PERCEIVED CHALLENGES IN OPEN AND DISTANCE LEARNING AMONG NURSING STUDENTS OF OPEN UNIVERSITY MALAYSIA: A DESCRIPTIVE ANALYSIS

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ABSTRACT

Open and distance learning (ODL), a structured learning whereby the students and instructors are separated by time and place, is currently the popular trend among working adults across the nation. From higher nursing education perspective, it must be made accessible, affordable and flexible to allow the nurses to cope with the demands and pressure of busy work and family commitments that give rise to several challenges. Hence, the main objective of this study is to examine perceived challenges in ODL among undergraduate nursing students of Open University Malaysia (OUM). The study employed quantitative approach by using close-ended questionnaires. A convenience samples of registered nurses (RNs) undertaking Bachelor of Nursing Sciences (BNS) programme (n = 81) completed the face-to-face questionnaires. Data analysis using descriptive statistics collected from 81 respondents from five OUM learning centres. The perceived areas of challenges were grouped into: perceptions of ODL for continuing education; perceived challenges facing ODL students; instructional related challenges; and institutional related challenges. Surprisingly, the findings indicate that BNS students are facing only some extent of challenges in their learning particularly within their own circles with perceived challenge highest on financial constraints (54.3%). However, they demonstrate positive perception of ODL for continuing education with the majority (70.4%) agreeing that it is relevant with current teaching-learning strategy. There is no obvious indication of perceived challenges instigates from instructional and institutional factors as the majority disagree (51.9%) that they are facing unhelpful course information and lack of direction; and (46.9%) disagree lack / delayed of important information, respectively. Above all, the findings address students' concerns in improving student experiences, and enhanced instructional and institutional contributions that marked the achievement of ODL outcomes. In essence, this study has shed some light into challenges faced by ODL nursing students and the strategies to further ameliorate the implementation of ODL.

Keywords: Open and Distance Learning, Higher Nursing Education, Perceived Challenges

INTRODUCTION

Distance education has experienced dramatic growth both nationally and internationally since the early 1980s. It has evolved from early correspondence education using primarily print-based materials into a worldwide movement using various technologies. The goals of distance education, as an alternative to brick-and-mortar education, have been to offer degree-granting programmes, to battle illiteracy in developing countries, to provide training opportunities for economic growth, and to offer curriculum enrichment in non-traditional educational settings.

In Malaysia, the offering of open distance learning (ODL) programmes is consistent with the mission of the Malaysian Ministry of Higher Education, and is a critical endeavour for the survival of higher learning institutions (Dzakiria & Mohamad, 2014). Santhi, Mohd Ghazali, and Loo (2015) define ODL as the provision of flexible educational opportunities in terms of access and multiple modes of knowledge acquisition; flexible means the availability of choices for educational efforts anywhere, anytime and anyhow; access is the opportunity made available to all, freeing them from constraints of time and place; and multiple modes imply the use of various delivery systems and learning resources.

With the intent of making university courses and programmes more accessible to learners, several ODL and dual mode institutions in Malaysia are offering various courses and programmes. ODL delivery began in Malaysia in 1969 and it is getting larger, more popular and better. Open University Malaysia is the pioneer ODL provider for many higher education programmes and Bachelor of Nursing Sciences (BNS) is the most significant for nursing education in this country.

Nursing education is challenged to meet evolving healthcare needs, while at the same time has to preserve the standards and integrity of the profession. The contemporary knowledge-driven society requires that nurses upgrade their knowledge and skills in order to remain competitive and competent in a fast-changing environment. ODL is a suitable way of ensuring opportunities for all to engage in continuous professional development and lifelong learning. The structure of ODL provides learners with the greatest flexibility. However, learning at a distance is not without problems (Dzakiria, Kasim, Mohamed, & Christopher, 2013).

It is challenging for nurses and healthcare institutions in which they work, to support lifelong learning especially if they have acute staffing problems and unable to release nurses for prolonged periods of study; the escalating costs related to further education is often prohibitive for many nurses who cannot afford to interrupt work for study; while the pressure of combining shift work and family life often excludes continuing education.

