Instructors' experiences of interaction with students at Distance Learning University in Tanzania

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Abstract

This was a qualitative case study which used semi-structured interviews to explore instructors' experiences of interaction with students at Distance Learning University in Tanzania. Social constructivism theory guided the study. Findings show that instructors used e-mail, face-to-face sessions, written comments on students' test scripts, regional-center staff/student representatives, e-learning platforms, as well as mobile phones to interact with students. Instructors confirmed that all these means of interaction involved certain challenges or weaknesses. Instructors were positive about the role of interaction in learning. However, they specifically believed that their interaction was more beneficial to the few students who managed to maintain regular interaction as opposed to the majority who did not. This study seeks to contribute to the existing literature on interaction processes, pointing out the major issues that need to be addressed in order to improve student–instructor interaction in distance learning.

Keywords: distance learning; student–instructor interaction; face-to-face interactions; portfolio assessment; mobile phone use in learning; instructors' role in interaction

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Résumé

Il s'agit d'une étude de cas qualitative qui s'est servie d'entrevues semi-structurées pour examiner les expériences d'interaction des facilitateurs avec les étudiants de l'université à distance de Tanzanie. L'étude a porté sur un groupe de 13 participants au siège de l'institution située dans la ville de Dar es Salaam. Elle a utilisé la théorie du constructivisme social aux fins de la collecte et de l'analyse des données. Les résultats indiquent une interaction facilitateur-étudiant limitée vu que les facilitateurs n'interagissaient avec les étudiants qu'au fur et à mesure des événements ou des problèmes qui se présentaient. Les facilitateurs avaient recours au courrier électronique, aux séances individualisées, aux commentaires écrits sur les scripts de test des élèves, aux représentants des directeurs régionaux/étudiants, à la plateforme e-learning ainsi qu'aux téléphones mobiles pour interagir avec les étudiants. Ils ont confirmé que tous ces moyens d'interaction présentaient des défis ou des faiblesses dans la façon dont ils étaient utilisés pour permettre des échanges fructueux et faciliter l'apprentissage. Les facilitateurs avaient une perception positive du rôle de l'interaction dans l'apprentissage, même s'ils estimaient précisément que l'interaction était plus profitable aux quelques étudiants qui réussissaient à maintenir des échanges réguliers avec eux, contrairement à la majorité des étudiants qui n'y parvenaient pas. Cette étude contribue à la documentation existante sur les processus d'interaction en mettant en exergue des questions majeures auxquelles les facilitateurs doivent apporter des réponses en vue d'améliorer l'interaction entre étudiants et facilitateurs dans la formation à distance.

Mots clés : apprentissage à distance, interaction étudiant-facilitateur, interaction individualisée dans l'apprentissage, évaluation du portfolio, usage du téléphone mobile dans l'apprentissage, rôle des facilitateurs dans l'interaction

Resumo

Este foi um estudo de caso qualitativo que usou entrevistas semi-estruturadas para explorar as experiências dos professores em termos de interacção com os estudantes na universidade de ensino à distância na Tanzânia. O estudo envolveu 13 participantes na sede da instituição situada na cidade de Dar es Salaam. Usou a teoria do Construtivismo Social para orientar a recolha e análise de dados. As conclusões mostram que houve uma interacção limitada estudante-professor pois os professores interagiram com os estudantes com base em eventos ou problemas que surgiram. Os professores utilizaram e-mail, sessões presenciais, comentários por escrito sobre provas, directores regionais/ representantes dos alunos, plataformas de e-learning bem como telemóveis para interagirem com os alunos. Confirmaram que todos estes meios de interacção apresentavam alguns desafios ou fragilidades na forma como estavam a ser utilizados para facilitar interacções e aprendizagem significativas. Os professores mostraram-se positivos quanto ao papel da interacção na aprendizagem embora eles especificamente sentissem que a sua interacção era mais benéfica para os poucos estudantes que conseguiam manter uma interacção regular em comparação com a maioria dos estudantes que não conseguia. Este estudo contribui para a literatura existente sobre processos de interacção destacando as principais questões a serem tratadas pelos professores para melhorarem a interacção entre alunos e professores no ensino à distância.

