국립한국방송통신대학교
Korea National Open University

ASIAN ASSOCIATION
OF OPEN UNIVERSITIES

Conference Proceedings

The 35th AAOU Annual Conference

**Opening a New Path to Open Universities:
Responding to Global Issues**

Nov. 2nd – 4th, 2022
International Convention Center JEJU, KOREA

Vol.4 Subtheme

Human Resource Development (HRD) in Open Universities

Editorial Board

INDEX

Human Resource Development(HRD) in Open Universities

COLLABORATIVE APPROACH FOR PREPARING FACULTY MEMBERS FOR BLENDED AND ONLINE LEARNING: CONTRIBUTIONS OF UNITWIN NETWORK IN TRIBHUVAN UNIVERSITY

Ganga Ram Gautam, PhD

Director, Open and Distance Education Center
Tribhuvan University, Kathmandu Nepal

Abstract

Tribhuvan University (TU), as the oldest and largest university of Nepal, still holds about 80% of the total higher education strengths with more than 4,00,000 students and about 12,000 teachers across the country through its 1122 campuses. In 2015, TU made a decision to go dual-mode and established Open and Distance Education Center (ODEC) to manage the blended/online education programs. Currently, 15 Masters' programs including five M. Phil. programs are running on a blended mode under the Faculty of Education and Faculty of Humanities and Social Sciences. People living in the rural areas, students from poor families, women and working professionals are benefitting from these program.

There is a growing demand for more blended/online education programs in various subjects particularly after the COVID-19 context. In this scenario, it was very necessary to prepare TU teachers for blended/online pedagogy and considering the large number of teachers in TU, it was a challenging task. After joining the UNESCO-UNITWIN network, TU has made a remarkable progress in preparing TU teachers for blended and online learning. This paper presents the highlights of the strategies adopted by TU to develop its faculty members for blended and online learning. Also, the paper mentions the contributions of UNESCO-UNITWIN network along with the support received from Korea National Open University (KNOU) under the network.

Key words: blended learning, collaborative approach, faculty development

TRIBHUVAN UNIVERSITY IN BRIEF

Tribhuvan University offers a wide range of programs and confers Doctoral, M. Phil, Master's and Bachelor's degrees through over 300 programs under its institutes and faculties. Despite the emergence of multiple universities in the country, TU still becomes the destination of most students with undiminished craze for its academic credentials and it still bears a substantially bigger load of about 80% of all students every year even after the establishment and operation of more than a dozen universities in the country. The attraction to TU's education is mainly due to the affordable cost and the brand it holds for quality education.

S. No.	University	Campuses				Students				Teachers	Graduates
		Constituent	Community	Private	Total	Constituent	Community	Private	Total		
					Full Universities						
1	TU	62	529	553	1,144	123,286	132,298	101,070	356,654	7,592	70,077
2	NSU	15	2	2	19	2,565	143	120	2,828	745	-
3	KU	9	-	15	24	8,886	-	9,757	18,643	504	3,150
4	PU	5	5	106	116	1,562	694	25,271	27,527	74	-
5	PokU	9	-	58	67	3,143	-	29,441	32,584	133	3,891
6	LBU	1	-	8	9	330	-	365	695	23	-
7	AFU	11	-	7	18	3,866	-	562	4,428	109	453
8	FWU	15	-	-	15	10,097	-	-	10,097	390	-
9	MU	18	-	-	18	9,754	-	-	9,754	345	1,315
10	NOU	1	-	-	1	1,164	-	-	1,164	212	11
11	RJU	1	-	-	1	186	-	-	186	45	-
					Medical Academies						
12	BPKIHS	1	-	-	1	1,348	-	-	1,348	-	348
13	NAMS	2	-	-	2	642	-	-	642	329	197
14	PAHS	1	-	-	1	219	-	-	219	232	99
15	KAHS	1	-	-	1	59	-	-	59	77	-
	Total	152	536	749	1,437	167,107	133,135	166,586	466,828	10,810	79,541

Figure 1. Status of Higher Education in Nepal (UGC, 2021)

TU AND UNESCO-UNITWIN NETWORK

Rapid advancement and growth in technology has changed the landscape of higher education significantly. Similarly, "Disruption, innovation, turbulence, change, and competition are words that define our world today. If you aren't aware of this already, you're in trouble! If you are, then you have likely been looking at how best to respond to these changes" (Brett, 2019: p. 3). TU in the last few years has pushed the agenda of utilizing the digital tools and resources for teaching and learning purposes. Also, TU has started offering blended mode of education in certain subjects since 2015 to provide higher education access to those who cannot join our face-to-face mode of education due to various reasons. Technology integration in this context is very important and use of digital tools and resources are the key to the success of the blended and online mode of education. However, due to the limited resources and lack of adequate capacity in digitalization, networking through the web-based technology, full-fledged integration of ICT in the entire educational pedagogy is yet to be realized. In this context, TU was exploring an opportunity to learn from the higher education institutions who have embedded ICT and digital resources as a part of overall education delivery and also implemented blended mode of education programs. Collaboration with the UNESCO-UNITWIN network has become a key milestone for TU not only to continue its efforts to run blended and online education but also to enhance the capacity of its faculty members for blended and online learning.

TU joined UNESCO-UNITWIN network on April 9, 2019 amid a special occasion of the 3rd UNESCO-UNITWIN Work Conference organized in Kuala Lumpur, Malaysia. Since then, TU has been active in the network and organized different programs in areas of blended and online education in TU. Key activities that have been conducted under the network include: leadership sensitization workshop (2019): participation and presentation in the Working Group Seminars (2020, 2021); exchange and learning visits of the key individuals between Korea National Open University (KNOU) and TU; preparation of the MOODLE teacher training manual to build the capacity of TU teachers in blended and online learning; and online discussion and sharing of the digital resources among the experts of Open and Distance Education Center (ODEC) of TU and KNOU. The sections below elaborate the contributions made by those events in TU's efforts of institutionalizing blended and online education.

Figure 2. TU Membership of UNESCO-UNITWIN

Leadership Sensitization Workshop in TU

As soon as TU joined the network, KNOW invited TU to carry out a joint research on **Exploring ICT Integration in Higher Education for the Customized Open and Distance Education System in Tribhuvan University in Nepal** and there by develop a Short-term or Mid-term and or Long-Term ICT Integration Plan for Tribhuvan University. In this connection, delegates of KNOU led by Prof. Dr. Yong Kim along with two members Dr. Yang Chang Yeul, Team Head, Office of International Affairs and Dr. Yeongmin Kwon, Department of Education visited Tribhuvan University and organized meetings with the officials of TU at different levels. During the visit, KNOU and TU organized a joint seminar in Kathmandu on May 2, 2019.

Figure 3. Workshop

The main objective of the seminar was to share the KNOU's experience in implementing open and distance mode of education among the TU leadership and its key stakeholders so that TU can envision expanding its open and distance education program across the disciplines. Also, this was an opportunity for KNOU delegates to learn about the TU's academic programs and activities. Participants of the seminar included the Vice Chancellor, Rector, Registrar, Deans, Executive Directors, Heads of Central

Departments, Chairs of various Subject Committees, representatives of Higher Education Reform Project (HERP), Faculty Members, Campus Chiefs and media persons.

During the seminar, it was realized that training needs assessment of the TU faculty members was an urgent need to expand TU's academic programs through ODEC. As online pedagogy is very different from the face-to-face pedagogy and faculty preparation is the key foundation for open distance education program, the seminar was the starting point to review the current situation of TU's curriculum, pedagogy and assessment from blended and online education perspective. Training the faculty members on the use of ICT in their pedagogy, enhancing the performance of the Moodle system of the ODEC program and enhancing the capacity of the ODEC office were some of the initial activities identified as the areas of subsequent collaborative activities under the UNESCO-UNITWIN network.

Presentations made by the KNOU delegates during the seminar was informative for the TU leadership to understand the dynamics of distance and online education and see how such education could be strengthened from limited resource context to technology-enabled situations. The ICT resources that KNOU uses that include TV lecture, Multimedia lecture and Web based lecture, internet and mobile were also discussed.

During the seminar, it was also stated that a network of the universities that are running open and distance mode of education have been formed with the name UNESCO-UNITWIN Network and TU was awarded the membership of that network in a program organized at Open University of Malaysia in Kuala Lumpur and the joint interaction seminar was a part of that network. So, this event served a milestone to start the joint research between KNOU and TU to develop further programs for mutual collaboration.

On the occasion, Registrar of TU said that ODL was appropriate for the working professionals who would like to upgrade their qualifications from the distance. He said that still many people particularly in the rural geographical areas of Nepal have not had the opportunity to attend higher education and there are many people in the lower economic band who could not afford to travel and study higher education in the urban areas. In this context, as a public university, it was the obligation of TU to reach the unreached in higher education and offer them opportunities to attend higher education at their door steps through open and distance mode of education. He believed that KNOU's experience would be very useful for TU and expected that the joint research would be instrumental to lay the foundation in making TU's academic programs accessible to the wider group of people from rural and urban Nepal.

The Vice Chancellor of TU stated that the term ODL had been still unfamiliar to many people in Nepal despite the widespread practice internationally and TU should be prepared to run as many courses as possible in both open and distance mode through blended and online delivery. The Rector of TU expressed her commitment to run TU's programs in open and distance mode. She mentioned that in order to operationalize the open distance mode of education with a quality rigor, the first and the most important aspect is the enhancement of the capacity of the faculty members. She further said that though ICT had been embraced as the cross-cutting tool in different disciplines including education, on-line pedagogy has its own standard procedures. Customizing curricular contents and detailing them for the semester; creating the virtual classroom and maintaining interactivity; making regular connections with the students through the online portal; engaging students in learning through online sharing and discussion; designing and implementing online assessment and grading are some of the crucial elements of open and distance learning in which TU Faculty members need to be prepared before TU lunched the online mode of education. Prof. Tripathi further said that Korean National Open University, which is the champion of open and distance education in Asia, was also willing to support us to implement Open and Distance Education by carrying out the initial research through UNESCO/UNITWIN network and she requested the KNOU and TU research team to make a detailed study of the existing scenario of the ICT strengths of TU's Faculty members and the available infrastructure so that a detailed implementation plan could be developed for TU.

UNESCO-UNITWIN SUPPORT TO RUN TU'S ONLINE PROGRAMS: COVID-19

In Nepal, the first case of COVID-19 was spotted in Nepal on January 2020 and government initiated efforts to address this through various means. The country went into a complete lock down since March 24, 2020 and it was extended multiple times as the cases kept increasing. Education sector suffered a lot by this pandemic. Classes were disrupted, exams were on hold and teaching learning process became stand still due to this unprecedented virus. There was a lot of confusion in the beginning and we hoped that the crisis would go shortly after a few weeks. Unfortunately, the situation started becoming worse day by day and getting out of the pandemic became very unpredictable. The chaotic situation in the country and spread of pandemic all over the world made us think that we could let the education go like this. Government, universities and schools started responding to COVID-19 by switching the educational programs using the online tools and resources as the crisis management strategy.

As the situation of pandemic became more unpredictable, government and universities initiated discussions to make efforts to respond to COVID-19 so that educational programs could be conducted through an alternative means. Consequently, government of Nepal issued a guidelines entitled "Facilitating Student Learning System through Alternative System – 2077" (in Nepali language) which paved the ways for schools to run classes using alternative tools such as radio, television, internet, email and so on. The curriculum, textbooks, teachers guides and other learning resources were uploaded on the webpage of the Curriculum Development Center (https://moecdc.gov.np/) and teachers could access them online to prepare their lessons for the learning facilitation. Efforts are now being made to teach school children through national and local TV channels, local FM radio, online tools and so on. Following the government's directives, University Grants Commission (UGC) and universities had also been engaged in reaching the students and teachers and establish their communication through various means. Efforts were made to begin online classes and planning for the sustainable mechanism were initiated.

In the meantime, the University Grants Commission (UGC) Nepal also issued guidelines (draft for internal discussion which will be made public in the near future) to facilitate the universities in Nepal to run the classes through the alternative modes during the pandemic and beyond.

> This guideline is not meant to replace or discourage 'in-person teaching-learning environment. 'Rather it is issued with the understanding that universities and Higher Education Institutions (HEIs) have been running classes in the emerging crisis situation using various available technological tools and online education platforms. The universities need to ensure availability of minimum basic infrastructures to plan and implement a new pedagogical approach that fits online teaching and learning. The universities also need a comprehensive, students–centered and technology –friendly policies and strategies. In this context, the University Grants Commission (UGC) of Nepal proposes 'a strategy of optimum utilization of Information and Communication Technology (ICT) in teaching–learning', so university may use combination of both synchronous and asynchronous modes of teaching –learning that could be continued during and after the period of crisis caused by COVID-19. Such use should be ethical, and within the premise of prevailing law, in particular, National Cyber Security Law and Policies of Nepal. It is endorsed to facilitate teaching–learning activities adopting COVID-19 Safety Protocol (CSP) in academia with full precaution to the health and safety of those involved. The universities/HEIs may resume face–to–face in-person classes and other co-curricular as well as extra-curricular activities, after making a comprehensive assessment of the level of preparedness, residential status of the students, and local status of COVID–19 pandemic, after maintaining CSP. This guideline would not restrict the smooth flow of activities and right of the Nepal Open University (NOU), or any other programs of any universities those are running programs under 'Open and Distance Learning Mode (ODLM)' approved in the past".

(UGC Guidelines, 2020 – Draft)

This guidelines encompassed the details of the minimum standards that higher institutions in Nepal

need to ensure for e-learning platform. The parameters for the standards included the establishment of the information technology department in each teaching units; required infrastructure such as servers, connectivity, security and equipment; dedicated IT staff; allocation and registration of online education domain; official email IDs for all faculty, staff and students; appropriate policies and descriptions; credit transfer system within and beyond the university departments; integration of online pedagogy in the teaching and learning process through a proper learning management system (LMS); and codes of conduct for the users. The guidelines also indicate the possibility of conducting examinations using the alternative modes as per the circumstances.

TU's Response to COVID-19

Tribhuvan University (TU) that accommodates around 79% of higher education enrollment in Nepal also started online classes using the alternative tools. As soon as the country went into lock down, the university leadership, Open and Distance Education Center (ODEC) officials and a group of self-motivated professors organized a series of meetings and integration in order to find ways of responding to COVID-19 so that the damage in the educational calendar of the university could be minimized. Some of the colleges began online classes using Zoom, Skype, Face Book live, Google classes and many other tools that were available for them. Since TU is a large institutions with more than 1000 constituent and affiliated campuses all over the country with about 5,00,000 students, it was necessary to have a systematic framework to run the classes guided by a policy framework that aligns with the government of Nepal and the UGC.

In order to institutionalize the spontaneous initiatives made by different institutions and individuals as crisis management strategies and work on the detailed plan of action to respond to COVID-19 and beyond, TU formed high level task force including the Director of ODEC as a member. The task force members reviewed the global scenario and observed the spontaneous initiatives taken by the different educational organizations and individuals. Additionally, the task force also organized a number of interaction programs with the Heads of the 42 Central Departments of TU, Chiefs of the 62 Constituent Campuses, 9 Deans of various Institutes and Faculties and conducted a survey with teachers and students. Based on stakeholders' consultation, the task force submitted the report with the three-pronged strategy to respond to COVID-19 and beyond. The three-pronged strategy included:

      Phase I: Live/Virtual Class
      Phase II: Blended Mode
      Phase III: Online Mode

In the meantime, TU purchased 175 corporate licenses of Zoom technology with Nepal Research and Education Network (NREN) for official meetings in TU and Open and Distance Education Center (ODEC) of TU has signed an agreement with Microsoft Office for 1.5 million user IDs to use Office 365 A1 package in TU. Using this technology TU moved forward to respond to the crisis caused by COVID-19 and also planned for the next steps to embrace ICT in the overall TU's academic programs as outlined in the recent policy documents of TU including Vision 2030 and strategic plan. Tribhuvan University formed a high-level committee under the leadership of TU's Rector in order to manage the online classes using various technological tools during COVID-19 lock down and beyond. Open and Distance Education Center (ODEC) was the secretariat of the committee. Based on the strengths and experiences that ODEC has collected in the last few years of running online education, the committee has been implementing the activities as outlined in the three-phase strategies mentioned above.

In order to run the live classes TU developed the virtual system to run the classes through Microsoft Teams and we trained the technical and pedagogical human resources of all the teaching units. The key activities accomplished in this regard include;

- Policy decision for the virtual education and online classes by the Academic Council of TU to run disrupted classes during and post COVID-19 lock down.

- Rapid assessment of the existing infrastructure and ICT system and analysis the short term need of TU during the pandemic at the IT Center and ODEC.
- Instalment of the Commercial-off-the-shelf (COTS) software solution to run the online class.
- Setting up of the virtual architecture of TU network and deployment of Office 365 and MS Teams for all the teaching and administration units (about 150) in TU network.
- Development of email operation guidelines, naming convention of group and teams for the virtual classes.
- Negotiation with the internet providers that include Nepal Telecom and Ncell to provide support to release educational data package for students and faculties for the live classes.
- Creation of email IDS for all the staff, students and teachers of TU for the live classes and access to the e-resources in TU's central library.
- Training for the staff (about 300) and teachers (about 7,500) for the live classes through MS Team.

MOODLE Training of Trainers (TOT) Under UNESCO-UNITWIN Support

TU is simultaneously worked on running the blended mode of education post COVID-19. Key activities planned for this purpose include;

- Installation of learning management system (LMS) = MOODLE at the center and in each teaching units (campus, central department and school)
- Set up ICT support unit in unit (campus, central department and school) to provide ICT backstopping support to the faculty members and students.
- Modularization of the courses for online delivery
- Capacity building of the faculty members on online pedagogy.
- Training administrative staff for support and management.

Once the classes were running online using the MS Teams, the next step for us in TU was to train the teachers on the use of Learning Management System (LMS) for engaged learning experience. As TU has a large number of teachers, it was a challenging task. TU requested KNOU for help and the experts of KNOU kindly extended their support to train the trainers on the use of MOODLE as the LMS for online learning. KNOU designated its faculty to collaborate with TU experts and develop a MOODLE training manual before the training was conducted. Once the manual was prepared, KNOU experts trained the two experts of TU to run the TOT. Then TU conducted MOODLE Training of Trainers (TOT) Workshop from 8 – 13 November 2020 and 67 trainers were trained on the use of MOODLE for online learning. The Textbook sent by KNOU was used as the main reference

Figure 4. Workshop Participants

of this training/workshop covered following learning contents. These trainers are now cascading the training to their colleagues in their respective institutions.

Module 1 Introduction (3 hours)

Learning Contents	Learning Objectives
1 What is Moodle LMS 2 Setting User Profile in Moodle 3 Overview of Moodle GUI (Graphic User Interface)	• Can explain more than 3 features of Moodle LMS • Can explain and find a location for 3 basic processes of login, pw recovery, and modification. • Can find where is blocks, sections, activities, menu, and site menu.

Module 2 Management of Course (3 hours)

1 Course Profile in Moodle 2 Working with Blocks 3 Course backup/restore/import 4 User and group management	• Can list and explain more than 3 attributes of course settings • Cam add/remove blocks • Can execute 4 course related processes in sequence (Course creation, enrollment, backup, and restore) • Can enroll new student & make teams

Module 3 Management of Learning Resources (3 hours)

1 Setting and using File & Folder 2 Setting and using Audios and Videos 3 Setting and using Pages URL and HTML 4 Setting and Using Lessons	• Can list and explain more than 3 unique properties of resources • Can create and perform main processes for resources • Can add Audios and videos in HTML format • Can add lessons

Module 4 Management of Learning Activities (3 hours)

1. Activity management in Moodle: Taxonomy of learning 2. Working with Quiz 3. Working with Assignment 4. Working with Forum	• Can list and explain more than 3 common properties of activities and resources • Can create and execute main processes for "Quiz" activity • Can create and execute main processes for "Assignment" activity • Can create and execute main processes for "Forum" activity

Module 5 Monitoring, Feedback and Encouragement (3 hours)

1 Inclusive Pedagogy 2 Badges, managing badges, site badges 3 Course Progress 4 Log Records 5 Feedback and Reminders	• Can address gender responsive pedagogy • Can create badges • Can show where is the menu to check completion status • Can find how is the status of the course, activities, and resources • Can set up feedback and reminders

Module 6 Learning Analytics (3 hours)

1. Introduction to Learning Analytics 2. Gradebook setup 3. Grade category Setup 4. Activity and Resource Report	• Can explain at least three features of LA • Can set up grades • Can categorize and modify the weightings for unit grades • Can create report of activity and resources

WAY FORWARD

TU is committed to run the classes disrupted by the pandemic and continue its efforts to explore the alternative mode of higher education delivery. The support received under the UNESCO-UNITWIN program has been instrumental to initiated blended mode of education in TU in a large scale and the efforts made so far have created appetite for the expansion of blended and online education in TU. Thus, planning is in progress to make TU an ICT friendly university incorporating the spirit of the following points:

- ✓ ICT integration in the university DNA
- ✓ Flexible learning: curriculum, pedagogy & assessment
- ✓ Connectivity enhancement: local, regional & global
- ✓ Scaling the successes and best practices
- ✓ Exploring the alternative modes of delivery
- ✓ Research and innovations integrated to pedagogical practices   (Action Research)

C

ontinued support of the UNESCO-UNITWIN network will be needed in the next few years so that all

these initiatives will get institutionalized.

References

1) *Brett, J. (2019). Evolving Digital Leadership: How to be a digital leader in tomorrow's disruptive world. New South Wales. Apress.*

2) https://covid19.mohp.gov.np/#/

3) https://www.doe.gov.np/article/1082/

4) Ministry of Information and Communication. (2015). *Nepal's National Information and Communication Technology Policy, 2015.* Kathmandu: Government of Nepal, Ministry of Information and Communication

5) Tribhuvan University (2014). *TU Strategic Plan 2014 - 2018.* Kathmandu. TU

6) Tribhuvan University. (2019). *Vision 2030.* Kathmandu: Tribhuvan University.

7) University Grants Commission, (2020). *Guidelines for the Management of E-learning in the Universities of Nepal.* Kathmandu. UGC

8) University Grants Commission, (2021). *Education Management Information System (EMIS Report)*   Bhaktapur. UGC

9) Wagley, M. P. (2019). *From adult education to open university: History of ODL in Nepal. Conference Presentation* PowerPoint presented in the ICT in Education Conference in Kathmandu on 19th of September 2019.

10) *Cher Ping (2022). IIOE-CFHEW Framework. UNESCO-ICHEI. (Competency Framework for Higher Education Workforce)*

VALIDATING FACTORS RELATED TO RESEARCH PRODUCTIVITY: AN EMPIRICAL STUDY TO INCREASE FACULTY MEMBERS' CAPACITY THROUGH THE LENS OF EXPECTANCY THEORY

Moh. Muzammil[1], Meirani Harsasi[2], Faridah Iriani[3]

[1,2,3]*Universitas Terbuka (INDONESIA)*

Abstract

Research productivity is one of the essential measures of faculty members' performance in universities worldwide, including in open and distance learning institutions. Research productivity is often related to the motivation and capability of faculty members to produce scientific articles. This study seeks to explore factors related to faculty motivation in conducting research and publication within an expectancy theory framework. The study was designed as a quantitative study with motivation as an intervening variable to verify the effect of expectation, instrumentality, and valence on research productivity. By using the purposive sampling technique, 250 data were obtained through a survey that could be analyzed further. Based on the research model, six hypotheses from 7 variables must be tested using structural equation modeling. The results showed that expectancy, extrinsic instrumentality, and intrinsic valence were found to have a significant effect on motivation. Likewise, motivation has a positive effect on research productivity. These results show that faculty members with high confidence in producing scientific work can increase their motivation. The implications of managerial results on efforts to increase faculty capability will also be discussed in this paper.

Keywords: Motivation, research productivity, expectancy theory.

1 INTRODUCTION

Research productivity is an essential element for higher education institutions. Desselle et al. (2018) emphasize that research productivity can improve teaching quality because there is a strong link between teaching and research activities. Research productivity indicates the quality and quantity of research and publications that have significant meaning to institutions and individual lecturers. In terms of institutions, research productivity is useful as one of the main benchmarks for assessing the ranking of universities nationally and internationally (Angaiz, 2015), showing the reputation of higher education institutions (Zain et al., 2011) assessing higher education performance (Suryani, 2015). 2013), as well as a means for every higher education institution to be recognized and receive attention from other institutions (Bakri et al. 2017). Besides being beneficial for institutions, research productivity is also beneficial for individual lecturers in terms of obtaining positions and promotions (Teodorescu, 2000; Dhillon et al., 2015) and as a tangible form of lecturer career success (Fawzi and Al-Hattami, 2017).

Like other universities, as a higher education institution that implements open and distance learning, the Universitas Terbuka (UT) has challenges in increasing lecturers' research productivity. As part of the main task of lecturers besides teaching and community service, research is an activity that requires more effort in its implementation, especially when lecturers are active with teaching activities. As one of the human resources that play an essential role in the success of higher education institutions, lecturers maintain the main task of teaching, research, and community service. Currently, research and scientific publications are the main tasks of lecturers besides teaching Zain et al. (2011).

Several previous studies have shown that motivation is an essential factor influencing research productivity (Angaiz 2015; Hardré et al. 2011; Horodnic and Zaiţ, 2015; Ibegbulam and Jacintha 2016; Nguyen 2015; Sondari et al. 2016). Estes and Polnick examined the motivation of lecturers in conducting research and publications based on one of the motivational theories, i.e., expectancy theory. Expectancy theory is one of the motivational theories developed by Victor H. Vroom (1964), which explains the process used by individuals to make decisions based on various alternative behaviors. The power of motivation comes from three perceptions, i.e., expectancy, instrumentality, and valence. Expectancy theory states that people will be motivated if they believe that solid effort will result in a good performance and results in desired rewards. This theory emphasizes that three elements of perception affect motivation, namely valence, instrumentality, and expectancy. These three elements separately can influence a person's motivation. However, when the three are combined, these three perceptions will keep a substantial effect on generating motivation.

Expectancy theory can be used as a theoretical basis to analyze the behavior that encourages employees, including lecturers' motivation to conduct research and publications (Chen et al. 2006, Estes and Polnick 2012, Ramli and Jusoh 2015). These studies show various factors that influence the motivation of lecturers in conducting research and publications. Therefore, this study was conducted to answer the research question, "how is the influence of motivation on research productivity based on expectancy theory?". Thus, the study aims to analyze the elements in expectancy theory on motivation and research productivity.

2 LITERATUR REVIEW

2.1 Motivation Theory

An employee in his job always holds a particular motive known as motivation. Robbins and Judge (2017) define motivation as a process that clarifies an individual's intensity, direction, and persistence in achieving a specific goal. Intensity describes how tough a person tries. High intensity is unlikely to assemble good performance unless the existing efforts are channeled in a direction that benefits the organization. Therefore, the quality of effort and intensity must be balanced. Efforts that are directed and consistent with organizational goals must be achieved. While persistence measures how long a person can maintain the actions that have been carried out, persistence is an element. A person with high motivation will carry out his efforts in the long term to achieve goals.

Latham (2005) defines *motivation* as a set of energetic forces that come from inside and outside the employee, initiate work-related efforts, and determine its direction, intensity, and persistence. Internal strengths of employees can vary, such as goals or self-confidence, while external strengths come from outside the employee's personality, such as organizational goals and incentives. Motivation determines what individuals do at a specific time and the direction in which channeled efforts can be channeled. Employee motivation at work is the primary driver that generates efforts and actions related to completing work activities—for example, the employee's desire to use energy to achieve an important goal or reward. When an employee is motivated, the employee will show enthusiasm and willingness to work and a solid determination to implement and complete work tasks (Stueart, et al., 2013).

2.2 Expectancy Theory

Individual motivation to perform at work is an exciting topic in various empirical studies. Several theories of motivation become the basis for explaining personal motivation to achieve performance. Expectancy Theory, developed by Vroom (1964), is one of the theories widely used by researchers to measure motivation at work. Expectancy theory describes a general framework for assessing, interpreting, and evaluating employee behavior in learning, decision making, attitude formation, and motivation (Chen and Lou 2002).

Expectancy theory explains how an individual makes decisions based on various choices (Harris et al., 2017). Specifically, Expectancy Theory states that if a person is given a choice, they will tend to choose the option that will provide them with the greatest reward (e.g., promotion, praise, recognition, etc.). This theory explains what will motivate employees and how motivation arises. Expectancy theory emphasizes the cognitive antecedents that encourage motivation and how these cognitive and motivational antecedents relate to one another. This theory is related to cognitive processes based on the idea that people will believe there is a relationship between the effort they put in at work, the performance they achieve from that effort, and the rewards they get for that effort and performance. In other words, people will be encouraged if they believe that solid effort will result in a good performance and desired rewards. Expectancy Theory has three key elements: expectancy, instrumentality, and valence. The relationship between these elements is that a person is motivated to the extent that he believes that (a) effort will result in acceptable performance (expectancy), (b) performance will be rewarded, and (c) the value of the reward is very positive (valence). Expectancy (E) shows an individual's estimate of the likelihood that the effort made regarding work will result in a specific performance. Instrumentality (I) is an individual's estimate of the probability that the achievement of performance at a certain level will produce various work outcomes. Valence (V) is the strength of an employee's preference for a particular award. These awards include, among others, promotions, acceptance of colleagues, and recognition from superiors and can have more or less value for individual employees.

The Basic Model of Expectancy Theory is shown in Figure 1.
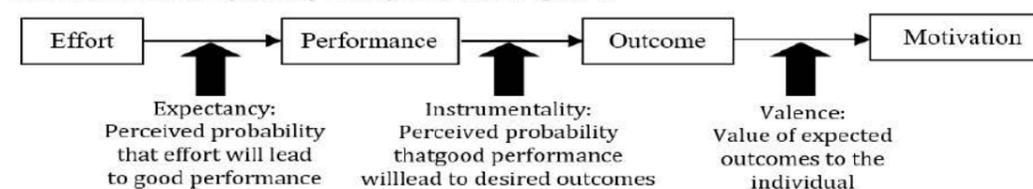

Figure 1. Expectation Theory Model

If written as an equation, the relationship between expectancy, instrumentality, and valence is as follows.

$$M = E \times I \times V \text{ (motivation = expectancy x instrumentality x valence)}$$

The multiplier effect on the equation shows that a higher level of motivation will be achieved if expectancy, instrumentality, and valence together have higher values. Likewise, if one of these elements is zero, then the overall level of motivation is also zero. For example, if an employee believes that his or her efforts will lead to good performance, which will eventually result in a reward, motivation will be zero if the valence of the reward they expect is zero; for example if the employee believes that the rewards he will receive for his efforts are of no value to him (Lunenburg 2011).

