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Pedagogical strategies to support economics students' learning at an open distance learning university

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Abstract

In this article, I investigate the use of pedagogical strategies employed to support students' learning in an online teaching methodology of economics course. To this end, I conducted a systematic review of the extant literature on student support in an open distance learning context. Furthermore, I employed a pragmatic approach, along with an explanatory mixed methods design to conduct the research. I collected data via an online questionnaire, and from e-Discussion forum entries and blog postings. Convenient and purposive sampling was done with postgraduate students (n = 179) in economics education, after which the respondents voluntarily completed an online survey. The findings and practical implications of the study, on which this article is based, have been formulated to advance online pedagogical strategies. The aim is to support students' learning, and to promote essential competencies as necessary outcomes to master the content of the course in the College of Education at an open distance learning university.

Keywords: teaching methodology of economics, pedagogical strategies, systematic review, exploratory mixed methods design, open distance learning

Introduction

Globally, the higher education sector faces immense opportunities and challenges, but it appears that the opportunities outweigh the challenges of providing quality education to all students (Federici, Caspersen, & Wendelborg, 2016; Warschauer & Matuchiak, 2010). Most institutions of higher learning are confronted with relevance of curricula, lack of infrastructure, insufficient student accommodation (Federici et al., 2016), and insufficient student funding and student support (Tait, 2000), all of which affect their throughput and success rates (Bates, 2010). In view of the latter, South African universities are facing the same dilemma and are not immune to these challenges. They have also begun debating the relevance of their existing curricula in terms of whether or not they equip students for the requirements and challenges of the job market. Several public lectures, debates, and scholarly

publications have focused on the relevance, appropriateness, feasibility, and fit-for-purpose of the existing curricula. To compound these issues, student leaders have also used issues such as the #Rhodesmustfall, #feesmustfall and freeeducationforall movements as leverage, which culminated ultimately in the demand for a decolonised curricula. It emerged from these public lectures and movements for a decolonised curricula that universities must engage in a process of transforming their existing curricula to reflect a decolonised approach; they do so with the aim of making their institutions sustainable and providing quality education. Several scholars argue that contemporary debates on quality education at universities, which foster critical thinking, revolve around transforming future learning programmes so that students are appropriately prepared for the demands of the 21st century (Nichols, 2010; Wangenge-Ouma, 2012; Warschauer & Matuchiak, 2010). It is not my intention in this paper to argue for decolonised curricula, but to discuss how universities support students. Student support was one of the crucial issues that emerged from demands during the various protest marches on South African university campuses. Other issues emerging from the students' demands included academic support (Simpson, 2008) and financial and wellness support (Federici et al., 2016). According to Wangenge-Ouma (2012), research has shown that specific and carefully considered technological interventions can provide answers to students' (and lecturers') identified teaching and learning concerns.

In the online e-News staff letter of the University of South Africa (Unisa), Farrell (2018) reported that student support is an important function of the institution as an open distance learning (ODL) university. Furthermore, Farrell is of the view that practice-based research is supported by the social constructivist pedagogical paradigm because it supports students' studies in an online context. To execute this social constructivist pedagogical approach as a means of supporting students to achieve the course outcomes is of vital importance. Farrell posits that this (social constructivist e-pedagogical) approach to success, is a "socially situated, dynamic, active online connection using a learning management system (LMS) between the lecturer, and the student, using various resources to support the student. Furthermore, the lecturer provided administrative and professional support to students" (2018, p. 1) to achieve the learning objectives of a particular course. Tait (2000) has also noted that while planning support for students is crucial, it offers no guarantee that a common design existing for such support will bear fruit. Therefore, Tait (2000) actually appears to have meant that there is no common design that fits all programmes. Student support that works for one programme may not be equally effective in another, so one support design may not fit all programmes. Therefore, support design should be tailor-made for a specific programme.

Lecturers have the responsibility to guide, support, and encourage students to complete their course, no matter the circumstances and challenges of the latter. Some scholars (Beldarrain, 2006; Simpson, 2008; Tait, 2000) are of the view that motivation and support systems play an important role in the success of distance learners at ODL universities. One aspect that a lecturer could apply, for instance, is to write motivational or encouraging texts on a student WhatsApp group or blogging space (Manca & Ranieri, 2016; Simpson, 2012). Anderson (2019) extends these views on the adoption of social media since teaching support tools have

changed how lecturers create engaged daily online environments. Finally, lecturers can increase the number of positive moments they use to motivate and advise their students so that the latter become determined to complete the course.

Most research published on student support emerged in the areas of traditional face-to-face (F2F) contact (Graf, Kinshuk, & Liu, 2009) and blended distance learning environments (Troiano, Liefeld, & Trachtenberg, 2010; Rodriguez et al., 2019), and, to a lesser extent, the ODL context (Simpson, 2004; Tomas, Lasen, Field, & Skamp, 2015). The outcome of the scoping review prompted me to investigate this phenomenon as it manifests itself in the aforementioned course.

Several research projects on student support have been conducted, but few (see, for example, Graf et al., 2009) have focused on pedagogical strategies specifically in an ODL context. In addition, very few recent studies on student support have been done in the field of ODL (Simpson, 2008; Rodriguez et al., 2019), but were done on distance learning because it became a popular mode of delivery (Blaess & Grant, 2010; Tait, 2000; Upko, 2006). Until recently, there were only a few studies that explored the pedagogical strategies specifically used to support students enrolled in an economics programme delivered in an ODL context (Simpson, 2008; Upko, 2006). If it is the case that only a few studies were conducted on student support, in particular using pedagogical strategies in an ODL environment, what specific research protocol was designed, and with which criteria, to retrieve scholarly works on student support, asked Arksey and O'Malley (2005)? Furthermore, why were specific indices/databases selected for the purpose of conducting searches for appropriate scholarly publications (articles, theses, dissertations and book chapters) employing pedagogical strategies to support students? In the context of the study on which this article is built, Bachelor of Education (BEd) and Postgraduate Certificate in Education (PGCE) students registered for the teaching methodology of economics module regularly requested support for assignments, projects, examinations, as well as financial and wellness support. These forms of pedagogical support were requested through e-mails, telephone calls, on social media platforms, in e-Discussion forums, in blogs, and in instant short messages (SMSs). Therefore, what motivated me to investigate the use of pedagogical strategies in supporting BEd and PGCE students' learning in the teaching methodology of economics module delivered via ODL? To achieve the main research aims on which this article is based, I formulated the following sub questions.

- What specific research protocol was purposively employed to conduct a student support scoping review on pedagogical strategies in an ODL context and what were the criteria?
- Which pedagogical strategies offer students optimal support in acquiring competencies in the teaching methodology of economics module in an online environment?
- How best can the lecturer support BEd and PGCE students academically and non-academically, in the teaching methodology of economics course?

- Are there any statistically significant differences between BEd and PGCE students related to pedagogical support strategies in the teaching methodology of economics module?