Palavras-chave: ensino à distância, interacção estudante-professor, interacção presencial na aprendizagem, avaliação de portfólio, uso do telemóvel na aprendizagem, papel do professor na interacção

Introduction

Greenberg (1998) defined distance education as a planned teaching and learning experience that uses a wide spectrum of technology to reach learners at a distance, as well as to encourage interaction and learning. The main pedagogical idea is that teaching and learning do not occur at the same place (or time), and that printed and digital learning materials are used to maintain interaction between instructors and learners. As regards the pedagogical nature of distance learning, there is limited interaction between instructor and students, as well as among students themselves.

According to scholars such as Garrison and Cleveland-Innes (2005), and Ekwunife-Orakwue and Teng (2014), interaction is a mutual relation that exists between two or more objects (people), facilitated by whatever means of communication in order to provide feedback that is useful in meaning construction. This conceptualization of interaction has influenced the present study. In the context of this study, 'interaction' refers to any kind of social and pedagogical relations, whether formal or informal, between two or more entities in face-to-face situations or which are mediated by different media with the purpose of improving learning. The relation should have a meaningful connection with the intention to improve learning.

Moore (1989) identified three kinds of interaction, namely learner–instructor interaction, learner–learner interaction and learner–content interaction. However, the focus of this study was on interaction between learners and instructors. It describes instructors' experiences of their interactions with students in a distance learning environment. Furthermore, it depicts the areas of concern that need to be considered in order to address the limited interaction in distance learning. This it does by: reflecting on the means/methods instructors use to interact with students; the challenges instructors face when interacting with students; the roles instructors play when interacting with students; as well as the meaning that instructors attach to their interaction with students in relation to students' learning achievement.

Background and statement of the problem

The separation of teaching and learning activities in distance learning has resulted in limited interaction between students and instructors, which, in turn, has created challenges with regard to students' learning, challenges like the feeling of isolation (Bouhnik & Marcus, 2006), limited academic support, as well as delayed feedback and information (Niwagila, 2014). Since interaction gives learners an opportunity to obtain elaboration from different perspectives (Hannifin, 1989, as cited by Anderson, 2003; Moore, 1993), as well as promote study pleasure and motivation (Holmberg, 1995; Anderson, 2003; Abrami, Bernard, Bures, Borokhovski & Tamim, 2011), limited interaction affects students' learning motivation (Temba, 2011; Rwejuna, 2013; Anderson & Dron, 2011). As a result, delays in graduation or dropout in distance learning have been attributed to limited student–instructor interaction (Chang & Smith, 2008; Temba, 2011).

The literature reports that, in developed countries, technology has increased the opportunity for interaction and reduced the negative effects of limited interaction in distance learning (Chang & Smith, 2008; Ekwunife-Orakwue & Teng, 2014). However, improved interaction in developing countries, and Tanzania in particular, has not occurred. There are a number of reasons for this, such as challenges relating to access and the affordability of information and communications technology (ICT) facilities (Komba, 2009; Nihuka, 2008; Nyandara, 2012; Rumanyika & Galan, 2015). Moreover, distance learning institutions focus on learning materials delivery rather than pedagogical activities that facilitate interaction and learning motivation (Simpson, 2013). This means that limited access to ICT facilities and to technical know-how regarding the use of technology for teaching in developing countries has limited the effective use of ICT for facilitating interaction and bridging the separation gap between students and instructors.

Similarly, at a Distance Learning University (DLU) in Tanzania, it was reported that, despite the use of ICT, student–instructor interaction was limited (Ng'umbi, 2013; Niwagila, 2014). This illustrates that students lack frequent academic support, which has an influence on their learning motivation, retention and satisfaction (Inkelaar & Simpson, 2015). Consequently, low retention and graduation rates at the DLU (OUT, 2014; OUT, 2015) have been attributed to the limited interaction (Temba, 2011; Niwagila, 2014).

Specifically, concerning the challenges of low retention and graduation rates at the DLU, statistics show that the accumulative enrolment from 1994 to 2014/2015 was 103 388 students, of which only 22% were able to graduate (OUT, 2015). In addition, the dropout rate was 44% of the students enrolled since 1999, and the remaining 34% were the only active students in the 2014/2015 academic year (OUT, 2015). Despite this complex situation, little is known about instructors' interactional experiences with students in the distance learning environment, especially in the Tanzanian context. The purpose of this study, therefore, was to explore and generate knowledge on instructors' experiences of their interaction with students in order to reflect on the practice and to improve interaction in a distance education context.