2.2 Research Productivity

Research productivity is integral to the higher education system in developed and developing countries. The definition of research productivity is not only limited to research results but also includes other outputs and outcomes as a result of a study, such as the publication of the research results in various media. Williams (2003) defines research productivity as a product and research effort that a researcher produces. Dundar and Lewis (1998) define research productivity as the faculty's contribution to the formation of new knowledge and dissemination through publications in leading journals and presentations at scientific conferences. Research publications are the primary and most significant indicator of lecturer productivity. Scientific publications in various fields of specialization also provide up-to-date information on growth, progress, development, and societal improvement (Usang et al., 2007). Scientific publications encourage hard work to fill gaps in previous studies and create directions for further research. The final achievement of research is determined by the number of publications in journals or conference proceedings (Oloruntoba and Ajayi 2006). Scientific publications can be in the form of books, chapters in books, papers in scientific conferences and proceedings, articles in scientific journals, theses and dissertations, patents, and creative works such as appearances in art exhibitions (Ocholla et al. 2012). DEST HERDC (2006) completes the definition of publication as a result of research in a book, chapter in a book, journal article and/or scientific conference publication that meets the purpose of research and has the characteristics of substantial scientific activity as evidence of discussion of the relevant literature; a knowledge of the past and antecedents to work results; a format (in this case presentation) that allows the reader to trace the source through citations and footnotes; authenticity; content that enhances the stock of knowledge; a form that enables the dissemination of knowledge; and aims to improve the quality of publications.

Scientific publications produced by higher education institutions have a role in developing various fields of science, for example, their contribution to global economic growth and national income (Hatakenaka 2004). Publications also bridge theory with practice and are a means of sharing new knowledge among academics and practitioners. The quality publication starts with quality research. Quality research is a highly valued achievement in excellent academic activity, demonstrated by the creation of intellectual property, publications and citations, and research funding.

The broad scope of the definition of research productivity has caused several researchers to make different assessments of research productivity. Ramsden and Moses (1992) researched research performance and measured research productivity using the summation formula of (3 x number of books as a single author or co-author) + (number of papers in scientific journals) + (number of edited books) + (number of chapters on the book). Betsey (2007) suggests that research productivity is a series of composite variables that indicate the number of articles published in scientific journals, chapters in books, books, presentations, copyrights, and patents obtained in the last two years. Bloedel (2001) stated that traditionally, the assessment of research productivity is based on the number of scientific publications in reputable journals and the consistency of research funding obtained through competition. Sax et al. (2002) calculated research productivity as the average number of research reports published in the last two years. Supporting this statement, Conklin and Desselle (2006) operationalize research productivity as the number of research and publications submitted and accepted in scientific journals. However, Bloedel (2001) stated that the measurement of research productivity should consider the weight difference based on the publication type. Indicators of publication success in reputable journals should receive a higher weight than other indicators. Kortlik et al. (2000) looked at the assessment of research productivity based on the number of researchers/authors and recommended the significance of research publications based on the status of the researcher/author as follows: single author, second author, and third author weights were 1.0; 0.5; and 0.33. Some studies also measure the productivity of researchers by adding up the composite indicators obtained by adding up research reports, publications of research results, and the number of uses of research reports (Williams 2003). White et al. (2012) measure research productivity as the sum of articles in scientific journals over the last five years. Likewise, Margaretha and Saragih (2012) measure research productivity by adding research reports and publications produced by lecturers in one year. Considering the data availability, the researcher will use the size of the number of research reports, the number of articles in seminars, and articles published in scientific journals at least once a year.

2.4 The Effect of Motivation on Research Productivity

Previous studies have shown that motivation positively influences research productivity (Angaiz 2015, Bland et al. 2005, Estes and Polnick 2012, Hardré et al. 2011, Horodnic and Zaiţ, 2015, Ibegbulam and Jacintha 2016, Nguyen 2015, Sondari et al. . 2016). One of the motivational theories used is the Expectancy Theory. Expectancy theory emphasizes three key elements: expectancy, instrumentality, and valence. Based on the combination of these three key elements, employees will choose behavioral alternatives to provide the highest motivational support—the greater the value of each factor, the greater their motivation. Thus, the theory is developed based on the perception of the value of the award that will be received. Therefore, expectancy theory can be classified in motivation theory with a process approach (Fudge and Schlacter 1999) which emphasizes that how a person's expectations will affect behavior depends on the individual's perception.

Expectancy theory is one of the behavioral theories that researchers have used to reveal behaviors related to motivation at work (Blotnicky et al. 2015, Chen et al. 2006, Chiang et al. 2008, Estes and Polnick 2012, Harris et al. 2017, Lunenburg 2011, Ramli and Jusoh 2015, Simone 2015). Specifically, this theory shows how various motivational factors can increase behavior in a particular scope. Blotnicky et al. (2015) found that expectancy is essential in explaining consumer behavior related to the promotion of healthy food in university students. The study's results also show that although external influences are significant, they are not enough. External forces should focus on individual needs and how individuals value the goals they have set. Here the Vroom model applies. When expectancy increases, the instrumentality and valence of rewards will also increase. At the end, when valence rises, one's behavior will also increase, as indicated by motivation (Blotnicky et al. 2015). Research Chiang, et al. (2008) have developed five components that support motivation based on Expectancy Theory: expectancy, extrinsic instrumentality, intrinsic instrumentality, extrinsic valence, and intrinsic valence. This study also proves that employees believe that if they work hard, their performance will increase. Intrinsic instrumentality contributes to the motivation that makes employees feel very good when they work well. Intrinsic valence motivates employees to take on greater responsibilities and use their abilities to complete tasks.

This study adopted the research model of Chiang, et al. (2008), which was modified by Horodnic and Zaiţ's (2015) research to form a complete research model which shows the influence of expectancy, instrumentality, and valence on motivation and research productivity. Horodnic and Zaiţ (2015) examined the effect of motivation on research productivity. The results showed that motivation positively affects research productivity. Lecturers who have high reason will have high research productivity as well. Thus, the proposed hypothesis is as follows:

H1: Expectancy has a positive effect on motivation

H2: Extrinsic instrumentality has a positive impact on motivation

H3: Intrinsic instrumentality has a positive impact on motivation

H4: Extrinsic valence has a positive impact on motivation

H5: Intrinsic valence has a positive impact on motivation

H6: Motivation has a positive impact on research productivity
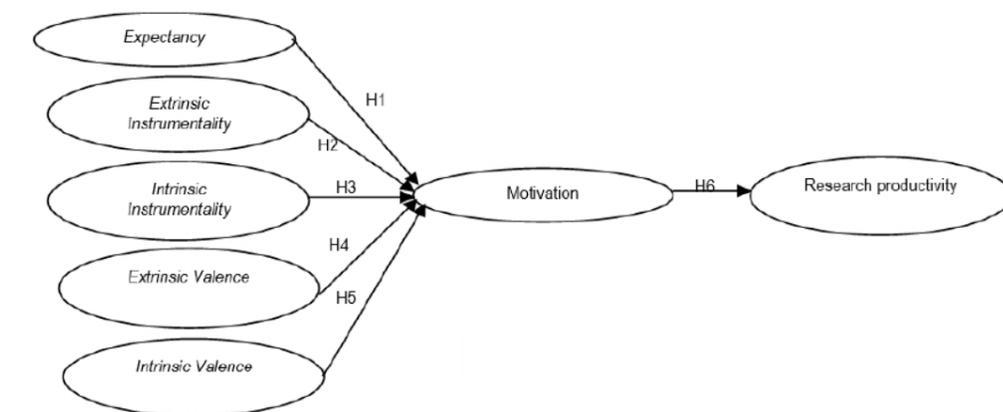
The research model proposed is as shown in Figure 2.

Figure 2. Research Model

3 METHODOLOGY

This study was designed as quantitative study to verify the influence between variables as stated in the research model (Fig. 2). The model, then, translated into variables and measured by the scale, reliability test, validity test, and Structural Equation Modeling (SEM) analyses were carried out to conclude. This research was conducted at the Universitas Terbuka (UT), with the target respondents being lecturers. The data obtained through the population in this study were all UT lecturers both at the head office and in the regions. To achieve the research objectives properly, the sampling technique chosen is purposive sampling, with the selection of lecturers having at least the academic position of 'assistant professor'. 250 data were successfully Based on the results of data collection, data obtained as many as 250.

To answer the research hypotheses, this study uses variables measured through indicators using a Likert scale. The Likert scale generally uses a value between 1 and 5, namely for attitudes of strongly disagree, disagree, neutral, agree, and strongly agree. A scale of 1 to 5 (odd) is still carried out to give the respondent the right to have an opinion. If the pre-test results show a central tendency, namely, the neutral choice is greater than 30%, then a scaling improvement is made that forces the respondents to choose an even scale.

This study measures the relationship between the variables of expectancy, extrinsic instrumentality, intrinsic instrumentality, extrinsic valence, intrinsic valence, motivation, and research productivity. This study is a replication of the research of Harris, et al. (2017), which examines the motivation of restaurant workers regarding food health. The instrument was developed from the research instrument by Chiang, et al. (2008) and Harris, et al. (2017) by adjusting the instrument for lecturers concerning research productivity.

4 RESULTS

Data analysis was carried out using SEM to test the hypotheses that have been developed. The first step of the analysis is to test the suitability of the measurement model (Overall Model Fit). This study analyzes model fit using the CMIN/DF, RMSEA, GFI, CFI, and AGFI standards. The results of the model fit test are shown in Table 1.

Table 1. Overall Model Fit Test Value (overall model fit)

	Goodness of Fit	Standard	Result	Description
CMIN/DF	The Minimum Sample Discrepancy Function	< 2,0	1,6	Good fit
RMSEA	Root mean square error of approximation	≤ 0,08	0,064	Good fit
GFI	Goodness of fit index	≥ 0,9	0,985	Good fit
CFI	Comparative fit index	0 ≤ CFI ≤ 1	0,992	Good fit
GFI	Goodness of fit index	≥ 0,9	0,985	Good fit
AGFI	Adjusted Giidnes of Fit Index	≥0,9	0,916	Good fit

Based on Table 4.1, it can be seen that the value of CMIN/DF is 1.6. CMIN/DF is one indicator to measure the level of fit of a model (Ferdinand, 2005). In this case, CMIN/DF is nothing but the Chi-Square statistic (χ^2) divided by the DF, so it is called two relatives. The relative value of 2 indicates the acceptable fit between the model and the data. With a value of 1.6, the model in this study includes a good fit because the CMIN/DF value is less than 2.0. The RMSEA value is 0.068 (good fit). RMSEA is a measure that tries to improve the tendency of the chi-square statistic to reject models with many samples. RMSEA values between 0.05 and 0.08 indicate an excellent index to accept the suitability of a model. The GFI value is 0.869 (poor fit). GFI shows an index that describes the overall level of model suitability calculated from the squared residual of the predicted model compared to the actual data. The CFI value is 0.992 (good fit), which indicates the incremental suitability index. The closer to 1, it means that the model has a good level of conformity. At the same time, the AGFI value is 0.916 (good fit). AGFI is a criterion that considers the weighted proportion of variance in a sample covariance matrix. The recommended acceptance rate is when AGFI has a value equal to or greater than 0.90. A value of 0.916 can be interpreted as a good level - good overall model fit (good), while the value between 0.90 - 0.95 indicates a sufficient fit.

The next step is to test the hypothesis by observing the magnitude of the coefficient of the relationship between latent variables. The significance testing process uses a 95% confidence level or, in other words, a 0.05 level of significance. Thus, if the p-value is less than 0.05, it means that there is an influence between the exogenous variables on the endogenous variables. On the other hand, if the P value is more significant than 0.05, it indicates no meaningful relationship between the variables, or the exogenous variable cannot explain the intended endogenous variable. The magnitude of the coefficient of the relationship between variables is shown in Table 2.

Tabel 2. Hypotheses Testing

Path line	Hypotesis	Estimation	P	Conclusion
Expectancy → motivasi	H1	0,294	0,00	Significant
Extrinsic instrumentality → motivasi	H2	0,191	0,00	Significant
Intrinsic instrumentality → motivasi	H3	0,089	0,094	Not Significant
Extrinsic valence → motivasi	H4	0,025	0,664	Not Significant
Intrinsic valence → motivasi	H5	0,429	0,00	Significant
Motivasi → produktivitas penelitian	H6	0,485	0,00	Significant

The results of the research model with SEM are as shown in Figure 3.
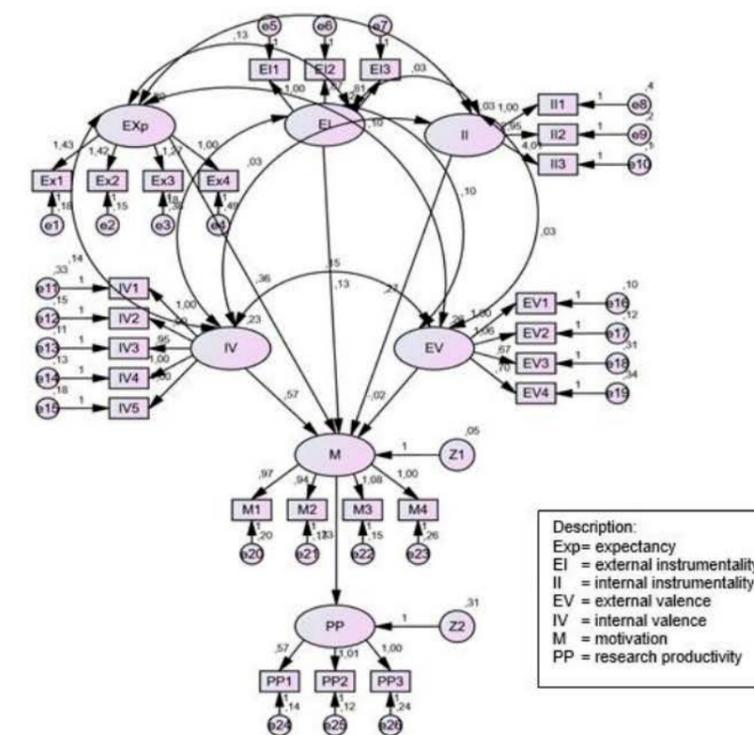
Figure 3. Results of Structural Model

The test results showed that hypothesis 1, hypothesis 2, hypothesis 5, and hypothesis 6 proved significant. Meanwhile, hypothesis 3 and hypothesis 4 were found to be unproven. Expectancy was found to have a positive effect on motivation, extrinsic instrumentality was found to have a positive impact on motivation, and intrinsic valence was found to have a positive effect on motivation. Meanwhile, motivation was also found to affect research productivity. However, intrinsic instrumentality and extrinsic valence were found not to influence motivation.

In expectancy theory, expectancy is a person's belief that the amount of effort or effort he does will increase performance, which will then get more significant results. In other words, the higher a person's action or effort, the higher his performance. In this study, expectancy was found to have a positive effect on motivation, and motivation positively impacted performance. Therefore, in this case, it means that the lecturers have confidence that the efforts made will be able to increase motivation to produce scientific publications so that research productivity also increases. In contrast, instrumentality is the belief that a task performed will get the desired result. In other words, this instrumentality is a person's belief that performance will get specific results. The results referred to here can be in the form of salary increases, bonuses, promotions, job satisfaction, incentives, praise from work colleagues or superiors, or other materialistic rewards. One example of this instrumentality is work-related incentives. Incentives are additional benefits on top of the salary received by an employee after completing specific tasks related to his work. If employees perform well, their incentives will also be more significant. Thus their role in the work will also increase. In this study, extrinsic instrumentality was found to affect motivation, while intrinsic instrumentality was found to have no positive effect. This study examines extrinsic instrumentality through increased incentives, promotions, and salary increases. This proves that external rewards are considered more meaningful in increasing motivation. At the same time, the internal factors in the form of having a feeling of satisfaction, responsibility, and pride do not affect research productivity.

Other results showed that extrinsic valence was found not to affect motivation. This indicates that external awards are not considered valuable for lecturers to increase their motivation. Intrinsic valence or elements

from within the lecturer are considered more helpful in this case. They positively influence motivation. The motivation was also found to affect research productivity, which means the more significant the motivation of a lecturer to conduct research and publications, the more results of scientific publications, which means that research productivity also increases.

The study results showing that motivation affects research productivity are in line with previous research by Harsasi, et al. (2021). These results can be used as a basis for developing human resources, in this case, lecturers, in universities to increase research productivity. The motivation variable in this study has accommodated internal motivation and external motivation. Both types of motivation have the same power in shaping and encouraging a person's intention to do something believed to give the best results. Together, these two types of motivation can encourage behavioral improvement because this variable is determined by a complex interaction between internal and external factors (Hattie et al., 2020). These factors are interrelated and mutually reinforcing, thus increasing the complexity of the formation of motivation which is the basis for various activities related to the output of scientific publications (Payakachat et al., 2021). The institution is vital in encouraging lecturers to research and publish their scientific works if external stimulation is influenced.

The study results show that extrinsic instrumentality affects motivation and that institutions have an essential role in encouraging the formation of lecturers' motivation to produce scientific publications. So, in this case, higher education institutions must be able to determine the amount and type of extrinsic instrumentality that can increase the output of scientific publications. Nguyen et al. (2016) found that the low productivity of lecturers' research is mainly due to institutional factors such as funding support, teaching burden, and weak collaborative research. When these institutional factors play a strategic role in increasing research productivity, the composition of institutional support must be designed appropriately. Park and Yang (2019) found that rewarding increases motivation by mediating performance standards. In this case, higher education institutions can set performance standards in research and scientific publications as the minimum standards that lecturers must achieve, such as the obligation to produce scientific papers every year and publish them in reputable journals. In addition, Angaiz (2015) found that the role of institutions in increasing motivation is to create a work environment in a solid academic atmosphere by setting the direction and objectives of research policies and scientific publications at the institutional level, encouraging research collaboration between lecturers, and holding scientific discussion forums and seminars. In the current pandemic atmosphere, strengthening the academic environment through scientific discussion forums and conferences can be done more efficiently through online discussions and workshops. Organizing activities online has the advantage of being able to reach a broader range of participants at a lower cost.

5   CONCLUSIONS

This research has succeeded in uncovering and proving how research productivity can be formed in a model based on expectancy theory. The model was validated under the SEM, which assessed the empirical data from a survey of 250 students at the Open University. The study ascertains that motivation has a positive impact on research productivity. In the expectancy theory lens, the results of this study indicate that expectancy, extrinsic instrumentality, and intrinsic valence are found to have a significant effect on motivation. This shows that lecturers' confidence in producing scientific work can increase motivation. Likewise, the need for organizational support in the form of awards to increase motivation and feelings of satisfaction with one's ability to produce scientific work can also encourage motivation. When the factors that drive the motivation can be strengthened, it will be able to increase the productivity of lecturers' research.

The support of higher education institutions and internal encouragement in motivation theory show that both types of motivation will form a strong impetus for lecturers to produce scientific publications. Research productivity cannot be achieved only from one kind of motivation but must be from both types. Intrinsic motivation exists in a person when someone does something because of his own will. Intrinsic motivation refers to engaging in naturally judged to be satisfying or pleasurable behaviors. On the other hand, extrinsic motivation is the desire to perform an activity to achieve positive consequences such as incentives or to avoid adverse effects such as punishment. Thus, extrinsically motivated behavior is essentially dependent on achieving an outcome that can be separated from the action performed to achieve some other outcome.

Institutional support to promote research productivity must be designed appropriately. Rewards are found to be a factor that can increase motivation by mediating performance standards. Therefore, a critical thing in the role of universities is the preparation of performance standards in the field of research and scientific publications. In addition, the institution also increases motivation by creating a work environment in a robust academic atmosphere by setting clear policy directions and objectives regarding research productivity. In addition, policies that encourage research collaboration between lecturers, as well as holding scientific discussion forums and seminars, are efforts that can be done.

REFERENCES

Angaiz D. 2015. An Investigation of Determinants of Teacher Education Faculty Research Productivity in Public Sector Universities of Pakistan [disertasi]. New York (US): Dowling College.

Bakri A, Azura NM, Md Nadzar, Ibrahim R, Tahira M. 2017. Publication Productivity Pattern of Malaysian Researchers in Scopus from 1995 To 2015. *Journal of Scientometric Research.* 6(2):86-101.

Betsey CL. 2007. Faculty Research Productivity: Institutional and Personal Determinants of Faculty Publications. *The Review of Black Political Economy.* 34(1-2):53-85.

Bland CJ, Weber-Main AM, Lund SM, Finstad DA. 2005. *The Research Productive Departments: Strategies from Departments that Excel.* New York (US): Anker Publishing Company.

Bloedel JR. 2001. Judging Research Productivity on an Entrepreneurial Campus. On: Rice ML, Editor. *Evaluation Research Productivity* [Internet]. Lawrence (US). hlm 81-84; Available on https://masc.drupal.ku.edu/sites/masc.drupal.ku.edu/files/docs/2001whitepaper.pdf#page=84.

Blotnicky KA, Mann LL, Joy PR. 2015. An Assessment of University Students'healthy Eating Behaviors with The Expectancy Theory. *ASBBS Ejournal.* 11(1):31–44.

Chen Y, Gupta A, Hoshower L. 2006. Factors That Motivate Business Faculty to Conduct Research: An Expectancy Theory Analysis. *Journal of Education for Business.* 81(4):179-189.

Chen Y, Lou H. 2002. Toward an Understanding of The Behavioral Intention to Use a Groupware Application. *Journal of End User Computing.* 14(4):1-16.

Chiang CF, Jang S, Canter D, Prince B. 2008. An Expectancy Theory Model for Hotel Employee Motivation. *International Journal of Hospitality Management.* 27(2):313-322.

Conklin MH, Desselle S. 2006. Factors Associated with Research Productivity Among Pharmacy Academicians. Paper dipresentasikan pada The Annual meeting of the American Association of Colleges of Pharmacy, Sheraton San Diego Hotel & Marina, San Diego, California, USA. Available on http://citation.allacademic.com/meta/p117942_index.html

Desselle, S. P., Andrews, B., Lui, J., & Raja, G. L. (2018). The Scholarly Productivity and Work Environments of Academic Pharmacists. *Research in Social and Administrative Pharmacy, 14*(8), 727-735.

Dhillon SK, Ibrahim R, Selamat A. 2015. Factors Associated with Scholarly Publication Productivity Among Academic Staff: Case of a Malaysian Public University. *Technology in Society.* 42:160-166.

Dundar H, Lewis H. 1998. Determinants of Research Productivity in Higher Education. *Research in Higher Education.* 39(6):607-631.

Estes B, Polnick B. 2012. Examining Motivation Theory in Higher Education: An Expectancy Theory Analysis of Tenured Faculty Productivity. *International Journal of Management, Business, and Administration,* 15(1):1-7.

Fawzi H, Al-Hattami A. 2017. Faculty Production of Research Papers: Challenges and Recommendations. *International Journal of Humanities and Social Science.* 7(2):221-228.

Fudge RS, Schlacter JL. 1999. Motivating Employees to Act Ethically: An Expectancy Theory Approach. *Journal of Business Ethics.* 18(3):295-304.

Hardré PL, Beesley AD, Miller RL, Pace TM. 2011. Faculty Motivation to Do Research: Across Disciplines in Research-Extensive Universities. *The Journal of the Professoriate.* 5(1):35-69.

Harris KJ, Murphy KS, DiPietro RB, Line ND. 2017. The Antecedents and Outcomes of Food Safety Motivators for Restaurant Workers: An Expectancy Framework. *International Journal of Hospitality Management.* 63:53-62.

Harsasi, M., Hutagaol, M. P., Baga, L. M., & Sailah, I. (2021). How to Improve Scientific Publication Performance of Private University Lecturers: An Empirical Analysis on Individual and Institutional Factors. *Jurnal Organisasi dan Manajemen, 17*(2), 164-179.

Harsasi, M., & Sutawijaya, A. (2018). Determinants of Student Satisfaction in Online Tutorial: A Study of a Distance Education Institution. *Turkish Online Journal of Distance Education, 19*(1), 89-99.

Hatakenaka S. 2004. *Internationalism in Higher Education: A Review.* Available on: http://www.hepi.ac.uk/466-1127/Internationalismin-Higher-EducationeA-Review.html.

Hattie J, Hodis FA, Kang SH. 2020. Theories of Motivation: Integration and Ways Forward. *Contemporary Educational Psychology.* 61:1-8.

Horodnic IA, Zaiţ, A. 2015. Motivation and Research Productivity in a University System Undergoing Transition. *Research Evaluation.* 24(3):282-292.

Ibegbulam IJ, Jacintha EU. 2016. Factors That Contribute to Research and Publication Output Among Librarians in Nigerian University Libraries. *The Journal of Academic Librarianship.* 42(1):15-20.

Kortlik JW, Bartlett II JE, Williams HA. 2002. Factors Associated with Research Productivity of Agricultural Education Faculty. *Journal of Agricultural Education.* 43(3):1-10.

Latham GP. 2005. Work Motivation Theory and Research at The Dawn of The Twenty-First Century. *Annual Review of Psychology.* 56: 485-516.

Lunenburg FC. 2011. Expectancy Theory of Motivation: Motivating by Altering Expectations. *International Journal of Mangement, Business and Administration.* 15(1):1-6.

Margaretha M, Saragih S. 2012. Faktor-Faktor Penentu Produktivitas Penelitian Dosen sebagai Implementasi Integritas Profesi. *Zenit.* 1(3):195-208.

Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020). Investigating Student Satisfaction in Online Learning:

The Role of Student Interaction and Engagement in Distance Learning University. *Turkish Online Journal of Distance Education, 21*(Special Issue-IODL), 88-96.

Nguyen QH. 2015. Factors Influencing The Research Productivity of Academics at The Research-Oriented University in Vietnam [disertasi]. Queensland (AU): Griffith University.

Nguyen, T.L.H., 2016. Building Human Resources Management Capacity for University Research: The Case at Four Leading Vietnamese Universities. Higher Education. 71, 231–251.

Ocholla D, Ocholla L, Onyancha OB. 2012. Research Visibility, Publication Patterns and Output of Academic Librarians in Sub-Saharan Africa. The Case of Eastern Africa. *Aslib Proceedings: New Information Perspectives*. 64 (5):478-493.

Oloruntoba A, Ajayi MT. 2006. Gender and Reserach Attainment in Nigerian Agricultural Universities. *Journal of Higher Education in Africa*. 4(2):83-98.

Ramli SBR, Jusoh AB. 2015. Expectancy Theory Analysis to Conduct Research at Malaysian Research University. *International Journal of Economics and Financial Issues.* 5(Special Issue):366-372.

Ramsden P, Moses I. 1992. Associations Between Research and Teaching in Australian Higher Education. *Higher Education* 23: 273-295

Robbins SP, Judge TA. 2017. *Organizational Behavior, seventh edition*. Harlow (GB): Pearson Education.

Stueart RD, Moran BB, Morner CJ. 2013. *Library and Information Center Management*. Santa Barbara (US):Libraries Unlimited.

Park J, Yang JS. 2019. Moderating Effects of The Timing of Reward Determination and Performance Standards Between Rewards and Self-Efficacy for Sustainable Intrinsic Motivation. *Sustainability*. 11(17): 1-20.

Payakachat N, Hight K, Reinhardt M, Pate A, Franks AM. 2021. Exploring Factors Associated with Scholarly Writing Among US Pharmacy. *Research in Social and Administrative Pharmacy*. 17(3):531-540.

TEACHER SUPPORT IN AN ONLINE EDUCATION FROM THREE PERSPECTIVES: IMPLICATIONS FOR HUMAN RESOURCE DEVELOPMENT

Jean A. Saludadez[1], Kunchon Jeotee[1,2], Maripres U. Sarinas[1], and Dona Lyn M. Piamonte[1]

[1]*University of the Philippines Open University, Philippines (PHILIPPINES)*
[2]*Sukhothai Thammathirat Open University, Thailand (THAILAND)*

Abstract

What makes an open and distance online education unique is its accomplishments by multiple actors who perform pedagogical, technological, administrative and financial roles and support. With such nature and with increasingly prevalent use of new media in online education, it broadens the arena for the participation of a diverse teaching workforce. In addition to the traditional teachers, there are other professionals who are qualified to teach such as previously engaged retirees, practitioners and people with disabilities, requiring unique academic and administrative assistance to navigate technology. With the use of autoethnographic analysis, this paper describes the support for teachers in a graduate program delivered online from three perspectives: Academic, Assistance for Technology, and Administrative.

The ASEAN Studies Graduate Program is a multidisciplinary program whose framework was collaboratively developed by five open universities in the ASEAN region and whose teaching workforce come from various disciplines, academic institutions and professional community with diverse situational background, physical, and technological challenges. What nature of support do these teachers require? How is the support performed from academic, technological and administrative perspectives?

Qualitative data in the form of email exchanges and program reports were collected and analyzed thematically. The analysis surfaced three arenas where support is required: 1) *Transitioning from being traditional to being online teacher* (consisting of acquiring the Open and Distance eLearning (ODeL) Framework as a shared performance and awareness with the technological nature of online education); 2) *Teaching interaction between teacher and students* (consisting of constructing the online classroom and connecting with the students); and 3) *Transforming societal role of the university* (consisting of program completion of students and producing competent workforce).

Implications for human resource development on ODeL knowledge and skills both for the teaching workforce and the teaching support are drawn from the study.

Keywords: teacher support, autoethnographic analysis, shared pedagogical performance

1   RATIONALE

The rapid developments in technology, especially the Internet and the worldwide web, have revolutionized open and distance learning (Labbas & Shaban, 2013; Harry, 1999). Some of these fundamental changes are the transformation of the web from hypertextuality to a highly interactive communication media, and a shift in learning theory from the traditional educational theory of behaviorism to cognitivism and constructivism methods of instruction (Chukwunonso, 2013).

Technological advancements have resulted in the growth of a new generation of learners who are called digital natives. These learners require new models of teaching and learning and have different patterns of thinking and practices unknown to teachers (Prensky, 2001). These developments result in the changing role of the teacher in the teaching and learning process and in the expansion of who can participate in the teaching and learning process.

What makes an open and distance online education unique is its accomplishments by multiple actors who perform pedagogical, technological, administrative and financial roles and support. With such nature and with increasingly prevalent use of new media in online education, it broadens the arena for the participation of a diverse teaching workforce. In addition to the traditional teachers, there are other professionals who are qualified to teach such as retirees, practitioners and people with disabilities (PWDs), requiring unique academic and administrative assistance to navigate technology.

Online learning employs a variety of online tools, systems, and software which might demand the technical competence of instructors. Bennett & Lockyer (2004) said that they need to:

- *Design and facilitate collaborative and cooperative activities for learners who are working in different places, at different times and with varying facilities*;
- *Develop a schedule and study guide around milestones rather than classes;*
- *Manage an electronic assignment submission and feedback process*;
- *Create and integrate a greater range of electronic resources; and*
- *Develop skills and strategies for using computer-mediated tools as the primary means of communication.*

They should also be able to effectively communicate, manage technology, and deliver and assess content (Esteves, 2013). However, some teachers who consider themselves as digital immigrants might be reluctant to change and hold on to traditional teaching(Labbas & Shaban, 2013).

2   REVIEW OF LITERATURE

2.1 Faculty Competencies for Online Teaching

Roddy et al (2017) cited some of the most important online teacher competencies required for effective online instruction which include: communication skills; technological competence; provision of informative feedback; administrative skills; responsiveness; monitoring learning; and providing student support.

Studies have shown that teachers who are well-prepared and competent have the greatest impact on student learning. They are a valuable human resource and need to be treasured and supported by school leaders (Darling-Hammond, 2003). As cited in a study (Clouse, 2007) administrators create good schools while teachers create good classrooms.

Betts (2009) claimed in a study that Online Human Touch (OHT) training and support which was created and implemented to proactively engage, connect, and retain online faculty resulted in high retention rates and high levels of satisfaction for faculty and students. This approach is supported by five interconnected areas - faculty engagement, community development, personalized communication, faculty development and data-driven decision-making. The study further argued that it is important to provide faculty with program-based policies and guidelines in terms of online communication, frequency of postings, grading, email response times, etc.