Employing a pragmatic approach, I used an explanatory mixed methods design to conduct the research. I collected data via an online questionnaire and consulted only e-Discussion forum entries. The e-Discussion forum is one of the interactive online tools on an online myUnisa LMS platform located on the university webpage for lecturers and students to communicate, announce, and share and upload information relevant to a specific course. I used convenient and purposive sampling of only BEd and PGCE students who were registered for the teaching methodology of economics module. They voluntarily completed the online survey and posted e-Discussion forum entries. The findings and practical implications put forward here aim to improve student teachers' online pedagogical strategies in supporting students' learning as part of the requirement to pass the course. I present this under the auspices of the College of Education at the University of South Africa as an African ODL university.

Literature review

An integrative theoretical framework for this study

I made use of an integrative, theoretical framework consisting of the self-determined learning, connectivity, social cognitive, and self-regulated learning theories. These theories provide an integrative framework for the study as a whole, as well as for this paper. This was deemed necessary because of the online ODL context used to enable online student teachers to become future self-regulated teachers and lifelong learners. In this case, BEd and PGCE students enrolled in the teaching methodology of economics module as an exit level course are using daily social media networks for personal means and are tech-savvy. These student teachers are, of course, digitally literate and use online tools through an LMS, myUnisa, as the platform. These BEd/PGCE student teachers are expected to study independently by regulating and taking ownership of their learning, which is a necessity for online learners. For me, this integrative theoretical framework with each specific theory having been considered thoroughly before being selected, is most appropriate for this paper. Each theory, which was purposively selected has specific characteristics and educational value and has been employed previously in several empirical investigations that showed specific findings aligned to a particular context.

Self-determination theory (Vansteenkiste, Lens, & Deci, 2006) focuses on students' learning through blended approaches in distance education environments. According to this theory, students are motivated intrinsically to become self-determining in assuming their roles and responsibilities as autonomous learners. Student autonomy is a vital ingredient in support of clear sets of goals in determining intended learning outcomes in order to become self-regulated learners (Nilson, 2013; Simpson, 2012). To achieve this objective, students participate by choosing to take responsibility for their own learning.

Connectivity theory, which is the brainchild of Siemens (2004), is based on there being a connection between students and lecturers on, for example, an online networked platform where they can share, communicate, and collaborate (van Wyk, 2018). In this study, the student teachers logged into an online LMS (myUnisa portal) to upload their final e-Portfolios for summative assessment. From time to time they were also expected to collaborate, share, and submit evidence online.

Social cognitive theory, part of constructivism, suggests that students learn socially via an online platform by sharing and collaborating with others in a networked community. The students logged into the myUnisa LMS, and then uploaded evidence to their e-Portfolios. They had to design and create evidence for the portfolio for formative and summative assessment purposes (see van Wyk, 2018)

Self-regulated learning theory (SGL) (Zimmerman, 2000) focuses on how students regulate their own learning to achieve outcomes. According to Zimmerman, students use creative means and analyse ways, selecting and appraising them to accelerate the regulation of personalised learning. Furthermore, Zimmerman posits that SGL enhances students' metacognition competencies as they acquire new knowledge and learn skills and values throughout the course. In this *Teaching Methodology of Economics* module in the BEd and PGCE course, the students acquired new (subject content) knowledge, applied and practised pedagogical content knowledge learned throughout the module in planning specific lessons, and were empowered with regard to specific values (social, communitive, and negotiated).

A systematic scoping review on student support

For this paper I performed a systematic scoping review of scholarly works on student support for an ODL context. As stated earlier, research studies have reported on student support in general, but only a few reported on pedagogical strategies in blended and ODL contexts (Graf et al., 2009). In addition, Simpson (2008) reported on student support in a distance learning environment. Many scholarly texts have indeed been published on student support in ODL contexts, in particular, Simpson's (2012) seminal work, *Supporting students for success in online and distance education* that prompted my scoping review of student support in general, and in an ODL context in particular.

What is a systematic scoping review? Aromataris & Pearson (2014) posit that this is a predetermined process focused on the scope, nature, benefits, and context of literature. The systemic scoping review is a step-by-step process searching for relevant and appropriate scholarly works. The following criteria for all scholarly publications were employed: identification; screening; appropriateness; and inclusion of relevant citations (Arksey & O'Malley, 2005; Aromataris & Pearson, 2014). These criteria were used as the parameters for the systematic scoping review of this paper. After studying several sources, I chose a scoping review as the research protocol for this study because a systematic scoping review of the extant literature is an important component of scholarly investigation and publication in that it helps to substantiate and support the research findings. In the context of this paper, I did a brief literature review on student support and motivation. A scoping review is an emerging

process, employed in the scholarly arena to identify suitable texts for inclusion in a literature study (Arksey & O'Malley, 2005). I employed a rigorous and transparent methodology in searching for suitable and valid scholarly works. Search databases such as SCOPUS (biographical databases /index of citations of scholarly publications), Web of Science (scientific index with scholarly publications), EBSCOhost (online reference system with index of scholarly works), Academic Primer (multidisciplinary research database with scholarly publications), Google Scholar (largest Google.com search engine for scholarly publications either in journal articles, academic books, dissertations, or theses) and ERIC (Education Resources Information Centre) were used. Specific inclusive criteria were employed in the process, such as identifying scholarly publications, screening specific downloaded scholarly works, deciding on the appropriateness of each, and including relevant scholarly works. At first, I identified indices for scholarly works on student support in online contexts. For the purpose of this study (particularly in respect of distance education and ODL), I used several reputable indices (databases) and search engines. I purposively selected SCOPUS, Web of Science (ISI), the International Bibliography of Social Sciences (IBSS), the Norwegian Scientific Index, the Scientific Electronic Library Online (SciELO) and the South African Department of Higher Education and Training's (DHET) list of approved journals (DHET, 2015, Section 5 Journals), as well as Google Scholar, for this investigation. The DHET (2015) has gazetted the Research Output Policy framework and guidelines for inclusion of all scholarly publications.

A synopsis of academic student support

I employed specific criteria, as stated earlier, in the systematic scoping review on academic and non-academic support to students, in particular in an ODL context. The findings of systematic scoping reviews of scholarly works emerged on academic and non-academic support to students for conducting the online literature review for this paper. Furthermore, findings from these publications revealed that in a distance education context, online support is vital for student success. For the purposes of this study, the benefits of student support strategies (academic and non-academic support and assessment) as reported in the literature are explained. It emerged from several studies that student support strategies in an ODL context are important since students study at a distance, so the support they receive needs to be adequate and effective enough to bridge the distance between the lecturer and the student. This implies that distance education students are physically removed from the lecturer/teacher educator and therefore require different support strategies to those of full-time students. In this case, student support includes, for instance, a telephone call, or the delivery of a parcel containing learning material. In an effort to pre-empt the types of triggers that generate the need for online student support at Unisa, various student support strategies are available and employed, including myUnisa LMS, to support students online with regard to myLife e-mail account, e-tutors, student counselling, the Unisa library services desks, and regional (teacher) centres. In teaching the course under study here, I also used an e-Discussion forum, blogs, announcements, and SMS to support students. I recognise that students need assistance and guidance in preparing to learn, and they need to be actively involved in their learning journey.