The research questions were as follows:

1. In what ways do instructors interact with students at the DLU?
2. How do instructors perceive the influence of such interactions on students' learning?
3. In what ways have their perceptions influenced interaction processes at the DLU?

Significance of the study

The limited student–instructor interaction at the DLU is one of the factors that has contributed to low rates of student retention and graduation (Temba, 2011; Niwagila, 2014). Despite this, little was known about instructors' experiences of their interaction with students. This study significantly

contributes to the existing limited literature on interaction processes in distance learning based on instructors' experiences. It points out the major issues that need to be addressed in order to improve the interactions as well as create positive learning experiences in distance learning. The findings of this study therefore serve as a guide on how to improve interaction in the distance learning context, especially for developing countries with characteristics similar to Tanzania.

Context of the study

The DLU is an open and distance learning institution offering numerous courses at certificate, degree and postgraduate levels. The institution's headquarters are in Dar es Salaam, Tanzania. It has 29 regional centers and 69 study centers across the country. It also has some coordination centers beyond Tanzania. In the 2014/2015 academic year, the DLU had 35 500 active students in all programs (certificate, undergraduate and postgraduate). Up to June 2014, it had a total of 350 academic staff, 276 administrative staff, as well as 43 technical staff (OUT, 2015).

The mode of operation is distance using occasional face-to-face sessions, modern technology, as well as print materials (Nihuka, 2008). Despite the efforts to use ICT in order to reduce the distance between instructors and students, some scholars like Nyandara (2012), Nihuka (2008), Ng'umbi (2013) and Niwagila (2014) have reported challenges at the institution relating to ICT access, usage and affordability, challenges that affect the interactional processes between instructors and students.

Theoretical framework

Social constructivism (by Vygotsky) guided data collection and analysis for this study. The theory emphasizes the role of interaction on cognitive development and the way we understand the world (Kim, 2001). Social interactions help students to obtain different perspectives regarding phenomena, to internalize these, and to use the information to guide or regulate their own understanding. Social constructivism explains the relationship between interaction and learning based on how knowledge is constructed and created so as to clear misconstruction in a social setting. In addition, it declares that, since learning is a social activity or process, meaningful learning takes place when the learner is actively engaged in a social activity in a social context (Atherton, 2013; Kim, 2001; Kumpulainen & Wray, 2002; Pritchard & Woollard, 2010).

Social constructivism further asserts that social interaction facilitates meaningful learning to a greater degree compared with what one can learn individually without assistance from a knowledgeable expert. This is referred to as 'the zone of proximal development'. The zone of proximal development emphasizes the role of interaction with instructors to facilitate meaningful learning; in other words, students' learning depends on instructors' guidance and facilitation.

The theory suggests that learners and instructors construct knowledge through interaction among themselves. Learners have to engage actively in learning activities for meaningful learning to take place. On the other hand, the role of instructors is to facilitate interaction, and encourage, motivate and guide learners to engage actively in knowledge creation (Atherton, 2013). The emphasis is on instructors interacting with students while at the same time fulfilling their role of facilitating interaction among students and encouraging them to take part in different learning activities (Dagarin, 2005).

Research methodology

This was a qualitative case study which used semi-structured interviews to collect data from 13 instructors on their experiences of interacting with students at the DLU in Tanzania. The case study was useful in studying the experience and meaning of interaction from the instructors' perspective, considering the processes and relationships with learning, and explaining why and how certain outcomes might happen rather than finding out what those outcomes were (Denscombe, 2007).

Respondents' demographic data

Respondents were five male and eight female instructors at the headquarters of the DLU in Tanzania. Researchers used a purposive sampling technique to select respondents at the institution's headquarters. The criteria for the selection of respondents were work experience (at least four years or above) as well as education level (from master's degree onwards). The work experience of participants was important in view of the need for them to have a wealth of experience in the field. In addition to that, the level of education was crucial because only instructors with masters' education level were assigned to teach courses independently, which could have implication on their personal experiences in the field. Table 1 summarizes the demographic information of the respondents. However, some details, such as their faculty and field of specialization, are not indicated so as to maintain respondents' privacy and not disclose their identity.