In the area of assessment Saludadez, et. al. (2018) claimed that while the principles involved in assessment of learning remain the same as in traditional teaching, there are unique challenges in assessment for online learning. This would require reorientation on the part of the online teacher. Kearns (2012) identified three major concerns of teachers in assessing student learning in the online environment:

- monitoring their students' progress and understanding and providing actionable feedback under the constraints of being geographically separated from their students, needing to use technology to communicate with their students, and managing their time effectively;
- online discussion is so frequently relied upon as part of an assessment strategy in online learning that pose challenges; and
- the process by which they evaluate the effectiveness of their assessments.

2.2 Faculty Support in an Online Education

According to Baran (2011), support, such as pedagogical, technological, and financial, is one of the most cited motivational factors for teaching online. Pedagogical support involves assistance in finding new pedagogical strategies for teaching online courses and updates on pedagogical use of technologies. Technological support is needed by teachers while they develop learning resources, reorganize existing course materials and explore new pedagogical approaches. They emphasized that their role was not as technologists but as online teachers who preferred to invest their time in teaching-related tasks. Meanwhile financial support was needed as financial reward to compensate for the amount of work spent to create a course for online teaching that is beyond their normal teaching responsibilities. Teachers used the support to attend professional meetings and hire graduate students. Clouse (2007) cited *emotional*, *social*, *programmatic*, *mentor* and *institutional* support as a way to help new teachers in their transition to online teaching.

In a study by Rockwell et al., (2000), the faculty believed that further education, assistance and support for developing instruction, developing instructional materials, applying selected technologies and marketing a course are very important needs for distance delivery. Subsequently, they felt that it is somewhat important to have help in the curriculum content, design and evaluation of the delivery process as well as student outcomes; the effective use and integration of older technologies such as email, audio conferences, satellite, videotape; and have peer support.

Kim & Bonk (2006) explained that faculty training and support is a critical component of quality online education. With the changes in the nature of teaching in the online environment, institutions must address issues for training and support of online teachers (Bennett & Lockyer, 2004). While the teachers' competencies for online teaching has been extensively researched, the types of support given to them have hardly been looked at.

3   RESEARCH OBJECTIVES

The ASEAN Studies Graduate Program is a multidisciplinary program whose framework was collaboratively developed by five open universities in the ASEAN region and whose teaching workforce come from various disciplines, academic institutions and professional community with diverse situational background, physical, and technological challenges. What nature of support do these teachers require? How is the support performed from academic, administrative and technological perspectives? This paper describes the support for teachers in a graduate program delivered online from three perspectives: Academic, Administrative and Assistance for Technology.

4   RESEARCH METHODOLOGY

Autoethnography is a qualitative research methodology which generates knowledge grounded on the researcher's experience. According to Ellis (2010), autoethnography is "an approach to research and

writing that seeks to describe and systematically analyze (*graphy*) personal experience (*auto*) in order to understand cultural experience (*ethno*) (Ellis, 2004; Holman Jones, 2005)."

Of the many approaches to autoethnography, the study employed the use of layered accounts. Ellis (2010) described layered accounts as:

> ...often focus on the author's experience alongside data, abstract analysis, and relevant literature. This form emphasizes the procedural nature of research. Similar to grounded theory, layered accounts illustrate how "data collection and analysis proceed simultaneously" (Charmaz, 1983, p.110) and frame existing research as a "source of *questions* and *comparisons*" rather than a "measure of truth" (p.117). But unlike grounded theory, layered accounts use vignettes, reflexivity, multiple voices, and introspection (Ellis, 1991) to "invoke" readers to enter into the "emergent experience" of doing and writing research (Ronai, 1992, p.123), conceive of identity as an "emergent process" (Rambo, 2005, p.583), and consider evocative, concrete texts to be as important as abstract analyses (Ronai, 1995, 1996).

Data in the form of text messages, email exchanges, notification of assignments, and assessment reports since the program was offered in 2014 were collected and analyzed thematically.

5   RESULTS AND DISCUSSION

The analysis surfaced three arenas where support is required: 1) *Transitioning from being traditional to being online teacher* (consisting of acquiring the Open and Distance eLearning (ODeL) Framework as a shared pedagogical performance, and awareness with the technological nature of online education); 2) *Teaching interaction between teacher and students* (consisting of constructing the online classroom and connecting with the students); and 3) *Transforming societal role of the university* (consisting of program completion of students and producing competent workforce).

5. 1 Transitioning from being traditional to being online teacher

In this arena, the academic support, the assistance for technology, and the administrative support needed pertain to two areas of concern: a) acquiring and understanding the Open Distance ELearning (ODeL) Framework as a shared pedagogical performance; and b) awareness of the technological nature of online teaching.

5.1.1 Acquiring and understanding the ODeL Framework as a shared pedagogical performance

The Open and Distance eLearning (ODeL) Framework espouses the plurality of ideas and the production of scholarly texts in a networked world (Alfonso, 2014). This suggests that teaching is a shared performance. At the ASEAN Studies Graduate Program, teaching involvement for a particular term begins with a notification of assignment as faculty-in-charge (FIC) and a welcome email from the program chair. The shared nature of pedagogical performance in an online education can be seen in the FIC notice sent by the faculty secretary :

> *Review the course materials used in previous offerings of the course (if any) ;*

And in the welcome email by the program chair:

> *We have imported the courses from the previous semester…*

This kind of academic and administrative support has a practical utility in that it eases up the task of the teacher as the teaching work will not start from scratch and the teacher can focus on the updating of the content of the course, but it also has philosophical value that within the ODeL framework the previous course site can contribute to the teaching of the succeeding course offering.

The teachers are also provided assistance in their attendance to the faculty orientation where the ODeL framework is discussed and where they can get familiar with the shared nature of pedagogical performance in an online set-up. This is clearly seen in the email of the program development associate (PDA) :

> We would just like to remind you of the online orientation for new faculties-in-charge tomorrow via Zoom. Official invite was sent via Google Calendar.
>
> Forwarding below the details of the invite for your reference.

Assessment as part of the teaching process takes a shared nature within the ODeL framework. The shared performance does not necessarily mean in the execution of assessment but in the form of guidance, for instance at the FIC notice of assignment:

> Prepare and submit examinations at least one month before the scheduled date of examinations.

Or at the technical assistance provided to the program and shared with individual courses during program meetings on the online assessment requiring clarity as gleaned from the consultant's report:

> The appropriate way to see if the assessment achieves the purposes of the course is to look at the instruction of the assessment, the criteria of marking, and the assessment results.

5.1. 2 Awareness of the technological nature of online education

Engagement in an online teaching requires awareness of its technological nature. At the ASEAN Studies, those who have the potential for ODeL teaching, that is, they are not necessarily technologically savvy but are experts in their field are invited to teach as long as they are able to teach at a virtual classroom given assistance.

Technical assistance is given anytime the teacher needs it. For instance, the PDA provided assistance to a teacher in navigating the online platform:

> Attached is the list of students with their specific groupings, just for your reference. I have uploaded the course guidelines in the portal so students have an idea/background of the activities for the whole semester. I have also plotted some of the activities for modules 1-3 but are still hidden for students except for Assignment 1 due on February 1, as per course guide.
>
> Please check the portal and let me know if there will be changes . Many students have already posted to the self-introduction forum. Some sent a message for questions.

Or, when a teacher was unable to send email notification:

> I already emailed the Myportal administrator to help you with the email notification. Manually, you can opt to subscribe to every forum discussion thread but it will be too tedious. But let me teach you how to do it anyway:
>
> > Just turn the editing on (right side), go to the discussion forum you want to subscribe to, then under the administration tab (left side, bottom part), you can click to subscribe to this forum. Please see below…

5.2 Teaching interaction between the teacher and the students

In online education, the interaction between the teacher and the students is mediated by technology. In this arena, the academic, administrative and the technological support needed pertains to two areas of concern: constructing the online classroom and connecting with the students.

5.2.1 Constructing the online classroom

The online classroom is a space that is not like a traditional classroom. It is not filled with physical artifacts but with activities that are designed to achieve course goals and objectives and prepared ahead of time. At the ASEAN Studies, in the notice of FIC assignment, the teachers are informed of their access to the learning management system and guided on the time they have to observe:

> Prepare the online course site for virtual classroom on UPOU's MyPortal at least two weeks prior to the course start date.

Further guidance on constructing the online classroom is given in the Program Chair's welcome email:

> We have imported the courses from the previous semester for your easy revision and updating. When updating, please take note of the following:
>
> - Update all published dates in the course sites.
> - Check hidden sections and hidden resources/activities..
> - If possible, use short labels to make it compatible with Moodle Mobile that some students may be using.
>
> Please remember to make the course site visible to students when ready. (To do so, click Course Administration>Edit setting>Visible>Show).

5.2.2 Connecting with the Students

In an online classroom, there is a "communication space to be crossed" (Moore, 1997) between the teacher and the students. At the ASEAN Studies, technological support is provided to meet the teacher's need to connect with the student through the same learning management platform. This support is exemplified in the following exchange between a teacher and the program development:

> Faculty-In-Charge:
>
> > Dear PDA,
> >
> > I have not been receiving any email notices of the posts of my students. Can you please show me the page where I can activate this?
> >
> > Thanks very much.
>
> Program Development Associate:
>
> > Dear FIC,
> >
> > Just click the discussion forum where you want to receive email notices of the posts of the students, then look for the "administration" box at the left side of the window, then click "subscribe to this forum".

Faculty-In-Charge:

Dear PDA, Thanks, I got it.

5.3 Transforming role of the university in society

It has been said that "at core of the universities social contract is its role in social transformation" (Alfonso, 2014). In this arena, the academic, administrative and the technological support needed pertains to two areas of concern: program completion of students and producing a competent workforce.

5.3.1 Program completion of students

In an online learning set-up, the responsibility of completing the program is also a shared responsibility. It does not solely rest on the shoulders of competent teachers or on responsible students who may both face insurmountable obstacles in their respective contexts. Both need support to arrive at such a destination. At the ASEAN Studies, the academic, the administrative and the technological support for the program completion are bundled together, as suggested in the following email response of the program chair to a student who faced difficulty in finishing the thesis that is a partial requirement for the completion of the program:

As educators, to us the completion of the degree of the student is paramount. This is the reason why, as the Program Chair, I am attempting to find out where the problem lies and trying to provide a remedy if still possible.

I suggest that you stick with what you proposed and send the draft to your adviser. I consulted the thesis panel on how you can go forward. They suggested having the committee video conferencing with you. I have copied on this email our PDA, to set up the Zoom invite should everyone be free at the suggested time.

This is where we are, we are finding a way that you can still finish your thesis within this term.

5.3.2 Production of competent workforce

Due to the affordances of technology and its capacity to widen access for education, online education providers are in a unique position to produce a competent workforce. At the ASEAN Studies, this end is at the beginning of the teacher's engagement with the program, as a kind of support to orient the teacher to what an open university, as articulated in the notification of FIC assignment, their participation in the course delivery of the program is:

an opportunity to help the UPOU fulfill its mission of democratizing access to quality education and to realize its vision of a Filipino nation and people with capacity to meet the challenges of the Information Age.

6. CONCLUSION

The literature mentioned that pedagogical support for online teaching involves assistance in finding new pedagogical strategies for teaching online courses and updates on pedagogical use of technologies; technological support is needed by teachers while they develop learning resources, reorganize existing course materials and explore new pedagogical approaches as teachers emphasized that their role was not as technologists but as online teachers who preferred to invest

their time in teaching-related tasks and administrative support in terms of financial compensation. This study has widened understanding of teacher support in terms of three arenas: their transitioning from from being traditional to being online teacher (consisting of acquiring the Open and Distance eLearning (ODeL) Framework as a shared pedagogical performance, and awareness with the technological nature of online education); 2) Teaching interaction between teacher and students (consisting of constructing the online classroom and connecting with the students); and 3) Transforming societal role of the university (consisting of program completion of students and producing competent workforce) where pedagogical, technological and administrative support are bundled together.

With such a widened understanding of teacher support, the following are the implications for human resource development on ODeL knowledge, skills and attitude required both for the teaching workforce and the teaching support:

- There are varied and multiple avenues where the ODeL framework can be understood;
- Technological skill is not a prerequisite for online teaching but the readiness to teach at an online classroom given an assistance; and
- Transactional distance can be crossed through the mediating role of teaching support.

References

Alfonso, G. J. (2014). Creating Spaces and Possibilities Through Open and Distance: e-Learning (ODeL): A Worldview. In G. J. Alfonso, & P. G. Garcia (Eds.), Open and Distance eLearning: Shaping the Future of Teaching and Learning (pp. 91-100). Los Baños, Laguna, Philippines: UP Open University and Philippine Society for Distance Learning.

Baran, E. (2011). *The transformation of online teaching practice: Tracing successful online teaching in higher education* (Order No. 3472990). Available from ProQuest One Academic. (894265253). https://search.proquest.com/docview/894265253?accountid=204903

Bennett, S., & Lockyer, L. (2004). Becoming an Online Teacher: Adapting to a Changed Environment for Teaching and Learning in Higher Education. Educational Media International, 41(3), 231–248. https://doi.org/10.1080/09523980410001680842

Betts, K. (2009). Online human touch (OHT) training & support: A conceptual framework to increase faculty engagement, connectivity, and retention in online education, part 2. MERLOT Journal of Online Learning and Teaching, 5(1), 29-48.

Calvert, J. (2005). Distance Education at the Crossroads. *Null, 26*(2), 227–238. https://doi.org/10.1080/01587910500168876

Chukwunonso, F., Ibrahim, R. B., Selamat, A. B., Idama, A., & Gadzama, W. A. (2013). The impact of the Internet and World Wide Web on distance and collaborative learning. *ICCGI*, 7-15.

Clouse, N. K. G. (2007). *The leadership role in online support programs for beginning teachers* (Order No. 3288939). Available from ProQuest One Academic. (304838264). https://search.proquest.com/docview/304838264?accountid=204903

Cook, C. W., & Sonnenberg, C. (2014). Technology and online education: Models for change. *Contemporary Issues in Education Research (CIER), 7*(3), 171-188. https://doi.org/10.19030/cier.v7i3.8638

Darling-Hammond, L. (2003). Keeping good teachers: Why it matters, what leaders can do. *Educational leadership, 60*(8), 6-13.

Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An Overview. Forum Qualitative Sozialforschung / Forum: Qualitative Social Research, 12(1). https://doi.org/10.17169/fqs-12.1.1589

Esteves, K. K. (2012). Exploring Facebook to Enhance Learning and Student Engagement: A Case from the University of Philippines (UP) Open University. *Malaysian journal of distance education*, *14*(1).

Harry, K. (Ed.). (1999). *Higher education through open and distance learning* (Vol. 1). Taylor & Francis.

Kearns, L. (2012). Student Assessment in Online Learning: Challenges and Effective Practices. MERLOT Journal of Online Learning and Teaching, 8(3). https://jolt.merlot.org/vol8no3/kearns_0912.pdf

Kim, K. J., & Bonk, C. J. (2006). The future of online teaching and learning in higher education. *Educause quarterly*, *29*(4), 22-30.

Labbas, R., & Shaban, A. E. (2013). Teacher development in the digital age. *Teaching English with technology*, *13*(3), 53-64.

Moore, M. "Theory of transactional distance." Keegan, D., ed. "Theoretical Principles of Distance Education (1997), Routledge, pp. 22-38.

Muilenburg, L., & Berge, Z. L. (2001). Barriers to distance education: A factor-analytic study. Null, 15(2), 7–22. https://doi.org/10.1080/08923640109527081

Prensky, M. (2012). From digital natives to digital wisdom: introduction. *From Digital Natives to Digital Wisdom: Hopeful Essays for 21st Century Education*, 1-9.

Rockwell, S. K., Schauer, J., Fritz, S., & Marx, D. (2000). Faculty Education, Assistance and Support Needed to Deliver Education via Distance. Faculty Publications: Agricultural Leadership, Education & Communication Department. https://digitalcommons.unl.edu/aglecfacpub/54/

Roddy, C., Amiet, D. L., Chung, J., Holt, C., Shaw, L., McKenzie, S., Garivaldis, F., Lodge, J. M., & Mundy, M. E. (2017). Applying Best Practice Online Learning, Teaching, and Support to Intensive Online Environments: An Integrative Review. *Frontiers in Education*, *2*(59). https://doi.org/10.3389/feduc.2017.00059

Rust, C. (2002). Purposes and principles of assessment, The Oxford Centre for Staff and Learning Development, Oxford Brookes University, Wheatley Campus Oxford OX33 1HX

Saludadez, J. A., Jeotee, K., Alfonso, G. J., & Lumanda, M. F. (2018). Towards an Assessment System for Open and Distance e-Learning: The Case of the ASEAN Studies Graduate Program. In M. F. Lumanta, & L. C. Carascal (Eds.), Assessment Praxis in Open and Distance e-Learning: Thoughts and Practices in UPOU (pp. 45-52). Los Baños, Laguna, Philippines: UP Open University

Warschauer, M. (2003). Dissecting the "Digital Divide": A Case Study in Egypt. *The Information Society*, *19*(4), 297–304. https://doi.org/10.1080/01972240309490

***

ACADEMIC PERFORMANCE AND SELF-EFFICACY OF FIRST YEAR ONLINE DISTANCE LEARNERS: A COMPARISON BETWEEN REGULAR AND APEL ENTRANTS

Tan Saw Fen, Ooi Li Hsien, and Arathai Din Eak

Wawasan Open University (Malaysia)

Abstract

This study aims to compare the academic performance and self-efficacy of both postgraduate and undergraduate regular and Accreditation of Prior Experiential Learning (APEL) entry first year students. It also explores the relationship between the academic performance and self-efficacy of these groups of students. Self-efficacy includes academic self-efficacy, distance learning self-efficacy and computer and online technology self-efficacy. This study involved 338 first year students in an open distance learning institution. A correlational research design was used in this study. Data were collected through archival data and questionnaire adapted from the Motivated Strategies for Learning Questionnaires (MSLQ) and a questionnaire adapted by Tladi [1]. Independent sample *t*-test and Pearson's correlation analysis were performed using SPSS. Analysis of data showed that regular entry first year students perform slightly better than APEL entrants. At postgraduate level, there is a significant difference between these two groups in their academic performance and the effect size is medium. However, at undergraduate level, there is no significant difference in their academic performance between these two groups of students. There is no significant difference in self-efficacy of these two groups of students regardless of the levels of their study. Self-efficacy of APEL entry first year students, at both undergraduate and postgraduate levels, was not correlated with their academic performance. For regular entry first year students, self-efficacy of undergraduates is positively correlated with their academic performance, but, there was no correlation between these two variables for postgraduate students. The findings implied that additional academic support should be provided to APEL entrants, especially those at the postgraduate level. Suggestions for several interventions, such as orientation for new students and motivating teaching and learning environments could be provided to undergraduates in order to enhance their self-efficacy and ultimately their academic performance.

Keywords: APEL (Accreditation of Prior Experiential Learning), self-efficacy, academic performance.

1   INTRODUCTION

The Malaysian Government is striving to improve its human capital in order to become a developed nation. One of the six major thrusts in the 11th Malaysia Plan is to develop human resources through lifelong learning [2], which is in line with the Sustainable Development Goals promoted by the United Nations (UN). Many public higher education institutions and private higher education institutions were established. The Malaysian Government established the Open Distance Learning (ODL) mode of study in order to maintain the economy while allowing its residents to advance their professional careers. The Malaysian Qualifications Agency (MQA) introduced the provision of Accreditation of Prior Experiential Learning (APEL) in 2011 through the MQA Act 2007 [3]. With APEL, learners can leverage on their working experience or prior experiential learning to enroll into tertiary education. In other words, with APEL, individuals who have relevant experience but lack the formal academic qualifications are allowed to pursue their tertiary education. It gives access to learners from diverse backgrounds, conventional or otherwise, to gain professional development in tertiary educational institutions [4].

There are four types of APEL offered in Malaysia, namely APEL.A (Access), APEL.C (Credit Award), APEL.Q (Academic Qualifications) and APEL.M (Micro-credentials). APEL.A recognises learning and experience for the purpose of access to a programme, whereas APEL.C recognises learning and experience for the purpose of awarding course credit in an academic programme pursued. APEL.Q on the other hand, focuses on recognising the learning and experience for the purpose of obtaining an academic qualification while APEL.M focuses on using micro-credentials to gain access into a

programme of study with Advanced Standing. We will only focus on the APEL.A students in this study and we call them APEL entry students in the following parts of the article. APEL.A is offered at several levels of qualifications as set under the Malaysian Qualifications Framework (MQF) and later revised into the Malaysian Qualifications Framework 2nd Edition (MQF2.0), starting from MQF level 3 (Certificate) to MQF level 7 (Master's). The entry requirement for each level is shown in Table 1.

Table 1. APEL entry requirement based on level of programme

Level of programme	Entry Requirement
Certificate	19 years old and above in the year of application. Possess relevant work experience and passed APEL assessment.
Diploma	20 years old and above in the year of application. Possess relevant work experience and passed APEL assessment.
Bachelor's	21 years old at the time of application. Possess relevant work experience and passed APEL assessment.
Master's	30 years old and above in the year of application. Possess at least STPM / diploma / equivalent (e.g. foundation), relevant work experience and passed APEL assessment.

Source: [5]

APEL entrants lack the conventional academic background. This may have caused them to not being able to perform well in their studies. Some researchers [6, 7, 8] have reported that APEL entrants do not perform as well as their peers who entered the university through regular entry. However, Cheng and Siow [9] found that APEL entrants performed equally well as regular entry students. There is an inconsistency in the findings regarding the difference in academic performance between APEL entrants and their peers with regular entry. Thus, there is a need for further study in this area.

It is important for institutions to discover whether APEL entry students are able to cope with their studies as well as their peers when they first started their studies. If they were not able to perform well in their first year of studies, they will be likely to suffer in the following academic years. Hence, this study will explore the performance of APEL entrants in their first year. If they were found not performing well in their first year of studies, early interventions can be introduced by the university to assist the students to learn better in their studies.

Self-efficacy is always considered as one of the good predictors of students' academic achievement [e.g. 10, 11]. Students who have a high level of self-efficacy tend to set higher goals and expend more effort towards their achievement, and ultimately being able to perform well in their studies. Self-efficacy is a non-cognitive factor that can be changed by the students themselves and lecturers [12, 13, 14], hence, if self-efficacy is found to be a relevant factor affecting academic performance, the university is able to provide interventions to improve the students' self-efficacy and ultimately their performance. To the knowledge of the authors, no study has been done to explore the self-efficacy of APEL entry students. Therefore, there is a research gap to be filled.

In this study, the academic performance and self-efficacy of APEL entry first year students were compared with those of regular entry first year students. Further analysis was also be done at different levels of studies. Then, the relationship between self-efficacy and academic performance was also be studied to explore if self-efficacy is a good predictor of academic performance for these groups of students. The research questions framed are as follows:

1. Is there a significant difference in academic performance between APEL and regular entry first year students?
2. Is there a significant difference in academic performance between APEL and regular entry first year undergraduate students?
3. Is there a significant difference in academic performance between APEL and regular entry first year postgraduate students?

4. Is there a significant difference in self-efficacy between APEL and regular entry first year students?
5. Is there a significant difference in self-efficacy between APEL and regular entry first year undergraduate students?
6. Is there a significant difference in self-efficacy between APEL and regular entry first year postgraduate students?
7. What is the relationship between academic performance and self-efficacy of APEL entry first year undergraduate students?
8. What is the relationship between academic performance and self-efficacy of APEL entry first year postgraduate students?
9. What is the relationship between academic performance and self-efficacy of regular entry first year undergraduate students?
10. What is the relationship between academic performance and self-efficacy of regular entry first year postgraduate students?

2   LITERATURE REVIEW

The recognition of prior learning (RPL) movement was started in the 1980s in England before spreading globally [15]. Countries like Australia, Germany, India, Malaysia and South Africa are among the few that have since created methods of assessment to recognise these prior learning in order to allow people with working experience and prior experiential learning to enter tertiary education [15, 16, 17]. The Accreditation of Prior Experiential Learning or APEL, as it is known in Malaysia, is the result of the Malaysian Government's efforts to encourage lifelong learning among its citizens in order to develop its human capital to achieve its goal of becoming a developed nation with a high-income economy. With the number of candidates entering tertiary education through APEL is expected to rise continuously in the years to come, many studies are looking into comparing APEL entry students against regular entry students in terms of attrition rates, academic performance, self-efficacy, persistence, learning engagements, perceptions on learning etc.

It is crucial to compare the academic performance APEL entry students with those of regular entry students because it enables us to determine if the informal learning and non-formal learning experiences, including working experience, of APEL entrants are on par with the formal academic qualifications of regular entry students [18, 19, 20]. The study by Brimble [18] compared the academic achievements of traditional and non-traditional entrant nursing students in a university in the United Kingdom and found students who entered the programme through the non-traditional route performed better than those of the traditional route. However, the non-traditional route students have a higher tendency to drop out of the programme compared to their traditional entry counterparts. A similar study conducted in Canada by Grundy [20] who examined the academic records of more than 8000 students, out of which 27% were from the non-traditional entry students, found no significant difference in academic performance between traditional and non-traditional entry students. This finding was consistent with the study by Osborne et al. [21] who found that the non-traditional entry students performed equally well in their academic studies as the regular entry students. A study by Cantwell et al. [19] that looked at three cohorts or over 15000 students studying various majors from a university in Australia found that although there was no difference in terms of the attrition rates between traditional and non-tradition entry students, students from the traditional entry or regular entry performed better than non-traditional entry students. This finding was consistent with the study by Hoskins et al. [22] in the United Kingdom who also reported that the academic performance of non-traditional entry students was lower than their regular entry counterparts.

The studies above show the various findings that compared the academic performance between regular entry students and APEL entry students. It is important to note that all the studies above were based on on-campus students where these students have regular contact with their peers and the academic faculty. ODL is different from on-campus learning. Most of the students are far apart from their course mate and lecturers. They need to be highly independent and self-disciplined to be able to perform well.

Another group of researchers have compared the academic performance of APEL entrants with their regular entry peers in ODL context. Latifah Abdol Latif et al. [7] found that APEL entry students performed slightly lower than regular entry students. Similar results were reported by Ahmad Izanee Awang et al. [6] and Tan et al. [8]. Ahmad Izanee Awang et al. [6] reported that regular entrants

performed better than APEL entrants, where 57% of regular entrants scored a CGPA of higher than 2.0 as compared to 34% by APEL entrants. Tan et al. [8] reported that there was a significant difference between these two groups of students, but the magnitude of difference in the means was small (eta squared = 0.03). However, in the study conducted by Cheng and Siow [9], which involved students from a degree programme, it was found that there is no significant difference in the academic performance between these two groups of students. These past studies were conducted in Malaysia and involved only undergraduates. Nevertheless, the relation between academic performance of APEL and regular entrants are not consistent. Moreover, none of these studies studied the academic performance of postgraduate APEL entrants. Hence, in this study, the academic performance of APEL entrants at both undergraduate and postgraduate levels was studied.

Self-efficacy refers to the individual's beliefs about their own agency or judgement of one's "capacities to organize and execute courses of action required to attain designated types of performance" [23, p. 391]. It is a subset of Bandura's [24] Social Cognitive Theory. Bandura [25] advocated that self-efficacy was developed from mastery experience, vicarious experience, social persuasion, and psychological state. APEL entrants have not experienced the conventional study path. So, their self-efficacy might be different from those of the regular entrants. To the knowledge of the authors, little is known about the self-efficacy of APEL entry distance learners. The findings of this study will be able to fill this research gap.

Social Cognitive Theory suggests that students' beliefs about their own learning ability influence their learning performance and self-efficacy can be used to predict their learning performance [23, 25, 26]. Students who have high self-efficacy are more willing to carry out challenging tasks, put more effort and be more persistent when they encounter difficulties. Many researchers have reported that self-efficacy is a good predictor of students' academic performance. Azadeh Amoozegar et al. [27] studied 367 distance learning undergraduates to explore the institutional factors and learner characteristics that lead to success. They claimed that students with high levels of self-efficacy have better academic performance in the distance-learning programme and were more likely to be engaged in their learning. Law and Norlizah Che Hassan [11] studied the self-efficacy, learning strategies and academic achievement of 310 undergraduates from the Faculty of Educational Studies in a Malaysian university. They reported that there was a positive relationship between self-efficacy and academic performance. Goulao [10] studied the relationship between academic performance and self-efficacy of 63 adult learners in an online learning context. The analysis of the data showed that students' level of self-efficacy was high (average=45) and a significant relationship existed between self-efficacy and academic achievement (r=0.286, at 0.05 level). Krumrei-Mancuso et al. [28] studied 579 first year students and found that academic performance was a good predictor of end-of-year GPA. Hannon [29] reported that academic self-efficacy, epistemic belief of learning, and high-knowledge integration predicted the college students' academic performance. All these studies support the idea that self-efficacy is a good predictor of students' academic performance.

Learning in an open distance learning environment is different from conventional face-to-face learning. Students' learning might be affected by their skills in using computers and technology. If the students are confident in using technology, they will be more likely to perform well in their studies. Hence, there are researchers who focused their studies in distance learning self-efficacy [1], internet efficacy [30], technology self-efficacy [31] and computer and online technology self-efficacy [1]. Wang et al. [31] reported that there was a positive relationship between technology self-efficacy and academic performance, students with higher technology self-efficacy tend to perform well in online courses. Tsai and Tsai [30] conducted a study which involved 8 students of mixed genders on Internet self-efficacy levels. They reported that students with higher Internet self-efficacy performed better than those with lower Internet self-efficacy in their Web-based learning task, regardless of their genders.

Although many studies reported that self-efficacy is a good predictor of academic performance, there were also studies that reported that there was no correlation between these two variables. Tladi [1] reported that only distance learning self-efficacy has a significant effect on academic performance, with low effect (r= -.13). There was no correlation between self-regulated learning efficacy and computer and online technology self-efficacy with academic attainment. Balami [32], who studied 636 distance learners in Nigeria, found that there was no significant relationship between self-efficacy and academic performance. The findings of the relationship between self-efficacy and academic performance are not consistent, hence, further study to explore this relationship is needed.

3　METHODOLOGY

This study employed the quantitative methodology approach. Comparative design was used to examine the differences in academic performance and self-efficacy between regular and APEL entry first year students at both undergraduate and postgraduate levels. Then, a correlational design was used to explore the relationship between the academic performance and self-efficacy amongst these students. The data was collected from archival data and questionnaire. The archival data included the Cumulative Grade Point Average (CGPA) and the type of entry, APEL or regular. The academic performance of students in this study refers to their CGPA upon the point of data collection. Self-efficacy was measured by using a questionnaire. The questionnaire was adapted from the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. [33] and the questionnaire used by Tladi [1].

In this study, self-efficacy consisted of academic self-efficacy, distance learning self-efficacy, and computer and online technology self-efficacy. There are 4 items related to academic self-efficacy, 4 items related to distance learning, and 29 items related to computer and online technology self-efficacy in the questionnaire. Some changes were made in the questionnaire to suit the context of the university. Two stages of pilot study were conducted with the questionnaire to confirm that the modified questionnaire was considered a reliable instrument. A debriefing interview was conducted with four students at the first stage of pilot study. The questionnaire was revised based on the feedback collected from the interview. Then, the questionnaire was administered to 40 students. The alpha coefficient obtained was 0.857. The result of the pilot study revealed that the questionnaire was reliable as the alpha value was within the acceptable range.