I employed various strategies at different stages when the students required help or asked for a consultation. According to Federici et al., (2016), the support that teachers give to their learners is an important strategy to bring out the best in them to help them succeed in numeracy and assessment for learning in the course. In the context of this paper, I used, for example, official online announcements and tutorial letters as supportive tools in preparing students for assignments, examinations, or the completion of tasks. Additional support structures (pedagogical strategies) must be implemented to support students' learning in a distance learning context. Studying through an ODL context requires specific student support strategies compared to a blended or F2F context. In studying through an ODL context, students and lecturers need to become more innovative by employing specific teaching and learning strategies. With reference to this paper, many students at Unisa are from the socioeconomic context of a developing country. Many of these students who live in either urban or rural areas, and in different socioeconomic contexts are faced with expensive data prices to access the internet (because South African data bundles are expensive in comparison with those of other developing countries), poor internet connectivity, and lack of digital literacy skills all of which may pose specific challenges to ODL students.

In the past decade, more students have enrolled at higher education institutions (HEI) such as Unisa as an ODL university and face the abovementioned challenges, but some of them show immense resilience and determination to succeed in their studies (Nilson, 2013; Vansteenkiste et al., 2006). Rumble (2000) conducted a study on an in-service management course and distance education university and found that it is possible to overcome the challenges facing students studying at a distance and concluded that student support services are thus a vital part of the success of any overall online LMS at a distance education institution.

Contextualisation of the study

Unisa as an ODL university in service of humanity, implemented the Scholarship of Teaching and Learning (SoTL) strategy (2017–2025) as a university initiative to promote scholarship of teaching and learning among academics. Further, its objective is to support academics through this initiative and increase the student throughput rate for all colleges' learning programmes. SoTL identified specific areas for research such as teaching and learning ODL pedagogy, assessment and quality assurance, student support, and material development including open educational resources (see Figure 1).

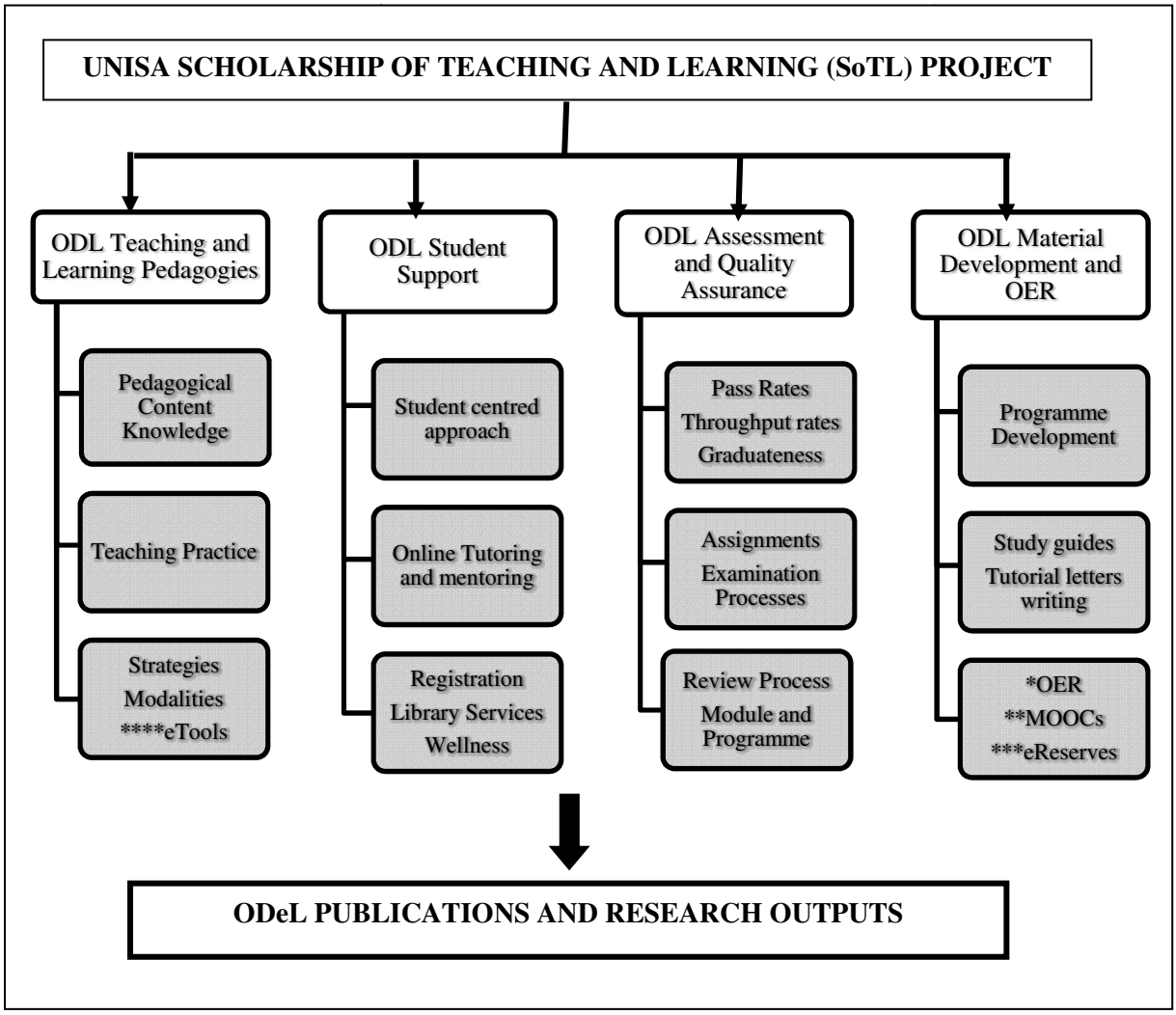

Figure 1: Diagrammatical overview of SoTL Project (Magano, 2018)

Note: *open educational resources (OER);
**Mass Online Open Courses (MOOCs);
***eReserves is a **text** of scholarly publications that allows multiple usage;
****eTools are interactive digital tools use online for example eDiscussion forums, blogs. Teaching Lab etc.

From the four sub SoTL projects, I decided on and selected the ODL Student Support project. This project, on which this article is based, forms part of a larger research project called the Scholarship of Teaching and Learning (SoTL) initiative (see Figure 1). This initiative was funded and motivated for under the auspices of the College of Education at a South African ODL university, an entity that views and measures student support as one of the pillars of student success on the path to graduation. The aim of the SoTL project for the college was to design a strategic framework to enhance student support strategies as an integral component of teaching for success in an ODL context. With reference to this paper, I decided to focus on ODL student support as one of the research areas of the SoTL strategy. BEd/PGCE course students registered for the Teaching Methodology of Economics module used the university webpage, myUnisa (LMS), as a connecting space. I planned the activities before the commencement of the yearly course. Before the course began, I uploaded to myUnisa (LMS) the course tutorial letter (TUT 101/0/2018), the study guide (*Teaching Methodology of*

Economics), module information, and other related learning materials (van Wyk, 2018). To access the myUnisa platform, students are required to login with username and password for security reasons to participate in the different pedagogical strategies for the course.