Since the programme's inception by OUM, little is known about learning experiences of ODL students from the aspects of their learning needs and support verses the teaching-learning methods and the implementation of the programme on the whole. In particular, it is not clear whether students perceive the program positively. Therefore, this study aims to identify issues concerning the implementation of ODL based on students' perceptions which particularly focused on their perceived challenges while undertaking ODL programme. Research related to students' learning experiences has focused on identifying factors related to their perceptions on ODL for continuing education; challenges they encountered while being ODL students in general, instructional-related and institutional-related.

Factors affecting students' satisfaction may be individual which includes readiness, time and family and financial support or may be organizational and may involve the environment, management and support services. Bisciglia and Monk-Turner (2002) argue that ODL students will be more enthusiastic about this type of learning environment because ODL programmes are designed to serve an off-campus population.

The positive and negative factors associated with ODL programmes may correspond to students' perceptions of ODL. Despite the important role and increased popularity of ODL, different people perceive the advantages of ODL differently, and their perceptions have influenced attitudes to the acceptance and use of ODL in the education system (Kaphesi & Banda, 2018). In other words, the truthful assessment of students' perceptions is a crucial factor, as the success of the ODL programmes could be affected by how it is viewed by the individuals it serves.

LITERATURE REVIEW

Despite the rapid growth in popularity of distance learning, the issues surrounding quality of ODL particularly in nursing education have been discussed and debated by many different parties including non-stakeholders. Regardless of who is interested and involved in quality of this unique educational environment that ODL establishes, all are put in emphasis the need to have what contributes to quality of this mode of education.

In actual fact, students' judgments on ODL for continuing education are the prime issue that leads to their further perceptions on challenges while undertaking ODL programme. Previous study has reported that identified flexibility and convenience as strengths of online learning (Hitchcock, Meyer, Rose, & Jackson, 2002) that obviously contributes to positive perceptions of ODL and inspired students in continuing their education. This finding is aligned with another recent study by Harerimana et al., (2016) who revealed that about 63.6% of the participants joined different ODL programmes due to the flexibility of the delivery mode which builds on self study. On the other hand, Ahmad (2018) discovered that from the aspect of financial support many nurses had grieved the escalating costs related to further education are often prohibitive for them who cannot afford to interrupt work for study.

It has conclusively been shown in the study by Melrose and Gordon (2008) when the students affirmed that restrictions of healthcare workplaces pose unique access challenges especially with the shortage of staff, nurses' requests for time off was denied and they were required to work overtime, instead. They became exhausted after long and demanding hours in the workplace; shift work made accessing to tutorials difficult, and forced to use off-days or holidays for clinical practice. This challenge seem to be consistent with another research by correlated with acute staff shortages that make it difficult for many nurses to leave their clinical areas to undertake further education, even for short time periods of distance education (Ahmad, 2018). This issue apparently give rise to another challenge faced by ODL students from the aspect of conflicts between work and study schedule.

Along with these challenges, however, there is increasing concern over workplace restrictions, where the current nurse shortage may not even allow students to leave in order to attend their tutorials and practicums, thus perceived as lack of support from the employer. This practice by many nurse managers has been challenged by Ledwell, Andrusyszyn, and Iwasiw (2006) whose studies demonstrated how nurses pursuing their degrees online needed employer support to feel empowered.

Distance education, a structured learning in which the student and instructor are separated by time and place, is currently the fastest growing form of domestic and international education. What was once considered a special form of education using nontraditional delivery systems is now becoming an important concept in mainstream education.

More recent attention has focused on the comparison of students' academic performance on a traditional face-to-face course to those studying the same material via an online alternative. Mgutshini (2013) conducted a comparative study to explore student satisfaction with their learning experience with regard to each mode of teaching and learning experiences in psychiatric nursing. Online students in this study expressed greater satisfaction with their learning experience than their campus based peers. This was unpredicted, particularly if considered that in the latter medium students have much more direct access

to tutor support and all of the other campus-based student support systems. What seems to hold the key is the fact that within online classes, each student has an equal opportunity to express their viewpoints and be heard more than in a campus-based class for the fact that only vocal students are motivated and get opportunities to contribute.