Context description of data collection

This case study used semi-structured, face-to-face interviews to collect data from 13 participants. Initially, the interviewer approached potential respondents individually, explained the objectives of the research, and requested their consent to be involved in the study. The interviewer audiotaped 12 interviews. However, one interviewee refused to be recorded; hence the interviewer had to take notes during the particular session. The duration of interviews ranged from 30 to 45 minutes, with an average of 33 minutes.

Since the interviews were conducted at the respondents' workplace, the interviewer had an opportunity to observe the work environment of the instructors. They shared offices with two or three colleagues, except for three of them, who had offices of their own. Offices had facilities such as air conditioners, computers were connected to the Internet, and, in some offices, there were even printers. In addition, all the instructors had their own laptops. As a result, some of the institution's computers were not even switched on. There was the occasional interruption during the interviews from students who came to meet with their instructors, or as result of calls from students.

Table 1: Summary of participants' demographic information

Gender	Work experience (years)	Age (years)	Education level	No. of courses assigned to the instructor	No. of students in research supervised by the instructor	Approximate total no. of students taking the course(s) of the instructor
F	4	45–50	MA	4	–	100
F	5	40–45	MA	1	–	1 200
F	5	40–45	MA	4	–	450
F	6	45–50	PhD	3	50	370
M	8	40–45	MA	1	–	2 500
F	8	40–45	PhD	2	10	155
M	9	45–50	PhD	3	5	1 500
F	9	45–50	MA	2	–	1 500
F	9	40–45	PhD	2	32	800
M	9	50–55	PhD	2	20	150
F	9	40–45	PhD	4	3	30
M	10	45–50	PhD	5	22	20
M	20	60–65	PhD	3	28	350

Findings

Thematic analysis was used to analyze and organize data obtained from participants. Interviews were transcribed, and the major themes that occurred frequently were identified in line with the objectives of the study. Below is a presentation of the major themes and subthemes, supported by participants' verbatim quotes.

Means/methods of interaction used by instructors to interact with students

'Means/methods' refers to ways that enable somebody to do something. Instructors used various means to interact with students. These were: face-to-face sessions; field practice; invigilation and marking of examination scripts; e-mails; mobile phones; as well as e-learning platforms. Below is a description of how instructors used these means to interact with students.

Firstly, the results showed that instructors used both formal and informal face-to-face sessions to interact with students. Formal sessions included the normal and intensive face-to-face sessions. The difference between the two is that normal face-to-face sessions included all students and were conducted once per academic year for a duration of three to four days per center, while the intensive sessions were for certain special programs conducted for two to three weeks up to some months. On the other hand, informal face-to-face sessions included students' visits to institutional headquarters with or without appointments to meet with instructors for different academic issues. Informal face-to-face sessions were possible for only the few students who could afford to visit headquarters. The following are some of the respondents' comments regarding face-to-face interaction with students:

> Mr. Raphael: … [T]hose students who are around … HQ usually visit, and sometimes we have discussions with them… . [It] is a kind of informal procedure [but it benefits only a] few of them … .

> Ms. Joyce: … [W]e also have face-to-face sessions… . [W]e [visit] students [at] their centers for three to four days and get to hear their problems … .

Secondly, instructors used mobile-phone technology to interact with students. They reported that this was a convenient means of communication, as it provided an opportunity for immediate feedback. Instructors confirmed that using both mobile-phone calls and text messages to interact with students was a way of reminding students of, confirming, or giving clarification on, administrative and academic issues. The following is some of their input in this regard:

> Ms. Aida: I use [a] mobile phone or e-mail [but] I think the mobile phone is more convenient because … almost every student [now] owns a mobile phone … .

Mr. Raphael: In my case, I interact with them almost every day through mobile-phone calls, … e-mail and Moodle … but I prefer mobile phones because you can give [an] immediate response when called. E-mail sometimes is limited [by] Internet access … .

Thirdly, instructors used examination invigilation and marking activities to interact with their students. Through invigilation, instructors were able to meet their students at the examination centers, although the interaction was less about facilitation and more about getting to know one another. On the other hand, marking of examination scripts and tests served as a way for instructors to get feedback about their courses through students' performance and to give students feedback in terms of scores and written comments. Respondents had the following to say about this:

Ms. Giraffe: … [W]e just interact through their papers when we mark them and [make] comments … .

Mr. Alhaji: When marking, I write comments, and then send [the scripts] back to students … . [T]hat is the only major [means] of interaction with undergraduate [students] … .