The questionnaire was sent to 1658 first year students through SurveyMonkey. Informed consent was collected through the questionnaire. A total of 338 students responded to the questionnaire. The types of entry and levels of study of these students are displayed in Table 2.

Table 2. Level of study and type of entry of participants

Level of study	Type of entry		Total
	Regular	APEL	
Undergraduate	125	116	241
Postgraduate	61	36	97
Total	186	152	338

The data was imported into SPSS for data analysis. Independent sample t-tests were conducted to compare the difference in academic performance and self-efficacy between APEL and regular entry students at both postgraduate and undergraduate levels. Then, the Pearson correlation was carried out to explore the relationship between academic performance and self-efficacy of these groups of student.

4　RESULTS

An independent sample t-test was conducted to compare the academic performance of regular and APEL entry first year students. It was found that there was a significant difference in CGPA between the regular entry [M:3.40, SD:0.5753] and APEL entry students [M:3.23, SD:0.7566; t(338) = 2.33, p= 0.020]. The magnitude of the differences in the means was small (eta squared= 0.03). Independent sample t-tests were also conducted to compare their academic performance at undergraduate and postgraduate levels. As shown in Table 3, at undergraduate level, there was no significant difference in academic performance between these two groups of students, but, at postgraduate level, there was a significant difference between these two groups of students and the magnitude of the differences in the mean was median (eta squared = 0.49).

Table 3. Means of academic performance for regular and APEL entry first year students at undergraduate and postgraduate levels

Level of study	Regular entrants	APEL entrants

	Mean	Standard Deviation	Mean	Standard Deviation	t	Sig.
Undergraduate	3.37	0.5845	3.26	0.7264	1.322	.188
Postgraduate	3.47	0.5548	3.14	0.8449	2.335	.022

An independent sample t-test was also carried out to compare the self-efficacy between regular and APEL entry first year students. It was found that there was no significant difference in self-efficacy between the regular entrants [M:118.13, SD:0.17.150] and APEL entrants [M:152, SD:18.464; t(338) = 0.415, p= 0.678]. Then, independent sample t-tests were also conducted to compare their self-efficacy at undergraduate and postgraduate levels. As displayed in Table 4, there was no significant difference in self-efficacy between these two groups of students at both undergraduate and postgraduate levels.

Table 4. Means of self-efficacy for regular and APEL entry first year students at undergraduate and postgraduate levels

Level of study	Regular entrants		APEL entrants			
	Mean	Standard Deviation	Mean	Standard Deviation	t	Sig.
Undergraduate	116.67	18.150	118.28	17.541	-.697	.487
Postgraduate	121.13	14.576	114.28	21.151	1.886	.062

The Pearson correlation was conducted to explore the relationship between the self-efficacy and academic performance of regular and APEL entry first year students at both undergraduate and postgraduate levels. As shown in Table 5, it was found that only the self-efficacy of the regular entrants at undergraduate level was correlated with their academic performance. The magnitude of the relationship was small as in accordance with Cohen [34]. For undergraduate APEL entrants, postgraduate regular entrants and postgraduate APEL entrants, there was no significant relationship between their self-efficacy and academic performance.

Table 5. Coefficients of relationship between self-efficacy and academic achievement of regular and APEL entrants at undergraduate and postgraduate levels

Self-efficacy			Academic achievement (r)
Level of study	Type of entry		
Undergraduate	Regular	Pearson Correlation	.178*
		Sig. (2-tailed)	.047
	APEL	Pearson Correlation	.061
		Sig. (2-tailed)	.515
Postgraduate	Regular	Pearson Correlation	-.071
		Sig. (2-tailed)	.589
	APEL	Pearson Correlation	.055
		Sig. (2-tailed)	.751

*. Correlation is significant at the 0.05 level (2-tailed).

5　DISCUSSION

In general, the regular entry first year students perform slightly better academically than their peers who join the university via APEL entry. At undergraduate level, both groups of student performed equally well. Inconsistency was found when comparing this finding with the findings of another three studies which also focused on undergraduate students. Like this study, Cheng and Siow [9] reported that both regular and APEL entrants performed equally well. Whereas, Latifah Abdol Latif et al. [7] and Ahmad Izanee Awang et al. [6] found that there was a significant difference in academic performance between these two groups of students. The difference in findings could be due to the samples of study. The sample of this study and the study conducted by Cheng and Siow [9] were first year students, whereas, the sample of studies conducted by Latifah Abdol Latif et al. [7] and Ahmad Izanee Awang et al. [6] were students across different stages of their studies. This might imply that APEL entry undergraduate students were able to perform equally well as their regular entry peers in their first year because the

courses offered in the first year are usually at lower levels and easier to score. As they progress to their second, third or even fourth year of studies, the content learned as well as the assessments in the higher level courses becomes more difficult and complex. The APEL entry students were then not able to perform as well as their regular entry peers.

At postgraduate level, regular entrants performed better than APEL entrants. The magnitude of the differences in the mean was median (eta squared = 0.49). This indicates that APEL entry postgraduate students were not able to perform as well as their regular entry peers even in their first year of studies. This could be because of the requirements for postgraduate studies are more demanding as postgraduate students are required to apply their theoretical knowledge into practice, write academic essays with citations and reference which APEL entrants may not have the academic training as their conventional peers. Thus, additional academic support is needed for APEL students when they first start their postgraduate studies.

Self-efficacy of regular entry undergraduate students was found to be positively correlated with their academic performance. This finding supports the findings reported by Krumrei-Mancuso et al. [28] and Hannon [29]. However, it was surprising to find that there was no significant relationship found between self-efficacy of APEL entrants at both undergraduate and postgraduate levels, and regular entrants at the postgraduate level. This scenario might be caused by two reasons. Firstly, the relationship between these variables of these three groups of students are mediated by other variables. As reported by Honicke and Broadbent [35], after a systematic review of 59 studies that looked into the relationship between self-efficacy and academic performance, they found that there were several variables that mediate the relationship between these two variables, such as, effort regulation [36, 37], metacognition [36], academic procrastination [38], academic self-discipline [39], and deep processing [39, 40]. Neuville et al. [41], for example, found that there was no predictive effect of self-efficacy on students' performance. However, self-efficacy is a significant predictor of deep-processing strategies, which in turn are predictors of academic performance. Therefore, further studies are needed to explore and determine the other mediating variables between self-efficacy and academic performance of APEL entrants.

Secondly, the students might have overrated themselves when they answered the questionnaire, as commented by Balami [32]. According to Coleman and Hammen [42], there are three components of self-concept, namely self-identity, self-ideal and self-esteem. Self-identity refers to a person's perception about himself in relation to environmental experiences, whereas self-ideal is a person's image of what he should be. Self-esteem is a person's perception of his worth, the extent to which he like, accept or approve himself. It always involves a degree of evaluation. An individual may have either a positive or a negative view about himself. There might be a discrepancy between their self-concept, self-efficacy in this study, and their actual ability. The students might not be a successful open distance learners even though they rate that they are confident to study in distance learning mode. As a result, the relationship between self-efficacy and academic performance was found not significant.

6   CONCLUSION

In this study, we have found that regular entry first year students performed slightly better than APEL entry first year students in an ODL learning environment. There was no significant difference in academic performance between these two groups of students at undergraduate level, but the difference at postgraduate level was significant with the median effect size, eta squared = 0.49. There was no significant difference in self-efficacy between these two groups of students, regardless of their level of study. Only the self-efficacy of regular entry undergraduates was correlated with their academic performance. Self-efficacy of APEL entry first year students at both undergraduate and postgraduate levels and regular entry postgraduates, was not correlated with their academic performance.

It is recommended that the ODL higher education providers with APEL entry students provide additional post-admission support to APEL entrants at postgraduate level. The additional support could be in the form of foundation courses to build up the APEL entrants' basic academic or theoretical knowledge related to their programme. Collaborative learning could also be added to the teaching and learning process. With that, APEL entrants would be able to interact with regular entrants and learn from each other. Since the self-efficacy of regular entry undergraduate students is a predictor of their academic performance, ODL institutions should try to enhance these students' self-efficacy. Self-efficacy in this

study includes academic self-efficacy, distance learning self-efficacy as well as computer and online technology self-efficacy. The university may conduct an orientation session for all students when they first join the university. Explanation to these new students about the criteria to become successful distance learning learners could help these APEL entry students to be prepared and be more confident in their distance learning journey. They would also need to be introduced to the various learning systems used by the university, such as the Learning Management Systems, academic writing conventions and other relevant online technology during the orientation so that they will be well equipped with the skills needed to start their academic journey. Lastly, academics in these ODL universities could also strive to create an interesting and motivating learning environment, both online and physically for students, so that these students have high self-efficacy to persist in their learning. Even when they face challenges in their learning, students should be comfortable enough to approach their peers and faculty to address their concerns and challenges in order to resolve them.

Findings show that self-efficacy is not a good predictor of APEL entrants' academic performance. Future studies can be done to explore other personal variables, such as effort regulation, metacognition and academic self-discipline, which can be used to predict their learning outcomes. The sample of this study only involved students from one ODL institution. Academic performance might be affected by institutional factors, such as quality of programme and competence of teaching staff. Hence, the generalisability of the finding of this study might be limited. Future study can be conducted by involving students from several institutions. This study explores the students' self-efficacy and academic performance in their first year. These two variables might change as they progress in their academic path. Longitudinal study can be conducted to explore the learning of APEL entrants as they progress from the beginning to their end of their studies.

7   ACKNOWLEDGEMENTS

8   REFERENCE

[1]   Tladi, L. S. (2017). Perceived ability and success: Which self-efficacy measures matter? A distance learning perspective. *Open Learning: The Journal of Open, Distance and e-Learning*, 1-19.

[2]   Economic Planning Unit (2015), Eleventh Malaysia Plan, Percetakan National Malaysia Berhad, Kuala Lumpur.

[3]   Malaysian Qualifications Agency Act 2007 (Act 679)

[4]   Malaysian Qualifications Agency (2014). APEL handbook for learners. Kuala Lumpur: Malaysian Qualifications Agency.

[5]   Malaysian Qualifications Agency (n.d.). Guidelines to Good Practices: Accreditation of Prior Experiential Learning.

[6]   Ahmad Izanee Awang, Nik Azlina Nik Yaacob, & Kamariah Mohd Noor (2014). A comparative study on persistency and performance of flexible and normal entry learners. Paper presented at the Seminar Kebangsaan Pembelajaran Sepanjang Hayat, Open University Malaysia, Kuala Lumpur, Malaysia.

[7]   Latifah Abdol Latif, Mansor Fadzil, & Kek, L. S. Y. (2009). Persistence and performance: Does prior learning really matter? Paper presented at the International Conference on Information (ICI9), Kuala Lumpur, Malaysia.

[8]   Tan, S. F., Eak, A. D., Ooi, L. H., & Abdullah, A. C. (2021). Relationship between learning strategies and academic performance: A comparison between accreditation of prior experiential learning (APEL) and regular entry undergraduates. *Asian Association of Open Universities Journal. 16*(2), 226-238.

[9]   Cheng, S., & Siow, H. L. (2018). Accreditation of Prior Experiential Learning (APEL): An alternative entry route to higher education in Malaysia. Paper presented at the International Conference on Open and Innovative Education (ICOIC 2018), The Open University of Hong Kong, Hong Kong SAR.

[10] Goulao, M. F. (2014). The relationship between self-efficacy and academic achievement in adults' learners. *Athens Journal of Education, 1*(3), 237-246.

[11] Law, M. Y., & Norlizah Che Hassan. (2015). Self-efficacy, learning strategies and academic achievement among Malaysian future educators. *Jurnal Pemikir Pendidik, 6,* 31-48.

[12] Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.). (2012). *Handbook of research on student engagement.* Springer.

[13] Kember, D., Hong, C., & Ho, A. (2008). Characterizing the motivational orientation of students in higher education: A naturalistic study in three Hong Kong universities. *British Journal of Educational Psychology*, 78, 313–329.

[14] Wentzel, K. R., & Wigfield, A. (Eds.). (2009). *Handbook of motivation at school*. Routledge.

[15] Garnett, J., & Cavaye, A. (2015). Recognition of prior learning: Opportunities and challenges for higher education. *Journal of Work-Applied Management, 7*(1), 28–37.

[16] Mikulec, B., Singh, S., Schiller, J., Balappagari, D., & Syed Tauseef Ahmad Tirmize. (2022). Toward a convergence or divergence of adult learning and education policies ? Recognition of prior learning in Germany and India. *Sisyphus Journal of Education, 10*(2), 37–60.

[17] Ooi, L. H., & Eak, A. D. (2019). Implementation and challenges of accreditation of prior experiential learning: admissions (APEL-A): The assessors' perspective. *Asian Association of Open Universities Journal, 14*(1), 1-11.

[18] Brimble, M. J. (2013). Does entry route really affect academic outcome? Academic achievement of traditional versus nontraditional entrants to BN (Hons) pre-registration nursing programmes. *Journal of Further and Higher Education*, *39*(3), 379–398.

[19] Cantwell, R., Archer, J., & Bourke, S. (2001). A comparison of the academic experiences and achievement of university students entering by traditional and non-traditional means. *Assessment and Evaluation in Higher Education, 26*(3), 221–234.

[20] Grundy, S. L. (2016). Flexible admission and academic performance. In S. L. Grundy, D. Hamilton, G. Veletsianos, G. Agger-Gupta, N. Marquez, P. V. Forssman, & M. Legault (Eds), *Engaging students in life-changing learning: Royal roads university's learning and teaching model in practice*. Royal Roads University.

[21] Osborne, M., Leopold, J., & Ferrie, A. (1997). Does access work? The relative performance of access students at a Scottish University. *Higher Education, 33*, 155–176.

[22] Hoskins, S. L., Newstead, S. E., & Dennis, I. (1997). Degree performance as a function of age, gender, prior qualifications and discipline studied. *Assessment and Evaluation in Higher Education, 22*(3), 317-328.

[23] Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc.

[24] Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review, 84*(2), 191.

[25] Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.

[26] Zimmerman, B. J. (1997). Self-efficacy and educational development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 202–231). Cambridge University Press.

[27] Azadeh Amoozegar, Shaffe Mohd Daud, Rosnaini Mahmud, & Habibah Ab. Jalil. (2017). Exploring learner to institutional factors and learner characteristics as a success factor in distance learning. *International Journal of Innovation and Research in Educational Sciences, 4*(6), 2349-5219.

[28] Krumrei-Mancuso, E. J., Newton, F. B., Kim, E., & Wilcox, D. (2013). Psychosocial factors predicting first-year college student success. *Journal of College Student Development, 54*(3), 247–266.

[29] Hannon, B. (2014). Predicting college success: The relative contributions of five social/personality factors, five cognitive/learning factors, and SAT scores. *Journal Of Education And Training Studies, 2*(4), 46-58.

[30] Tsai, M. J., & Tsai, C. C. (2003). Information searching strategies in web-based science learning: The role of Internet self- efficacy. *Innovations in Education and Teaching International, 40*(1), 43-50.

[31] Wang, C.-H., Shannon, D. M., & Ross, M. E. (2013). Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education*, *34*(3), 302-323.

[32] Balami, Y. G. (2015). Relationship between self-efficacy belief and academic achievement of distance learners in National Teachers Institute (NTI) Adamawa State, Nigeria. *International Journal of Education and Practice, 3*(2), 80-84.

[33] Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the motivated strategies for learning.* School of Education Building, The University of Michigan.

[34] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Routledge.

[35] Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematics review. *Educational Research Review, 17*, 63-84.

[36] Kassab, S. E., Al-Shafei, A. I., Salem, A. H., & Otoom, S. (2015). Relationships between the quality of blended learning experience, self-regulated learning, and academic achievement of medical students: A path analysis. *Advances in Medical Education and Practice, 6*, 27-34.

[37] Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences, 25*, 67-72.

[38] Balkis, M. (2011). Academic efficacy as a mediator and moderator variable in the relationship between academic procrastination and academic achievement. *Eurasian Journal of Educational Research, 45*, 1-16.

[39] Jung, K. R. (2013). *The mediational effect of academic self-discipline (ASD) between academic self-efficacy (ASE) and college GPA.* [Unpublished doctoral dissertation]. University of Minnesota.

[40] Fenollar, P., Roman, S., & Cuestas, P. J. (2007). University students' academic performance: An integrative conceptual framework and empirical analysis. *British Journal of Educational Psychology*, 77, 873-891.

[41] Neuville, S., Frenay, M., & Bourgeois, E. (2007). Task value, self-efficacy and goal orientations: Impact on self-regulated learning, choice and performance among university students. *Psychologica Belgica, 47*, 95-117.

[42] Coleman, J. C., & Hammen, C. L. (1974). Contemporary psychology and effective behaviour. Scott.

JOB STRESS OF INFORMATION TECHNOLOGY EMPLOYEES: A CASE STUDY AT HANOI OPEN UNIVERSITY, VIETNAM

Hong Nguyen Thi Thuy, Lan Nguyen Thi Hong, Hiep Nguyen Phuong

*Hong Nguyen Thi Thuy (*VIETNAM*)*
*Lan Nguyen Thi Hong (*VIETNAM*)*
*Hiep Nguyen Phuong (*VIETNAM*)*

Abstract

Globalization and integration tendency throughout the world have created the job market among universities. In fact, universities especially open ones have been developing effective strategies to select and retain well-qualified workforce for better performances. Retention is considered one of the most important stage of human resource management (HRM) process to motivate employees to work permanently and devote all their lives to universities' sustainable development. Recently, Hanoi Open University (HOU) has been paid much attention to enhancing employees' job satisfaction to motivate them to achieve their personal best. However, more and more employees especially the ones working in the field of information technology have been dissatisfied at work and suffered from job stress. This article focuses on analyzing and assessing job stress of employees of information technology at HOU. Basing on the findings drawn from the survey, some suggested recommendations have been proposed to reduce job stress of HOU's employees of information technology. A qualitative study was applied concerning analyses of the survey with employees of information technology referring job stress at HOU. The study findings will be useful for HOU to reduce job stress of employees of information technology and as a result to enhance their productivities and open universities' performances as well.

Key words: job stress, information technology, employees

INTRODUCTION

The digital era throughout the world has brought Vietnam's higher education ever-increasing and challenging opportunities of development. Digital working environment promotes shifting from the delivery of learning packages and mass production to education's issues concerning the teaching-learning transaction process, the real-life communication and the communication via technologies to assist sustainable communication regardless time and place.

Application of information technology in digital working environment concerns technology infrastructure, capacity management, teaching and learning organization, and employees' engagement. To respond to the requirements of the digital era, universities should pay much attention to train and retrain their labor force, providing them with necessary skills and capacities to apply assisted technologies effectively at work. Improving employees' working capacities in the digital era along with globally growing competition in the labor force market increases the level of workplace stress.

There has been a great concern of universities to reduce stress at work. In fact, job stress has cost universities billions of dollars every year for health care, higher rate of absenteeism, turnover and lower performances (Shahu & Gole, 2008). Basically, when employees suffer from job stress (JS), the consequences are likely known as high levels of sickness and absenteeism, reduced productivity and failure to meet targets, increased accidents and error rates, increased number of conflicts between individuals, undesirable rates of staff turnover; increased grievances and health care cost; and reduction in the quantity and quality of performances (Jibril, 2007).

Employees especially ones of Information Technology (IT) in open universities face workplace stress and prone to health problems. They have to work in front of computer screen for long hours to dealt with heavy workloads. Many of them have to work overtime and at the weekends to meet their deadlines. Besides, technologies keep changing all the time, which requires IT employees to learn all their lives to catch up with the rapid growth of technologies. Many IT employees find it stressful to work

hard during the day to complete their tasks and do service courses in the evening to upgrade their knowledge and skills to meet the job's requirements.

2. Impacts of Workplace Stress on University Performances

Stress at work has strong impacts on universities' and employees' performances. A prominent tendency in universities' human resource's movement has dominated the labor market, making the level of stress at work higher. Engaged and satisfied employees at work can achieve their personal best to fulfill their aims and objectives they have set. Job satisfaction stimulates employees to work permanently and contributes all their lives to universities' sustainable development. Universities cannot reach their higher education missions and fulfill their high causes to serve the community with their unsatisfied and demotivated staff. Retention activities, especially actions aim at reducing workplace stress are essential for universities to raise commitments with their employees, encouraging them to follow their ambitions and take opportunities to achieve their personal best (Bogdanowicz & Bailey, 2005).

Many universities have spent much time, efforts, and money to create and foster the best working conditions for their staff to develop their fullest. Fair internal policies and suitable practices addressing employees' ambitions and needs enable universities to satisfy and retain employees to work at university permanently. Suffering from JS, employees may face with a wide range of symptoms indicating an apparent dissatisfaction with work namely demotivation; loss of vitality and energy; poor decision making; reduced creativity, innovation and job performances. In other words, JS leads to low productivity, reduced profit, high rates of staff turnover and cost of recruiting and training replacement staff (Yahaya, et.al., 2009).

Recently, a lot of Vietnam's universities have paid much attention to enhancing employees' job satisfaction and self-actualization. Suffering from workplace stress, employees leave universities to look for a workplace which provide them with better working conditions. This influences universities' operations and performances seriously. Universities need to reduce employees' job pressure to retain and make capable manpower satisfied to work permanently. Reducing employees' job stress requires the identification of the causes and obstacles to lease workplace pressure. This provides necessary information for universities to make proper decisions whether they are capable of implementing effective strategies to reduce employees' JS or not and what they should do to implement these strategies. Although lots of research have identified the linkage of employees' performances with their stress level at work, relatively few research focus on the impacts of job stress on IT employees' performances. Therefore, it is essential for universities to work hard reduce job stress to enhance IT employees' satisfaction to engage them with universities permanently.

3. Literature Review

3.1 Job Stress

Job-related stress or occupational stress is directly related to individual's professional work or occupation. JS is generally defined in the literature as an employee's feeling of job-related hardness, tension, anxiety, frustration, worry, emotional exhaustion, and distress (Armstrong and Griffin, 2004). In the era of rapid industrialization, rapid advancements and globalization, workers across the industries are expected to work intensely and constantly deliver success.

JS includes harmful emotional and physical responses, which occur when workers perceive an inadequate balance between their work demands and their abilities. Leung et. al. (2011) stated that under prolonged and accumulated JS, construction personnel may suffer from job burnout, that is, a state of emotional, physical and mental exhaustion (Halbesleben & Buckley, 2004; Meliá & Becerril, 2007).

In general, at the individual level, JS reduces life quality and affects employees' health in terms of insomnia, constant tiredness and high blood pressure. At the organizational level, complex working environments have caused workplace stress for both employers and employees. Workplace pressure results from rapid technological advances, diminishing resources and rising costs, new employment trends, longer working hours, increasing demands and pressures of management and the lack of job security (Weijing & Hongchun, 2011).

3.2. Main Factors Affecting Job Stress

There have been various factors affecting JS known as conflicts with superiors, inadequate preparation, problems with coworkers, problems with superiors, discrimination, workload, uncertainty about work, dealing with client problems, leadership and management issues, professional conflicts, mood disorders, age and experience, emotional demands for caring, lack of skills and short experience, conflicts with others, lack of clarity about tasks and goals and low social support at work. In general,

there are the four main factors affecting JS at workplace as followed:

Work overload significantly affects JS. When the complexity of work increases, employees will arrange the work in their brains to complete it effectively. Muhammad (2012) has raised the serious consequences of employee pressure results from work overload. Workload stress can be defined as the reluctance to perform a task in the workplace and a constant feeling of pressure associated with physiological, psychological, behavioral and other symptoms. Workload stress is known as feeling of constant pressure and not willing to come to work accompanied by the general physiological and behavioral stress foretoken.

Role ambiguity is another factor that causes work stress. According to Rizwan et al. (2014), role ambiguity is a situation when someone does not have clarity on the authority and information about how to do or complete the work that has been assigned to them. In other words, role ambiguity occurs when expectations, goals, responsibilities have not been clearly designed for employees. When employees lack information about the requirements of their role, how to meet those role requirements, and the evaluating process to ensure the role performed successfully, they reduce confidence, feel hopeless, anxious and depressed (Karimi, 2014).

Transformational leadership is considered other job stressor at work. In recent years, researchers (Ibraheem et al., 2011) have demonstrated the importance of transformational leadership and considered that this style of leadership provides self-motivation and special attention to their followers and direct them to influence them. These leaders are able to draw necessary paths for new organizations, because they are sources of changes and have control in the organizations. Transformational leadership highlights the connection between leaders' declarations to fulfill organization's commitments for the sake of their subordinate employees' interests and emotional drivers to achieve desired organization's outcomes (Mirkamali et. al., 2011).

Workplace relationships are unique interpersonal relationships with important implications for the individuals to interact with others employees successfully (Sias et. al., 2012). The relationship between employees and their managers is a main aspect of employee's link to the company, and employee behaviors affected by the way their supervisors managed them. Effective communication is one of the components of a good relationship, and it can provide employees with direction. Supervisors can treat more effectively to the needs and problems of their employees when there are open-lines of communication such as an open-door policy (Kahancova, 2022).

3.3. Job Stress in Information Industry

JS involves in all working fields, however, the stress faced by IT professionals is comparatively larger compared to the employees of other fields. The IT sector is one of the fastest developing sector among all fields in many countries all over the world (Andrew et al., 2008). Umesh (2016) explores that after IT revolution, the stress levels have increased. He identifies JS comes from job design, physical environment, role ambiguity, interpersonal relationship, authority and power, role overload and social support.

Bushara & Rajiv (2012) explored whether there is any relationship between burnout and working in an IT profession. They identified three key exposures: role ambiguity, role conflict, and job tasks. They recommend that managers should take action against these exposures to improve staff wellbeing as well as reduce long- term costs due to burnout. Dhar & Dhar (2010) found that the most significant cause of workplace stress was down to complex infrastructures and unclear goals, therefore recommending that IT workers are provided with IT-specific employee assistance programs. Prasad et. al. (2016) identified the main cause of work stress among IT professionals as a rapid change in technology.

Although many studies have investigated the factors affecting JS of IT employees, there is a lack of consideration in leadership style and workplace relationships. Moreover, in Vietnam, studies on JS are few and often only consider factors related to the nature of work, separating employees from the relationship between colleagues and superiors. Therefore, it is necessary to closely analyze the stress faced by IT employees in order to help them to feel more satisfied to work effectively.

4. Job Stress of Information Technology Employees at Hanoi Open University

With the distance learning method, HOU has brought learning opportunities to many people across the country, contributing to university's goal of building a learning society and lifelong learning from the delta to mountainous, island, deep-lying and remote areas of all economic sectors. HOU is the pioneer in applying assisted advanced technologies and implementing the "Open Education" model to develop the scale and continuously innovate training technology to improve training quality.

HOU has continuously improved, renovated training management, increased investment in facilities and technology infrastructures and strengthen cooperation with the training establishments throughout the country. To operate online teaching and learning effectively to serve various learning needs of working people, HOU's employees especially ones of IT have worked very hard to create the best online learning conditions for the sake of learners' interests. In fact, HOU has gained significant achievements in building and fostering advanced technology system, ensuring online teaching and learning process go smoothly and effectively. This result has gradually affirmed HOU's prestige in meeting the increasing requirements of a long - life learning society in the integration era.

These significant achievements result from the productivity and efficiency of all HOU employees in general and of ones in IT. Employees of IT should work very hard regardless of time to maintain stable platforms and strong internet for virtual classes to go on time as schedules. In addition, they are willing to support teachers and learners in needs in terms of technologies in the right time to make teaching and learning processes effective. Therefore, the work pressure of the technology sector is higher than ever especially in the digital era.

HOU has tried their best to reduce workplace stress by implementing favorable internal principles and flexible working mechanism. This creates positive effects on enhancing employees' job satisfaction and as a result raises university's productivities. However, in the digital era, IT employees at HOU are under higher pressure due to increasing demand of a long - life learning society. Dealing with JT, a costly, time-consuming and problematic factor, requires efforts of not only HOU's management but also all units within university and all employees themselves. In order to reduce JT of IT employees, HOU need to identify the factors affecting JT faced by IT employees and find solutions for them to overcome it effectively.

5. Methodology

The study used a quantitative research methodology basing on the data collected via the survey questionnaire. Quantitative research using the survey which offers a cost-effective to evaluate IT employees' JS in terms of workload, role ambiguity, transformational leadership, workplace relationship at HOU to collect the primary data from the respondents for the reducing IT employees' JS at HOU. The respondents of the study are 120 IT employees of HOU.

The survey consists of two parts. The first part was to gather the respondents demographic profile. The second one was designed to assess the JS of IT employees at HOU. The statements were organized applying the 5-point Likert scale ordering from 1 = strongly disagree (SD), 2 = disagree (D), 3 = neutral (neither agree nor disagree) (N), 4 = agree (A) and 5 = strongly agree (SA). The statements' interpretation was ranked from *very high, high, average, low, very low* basing on the 5-point Likert scale from 1 to 5 respectively. The validating and establishing's method of Likert scale's reliability was applied (Zikmund, 2010). The scale below was used in the survey questionnaire:

Scale	Range Interval	Choice Description	Descriptive Interpretation
5	4.20 – 5.00	Strongly Agree (SA)	Very high
4	3.40 – 4.19	Agree (A)	High
3	2.60 – 3.39	Neither Agree nor Disagree (N)	Average
2	1.80 – 2.59	Disagree (D)	Low
1	1.00– 1.79	Strongly Disagree (SD)	Very low

6. The Findings

The survey questionnaire was conducted to gather the data on the current IT employees' JS at HOU in terms of *workload (WL), role ambiguity (RA), transformational leadership (TL), and workplace relationship (WR)*. The respondents were required to which extend they agreed or disagreed with the proposition on a 5-point Likert scale.

The author conducted statistical data on 120 valid samples with the centralized measurement parameter being the weighted mean and standard deviation (Std. Deviation). The statistical results in terms of IT employees' JS at HOU reveal as below.

Table 1: IT Employees' Job Stress Results from Workload at Hanoi Open University

IT employees' job stress at Hanoi Open University	Descriptive Statistics			
Workload	Weighted mean	Std. Deviation	Descriptive rating	Descriptive Interpretation

WL1	3.84	.947	A	High
WL2	3.83	.988	A	High
WL3	3.80	1.024	A	High
WL4	3.81	1.013	A	High
Average value	**3.82**	**.993**	**A**	High

Source: Developed from the Results of the Survey Questionnaire

The table 1 above-mentioned shows that workload at HOU is rather high with an average value of 3,82 points. There are 2 variables with the standard deviations less than 1, accounting for 50% of the total observed variables. This shows that the two opinions obtained about the variables are equally different.

IT employees at HOU face burnouts due to long working hours. They are unable to plan and demonstrate steps to complete the tasks on time. IT staffs fail to arrange work according to priority order and perform the work in the most reasonable way. They are unable to break down their work to follow each step and be reviewed by managers. IT staff feel scared and stressful when receiving many projects at the same time. This clearly reflects HOU's requirements for creating conditions to lessen workload for IT employees to reduce workplace stress.

