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THE STATE OF DISTANCE EDUCATION IN SOUTH AFRICA: AN ANALYSIS OF TRENDS, RESEARCH AREAS AND PUBLICATION VEHICLES

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Summary

Open distance learning research from South African authors represents only a small percentage of the body of distance education research that has been carried out. South Africa is home to one of the top ten mega distance education universities in the world and a recent South African government paper mandated that all higher education institutions consider implementing distance education units in addition to their face to face teaching. This paper investigates the state of distance learning research emanating from South African universities and categorises each paper into one of the broad research areas proposed by Zawacki-Richter in his 2009 study. In addition it provides an analysis of the South African distance education research trends and maps these against the trends that were identified in an article in the journal Distance Education by Zawacki-Richter and Naidu in 2016. Data for this research was obtained from the Scopus database of academic literature as well as from SABINET - the South African Bibliographic and Information Network. The classification of the research framework of Zawacki-Richter was analysed through the use of Atlas ti which provided a quantitative content analysis. The titles and abstracts of the South African authored articles were analysed using the LeximancerTM tool in order to map the trends. The results indicate that most distance education publications written by South African authors have been published in South African journals and are context specific to South Africa. These articles mainly address the micro level research area of practices and experiences of teaching and learning in an open distance learning environment. In addition the research indicates that there are very few articles that reflect the trends in the past five years of interactive learning, MOOCs and Open Educational Resources that were identified by Zawacki-Richter and Naidu.

Introduction

The academic field of distance education is a relatively new one and initially attracted a fair amount of criticism for its lack of theoretical frameworks, for being predominantly descriptive and for the use of poor research methodologies (Perraton, 2000; Bernard, Abrami, Lou, & Borokhovski, 2004). In order to address these deficiencies Zawacki-Ricter (2009) developed a categorisation of research levels and areas in distance education which was based on a

literature review as well as a Delphi study. He proposed three levels of research levels in distance education further breaking them down into fifteen areas within these broad levels.

In addition, Zawacki-Richter and Naidu (2016) mapped out the research trends in the journal *Distance Education* since its inception 35 years ago, particularly exploring the keys themes as well as the semantic relationships between these themes during this time span.

Using the Scopus database, a search was conducted on all articles published on the theme of open and distance education (ODL) and online learning written in English from the social sciences and those articles written by South African authors were extracted which showed that only 1.5% of the articles emanated from South African institutions (497 articles out of a total of 33,838) (Table 1). Another indicator of the low number of articles from South Africa can be found when analysing the Turkish Online Journal of Distance Education (TOJDE). According to Ozarslan and Balabin-Sali (2012), of the total of 420 electronic articles published in the TOJDE from 2000 to 2010, only 2 of the articles were written by researchers at South African institutions.

Table 1: ODL publications from South African institutions as published in Scopus

Total no of ODL articles from Social	Total no of South African authored	% of South
Science published in English from	articles from Social Science published in	African authored
1980 to 2016 in Scopus	English from 1980 to 2016 in Scopus	articles
33 838	497	1.5%

Source: Scopus, 2016

The question therefore is whether South African articles on ODL are not being published due to their content being at too low a level according to the levels proposed by Zawacki-Richter (2009), not keeping up with current research trends in ODL research as identified by Zawacki-Richter and Naidu (2016) or whether editors are not considering the worth of research being carried out in developing countries. This paper therefore attempts to provide empirical evidence required In order to address this question of the low levels of South African ODL research.

Literature review

In order to better understand the South African research environment, the important issues regarding the publication subsidy and reward system will be discussed. Research in South Africa is guided by the Department of Higher Education and Training (DHET) Research Outputs Policy (2015). This policy aims "to sustain current research strengths and to promote the kinds of research and other knowledge outputs required to meet national development needs" (DHET, 2015; p.3). The purpose of this policy is to encourage research outputs through a reward system which is paid to the public institutions of higher education. In order to qualify for the research subsidy that is paid by the DHET an article has to be published in one of the journals that appears on their accredited list. An updated list is distributed every year and South African journals as well as international journals are included in this accredited list. Up until 2015 this list included only three journals where the focus is entirely

on ODL research. These journals are *Distance Education (DE)*, which is published by Taylor and Francis under the auspices of the Open and Distance Learning Association of Australia (ODLAA), the *International Review of Research in Open and Distributed learning (IRRODL)* which is published by Athabasca University and *Progressio*, a local South African journal published by Unisa Press.

