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# The Impact of Contact Sessions and Discussion Forums on the Academic Performance of Open Distance Learning Students



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## Abstract

This study investigated the impact of face-to-face contact sessions and online discussion forums on the academic performance of students at an Open Distance Learning (ODL) university (N = 1,015). *t*-Tests for independent samples indicated that students who attended a written assignment preparation contact session performed significantly better in the written assignment than those students who did not attend this contact session [ $t(813) = 4.64, p = 0.00$ ]; students who attended an examination preparation contact session did not perform significantly better in the examination than those students who did not attend this contact session [ $t(892) = 1.12, p = 0.26$ ]; while students who used an online discussion forum performed significantly better in the final examination than those students who did not use this forum [ $t(1,013) = 4.04, p = 0.00$ ]. Reasons for these mixed results are subsequently discussed. The study also found that the attendance of contact sessions and the utilisation of an online discussion forum by students were extremely low, and possible reasons for this are also given. Implications for the use of contact sessions and online discussion forums to improve the academic performance of ODL students are also discussed.

*Keywords:* contact sessions, online discussion forums, academic performance, open distance learning

## Introduction

Distance learning institutions globally are facing challenges to transform their policies and procedures to accommodate the growing number of learners (Roberts, 2014; Van Zyl & Spamer, 2013). This is especially true of the University of South Africa (Unisa), an Open Distance Learning (ODL) institute that has shown a nearly 25% increase in student enrolments from 263,559 students in 2009 to 328,864 students in 2011 (Unisa, 2012). Student support at Unisa, which includes feedback on summative assessments, e-tutoring, contact sessions, and online discussion forums, was developed to assist students in meeting their learning objectives, and is prescribed by Unisa's ODL Policy (Unisa,

2008). While there are a few departments at Unisa that have suspended their use of contact sessions as part of learner support due to a lack of resources, on the whole this remains a method of instruction that is still widely used at the university (Casquin–Johnson, 2012; Muchengetwa & Ssekuma, 2012).

Organisational Behaviour (OB) is a one-year module that forms part of a Human Resources Management (HRM) qualification offered by the Department of Human Resources at Unisa. It is a compulsory module for all third year HRM students with the aim being to help students understand why people do what they do in organisations at an individual, group and organisational level (Unisa, 2013). Formative assessment consists of two assignments, one multiple-choice question assignment and one written assignment, while a summative assessment consists of a two-hour open-book examination at the end of the year.

Two contact sessions were initiated for the OB module at Unisa. The first prepared students for the written assignment and the second prepared students for the final examination. The Discussion Forum, as part of the myUnisa online learning management system was also continuously available to enable students and lecturers to engage with each other. Although it was assumed that the above mentioned student support mechanisms were effective, no research was available to indicate whether the invested time and effort justified their use. This study attempted to provide guidance regarding this aspect.

### **Open Distance Learning and Student Support**

According to Krishnan (2012), open distance learning (ODL) has become an integral part of higher education globally, mainly to cater for the increasing demand for higher education. In this respect Tzagari (2013) explains that a distance context presents learners with different learning challenges and opportunities compared with those experienced in conventional classrooms. According to Thorpe (2002), ODL is characterised by a more diverse range of practices than ever before. The author explains that many ODL universities have moved from the more traditional print and correspondence models to more advanced online environments as they adapt to Internet technology.

The growing number of learners at ODL institutions has placed more pressure on these institutions to provide more services, a fundamental one being learner support (Roberts, 2014). Different authors and institutions refer to these support services by different names and also define them differently. Unisa (2008, p. 2) refers to student support as “a generic term that is applied to a range of services that is developed by Unisa to assist students to meet their learning objectives and to gain the knowledge and skills to be successful in their studies.” These support services are then listed and include face-to-face contact sessions, peer support, in-text support, and administrative support. Tait (2003) refers to a number of student support activities that have been provided over the last 150 years such as providing feedback to students, face-to-face teaching, short residential schools, special texts to help students, regional learning or study centres, personal tutors, and administrative support. Krishnan (2012) refers to student support services as a cluster of facilities and activities that are provided to make the learning process easier and more interesting for the learner. From the above it is thus clear that most approaches to learner support include some or other variation of a face-to-face contact session and online discussion forums.