Another observable possibility is the campus-based class has an average of three hours for the weeklytaught session and discussion seminars whereas online students had access to an audio recording of each taught session at all-time round the clock.

A different major instructional related challenge reported by the students in the study conducted by Bisciglia and Monk-Turner (2002) was that they did not receive all the study material in time to complete their assignments. For instance, the students received some material after the deadlines for their assignments had passed which affected their ability to submit the assignments. Furthermore, some students indicated that there was a lack of teaching and learning resources in the off-campus which put them in distress.

Dzakiria, Kasim, Mohamed, and Christopher (2013) point out that the crucial element of success factor for students attending ODL programme is the level of interactivity within the tutor-student circles. The study supported the widely held belief that a high level of interaction is desirable in ODL environment (Dzakiria, 2008; and Dzakiria & Idrus, 2003) and positively affects the learning experiences.

Good distance learning courses result from institutions that provide quality learner support systems via effective communication for students and instructors. McClary (2013) suggests support systems can be divided into three different areas; academic support, administrative support, and technical support. Academic support involves instructors providing substantive engagement and feedback for course activities. Administrative support involves things such as financial aid, advising, registrar services etc.

Network resources and technical support is significant in sustaining ODL experiences. Dzakiria (2013) indicates clearly that in order to deal effectively with large numbers of students coming from a rich variety of backgrounds, it is crucially important to back the teaching/learning processes with efficient delivery and support systems. However, the accessibility to network resources and technical support were moderately reported (61.7% and 69.2%) by Dzakiria (2013).

Factors found to be influencing students' perceptions on ODL that have been explored in several studies could become the point of reference. It is seen that one important element of success factor for students attending ODL programme is their level of perceptions and judgment upon their learning environment and experiences.

FINDINGS AND DISCUSSION

This study utilized a quantitative non-experimental cross sectional survey approach using self-report questionnaires. A convenience samples of registered nurses (RNs) undertaking Bachelor of Nursing Sciences (BNS) program (n = 81) from five OUM learning centres completed the face-to-face questionnaires.

Demographic Findings

The average age of nursing learners involved in the study is between 25-35 years old (59.3%). Majority are female participants (96.3%) that contribute their opinions in this study. Majority of them are staff nurses (74.1%), Malay (74.1%) working in public hospitals (74.1%). In relation to professional qualification and years of working experiences in nursing, 49.4% have post-basic nursing education and 51.9% have more than 10 years working experiences. These findings indicate the staff nurses in their

prime ages with many years of experiences were still enthusiastic to engage themselves in lifelong learning. In relation to computer skills, 79% of the participants claimed that they have intermediate level. This finding is important because computer literacy is an essential skill as ODL students. Interestingly, in relation to place of internet access, 63% reported that they access the internet both from home and workplace. Due to the nature of their shift duty, they leverage on the internet facilities at home and workplace to support their learning experience as ODL students.

Perception of ODL for Continuing Education

The survey responses for the perception of ODL as choice of continuing education in this study are captured in Table 1. Overall, majority of the participants agree that ODL as mode of continuing education base on capacity to learn independently (54.3%), flexible mode of learning (53.1%), convenience and self-paced learning (59.3%), appropriate for working and busy adults learners (51.9%), non-compulsory face-to-face learning (43.2%) and unlimited time frame for graduation (51.9%). This is in line with the study by Yee, Ali, Rahim, Ahmad, and Khan (2016) which both environment and personal factors are significant variables influencing OUM learners' choice in selecting ODL as a mode of study despite perceived challenges. Similarly, Hitchcock et al. (2002) reported that identified flexibility and convenience are the strengths of online learning, and believe to contribute to positive perceptions of ODL and inspired students in continuing their education.