Progressio is a South African journal concentrating on open and distance learning (ODL) practice and is a vehicle for researchers and practitioners to publish their articles on open, distance and e-learning The journal has an international editorial board and is supported by the Commonwealth of learning (COL) as well as the National Association of Distance Education Organisation in South Africa (NADEOSA) (Unisa, 2016a). The journal has been available online since 1990 starting with Volume 21 and Issue 2. Progressio only received accreditation from the DHET in 2010, the result of which limited the number of articles that could be published by Unisa authors in any one issue. 75% of the articles need to be authored by researchers outside of Unisa. Historically most of the articles that were published in Progressio were written by Unisa staff members. This is not surprising as Unisa is the largest distance education institution in South Africa and employs the most number of academic staff of all the South African universities (CHET, 2013). Before *Progressio* received its accreditation of the DHET, most of the articles that were published were written by Unisa staff members. Because of the restriction non publications from Unisa since Progressio received its accreditation status, authors from other universities are starting to publish in this vehicle, most notably from North West University (SABINET, 2016).

Once restrictions were placed on the number of article that could be published in Progressio by local authors, there was a marked reduction in ODL outputs from South Africa. This was partially offset by a sharp increase in the number of ODL articles published in the Mediterranean Journal of Social Sciences in 2013 and 2014. This journal has subsequently been taken off the accredited journal list which has led to the decrease in ODL publications from South Africa.

Research areas in distance education

As a result of the criticism that has been made about the academic rigour of ODL research (Perraton, 2000; Bernard, Abrami, Lou, & Borokhovski, 2004). Zawacki-Richter (2009) developed a categorisation of distance education research areas. Based on both a literature review and a Delphi study, he proposed 3 levels of research areas as well as 15 areas which fitted into these 3 levels. He termed the 3 levels macro, meso and micro levels. Table 2 indicates the scope of each level as well as the different research areas that full within each level.

Table 2: Levels and areas of distance education research

Level	Scope	Research areas
Macro	Distance education systems and	1. Access, equity and ethics
	theories	2. Globalisation of education and cross-cultural
		aspects
		3. Distance teaching systems and institutions
		4. Theories and models
		5. Research methods in distance education and
		knowledge transfer
Meso	Management, organisation and	6. Management and organisation
	technology	7. Costs and benefits
		8. Educational technology
		9. Innovation and change
		10. Professional development and faculty support
		11. Learner support services
		12. Quality assurance
Micro	Teaching and learning in distance	13. Instructional design
	education	14. Interaction and communication in learning
		communities
		15.Learner characteristics

Source: Zawacki-Richter, 2009

Research was carried out by Zawacki-Richter, Bäcker, and Vogt (2009) on articles published in 5 distance education journals, *Open Learning* (OL), *Distance Education* (DE), *American Journal of Distance Education* (AJDE), *Journal of Distance* (JDE) and *International Review of Research in Open and Distance Learning* (IRRODL). They selected all the articles published between 2000 and 2008 (N = 695) and classified them according to Table 2. Table 3 shows the results of their classification according to frequency of research areas

Table 3: Zawacki-Richter et al.'s ranking of research areas by number of articles (N = 695)

Rank	Research area	Level	Frequency	%	Cum
					%
1	Interaction and communication in learning	Micro	122	17.6	17.6
	communities				
2	Instructional design	Micro	121	17.4	35.0
3	Learner characteristics	Micro	113	13.3	51.2
4	Distance education systems and institutions	Macro	62	8.9	60.1
5	Educational technology	Meso	48	6.9	67.1
6	Quality assurance	Meso	41	5.9	72.9
6	Professional development and faculty support	Meso	41	5.9	78.8
7	Access, equity and ethics	Macro	31	4.5	83.3
8	Theories and models	Macro	24	3.5	86.8
9	Learner support services	Meso	23	3.3	90.1
10	Management and organisation	Meso	18	2.6	92.7
11	Research methods in DE and knowledge transfer	Micro	13	1.9	94.5
11	Globalisation of education and cross-cultural aspects	Micro	13	1.9	96.4
11	Innovation and change	Meso	13	1.9	98.3
12	Costs and benefits	Meso	12	1.7	100.0

This research indicates that over 50% of all the articles addressed the research areas of interaction and communication, instructional design and learner characteristics all of which fall into the Micro-level. 16.9% of the articles were linked to the macro level and 38.5% of the articles related to the meso level. This research was carried out in 2008 and little research seems to have been carried out in more recent years to ascertain if this trend is still applicable in 2016.