### **Contact Sessions as a Form of Student Support**

Most distance learning institutions include face-to-face contact sessions in the student support services provided to students (Fung & Carr, 2000; Rajamanthri & Bulumulle, 2006). Such face-to-face

interaction between students and lecturers or tutors is referred to by various names, such as study centres (Fritsch & Ströhlein, 1988), counselling sessions (Ushadevi, 1994), study schools (Tait, 2003), contact interventions (Spencer, Lephthal, & Pienaar, 2005), discussion classes (Muchengetwa & Ssekuma, 2012) or contact classes (Van Zyl & Spamer, 2013). However they are referred to, their aim is to provide students with face-to-face interaction in order to assist them in achieving academic success (Fung & Carr, 2000; Ogina & Mampane, 2013; Unisa, 2008; Ushadevi, 1994; Van Zyl & Spammer, 2013).

Although various researchers have investigated the relationship between contact session attendance and the academic success of ODL students, these studies have focused on subjective aspects such as the feelings of distance learners (Ushadevi, 1994), the needs of students (Fung & Carr, 2000), student expectations (Rajamanthri & Bulumulle, 2006), the experience of students (Ogina & Mampane, 2013) or the perspectives of students (Tsagari, 2013). Very few studies have used objective criteria like assignment and examination scores to determine whether contact sessions can improve the academic performance of ODL students. Five studies that have in fact attempted to quantify the effects of contact session attendance in an objective way are reported below.

A study by Fritsch and Ströhlein (1988) investigated the effect of study centres at the Fein University in West Germany, which involved face-to-face contact sessions and advice. Their sample consisted of students busy with beginners' courses in Business Administration. They found that students who participated in study centre groups obtained better results in their second assignment (more than 10 percentage points) than students without this contact. However, they found no significant difference in examination results between the groups with mentor contact and those without.

A study by Cheung and Kan (2002) examined 168 students in a distance-learning Business Communication course at the Open University of Hong Kong. They found that tutorial class attendance had a significant effect on student performance in distance-learning courses.

A study by Spencer et al. (2005) in the Mercantile Law Department at Unisa investigated whether contact interventions could improve the academic proficiency of Mercantile Law students. In this study academic proficiency was defined as the ability to read well, to understand style and argumentations, to apply what is read to problems and students' own written text and the contact interventions were writing and reading workshops (Spencer et al., 2005). The authors found that there was a 9% increase in terms of writing content and a 1% increase in terms of writing form. They also found an 8.6% improvement in students' reading ability. As a final conclusion they stated that students' academic proficiency can improve from contact interventions, but that more intensive research needs to be done with a larger sample, as their sample comprised only 27 students (Spencer et al., 2005).

A study by Bowa (as cited in Van Zyl & Spamer, 2013) investigated the effect of contact classes on the academic performance of 212 distance education students enrolled for a Bachelor of Education programme at the University of Nairobi, Kenya. Bowa found that cognitive, affective, and systemic learner support services, including contact classes, did not contribute significantly to academic performance.

Van Zyl and Spamer (2013) conducted research at North West University in South Africa among ODL teachers studying towards an Advanced Certificate in Education (ACE). The aim was to determine

whether contact class attendance was imperative to the academic success of ODL students. Their study found that contact class attendance was in fact not imperative for students' academic success in the particular research sample, and made certain recommendations about drafting a new management model for ODL at their university. These recommendations included cutting costs and increasing the quality of contact classes (Van Zyl & Spamer, 2013).

In summary, of the five studies investigated, three reported evidence of improved student academic results due to contact session attendance, while two reported that contact sessions did not contribute significantly to student academic results.

### **Online Discussion Forums as a Form of Student Support**

Most distance learning institutions also include online discussion forums as part of the student support services provided to students (Rajamanthri & Bulumulle, 2006; Tait, 2003). Such online discussion forums provide students with opportunities to share their ideas with each other and their lecturers, and can also be a way for students to extend classroom discussions (Balaji & Chakrabarti, 2010; Kearsley, 2000).