Fourthly, instructors at institutional headquarters indicated that they also use regional-center staff and student representatives to pass on different types of information to students. They confirmed that, sometimes, they also receive student queries from regional-center staff or student representatives. Below are some of their comments on this aspect:

Ms. Pendo: I just have [the] contact information of [a] few students … mostly class representatives whom I normally call and give information to [for them to] pass [on] to others … .

Mr. Sessy: …[W]e have coordinators in those centers … students can visit and there are [staff members] responsible [for handling] students' queries … .

The last means of interaction that instructors used was the e-learning platform and e-mail. Instructors confirmed that e-mail communication was used more often for postgraduate students than for undergraduate students. Postgraduate students used e-mail to report on their research progress, while some undergraduate students used e-mail for queries on administrative issues or missing examination marks. Instructors also used the e-learning platform to deliver study materials to students. Two of the respondents confirmed using the platform for online

interaction with students; three reported that, even though their courses were already uploaded to the platform, they did not interact with students online; and the remaining eight indicated that their courses had not yet been uploaded to the platform. The following are their verbatim reports regarding how they used ICT to interact with students:

Ms. Giraffe: I normally log in to upload some instructions … but I have never received questions from them … .

Mr. Daniel: … [W]e communicate through e-mail … . [F]or undergraduate students I could have used Moodle but none of my courses have been uploaded [to] Moodle … .

Mr. Kagenyi: … [I]n Moodle … specific groups have [a] specific time for discussion … . [In the case of] the study group which will need to invite me to participate in their discussion … I join [them]. … I [also] communicate with them individually … .

Instructors' role in facilitating interaction

This was the second major theme that emerged from the instructors' responses. This theme describes how respondents fulfilled their role as instructors when interacting with students. It also shows how instructors facilitated and sustained interaction between them and their students or among students themselves. The following comments by respondents describe this:

Ms. Giraffe: … [T]hat is difficult … I don't know them … they are far away from me … in different regions … only their names or registration numbers [are known] … how will I connect them [with one another] … ?

Ms. Sessy: … [W]hen [the] examination session is about to start you have to remind them about that so that they will register on time … .

Ms. Joyce: … [I]t happened that I met two students who were taking Biology living in the same region and [I] tried to connect them [with each other] … but then it is not easy to … [to] follow up to see if that really worked or not … .

Issues of concern regarding instructor–student interaction

This was the third major theme that emerged. It explains the principal issues of concern when instructors interacted with students. Instructors reported that they interacted with students when

there were both administrative and academic issues that needed to be dealt with. Instructors received communications pertaining to academic-related issues, specifically on research, from postgraduate students. On the other hand, they handled few cases relating to clarification of difficult issues from undergraduate students. Instructors stressed that undergraduate students had more queries concerning missing examination marks and course registration, as well as requests with respect to course outlines or study material. Below is some of the input from respondents in relation to this theme:

> Ms. Auma: With undergraduate students, interaction is very limited … . [E]ven when they communicate with me, mostly they are looking for course outlines or their missing scores … .

> Mr. Alhaji: … [V]ery few communications [by] phone are [about] academic issues … .

How instructors used face-to-face activities to interact with students

This was the fourth major theme. Instructors revealed that there were field practice and formal face-to-face activities which gave them an opportunity to interact with students. The duration of field practice varied from faculty to faculty. It normally took one to four weeks, depending on the requirements of the particular field of study. Instructors and students had to travel to different places where the field practice was taking place. Instructors acknowledged that field practice gave them an opportunity to get feedback from students as well as to provide students with feedback. The following are one of the respondent's comments regarding this:

> Ms. Sakina: … [W]e also use that opportunity to communicate with them regarding their learning difficulties and help them to solve [these] … .

In addition to field practice, instructors used formal face-to-face and orientation sessions to interact with students. They reported that they used one or two days at the beginning of a new academic year to orient newly enrolled students with regard to the distance learning environment. Later on, around April and May, they had face-to-face sessions for three or four days to meet students in different regional centers. They also indicated that management allocated one instructor from each department to represent the faculty at a particular regional center and to handle queries from students in that faculty. Where there were unresolved issues, the representative would refer these to the relevant person in the faculty after the face-to-face session. Instructors stated that the first day of the face-to-face sessions was used to impart general academic skills and administrative information to students. They then used the second day to assess and sign students' portfolios. Mr. Raphael had this to say about face-to-face interaction:

> Mr. Raphael: … [O]nce you are there, you are the faculty representative … and … handle faculty queries at that time … . [T]he ones [you cannot deal with], you [refer] to [the] appropriate instructors … ."