Research trends in distance education

Many studies have been conducted to establish the trends that have emerged in ODL research (Howell, Williams, & Lindsay, 2003; Davies, Howell, & Petrie, 2010; Bozkurt, Agkgun-Ozbeck, Yilmazel, et al., 2015). One of the latest studies is the one that was carried out by Zawacki-Richter and Naidu (2016) which maps out the research arena for distance education over the last 35 years (from 1980-2014) in the Distance Education (DE) journal. They used a text-mining tool called LeximancerTM in order to investigate the main themes and relationships that were present over this period. They grouped the trends together in 5 years bans, starting from 1980-1984 and ending with 2010-2014. The Leximancer[™] tool has been successfully used in other studies as well (Smith & Humphreys, 2006; Thomas, 2014). It is an automated system for content analysis and uses two different algorithms when extracting information - semantic and relational. Smith and Humphreys (2006) raised the concern of human decision makers' potential for subjectivity when assigning codes as well as the time consuming nature of coding. Thomas (2014) includes the problem of large numbers of documents which could or could not be important and also that many documents are unstructured and therefore difficult to research systematically. LeximancerTM is therefore a software technology which is able to automate complex and time consuming tasks associated with a content analysis.

Zawcki-Richter and Naidu (2016) found that the concepts of students, learners, course, instructional design and educational technology were common themes that run throughout all of the 5 year time periods. Figure 1 depicts the major topics covered in the articles published over the first 35 years of the Distance Education journal (1980–2014). The focus is on students, learners, course, instructional design, and educational technology which encapsulates the general thematic areas over that whole time period. Table 4 illustrates the results that they found in their investigation when dividing the whole period into 5 year time spans. From Table 4 it can be seen that the research trends emerging in the last 5 years, from 2010 to 2014 centre on interactive learning, OER's and MOOCs.

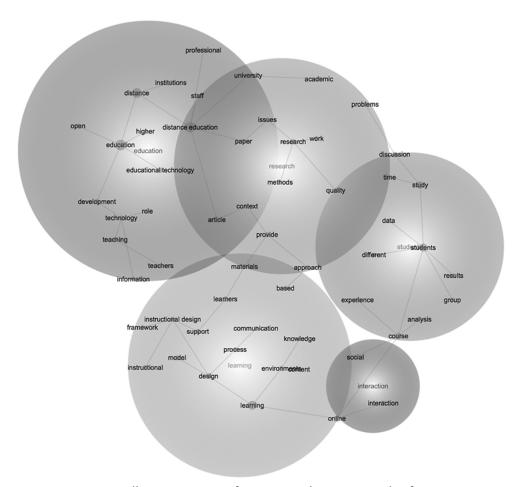


Figure 1. Overall concept map of Distance Education articles from 1980 to 2014 Source: Zawacki-Richter and Naidu (2016)

Table 4: Themes in DE from 1980 to 2014 in 5 year time periods

Period	Theme	No of articles
1980-1984	Professionalization and institutional consolidation	56
1985-1989	Instructional design and educational technology	50
1990-1994	Quality assurance in distance education	56
1995-1999	Student support and early stages of online learning	75
2000-2004	The emergence of the virtual university	75
2005-2009	Collaborative learning and online interaction patterns	101
2010-2014	Interactive learning, MOOCs and OERs	102

Source: Zawacki-Richter and Naidu (2016) and Scopus (2016)

Methodology

When evaluating textual data, content analysis is judged to be an appropriate approach (Hsieh & Shannon, 2005). Stemler (2001) states that content analysis is a useful tool that can be used to examine trends and patterns that are present in documents.

Data for this research was retrieved from the Scopus database of academic literature (Scopus, 2016) as well and SABINET (SABINET, 2016) which is the South African Bibliographic and Information Network. Both databases were accessed through the Unisa library online service.