Various researchers have investigated the outcomes of discussion forums. They have been shown to upgrade critical thinking skills (Collison, Elbaum, Haavind, & Tinker, 2000; Shapley, 2000), provide better cognitive and exploratory learning (Haggerty, Schneberger, & Carr, 2001), increase student-to-student discussion and cooperation (Kassop, 2003; Strodel, Thompson, & MacDonald, 2006), and increase superior learner empowerment (Kassop, 2003). Song and McNary (2011) also found a strong correlation between the number of discussion forum posts and students' course grades. However, except for the Song and McNary (2011) study, there is a paucity of research on the specific relationship between discussion forums and the academic performance of ODL students.

### **Research Hypotheses**

From the literature review the following research hypotheses were formulated:

H1: There is a significant difference between the academic performance of students who attended contact sessions and used an online discussion forum and those who did not.

H2: There is a significant difference between the written assignment results of students who attended a written assignment preparation contact session and those who did not.

H3: There is a significant difference between the final examination results of students who attended an examination preparation contact session and those who did not.

H4: There is a significant difference between the final examination results of students who used the myUnisa online Discussion Forum and those who did not.

## **Methodology**

The study followed a quantitative research approach for data collection and analysis, and a post test-only control group experimental design was used (Salkind, 2012).

## The Research Population and Samples

The population for this study was 1,015 students who registered for an OB module and wrote the final exam at the end of the year. The composition of the population is set out in Table 1 below.

Table 1

Composition of Population (N = 1,015: Source: Unisa Student Record System, 2013)

|               | No of students | % of N |
|---------------|----------------|--------|
| Gender        |                |        |
| Male          | 294            | 29%    |
| Female        | 721            | 71%    |
| Language      |                |        |
| English       | 111            | 11%    |
| Other         | 904            | 89%    |
| Residence     |                |        |
| South Africa  | 1,004          | 99%    |
| International | 11             | 1%     |

As can be seen from Table 1, the majority of OB students were female, had a language other than English as their home language and resided in South Africa.

In this study contact session attendance and online discussion forum usage were the independent variables, while academic performance in the form of assignment and final exam results were the dependent variables. There were six samples for this study, which are explained in Table 2 below. The samples were compiled using an electronic data set obtained from the Unisa Student Record System.

Table 2

*The Six Research Samples (Source: Unisa Student Record System, 2013)*

| Sample no          | Description of sample  |
|--------------------|--|
| Sample 1 (n = 121) | Attended written assignment preparation contact session and submitted written assignment |
| Sample 2 (n = 694) | Did not attend contact session but submitted written assignment                          |
| Sample 3 (n = 209) | Attended examination preparation contact session and wrote final examination             |
| Sample 4 (n = 806) | Did not attend contact session but wrote final examination                               |
| Sample 5 (n = 132) | Used the myUnisa online Discussion Forum and wrote final examination                     |
| Sample 6 (n = 883) | Did not use the myUnisa online Discussion Forum but wrote final examination              |

## Composition of the Contact Sessions

The composition of the contact sessions was similar to that of the population (the majority being female, home language not English, and resident in South Africa). The number of students who attended each contact session is set out in Table 3 below, which indicates that only a very small number of OB students attended the sessions (11.9% and 20.6% respectively).

Table 3

*Number of Students who Attended the Contact Sessions (N = 1,015)*

|                |  |   |
|----------------|--|---|
|                | Written assignment preparation contact session | Examination preparation contact session |
| Total attended | 121 students<br>(11.9% of N)                   | 209 students<br>(20.6% of N)            |

### Composition of the Online Discussion Forum Groups

No information was available regarding the composition (gender, language, and residence) of samples 5 and 6, that is, the students who used and did not use the myUnisa online Discussion Forum, as it was not possible to determine this from the student and lecturer interactions recorded on the forum. However, this information was not crucial for further statistical analysis of the samples. Furthermore, only a very small number of students used the myUnisa online Discussion Forum throughout the academic year, namely 132, which was 13% of the total population of 1,015.

### Data Collection

The data regarding the composition of the population, the samples, the scores that students obtained for their written assignment and final examination, and the interactions on the myUnisa online Discussion Forum were obtained from the official Unisa Student Record System and the myUnisa student management system.