Specific e-tools for pedagogical support strategies at online ODL platform

The literature indicated several types of pedagogical strategies that can be used during the course to support students. In the context of this paper, when students decide to register for a degree course at the university, they log onto the website. The university website, myUnisa, has specific e-tools such as e-Discussion forums, blogs, announcements, teacher centres, e-Portfolio, webinars, surveys etc. and the purpose and functionality of each e-tool is described for clarity on the myUnisa platform. The myUnisa LMS measures how many times students log into the LMS to access module information. The first e-tool, the e-Discussion forum, is an e-tool for creating online discussions. This e-tool can be used as a dialogical or conversational tool to create a space for lecturers and students to engage with, share, and reflect on topics posted. It is an e-tool to create conversations about a topic among students to which they can respond regarding the module. As the primary lecturer for the teaching methodology of economics module, I posted specific topics, for example, material on a contemporary economic issue like poverty. I introduced the topic of youth unemployment for students to respond to on the blog. The purpose was to create a conversation thread among the students doing the teaching methodology of economics module to determine how they would respond to this phenomenon. A blog is a social networking tool on which to post entries to which others can respond. On myUnisa, a blog is another space in which lecturers can create learning opportunities for students to respond to questions, or suggestions, or information posted on it. Anderson (2019) has opined that social media creates specific educational advantages for students to us to enhance their learning. On the blog, for example, I, as the lecturer for the module, posted a question for students to answer: "How does an increase in the petrol price affect the family budget?" Other e-tools such as module tutorial letters, online announcements, and SMSs are used to make specific announcements to students registered for the course or module. The e-mail account (@mylife.unisa.ac.za) is another e-tool for students to send emails related to module queries such as feedback on assignments, examinations, and other module-related queries to the lecturers. Additionally, consultations, telephone calls, visiting regional teacher centres, and personal administrative WhatsApp groups play an important role in the support of students.

Methodology

Before commencing this research, I adhered to ethical principles with a letter confirming that Unisa's Research Permission Subcommittee (Certificate Ref #2018 RPSC_017) had granted authorisation for the study. The BEd and PGCE in Senior and FET phase course students (n=179) who were registered for the teaching methodology of economics module were purposively selected for this study. All these students do the same module as part of the different programmes (BEd /PGCE Senior and FET phase). Furthermore, I employed a pragmatic paradigm as the research approach. As mentioned above, data was collected via an

online questionnaire, and from e-Discussion forum entries, and blog postings. The purpose of using an explanatory mixed methods design was to triangulate both data sets from quantitative data and then later compare the qualitative data. First, to execute this approach, quantitative data was collected using an online self-designed closed structured questionnaire. This questionnaire was designed on an agreement four-point Likert scale (strongly agree to strongly disagree). The data was collected, computed, analysed, and interpreted to identify trends. However, for the qualitative data, two tools, the eDiscussion forums entries and blog postings were used to collect it. My intention was to triangulate both data sets (quantitative data and qualitative data) and the literature review to answer the main research question of this paper. Qualitative data was collected by downloaded eDiscussion forums entries and blog entries from the myUnisa LMS. These data sets were then further analysed and interpreted. To ensure trustworthiness, the downloaded eDiscussion forums entries and blog entries were given to one of the senior professors (an academic staff member) to validate whether data sets were reliable and trustworthy. After two weeks, the professor was satisfied with the protocol followed for the two data sets. He was granted limited access to the module by the ICT unit at the university. Both the eDiscussion forum and blog entries were validated and verified as reliable data. The sample for this study (n = 179) was selected from a cohort of BEd and PGCE students registered for specialisation in the Senior and FET phase course in the subject teaching module, teaching methodology of economics. The participants were required to complete an online survey (Appendix 1) entitled the e-Pedagogical Supportive Strategies Value Questionnaire (ePSSVQ).

A reliability test was computed for the online survey ($\alpha < 0.835$) and a descriptive statistical data analysis was presented. Both data sets were computed, presented, and interpreted to triangulate deductions aimed at answering the research questions identified earlier. For the qualitative data, thematic content analysis was used to identify themes and subthemes from the data sets. The purpose of having two data sets (quantitative and qualitative) was to triangulate the findings with information from the literature review. Following Creswell (2012), I followed scientific protocol in cross-member checking of the data sets and the extracts used under each theme to ensure credibility, reliability, and validity. I did member checking by using extracted data from the e-Discussion forums entries and compared emerging themes to ensure trustworthiness. The data sets from the ePSSVQ were reliable and extracts from students' e-Discussion posting were directly downloaded from myUnisa.

Results

Of the BEd PGCE students in the Senior and FET phase, 62 per cent (n =112/179) participated in the study. The biographical data showed that PGCE students (56%) were in the majority (n=102) among the participants since they were the majority enrolled in the teaching methodology of economics module. Below, the results of the study are considered against the identified research questions.

- What specific research protocol was purposively employed to conduct a student support scoping review on pedagogical strategies in an ODL context and what were the criteria?

The first research question required identification of the most relevant literature in which to ground the theoretical framework for the investigation. Only SCOPUS, Web of Science (ISI), IBSS, Norwegian Scientific Index, SciELO, and DHET-listed approved academic journals were consulted. For the purpose of conducting the systematic scoping review, I selected only scholarly outputs as stipulated by DHET (2015), which were gazetted in the *Research Outputs Policy* (DHET, 2015). In this gazetted policy by DHET on research outputs, specific criteria are provided to measure and evaluate scholarly publications so as to calculate the allocated subsidies for South African HEIs. Currently, the DHET recognises only the six selected accredited indices. It was therefore my intention to include only it for this paper. Specific key words such "systematic scoping review", "pedagogical strategies", "student support" "scoping studies", "open distance learning" and "academic support in teacher education" were used for the systematic review. The six indices referenced in Figure 1 have been recognised, approved, and accredited by DHET but Google Scholar as search engine was also included for the purpose of this paper. Only published scholarly works for the period, 2013–2018, were used for the systematic scoping review process. This period was decided on because journals are included in the approved DHET accredited journals' listing for only five years prior to being re-assessed for accreditation. Excluded from the indices were predatory journals and publishers, as identified by the DHET. To search for publications in academic journals, Google Scholar (as a search engine) was used to identify chapters in scholarly books, dissertations, and theses.