Instructors' perceptions of their interactional role in improving teaching and learning

The fifth major theme involved the general perception of instructors regarding the role of interaction in improving teaching and learning, and particularly the effect of their interaction practices on students' learning. Generally, all instructors acknowledged the positive role of interaction with respect to learning. They added that courses with intensive face-to-face interaction had higher graduation rates compared with programs based purely on the distance learning mode. On the other hand, they believed that interactional processes at the institution were limited and contributed little to students' learning. They cited certain weaknesses regarding how the institution conducted face-to-face sessions, as well as the limited use of Moodle, as indicators that students were not benefiting much. This is what they had to say in relation to this theme:

> Ms. Auma: … [T]he benefit of face-to-face sessions [for] student learning actually is very minimal … .

> Mr. Daniel: …[In] programs with intensive face-to-face sessions, graduation rates are higher than [for] the normal distance learning programs… .

> Dr. Kagenyi: … [S]tudents who make use of interaction make a big difference and their results are good … .

The influence of instructors' perceptions on interactional processes

The sixth theme dealt with how instructors' perceptions of interaction had influenced them in the way they interacted with students. Even though instructors believed that interaction had a positive influence on learning, some of them were of the opinion that interaction was a two-way process involving both students and instructors once there was an issue to attend to. As a result, they waited for issues or problems to arise before initiating interaction with students. In addition, they believed that it was not possible to be in touch with students, especially when student numbers were large. Respondents shared Mr. Alhaji's opinion:

> Mr. Alhaji … [F]or someone at … HQ, teaching a course with 300 students and [being] able to have … frequent communication with them … needs a miracle.

Challenges faced by instructors when interacting with students

The last theme concerned the challenges instructors faced when interacting with students. One of the challenges mentioned related to mobile-phone use. Instructors indicated that students called them even over weekends or after office hours inquiring about academic or administrative matters. This bothered them, as, at that time, they had family and social responsibilities to attend to and were not dealing with work-related matters. They had the following to say:

> Ms. Pendo   … [S]ometimes they [even] call … in the evening when you are already home.

> Mr. Alhaji: … [S]ometimes they call when it is not convenient for me, [such as] in the morning, at night or even [over] weekends.

Another challenge was the limited time allocated for face-to-face sessions, which was not enough to meet all students' individual learning needs. Apart from that, instructors shed more light on challenges relating to expertise. They confirmed encountering certain challenges during face-to-face interaction when responding to student queries, for instance queries that did not fall in their area of specialization. They stressed that it was difficult for them to effectively assess students' portfolios in areas beyond their field of specialization simply by using their prior knowledge. The following is what they said:

> Ms. Joyce: … [S]ometimes I focus on the area that I am [an] expert [in] because you cannot master [everything] … .

> Mr. Alhaji: … [Y]ou ask students some questions about the course, especially if it [happens] to be [in] your area of expertise; if it is not, then you might ask general questions and then you sign the portfolio … .

The other challenge that emerged concerned access to, and the coverage of, Internet facilities in regions besides the big cities. This delayed communication and feedback among instructors and their students. Instructors emphasized that Internet-based communication such as e-mail communication was very difficult and unreliable. They shared the following experiences:

> Mr. Raphael: … [S]ometimes, to access [the] Internet is not easy; this interferes with interaction processes … .

The last challenge related to the large number of students that instructors were supposed to deal with. Instructors reported that they did not know the students, which posed a challenge in establishing a rapport with them. They insisted that students' learning needs and socio-economic

backgrounds were diverse and not well identified. In addition, instructors reported that they were not aware of the learning behavior of their students and could not tell exactly how many students were active at a particular time. Instructors stated the following:

> Mr. Alhaji: … [W]e don't [even] know … what … the difficult areas [are] for them … . Actually, we don't know exactly who our students are, … [for] they are always new to us … .

> Mr. Mkude: … [B]ecause of their numbers and [the] distance between us, I know little about the students' learning behavior, the difficulties they face … .

