Afrikaans	17	7.26%
	English	49	20.94%
	French	3	1.28%
	IsiNdebele	5	2.14%
	IsiXhosa	22	9.40%
	IsiZulu	28	11.97%
	Northern Sotho	33	14.10%
	Sesotho	10	4.27%
	Setswana	16	6.84%
	Shona	10	4.27%
	Siswati	12	5.13%
	Tshivenda	10	4.27%
	Xitsonga	14	5.98%
	Other	5	2.14%
Study and employment status	I am studying part-time because I have a job	175	74.79%
	I am studying full-time because I do not have a full-time job	45	19.23%
	Other	14	5.98%

Figure 3 provides an indication of the respondents' status as either full-time or part-time students. The majority (74.8%) were studying part-time, and only 19.2% were studying full-time. Nearly 6% indicated they were either self-employed, disabled, or studying part-time because they were job seekers at the time.

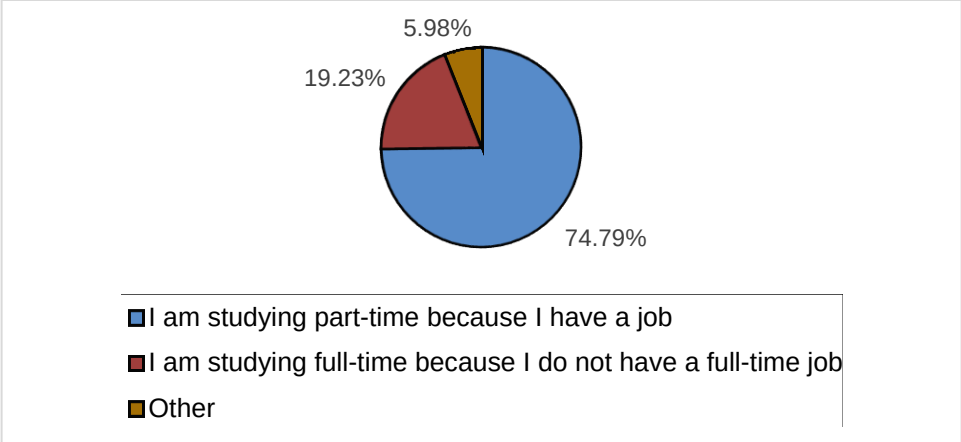

Figure 3: Respondents studying Full-time and Part-time

Figure 4 indicates the respondents' preference for academic learner support under normal (healthy) conditions.

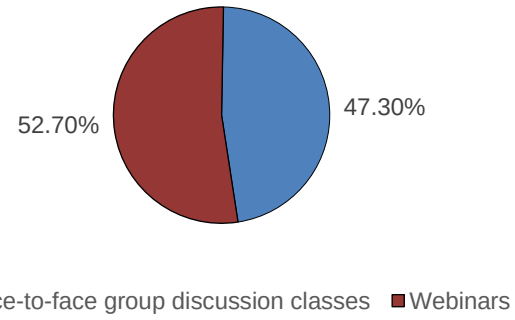

Figure 4: Respondents' Preferences during Normal (healthy) Conditions

Figure 5 indicates the preferences of the respondents amid the COVID-19 pandemic. The respondents indicated they would prefer three of the options from the list provided in the questionnaire, namely webinars (37.7%), live Question and Answer online sessions (14.1%) and vodcasts (in the form of PowerPoint slides with voice-over) (13.6%).