All the major international DE journals are listed in the Scopus database and therefore it was accepted that this database would provide credible information for the purpose of this research. Many of the South African published journals are not listed on the Scopus database and these journals can be found on SABINET. As discussed in the literature review, only journals that are accredited by the DHET attract a subsidy reward and therefore for the purpose of this research, only the DHET accredited journals were included.

A search was carried out in each of these databases using the search variables of open and distance education, ODL, distance learning, open education, e-learning and online learning. The search was restricted journal articles only and to South Africa being the country of affiliation. Once the data was extracted it was then cleaned by two different coders. Certain articles were removed due to them not fitting the research criteria. There was also an overlap of journals that appeared on both the Scopus and SABINET lists, for example, the African Education Review (AER) and Perspectives in Education. The duplications were then removed. The final list was compiled and consisted of 316 articles where the main research topic was DE.

For the purpose of the first part of this research, that is the identification of research levels and areas according Zawacki-Richter's (2009) framework, each article was firstly coded according to the level (For the levels of research the macro level was coded a (a) the meso level a (b) and the micro level a (c) and then the research areas were coded according to Table 2. The coding therefore made use of pre-set codes which is often referred to as *a priori codes*. To ensure validity of the coding, 2 coders independently coded the articles according to the *a priori codes*. The researcher was the first coder and the second coder was a senior colleague at Unisa who is experienced in DE research. Coding discrepancy could easily arise because of the overlap between research areas. An example would be when ODL students from Unisa were the population of the research, which is very context specific and classified at the micro-level, but the research that was carried out could be classified at the meso-level if it addresses innovation and change. In order to address these coding discrepancies, 10% of the articles were randomly selected in order to evaluate the inter-rater agreement using the Cohen's's kappa (k) statistical measure (Cohen, 1960). Fleiss (1981; pp.38–46.) provided guidelines for characterising Kappas as follows:

Table 5: Fleiss's guidelines for kappa effect

kappa	Magnitude of agreement	
< 0.40	Poor	
0.40 - 0.75	Fair to good	
>0.75	Excellent	
Source: adapted from Fleiss (1981)		

The coding consistency between the 2 coders was k = 0.697 and therefore the inter-rater reliability can be accepted as good for the coding of the articles according Zawacki-Richter's (2009) framework for classification of distance education research.

The second part of this research was to establish the trends of the South African DE articles over the past 35 years and to map them according to Zawacki-Richter and Naidu's (2016) article in the journal *Distance Education*. The earliest dated South African DE article was published in 1988 and therefore the time span for mapping the trends is 26 years and not 35 years. The trends were measured in 5 year time periods ending with the years 2010 to 2014. As a result the South African list was reduced from 316 articles to 266 articles as 50 articles were published in 2015 and 2016.

The title, abstracts and keywords of all 266 articles were used for the purpose of this analysis and Figure 2 presents the number of article published in each time period.

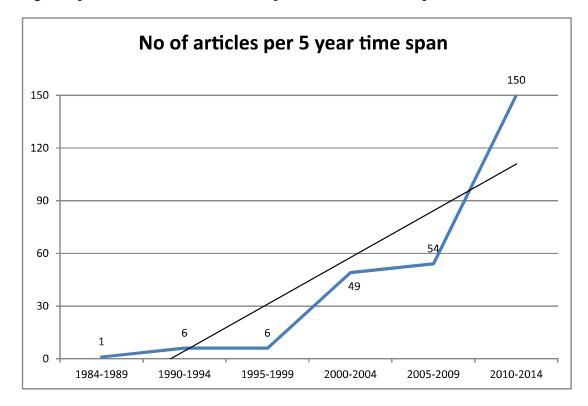


Figure 2. South African DE articles by year of publication

Figure 2 shows that there were very few DE articles published by South African authors in the 1990's. The growth in numbers commenced in the early 2000's and has grown exponentially since then.

An initial overall analysis was run with titles and abstracts of all 266 articles, in which common terms such as and, not, were excluded. The tool was requested to merge word variants such as distance and education or open and university. The software tool was used to analyse both the entire data-set (1988–2014) and the data for each 5-year time period separately. Because of the small number of articles that were published by South African authors in the period 1985 to 1999, these articles have not been analysed in their 5 year time spans as the results would be based on only a very small sample, therefore only the time periods of 2000-2004, 2005-2009 and 2010 to 2014 were analysed.