## Results

All the data gathered were analysed using the IBM Statistical Package for the Social Sciences (SPSS) version 23.

### Descriptive Statistics

During this study descriptive statistics in the form of means and standard deviations were calculated for the assignment and final exam scores obtained by students in all six samples. These statistics were calculated to determine whether there were any important frequency patterns regarding the scores obtained by the six different samples. The results are given in Table 4 below.

Table 4

#### *Means and Standard Deviations of Samples 1 – 6*

| Sample no | n   | Minimum (%) | Maximum (%) | Mean (%) | Standard deviation |
|-----------|-----|-------------|-------------|----------|--------------------|
| 1         | 121 | 27          | 93          | 68.25    | 13.99              |
| 2         | 694 | 6           | 100         | 61.76    | 14.22              |
| 3         | 209 | 12          | 88          | 49.69    | 17.79              |
| 4         | 806 | 1           | 99          | 47.77    | 17.59              |
| 5         | 132 | 12          | 91          | 54.34    | 16.76              |
| 6         | 883 | 1           | 91          | 47.67    | 17.85              |

As can be seen from Table 4, low minimum scores and high maximum scores were obtained by students in all the samples, but the lowest scores were obtained by students in samples 2, 4 and 6 (did not attend any contact sessions or use the myUnisa online Discussion Forum). However, students in these samples also obtained high maximum scores. This indicates that factors other than the attendance of contact sessions or the use of online discussion forums contributed to the academic

success of students. This argument is supported by a similar finding in a study by Van Zyl and Spamer (2013).

### **t-Tests for Independent Means**

In order to test the formulated hypotheses for this study, *t*-tests for independent means (Green & Salking, 2008) were calculated to compare the means between:

- Samples 1 (attended the written assignment preparation contact session and submitted the written assignment) and 2 (did not attend the contact session but submitted the written assignment).
- Samples 3 (attended the examination preparation contact session and wrote final examination) and 4 (did not attend contact session but wrote final examination).
- Sample 5 (used the myUnisa online Discussion Forum and wrote the final examination) and 6 (did not use the myUnisa online Discussion Forum but wrote the final examination).

The independent-samples *t*-test, which evaluates the difference between the means of two independent groups (Green & Salking, 2008), was ultimately used to determine the difference between the three independent pairs of samples, as the two samples in each pair were mutually exclusive categories of students. The sample pairs were independent, as the two means being compared were not based on the same group of students (Gray, 2009). The *t*-test results indicated whether the differences in means between the three pairs of independent samples that were compared to each other were statistically significant (Sig. 2-tailed value  $\leq 0.05$ ), or whether there was no statistically significant difference between the means being compared (Sig. 2-tailed value  $\geq 0.05$ ) (Bland, 2000). Table 5 below indicates the results of the *t*-tests conducted on the six pairs of independent samples.

Table 5

#### *T-tests for the Three Pairs of Independent Samples*

| Sample no | n   | Mean  | Std deviation | Std error mean | <i>t</i> | df    | Sig (2-tailed) | Mean difference | Significance    |
|-----------|-----|-------|---------------|----------------|----------|-------|----------------|-----------------|-----------------|
| 1         | 121 | 68.25 | 13.99         | 1.27           | 4.64     | 813   | 0.00           | 6.49            | Significant     |
| 2         | 694 | 61.76 | 14.22         | 0.54           |          |       |                |                 |                 |
| 3         | 209 | 49.69 | 17.79         | 1.62           | 1.12     | 892   | 0.26           | 1.92            | Not significant |
| 4         | 806 | 47.77 | 17.59         | 0.63           |          |       |                |                 |                 |
| 5         | 132 | 54.34 | 16.76         | 1.46           | 4.04     | 1,013 | 0.00           | 6.67            | Significant     |
| 6         | 883 | 47.67 | 17.85         | 0.60           |          |       |                |                 |                 |

## **Discussion, Implications, and Conclusions**

### **Discussion**

This study found mixed results regarding the academic performance of students who attended contact sessions and those who did not. The study did, however, find a statistically significant difference in the academic performance of students who used an online discussion forum and those who did not. These results as reported in Table 5 above indicate the following:

- There is a statistically significant difference in the means of written assignment scores of students who attended a written assignment preparation contact session (Sample 1) and students who did not attend this contact session (Sample 2). This supports previous research on contact sessions for ODL students, which indicated that contact interventions could improve Business Administration assignment results (Fritsch & Ströhlein, 1988).
- There is no statistically significant difference in the means of final examination scores of students who attended an examination preparation contact session (Sample 3) and students who did not attend this contact session (Sample 4). This supports previous research on contact sessions for ODL students, which indicated no improvement regarding the academic performance of Bachelor of Education students (Bowa, as cited in Van Zyl & Spamer, 2013), nor of teacher students (Van Zyl & Spamar, 2013). However, it contradicts previous research, which indicated that contact interventions could improve Business Communications course results (Cheung & Kan, 2002) and the writing and reading ability of Mercantile Law students (Spencer et al., 2005).
- There is a statistically significant difference in the means of final exam scores of students who used the myUnisa online Discussion Forum (Sample 5) and students who did not use this forum (Sample 6). This finding supports previous research by Cook and German (2010), Kay (2006), and Ramos and Yudko (2008), who found that the number of posts on an online discussion forum correlated significantly with classroom performance. An explanation for this significant difference could be that students who used the myUnisa online Discussion Forum were more motivated and dedicated towards their studies than students who did not use this forum, which was then reflected in the higher exam scores obtained. In contrast to these positive results, a study by Song and McNary (2011) found weak correlations between the number of posts on an online discussion forum and students' course grades. In this case the authors attributed this finding to the fact that their study was a graduate level course in which there was very little variation in the grades of students.

Due to the results obtained in this study:

- H1 was *partially accepted* (There is a significant difference between the academic performance of students who attended contact sessions *and* used an online discussion forum than those who did not).
- H2 was *accepted* (There is a significant difference between the written assignment results of students who attended a written assignment preparation contact session and those who did not).
- H3 was *rejected* (There is a significant difference between the final examination results of students who attended an examination preparation contact session and those who did not).



- H4 was *accepted* (There is a significant difference between the final examination results of students who used the myUnisa online Discussion Forum and those who did not).

Possible explanations as to why a written assignment preparation contact session was successful in improving the written assignment results of students while an examination preparation contact session was not successful in improving the examination results of students are, in the opinion of this researcher, the following:

- The written assignment preparation contact session assisted students in answering the previously published written assignment, and after the contact session students had one month in which to submit the assignment. This enabled students to submit a well-prepared written assignment based on assistance obtained during the contact session without a restrictive time constraint. As such, students who attended the contact session performed significantly better than students who did not attend it.
- The examination preparation contact session assisted students in answering possible examination questions, but the exact questions were not known to students. After the contact session students had four months in which to study and prepare for the examination. During the examination students had only two hours to complete the questions. Students were thus not able to manage this restrictive time constraint and also did not prepare thoroughly enough for all possible examination questions. As such, the assistance obtained during the contact session by students who attended it did not assist them in performing significantly better than students who did not attend it.

A disappointing aspect of this study is the small number of students who attended the contact sessions (121 or 11.9% of N for the first contact session, and 209 or 20.6% of N for the second contact session), and the small number of students who used the online discussion forum (132 students or 13% of N). The low attendance of contact sessions reported in this study was also reported in studies by Muchengetwa and Ssekuma (2012) in which only 13.2% of the total population attended a discussion class, and by Van Zyl and Spamer (2013) in which contact session attendance was 18.9%. In both studies, reasons for the low attendance was not known or determined.

A possible explanation for the low attendance of contact sessions in this study could be the unique current South African socio-economic conditions of students such as the inability to afford any travelling costs involved. Student apathy and lack of motivation and commitment could be another explanation, as anecdotal evidence exists to substantiate it, such as the late submission of assignments, lack of contact with the lecturer, not answering invitations to attend contact sessions and starting late with preparations for the final examination. The implications of this are that no matter how many contact sessions are conducted, unmotivated and undedicated students may not attend them. This view is supported by Spencer et al. (2005) who found that Mercantile Laws students at Unisa, when given the opportunity to receive assistance after a pre-test to determine the effectiveness of a contact intervention, were unwilling to put the requisite effort into their studies. A final explanation for the low attendance of contact sessions could be that students who perform well throughout the year in this module may feel that they do not need these sessions to support them - an explanation supported by Van Zyl and Spamer (2013) in a similar study on contact session attendance.