Table 2: IT Employees' Job Stress Results from Role Ambiguity at Hanoi Open University

IT employees' job stress at Hanoi Open University	Descriptive Statistics			
Role Ambiguity	**Weighted mean**	**Std. Deviation**	**Descriptive rating**	**Descriptive Interpretation**
RA 1	3.92	.943	A	High
RA 2	3.93	.954	A	High
RA 3	3.95	.939	A	High
RA 4	3.88	.997	A	High
RA 5	3.92	.947	A	High
RA 6	3.95	.920	A	High
Average value	**3.93**	**.950**	**A**	High

Source: Developed from the Results of the Survey Questionnaire

The table 2 above-mentioned illustrates that role ambiguity at HOU is quite high with an average value of 3,93 points. The standard deviations of all variables are less than 1. This implies that the opinions obtained about the observed variables are the same. This can be inferred from the survey results that HOU's IT employees are not very clear about the ways to apply advanced technologies at work.

The survey results show that HOU's IT employees currently work in an interdependent and uncertain working environment; therefore, role ambiguity seems unavoidable. Effective feedback-seeking strategies from coworkers and supervisors need implementing to minimize the negative effects of role ambiguity encountered by IT employees at HOU. It is high time for HOU to build principles to guide IT how to implement their work with the assisted technologies.

Table 3: IT Employees' Job Stress Results from Transformational Leadership at Hanoi Open University

IT employees' job stress at Hanoi Open University	Descriptive Statistics			
Transformational Leadership	**Weighted mean**	**Std. Deviation**	**Descriptive rating**	**Descriptive Interpretation**
TL1	3.84	1.048	A	High
TL2	3.80	1.056	A	High
TL3	3.81	1.046	A	High
TL4	3.84	1.028	A	High
TL5	3.85	1.020	A	High
TL6	3.86	1.023	A	High
TL7	3.83	1.045	A	High
Average value	**3.84**	**1.038**	**A**	High

Source: Developed from the Results of the Survey Questionnaire

The results of the table 3 demonstrates that transformational leadership at HOU is rather high with an average value of 3,84 points. The standard deviations of all the observed variables are more than 1. This shows the opinions obtained about the variables are the same, concerning that HOU's leaders need to improve their management style.

It is obvious that there is lack of training courses for management leaders. Transformational leaders typically consider the moral and ethical consequences of decisions. Some training courses on leading others to challenge assumptions, taking risks, fostering innovation and guiding how to coach and mentor others typically involve opportunities to role-play. It is time for HOU to associate with training leadership courses to deal with common university issues and related problems.

Table 4: IT Employees' Job Stress Results from Work Relationship at Hanoi Open University

IT employees' job stress at Hanoi Open University	Descriptive Statistics			
Work Relationship	**Weighted mean**	**Std. Deviation**	**Descriptive rating**	**Descriptive Interpretation**
RL1	3.79	.990	A	High
RL2	3.74	1.045	A	High
RL3	3.77	1.012	A	High
RL4	3.80	.979	A	High
RL5	3.82	.966	A	High
RL6	3.82	.953	A	High
RL7	3.82	.967	A	High
RL8	3.81	.994	A	High
RL9	3.80	.994	A	High
RL10	3.77	1.012	A	High
RL11	3.83	.963	A	High
RL12	3.80	.994	A	High
RL13	3.89	.868	A	High
Average value	**3.80**	**.980**	**A**	High

Source: Developed from the Results of the Survey Questionnaire

The table above-mentioned shows that work relationship at HOU is rather high with an average value of 3,80. There are 3 variables with standard deviations higher than 1, accounting for 23%. This shows that HOU needs to find solutions to build stronger relationship among employees. It is obvious that IT staff at HOU work quite independently and rarely co-operate with one another to work in a community.

It can be inferred from the survey results that favorable conditions have not created for managers to implement university's processes and regulations to make employees feel comfortable. IT staff in different faculties and departments of HOU do not really carry out collective actions to demonstrate the core values of HOU together. Therefore, IT employees from different units within HOU need to be given the opportunities to work together, contribute ideas together to promote the spirit for the common goals.

Table 5: IT employees' job stress at Hanoi Open University

Statements	Descriptive Statistics		
IT employees' job stress at Hanoi Open University	Weighted mean	Descriptive rating	Descriptive Interpretation
Workload	3.82	A	High
Role ambiguity	3.93	A	High
Transformational leadership	3.84	A	High
Workplace relationship	3.80	A	High
Overall weighted mean	**3.85**	**A**	**High**

Source: Developed from the Results of the Survey Questionnaire

The table 5 above-mentioned demonstrates the survey questionnaire's results on IT employees' job stress at HOU. The overall weighted mean of retention practices at HOU is 3.85, which is in the high level. It can be implied that the current level of JS encountered by IT employees at HOU need solving. The respondents agree that all the four factors namely *workload, role ambiguity, transformational leadership, and workplace relationship* with the average weighted means of 3.82, 3.93, 3.84 and 3.80 accordingly. This implies that HOU should build strategies to reduce workplace pressure faced by IT staff in order to improve university productivities.

7. Recommendations to Reduce Job Stress of IT Employees at Hanoi Open University

In order to reduce JS of IT employees at Hanoi Open University, the researchers would like to propose the following recommendations:

In terms of workload solutions

Firstly, HOU needs to perfect and enforce the Project on Working Placement in all fields in general and of IT field in particular. This is the basic foundation for HOU to ensure all employees especially IT ones are put the right place and given a suitable workload to fulfill. In order to do this, HOU should base on job analysis focusing on employees' tasks, responsibilities, ambition and interests in performing work. The requirements for each position should be specific and clear, which will enable HOU to measure IT employees' workload and assign them a suitable workload.

Secondly, HOU should strengthen operational effectiveness of IT Specialized Center in supporting IT employees in all units within university to solve relating - technology problems. This center provides IT employees opportunities to collaborate with each other, sharing ideas and making suggestions or changes directly on the platform. This support and allows IT team members to learn skills and experiences from other colleagues.

Thirdly, HOU should develop reasonable recruitment plans, especially on occasions when the IT department receives many projects. HOU can refer to the plans to recruit more interns or service contracts to have more resources to support IT staff to work and share workload for employees. Managers can provide resources to help IT employees achieve success in the form of staffing, hardware, software, or other areas that would complement the operational goals. To do so, manager should determine IT employees' capacities to assign them tasks and projects based on their strengths, which motivates them to complete the work effectively and as a result, increasing their productivities.

Fourthly, the IT leader or project manager is responsible for drawing the tasks plans and setting the deadlines for the tasks. The leader's communication with his/her IT employees should be clear about what is expected from the remote IT employees who works in setting expectations on time and the quality of work. The leaders should show maximum support to solve the issues and ensure IT employees are capable in the task's decision-making process and deadline expectations.

Role ambiguity solutions

Firstly, HOU should give IT employees different development career directions. IT employees will have the choice of developing in a management direction or developing in-depth expertise. This helps them to choose the right development path for themselves as well as to be aware of their role in their working unit and in university.

Secondly, HOU should invest in socialization mechanisms to clarify job roles through on-the-job training programs that link IT newcomers with more experienced colleagues in similar job positions. These mechanisms create transparency about the ends (e.g. specific performance goals) and means (e.g. time, budget) of IT employees' job requirements, for both senior members and junior ones. Managers should provide a greater sense of task identity so that the beginning and ending of each task is readily determined. In other words, the specific procedures of a particular task should be performed to help IT employees to have a better understanding of performing the tasks.

Thirdly, HOU should organize meetings for managers and staff to review their work's aims and objectives so that they can better understand their roles. Communication is a fundamental part of effectively dealing with role ambiguity. Managers at HOU need to give IT employees a clear definition of tasks and priorities related to the job. This will enable IT employees to identify the task objectives and reasons for carrying out the task to define the sequence in which subtasks should be performed.

Fourthly, HOU should open feedback forums to allow IT employees to obtain accurate and objective appraisals of their performances. Selecting the right individuals is crucial for ensuring team success. This ensures that the success can be reached through selecting individuals who either have prior exposure in working with cross functional teams or who have already worked together. Supervisors need to ensure that team members are clear about their goals, roles and responsibilities by providing detailed and prompt feedback within the team.

Transformational leadership solutions

Firstly, HOU should promote leadership development programs for IT employees. In other words, HOU needs to clarify job classification and capacity development for IT employees. This programs help managers to clarify where IT employees are and give them useful plans to become managers in the future. In fact, this project has opened a major reform step to enable IT employees to have more conditions to develop their careers. This projects help IT employees at HOU to understand clearly where they are and motivate all employees to develop, string to reach higher in their careers

Secondly, HOU should organize special forum for IT employees to submit ideas to improve their own working processes and working experiences. The innovative and creative ideas of IT employees will be directly managed and rewarded for outstanding ideas. This forum creates a willingness to accept change and risk and a culture that encourages knowledge sharing and creative problem-solving.

Thirdly, HOU should build university culture which foster the working environment where IT employees can enjoy, incorporating perks, events, and benefits in an effort to make each individual feel appreciated by the organization and thus motivated to work harder. Putting a similar emphasis on culture from a transformational leadership perspective can go a long way in the workplace. It is important to make sure IT employees feel appreciated and respected by utilizing transformational methods to ensure the environment encouraging collaboration, innovation, and communication.

Workplace relationship solutions

Firstly, HOU should build good connections and relationships between the Board of Directors and all units within university. Promoting a more collaborative approach will not only unite IT employees to fulfill university missions but also enable employees to improve of their performances through peer learning. Online portals where IT team members can share their work or ideas and receive support and feedback can develop a more collaborative experiences. Making IT employees feel more like a team instead of personal rivals can make the workplace a more harmonious environment instead of a battlefield.

Secondly, HOU should create meetings, parties in person or online for IT employees to build their own relationships with colleagues within university and with other universities. Social activities provide opportunities for colleagues to know each other in a more informal settings. This improves not only working relationships among colleagues, but also stimulating casual gatherings for IT employees' engagement and encouragement. HOU can also hold occasional team lunch, after-work drinks or maybe even a game night to create a great value for IT employee to improve their workplace relationships.

CONCLUSION

The pressure of constantly delivering successful results and intense working environment are threatening workers' physical and psychological well-being. JS is on the rise across universities, negatively affecting employees as well as the organizations. This problem is even more severe in IT field. JS has drawn the attention of many universities' leaders because when employees suffer from

stress, they will work less effectively. Their performances will lead to a decrease in productivity. Dealing with JS requires efforts not only from universities' management but also from all units within universities and from employees themselves.

This study attempts to identify the factors leading to work stress faced by IT employees at HOU. Basing on some established theories and empirical studies on JS, the researcher has generalized the factors leading to JS of IT employees at HOU's known as workload, role ambiguity, transformational leadership, workplace relation. Basing on the research results, the researcher proposes some solutions for HOU to lessen IT employee's stress at work. The study also develops specific ways to implement these solutions to build a better working environment to enhance IT employees' satisfaction, aiming at improving employees' and university performances.

REFERENCES

1. Andrew, M. K., Mitnitski, A. B., & Rockwood, K. (2008). Social vulnerability, frailty and mortality in elderly people. PLoS one, 3(5), e2232.

2. Armstrong, G. S., & Griffin, M. L., (2004). Does the job matter? Comparing correlates of stress among treatment and correctional staff in prisons. *Journal of Criminal justice*, 32(6), 577-592.

3. Bogdanowicz, M. S. & Bailey, E., K (2002), The value of knowledge and the values of the new knowledge worker. Generation x in the new economy. *Journal of European Industrial Training*.

4. Bushara, B. and Rajiv, K. J., (2012), 'organisational role stress among public and private sector employees: A comparative study', *the Lahore journal of business*, vol.1,No.1,pp.23-36.

5. Dhar, R. L., & Dhar, M., (2010). Job stress, coping process and intentions to leave: A study of information technology professionals working in India. *The Social Science Journal,* 47(3), 560-577.

6. Halbesleben, J.R. and Buckley, M.R., (2004). Burnout in organizational life. *Journal of management*, 30(6), pp.859-879.

7. Ibraheem, S., Mohammad, S., AL-Zeaud, H. and Batayneg, A.M., (2011). The relationship between transformational leadership and employees' satisfaction at Jordanian private hospitals. Business and Economic Horizons (BEH), 5(1232-2016-101155), pp.35-46.

8. Jibril, M.A., (2007). Managing Stress At Work. African Research Review, 1(1), pp.92-99.

9. Kahankova, R., Kolarik, J., Brablik, J., Barnova, K., Simkova, I. and Martinek, R., (2022). Alternative measurement systems for recording cardiac activity in animals: a pilot study. Animal Biotelemetry, 10(1), pp.1-21.

10. Leung, M.Y., Chan, Y.S.I. and Dongyu, C., (2011). Structural linear relationships between job stress, burnout, physiological stress, and performance of construction project managers. Engineering, Construction and Architectural Management.

11. Meliá Navarro, J.L. and Becerril Galindo, M., (2007). Psychosocial sources of stress and burnout in the construction sector: a structural equation model. Psicotthema.

12. Mirkamali, S.M., Thani, F.N. and Alami, F., (2011). Examining the role of transformational leadership and job satisfaction in the organizational learning of an automotive manufacturing company. Procedia-Social and Behavioral Sciences, 29, pp.139-148.

13. Muhammad, G. E. (2012). Creating spaces for Black adolescent girls to "Write it out". Journal of adolescent and Adult Literacy, 56(3), pp.203-211.

14. Prasad, K. D. V., Vaidya, R., & Kumar, V. A. (2016). A Comparative Analysis: Causes of Stress among the Employees and its Effect on the Performance at the Workplace in Agricultural Research and Information Technology Sectors. *AIMA Journal of Management & Research*, 10(4/4), 1-23.

15. Sias, P.M., Pedersen, H., Gallagher, E.B. and Kopaneva, I., (2012). Workplace friendship in the electronically connected organization. Human Communication Research, 38(3), pp.253-279.

16. Umesh, B. S., & Sivakumar, K. (2016). Dual-inverter-fed pole-phase modulated nine-phase induction motor drive with improved performance. IEEE Transactions on Industrial Electronics, 63(9), 5376-5383.

17. Weijing, C. and Hongchun, Y., (2011). Analysis of the predictive indicators of knowledge workers' job burnout: A perspective of organization. In MSIE 2011 (pp. 171-173). IEEE.

18. Yahaya, A., Yahaya, N., Arshad, K., Ismail, J., Jaalam, S., & Zakariya, Z., (2009). Occupational stress and its effects towards the organization management. *Journal of Social Sciences,* 5(4), 390-397.

19. Zikmund W. G., Babin, B.J., Carr, J.C. & Griffin M. (2010). *Business Research Method*. Mason, Ho: Cengage Learning.

EXISTING STATUS OF JOB STRESS

Please use the scale below to evaluate the existing status of job stress of IT employees at Hanoi Open University.

PART I: DEMOGRAPHIC AND WORKING PROFILE OF RESPONDENTS

Please fill-up all the items in this questionnaire and kindly tick the space that corresponds to your answer.

1. Name: _____   5. Gender: _____
2. Age: _____   6. Position: _____
3. Profession:_____   7. Department: _____
4. Highest Educational Attainment: 8. Length of Work Experience in IT field:

Elementary ☐	Less than one year ☐	
High University ☐	One year to less than two years ☐	
College ☐	Two years to less than five years ☐	
Masters Degree ☐	Five years to less than ten years ☐	
Doctoral Degree ☐	Ten years or more ☐	
Other Training, please specify _____		

PART II: SURVEY QUESTIONNAIRE

   A. EXISTING STATUS OF JOB STRESS

Please use the scale below to evaluate the existing status of job stress of IT employees at Hanoi Open University.

DESCRIPTIVE INTERPRETATION

SCALE

5	Strongly Agree (SA)
4	Agree (A)
3	Neither Agree nor Disagree (N)
2	Disagree (D)
1	Strongly Disagree (SD)

JOB STRESS STATUS	5	4	3	2	1	Results
Workload						
WL1. My job requires work very fast.						3.84
WL2. My job requires working very hard.						3.83
WL3. I am asked to do excessive amount of work.						3.80
WL4. My job is very hectic.						3.81
Overall weighted mean of Workload						**3.82**
Role Ambiguity						
RA 1. I do not have clear, planned goals and objectives for my job.						3.84
RA 2. I do not know that I have divided nay time properly.						3.80
RA 3. I do not know what my responsibilities are.						3.81
RA 4. I know nothing what is expected of me.						3.84
RA 5. I feel uncertain about how much authority I have on the job.						3.85
RA 6. Explanation is unclear of what has to be done.						3.86
Overall weighted mean of Role Ambiguity						**3.93**
Transformational Leadership						
TL1. My manager makes me proud to be associated with him/her.						3.84
TL2. I have complete faith in my manager.						3.80
TL3. My manager expresses appreciation when I do a good job.						3.81
TL4. My manager has a "sense of mission" which he/she transmits to me.						3.84
TL5. My manager develops ways to encourage me.						3.85
TL6. My manager enables me to think about old problems in new ways. My manager emphasizes my use of intelligence to overcome obstacles.						3.86
TL7. My manager makes me proud to be associated with him/her.						3.83
Overall mean of Transformational Leadership						**3.84**
Work Relationship						
WR1. There is a mutual relationship between supervisors and subordinates.						3.79
WR2. Supervisors rely on their subordinates and subordinates rely on their supervisors.						3.74
WR3. Supervisors communicate openly with their subordinates and likewise subordinates communicate openly with their supervisors. Supervisors support their subordinates and subordinates support their supervisors.						3.77
WR4. Supervisors feel free to give feedback to their subordinates and subordinates feel free to give feedback to their supervisors.						3.80
WR5. Supervisors often express gratitude to their subordinates and subordinates also often express gratitude toward their supervisor.						3.82
WR6. Supervisors follow what they have promised to their subordinates and subordinates follow what they have promised to their supervisors, too.						3.82
WR7. Supervisors allow subordinates to participate in decision - making and subordinates can make their own decisions.						3.82
WR8. The supervisor can get the cooperation of subordinates easily and subordinates can get the cooperation of supervisors easily.						3.81
WR9. There is a mutual relationship between supervisors and subordinates.						3.80
WR10. There is a mutual respect among employees.						3.77
WR11. Employees can depend on each other.						3.83
WR12. Employees can easily get the cooperation of other employees in community programs or activities.						3.80
WR13. Employees can communicate openly to other employees without hesitation.						3.89
Overall mean of Work Relationship						**3.80**

PERCEPTION OF TUTOR PERFORMANCE TOWARDS MATHEMATICAL LEARNING IN ELEMENTARY SCHOOL

Ranak Lince[1] & M. Arifin Zaidin[2]
Open University-Indonesia-Makassar
lince@ecampus.ut.ac.id

ABSTRACT

This study examines how the tutor's work perception of mathematics learning courses in the Distance Learning Program Unit of the Open University of Makassar. The study population was 241, and the sample was assigned 24 students, or 10% of the total population. This study used purposive samples. The data collection technique is used as a closed questionnaire, and the distribution is carried out online to students who take part in webinar tutorials for mathematics learning courses. The data analysis technique used in this study is a descriptive qualitative data analysis technique. Descriptive qualitative data analysis techniques include data description, reduction, categorization, interpretation, and inference. The results showed that the performance of tutors in webinar tutorials on mathematics learning courses in elementary schools, the percentage achieved was very high, namely 98.33%, and for one person, the ratio was less, namely 4.16%. Thus, it can be concluded that in the implementation of the webinar tutorial, the tutor introduces himself to students, conveys the rules for implementing it, and means the specific competencies to be achieved. The scope and benefits of the tutorial provide explanations of material and examples outside the module, use sound and correct Indonesian, are polite in the webinar tutorial, and motivate students to be active in webinar tutorial activities. The perception of the performance of tutor tutorials conducted by students focuses on webinar tutorials on mathematics learning lessons in elementary schools in the Distance Learning Program Unit of the Open University of Makassar. The tutor provides opportunities for students to ask, answer, and respond. In the closing stage of the tutorial, the tutor asks two or three students to give the conclusion of the tutorial material. The tutor provides reinforcement and assigns the task of identifying problems that are considered problematic, which will be the subject of subsequent tutorials. Indicators-indicators of the performance of such tutors, the tutor executes well and measurably. The perception of the performance of tutor tutorials conducted by students focuses on webinar tutorials on mathematics learning lessons in elementary schools in the Distance Learning Program Unit of the Open University of Makassar.

Keywords: Performance, mathematics, learning, perception, Open, University.

INTRODUCTION

Knowledge positively and significantly affects innovation performance (Papa, 2018). In (Pranogyo AB et al. 2021), then it is stated that performance orientation can encourage the search for positive feedback on performance from or negative feedback on peer performance to obtain profitably or avoid unfavorable evaluations (Yoping gong et al. 2021) (Pranogyo AB et al. 2021),

The concept of performance is a process in the embodiment of work to achieve specific results. Performance is a comparison between input and output. Related to performance, Pranogyo AB et al. (2021: 9) mentioned that performance is a series of measures related to the achievement of a person's work results, both quality, and quantity, in carrying out tasks by predetermined performance standards or the work to achieve organizational goals.

Kinerja pada dasarnya menekankan pada apa yang dihasilkan (output) atau manfaat what is excluded (outcome) from the functions of a job through an input management process (Hartati A. et al. (2022). Furthermore, performance is the level of achievement or tangible results that are calculated periodically both in quality and quantity based on predetermined goals, standards, or criteria as a result of the authority and responsibility of a job in a company or organization (Effendi, 2008) in (Hartati A. 2022).

Performance issues are inseparable from tutors' performance in the Open University of the Makassar Distance Learning Program Unit's webinar tutorials. These performances do not ignore knowledge, skills, and behavior competence. Tutors in carrying out their duties in webinar tutorials by prioritizing knowledge, skills, and behavior are essential to achieve specific results, namely carrying out webinar tutorials according to the performance signs of a tutor related to mathematics learning courses. Good tutor performance will create a quality tutorial atmosphere and a measurable work ethic, and students will gain an adequate learning experience.

Several research results related to perception, performance, and mathematics, namely (Yoana Nurul Asri, 2018), and Dyah Ayu Ningsih Ali Imron, Teguh Triwiyanto (2018), the correlation between student perceptions of lecturer performance affects student graduation rates with scores equal to 0.625 in the excellent category.

Suwondo D.I., & Sutanto E.D. (2015), Husni I. (2014), Damanik R. (2019), Rina R.P., Setyaningrum M., and Sundari S. (2014) a comfortable work environment and a high level of work discipline will improve employee performance. There is a significant relationship between work ethic and teacher performance of SMKN 1 Lubuk Sikaping. Between teacher competence and teacher performance, there is a meaningful relationship. Competence has an influence relationship on professionalism, and professionalism has an influence relationship on lecturer performance. Competence directly has an influence relationship on the performance of lecturers. Sofyan Husein Nasution (2019) This interactive multimedia affects students' mathematical concept comprehension ability. Lilis Novitasari and Leonard (2017) significantly influence the ability to understand mathematical concepts on mathematics learning outcomes.

LITERATURE REVIEW

1. PERCEPTION

Perception is interpreting a stimulus received by the five senses into an understanding. The brain will translate the inspiration from the sensory apparatus to generate an agreement that will influence how the individual behaves or responds to a stimulus. This perception will then move a person to be able to organize and manage himself in an activity.

Harish and Masiming (2008: 29) stated that perception is influenced by factors such as experience, knowledge background, physical, social, and cultural background. Suharto and Fajri (2018: 41) the nature of perception as something related to symptoms and experiences possessed. The more experience and knowledge a person has, the stronger the perception. Sugiharto (2007) states that perception is the brain's ability to translate a stimulus or process to translate an inspiration that enters into the human sensory apparatus. In human perception, there are different points of view in sensing. Some perceive something as good or a positive perception or a negative perception that will affect human actions that are visible or real. Perception is the process by which the brain executes to interpret sensory information transforming it into a meaningful picture of the outside world (Jeffrey S.Nevid, 2021:50).

2. PERFORMANCE

Performance is the willingness of a person or group to carry out something of activity and perfect it by its responsibilities with the expected results (Nasrullah Nursam, 2017:169). Wibowo (2007:3). Mentioning performance is derived from the word performance, which means the result of work or work achievement. But it is also necessary to understand that performance is not just the result of work or work achievements but also includes how the work process takes area. Performance is the result of work that has a strong relationship with the goals of the organization's strategy and consumer satisfaction and contributes to the economy (Amstrong and Baron, 1998:15).

Performance is interpreted as work achievement or the level of achievement of results, an employee/employee who is ongoing. (Sampe, 2014). The performance will be an actual issue in the organization because whatever the organization, performance is a crucial question to the effectiveness or success of the organization. A successful and effective organization is an organization with individuals who have good performance. (Sudarmanto, 2015). performance is the success achieved from work activities carried out by employees in an organization with full responsibility for their abilities (Noer Yasmin S. & Alit Sarino, (2019).

Echols & Shadily, 1975). Dan (Cardwell, 2003) in Pratisti W.D & Yuwono S. 2018: 138). The term perception comes from the English perception, which can be interpreted as (i) vision data and (ii) the response of the power of understanding or understanding. Perception is a combination of physiological processes and processes within the brain.

Physiological processes related to sensing and techniques in the brain are related to integrase and interpretation of information absorbed by the senses. Alwi H & Dendy S. (2014: 1061) perception means the immediate response (acceptance) of a person's process of knowing some things through his sensing.

3. TUTOR

3.1 Definition of Tutor

The National Education System Law, Number 20 of 2003, article 39 paragraph 2 states that tutors are professionals in charge of planning and implementing processes, assessing learning outcomes, conducting training guidance, research, and community service, especially for educators in universities. Meanwhile, in the reference book of the equality program, tutors are one of the components in the learning process that play a role in efforts to form students to become potential human resources in development. Therefore, the definition suggests that the position of tutors as educators must play an active role and place their work as educational personnel by the demands of society.

Barrows (1988: 18-20), quoted by the PAT-UT Development Team (2007: 6-7), mentions several principles that tutors should apply to be able to organize tutorial activities for the college level, namely (1) the tutor's interaction with the students should take area a metacognitive level, except for actions of a procedural nature such as scheduling. What is meant at the metacognitive level is the level of thinking that processes the thought process itself; for example answering the questions " why is this" and "how did it happen" (2), the tutor should guide the students meticulously in the whole step of the learning process that the Tutee must go through. For example, if the Tutee is asked to analyze a particular problem or situation, the tutor must be sure that the Tutee will follow the steps of logical thinking. If the Tutee is asked to research a case, the tutor must guide the Tutee in the synthesis process. Suppose the Tutee is asked to analyze an action contributed thoughts to the overall activity of the group, (8) tutors should avoid discussions that are merely tutor-tutee pattern interactions. However, the tutor must let go of his hands at any time if the learning process has gone well and only provide intervention if necessary.

The thirteen principles are suitable for peer tutoring and tutorials between lecturers and students, individually and in groups. However, to apply these thirteen principles, the tutor needs to develop a strategy of tutorial activities that suits various situations and needs.

3.2 Tutor Duties

Phil R. and Sally B. (2005: 13-27) mention some tutor tips for teaching learners (shiva/students).

1. Help learners prepare to start learning by (a) making sure they are provided with the appropriate information, (b) getting them to read ahead of time, (c) telling them why, (d) telling them about the intended learning outcomes, (e) consider providing a pre-learning package, (f) provide them with a pre-program list, (g) tell them about what

they should bring to the first program session, and (h) don't give them too much information.

2. Help learners explore how to learn best in a way: (a) start with their accomplishments, (b) make them think about how they have achieved a lot, (c) make them reflect on how to learn things well, (d) help them see that learning depends on their own, (e) ask them to think about something they like, (f) help realize how important feedback is, (g) remind that learning is not an entirely separate part of their lives, (i) help learn from disasters and also victories, (j) help them compare the causes of poor learning experiences, and (k) direct them to know the main factors that favor the success of pleasant learning

3. Help learners develop time management by (a) helping to see what's in it to get better at time management, (b) making them think consciously about learning that works, (c) helping them to stop and look back, (d) help them to set aside from the effects of procrastination, (e) direct them to set study deadlines for themselves, (f) help them feel optimistic about going beyond schedule, and (g) ask them to do a risk assessment, (h) help them maximize the use of their peers, and (i) assure that minutes can be counted over hours.

4. Assist learners in developing task management by (a) explaining how helpful the to-do list is, (b) directing them to prioritize their tasks, (c) suggesting creating a grid of urgency/importance, and (d) reminding them that tasks are often done younger if not too urgent, (e) encourage at least some multi-tasking, (f) suggest investing in a reward strategy, (g) remind them of human strength, (h) help them to celebrate the task, and (i) suggest using targets as well as deadlines.

3.3 Tutor Competencies

Competence is a combination of knowledge, skills, values, and attitudes reflected in the habits of thinking and acting. McAhsan (1981: 45) (quoted Muliyasa (2004: 38) mentions that competence is defined as knowledge, skills, and abilities mastered by a person who has become a part of himself so that he can perform cognitive, affective, and psychomotor behaviors to the best of his ability.

Gordon (Mulyasa, 2004: 38) explains some aspects or domains contained in the concept of competence as follows.

a. Knowledge (knowledge) is awareness in the cognitive field; for example, a teacher knows how to identify learning needs and how to learn students according to their needs

b. Understanding (understanding) is the cognitive and affective deepening possessed by the individual. For example, a teacher who will carry out learning must have a good understanding of the characteristics and conditions of students to be able to carry out learning effectively and efficiently

c. Ability (ability) is something an individual has to perform the task or work imposed on him. For example, the teacher's ability to choose and make simple props to make it easier to learn for students

d. Value (value) is a standard of behavior that has been believed and psychologically converged in a person. For example, teacher behavior standards in learning (honesty, openness, democracy, etc.)

e. Attitude is a feeling (happy-not happy, like-dislike) or reaction to a stimulus that comes from the outside. For example, the response to the economic crisis, the sense of rising wages, and so on

f. Interest is a person's tendency to do something. For example, the interest in learning or doing something.

Thaha (2008: 4) defines competence as the knowledge, skills, or abilities of a demonstrated individual (an individual's demonstrated relative, skills, or abilities). The tutor's competence is unconscious competence, which is if a person can do the job proficiently and do it automatically. Elliot A.J. et al. (2017: 25) mentioned that competence is a psychological motive that regulates daily experiences and shapes a person's self-concept. The self-confidence and emotions a person experiences result from developing competencies generated by thought.

It can be concluded that competence is an overview of what a person must know or do to carry out his work well (technically). Competence describes how a person is expected to behave by involving his psychological and emotional motives to complete his job well by the knowledge, skills, and abilities mastered to be part of him.

5. MATHEMATICS

Mathematics is one of the essential fields of study taught in formal educational institutions to improve the quality of education at the primary, secondary and tertiary levels. Human beings in real life are inseparable from mathematics. Without realizing it, mathematics becomes a part of life that is needed anytime and anywhere, so mathematics becomes essential. However, in learning mathematics, there are still obstacles that cause students to fail in this lesson." These constraints revolve around abstract mathematical characteristics, media problems, student or teacher problems"(Jihad, 2008:154)

The solution to obstacles experienced when studying mathematics requires maximum ability. Ability is the potential possessed by a person in mastering an innate skill or the result of exercises used to do something to be achieved. While solving mathematical problems is an activity to solve story problems, solve problems that are not routine, and apply mathematics to daily life or other circumstances (Hasanah &Surya, 2017).

Permendikbud Number 22 of 2016, one of the objectives of learning mathematics is to understand and describe the relationship between mathematical concepts and their application. This goal indicates that practical mathematics learning will give students

a new impression of learning mathematics. Mathematics learning is essential in everyday life. Mathematics can be viewed as the science of patterns and relationships. Mathematics is a symbolic language whose practical function is to express quantitative and spatial relationships, while its theoretical function is to facilitate thinking (Johnson in Mulyono Abdurrahman, 2003: 252).