Discussion and implications of the findings

This case study used semi-structured interviews to describe instructors' interactional experiences with students in a distance learning institution. Generally, it was reported that there was minimal student–instructor interaction, and, when there was, it was mainly event- or problem-based. The situation was even worse for undergraduate students than for postgraduate students. This section therefore discusses the findings in detail.

The first means of interaction between learners and instructors was e-mail. This was a convenient way for postgraduate students to submit their research work to their supervisors, but students would still seek opportunities to meet with their supervisors for more clarification. Some undergraduate students also used e-mail to submit their queries regarding missing examination marks and to request course outlines. However, in view of the limited access to ICT facilities and limited human relations in the online environment, these findings are aligned with those of Price, Richardson and Jelfs (2007), namely that Internet-based interaction alone is not a reliable medium of interaction for the majority of distance learning students. Integration of different channels of communication is vital, since different channels of communication are used for different purposes (Miliszewska, 2007).

The second means of interaction was the e-learning platform. It was found that not all study material had been uploaded to the platform, and even that which had been uploaded was not being used effectively for online facilitation. This suggests that the emphasis is not on facilitation but rather on study-material delivery. Simpson (2013) reported a similar finding. The provision of study material is not the ultimate goal of e-learning platforms; thus instructors need to be oriented on how to use the platform to facilitate learning. Likewise, as Price, Richardson and Jelfs (2007) stressed, students also need training on how to interact online.

Thirdly, contrary to what was reported by Ng'umbi (2013), in the present study instructors confirmed that mobile-phone technology was a convenient and affordable way for them to

reach most students, and even those living in remote areas. Mobile phones provided immediate feedback and facilitated the flow of information between them and students. However, this was also not free of challenges, because instructors were bothered by students' calls over weekends or in the late evening. Ng'umbi (2013) also reported this challenge.

Nevertheless, it is interesting that instructors acknowledged the fact that most of their students had other socio-economic responsibilities, which implies that regular working hours might not be convenient for student–instructor interactions. This calls for deliberate efforts to extend consultation time in order to accommodate all students. For instance, the institution could change office hours to 9 a.m. to 5 p.m. instead of 8 a.m. to 4 p.m. and have consultation hours that accommodate students who cannot make calls/visit during regular working hours.

The fourth means was face-to-face sessions, which included several activities like informal face-to-face interactions, formal face-to-face sessions, orientation, and field practice. Informal face-to-face sessions did not include all students but was rather based on individual needs and affordability of visiting headquarters. In addition, the institution had an arrangement for all students to be involved in formal face-to-face sessions and field practice.

Instructors were positive about the contribution of field practice to students' learning. However, they had a different view concerning formal face-to-face sessions. They were of the opinion that face-to-face sessions were not properly conducted so as to meet students' learning needs. Three to four days allocated per regional center were not enough to cover the differing learning needs of students. Additionally, face-to-face sessions were used more for administrative (e.g. payment of fees) issues, as well as to 'sign' (not assess) students' portfolios. According to the literature, such as Thome, Hovenberg and Edgren (2006) and Snadden and Thomas (1998), a portfolio is a kind of learning-assessment tool which, if used properly, improves teaching and learning practices by providing an opportunity for student reflection on learning and for reliable feedback for both students and instructors.

The findings reveal that portfolio assessments had little to do with subject-specific matters as a result of the absence of the relevant instructors for some courses. They also reveal that students copied from each other when completing portfolios instead of engaging in individual reflection before the sessions. This suggests that students attached less weight to portfolio assessment in relation to their learning, since they knew that the instructors who would assess them were not necessarily experts in the areas concerned. It should be noted that, for effective portfolio assessments, a thorough understanding of the subject areas is necessary for instructors to be able to discuss and comment on students' work (Sweet, 1993; Thome, Hovenberg & Edgren, 2006).

The fifth means of interaction was written comments on students' test scripts. However, instructors believed that students were not taking these seriously, as it was common for students to repeat mistakes. A further issue of concern could be the time it takes for students to get the scripts back as a result of some of them living far away from the regional centers. In addition, the situation raises doubts as to whether or not students consider comments on their scripts as beneficial to their learning experiences. This question is not answered here in relation to the subject matter under investigation.