Delimitations

It is acknowledged that the data used for this research has been taken from secondary sources (Scopus and SABINET) and therefore might not be fully representative of all the articles that have been published. In addition, because of the reward and subsidy policy of the DHET (2015), most researchers will only publish their articles in journals that are accredited by the DHET. Until 2016 only 3 lists were available for accreditation – the DHET list, the ISSI and IBNS lists. The Scopus list was only included into the list DHET accredited list of journal in 2016. Therefore it is possible that some authors decided to publish their articles in non-accredited journals, and chose not to be rewarded through the DHET subsidy.

In addition, each article was examined to ensure that it fitted into the discipline of DE. This was done by the author as well as the co-coder but it is always possible that a different researcher could have interpreted the criteria differently.

Data analysis

This article uses both the LeximancerTM tool as well as Atlas ti for analysing the articles that were selected for analysis for the purposed of this research. Atlas ti was used for the analysis of the classification of the articles according to 3 levels and research areas as put forward by Zawack-Richter's (2009) framework. In order to analyse the trends and relationships over the last 35 years and place them in 5 year time spans, the LeximancerTM automated analysis tool was employed. This is consistent with the analysis on DE research trends that was carried out by Zawacki-Richter and Naidu (2016).

Results are reported in descriptive tables, graphs and through frequency statistics.

Results

Table 6: Zawacki-Richter et al.'s ranking of South African research areas by number of articles (N = 316)

Rank	Research area	Level	Frequency	%	Cum %
1	Instructional design	Micro	86	27.2	27.2
2	Learner characteristics	Micro	65	20.6	47.8
3	Interaction and communication in learning communities	Micro	61	19.3	67.1
4	Professional development and faculty support	Meso	27	8.5	75.6
5	Learner support services	Meso	19	6.0	81.6
6	Management and organisation	Meso	16	5.1	86.7
7	Educational technology	Meso	15	4.7	91.4
8	Innovation and change	Meso	10	3.2	94.6
10	Quality assurance	Meso	7	2.2	96.8
11	Access, equity and ethics	Macro	4	1.3	98.1
12	Costs and benefits	Meso	3	0.9	99.0
13	Theories and models	Macro	2	0.6	99.6
14	Globalisation of education and cross-cultural aspects	Macro	1	0.3	100

Table 6 indicates that just over 67% of the South African articles addressed research at the micro level compared to 51.2% as shown in Table 3. Fewer than 30% of the South African articles fall into the meso level (compared to 38.5% in Table 3) and the only 6 South African articles making up 3.2% of the total relate to the macro level. According to Table 3, the macro level of the articles from the top 5 DE journals is 16.9%. The main difference in these results lays in the lack of research from South Africa at the macro level and to a lesser extent the meso level. With over 67% of the South African articles addressing the micro-level, this is proof that South African researchers are not "playing in the major league" due to the predominance of their research being carried out in the micro level.

A glaring omission from the South African authors is that there were no articles at all on *DE* systems and Intuitions or on Research methods in *DE* and knowledge transfer. Although the number of articles from Zawacki-Richter et al's (2009) in these 2 research areas are also relatively low it is still a stark fact that South Africans have not researched them at all.

These statistics indicate that the vast majority of South African articles address the micro level of ODL research and that the top research area is *Instructional design*, followed by *Learner characteristics* and *Interaction and communication in learning communities*. There are only two South African articles that speak to *Theories and models* and none that address the research area of *Research methods in DE and Knowledge transfer*.

Table 7 excludes the local South African based journals as well as discipline specific journals and provides information that only relates to the dedicated DE journals *Distance Education*, *International Review of Research in Open and Distributed Learning (IRRODL)* and the *Turkish Online Journal of Distance education (TOJDE)*. This is in order to make a comparison with Table 3. There were no South African articles published in *Open Learning*, (OL), *American Journal of Distance Education* (AJDE) or *Journal of Distance Education* (JDE), probably because these journals are not recognised by the DHET for accreditation purposes.