Variables		Total N = 81 N(%)
Capacity to learn independently	Disagree	5(6.2)
	Neutral	19(23.5)
	Agree	44(54.3)
	Strongly Agree	11(13.6)
	Missing	2
Flexible mode of learning	Disagree	2(2.5)
	Neutral	18(22.2)
	Agree	43(53.1)
	Strongly Agree	17(21)
	Missing	1
Convenience and self-paced learning	Disagree	2(2.5)
	Neutral	19(23.5)
	Agree	48(59.3)
	Strongly Agree	11(13.6)
	Missing	1
Applicable to all learning styles	Disagree	2(2.5)
	Neutral	18(22.2)
	Agree	46(56.8)
	Strongly Agree	14(17.3)
	Missing	1

Table 1: Perception of ODL for Continuing Education

Relevant with current teaching/learning strategy	Disagree	3(3.7)
	Neutral	13(16)
	Agree	57(70.4)
	Strongly Agree	7(8.6)
	Missing	1
Appropriate for working and busy adult learners	Strongly Disagree	1(1.2)
	Disagree	3(3.7)
	Neutral	15(18.5)
	Agree	42(51.9)
	Strongly Agree	19(23.5)
	Missing	1
Non-compulsory face-to-face learning	Strongly Disagree	6(7.4)
	Disagree	8(9.9)
	Neutral	23(28.4)
	Agree	35(43.2)
	Strongly Agree	8(9.9)
	Missing	1
Unlimited time-frame for graduation	Strongly Disagree	2(2.5)
	Disagree	5(6.2)
	Neutral	22(27.2)
	Agree	42(51.9)
	Strongly Agree	9(1.1)
	Missing	1

Perceived Challenges Facing ODL Students

Of the 81 participants in the study, 44 (54.3%) agree that financial constraint is the most challenging factor faced by them, as tabulated in the Table 2. This finding is aligned with Ahmad (2018) who discovered that many nurses had grieved the escalating costs related to further education and often prohibitive for them who cannot afford to interrupt work for study. A total of 39 (48.1%) and 33 (40.7%) participants claim that lack of sufficient time for study and the distance from home to the learning centre is part of the challenges. Interestingly, only 5 (16%) of the participants strongly agree that lack of support from family, employer and friends is part of pitfalls in ODL. Of the 81 participants, 4 (4.9%) strongly agree that conflicts between family, work and study schedule remain as the challenges for ODL students. These findings indicate that, to some minority of the students, personal factors remain as a strong supportive element throughout their journey as ODL students. Hence, our findings support the existing literature by Yee et al. (2016) who emphasizes that personal factors no longer play the important role among ODL students. As adult learners, higher degree of flexibility in learning is the paramount in their effort to juggle with family, work and personal. Thus, issues of convenient in any time, any place and own pace will be the adult learners' centre of debate (Dzakiria, Idrus, & Atan, 2005; Brown, Hughes, Keppell, Hard, & Smith, 2015). Separately, in relation to difficulties in learning technically demanding materials, most of them remain neutral 38 (48.1%). For BNS programme, the only so called "learning technically" are engagement with the e-tutors for asynchronous forum discussions and live-forums in real time. One of the reasons could be due to non-compulsory of their participants in e-forum discussions.

Variables		Total N = 81 N(%)
Lack of sufficient time for study	Disagree	7(8.6)
	Neutral	22(27.2)
	Agree	39(48.1)
	Strongly Agree	12(14.8)
	Missing	1
Distance from home to the learning centre	Disagree	8(9.9)
	Neutral	28(34.6)
	Agree	33(40.7)
	Strongly Agree	10(12.3)
	Missing	2
Financial constraints	Strongly Disagree	1(1.2)
	Disagree	6(7.4)
	Neutral	20(24.7)
	Agree	44(54.3)
	Strongly Agree	7(8.6)
	Missing	3
Lack of support from family, employer, friends, etc.	Strongly Disagree	9(11.1)
	Disagree	30(37)
	Neutral	21(25.9)
	Agree	15(18.5)
	Strongly Agree	5(6.2)
	Missing	1
Unfavourable home learning environment	Strongly Disagree	5(6.2)
	Disagree	20(24.7)
	Neutral	28(34.6)
	Agree	24(29.6)
	Strongly Agree	2(2.5)
	Missing	2
Difficulties in learning technically demanding	Strongly Disagree	2(2.5)
materials	Disagree	13(16)
	Neutral	39(48.1)
	Agree	22(27.2)
	Strongly Agree	3(3.7)
	Missing	2