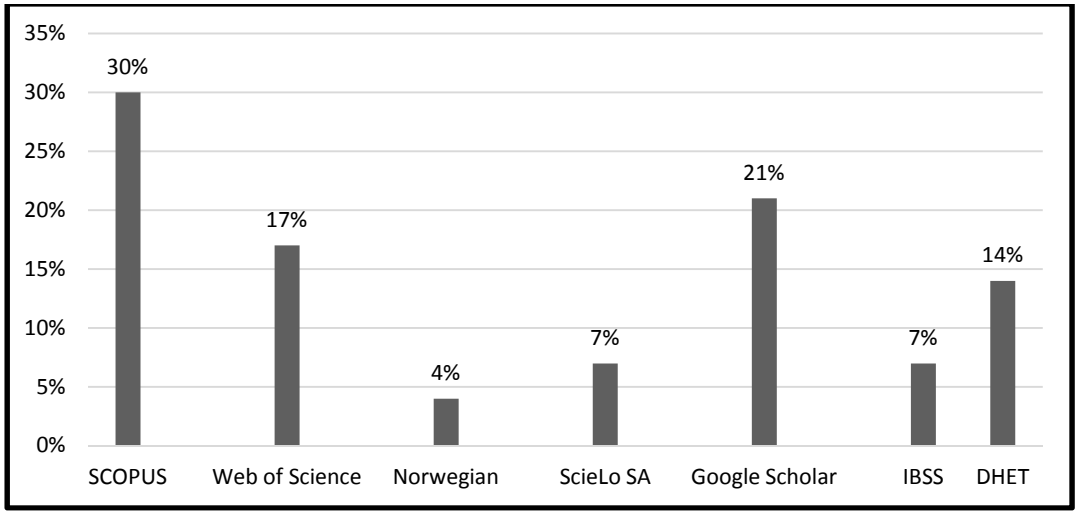

Figure 2: Indices used in searching for scholarly works on student support

As shown in Figure 2, the majority of identified articles, chapters in books, theses, and other related scholarly works were found in journals hosted by SCOPUS (30%), which proved to be the most valuable index for a scoping review on student support since it pertains to distance education.

In the literature review, I employed a systematic approach covering the period 2013–2018, using only the six purposively selected indices employed for the scoping review (see Table 1).

Table 1: Systematic process of searching for scholarly works (2013-2018)

Index/Search engine	# Publications	Type of publication			Criteria employed to classify scholarly works on student support			
		Articles	Books/ chapters in book	Dissertation /theses	Identified scholarly publications	Screening of specific downloaded scholarly works	Decision on appropriateness	Included in final scoping view
SCOPUS	33 (26%)	23 (31%)	7 (35%)	3 (37.5%)	33 (26%)	21 (25.6%)	19 (31.6%)	12 (24%)
Web of Science (ISI)	19 (15%)	16 (21%)	3 (15%)	0 (0%)	19 (15%)	13 (15.8%)	11 (18.3%)	10 (20%)
Norwegian Scientific Index	4 (3%)	3 (4%)	1 (5%)	0 (0%)	4 (3%)	3 (3.6%)	2 (3.3%)	1 (2%)
Google Scholar	40 (37%)	35 (47%)	4 (20%)	1 (12.5%)	40 (37%)	33 (40.2%)	20 (33.3%)	18 (38%)
SciELO	7 (5%)	5 (6%)	1 (5%)	1 (12.5%)	7 (5%)	3 (3.6%)	3 (5%)	3 (6%)
IBSS	7 (5%)	5 (6%)	2 (10%)	0 (0%)	7 (5%)	3 (3.6%)	0 (0%)	0 (0%)
DHET	13 (11%)	8 (11%)	2 10%)	3 (37.5%)	13 (11%)	6 (7.3%)	5 (8.3%)	5 (10%)
Total	**123**	**75 (60.9%)**	**20 (16.2%)**	**8 (6.5%)**	**123**	**82 (66.7%)**	**60 (48.7%)**	**49 (39.8%)**

From the data in Table 1, it is clear that search engine Google Scholar produced the greatest number of types of publications (37%) and scholarly works (38%). The articles (n = 40) that were downloaded from Google Scholar had been included in SCOPUS and ISI indices as appearing in accredited journals. It is apparent that articles (60.9%) were the main type of publication used. Screening of specific downloaded publications (66.7%) and inclusion in the final scoping review (39.8%) emerged as appropriate criteria for the scoping review.

A systematic approach, following Arksey and O'Malley (2005) was used to decide on the most reliable, valid, and appropriate scholarly publications to meet the purposes of this undertaking (see Figure 2). Only full-text articles were downloaded from the six indices. Other related sources (Google Scholar) that were deemed valid and reliable were included in the literature review of this main study. This systematic scoping literature review was used to identify literature to triangulate the data collected through the empirical study with findings in the literature. Originally, 123 scholarly works were downloaded, but only 49 (39.8%) were validated and finally used for the purposes of this article.

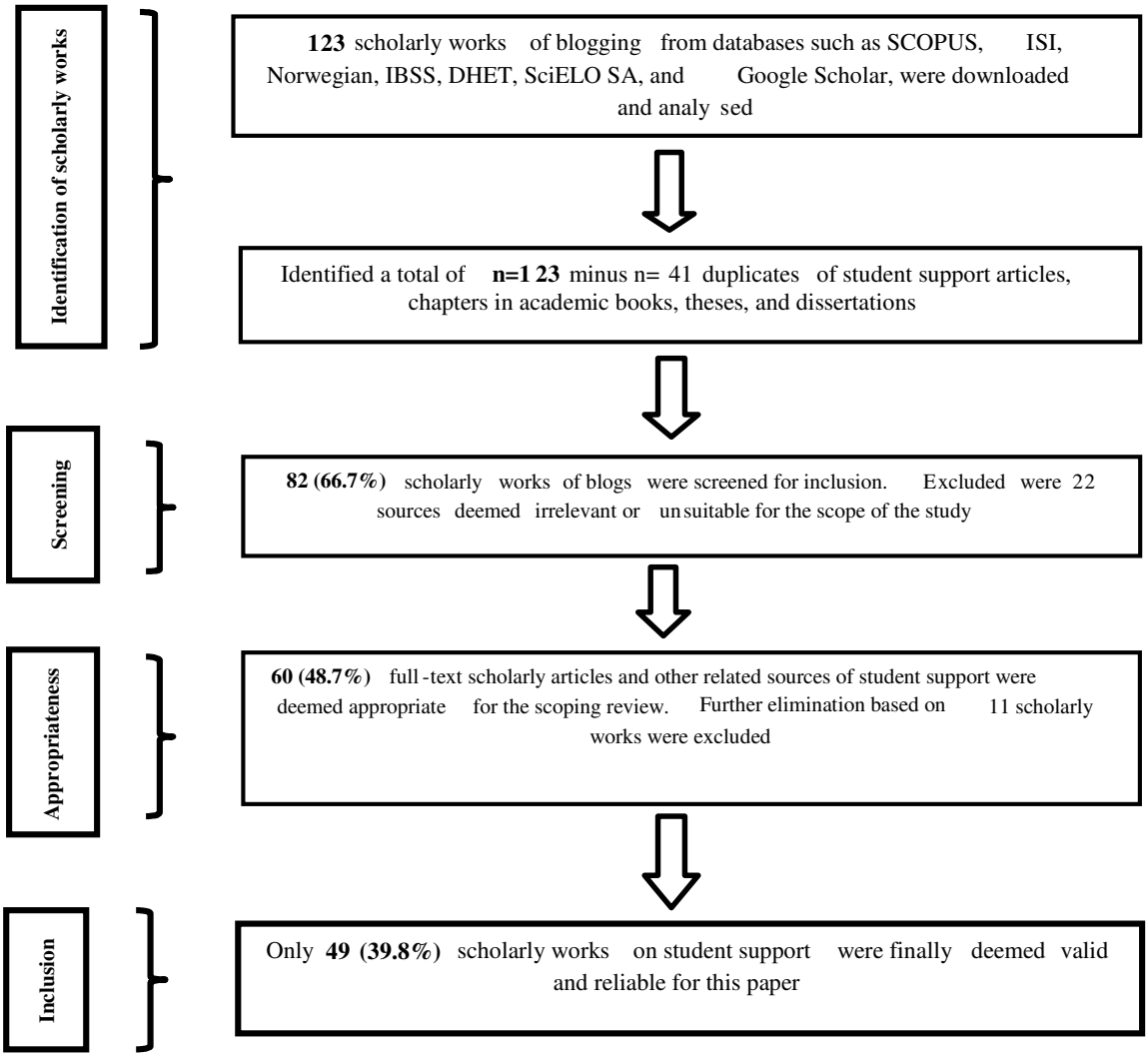

Figure 2: Systematic process of searching for student support publications

- Which pedagogical strategies offer students optimal support in acquiring competencies in the teaching methodology of economics course in an online environment?