The low utilisation of an online discussion forum encountered in this study is also supported by studies by Nandi, Hamilton, Chang, and Balbo (2012) and Shana (2009), who found that setting up and having discussion forums available does not ensure that students will in fact utilise it. An example is a study by Maboe, Nkosi and Makoe (2013) in which only 53 students out of a possible 1,379 (3.8%) used the online discussion forum in their ODL studies. Balaji and Chakrabarti (2010) also argue that there are challenges involved in encouraging students to participate in online discussions. These challenges include students' perceived lack of relevance and usefulness of discussion forums (Beaudoin, 2002), confusion, anxiety, apprehension in writing and difficulty in phrasing, and time constraints (Balaji & Chakrabarti, 2010), a perception by students that it was time-consuming, addictive and sometimes distracting (Shana, 2009) and technical problems, unclear expectations from lecturers and insufficient feedback from lecturers (Mokoena, 2013).

A possible explanation for the low usage of the online discussion forum in this study could be that students are not able to afford access to the internet. This is a disturbing possibility, as Unisa is an ODL university requiring all students to have access to the Internet in order to study through it. Student apathy and lack of motivation and commitment could be another explanation, as Unisa has regional offices throughout South Africa with free access to the internet so that students can make use of these facilities if they do not have internet access in the home. Lastly, a lack of computer skills of ODL students could have restricted the use of the online discussion forum.

## **Implications**

The implications of the present study are that the assignment and examination results of ODL students can be improved by the use of contact sessions and an online discussion forum. Specifically, if you want to improve the assignment results of ODL students conduct assignment preparation contact sessions and motivate as many students as possible to attend them. Also, if you want to improve the examination results of ODL students, encourage them to utilise discussion forums.

Implications for the effective use of contact sessions are that they need to be well-organised and cost-effective (Tsagari, 2013); carefully structured to achieve specific learning objectives (Spencer at al., 2005); adapted to the learning styles and prior knowledge of students (Fritsch & Ströhlein, 1998); focused on modules in which students experience the most problems (Van Zyl & Spamer, 2012); and presented by knowledgeable and helpful facilitators (Fung & Carr, 2000) who are effective discussion leaders (Balaji, 2010); while the content presented during the contact session should be uploaded on the internet within days so that students can view or review them in their own time and at their own pace (Van Zyl & Spamer, 2013).

Implications for the effective use of online discussion forums are that they must include online assessments, which have been shown to significantly influence student interaction (Balaji, 2010), and be learner centred, task oriented, and non-threatening for students (Shana, 2009). Furthermore, lecturers must have the necessary technical skills to use the system (Cant & Bothma, 2011), and must respond to learners' queries timeously (Maboe et al., 2013). Students must also have the necessary access to the system, the computer skills to use it and access to technical support to assist them, such as a telephone helpline (Mokoena, 2013).

## **Limitations**

This study also had various limitations. The first is the small numbers of students who attended the contact sessions and used the myUnisa Discussion Forums, resulting in the small sizes of samples 1, 3,

and 5. This could have influenced the practical significant effect of the study on academic success (Van Zyl & Spamer, 2013). Secondly, the focus of the study was on only one academic subject, namely OB. Thirdly, nothing is known about the personal characteristics of the population or samples, such as previous academic achievement and motivation, which could have influenced their performance on the written assignment and final examination. Lastly, the quality of the content of the interactions on the online discussion forums was not assessed; only the number of interactions was used.

## Recommendations

The results of this study have led to various recommendations being made. Firstly, similar research should be conducted involving larger samples and involving academic subjects other than OB. Research should also be conducted on the specific reasons why so few students attended the contact sessions and why so few used the myUnisa online Discussion Forums. What must then be researched are methods that could successfully motivate ODL students to attend contact sessions and utilise available online discussion forums. Research should also be conducted on other variables that affect ODL student academic performance, such as student apathy, lack of commitment or interest, socio-economic conditions (e.g., affordability), and student characteristics (e.g., age, gender and marital status). Research should also be conducted on the relationship between the academic performance of students who participate/do not participate in contact sessions and students who use discussion forums. Lastly, research needs to be conducted on the quality of discussion forum postings, and thus go beyond merely the number of times that a student uses a discussion forum, to determine whether there is a relationship between the quality of discussion forum interaction and student academic success.