Table 2: Perceived Challenges Facing ODL Students

Lack of experience and/or training with	Strongly Disagree	2(2.5)
instructional technologies	Disagree	11(13.6)
	Neutral	37(45.7)
	Agree	28(34.6)
	Strongly Agree	2(2.5)
	Missing	1
Conflicts between family/work and study schedule	Strongly Disagree	11(13.6)
	Disagree	17(21)
	Neutral	21(25.9)
	Agree	27(33.3)
	Strongly Agree	4(4.9)
	Missing	1

Instructional Related Challenges

Table 3 illustrates the findings of instructional related challenges among ODL students. Of the 81 participants in the survey, 33 (40.7%) disagree of difficulty in attending face-to-face sessions due to distance. This finding is contrast with the above (in Table 2) result whereby 33 (40.7%) actually agree that distance from home to learning centre is part of the challenge as ODL students. Coincidently, both variables report same number and percentage. Further investigation in future study needs to examine whether or not those are the same participants. In relation to poor / inappropriate course material design and inappropriate/inconvenience form of learning materials, the participants disagree with the statements, which are 38 (46.9%) and 33 (40.7%) respectively. Conversely, Bisciglia and Monk-Turner (2002) reported that students in their study did not receive all the study material in time to complete their assignments, and indicated that there was a lack of teaching and learning resources in the offcampus which put them in distress. Several publications have suggested that ODL with blended learning will contribute to better learning performance, positive learning experiences, and better self-direction in professional learning (Legg, Adelman, Mueller, & Levitt, 2009; Melrose & Bergeron, 2007; Hsu & Hsieh, 2011). Good information system through technology will provide good students support, be it online discussion, tutor's feedback, conference, online grading or e-library, are core elements of ODL mode. Nevertheless, questions regarding clinical placement is not favourable to conclude any findings.

Table 3	: Instructional	Related	Challenges

Variables		Total N = 81 N(%)
Difficulty in attending face-to-face sessions due to distance	Strongly Disagree	4(4.9)
	Disagree	33(40.7)
	Neutral	26(32.1)
	Agree	12(14.8)
	Strongly Agree	5(6.2)
	Missing	1
Difficulty in attending clinical practice due to unfavorable	Strongly Disagree	4(4.9)
schedule	Disagree	25(30.9)
	Neutral	27(33.3)
	Agree	22(27.2)
	Strongly Agree	3(3.7)
	Missing	0

	1	
Limited opportunities for hands-on during clinical	Strongly Disagree	6(7.4)
placement due to healthcare institutional policy	Disagree	24(29.6)
	Neutral	30(37)
	Agree	17(21)
	Strongly Agree	2(2.5)
	Missing	2
Lack of tutors'/facilitators'/local preceptors' contact and	Strongly Disagree	8(9.9)
inadequate academic support	Disagree	31(38.3)
	Neutral	27(33.3)
	Agree	12(14.8)
	Strongly Agree	2(2.5)
	Missing	1
Poor / inappropriate course material design	Strongly Disagree	2(2.5)
	Disagree	38(46.9)
	Neutral	27(33.3)
	Agree	10(12.3)
	Strongly Agree	4(4.9)
	Missing	1
Inappropriate/inconvenience form of learning materials	Strongly Disagree	3(3.7)
	Disagree	33(40.7)
	Neutral	31(38.3)
	Agree	11(13.6)
	Strongly Agree	3(3.7)
	Missing	0
Unhelpful course information and lack of direction	Strongly Disagree	4(4.9)
	Disagree	42(51.9)
	Neutral	24(29.6)
	Agree	8(9.9)
	Strongly Agree	3(3.7)
	Missing	0
Delayed / ineffective feedback from the tutors/facilitators/	Strongly Disagree	6(7.4)
local preceptors	Disagree	39(48.1)
	Neutral	27(33.3)
	Agree	5(6.2)
	Strongly Agree	4(4.9)
	Missing	0