Table 2 presents students' experiences and ranking of the pedagogical support strategies employed in the module. In the table, descriptive data of students' views related to agreement and ranking of pedagogical support strategies employed in the module is presented.

Table 2: Students' views of pedagogical support strategies used and ranking in the module (n=179)

The e-pedagogical support strategies employed in the course	Descriptive analysis		Four-point scale of agreement/disagreement				Ranking of support strategies
	Mean	St Dev	SA	A	D	SD	
e-Discussion forums	3.833	1.666	73%	26%	0%	0%	2
Blogging	3.789	1.789	29%	69%	3%	0%	3
Online announcements	3.113	1.561	37%	60%	3%	0%	8
Instant short messages (SMS)	3.333	1.706	59%	41%	0%	0%	7
Online tutorial letters	3.920	1.819	89%	9%	2%	0%	1
WhatsApp messages	3.110	1.566	37%	60%	3%	0%	9
myUnisa online portal	3.806	1.665	43%	57%	0%	0%	4
myLife e-mail account	3.778	1.543	40%	57%	3%	0%	5
Regional teaching centres	2.786	1.223	12%	75%	13%	0%	10
Telephone calls	3.701	1.498	29%	71%	0%	0%	6
Consultations	2.872	1.007	16%	54%	23%	7%	11

Simple statistical analysis was computed to measure agreement and to rank the types of pedagogical support strategies employed by lecturers in the module. The BEd and PGCE students' views were statistically computed and ranked regarding the effect of pedagogical support strategies used to enhance their learning in the module. Table 2 shows the results obtained from BEd and PGCE students' views relating to the types of e-pedagogical support strategies used during the course. Of the students, 73% strongly agreed that the online tutorial letters (mean = 3.920; SD = 1.819) were supportive. The results show that there is general agreement that e-pedagogical support strategies help students to achieve their learning goals. Thus, overall, in response to this question, the participants had very positive attitudes towards the listed pedagogical tools. They ranked their support preferences from online tutorial letters (top ranking) to regional teaching centres (lowest ranking).

- How best can lecturers support BEd and PGCE students academically and non-academically, in the course, teaching methodology of economics?

Table 3: Academic/non-academic support in the course (n = 179)

To what extent do you agree or disagree regarding these statements on learning support in teaching methodology	Descriptive statistical analysis		Four-point scale of agreement /disagreement				Ranking of support
	Mean	St Dev	SA	A	D	SD	
The lecturer is available during office hours when I need my lecturer to support me in my assignment, task or project	3.789	1.089	69%	26%	5%	-	3
The lecturer provides responses in handling my academic enquiries on assignments, tasks, projects or examination-related issues	3.810	1.561	17%	80%	3%	-	8
The lecturer is approachable during office hours and gives support regarding my queries related to the module	3.422	1.340	22%	69%	9%	-	7
The lecturer extends support by giving me further information on the module, and on other related academic issues	3.322	1.021	33%	59%	8%	-	5
The lecturer shows sympathy for my circumstances regarding outstanding work or the late submission of tasks, and also in answering my queries on other related issues	3.833	1.014	75%	20%	5%	3%	2
The lecturer provides extra learning material, is active on discussion forums, and created a blog to support me in this module	3.411	1.398	25%	69%	6%	-	6
In my tutorial letter, the information provided should be clear with regard to due dates for tasks and the submission of other related assessments	3.221	1.544	65%	35%	-	-	4
The lecturer provides constructive feedback to support me in my assessment tasks, projects, and assignments	3.431	1.431	83%	22%	-	-	1

In Table 3, the participants' responses are, in order of preference, lecturer availability (69%), handling of academic enquiries (80%), being approachable (69%), providing extra learning support (69%), showing sympathy (75%), suggesting extra learning materials (59%), giving clear instructions for the module (65%) and providing constructive feedback (73%). The participants awarded the item, "The lecturer for my module provides constructive feedback to support me in my assessment tasks, projects and assignments," top ranking (83%), making it apparent that they viewed the academic support they received from me as the module lecturer in a positive light. Vahed and Cruickshank (2018) report similar results to those outlined in table 3, confirming that providing support to undergraduate students is important for the latter's academic success. Furthermore, these findings revealed that academic support allowed students to become self-directed and successful in their studies. As Blaess and Grant (2010) have noted, psychosocial support must form part of any academic support offered to students if they are to be successful on the academic front.

- Are there any significant statistical differences of support between BEd and PGCE students related to pedagogical support strategies in the teaching methodology of economics module?

Table 4: Comparing BEd and PGCE students' ranking of pedagogical support strategies used in the course (n=179)

The e-pedagogical support strategies employed in the course	Bachelor of Education		Postgraduate Certificate in Education		Significance	
	Mean	St Dev	Mean	St Dev	t-test	p-value
e-Discussion forums	3.903	1.666	3.911	1.876	.000**	.899*
Blogging	3.889	1.789	3.809	1.7001	.000**	.872*
Online announcements	3.113	1.561	3.403	1.601	.000**	.791*
Instant short messages (SMS)	3.633	1.706	3.322	1.576	.002**	.817*
Online tutorial letters	3.980	1.919	3.900	1.890	.000**	.833*
WhatsApp messages	2.210	1.066	2.090	1.034	.012	.632
myUnisa online portal	3.806	1.665	3.777	1.711	.002*	.787*
myLife e-mail account	3.778	1.543	3.848	1.742	.000**	.766*
Regional teaching centres	2.986	1.323	2.516	1.113	.000**	.701*
Telephone calls	3.801	1.698	3.451	1.598	.000**	.771*
Consultations	2.311	1.079	2.877	1.657	016*	.685

Sign: **p < .001
*α <.7

Simple statistical analysis was undertaken to compare groups and to rank the types of pedagogical support strategies lecturers used to enhance students' learning. Table 2 shows that results obtained from students' views were statistically significant (p < 000) in nine of the pedagogical support strategies. Only WhatsApp (.012 >.001; α <.632) and Consultations (.016 >.001; α <.685) are not statistically significant as viewed by students as types of e-tools for pedagogical support strategies used during the course. Both groups agreed that the three most preferred pedagogical support strategies in the module were Online tutorial letters (p <.000**; α>.833), e-Discussion forums (p <.000**; α >.899) and blogging (p <.000**; α>.872). Students agreed that they preferred e-Discussion forums (BEd, mean = 3.903; SD = 1.666; PGCE, mean 3.911; SD=1.876). The results show that pedagogical support strategies have statistical significance in supporting student teachers to achieve learning goals in the module.