Lerner in (Mulyono Abdurrahman, 2003) states that mathematics, besides as a symbolic language, is also a universal language that allows humans to think about, record, and communicate ideas regarding elements and quantities. Mathematics is the science of deductive thinking about logic, form, arrangement, magnitude, arithmetic, algebraic concepts, geometric analysis, the concept of counting, calculation, reasoning logic, and related to numbers that have strict rules and stand alone without relying on other fields of study (Susilowati D. 2019).

Vivi Aledya (2019). Mathematics is a means of finding answers to problems faced by man, using information, using knowledge of calculations, and most importantly, thinking man himself to see and use relationships. Mathematical ability is the ability to deal with problems both mathematical problems and in real life mathematical and real-life problems. Mathematics learning in Indonesia is behavioristic, emphasizing knowledge transfer and practice laws. The teacher dominates the classroom and becomes the primary source of knowledge, paying little attention to student activities, student interaction, and the construction of knowledge (Magdalene, 2018).

Fajriyah and Supardi (in Leonard, 2015: 3) mathematics is a symbol, a collection of characters and numbers that we must understand and concentrate on in each of their thoughts, which even consists of concepts of an abstract nature, thus requiring a diligent and meticulous understanding.

RESEARCH METHODS

This research uses the qualitative descriptive method. Qualitative research examines the condition of natural objects, and researchers as key instruments" (Sugiyono, 2011). The study population was 241, and the sample was set at twenty-four college students, or 10% of the total population. Data collection techniques are used closed questionnaires, and the distribution is carried out online to students who participate in webinar tutorials on mathematics learning courses. The data analysis technique used in this study is a descriptive qualitative data analysis technique. The steps of descriptive qualitative data analysis techniques include data description, data reduction, data categorization, interpretation, and inference. Data reduction is a form of analysis to sharpen, own, focus, create, and compile data for decision making. The presentation of data is carried out after data reduction and is carried out in the form of overviews, charts, tables, graphs, and relationships between categories. After the presentation of the data, the researcher concludes. The conclusions must be able to answer the formulation of the problem.

RESULTS AND DISCUSSION

Students' perception of tutor performance is the items carried out by tutors when conducting webinar tutorials for the 2022.1 tutorial period.

01. Tutors give greetings when giving webinar tutorials

Greetings are an essential part that tutors must do in the webinar tutorial process because it will create academic and emotional closeness between tutors and students. This educational and emotional closeness will provide a more flexible and amicable wiggle room. The percentage of this aspect of greeting delivery reaches 100%, which means that the tutors conduct webinar tutorials, beginning with the delivery of greetings to students who participate in webinar tutorials.

02. Tutors outline webinar tutorial rules clearly

The tutor's description of the rules of the webinar tutorial becomes very important to do before entering the presentation phase of the material because students can know their tasks during the tutorial. About 75% of tutors deliver webinar tutorial rules consistently, and 25% are less done always.

03. The tutor outlines specific competencies, scope, and material benefits.

In the preliminary phase, the tutor conveys particular competencies, scope, and material benefits to students before entering the material presentation phase. This phase is significant because students can acquire specific competencies to be achieved and understand the material's scope and benefits. Existing tutors with this phase reached 62.5%, and less existed 58.33%.

04. Tutors outline the material clearly and interestingly

The ideal tutor is a tutor who masters the material and learning methods. Mastery of the material and ways of bridging the ability to decipher interesting material and presentations. A clear and engaging description of the fabric gives students responses to participating in webinar tutorials. This phase is the phase of presenting the material, and the percentage reaches 65.5% mastering the description of the material and engaging, then lacking mastery of the content 33.33%.

05. Tutors outline additional material beyond the modules and easy-to-understand examples.

One additional task that students need to do is to provide supplementary material and examples outside the module to enrich their knowledge. Tutors gave very consistently with a percentage of 66.66%, at 33.33%, and a less consistent 4.16%.

06. Tutors use easy-to-understand language

The presentation of material that is easy to understand and attracts students' attention is when the production of the material is used in Indonesian, which is easy for students to understand. Tutors carried out this activity very communicatively, and the percentage reached 79.16% and less communicative at 20.83%.

07. Tutors are polite in giving a webinar

Interesting material relates to a polite attitude when presenting material in front of students. The tutor performed this courteous attitude with an achievement of 87.5% and a lack of politeness of 12.5%. Tutors motivate students to participate in webinar activities actively

The motivation of tutors in activating students to participate in webinar tutorial activities is essential to increase attention and concentration following tutorials. Students' engagement and concentration during the tutorial will get a learning experience by the specific competency targets that the tutor has set. Tutors who gave motivation for their achievements were 91.66%, and 8.33% did not explain.

08. Tutors give assignments/exercises to students at the end of each meeting.

One of the tutor's tasks is to give a task or exercise at the end of each meeting. The assignment or training at the end of each tutorial has implications for the achievement of tutorial-specific competencies and their contribution to providing a student learning experience. Unfortunately, there are 75% consistently giving tutorial final assignments, and 25% inconsistently assigned duties or exercises at the end of each tutorial.

09. The tutor discusses the assignments/exercises given in the previous week.
Ideally, every time a tutorial is implemented, the tutor discusses the results of assignments or exercises considered substantial to get to know or understand the material that is regarded as lacking. The tutors who re-discussed the achievements were 66.66%, and 33.33% did not re-discuss, then the tutor immediately started the following tutorial.

10. Tutors encourage students to participate in discussion activities/webinars actively.

One of the tutors' duties in the webinar tutorial is always to encourage student participation in discussion activities. It contributes to building consensus or attention to knowing and understanding the concepts born from discussion activities. However, tutors who carried out this activity achieved 88.33%, and 16.66% did not encourage student participation in terms of discussion.

11. Tutors allow all students to answer questions/respond to other student's answers in the webinar.

Providing opportunities for all students to answer and respond to all students. It is intended to build the intellectual intelligence and emotional intelligence of students. Unfortunately, the percentage of providing opportunities reached 75%, and 25% did not give options to students.

12. The tutor gives a closing greeting and directs the student to read the module at the next meeting.
The closing greeting phase is contained in the closing activity of the webinar tutorial. In this activity, the tutor provides an opportunity for students to give conclusions, and then the tutor provides reinforcement. In this activity, the tutor assigns students to read the module for the following tutorial. The closing phase with the opportunity to offer conclusions and assignments to read the module for the next tutorial was 83.33%, and the tutors who did not do the closing phase mentioned above were 16.66%.

The collective achievement of the tutor tutorial performance towards mathematics learning in the Distance Learning Program Unit of the Open University of Makassar can be seen in the following title chart.

Table 01. Collective Achievements of Tutor Performance

Activity	Achievement
Give a closing greeting	83.33
Allow time to ask and responses	75
Invite students to actively discuss	88.33
Give the final project of the meeting	66.66
Discuss previous week's tasks	75
Provide motivation to students	91.66
Be polite to students	87.5
Easy-to-understand language	79.16
Expand additional material	66.66
Describe the material clearly	65.5
Outline specific competencies	62.5
Break down the rules of the tutorial	75
Say hello	100

CONCLUSION

The quality of tutor performance is still below the average, with a percentage achievement of 73.04%. The quality of the performance of the webinar tutorial tutors in mathematics learning courses needs to be improved. The tutor needs to explain specific competencies, scope, and material benefits. Tutorial rules increased participation in tutorials and discussions. Tutors need to give friendly feedback and assign tasks in closing tutorials.

DAFTAR PUSTAKA

Alwi H. & Sugono D. (2014) Kamus Besar Bahasa Indonesia, Jakarta: PT Gramedia Pustaka Utama

Amstrong and Baron, (1998). Perfect Management, Institut of Personal and Development, London

Abdurrahman, Mulyono. 2003. Pendidikan bagi Anak Berkesulitan Belajar. Jakarta: Rineka Cipta.

Asri Y.N. (2018). Hubungan Persepsi Mahasiswa pada Kinerja Dosen Terhadap Tingkat Kelulusan Mahasiswa. Jurnal Pendidikan Islam Al Tanzim. Volume 2 Nomor 2 2018

Damanik R. (2019). Hubungan Kompetensi Guru dan Kinerja Guru. Jurnal Serunai Administrasi Pendidikan Vol 8, No. 2, Oktober 2019.

Departemen Pendidikan Nasional (2007) Pedoman Tutorial, Jakarta: UT

Elliot A.J., Dweck C.S. & Yeager D.S. (2017). Handbook of Competence an Motivation. Theory and Application. The Guilford Press New York London

Harisah, Afifah dan Zulfitria Masiming. (2008)Persepsi Manusia terhadap Tanda, Simbol dan Spasial. Jurnal SMARTek, Vol. 6, No. 1, Februari 2008: 29 – 43.

Hasan, N., & Jihad, L. (2008). The Salafi Madrasas of Indonesia. *The Madrasa in Asia: Political Activism and Transnational Linkages*, 247-274.

Hasanah, M. A., & Surya, E. (2017). Differences in the abilities of creative thinking and problem solving of students in mathematics by using cooperative learning and learning of problem-solving. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, *34*(01), 286-299.

Irda Husni (2014).Hubungan etos kerja dengan kinerja guru SMKN 1 Lubuk Sikaping. Jurnal Administrasi Pendidikan Bahana Manajemen Pendidikan Volume 2 Nomor 1, Juni 2014/341-831

Jeffrey S. Nevid, (2021). Sensasi dan Persepsi. Konsepsi dan Psikologi. Nusamedia

Leonard. (2009). Kinerja guru di DKI Jakarta (suatu tinjauan terhadap kompetensi dan kompensasi yang diterima guru di DKI Jakarta). Jurnal seminar nasional matematika Universitas Parahyangan Bandung.

Mulyono A. (2003). Pendidikan bagi Anak Berkesulitan Belajar. Jakarta: Rineka Cipta.

Mulyasa, 2004. *Kurikulum Berbasis Kompetensi : Konsep, Karakteristik, dan Implementasi*, Bandung : PT Remaja Rosdakarya.

Magdalena, Theresia, dan Edy Surya. (2018). Pengaruh Model Pembelajaran Means-Ends Analysis Terhadap Kemampuan Pemecahan Masalah Matematika Siswa Pada Kelas X SMA Swasta Bhayangkari Rantauprapat. Jurnal Sinastekmapan. Vol 10 (1), hal 1165-1173.

Nursam N, (2017). MANAJEMEN KINERJA. Kelola: Journal of Islamic Education Management Vol.2, No.2 Oktober 2017, Hal 167 – 175. ISSN : 2548 – 4052

Noer Yasmin Supriyadi, & Alit Sarino, (2019). Kunci untuk meningkatkan kinerja, Jurnal Pendidikan Manajemen Perkantoran, Vol. 4, No. 1, Januari 2019

Ningsih D.A., Imron A., & Triwiyanto T. (2018). HUBUNGAN PERSEPSI TENTANG KUALITAS DAN PELAYANAN PENDIDIKAN DENGAN KEPUASAN ORANG TUA SISWA SEKOLAH MENENGAH KEJURUAN NEGERI. JAMP: Jurnal Adminitrasi dan Manajemen Pendidikan. Volume 1 Nomor 2 Juni 2018, 245-254

Phil Race and Sally Brown, (2005). 500 Tips for Tutors, RoutledgeFalmer 2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Pratisti W.D & Yuwono S. (2018). Psikologi Eksperimen. Konsep, teori, dan aplikasi. Surakarta, Mummadiyah University Press

Rina R.P.,Setyaningrum M.& Sundari St. (2014). Model Hubungan Kompetensi, Pprofesionalisme dan Kinerja Dosen. Jurnal Bisnis, Manajemen & Perbankan Vol. 1 No. 2 Edisi September 2014:157-174

Sampe, M. S. (2014). Pengaruh Kompetensi terhadap Kinerja Pegawai UPT Perpustakaan Universitas Hasanuddin. JUPITER, 22-25

Sofyan Husein Nasution (2019). Analisis Pemahaman Konsep Matematika Dalam Bentuk
Multimedia Interaktif.: https://www.researchgate.net/publication/333160481. DOI: 10.13140/RG.2.2.23312.66562. Researchgate.

Sugiartini, dkk. 2013. Pengaruh model pembelajaran metakognitif terhadap kemampuan pemecahan masalah matematika siswa kelas V SD gugus depan III kecamatan tejakula.
http://ejournal.undiksha.ac.id/index.php/JJPGSD/article/view/72

Sugiyono. (2011). Metode Penelitian Kuantitatif, Kualitatif dan R&D. Bandung: Afabeta

Suwarto dan Hulman Fajri. (2018). PersepsiOrang Tua terhadap Proses Bimbingan B e l a j a r A n a k d i R u m a h .Jurnal SAP Vol. 3 No. 1 Agustus 2018.p - I S S N : 2 5 2 7 - 9 6 7 Xe-ISSN: 2549-2845.

Suwondo D.I.,& Sutanto E.D.(2015). Hubungan lingkungan kerja, disiplin kerja, dan kinerja karyawan. JMK, VOL. 17, NO. 2, SEPTEMBER 2015, 135–144. DOI:10.9744/jmk.17.2.135–144. ISSN 1411-1438 print/ISSN2338-8234 online

Sugiharto, (2007). Psikologi Pendidikan. Yogyakarta: UNY Press.

Sudarmanto. (2015). Kinerja dan Pengembangan Kompetensi SDM. Teori, Dimensi Pengukuran, dan Implementasi dalam Organisasi. Yogyakarta: Pustaka Pelajar

Susilowati D. (2019). Meningkatkan minat dan hasil belajar matematika tentang operasi hitun dan penjumlahan pecahan berbeda penyebut melalui pendekatan realistic mathematic education siswa kelas V semester 1 SDN Banyuanyar 1 No. 109 Surakarta tahun ajaran 2016/2017. Konvergensi. ISSN 2301-9050

Thaha, N. & Hutapea P. 2008. *Komptensi Plus Teori, Desain, Kasus dan untuk HR dan Organisasi yang Dinamis*. Jakarta: PT Gramedia Pustaka Utama.

Undang-Undang Republik Indonesia Nomor 12 Tahun 2012 Tentang Pendidikan Tinggi, Bagian 7 Pasal 31.

Undang-Undang Republik Indonesia Nomor 12 Tahun 2012 Tentang Pendidikan Tinggi, Bagian 7 Pasal 31

Vivi Aledya (2019). KEMAMPUAN PEMAHAMAN KONSEP MATEMATIKA PADA SISWA. Laman: :https://www.researchgate.net/publication/333293321 Researchgate.

Wibowo, (2007). Manajemen Kinerja, Raja Grafindo Persada, Jakarta

Psychosocial Support and Mental Health Promotion Training Program in UP Open University: Basis for a Psychosocial Support Protocol for Faculty and Staff

Queenie R. Ridulme[1], Rachel Anne Joyce C. Sales[2], Larry N. Cruz[3], Michael P. Lagaya[4]

[1-4]UP Open University (Philippines)

Abstract

Being a distance education university and institution, UP Open University is unique in a way that its personnel (faculty and staff) can work in any setting (office, home, etc.). When the COVID-19 pandemic started, most of the UPOU employees were working from home and had minimal contact and socialization among each other. On top of that, a few personnel have been found positive with COVID-19 and one died because of it. Although UPOU have been vigilant in recording and monitoring the personnel for COVID-19, no formal psychosocial and mental health support has been provided to these affected personnel. Hence, it is imperative that the faculty and staff be trained in psychosocial support and mental health promotion. Numerous mental health and psychosocial activities can be carried out depending on the context. In this study, a training program on mental health and psychosocial support was provided for faculty and staff. It also includes promotion of mental health and activities and demonstrations of the related topic. The trained staff will be the mental health first aiders for the faculty and staff-in-distress in the university who will be providing support and reporting their needs to the human resource development office and referred to mental health professionals. From the outputs of the program, the university was able to develop a flow chart and protocol for faculty and staff in distress.

Keywords: Psychosocial support, mental health promotion, Open university

1 BACKGROUND OF THE STUDY

The COVID-19 pandemic has raised drastic changes in the working landscape worldwide, the government and organizations have implemented several health protocols that restrict the movement of people to mitigate the virus. During this time, employees have experienced restriction-induced job insecurity, financial issues, and adjustment challenges that could affect their psychological well-being. There are several pieces of literature which point out the consequences of the pandemic in the mental health of a person. Despite this, the attention to the promotion of mental health and psychosocial support is still low and needs improvement especially in the workplace.

The promotion of mental health consists of any action taken to create living conditions and environments that support mental wellness and allow individuals, families, groups, or communities to adopt and maintain healthy lifestyles fostering optimal emotional functioning and social inclusion (O' Reilly et al., 2018). LaMontagne et al. (2014) point out that, there is an increasing importance on the need to promote mental health and prevent mental illness worldwide, particularly in relation to what are known as "common mental disorders" of depression and anxiety which have not shown any recent signs of decreased occurrence. These conditions have immense social and economic impacts including loss of life, reduced capacity to work, substance misuse, family and relationship distress, costs associated with absenteeism, early retirement, and employee compensation (McDaid et al., 2019).

In the study of Magrove et al (2014), they concluded that many higher education (HE) staff provide support for psychological distress as part of their workloads, though most are untrained to do so. HE institutions should ensure that appropriate mental health awareness training is made available to employees and should encourage staff to complete this training if already available.

Last 2021, the University of the Philippines Open University created a Sub-Committee on Faculty and Staff in Distress which were tasked to develop and submit plans, programs, and mechanisms in dealing with employees experiencing problems. With these, the Sub-committee planned to conduct psychosocial support and mental health promotion training, identify focal persons per major unit in the university and to develop a referral protocol or Flow-chart. The mental health and psychosocial support protocol training enhanced the understanding of the determinants and protective factors for mental health well-being and the importance of psychosocial support. However, there is still a need to

conduct a study to have a basis for psychosocial support protocol for the faculty and staff in distress, thus, this study will identify the mental health and psychosocial needs of UPOU employees.

1.1 Theoretical Considerations

COVID-19 has fundamentally changed the working life of many, while some employees might enjoy working remotely and commuting less, there are still the general consequences of the pandemic such as threat to physical and mental health, lack of personal freedom, and increased future uncertainty (Konrad & Simon, 2021). On balance, it therefore seems most plausible to that life satisfaction and momentary happiness decline because of the pandemic, and even though we are slowly adapting to the new normal, life did not completely return to what was perceived as normal before the pandemic especially with regards to the lifestyle and psychological well-being of a person.

The pandemic could have severe effects on the mental health of the general population and of workers. In addition to the problems created by the pandemic, public health strategies, such as mandatory isolation, or quarantine in governments' temporary shelters, or the call for people to return to their original places, and social distancing, increase the feeling of loneliness, leading to mental problems that can contribute to suicide. Experts point out that both people who already suffered from psychiatric problems, and others who have never experienced symptoms, could be at risk (Rajkumar, 2020). The various psychological problems that will arise once the acute coronavirus emergency phase has passed are not receiving the necessary attention. Organizational and employment aspects have a considerable impact on psychological health, especially in the context of a global pandemic. The workplace therefore represents an important target towards which efforts should be directed to manage mental health issues related to the COVID-19 pandemic. In a recent study, Gunnel et al (2020) provided accurate predictions on how the effects on mental health of the pandemic could have an important psychological impact on the whole population if not mitigated. Thus, promoting the development of a preventive approach is essential to overcome such challenges even when the pandemic ends.

2 RESEARCH OBJECTIVES

The research study aims to:
1. describe the mental health and psychosocial need of UPOU employees
2. develop a mental health psychosocial protocol for faculty and staff in distress.

3 RESEARCH METHODOLOGY

3.1 Research Design
The study utilized a qualitative design to determine the current mental health and psychosocial needs of the respondents and to use this to develop a mental health psychosocial protocol for faculty and staff in the university.

3.2 Research Methods
Online interviews and Focus Group Discussions (FGDs) of participants were employed to gather data for the study. The researchers have prepared open-ended questions that will serve as a guide during the interview and discussions. These questions extracted the experiences and perspectives of the participants towards the planned mental health and psychosocial support protocol that will be used in the university.

3.3 Research Setting
The data collection was conducted in the University of the Philippines Open University (UPOU). The university was established on February 23, 1995 and pioneered in online teaching and learning in the Philippines. UPOU is envisioned as a leader in teaching and learning in the digital age, helping to equip Filipinos with the knowledge and skills they need for life and work in the 21st century.

3.4 Participants
The participants of the study were UPOU employees who have experienced remote work during the COVID-19 pandemic and are currently working in the university. The participants were research assistants, professors, lecturers, and administrative officers.

3.5 Data Analysis
The study utilized a qualitative data analysis to highlight the significant points that will be brought up by the participants regarding psychosocial support and mental health promotion training program during

the interviews and FGD.

3.6 Scope and Limitations

The study was done in UP Open University since the protocol will be used in the institution and will only focus on determining the employees' needs with regards to mental health and psychosocial support. Thus, the findings of this study may not be applicable to other institutions.

3.7 Ethical Considerations

The conduct of research requires not only expertise and diligence but also honesty and integrity. These are done to recognize and protect the rights of the participants. To render the study ethically, the rights to self-determination, anonymity, confidentiality, and informed consent was provided prior to the FGD and interviews. Participation in this study was voluntary and . No compensation will be given to the participants nor were the expenses shouldered in joining in the research, this will only benefit them when the protocol will be implemented in the university and once they can use the services that will be provided for mental health and psychosocial support.

4   RESULTS

For the given duration of the data collection of the research, we have interviewed seven (7) employees from the university aside from those who participated in the training program. These employees have different positions and length of working experience in the university. We are still planning to interview more staff from different departments to be able to get more knowledge on what their standing on this matter is and be able to provide a protocol that will be beneficial to all employees of the university. But in the meantime, we will use the current responses and analyze it.

4.1   University Staffs' Mental Health

Mental health includes a person's emotional, psychological, and social well-being. It affects how they think, feel, and act. It also helps determine how they handle stress, relate to others, and make healthy choices. According to the World Health Organization (2022), mental health is a basic human right and it is crucial to personal, community and economic development. Thus, it is important to determine and understand the mental health of the university staff to be able to protect and promote well-being and to address their needs based on their conditions. Before the interview, we have built rapport with the respondents and explained to them again the objective of the research, this is to build a safe space for them and to reassure them that we will only be using the responses as a basis for the protocol and for this academic paper.

All the respondents have experienced problems in coming to work due to physical and mental health issues. They experienced having a hard time waking up in the morning due to the feeling of fatigue. They have experience having a hard time focusing on one thing and this affects their work performance. During the pandemic, people have longer exposures to gadgets and tend to lose focus on one thing and end up doing other things aside from their work and responsibilities. One respondent even said that sometimes she feels empty and does not have the motivation to do anything, even socialize with friends since during the pandemic, the socialization has been limited and we have been used to just being at home and using our gadgets to be entertained. Now, the policy to return to work amidst the pandemic is causing new anxiety to the employees, and this is the right time that the organization also look into the adjustment issues and well-being.

Respondents also experienced having a hard time due to emotional problems. They tend to be anxious about things that are not yet happening and the things they need to do within the day which affects their work performance and deliverables. Sometimes, they tend to overthink their work deliverables leading to more time in finishing it and then sometimes they just do not feel like working at all due to the negative thinking especially while working at home since there is this feeling of uncertainty of what will happen next and there is no colleague to talk to. In the study of Vander Elst et al. (2017), they also found that those working more days at home experienced greater emotional exhaustion and cognitive stress associated with reduced social support from their colleagues. Similarly, in the study of Grant et al (2013), they identified colleagues' support and communication as important influences on psychological well-being.

4.2   The Need for Training and Support

We asked for the respondents' opinions of whether they are in favor of conducting mental health and psychosocial support training in the university and all of them agreed. One respondent thinks that this issue is actually a common problem with both students and staff inside the university that affects their performance in their works and academics especially during the pandemic. Until now, it seems that people still find it hard to admit they are suffering from these problems and are not seeking help. This leads to bigger problems and some even harm themselves eventually. Thus, she wanted that this protocol be implemented to be able to build awareness on this kind of situation inside the university.

Mental health problems cause a negative impact on an employee's productivity which can also lead to organizational problems. As mental health is a big part of physical health, the functionality of one's person would be affected and might also affect co-employees which could cause problems in the workplace. In our work inside the university, there are lots of tasks daily, which is sometimes stressful for employees, that is why support for these issues will greatly help and it is necessary that everyone will be made aware of this with proper implementation and guidance from the experts in these issues.

Speaking of experts, the university aims to train staff to become mental health first aiders in the university. Respondents agreed that this will benefit the employees of the university as long as the first aiders will have proper knowledge on what to do and will respect the staff's situation and be confidential about it. In their point of view, the first aiders could help by listening to employees when they need to vent out what they feel and what is going on in their mind. They can be the frontline people wherein employee's can feel safe to share their emotions and problems in work and in their life, this could prevent possible incidents and other possible problems brought out by mental illness. They could also be the ones who can relay the mental health problems of an employee to experts such as doctors if needed, since there are employees who are not comfortable to discuss their mental health problems to others due to being afraid of being judged. Therefore, it is good to have someone who can listen to them within the same work environment as this can make them feel that this person understands and can relate to what they are going through.

The respondents recommend that the training and workshops should discuss how a person could determine if someone is struggling with their mental health and tips on how to prevent things that can trigger a person into a meltdown in the workplace. Topics should also include ethics, attitudes toward co-employees, proper treatment and communication with your colleagues, and topics that could prevent mental and physical problems, such as discussing work-life balance which most of the people disregard nowadays. To be able to encourage people to attend these trainings and to utilize the mental health and psychosocial services, it is also important to discuss how to overcome this fear of the stigma when someone has a mental health issue, it is necessary to reassure the staff that they are in a safe environment and the process could help them and not make the situation worse for them. There is a need to raise awareness that the university has this initiative to tackle these kinds of issues and create a strategy on how to help those who are experiencing it; this will make the employees feel that they are important in the university and that the organization cares and understand on what they are going through especially now that the situation is slowly getting back to normal.

4.3   Willingness to Participate

All the respondents said that they are willing to participate in these kinds of training and workshops since they feel that it is also their responsibility as part of the organization to look after their colleagues to avoid problems and issues in the workplace. Also, some of them had experienced having mental and emotional breakdowns and having no support system in those moments are very difficult and they do not want others to have the same experience as them. One respondent reminded that these trainings should be properly planned to be able to achieve the goals of the program. There should be a line between encouraging and forcing employees to participate and open themselves immediately to the first aiders. They also believe that there is a need to have an organizational partnership with those institutions that are experts on mental health issues to be able to refer the employees to them when needed. With this, they think that there is a need to also have a proper flowchart that can be followed by the trained staff since there is also a limit on the extent of what they can do for someone who has a mental health issue.

4.4 Mental Health First Aiders/Mental Health Focal Persons

In the first training for mental health promotion in the university, the participants consented to be the first Mental Health First Aiders in their respective units. There were 24 participants who were trained as Mental Health First Aiders who will serve their own respective units' mental health and psychosocial needs. The training conducted were on Psychological First Aid, basic counseling skills and psychosocial interventions. At the heart of all these mental health psychosocial support to the employees, the Human Resource Development (HRDO) was the heart of it all. The university also identified three faculty members who served as the Mental Health Focal Persons in their respective faculties of study. These Mental Health Focal persons have background in nursing, psychological first aid and basic counseling skills. The skills they have have been very beneficial in addressing the concerns of the faculty and staff-in distress in the university during this pandemic times.

4.5 Psychosocial Support Protocol

From the interviews, FGDs and training conducted for employees, both faculty and staff, a protocol for mental and health promotion and psychosocial support was developed to address the needs of the employees. The HRDO in coordination with the Faculty and Staff in Distress Committee developed a protocol where all employees were informed on what to do when they experienced mental health distress

and in need of psychosocial support services. UPOU is now implementing and utilizing this protocol. (See Fig. 1)

5 CONCLUSION/RECOMMENDATIONS

The pandemic has resulted in many sudden and unexpected changes in work practices which potentially created uncertainty for employees. It has also created a boundary for communication and socialization in the workplace, thus leading to anxiety and other mental health issues. The implementation of health protocol during the pandemic is considered one of coping behaviors in suppressing the anxiety about being exposed or being infected with COVID-19, figuring out employees' mental health situation during and even after the pandemic will help the organization ease their employees' anxiety and improve their work performance. With the results of the research, it can be said that there is a need to have a mental health and psychosocial support in the university and we have created a psychosocial support referral flowchart as a tool that they can use when aiding a faculty or staff in distress. This can serve as a guide for the employees on what to do when a faculty or staff is in distress. With this, there is still a need to conduct more training and seminars and the university committee will also be conducting basic counseling skills for the assigned first aiders to be able to determine if the faculty or staff will be needing more help or not.

Figure 1. Psychosocial Support Flowchart
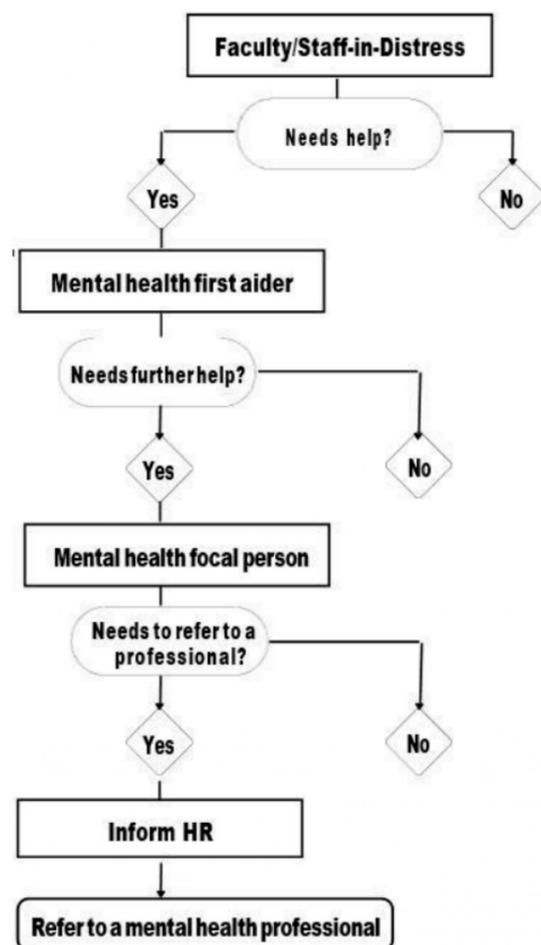
REFERENCES

[1] Grant, C.A., Wallace, L.M., & Spurgeon, P.C. (2013) An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and work-life balance. *Empl Relat.*, 35(5), 527–546.

[2] Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R.C., Pirkis, J., Caine, E.D.; et al. (2020). Suicide risk and prevention during the COVID-19 pandemic. *Lancet Psychiatry*, 7, 468–471.

[3] LaMontagne, A. D., Martin, A., Page, K. M., Reavley, N., Noblet, A. J., Milner, A. J., Keegal, T., & Smith, P. M. (2014). Workplace mental health: Developing an integrated intervention approach. *BMC Psychiatry*, 14, Article 131. https://doi. org/10.1186/1471-244x-14-131

[4] McDaid, D., Park, A., & Wahlbeck, K. (2019). The economic case for the prevention of mental illness. *Annual Review of Public Health*, 40, 373-389. https://doi. org/10.1146/annurev-publhealth-040617-013629

[5] Margrove, K.L., Gustowska, M., & Grove, L.S. (2014). Provision of Support for Psychological Distress by University Staff, and Receptiveness to Mental Health Training. *Journal of Further and Higher Education*, 38(1), 90-106.