Table 7: Zawacki-Richter et al.'s ranking of research areas for South African publication in DE, IRRODL and TOJDE by number of articles (N=36)

Rank	Research area	Level	Frequency	%	Cum
					%
1	Instructional design	Micro	8	22.2	22.2
2	Interaction and communication in learning	Micro	7	19.5	41.7
	communities				
2	Professional development and faculty support	Meso	7	19.5	61.2
3	Innovation and change	Meso	4	11.1	72.3
4	Management and organisation	Meso	3	8.3	80.6
4	Learner characteristics	Micro	3	8.3	88.9
5	Globalisation of education and cross-cultural aspects	Macro	1	2.8	91.7
5	Costs and benefits	Meso	1	2.8	94.5
5	Educational technology	Meso	1	2.8	97.3
5	Learner support services	Meso	1	2.8	100

When only looking at the three above mentioned international distance education journals, the picture changes slightly. 50% of the articles are pitched at the micro level and almost 44% address the meso level. This compares relatively well with the finding from Zawacki-Richter et al.'s (2009) that was presented in Table 3. This illustrates the fact that when South African authors publish their articles in international journals, there is a more even spread of research levels between the meso and micro level. However, even when publishing in international journals, the area where the South African are lagging behind is in the macro-level.

Figure 3 shows the breakdown of South African articles by journal. The acronyms for these 2 graphs are presented in Table 8

Table 8: Acronyms for journals

Acronym	Journal	County of publication
AER	African Educational review	South Africa
DE	Distance Education	Australia
IRRODL	International Review of Research in Open and Distance Learning	Canada
Med	Mediterranean Journal of Social Science	Italy
OL	Open Learning	United Kingdom
Pers in Ed	Perspectives in Education	South Africa
Progressio	Progressio	South Africa
SAJE	South African journal of Education	South Africa
SAJHE	South African Journal of Higher Education	South Africa
TOJDE	Turkish Online Journal of Distance Education	Turkey
Other	Other (mainly discipline specific journals)	Various

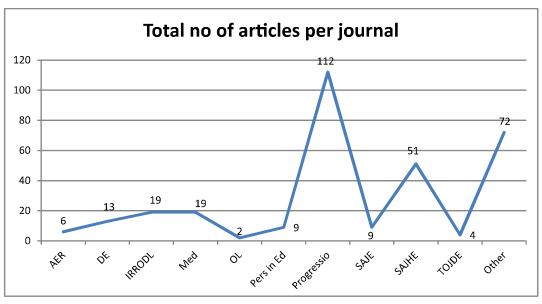


Figure 3. Number of South African DE articles by journal

Figure 3 indicates that most frequently used vehicle for publishing South African articles (n = 112) is the local journal, Progressio. This is followed by articles published in discipline specific journals (n = 72). The most popular disciplines here include computing, library

science, and medical as well as accounting. In third place is another South African journal, *SAJHE*. *SAJHE* is not discipline specific to DE research but is the journal for all articles on Higher Education in South Africa. The leading international journal for South African publication is *IRRODL*, followed by *DE*.

The discipline specific journals are mostly published in South Africa but that is not always the case. If we exclude the discipline specific journals then only 55 out of 244 articles (23%) have been published in international journals.

At this stage it is prudent to look a bit deeper at the data in order to establish the levels of research in the various journals and Figure 4 addresses this.

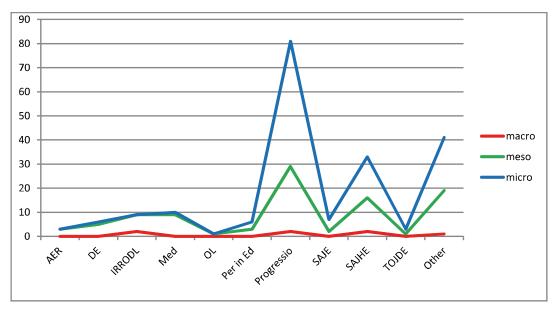


Figure 4. Number of South African articles by journal according to level

From Figure 4 it can be seen that the journal with the highest number of DE articles is the locally published journal *Progressio* which was discussed under the literature review. However, it can be seen that the South African published journals show the biggest gap between the levels of research. The articles published in the international journals all have an almost equal mix of meso and micro level articles, *whereas Progressio*, *SAJHE*, *SAJE* and the discipline specific journals show a much higher level of micro level articles.