The purpose of using an explanatory mixed methods design was to triangulate the quantitative and qualitative results. In the next section, I focus on the qualitative data, and the process of triangulating the findings with quantitative data. For the qualitative data, thematic content analysis was used to identify themes from the e-Discussion forum entries and blog postings. From these data sets, four themes emerged, along with specific extracts from the data analysis process.

- Using pedagogical strategies to support students throughout the course
- Lecturer support to students to achieve learning goals
- Providing constructive feedback and academic support
- Ongoing motivational support in the course

Using pedagogical strategies that support student learning throughout the course

Student teachers wrote on the e-Discussion forum that the pedagogical strategies they made use of were supportive of their learning. From the entries, it was clear that the students were generally positive and satisfied with the support strategies on offer during the course. They were positive and in favour of strategies that represented extra effort and additional means, on my part as their lecturer, of providing clarity on both the module and its contents. As one student wrote,

> Most of the pedagogical strategies, like the flipped classroom pedagogy and economic games, were well planned and motivated me. I like the responses to issues posted on discussion forums and regular announcements. These means direct us what [is]to be expected in the course. (Participant 3, e-Discussion forum, 16 October 2018)

Another entry commented on "the communication in the tut letters and regular announcements on myUNISA." The participant said, "What I like was the interaction in the e-discussion forum amongst students and our lecturer" (Participant 12, e-Discussion forum, 16 September 2018).

Lecturer support to achieve learning goals

The students posted the fact that the module lecturer provided them with support as they worked on their tasks. On the e-Discussion forum, the respondents listed several ways in which such support was provided, but the guidelines (in Tutorial Letter 101) were deemed especially invaluable for completing their assessment tasks. As one participant wrote, "Student support is crucial, especially when in the tutorial letter of the module showed clear guidelines for us which is huge plus." Furthermore, this student went on to say that "our lecturer gave us clear guidelines on how I must perform the task or lesson plan activities" (Participant 5, blog posting, 25 May 2018). Next, key support was offered via feedback to the students. As one participants confirmed, "[T]hrough feedback that takes place in dialogues, group discussions, and written comments. It shows students where they stand, where one could go and how to continue" (Participant 1, e-Discussion forum posting, 24 April 2018). For another participant, "[O]ur lecturer was often available for F2F consultations" (Participant 9, e-Discussion forum, 10 October 2018). Another student wrote, "We often booked either by sending an email or telephonically, appointments (date and time for visits) to discuss our performances in assessment tasks" (Participant 7, e-Discussion forum, 19 October 2018). The participants indicated in the blog entries that the lecturer was available for academic inquiries.

Providing constructive feedback and academic support

In the case of this paper, I, as the lecturer for the module, used different types of pedagogical strategies, such as eDiscussion forums, blogs, SMS messages, telephone calls, emails, and WhatsApp messages. Pedagogical strategies are powerful teaching instruments to advance

student learning. According to downloaded responses, several students wrote about the different strategies used in the course to support them academically. One said, "I was exposed to several types of pedagogical strategies but eDiscussion forums and online tutorial letters. But for me the eDiscussion forums engagements were of great help when you struggle with specific topics like inflation and business cycles" (Participant 109, e-Discussion forum, 12 October 2018). Moreover, constructed feedback is an important way to guide students in how they measured up against tasks completed. It guides them to the extent to which they achieve specific knowledge and skills for a specific objective. Lecturers may design specific tools to measure student achievements levels. Another student wrote on the blog space, "I received excellent constructive feedback on my assignments, lessons presented and self-created podcasts" (Participant 34, blog, 02 November 2018). These responses from students showed much appreciation of the lecturer's efforts to provide support throughout the course.

Ongoing motivational support to students during the course

Motivation is an important tool to use to support students' learning. It is both enabler and enhancer, especially to those students who may struggle with a section of the course, or those who experience personal challenges related to financial constraints. Writing motivational texts using online tools like WhatsApp messages, SMS, blog texts, or eDiscussion forums entries elevates struggling students. Students engaged actively in the eDiscussion forums and blog space. It showed that they enjoyed the course and actively participated in it. In conclusion, they were motivated to do well. Motivational support plays a crucial part in student learning. It helps a student do better and also restores a sense of self-worth. On several occasions students reflected on my contributions in a blog entry. One said, "I like the positive comments written on my assignments. It is much appreciated. It creates a sense that what I do, is worth" (Participant 4, blog, 07 November 2018). Another student said, "Very often we got a message to say you are doing good, which is heart-warming. I really appreciated it" (Participant 56, eDiscussion forums comment, 07 September 2018).

Discussion of findings

In this paper, I set out to investigate the use of pedagogical strategies, on the part of lecturers, to support their students' learning in the online teaching methodology of economics course. First, I explored the research protocol followed for conducting a scoping review on student support in an ODL context. Numerous studies have conducted such reviews, which have become a popular methodology to employ in literature reviews. See, for example, Davis, Drey, and Gould (2009) and Levac, Colquhoun, and O'Brien (2010). The study extended those views to teacher education by building on Arksey and O'Malley's (2005) methodological design for using a systematic process as a research protocol. This study advanced Arksey and O'Malley's seminal framework by including only the DHET list of reputable indices as part of the research protocol for identifying appropriate, accredited scholarly works. To answer the first research question, only six indices (see table 1 and figure 1) and Google Scholar were selected purposively to conduct the scoping review. These research indices are regarded as highly reputable, identifying published, peer-reviewed

scholarly works in highly rated repositories. To conduct the scoping review on student support in an ODL context, I reviewed several scholarly articles, chapters in academic books, dissertations and theses. It emerged that Google Scholar, as a reputable search engine, produced the greatest number of types of publications (37%) and scholarly works (38%). Understandably, Google Scholar as a search engine revealed most of the scholarly works because it is driven by Google.com as the top internet search engine. Surprisingly, the data in Table 1 shows that most of the articles published on student support in ODL contexts were hosted by SCOPUS (31%). Of those articles classified in quintile 2, (of all quintiles, 1–4), 70% belong to the "Open Access" category, which made them easily and freely accessible. Table 1 also reveals that most of the publications were articles (60.9%). Screening of specific scholarly publications (66.7%) and inclusion in final scoping reviews (39.8%) emerged as appropriate criteria.