Institutional Related Challenges

In relation to institutional related challenges, 32 (39.5%) and 34 (42%) prefer to be neutral when ask about whether lack of appropriate advice provided by students services support, and lack of an effective institutional network of technical assistance are part of the institutional related challenges (Table 4). Probably this group of students do not reach out for the students services support and technical assistance provided by the university, as appose to 30 (37%) report disagree with lack of appropriate advice provided under the umbrella of students services support, and 28 (34.6%) disagree with lack of an effective institutional network of technical assistance are part of the institutional related challenges.

Variables		Total N = 81 N(%)
Delayed study materials at learning centers	Strongly Disagree	5(6.2)
	Disagree	34(42)
	Neutral	29(35.8)
	Agree	8(9.9)
	Strongly Agree	4(4.9)
	Missing	1
Difficulty in administrative services such as registering and	Strongly Disagree	6(7.4)
paying fees	Disagree	35(43.2)
	Neutral	26(32.1)
	Agree	13(16)
	Strongly Agree	1(1.2)
	Missing	0
Lack of appropriate advice provided under the umbrella of	Strongly Disagree	4(4.9)
students services support	Disagree	30(37)
	Neutral	32(39.5)
	Agree	14(17.3)
	Missing	1
Lack of an effective institutional network of technical	Strongly Disagree	5(6.2)
assistance	Disagree	28(34.6)
	Neutral	34(42)
	Agree	13(16)
	Strongly Agree	1(1.2)
	Missing	0
Lack of responsiveness from learning centre/headquarter	Strongly Disagree	8(9.9)
administrative staff	Disagree	31(38.3)
	Neutral	31(38.3)
	Agree	9(11.1)
	Strongly Agree	2(2.5)
	Missing	0
Lack/delayed of important information	Strongly Disagree	6(7.4)
	Disagree	38(46.9)
	Neutral	24(29.6)
	Agree	12(14.8)
	Strongly Agree	1(1.2)
	Missing	0

Table 4: Institutional Related Challenges

CONCLUSION

This preliminary descriptive study employed quantitative approach by using close-ended questionnaires to examine perceived challenges in ODL among under-graduate nursing students undertaking BNS program of OUM from five learning centers. Students' judgments on ODL for continuing education are the prime issue that leads to their further perceptions on challenges in ODL. 59.3% of 81 students participated in this study perceived ODL is convenient and self-paced learning. Hence, their perceived challenges were examined further in three different areas; academic/personal, instructional, and institutional supports. This study gives insight to nursing students of OUM and their perceived challenges dictate the significant influence to the strengths and limitations of implementing ODL, in particular the BNS programme. May be it would be interesting and beneficial to compare learning experiences and perceived challenges of other BNS students from other learning centers. In essence, a better understanding of students' perceptions and judgment on ODL will shed some lights into nursing education challenges and the strategies required to enhance the implementation of ODL.