Figure 5 shows the number of ODL articles published from each university/institution in South Africa and the acronyms for each university are shown in Table 9.

Table 9: Acronyms for South African universities

Acronym	University
CPUT	Cape Peninsula University of Technology
CUT	Central University of Technology
Free State	University of the Free State
SUN	Stellenbosch University
Unisa	University of South Africa
UKZN	University of KwaZulu-Natal
UP	University of Pretoria
WITS	University of the Witwatersrand
NWU	North West University
Other	Other and author affiliation not established

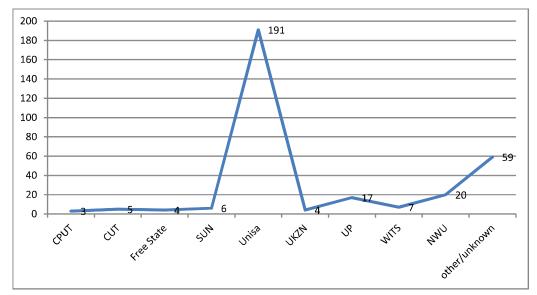


Figure 5. Number of DE articles by University/Institution

It is not surprising that Unisa has produced the highest number of DE articles because the university is the only full DE University in South Africa. However, the government white paper on distance education (DHET, 2014) encourages all institutions of Higher Education to develop DE units. Many of the universities already have Centres for Distance Education so it is expected that more DE research will emanate from them in the future.

Data analysis - Trends

Firstly an overall analysis was run using all the titles, keywords and abstracts of all 266 articles that were identified as being written by South African researchers on the broad topic of DE from 1988 to 2014. Figure 7 depicts graphically the major topics that emerged from this overall analysis and also includes the number of hits that each concept scored.

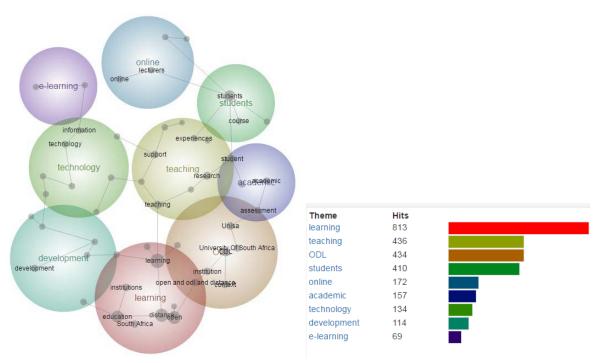


Figure 6. Overall concept map analysis of themes from 1988 to 2014 using Leximancer™

It is not surprising that the themes of ODL and distance learning were the most prominent, which were connected to Higher Education institutions and South Africa, as this is the theme of the analysis of this research. In addition the themes of students, learning and teaching also feature strongly. Within the student themes, links are made with assessment, student support and experiences. A particular theme of *Development* was identified which is encouraging to see as South Africa is seen as a developing country and the theme of development is a necessary one. Technologies, linked to e-learning and online learning also emerged as prominent themes. The findings tie in with the results obtained from the research levels and areas analysis of Zawacki-Richter (2009) and presented in Table 7 above.

Figures, 7, 8 and 9 display the results of the themes identified by LeximancerTM according to the 3 time periods of 200-2004, 2005 to 2009 and 2010 to 2014.

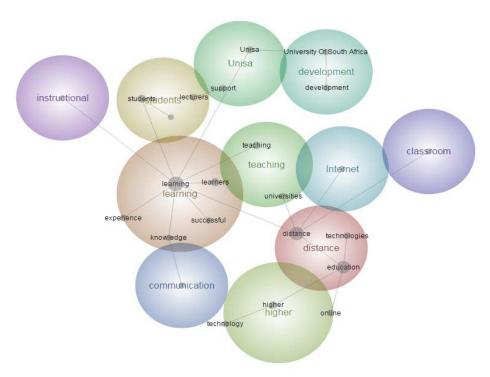


Figure 7. Analysis of themes using Leximancer[™] 2000-2004

Figure 7 depicts graphically the important themes that emerged during the period 2000 to 2004. The emphasis of the research was rooted in the themes of, learning, students, instructional design and development. During this same period the articles in *DE* were concentrated around the theme of the emergence of the virtual university and this theme does not feature at all in the South African publications.