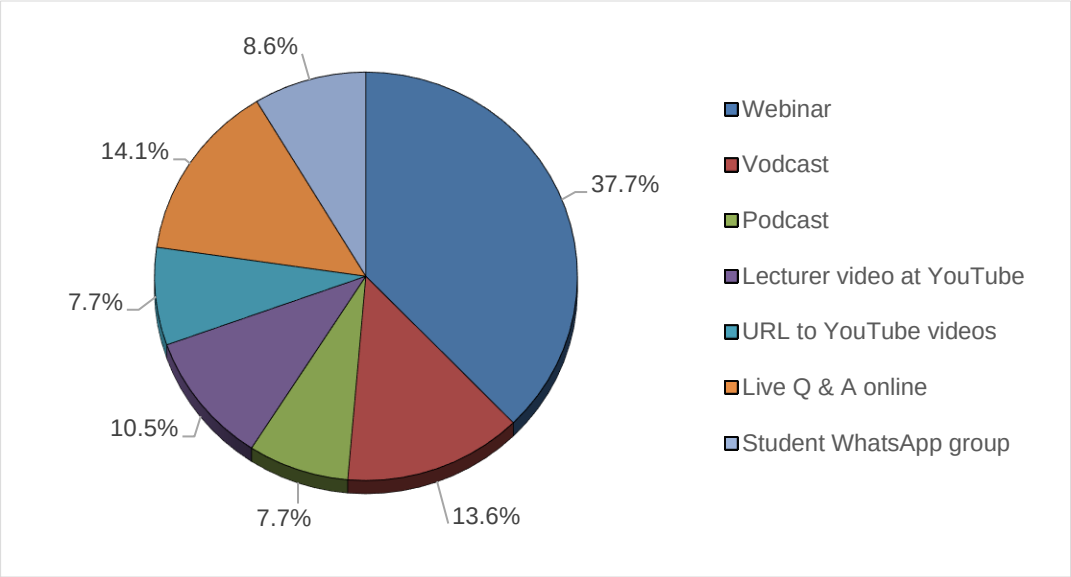

***Figure 5*:** Respondents' Preferences amid the COVID-19 Pandemic

The rationale for the need for learner support was also studied. The respondents confirmed the rationale indicated by Tait (2003, p. 4–5), namely that it needs to be predominantly cognitive, affective, and systemic, as indicated in Figure 6 below.

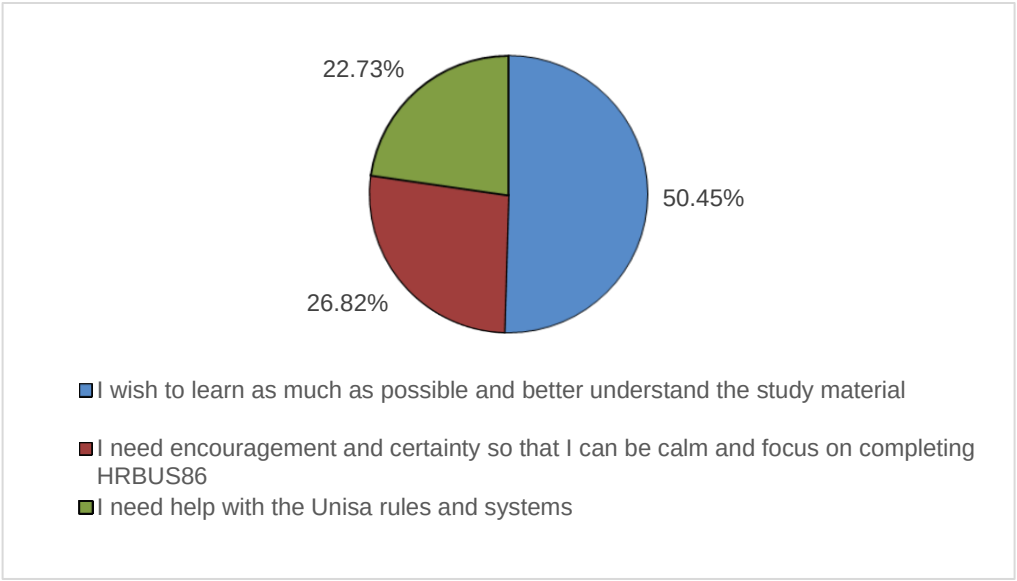

***Figure 6*.** The Rationale for Learner Support

The majority of respondents preferred the learner support to take place on Saturdays (35.1%), Mondays (29.3%) or Fridays (16.2%), as indicated in Figure 7 below.

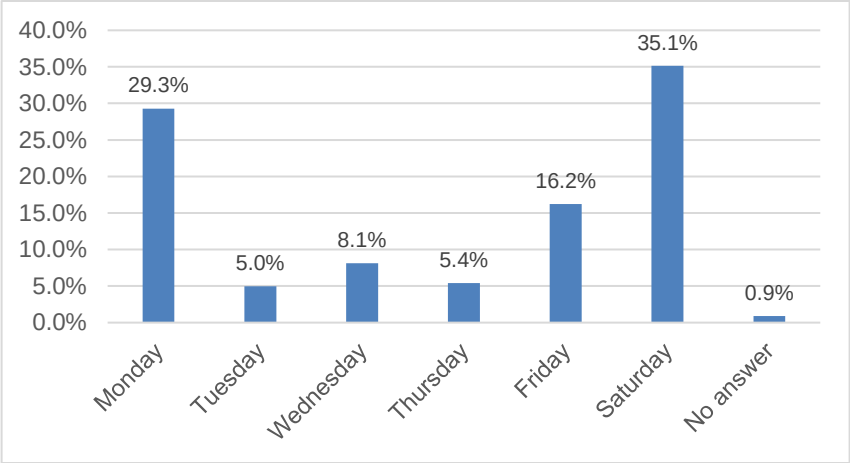

***Figure 7*:** Preferred Day of the Week for Learner Support

The respondents indicated that they would prefer any learner support during the morning (42%) or evening (39%), while only 19% indicated they preferred this to take place in the afternoon. Since nearly 75% of the respondents studied part-time and held full-time jobs, the majority of respondents indicated that they would prefer Saturday mornings, alternatively Monday evenings, for learner support. The preference for Saturdays may be ascribed to the majority of respondents being part-time students with work commitments during weekdays (see Table 2).