*End Note: A synopsis of this paper was presented at the 26<sup>th</sup> International Council for Open and Distance Education (ICDE) World Conference at Sun City, South Africa, on 14 October 2015.*

## References

- Balaji, M.S., & Chakrabati, D. (2010). Student interactions in online discussion forum: Empirical research from “Media Richness Theory” perspective. *Journal of Interactive Online-Learning*, 9(1), 1-22.
- Beaudoin, M.F. (2002). Learning or lurking? Tracking the invisible online student. *The Internet and Higher Education*, 5(2), 147-155.
- Bland, J.M. (2000). *An introduction to medical statistics* (3<sup>rd</sup> ed.). Oxford, UK: Oxford Medical Publications.
- Cant, M.C., & Bothma, C.H. (2011). Applying learning technologies in an open learning context. *International Business & Economics Research Journal*, 10(12), 117-126.
- Collison, G., Elbaum, B., Haavind, S., & Tinker, R. (2000). *Facilitating online learning: Effective strategies for moderators*. Madison, WI: Atwood Publishing.

- Cheung, L.L.W., & Kan, A.C.N. (2002). Evaluation of factors related to student performance in a distance-learning business communication class. *Journal of Education for Business*, 77(5), 257-263.
- Clasquin-Johnson, M. (2012). Contact sessions: Their role in open distance learning and contemporary practice in the College of Economic and Management Sciences at the University of South Africa. Paper presented at the First UNISA International ODL Conference: 5 – 7 September 2012. Pretoria: South Africa.
- Cook, S., & German, C. (2010). The tell-tale data: Virtual whispering and final student grades. Retrieved from <http://kmeade.weblog.com/files/2010/technology-pdf.pdf>
- Fritsch, H., & Ströhlein, G. (1988). Mentor support and academic achievement. *Open Learning*, 3(2), 27-32.
- Fung, Y., & Carr, R. (2000). Face-to-face tutorials in a distance learning system: Meeting student needs. *Open Learning*, 15(1), 35-46.
- Gray, D.E. (2009). *Doing research in the real world* (2<sup>nd</sup> ed.). Thousand Oaks, CA: SAGE Publications.
- Green, S.B., & Salkind, N.J. (2008). *Using SPSS for windows and Macintosh: Analysing and understanding data* (5<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Haggerty, N., Schneberger, S., & Carr, P. (2001). Exploring media influences on individual learning: Implications for organizational learning. In J. DeGross, S. Sarkar, & V. Storey (Eds.). *Proceedings, International Conference on Information Systems* (pp. 13-22), New Orleans, LA.
- Kassop, M. (2003). Ten ways online education matches, or surpasses, face-to-face learning. Retrieved from <http://ts.mivu.org/default.asp?show=article&id=1034>.
- Kay, R.H. (2006). Developing a comprehensive metric for assessing discussion board effectiveness. *British Journal of Educational Technology*, 37(5), 761-783.
- Kearsley, G. (2000). *Online education: Learning and teaching in cyberspace*. Belmont, CA: Wadsworth.
- Krishnan, C. (2012). Student support services in distance higher education in India: A critical appraisal. *International Journal of Research in Economics and Social Sciences*, 2(2), 459-472.
- Maboe, K.A., Nkosi, Z.Z., & Makoe, M.E. (2013). Prospects and challenges of learners on-line discussion forum interaction in an ODL (Open Distance Learning) institution. *Journal of Health Science*, 1, 12-20.
- Mokoena, S. (2013). Engagement with and participation in online discussion forums. *The Turkish Online Journal of Educational Technology*, 12(2), 97-105.