REFERENCES

- Ahmad, Z. (2018). A Phenomenological Analysis of the Experience of Nursing Students' Usage of Various Technologies Within a Hybrid Degree Program. *Canadian Journal of Nursing Informatics*, 13(2).
- Bisciglia, M. G., & Monk-Turner, E. (2002). Differences in attitudes between on-site and distance-site students in group teleconference courses. *The American Journal of Distance Education*, *16*(1), 37–52.
- Brown, M., Hughes, H., Keppell, M., Hard, N., & Smith, L. (2015). Stories from students in their first semester of distance learning. *The International Review of Research in Open and Distributed Learning*, *16*(4).
- Dzakiria, H. (2008). Students' accounts of the need for continuous support in a distance learning programme. *Open Learning: The Journal of Open, Distance and E-Learning, 23*(2), 103–111.
- Dzakiria, H. (2013). Female Learner Tenacity in Open Distance Learning Success: Life History of Sharan, Fuziah and Aleena as Open Distance Learnersa. *International Women Online Journal of Distance Education*, 2(4), 24–40.
- Dzakiria, H., & Idrus, R. M. (2003). Teacher-learner interactions in distance education: A case of two Malaysian universities. *Turkish Online Journal of Distance Education*, 4(3).
- Dzakiria, H., Idrus, R. M., & Atan, H. (2005). Interaction in open distance learning: Research issues in Malaysia. *Malaysian Journal of Distance Education*, 7(2), 63–77.
- Dzakiria, H., Kasim, A., Mohamed, A. H., & Christopher, A. A. (2013). Effective Learning Interaction as a Prerequisite to Successful Open Distance Learning (ODL): A Case Study of Learners in the Northern State of Kedah and Perlis, Malaysia. *Turkish Online Journal of Distance Education*, 14(1), 111–125.
- Dzakiria, H., & Mohamad, B. (2014). Communicating Effectively the Lifelong Blue Print and its Demands to Improve Open Distance Learning (ODL) Ergonomics. *Procedia Social and Behavioral Sciences*, 155(October), 539–546. http://doi.org/10.1016/j.sbspro.2014.10.336

- Harerimana, A., Mtshali, N. G., Ewing, H., Maniriho, F., Kyamusoke, E., Mukankaka, A., & ... Mugarura, J. (2016). E-learning in nursing education in Rwanda: Benefits and challenges. An exploration of participants' perceptives. *IOSR J Nurs and Health Sc*, 5(3), 64–92.
- Hitchcock, C., Meyer, A., Rose, D., & Jackson, R. (2002). Providing new access to the general curriculum: Universal design for learning. *Teaching Exceptional Children*, 35(2), 8–17.
- Hsu, L., & Hsieh, S. (2011). Effects of a blended learning module on self-reported learning performances in baccalaureate nursing students. *Journal of Advanced Nursing*, 67(11), 2435–2444.
- Kaphesi, E., & Banda, G. M. (2018). Students' perceptions of the open and distance learning mode for initial primary teacher training in Malawi: A case of Lilongwe Teachers' College.
- Ledwell, E., Andrusyszyn, M.-A., & Iwasiw, C. (2006). Nursing students' empowerment in distance education: testing Kanter's Theory. *International Journal of E-Learning & Distance Education*, 21(2), 78–95.
- Legg, T. J., Adelman, D., Mueller, D., & Levitt, C. (2009). Constructivist strategies in online distance education in nursing. *Journal of Nursing Education, 48*(2), 64–69.
- McClary, J. (2013). Factors in high quality distance learning courses. Online Journal of Distance Learning Administration, 16(2), 230–256.
- Melrose, S., & Bergeron, K. (2007). Instructor immediacy strategies to facilitate group work in online graduate study. *Australasian Journal of Educational Technology*, 23(1), 132–148.
- Melrose, S., & Gordon, K. (2008). Online post LPN to BN students' views of transitioning to a new nursing role. *International Journal of Nursing Education Scholarship*, 5(1), 1–18.
- Mgutshini, T. (2013). Online or not? A comparison of students' experiences of an online and an oncampus class. *Curationis*, *36*(1), 1–7.
- Santhi, R., Mohd Ghazali, M., & Loo, S. C. (2015). Access to higher education via ODL: Addressing attrition to maximize university sustainability. *American Journal of Economics*, 5(2), 208–216.
- Yee, B., Ali, A., Rahim, R. A., Ahmad, A., & Khan, M. A. (2016). Factors influencing nursing learners in selecting and engaging Open and Distance Learning as a mode of study for tertiary nursing education.