The respondents were also asked about their access to computers and the Internet.

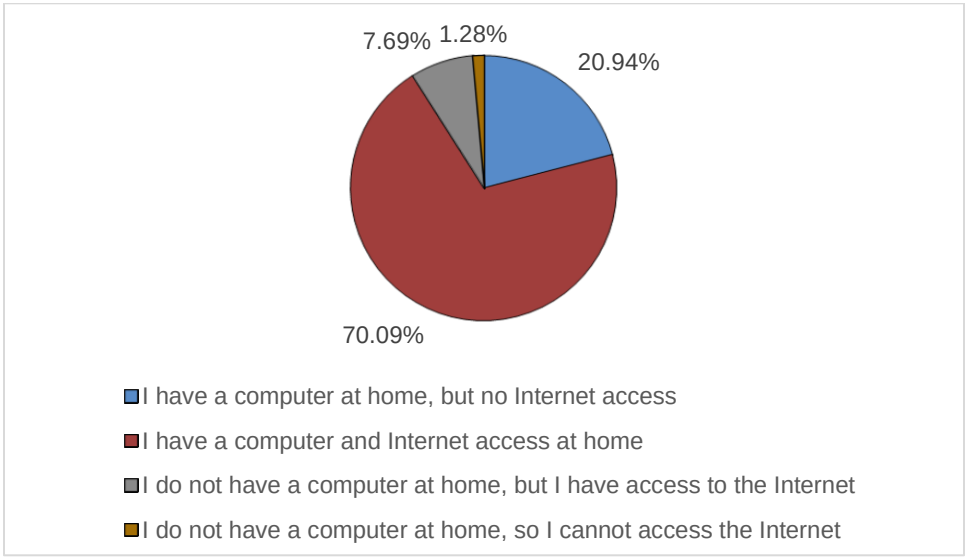

Figure 8: Access to Computers and the Internet

Figure 8 shows that the majority of respondents (70%) had computers and Internet access at home; 20.94% had a computer at home, but no Internet access; 7.69% did not have a computer at home, but they had access to the Internet (either at the office, at the home of a friend or relative, or one of the campuses or regional offices). A small percentage (1.28%) indicated they did not have a computer and could not access the Internet at all.

Figure 9 shows the confidence levels of ICT literacy of the respondents.

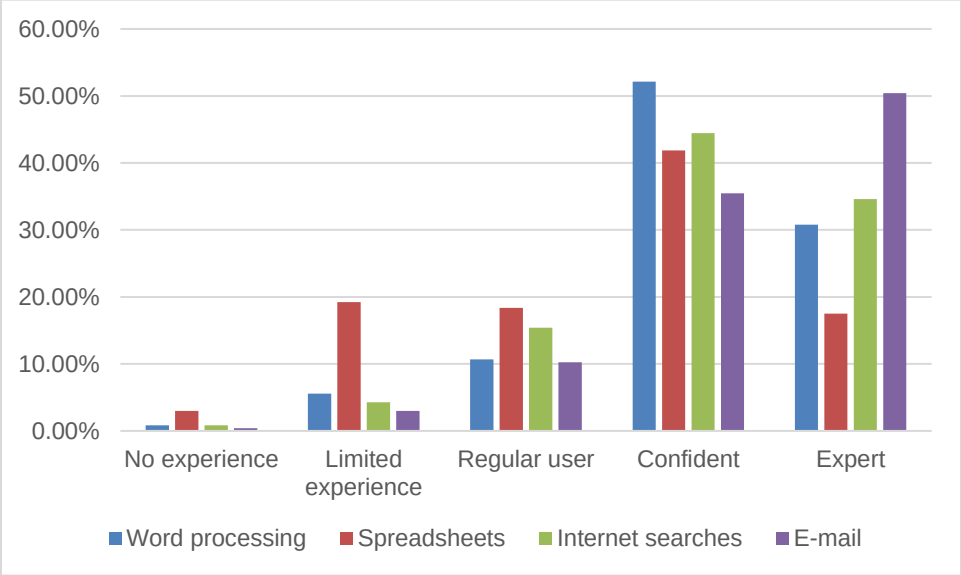

Figure 9: Levels of ICT Literacy

As indicated in Figure 9, the respondents regarded themselves as predominantly experts or confident in using word processing, spreadsheets, doing Internet searches, composing, and responding to e-mails.