[6] O'Reilly, M., Svirydzenka, N., Adams, S., & Dogra, N. (2018). Review of mental health promotion interventions in schools. Social Psychiatry and Psychiatric Epidemiology, 53, 647-662. https://doi.org/10.1007/s00127-018-1530-1

[7] Rajkumar, R.P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian J. Psychiatry.*

[8] Vander Elst, T., Verhoogen, R., Sercu, M., Van den Broeck, A., Baillien, E., & Godderis, L. (2017). Not extent of telecommuting, but job characteristics as proximal predictors of work-related well-being. *J Occup Environ Med.*, 59(10), E180–E6.

[9] World Health Organization [WHO] (2022). *Mental Health: Strengthening our Response.* https://www.who.int/en/news-room/fact-sheets/detail/mental-health-strengthening-our-response

WORKPLACE STRESS AMONG ACADEMICS AT AN OPEN DISTANCE LEARNING UNIVERSITY IN MALAYSIA

Amiraa Ali Mansor [a], Mohd Tajudin Md Ninggal [b], Wong Huey Siew [a], Fatimah Yusooff [a], Oo Cheng Keat [a]

a Faculty of Social Sciences and Humanities, Open University Malaysia
b Vice President (Academic)'s Office, Open University Malaysia

Abstract

Human Resource Development (HRD) is the process of enhancing the effectiveness and productivity of employees which entails providing opportunities for training and growth, as well as designing and implementing systems for rewarding employees. HRD plays a significant role in reducing workplace stress levels by ensuring that employees are equipped with the knowledge and abilities necessary to perform their jobs effectively. There has been a heightened awareness of the need to address workplace stress in recent years. One of the contributing factors is due to the competitive and demanding workplace that affects employees' both physical and mental well-being. Workplace stress appears to be a significant issue for lecturers at open distance learning (ODL) universities. Academics working in ODL universities often rely heavily on technology to meet the demands of education and service delivery in contrast to academic staff from traditional universities. This current research has one main objective: to identify the stress levels among lecturers at an open distance learning university in Malaysia. This study employed a cross-sectional survey by administering the Health & Safety Executive's (HSE) Indicator Tool to measure the workplace stress level of 66 full-time academicians in an ODL university. The findings of this study indicated that academic staff members, regardless of the faculty they work in, experience high levels of stress at work as a result of their workload and responsibilities.

Keywords: Workplace Stress, Open Distance Learning, Human Resource Development

INTRODUCTION

The World Health Organization declared COVID-19 a global pandemic on March 11, 2020. Due to the rapid spread of COVID-19 throughout the world, including Malaysia, the Malaysian government, through the Ministry of Health (MoH), was forced to enact mitigating measures, such as movement control orders (MCOs), to reduce the number of new cases (Ho & Tang, 2020). Other required safety measures mandated by the government include the use of face masks, social distancing, and the temporary physical shutdown of educational facilities in reaction to lockdown measures (Umair et al., 2021).

As a consequence of the viral pandemic, the closure of educational facilities had drastically changed teaching and learning approaches and activities. Universities all across the world were not exempt from the new norms that dramatically shifted communication away from face-to-face interactions and toward virtual ones. Universities were left with no option but to switch from the traditional mode of teaching and learning to the new mode of online teaching and learning.

Traditional classroom-based instruction had to be replaced with entirely online lectures. This unprecedented situation caused a paradigm shift for learning institutions and brought about the practices of new norms in higher education settings (Salta et al., 2022). Universities in Malaysia, like universities everywhere else, were obliged to create new opportunities for students to complete their educations via online distance learning in order for them to successfully complete the academic year. This situation however caused difficulties at all academic levels due to the unplanned, rapid, and unknown duration of the new mode of online teaching and learning.

With the new method of online education and learning, people are spending more time in front of computers and smartphones. However, prior research has indicated that increased use of computers and gadgets can lead to higher levels of stress and burnout (Mheidly et al., 2020). The sudden and rapid shift toward the implementation of online teaching and learning also has not only created a number of challenges to students, but also to academic staff members in universities all over the country (Chung et al., 2020). According to Aperribai et al., (2020) the use of online teaching and learning methods has led to a rise in stress among academics. The academics' ability to maintain a healthy work-life balance was negatively impacted, as evidenced by increased stress levels, which in turn led to a decrease in the overall quality of education for the students.

LITERATURE REVIEW

The COVID19 outbreak has significantly disrupted many facets of life around the world. The pandemic has not only affected the physical health but also the mental health. Concerning the mental health, the COVID19 outbreak has resulted in a great deal of anxiety and stress (Ozamiz-Etxebarria et al., 2021) and university lecturers are one of the groups of people who have been affected by the outbreak of the pandemic (Miguel et al., 2021). This can be attributed to a number of constraints that the academic staff must encountered, such as the abrupt replacement of classroom-based education with totally online lectures, as well as other ongoing responsibilities such as research and publication activities.

Academic careers used to be thought of as relatively stress-free occupation (Opstrup & Pihl-Thingvad, 2016). Furthermore, academic careers were also perceived positively in terms of manageable workloads, flexibility, in addition to the perks that came with their jobs, such as attending international conferences (Gillespie et al., 2001). Literature, however, indicates that throughout the previous two decades, the academic environment has undergone profound change (Way et al., 2019) and academics deal with a lot of workplace stress (Kabito et al., 2020).

Meanwhile, academics working in open distance learning (ODL) institutions largely rely on technology in order to keep their employability and meet the needs of their students at any time of the day or night. Academics at ODL institutions must be accessible round-the-clock via computers, mobile devices, and email. As a result of this, one of the most frequently mentioned sources of stress in the context of distance education is the effort required to remain updated with information technology (Poalses &

Bezuidenhout, 2018). These problems are further worsened by academics who have little or no experience in online teaching which may lead to technostress (Wang & Li, 2019).

Research by Safaria, (2013) found several interesting findings on work stress among the lecturers. Based on the research, seven stressors categories were found concerning lecturers work stress which are inadequate role occupancy, increasing work demands, deficient role preparedness, insufficient role support, role ambiguity, role conflict and work-family conflict.

According to studies, most academics in other countries have similar levels of high stress due to their professions. Research by Shen and Slater, (2021) in the United Kingdom reported that a large proportion of academics were stressful and have poor emotional well-being. Besides that, study from China reported that almost all of the academic staffs were stressed (Han et al., 2020). Similarly, the result of studies in Australia and Canada have found increased stress to be a growing concern (Sabagh et al., 2018).

Hence, this research is intended to examine work stress levels among the lecturers in an open distance learning (ODL) in Malaysia during COVID-19 pandemic.

MATERIALS AND METHODS

Participants

An exploratory study using a cross-sectional online survey was carried out to analyse work stress involving 66 full-time academicians working at an ODL institution. The survey was completed conducted online. The academics who took part in the research were from three faculties: Faculty of Education and Social Sciences (FESS), Faculty of Business and Management (FBM), and Faculty of Applied Sciences (FAS).

Research Instruments

The Health and Safety Executive Management Standards Indicator Tool was employed as a research instrument in this study. This instrument is often used at the organisational level to identify work-related stress risks and consisted of questions related to workload and responsibility, relationship with colleagues and relationship with the superior and work condition and environment. The instrument consists of 39 items that have been adopted and adapted to fit the Malaysian academic context.

Research Procedures

The participants were given a Google Form questionnaire that included the sociodemographic information, The Health and Safety Executive Management Standards Indicator Tool and open-ended questions for feedback on how the organisation could improve in order to reduce stress. The participants were invited to participate in a survey by email from the Human Resource Department and were reminded periodically to complete the survey. The survey was fully voluntary, and the academician's consent was obtained before the survey began. It was made clear to the participants that the confidentiality of their responses would be maintained.

DATA ANALYSES

The data were analysed using the statistical program IBM SPSS Statistics for Windows, Version 26.0. The instrument's cut-off scores were used to categorise workplace stress into various levels (low, moderate and high). Firstly, both the frequencies and the percentages of the socio-demographic variables were described. Following that, analyses for mean. median, mode was carried out for three different workplace stress constructs.

RESULTS

Demographic Analysis

The total number of participants in this study is 66. There were 26 male participants (39.4%) and 40 female participants (60.6%) recruited for this study. As reported in Table 1, participants at the age of 41 to 50 is the highest number of the sample, followed by the age of 51 to 60, 31 to 40 and age 61 to 70. In terms of seniority level, there were 31 Senior Lecturers (47%), 28 Lecturers (42.4%) and 7 Associate Professors (10.6%). Meanwhile, for faculty, FESS indicates highest number of research participants which were 24 participants (36.4%) followed by FTAS 22 participants (33.3%), FBM 20 participants (30.3%).

Table 1: Demographic Background of Respondents

	Frequency	Percentage %
Age:		
31-40	15	22.7
41-50	28	42.4
51-60	18	27.3
61-70	5	7.6
Gender:		
Male	26	39.4
Female	40	60.6
Faculty:		
FESS	24	36.4
FTAS	22	33.3
FBM	20	30.3
Seniority Level:		
Lecturer	28	42.4
Senior Lecturer	31	47.0
Associate Professor	7	10.6

Mean and Standard Deviation Scores for Workplace Stress Constructs

Meanwhile, Table 2 presents the means and standard deviations of 3 workplace stress constructs by 3 different faculties. The workplace stress constructs are workload and responsibility (WLR), work relationship with colleagues and superior (WR) and work condition and environment (WCE). Based on the results, all of the three faculties scored high WLR workplace stress construct FESS (M=47.25, SD=4.829), FTAS (M=47.71, SD=5.72) and FBM (M=47.60, SD=5.040). For WR workplace stress construct, all of the three faculties scored average level where FESS (M=39.20, SD=6.36), FTAS (M=38.38, SD=5.22) and FBM (M=38.60, SD=4.48). Lastly, for WCE workplace stress construct, all of the three faculties scored low level where FESS (M=21.79, SD=3.175), FTAS (M=20.95, SD= 3.81) and FBM (M=22.70, SD=2.47).

Table 2: Mean and Standard Deviation Scores for Workplace Stress Constructs

Faculty	Workplace Stress Constructs	Scores		Workplace Stress Level
		Mean	SD	
FESS	WLR	47.25	4.829	High
	WR	39.20	6.36	Average
	WCE	21.79	3.175	Low
FTAS	WLR	47.71	5.72	High
	WR	38.38	5.22	Average
	WCE	20.95	3.81	Low
FBM	WLR	47.60	5.040	High
	WR	38.60	4.48	Average
	WCE	22.70	2.47	Low

DISCUSSION AND CONCLUSION

The findings of this study indicated that academic staff members, regardless of the faculty they work in, experience high levels of stress at work as a result of their workload and responsibilities. Clear variations are noticed in terms of workplace stressors, and it should be highlighted that workload and responsibility are the main contributors to workplace stress among the academic staff at this ODL university as compared to other stressors.

Furthermore, these findings are consistent with other studies conducted since the onset of the pandemic, which suggest that academic staffs suffered from stress during the lockdown. (Besser et al., 2022). The current findings are also consistent with a study conducted by Nor Amalina et al., (2016) at a different university in Malaysia, which may help to explain why academic staff members are under so much stress given the same nature of their jobs in universities.

Other probable explanation is that academics in higher education frequently perform multiple responsibilities at once, which makes it difficult for them to manage their workload and leads to stress (Isa & Palpanadan, 2020). In fact, this may be why most academics have talked about their heavy workloads, which include teaching, research, publications and community service. This, in turn, could be related to the fact that intensive work prolongs the high workload, interferes with leisure activities, causes too much physical and mental fatigue to perform to the best of their ability, and, as a result, increases the production of stress hormones (Maslach & Leiter, 2016).

Workplace stress contributes as a risk that could end up being a liability for the organisation because it can cause employee illness, which has resulted in high absence rates, high staff turnover and low productivity (Watts & Robertson, 2011). Additionally, high levels of workplace stress have been linked to an increased risk of cardiovascular disease (Sara et al., 2018). When compared to those who reported low levels of work-related stress, those who reported high levels of occupational stress reported more than twice the risk of developing cardiovascular disease (Wilson et al., 2014).

Therefore, the ODL institutions ought to develop wellness and stress management methods in order to reduce the amount of occupational stress experienced by their academic staff. Redesigning the academic's job to promote role clarity and providing enough support resources are two potential strategies that could reduce the pressures that are inherently present in the higher education institutions.

Despite the fact that this study was successful in providing essential data on work-related stress among academic staffs, a number of limitations were observed. The likelihood of under- or over-reporting could not be ruled out because this cross-sectional study relied on self-reported questionnaire data. The study's findings also only apply to the faculty members of an ODL university in Malaysia. In spite of these limitations, the researchers believe that the study was able to produce a reasonably accurate assessment of the levels of stress related to work experienced by academic staff at the university that was researched.

ACKNOWLEDGMENTS

REFERENCES

Aperribai, L., Cortabarria, L., Aguirre, T., Verche, E., & Borges, Á. (2020). Teacher's Physical Activity and Mental Health During Lockdown Due to the COVID-2019 Pandemic. *Frontiers in Psychology*, *11*(November), 1–14. https://doi.org/10.3389/fpsyg.2020.577886

Besser, A., Flett, G. L., & Zeigler-Hill, V. (2022). Adaptability to a sudden transition to online learning during the COVID-19 pandemic: Understanding the challenges for students. *Scholarship of Teaching and Learning in Psychology*, *8*(2), 85–105. https://doi.org/10.1037/stl0000198

Chung, E., Subramaniam, G., & Dass, L. C. (2020). ERIC - EJ1267359 - Online Learning Readiness among University Students in Malaysia amidst COVID-19, Asian Journal of University Education, 2020-Jul. *Asian Journal of University Education (AJUE)*, *19*, 46–58. https://eric.ed.gov/?id=EJ1267359

Gillespie, N. A., Walsh, M., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: staff perceptions of the causes, consequences and moderators of stress. *Work & Stress*, *15*(1), 53–72. https://doi.org/10.1080/02678370110062449

Han, J., Perron, B. E., Yin, H., & Liu, Y. (2020). Faculty stressors and their relations to teacher efficacy, engagement and teaching satisfaction. *Higher Education Research & Development*, *0*(0), 1–16. https://doi.org/10.1080/07294360.2020.1756747

Ho, K., & Tang, D. (2020). Movement control as an effective measure against Covid-19 spread in Malaysia: an overview. *Journal of Public Health: From Theory to Practice*, 583–586. https://doi.org/10.1007/s10389-020-01316-w

Isa, K., & Palpanadan, S. T. (2020). Prevalence causes of stress and coping strategies among malaysian university lecturers. *International Journal of Higher Education*, *9*(5), 312–321. https://doi.org/10.5430/ijhe.v9n5p312

Kabito, G. G., Wami, S. D., Chercos, D. H., & Mekonnen, T. H. (2020). Work-related Stress and Associated Factors among Academic Staffs at the University of Gondar, Northwest Ethiopia: An Institution-based Cross-sectional Study. *Ethiopian Journal of Health Sciences*, *30*(2), 223–232. https://doi.org/10.4314/ejhs.v30i2.10

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, *15*(2), 103–111. https://doi.org/10.1002/wps.20311

Mheidly, N., Fares, M. Y., & Fares, J. (2020). Coping With Stress and Burnout Associated With Telecommunication and Online Learning. *Frontiers in Public Health*, *8*(November). https://doi.org/10.3389/fpubh.2020.574969

Miguel, C., Castro, L., Marques Dos Santos, J. P., Serrão, C., & Duarte, I. (2021). Impact of covid-19 on medicine lecturers' mental health and emergency remote teaching challenges. *International Journal of Environmental Research and Public Health*, *18*(13). https://doi.org/10.3390/ijerph18136792

Nor Amalina, M. Z., Huda, B. Z., & Hejar, A. R. (2016). Job stress and its determinants among academic staff in a university in Klang Valley, Malaysia. *International Journal of Public Health and Clinical Sciences*, *3*(6), 2289–7577.

Opstrup, N., & Pihl-Thingvad, S. (2016). Stressing academia? Stress-as-offence-to-self at Danish universities. *Journal of Higher Education Policy and Management*, *38*(1), 39–52. https://doi.org/10.1080/1360080X.2015.1126895

Ozamiz-Etxebarria, N., Berasategi Santxo, N., Idoiaga Mondragon, N., & Dosil Santamaría, M. (2021). The Psychological State of Teachers During the COVID-19 Crisis: The Challenge of Returning to Face-to-Face Teaching. *Frontiers in Psychology*, *11*(January), 1–10. https://doi.org/10.3389/fpsyg.2020.620718

Poalses, J., & Bezuidenhout, A. (2018). Number 2 April-2018 Mental Health in Higher Education: A Comparative Stress Risk Assessment at an Open Distance Learning. *International Review of Research in Open and Distributed Learning*, *19*(2).

Sabagh, Z., Hall, N. C., & Saroyan, A. (2018). Antecedents, correlates and consequences of faculty burnout. *Educational Research*, *60*(2), 131–156. https://doi.org/10.1080/00131881.2018.1461573

Safaria, T. (2013). Job stress among academic staff: A cross-cultural Qualitative study. *International Journal of Public Health Science (IJPHS)*, *2*(2). https://doi.org/10.11591/ijphs.v2i2.2427

Salta, K., Paschalidou, K., Tsetseri, M., & Koulougliotis, D. (2022). Shift From a Traditional to a Distance Learning Environment during the COVID-19 Pandemic: University Students' Engagement and Interactions. *Science and Education*, *31*(1), 93–122. https://doi.org/10.1007/s11191-021-00234-x

Sara, J. D., Prasad, M., Eleid, M. F., Zhang, M., Jay Widmer, R., & Lerman, A. (2018). Association between work-related stress and coronary heart disease: A review of prospective studies through the job strain, effort-reward balance, and organizational justice models. *Journal of the American Heart Association*, *7*(9), 1–15. https://doi.org/10.1161/JAHA.117.008073

Shen, P., & Slater, P. (2021). The Effect of Occupational Stress and Coping Strategies on Mental Health and Emotional Well-Being Among University Academic Staff During the COVID-19 Outbreak. *International Education Studies*, *14*(3), 82. https://doi.org/10.5539/ies.v14n3p82

Umair, S., Waqas, U., & Faheem, M. (2021). COVID-19 pandemic: Stringent measures of Malaysia and implications for other countries. *Postgraduate Medical Journal*, *97*(1144), 130–132. https://doi.org/10.1136/postgradmedj-2020-138079

Wang, X., & Li, B. (2019). Technostress among teachers in higher education: An investigation from multidimensional person-environment misfit. *Frontiers in Psychology*, *10*(JULY). https://doi.org/10.3389/fpsyg.2019.01791

Watts, J., & Robertson, N. (2011). Burnout in university teaching staff: A systematic literature review. *Educational Research*, *53*(1), 33–50. https://doi.org/10.1080/00131881.2011.552235

Way, S. F., Morgan, A. C., Larremore, D. B., & Clauset, A. (2019). Productivity, prominence, and the effects of academic environment. *Proceedings of the National Academy of Sciences of the United States of America*, *166*(22), 10729–10733. https://doi.org/10.1073/pnas.1817431116

Wilson, M. D., Conroy, L. M., & Dorevitch, S. (2014). Occupational stress and subclinical atherosclerosis: A systematic review. *International Journal of Occupational and Environmental Health*, *20*(4), 271–280. https://doi.org/10.1179/2049396714Y.0000000076

Readiness for Interprofessional Learning Among Undergraduate Students in the Faculty of Health Sciences, The Open University of Sri Lanka (OUSL)

Chulani Herath[1], H.P.K. Amarasinghe[2], E.B.S. Samarakoon[2]

[1] Department of Psychology & Counselling, Faculty of Health Sciences, The Open University of Sri Lanka

[2] Quality Assuarance Cell, Faculty of Health Sciences, The Open University of Sri Lanka

Introduction: Interprofessional learning (IPL) primarily aims to reduce prejudice among professionals, improve awareness of the roles and duties of other professional groups, and advance teamwork and collaborative competencies. Interprofessional education (IPE) is an inter-collaborative approach to develop healthcare students as future interprofessional team members, and is a practice promoted by the World Health Organization (WHO) as well as by various other international organizations. However, application of IPL is not commonly practiced in Sri Lanka. Therefore, this research study was conducted to assess the perception of undergraduate healthcare professional students on IPL.

Methodology: This was a cross-sectional study conducted in 2021 on undergraduate health care professional students of Nursing, Medical Lab Sciences (MLS), Pharmacy and Psychology degree programmes conducted by the faculty of health sciences, OUSL. The 19 items of Readiness for Inter-Professional Learning Scale (RIPLS)' containing four subscales: teamwork and collaboration (TWC), negative professional identity (NPI), positive professional identity (PPI) and roles and responsibilities (RR) used for collecting data and all the analyses were carried out using SPSS version 21.

Results: Total of 299 students participated in the study and 5 students have rejected to respond to the questionnaire. The internal reliability and consistency were measured by Cronbach's alpha coefficient, and it was acceptable ($\alpha = 0.811$). The results of ANOVA showed a significant difference among healthcare groups on two subscales: TWC (F=9.861, P<0.001) and PPI (F=18.132, P<0.001). Post-hoc comparison with Tukey test indicated that for TWC and PPI, the mean differences are statistically significant in MLS and Psychology students as well as Nursing and Psychology students. Overall, the results showed that Psychology students had the highest readiness for IPL (Mean=74.13, SD=5.97) while Nursing students had the lowest (Mean=69.78, SD=4.69).

Conclusion: The study showed that students have favorable attitudes towards IPL, which encourages introducing IPL in undergraduate curriculum to be competed with the current global trends in healthcare education. The findings of the study inspire the Universities in Sri Lanka to adopt IPE to improve future health professionals' capacity to develop shared understanding and mutual respect within cross-disciplinary teams which leads to improved quality of care and patient outcomes.

Key words: Interprofessional Education, Interprofessional Learning, Health Care Professionals, Undergraduates, The Open University of Sri Lanka

Introduction

'Interprofessional education' was considered a step further on than 'shared-learning' models, with the focus of IPE being on collaborative practice and 'on interactive learning between the different professional groups involved' (1). In the UK the concept developed alongside the formation of CAIPE (Centre for the Advancement of Interprofessional Education), which was responsible for the definition of IPE as it is now most recognized; where two or more professions 'learn with, from and about each other to improve collaboration and the quality of care' (2,3). Similarly, for the WHO (2010) "IPE occurs when two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes" (4). Further, Barr (2010) illustrated how IPE becomes a combination of the values, ideas, and abilities of all participating professions, whereas for Canadian Interprofessional Health Care (CIHC), (2010) interprofessional education (IPE) is an essential approach for healthcare students who are preparing for their professional work as well as for healthcare employees to provide patients' care in a collaborative team environment (5). Moreover, Interprofessional education is defined by Thistlethwaite, (2012) as a shared learning experience among health profession students across disciplines, with the goals of professional identification of strong clinical teams and the improvement health outcomes. For the Cochrane Collaboration (2013), interdisciplinary instruction is: "an IPE intervention when members of more than one health and/or social care profession learn interactively together, for the explicit purpose of improving interprofessional collaboration and/or the health/wellbeing of patients/clients. Interactive learning requires active exchange between learners of different professions".

The primary goals of interprofessional education are to alter attitudes and opinions, breed respect amongst professions, and make collaboration possible (6). These general goals are at the center of the global initiative to improve healthcare. In 2011, IPE is divided into the following four primary competencies within the general medical school curriculum: Teams and Teamwork, Interprofessional Communication, Values and Ethics for Interprofessional Practice, and Roles and Responsibilities.

As a developing country, Sri Lanka concern about the positive health outcomes to reach the Millennium Development Goals. The curricula of all the medical faculties were based on the British system of medical education (9). In 1995, the traditional discipline-based curriculum was changed to a more integrated and student-centered curriculum. The contents for the core curriculum were classified into four main areas; namely basic sciences knowledge, clinical competencies, generic competencies, and professional values which include ethical issues and commitment to continuing medical education. The teaching/learning methods have shifted from traditional lecture based didactic teaching activities towards methods involving greater student participation. These include small group discussions (SGD), problem-based learning tutorials (PBL), student seminars, staff seminars, dramas, debates, poster sessions, and field-based teaching (10). The history of undergraduate medical education in Sri Lanka dates to 1870, when the Colombo Medical School was founded. In 1942, the University of Ceylon was established, and the medical school acquired university status as the Faculty of Medicine (10). Over time, more faculties of medicine were established; at present, there are six medical faculties in Sri Lanka. If undergraduate/ graduate students, educate and trained about interprofessional teamwork skills and methods will help to provide collaborative patient care to improve patients' outcomes and will helps to

mitigate current health challenges in Sri Lanka. Learning to practice is very much essential to reduce the gaps, conflicts between each professional. Through introducing IPE will helps to address future health challenges, increase both practitioners and patients' satisfaction and enhance quality of service delivery involving more different health professionals together.

Methodology

This research study was conducted to assess the perception of undergraduate healthcare professional students on IPL. This was a cross-sectional study conducted in 2021 on undergraduate health care professional students of Nursing, Medical Lab Sciences (MLS), Pharmacy and Psychology degree programmes conducted by the faculty of health sciences, OUSL. The 19 items of Readiness for Inter-Professional Learning Scale (RIPLS)' containing four subscales: teamwork and collaboration (TWC), negative professional identity (NPI), positive professional identity (PPI) and roles and responsibilities (RR) used for collecting data and all the analyses were carried out using SPSS version 21. Readiness for Interprofessional Learning Scale (RIPLS) Questionnaire – For Students - The original RIPLS survey has been adapted for use by Latrobe Community Health Service & the Health &Social care Interprofessional Network (HSIN), Victoria – August 2009. The target population were undergraduate healthcare students in the faculty of health sciences at the Open University of Sri Lanka, and practitioners in teaching hospital including medical doctors, nurses, pharmacists, medical lab technicians.

Results

Respondent Demographics and Response Rates

A total of 299 students participated in this study and 04 respondents have rejected responding to the questionnaire due to personal reasons. The demographic characteristics are summarized in Table 1. The respondents included 23 MLS students (response rate 7.8%) and 139 nursing students (47.1%) of which 50 pharmacy students (16.9%) and 83 psychology students (28.1%) students indicated socio-demographic characteristics. More than half of the respondents in each sample were undergraduate students who were following Nursing degree program. MLS were the least well represented, with only 7.8%. There were no equal respondents among undergraduate healthcare students and programs. Most respondents were female (83.7%). Majority of the respondents were between 31 and 40 years of age.

Table 01: Demographic data

Demographic factor	Number	Percentage
Age		
20-30	141	47.8
31-40	120	40.7
41-50	31	10.5
Above 50	3	1
Gender		
Male	48	16.3
Female	247	83.7

Degree Programme		
Bachelor of Medical Laboratory Sciences Honours	23	7.8
Bachelor of Pharmacy Honours	50	16.9
Bachelor of Science Honours in Nursing	139	47.1
Bachelor of Science Honours in Psychology	83	28.1
Year of study		
First year	195	66.1
Second year	40	13.6
Third year	43	14.6
Fourth year	17	5.8

Reliability Analysis

The 19-item RIPLS questionnaire, a Sri Lankan translation adapted from McFadyen et al. (2005), was administered among the students at the Faculty of Health Sciences, The Open University of Sri Lanka.

Responses were recorded on a 5-point Likert scale ranging from 1 'Strongly Agree' to 5 'Strongly Disagree'. The internal consistency of the questionnaire was measured by Cronbach's alpha, equals to 0.811 which was overall good.

Table 02: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.811	19

According to the McFadyen's concept the questionnaire can be categorized in to 4 factors as follows. The internal consistency for each factor was also measured.

Table 03: Internal Consistency

Factor	Items	Internal consistency
Teamwork and collaboration	1 to 9	0.928
Negative professional identity	10,11,12	0.792
Positive professional identity	13 to 16	0.880
Roles and Responsibilities	17 to 19	0.208

Table 04: Students responses from each degree programme

Means and Standard deviation in each degree programme, current year of study and gender for the subscales of RIPLS are as follows.

	Department	Mean (SD)

Factor 1:	Bachelor of Medical Laboratory Sciences Honours	37.77 (3.247)
Teamwork and collaboration	Bachelor of Pharmacy Honours	39.66 (3.837)
	Bachelor of Science Honours in Nursing	38.75 (5.711)
	Bachelor of Science Honours in Psychology	40.55 (3.791)
Factor 2:	Bachelor of Medical Laboratory Sciences Honours	6.95 (2.246)
Negative professional identity	Bachelor of Pharmacy Honours	6.9 (2.605)
	Bachelor of Science Honours in Nursing	7.2 (2.743)
	Bachelor of Science Honours in Psychology	5.83 (2.224)
Factor 3:	Bachelor of Medical Laboratory Sciences Honours	16.13 (2.074)
Positive professional identity	Bachelor of Pharmacy Honours	17.24 (2.086)
	Bachelor of Science Honours in Nursing	16.51 (2.605)
	Bachelor of Science Honours in Psychology	17.91 (1.939)
Factor 4:	Bachelor of Medical Laboratory Sciences Honours	8.91 (1.621)
Roles and Responsibilities	Bachelor of Pharmacy Honours	9.4 (1.429)
	Bachelor of Science Honours in Nursing	9.45 (1.964)
	Bachelor of Science Honours in Psychology	9.81 (1.609)

Table: 05 Batch wise students response rate for each factor

	Current year of study	Mean (SD)
Factor 1:	1st year	39.02 (5.171)
Teamwork and collaboration	2nd year	39.03 (4.435)
	3rd year	41.02 (3.661)
	4th year	39.71 (3.514)
Factor 2:	1st year	6.91 (2.68)
Negative professional identity	2nd year	6.58 (2.427)
	3rd year	6.42 (2.621)
	4th year	6.06 (1.886)
Factor 3:	1st year	16.81 (2.418)
Positive professional identity	2nd year	17.15 (2.381)
	3rd year	17.72 (2.414)
	4th year	17.00 (1.696)
Factor 4:	1st year	9.49 (1.812)
Roles and Responsibilities	2nd year	9.75 (1.660)
	3rd year	9.58 (1.776)
	4th year	8.94 (1.478)

Table: 06 Gender wise responses

	Gender	Mean (SD)
Factor 1:	Female	39.18 (4.979)
Teamwork and collaboration	Male	40.21 (3.919)
Factor 2:	Female	6.73 (2.525)
Negative professional identity	Male	6.81 (2.987)
Factor 3:	Female	16.91 (2.442)
Positive professional identity	Male	17.42 (2.061)
Factor 4:	Female	9.41 (1.755)
Roles and Responsibilities	Male	10.00 (1.775)

As the reliability is very low for the factor "Roles and Responsibilities", that factor will not be used for the analysis hereafter.

The One-way ANOVA values were calculated for the first 3 factors to check whether there is a significant difference between the mean scores of degree programs.

If the p-value is less than alpha (0.001) the null hypothesis can be rejected which means, there is a significant difference between the scores of the degree programs.

H_0: The mean scores between the degree programs are equal

H_1: The mean scores between the degree programs are different

If the p-value is less than alpha (0.001) the null hypothesis can be rejected which means there is a significant difference between the scores between degree programs.