- Muchengetwa, S., & Ssekuma, R. (2012, September). *The impact of discussion classes on ODL learners in basic statistics*. Paper presented at the First UNISA International ODL Conference. Pretoria: South Africa.
- Nandi, D., Hamilton, N., Chang, S., & Balbo, S. (2012). Evaluating quality in online asynchronous interactions between students and discussion facilitators. *Australasian Journal of Educational Technology*, 28(4), 684-702.
- Ogina, T.A., & Mampane, S.T. (2013). Experiences of tutorial sessions as learning support for distance education students. *Progressio*, 35(1), 104-118.
- Rajamanthri, S., & Bulumulle, K. (2006). Students' expectations of classroom sessions at the Open University of Sri Lanka: ODL or convention? Paper presented at the Fourth Pan Commonwealth Forum on open distance learning, 30 October – 3 November. Ocho Rios, Jamaica.
- Ramos, C., & Yudko, E. (2008). Hits (not discussion posts) predict student success in online courses: A double cross-validation study. *Computers and Education*, 50(4), 1174-1182.
- Roberts, D. (2014). Learner support in South African distance education: A case for action. Retrieved from [www.col.org/pcf3/Papers/PDFs/Roberts\\_Des.pdf](http://www.col.org/pcf3/Papers/PDFs/Roberts_Des.pdf) on 15 April 2014.
- Salkind, N.J. (2012). *Exploring research* (8<sup>th</sup> ed.). Boston, MA: Pearson Education.
- Shana, Z. (2009). Learning with technology: Using discussion forums to augment a traditional-style class. *Educational Technology*, 12(3), 214-228.
- Shapley, P. (2000). Online education to develop complex reasoning skills in organic chemistry. *Journal of Asynchronous Learning Networks*, 4(2), 55-65.
- Song, L., & McNary, S.W. (2011). Understanding students' online interaction: Analysis of discussion board postings. *Journal of Interactive Online Learning*, 10(1), 1-14.
- Spencer, B., Lephala, M., & Pienaar, C. (2005). Improving academic proficiency in open distance learning through contact interventions. *Language Matters*, 36(2), 224-242.
- Stodel, E.J., Thompson, T.L., & MacDonald, C.J. (2006). Learners' perspectives on what is missing from online learning: Interpretations through the community of inquiry framework. *International Review of Research in Open & Distance Learning*, 7(3), 1-24.
- Tait, A. (2003). Reflections on student support in open and distance learning. *International Review of Research in Open and Distance Learning*, 4(1), 1-9.
- Thorpe, M. (2002). Rethinking learner support: The challenge of collaborative online learning. *Open Learning*, 17(2), 105-119.
- Tsagari, D. (2013). Contact sessions in distance education: students' perspective. In N. Lavidas, T. Alexiou, A., & M. Sougari (Eds), *Major Trends in Theoretical and Applied Linguistics: Selected*

*papers from the 20<sup>th</sup> ISTAL (International Symposium on Theoretical and Applied Linguistics). Volume 3.* London: Versita de Gruyter, pp. 385-405.

Unisa. (2008). *Open distance learning policy*. Pretoria, South Africa: University of South Africa Press.  
Retrieved from

[http://www.unisa.ac.za/cm/contents/departments/tuition\\_policies/docs/OpenDistanceLearning\\_Council3Oct08.pdf](http://www.unisa.ac.za/cm/contents/departments/tuition_policies/docs/OpenDistanceLearning_Council3Oct08.pdf)

Unisa. (2012). *Audited annual report*. Pretoria: South Africa. Retrieved from [http://www.unisa.ac.za/happening/docs/AnnualReport\\_2012.pdf](http://www.unisa.ac.za/happening/docs/AnnualReport_2012.pdf)

Unisa (2013). *Study Guide for PMA342T*. Pretoria, South Africa: University of South Africa Press..

Ushadevi, M.D. (1994). Are contact sessions necessary in distance education? A feedback to IGNOU. *Indian Journal of Open Learning*, 3(1), 16-21.

Van Zyl, J.M., & Spamer, E.J. (2012). Effect of contact class attendance on the academic success of open distance learning students in advanced certificate in education programs. *Contemporary Educational Technology*, 3(3), 166-183.

Van Zyl, J.M., & Spamer, E.J. (2013). Contact class attendance: Imperative for academic success of ODL students? *Progressio*, 35(1), 225-250.