The last means of student–instructor interaction was the use of regional-center staff or student representatives. Instructors confirmed receiving various queries from regional centers, mostly from those students who could not manage to visit the institution's headquarters. In addition, instructors and students used class representatives to provide information/feedback. However, the respondents confirmed that students who could visit institutional headquarters did so in person to follow up on administrative and academic matters. This takes us back to the role of face-to-face interaction sessions in the learning process. What is clear is that frequent face-to-face interactions are vital for students' learning processes; hence the institution must equip regional centers with enough instructors to serve students in their localities.

Apart from how instructors interacted with students, there was the further matter of what necessitated instructors interacting with students. Postgraduate students had more issues related to their research, while undergraduates had more issues concerning administrative matters but few problems regarding difficult areas. This was contrary to the expectation that students would strive to seek academic assistance and enjoy the benefits of interaction in learning. Since social constructivism emphasizes the role of interaction in learning (Kim, 2001; Pritchard & Woollard, 2010), students' low participation in interaction raises the unanswered question whether they really understood study material or had lost hope of obtaining academic assistance from their instructors.

Even in the prevailing situation, instructors were aware of the positive role of interaction in learning. They confirmed that programs with intensive face-to-face sessions as well as active interaction with instructors resulted in students performing better in their studies and graduating on time. Nevertheless, respondents were of the opinion that interaction processes at the institution had few learning benefits for the majority of students, particularly undergraduates. In addition, they believed that both instructors and students had a responsibility to interact when the need or problems arose that required the attention of the other party. Although this might be true, social constructivism places the roles of guiding and facilitating with instructors when teaching or interacting with students (Atherton, 2013). This implies that instructors should be active in interacting with students and not wait for a problem to arise. The literature suggests that instructors' proactive motivational messages conveyed to distance students increase students' satisfaction and retention rates (Inkelaar & Simpson, 2015).

On the basis of the aforegoing, there was limited student–instructor interaction at the DLU. Blended learning that integrates the use of occasional and focused face-to-face sessions, Internet-based interaction, as well as mobile-phone technology can provide an opportunity to reduce the interactional gap. In addition, instructors should be proactive initiators of interaction and communication, for instance by sending text messages fortnightly to encourage, remind and motivate students to learn. For all these to happen, institutional management needs to work with instructors and support them in terms of finance, training in online facilitation, as well as designing a work plan that will make consultation hours flexible so as to accommodate and serve students who have diverse needs and different work schedules.

Suggestions for further study

Firstly, future researchers should consider recruiting students and instructors in a large sample to study their interaction processes in relation to learning achievement. Secondly, they should use both qualitative and quantitative research methodology to gain an understanding of the same phenomena from different perspectives. Thirdly, there is a need to study students' views and experiences regarding the influence of face-to-face/mobile-phone interaction processes in relation to their learning achievements. Lastly, researchers should strive to gain an understanding of students' perceptions concerning the contribution of written comments on students' learning achievement.

Limitations of the study

The present study was a qualitative case study which used a sample of 13 participants at the headquarters of the DLU. This might be a small sample size from which to generalize, even though, in qualitative studies, the aim is not generalization. Despite the small sample size, this study helps to understand instructor–student interaction in a distance learning environment. Another limitation is that the study only used the interview as the major data-collection instrument, which can make data triangulation difficult. In addition to this, the study only used instructors as participants; hence the findings are not based on students' views on the same matters.

Conclusions

In distance learning, there is limited student–instructor interaction. However, the use of blended learning can provide an opportunity to meet students' varied learning needs. The integration of focused face-to-face sessions, online communication and mobile-phone technology neutralizes the limitations associated with these means of interaction and can provide rich learning experiences. Blended learning requires transformations such as: formalizing mobile-phone use at institutional level and designing flexible consultation hours to accommodate students' diverse learning needs and schedules. In addition, other transformations should include the use of multiple means of interaction like face-to-face as well as synchronous and asynchronous online methods to cater for the diverse learning needs of students from different backgrounds. Lastly, formal face-to-face sessions should also be redesigned to address both the academic and administrative needs of students, as well as consider subject expertise during portfolio assessment.

Overall, it is obvious that students and instructors are responsible for initiating interaction in the teaching and learning process. However, instructors should not lose sight of their facilitative role. Students depend on them for effective learning experiences and achievement. Instructors should therefore always make sure that they keep in touch with their students, even when there are no special events or problems. Otherwise, dropout and delay in graduating will continue to persist in distance learning.

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