As mentioned in the literature review, student support is crucial to students' academic achievement, whether F2F or by following a blended approach to distance education. Vahed and Cruickshank (2018) are of the view that students who struggle or fall behind in their course must be supported via regular, online academic support, learning materials, and extended assessment opportunities (see, too, Rodriguez et al., 2019) as well as emotional support, lest they become statistics related to dropouts who fail to complete their studies. Therefore, it is encouraging to report that student teachers perceive the pedagogical support offered by me, as the lecturer for the module, as positive and important in the teaching methodology of economics course. My study found that the student teachers agreed largely that continuous support is vital for academic progress because nine of the pedagogical support strategies statistically enhanced their learning significantly ($p < 000$). Three of the nine pedagogical support strategies in the module were online tutorial letters ($p <.000^{**}$; $\alpha >.833$), e-Discussion forums ($p <.000^{**}$; $\alpha >.899$) and blogging ($p <.000^{**}$; $\alpha >.872$). As Nichols (2010) has argued, universities must increase support to students through specific interventions, including wellness support, by empowering them with regard to study skills, offering free internet access (wi-fi hotspots when they visit Unisa regional offices) and extending the hours of library services. All these factors may help distance education learners to complete their courses. The participants indicated that online tutorial letters ($p <.000^{**}$; $\alpha >.833$) were their preferred means of academic support, while, surprisingly, 56% viewed SMSs as an important means of receiving information, communicating, or updating them on issues. In summary, the overall response to this question showed that the participants held positive views regarding the use of pedagogical tools employed during the course.

Finally, the last research question was formulated to explore what measures I employed to support students in the course. I was found to be available for academic enquiries by students, via either e-mail or telephone. As captured in entries on the e-Discussion forum, I was often available for F2F consultations. Furthermore, students booked appointments either by sending me an e-mail or telephoning me to discuss their performance in assessment tasks. Students reported that "[t]he lecturer provided constructive feedback to support me in my assessment tasks, projects and assignments," thus constructive feedback was the highest-ranked item (83%). Further, constructive feedback was given timeously on submitted tasks

and assignments. An unexpected finding was that "[t]he lecturer shows sympathy to circumstances regarding the outstanding or late submission of tasks, and answering my queries and other related issues," a finding supported by 75% of participants. A number of scholars have reported on studies using online instructional support, which greatly influenced the planning of student learning (Rodriguez et al., 2019; Tait, 2000); constructive feedback (Watson, Bishop, & Ferdinand-James, 2017); and the provision of online technological support (Simpson, 2012; Clauss-Ehlers & Pasquerella, 2017). The study focused on students' views of support provided by me in teaching the teaching methodology of economics module and I was found to sympathise with the students' struggles, challenges, and expectations around studying in an ODL environment. I believe academic support commences with providing relevant information regarding the processes to follow for the successful completion of any course. The students' responses mostly approved of the support received from me. As captured in the e-Discussion forum entries, "the lecturer telephonically contacted students whose tasks or assignments had been incorrectly uploaded and responded mostly immediately to e-mail queries regarding assessment tasks." The results showed the following in respect of the students' responses regarding the support they received throughout the course: constructive feedback (83%), academic enquiries (80%), sympathy (75%), approachability (69%), availability (69%), extra learning support (69%), extra learning materials (59%), and clear instructions regarding the module (65%). They thus clearly agreed that the academic support they received from me as their lecturer was both constructive and positive. It is vital that students regularly receive academic (and non-academic) support as a means of tracking their academic progress. It is imperative that lecturers plan specific academic support initiatives for slow learners (retention) or those who fall behind (Beldarrain, 2006; Clauss-Ehlers & Pasquerella, 2017; Simpson, 2004). Furthermore, Vahed and Cruickshank (2018) report similar results, emphasising how important support is for undergraduate students. It is vital to the success of any intervention with struggling students that they be provided with, in particular, non-academic assistance that focuses on wellness, emotional, and study-related support.

Conclusion and implications

The purpose of using an explanatory mixed methods design was to triangulate the descriptive quantitative data and qualitative thematic data to confirm the findings in answer to the research questions. I have argued that the pedagogical strategies that I employed indeed supported students' learning in the online module teaching methodology of economics. The method of the systematic review was explained as a meaningful way in which to identify the most relevant literature for this study, and to broaden our knowledge of the popularity of scoping studies being applied to teacher education research. The study confirmed the findings of previous studies that student support in an ODL context is vital, but more studies must be undertaken to advance online student support comparing blended, distributed, and open distance learning platforms. Therefore, it is encouraging that the participating student teachers' views were positive with regard to the online pedagogical strategies I applied in the aforementioned course. The participants concurred that continuous support from their lecturer is vital for their academic success. Surprisingly, it emerged that non-academic support

(wellness, emotional skills, and study skills) is equally imperative for struggling students. In the current study, I examined only a small sample of students' views on the pedagogical strategies I employed during an online teacher education course. Further research needs to be done on a bigger sample in order to compare similar courses in the teacher education programme at a distance education university.

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Appendix 1

e-Pedagogical strategies supportive value questionnaire (ePSSVQ)

You are invited to participate in a survey. The survey you have received has been designed to study the use of e-Pedagogical support strategies, which could be used to enhance student self-directed learning to support student learning in an ODL context. You were selected to participate in this survey because you are registered in the module. By completing this survey, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings. It is anticipated that the information we gain from this survey will help us to generate new knowledge on student support towards students' self-directed learning in an ODeL context, effecting changes to the e-learning and e-assessment through assessment policy practices of Unisa. You are, however, under no obligation to complete the survey and you can withdraw from the study prior to submitting the survey. The survey is developed to be anonymous, meaning that we will have no way of connecting the information that you provide to you personally. Unisa Research Permission Subcommittee (Certificate Ref #2018 RPSC_017) was granted.

Section A: Biographical data				
Male				
Female				
PGCE (Postgraduate certificate in education)				
BEd (Bachelor of education)				
Section B: e-Pedagogical support strategies To what extent do you agree or disagree regarding the inclusion of the following learning support methods in the teaching methodology used?	**A four-point scale of agreement or disagreement**			
	Strongly agree	Agree	Disagree	Strongly disagree
e-Discussion forums	4	3	2	1
Blogging	4	3	2	1
Online Announcements	4	3	2	1
Instant short messages (SMS)	4	3	2	1
Online tutorial letters	4	3	2	1
WhatsApp messages	4	3	2	1
myUnisa online portal	4	3	2	1

myLife e-mail account	4	3	2	1
Regional teaching centres	4	3	2	1
Telephonic calls	4	3	2	1
Section C: Academic and non-academic support To what extent do you agree or disagree regarding the statements of academic and non-academic support in the teaching methodology?	Strongly agree	Agree	Disagree	Strongly disagree
The lecturer is **available** during office hours when I need him to support me in my assignment, tasks or project	4	3	2	1
The lecturer provided responses in handling my **academic enquiries** on my assignments, tasks, project or examination related issues	4	3	2	1
The lecturer is **approachable** during office hours and gives support on my queries related to the module	4	3	2	1
The lecturer extended support by giving me **further information** in the module and other related academic related issues	4	3	2	1
The lecturer shows **sympathy to circumstances** regarding outstanding or late submission of tasks and answered my queries and other related issues	4	3	2	1
The lecturer provides **extra learning material,** is active on discussion forums and sets a blog as support in my module	4	3	2	1
In my tutorial letter, the information provided was **clear** regarding due dates for tasks and other related assessment activities submission	4	3	2	1
The lecturer provided **constructive feedback** to support me in my assessment tasks, projects, and assignments	4	3	2	1
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