DISCUSSION AND CONCLUSION

The purpose of the study was first to determine which form of academic learner support students enrolled for an honours (fourth level) module in writing a research proposal would prefer. Second, the researcher wanted to assess students' readiness for any of the ICT-enabled learner support options and their ICT literacy (should they prefer online learner support), be that under normal, healthy conditions or amid the COVID-19 pandemic.

Prior to the COVID-19 pandemic, students were provided with a face-to-face group discussion class once a year only. However, the pandemic imposed the need for social distancing and travel restrictions during the lockdown period in South Africa. Webinars for meeting and teaching purposes, of necessity became increasingly popular in 2020. However, no evidence existed that students were ready for alternative forms of academic learner support other than the traditional face-to-face group discussion classes and what their preferences are. Since students' preferences play a significant role in student satisfaction, retention and success, research in this regard was needed. Also, in view of the student-centred approach professed by the university, the input of students about their preferences was necessary. The study on which this article reports focused

on academic learner support aimed at addressing the cognitive aspect of supporting and developing learning.

At the time of the COVID-19 pandemic, it was necessary to provide interaction and communication between the faculty and students and thus prevent any feelings of isolation among the students. This is supported by the research of Sánchez-Elvira Paniagua & Simpson (2018) and Tait (2003) which indicated the need for learner support to be both cognitive and affective. Since face-to-face group discussion classes were impossible during the pandemic, various other forms of academic learner support by means of ICT had to be considered to ensure student satisfaction, retention, and success (Nortvig, Petersen & Balle, 2018), such as webinars, interactive Q and A sessions, vodcasts, podcasts, and WhatsApp groups.

The findings may be summarised as follows. The respondents indicated that even under safe (healthy) conditions, 52% would prefer webinars to face-to-face group discussion classes. Under the COVID-19 conditions and considering a greater variety of possibilities, the majority of respondents still preferred webinars (37.7%), followed by a live Q and A online session (14.1%) and vodcasts - in the form of PowerPoint slides with voice-over - (13.6%). The preference for webinars and live Q and A sessions underscores the interactivity required for learner support to be effective, as identified by Kara *et al*. (2019). The preference of the respondents in the current study for webinars corresponds with the findings of Sypsas *et al*. (2015). However, it seems South African students would prefer webinars to face-to-face learning due to the time and cost involved in travelling substantial distances from other provinces to the UNISA main campus to attend group discussion classes, making it a primary tool instead of a supplementary tool in blended learning.

The majority of respondents were part-time students (see Table 2) and they confirmed that they had a computer at home with Internet access, and that they were confident in the use of ICT equipment and software. This is similar to the finding of Shrivastava & Shrivastava (2022) among students in India.

Since UNISA is a comprehensive Open Distance e-learning institution with enabling policies in place, and had provided students with laptop computers and data, it did not suffer the same challenges as the educational system of Nigeria as reported by Bhatt *et al*. (2021).

Therefore, the literature reviewed earlier supported most of the findings of this study and refuted a few of the findings, as discussed above.

IMPLICATIONS

The study has implications for teaching, policy, and research. The practical implication for teaching is that webinars, live Q and A sessions and vodcasts should be actively considered for implementation by faculty as soon as possible instead of face-to-face lectures. These forms of technology-enabled learner support enable such learner support in a context that considers learners' needs and experiences, as envisaged by Gravani (2018). A further implication for teaching is that learning analytics needs to be implemented in an ethical manner. The social implication is that, in the future, students may wish to use online learner support to a greater extent, even if it means less personal contact and the greater use of technology to stay in contact with faculty and fellow students.

The policy implication is that the university needs to consider either allowing and enabling its faculty to record videos and to provide such via YouTube, or alternatively to create a facility that could enable the more efficient production, uploading and downloading of videos via the UNISA Learning Management System (called myUnisa) for academic support purposes. Another policy implication

is that the university needs to implement a signature module at the first-year level of study that would improve the ICT literacy of entry-level students as envisaged by Seymour & Fourie (2004) so that they are even more competent by the time they reach the fourth level of their studies.

The implication for further research is that an evaluation of the satisfaction of students with the technology-enabled learner support implemented and identifying areas for further improvement needs to be done in future.

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