From Figure 8 it can be observed that during the period 2005 to 2009, themes around online learning and e-learning as well as assessment started to emerge. Online interaction patterns appeared as the major topic for research in the same time frame in *DE* so the inference can be drawn that *DE* researchers were at a more advanced stage of online research than their South African counterparts, although the South Africans were just entering the field.

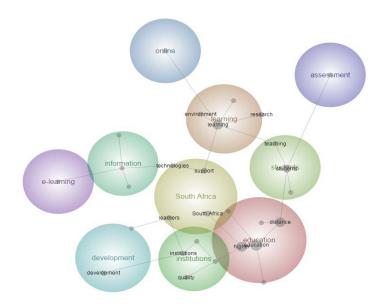


Figure 8. Analysis of themes using Leximancer [™] 2005-2009

The final analysis carried out using the LeximancerTM tool was for the period 2010 to 2014 (Figure 9). The emerging themes from the DE journal were interactive learning, OER's and MOOCs. Although there were a small number of South African articles published on these themes, there were not enough to even warrant a small finding on LeximancerTM. Once again the South African publications continued to centre on the themes of students, learning, elearning and online learning, as well as development and technologies.

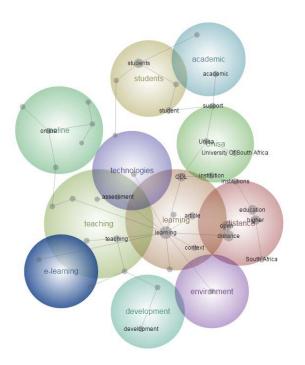


Figure 9. Analysis of themes using Leximancer[™] 2010-2014

Conclusions and recommendations for further research

This research paper seeks to explain the low levels of DE publishing in South Africa. Unisa is the oldest open distance education university in the world (Unisa, 2016c) and one of the top 10 mega distance universities (Daniel,1996). Despite this fact South Africans have contributed very little to theorising DE or even critiquing those who have theorised it who are mainly from the global North. Many South Africans are quick to lay the blame on the editors of the international DE journals who act as gatekeepers for publishing articles in their journals. This might indeed be the case in some instances, but it can be seen from this empirical research that the levels of research emanating from the South Africans are disproportionately represented at the micro level and that research at the macro level is almost non-existent. Although internationally most research is also pitched at the micro level, the South African researchers seem to be unable, unwilling or lacking in experience to produce original research which displays a theoretical understanding of DE. Most articles tend to "ride the same old horse" and revolve around the concepts of lecturer and student perceptions and the digital divide. Zawacki-Richter and Naidu (2016) mapped the trends in DE publishing and found that the most common themes emerging in the last 5 years were centred around Open Educational Resources (OER's), MOOCs and interactive learning, yet very few articles from South Africa have been published on these topics. In fact, during the period 2010 to 2014, the South African articles were still sticking to the research areas of technologies, e-learning and online learning as well as student support

The problem however does not seem to be confined only to the South African context but would seem likely to be prevalent among many developing countries. According to Scopus (2016) India has only published 4 articles in *DE* and none in *IRRODL*. The most popular journal for the Indian DE publications is *TJODE* which has published 40 articles. Two articles from Indonesia have been published in *DE* and only one article in *IRRODL*. This however, is only taking into account articles that are published in the English language so comparisons with other developing countries such as Brazil, China and Russia have not been researched.

These finding have significance for those people who are mandated to improve the quality and number of DE publications at the various universities in South Africa. At Unisa, the Institute for Open and Distance Education (IODL) is "an academic unit charged with the responsibility to undertake pragmatic and reflexive research including the organisation and professional research training programmes in order to strengthen ODL practice and benchmark it against global ODL practices" (Unisa, 2015). Unisa's ODL policy document (Unisa, 2015) states that "research should be carried out in many areas including the formulation of ODL theoretical explanations for ODL phenomena". It is clear that specialised units such as the IODL at Unisa and corresponding units at other South African universities need to take cognisance of these findings and incorporate higher level ODL research and trends in DE research into their research training programmes.

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