Factor 1:

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.476	3	.159	9.861	.000
Within Groups	.514	32	.016		
Total	.990	35			

Since p-value < 0.001 there is a significant difference between the mean scores of the degree programs.

Multiple comparisons were done using Tukey's HSD test, to determine the pairs which are significantly different. According to the result, the means of the following pairs were significantly different.

Bachelor of Medical Laboratory Sciences Honours & Bachelor of Science Honours in Psychology (p-value=0.000)

Factor 2:

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.369	3	.123	10.829	.003
Within Groups	.091	8	.011		
Total	.460	11			

Since p-value > 0.001 there is no any significant difference between the mean scores of the degree programs.

Factor 3:

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.468	3	.156	18.132	.000
Within Groups	.103	12	.009		
Total	.571	15			

Since p-value < 0.05 there is a significant difference between the mean scores of the degree programs.

Multiple comparisons were done using Tukey's HSD test, to determine the pairs which are significantly different. According to the result, the means of the following pairs were significantly different.

Bachelor of Science Honours in Psychology & Bachelor of Medical Laboratory Sciences Honours (p-value = 0.00)
Bachelor of Science Honours in Psychology & Bachelor of Science Honours in Nursing (p- value = 0.001)

Then, the One-way ANOVA values were calculated for the first 3 factors to check whether there is a significant difference between the mean scores with respect to the current year of study.

H_0: The means of the factor are equal for the years of study

H_1: The means of the factor are different for the years of study

If the p-value is less than alpha (0.001) the null hypothesis can be rejected which means there is a significant difference between the scores between degree programs.

Factor 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.297	3	.099	4.588	.009
Within Groups	.691	32	.022		
Total	.988	35			

Factor 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.126	3	.042	2.249	.160
Within Groups	.149	8	.019		
Total	.275	11			

Factor 3

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.116	3	.039	7.205	.005
Within Groups	.065	12	.005		
Total	.181	15			

All the p-values are greater than 0.001. Therefore, there is no any significant mean difference between the years of study for all three factors.

Independent T-Test

An independent sample t test was carried out to check whether there is a significant difference in the means of the variable gender. It was assumed that the p value is equal to 0.05 and the variances of the distributions of the means are equal.

	t	df	Sig.
Factor 1: Teamwork and collaboration	-1.348	293	.179
Factor 2: Negative professional identity	-.194	293	.846
Factor 3: Positive professional identity	-1.333	293	.183

All the p-values are greater than 0.05. Therefore, the mean differences between the two genders are not significantly different.

In order to determine the readiness of undergraduate healthcare students for interprofessional learning from each department and year, the below summary tables can be interpreted.

Readiness by Degree Programme

Degree Programme	Mean	Standard deviation
Bachelor of Medical Laboratory Sciences Honours	69.78	4.69

Bachelor of Pharmacy Honours	73.2	5.34
Bachelor of Science Honours in Nursing	71.93	8.44
Bachelor of Science Honours in Psychology	74.13	5.97

Readiness by Year of Study

Degree Programme	Mean	Standard deviation
First Year	72.22	7.58
Second Year	72.5	6.48
Third Year	74.74	6.42
Fourth Year	71.71	4.67

According to the means, the readiness is higher for the third-year students and for the students who are following Bachelor of Science Honours in Psychology

Readiness by Gender

Degree Programme	Mean	Standard deviation
Female	72.24	7.14
Male	74.44	7.08

Male students show higher readiness than the females.

Discussion

This study has demonstrated the value of the RIPLS instrument to assess the degree of students' perceptions and readiness towards IPE. The analysis showed strong internal consistency within the four subscales such as teamwork and collaboration (Q1-Q9), negative professional identity (Q.10-Q.12), positive professional identity (Q.13-Q.16) and roles and responsibilities (Q.17-Q.19) with Cronbach's Alpha values of .811. Comparing with other RIPLS studies, this indicates that RIPLS is a stable and reliable instrument for use in Sri Lankan context with students. These results indicate that RIPLS is a valid tool for measuring the readiness of postgraduate health care professionals to engage in interprofessional learning.

Similar to the findings of some previous studies, female students demonstrated more positive attitudes towards IPE than male students. Specifically, female undergraduate students tend to emphasize their understanding and readiness towards the IPE but no significant difference when compare with male students. However, gender has not consistently been associated with differences in RIPLS scores. Comparing with mean scores between subscales with programs of study, the significant difference of the mean scores of pharmacy students was identified. The results were calculated based on unequal number of respondents from each degree programms.

According to the tested results on ceiling and floor effects in this study students demonstrated higher scores on the teamwork and collaboration subscale, signifying a clearer sense of team working skills are vital for all health and social care students/professionals to learn. Moreover, for the scale of positive professional identity, undergraduate was given higher rating for (Q13) the Shared learning with other health and social care professionals will help me to communicate better with patients and other professionals. Similarly, for (Q.17) Shared learning before and after qualification will help me become a better team worker. In contrast, for (Q.18) under the scale of roles and responsibilities were indicated lowest rating. This lowest rating highlighted that, undergraduate healthcare students doesn't have clear idea about their own professional roles and responsibilities. Considering the subscale of negative professional identity, the majority students were given lowest rating for (Q.10-Q12). This indicates that the health professional students at selected health institutions were not having adequate background knowledge on IPE. However, the results of this study indicate that undergraduate health professional student's demonstrated greater readiness for interprofessional learning and having positive perception towards IPE.

Conclusion

In terms of strengths, the high number of respondents in this study was an obvious advantage along with the successful attempt to measure the responses of those who failed to respond to the initial survey. Moreover, the relatively high alphas, which demonstrate the internal reliability. The major challenge encounter for this study were unable to include all the disciplines related to the healthcare education. A possible weakness of the study is that the students surveyed did not have some previous exposure to interprofessional learning through their programs of study and unequal number of the sample. Moreover, the authors have found no comparable study in Sri Lankan context about IPE with which to align the results obtained in this study. The findings of this study suggest the undergraduate students have positive perception on IPE and they have an idea on necessity of IPE learning during the program of study. The needs of IP learning during the health professional degree programs would be essential for the countries like Sri Lanka to manage effective patient care. This result indicates that the level of perception of undergraduate healthcare students on IPE. However, this analysis produced the level of undergraduate healthcare students' readiness on IP learning in Sri Lanka

Reference

1. Boehm, L.M., E.E. Vasilevskis, and L.C. Mion, Interprofessional Perspectives on ABCDE Bundle Implementation. Dimensions of Critical Care Nursing, 2016. 35(6): p. 339-347.

2. Barr, H. and F. Ross, Mainstreaming interprofessional education in the United Kingdom: a position paper. J Interprof Care, 2006. 20(2): p. 96-104.

3. Lohenry, K., et al., Interprofessional Education: What Measurable Learning Outcomes Are Realistic for the Physician Assistant Profession? J Physician Assist Educ, 2016. 27(2): p. 63

4. Lee, B., et al., Attitudes of medical school deans toward interprofessional education in Western Pacific Region countries. J Interprof Care, 2012. 26(6): p. 479-83.

5. Mahler, C., S. Berger, and S. Reeves, The Readiness for Interprofessional Learning Scale (RIPLS): A problematic evaluative scale for the interprofessional field. Journal of Interprofessional Care, 2015. 29(4): p. 289-291.

6. Neville, C.C., et al., Team decision making: design, implementation and evaluation of an interprofessional education activity for undergraduate health science students. J Interprof Care, 2013. 27(6): p. 523-5.

7. Bhutta, Z.A., et al., Education of health professionals for the 21st century: a global independent Commission. The Lancet, 2010. 375(9721): p. 1137-1138.

8. Dimoliatis, I.D. and S. Roff, Interprofessional/multiprofessional health professions education: designing an efficient search to scope the literature of this exploding field. Health Info Libr J, 2007. 24(4): p. 274-82.

9. Anderson, E.S. and A. Lennox, The Leicester Model of Interprofessional education: developing, delivering and learning from student voices for 10 years. J Interprof Care, 2009. 23(6): p. 557-73.

10. Kulnik, S.T., et al., Implementing an interprofessional model of self-management support across a community workforce: A mixed-methods evaluation study. J Interprof Care, 2017. 31(1): p. 75-84.

11. Amour, D., et al., The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. J Interprof Care, 2005. 19 Suppl 1: p. 116-31.

12. Thistlethwaite, J.E., Interprofessional education and the basic sciences: Rationale and outcomes. Anat Sci Educ, 2015. 8(4): p. 299-304.

13. Thistlethwaite, J.E., Interprofessional education: implications and development for medical education. Educación Médica, 2015. 16(1): p. 68-73.

14. Barr, H. Interprofessional Education:The Genesis of a Global Movement The Centre for the Advancement of Interprofessional Education., 2015.

15. Maharajan, M.K., et al., Attitudes and Readiness of Students of Healthcare Professions towards Interprofessional Learning. PLoS One, 2017. 12(1): p. e0168863.

16. Brashers, V., et al., The University of Virginia interprofessional education initiative: an approach to integrating competencies into medical and nursing education. J Interprof Care, 2012. 26(1): p. 73-5.

A PHENOMENOLOGICAL STUDY OF HUMAN RESOURCE DEVELOPMENT AMONG EMPLOYEES IN OPEN UNIVERSITIES: A LESSON LEARNT FROM OPEN UNIVERSITY MALAYSIA (OUM)

Md Rosli bin Ismail[1], Loo Fung Lan[1], Lim Seong Pek[2], Rita Wong Mee Mee[2]

[1]Open University Malaysia (MALAYSIA)
[2]University of Selangor (MALAYSIA)

Abstract

Human resource development (HRD) is one of the crucial determinants in ensuring the sustainability of the open and distance learning (ODL) landscape of open universities. Established in 2000, Open University Malaysia (OUM) is the seventh private university in Malaysia. Multimedia Technology Enhancement Operation Sdn. Bhd. (METEOR) runs OUM, which is a consortium of eleven Malaysian public universities. OUM has been voted recently as the Employers' Preferred University with a 5-star rating through a Talentbank Group survey on the employability of Malaysian graduates. This award reflects attitudes, skills and knowledge in human resource development at OUM. This study applies the phenomenological approach to address two-fold research questions; (i) what does human resource development mean to employees at OUM? (ii) what is it like for employees to experience human resource development at OUM? The researchers selected four participants (n=4) from the Faculty of Education (FE) and the Faculty of Social Sciences and Humanity (FSSH) as purposive sampling, and the data collection is through in-depth interviews based on their own experiences. This study applied the interpretative phenomenological analysis (IPA) approach. The IPA employed three stages, namely stage 1 (description), stage 2 (interpretation), and stage 3 (emergent themes – superordinate themes and subordinate themes). The findings revealed that their understanding of human resource development is a continuous improvement that improves human capital continuously through human resource activities and empowerment in which employees have the freedom and trust to carry out their duties and tasks. The participants feel appreciated for OUM is concerned about its employees' well-being and human resource development practices. These considerations lead to the most vital aspect for OUM to sustain itself as an ODL leader when these employees are motivated and satisfied in continuously contributing their expertise in education. The most significant of the study is to learn from human resource development at OUM for it to sustain itself as the leader in ODL in Malaysia.

Keywords: Open and distance learning (ODL), human resource development (HRD), Open University Malaysia (OUM).

1 INTRODUCTION

Any organization's most valuable resource is its human capital, which guarantees the accomplishment of its goals and objectives. Human resource development (HRD) is the secret to increased and improved productivity since it aids in the knowledge, abilities, and attitudes that employers seek in their workforce. Employee job satisfaction may rise as a result, and team members' ability to communicate with one another may improve. In the era of the Industrial Revolution 4.0, developing human resources has an impact on university performance, and it makes universities perform better because it places the right people in the appropriate positions, which boosts morale, creates business opportunities, and increases labour turnover rates (Pilbeam and Corbridge, 2006).

HRD is one of the crucial determinants in ensuring the sustainability of the open and distance learning (ODL) landscape of open universities. Established in 2000, Open University Malaysia (OUM) is the seventh private university in Malaysia. Multimedia Technology Enhancement Operation Sdn. Bhd. (METEOR) runs OUM, which is a consortium of eleven Malaysian public universities. OUM has been voted recently as the Employers' Preferred University with a 5-star rating through a Talentbank Group survey on the employability of Malaysian graduates. This award reflects attitudes, skills and knowledge

in human resource development at OUM. Human resources play an important role in the development strategy of the university in general and for the goal of internationalization in particular (Nguyen Hoang Tien et.al, 2020).

OUM does not only cater for the local students in Malaysia, but it also provides ODL to students in some parts of the world. Just to name a few countries like Ewastini, Ghana, Dominica, Maldives and Sri Lanka. In fact, when talking about internationalization, some memorandum of agreements have been signed recently with a few institutions abroad.

In this study, two research questions were addressed, namely, (i) what does human resource development mean to employees at OUM? (ii) what is it like for employees to experience human resource development at OUM?

2 LITERATURE REVIEW

Human resource development (HRD) makes it possible for universities to operate to their maximum potential. In particular, efficient HRD ensures that universities are flexible since their workforce is capable, adaptable, and has the right skills at the right time (Mittal, 2013). The secret to permitting workforce improvements is to comprehend the impact of HRD on systemic practises, utility, and university productivity. University training and development evaluation procedures are examples of systematic methods. Utility concerns how effectively people can use possibilities for professional growth to carry out their work, whereas university results relate to how well a university accomplishes its objective.

A good HRD environment is necessary for dedication to university achievement (Kaifeng et al., 2012). Through various human resources development efforts, many forward-thinking colleges work to foster a welcoming environment that will help them attract and keep good personnel. HRD methods allow employees the freedom and opportunity to participate in decision-making. To get the necessary data on HRD, such as employee productivity, efficiency, and overall happiness, and to shape development programmes to produce favourable university results, the success of HRD implementation has been evaluated based on particular models of HRD evaluation.

To work and learn in the virtual learning environment effectively, open and distance learning (ODL) requires both new abilities from educators and students. Most personnel and educators working in open and distance education received training in traditional educational settings. The need for training in ODL for them is vital to coping with the qualities that are different from face-to-face. The high dropouts among distance learners are possibly due to incompetent ODL employees.

Hong Thi Thuy Nguyen (2018) looked into the functions of human resource development (HRD) at Hanoi Open University (HOU) to advance HRD to raise the quality and efficiency of training at HOU. The first two sections of the paper discuss HRD's function in open universities. The third one provides a summary of the HRD's past research. It also served as a theoretical foundation for the author's assessment of the current HRD at HOU in the fourth part. The fifth part explains the methods used to collect information on HRD practices at HOU. The following two crucial sections discuss the study's conclusions and suggestions for improving HRD at HOU.

In terms of technique, the researcher used statistical tools of frequency, percentage, and weighted mean to examine the survey data. The study's findings indicate that HOU's HRD practises in terms of human resource management, human resource structure, and human resource quality are not performing as well as anticipated. There is a lack of full-time, highly qualified workers, inadequate and unbalanced job descriptions, and disjointed, ad hoc personnel management.

There are a few studies on human resource development at ODL universities. As such, the research gap is that his study employed interpretative phenomenological analysis. It focuses on the lived experience of human resource development at OUM.

3   METHODOLOGY

This study applied the interpretative phenomenological analysis (IPA) approach. IPA is committed to the systematic exploration of personal experience (Tomkins, 2017). Four participants were selected in this study to obtain their lived experience in human resource development.

Two were from the Faculty of Education (FE), while the other two were from the Faculty of Social Sciences and Humanity (FSSH), OUM. All the participants are females who hold doctorate qualifications. They are between 37 and 71 years old, and the age means is recorded at 55 years old.

They have been working at OUM for between one year and 11 years and the means for the years of service stand at 6.8 years. They are identified as key informants 1, 2, 3 and 4. Table 1 summarises the participants' profiles.

Table 1 Summary of the Participants' Profiles

Participants	Age	Years of Service	Faculty	Qualification
Key Informant 1	65	11	FE	Doctorate
Key Informant 2	37	1	FSSH	Doctorate
Key Informant 3	48	8	FE	Doctorate
Key Informant 1	71	7	FSSH	Doctorate

Legend: FE (Faculty of Education), FSSH (Faculty of Social Sciences and Humanity)

In terms of analytical steps in IPA, three stages were employed, namely (i) stage 1 (description), (ii) stage 2 (interpretation) and (iii) stage 3 (emergent themes – superordinate themes and subordinate themes). The details of these stages are available in the data analysis section.

4   DATA ANALYSIS

There are three stages in this data analysis. Tables 2, 3, 4 and 5 (in section 4.1) are the responses to the first research question (RQ), i.e. 'What is your understanding of human resource development?', while tables 6, 7, 8, and 9 (in section 4.2) are the responses to the second RQ, i.e. What is it like for employees to experience human resource development at OUM? The feedback is from each of the participants' thoughts and experiences. The researchers employed stage 1 (description) and stage 2 (interpretation) in each of the responses from the key informants 1, 2, 3 and 4 for both RQs.

Fig. 1 is a diagram of the emergent theme that consists of the superordinate and the subordinate themes. There are two emergent themes which are human resource practices and positive synergy. Under human resource practices, there are two subordinate themes, i.e. continuous improvement and empowerment. There are also two subordinate themes under positive synergy, i.e. employees' well-being and motivation/satisfaction.
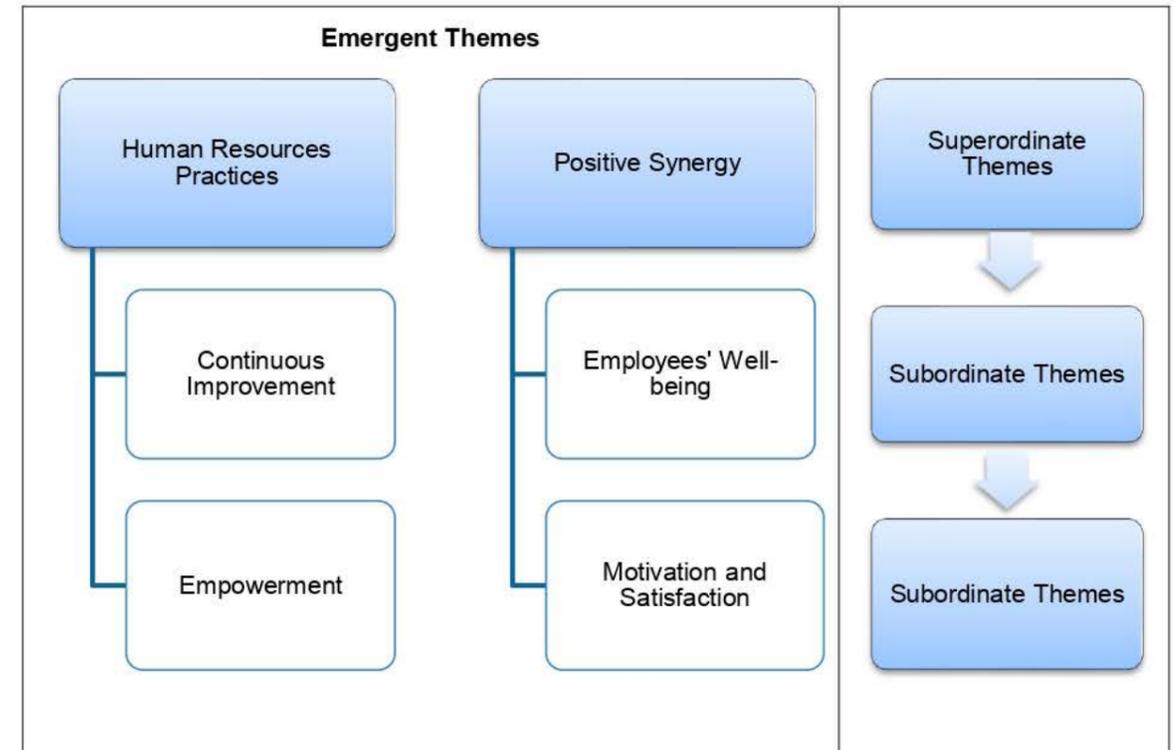
Fig.1 Emergent Themes (Superordinate and Subordinate Themes)

4.1   Stage 1 and 2: Responses for RQ 1

Below are stages 1 and 2 related to responses for RQ1 from the key informants 1, 2, 3 and 4 as shown in tables 2, 3, 4 and 5.

Table 2. Responses for RQ 1 from Key Informant 1

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
- Improve human capital - Continuous improvement (staff knowledge, training, skill, attitude) - Human resources activities (spirit of kaizen) - Networking – can't stand alone, consolidate - Motivating	I supposed my understanding of human resource development is to improve the human capital in any organization, like providing continuous improvement for their staff knowledge, training, skill, and attitude and then also I found that these human resource activities are enriching. If they organize any training in the spirit of kaizen. I have been throughout my training at OUM and they always conduct training for every department because we work in networking from one department to another. They make sure we sort of have some kind of idea of what they are doing and also how to get help because they are our network, yeah. They can't stand alone. Because we are a private entity, there are many departments and the existence of the department is to consolidate	Key informant 1 emphasized that human resource development is improving human capital continuously through human resource activities with the spirit of kaizen (Kaizen is a Japanese word that means continuous improvement). It is kind of motivating and rejuvenating as it should not be stagnant.

the services rendered, so it is important for human resources to acknowledge that.

Not only that. In a way is kind of motivating, rejuvenating whatever we are doing is not stagnant.

To make sure we are fit. When are hired job fit must be there.

Table 3. Responses for RQ 1 from Key Informant 2

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Achieving organizational goals ▪ Personal skills, competencies, and knowledge ▪ Empower employees – career development, performance management and employee training	Based on what I understand, the purpose of human resource development is to assist employees in achieving organisational goals by fostering the growth of their organisational and personal skills, competencies, and knowledge. Human resource development's goal is to empower employees by giving them access to a range of options, including career development, performance management, and employee training.	Key informant 2 argued that human resource development is assisting employees in achieving organizational goals through fostering personal skills, competencies and knowledge. Besides, it is also empowering employees through career development, performance management and training.

Table 4. Responses for RQ 1 from Key Informant 3

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Career development ▪ Employees' well-being, appropriate salary, promotion exercises, training medical benefits	My understanding is that human resource development for employees must include career development. Human resource development should also take care of employees' well-being and pays appropriate salary according to their qualification, promotion exercises, training, medical etc. In addition, HRD allows us to learn to increase our knowledge. So, HR has to develop all of that to be the best. Empowerment is important.	Key informant 3 defined human resource development as developing human capital resources through employees' well-being, appropriate pay, medical benefits, training etc.

Table 5. Responses for RQ 1 from Key Informant 4

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Developing skills, knowledge, abilities ▪ Leave matters, perks and benefits ▪ Guideline	When I was in a public university before, there were no human resources. It was called the registration office which consists of many things such as departments, leave matters, perks and benefits, allowances etc. I suppose it's all human resource development. And then I think because that public university is big, I did not know anyone Whenever we had a new issue, we just went to that department. Here it is small and we know everyone. In general, human resources development is the guidelines used by the organization to develop employees' skills, knowledge and abilities efficiently. Besides, empowerment is given to the employees to perform better.	Key informant 4 described human resources development as developing skills, knowledge and abilities.

4.2 Stage 1 and 2: Responses for RQ 2

Below are stages 1 and 2 related to responses for RQ 2 from the key informants 1, 2, 3 and 4 as shown in tables 6, 7, 8 and 9.

Table 6. Responses for RQ 2 from Key Informant 1

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Well-being ▪ Motivated	As far as Kelana Jaya is concerned, it is easy for me to get help. They are very friendly, it is a warm environment in terms of our relationship with the staff regardless of their level (of position). That is also the environment and climate as you mentioned just now. I think it's a ripple effect from whatever is transpired from HR. Walk the talk. I think they also walk the talk. I know they are role models yeah. They are friendly. I think the staff are well trained, you know. I can see from the security level up to right the top I can see their ethos is almost the same. I think HR has moulded the staff very well. That is what I can feel. I did not encounter unpleasantness so much and I am motivated to work well. If there is unpleasant stuff, it can be overcome quickly. I think that is the environment or climate. There are a lot of activities and training by HR before this. I do not know at the moment I do not involve, I am not required that, I am supposed.	Key informant 1 highlighted that OUM is concerned about the employees' well-being. Besides, she is happy working and motivated.

Table 7. Responses for RQ 2 from Key Informant 2

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ The performance appraisal method ▪ Reward ▪ Support ▪ Freedom ▪ Employees' well-being ▪ Tangible benefits	I think human resource development is vital. It is possible that the organisation's efficiency might deteriorate in the absence of human resource development. I believe human resource development will function to assist the organisation in identifying areas that need improvement and will give the essential steps to enhance the employees' skills and knowledge in order to enhance their performance, growth, and overall competence within the organisation. As far as I'm aware, OUM's performance appraisal method is entirely objective, allowing the company to identify the employees who have contributed most to its growth, evaluate their work thus far, and eventually reward those who have proven themselves to be particularly valuable. So far, I can say that OUM HRD has been really effective in terms of supporting staff members in sharpening their abilities and developing competencies. In addition to having a clear job description, I also have the freedom and trust to carry out my duties at work. Yes, I am capable, satisfied, and committed to working at OUM. So far, I am pleased with the working environment here in comparison to my prior employer. There are significantly better opportunities here. I frequently compared my current work experiences with those of my former organisation. I am confident that OUM is concerned and accountable for the employee's well-being. This is one of the things that motivates me to work. Aside from that, the tangible benefits provided by OUM are clearly better than those provided by my previous organisation. This is very significant, and it motivates me to continue working with OUM.	Key informant 2 made a comparison between her previous workplace and OUM. It is found that her experience at OUM is better in terms of the performance appraisal method, rewards, support system, freedom (work autonomy), employees' well-being and tangible benefits. Key informant 2 is happy working at OUM although she has been about 11 months. She is motivated and committed when OUM is concerned about the overall employees' well-being. She feels appreciated.

Table 8. Responses for RQ 2 from Key Informant 3

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Good pay ▪ Best medical benefits ▪ Friendliness, respect, easy getting help ▪ Motivation – work as worship (an Islamic perspective), salary ▪ Teaching as a strength ▪ Opportunity to work after 60 years old	HRD (Human Resource Department) functions as a resource for its employees. HRD is also a leader who should draw a plan and a vision for employees. KPI is very subjective. KPI should be appropriate and not burden the lecturers. KPI has to be our guide for promotion, career building, salary increase and others. Related to salary at OUM, it can be said to be good so far. Those who have been in service for a year have increments and bonuses. HR has never broken its promises. OUM is one of the best medical benefits compared to my old workplaces. I believe that friendliness among employees, respect and easy getting help if needed are some values at OUM. HR will inform us of any policies and display the information for us to access it easily. I want to say that the first motivation, of course, is that I asked for a job because of worship. The second motivation, of course, is salary. It is the only way I want to increase the stocks of the afterlife. At OUM, I prepare exam questions, write articles, and as long as people read my articles, I will get a reward from Him. So, that's a reason for keeping writing articles. I do all that because I think this is my stock in the afterlife. I am not as rich as Ebit Lew, but I use teaching as my strength. The second, of course, is the salary. I love the current policy of OUM is that it does not have mandatory retirement. That means after sixty years old, it is still possible to work. I will continue working as long as I am healthy. When I compare with other universities, OUM is the only one that offers 60-year-old opportunities to work. It motivates me to stay at OUM because I think my children are grown up and go out to work, and I can't chat with them. So, I should add more stock to my afterlife.	Key informant 3 made a comparison between her previous workplace and OUM. She highlighted that OUM is better than her previous work in many aspects. Among others are good pay, medical benefits, and friendliness. Besides, she also mentioned that she considered work as part of worship from the Islamic perspective. She used teaching as her strength and she is happy when the current policy of OUM allows continuing working after 60 years old.

Table 9. Responses for RQ 2 from Key Informant 4

Stage 1 (Description)	Responses	Stage 2 (Interpretation)
▪ Connect with OUM's revenue ▪ Feel better about the performance system ▪ Commitment to working ▪ Good pay, promotion and bonuses ▪ Boost motivation ▪ Still work at the age of 70	At first, I don't understand because it differs from public universities. What we do in government, we also do in OUM. But, at OUM, we must connect with OUM's revenue. After some time, I can understand it because when I was attached to a public university, I never thought about university revenue. If I have had to teach four courses, that's all just four courses. It means that how much the income goes into the company was nothing to do with me. It means that if you do a lot of work in terms of KPI, it's high, and that's good. But, from a transparent point of view, it's also a problem. In the former workplace, it was based on research because the university wanted to raise the name of the university. Sometimes in terms of teaching, it is not to say that I didn't teach, but some lecturers may be because we had many lecturers. We shared some courses, one course for two people, for example. In private universities, it cannot be like that. But I feel this means that public universities do not care about the quality of what it teaches students from a teaching point of view. Indirectly you will see that you emphasize the name of the university. But we do follow the syllabus if the teaching has an impact or not, but we are not sure. I feel better about the performance system at OUM, but I think this also depends on the individual. It is my commitment because working here is my choice. I can work, so I want to work. With regards to a workload perspective, for example. It's a lot of work, but I'll get through it. In the old place, there were many flexible hours. For example, when I newly joined OUM, I observed no one at the canteen at 8 am. It means everyone went to work at the stipulated time. If at the old workplace, at 9-10 in the morning, it's still full of people. I don't know if it is people working or sitting drinking or not monitored. That's not right. Because this doesn't have a particular action and at 10 o'clock there are people in the canteen, too. We used to meet the president, who would give a motivational talk, encouraging indirectly. Then there is a support system which is also good. In terms of salary, promotion and benefits are very good. That thing gives a lot of benefits to	Key informant 4 made a comparison between OUM and her previous work (a public university). She mentioned that connecting the organization and revenue is very important to ensure the sustainability of the university. She feels better about the performance system, good pay, promotion and bonuses. All these things boost motivation among employees.

| | employees such as bonuses. Since I came first, there has been a bonus at OUM. While working in a public university, I did not have such benefits in the past. This kind of benefit certainly gives a motivational boost to work.

I think I am competent and satisfied, so I feel motivated. I feel that I want to work. Most of my friends at this age (early 70s) are not working, but I never tell them about my working environment. | |

4.3 Stage 3: Emergent Themes (Superordinate and Subordinate Themes)

Stage 3 is the emergent themes which are superordinate themes and subordinate themes. The emergent themes are derived from stages 1 and 2. The details of the themes as shown in Table 10.

Table 10. Stage 3: Emergent Themes and Sample of References

Superordinate Themes	Subordinate Themes	Sample of References
Human Resources Development Practices	▪ Continuous Improvement	Key Informant 1: "…providing continuous improvement for their staff knowledge, training, skill, and attitude." Key Informant 2: "...to assist employees in achieving organisational goals by fostering the growth of their organisational and personal skills, competencies, and knowledge." Key Informant 3: "… human resource development for employees must include career development." Key Informant 4: "…it is the guidelines used by the organization to develop employees' skills, knowledge and abilities efficiently."
	▪ Empowerment	Key Informant 1: "…we sort of have some kind of idea of what they are doing and also how to get help because they are our network." Key Informant 2: "...is to empower employees by giving them access to a range of options, including career development, performance management, and employee training, I also have the freedom and trust to carry out my duties at work." Key Informant 3: "…empowerment is important."

		Key Informant 4:	"…empowerment is given to the employees to perform better."
Positive Synergy	▪ Employees' Well-Being	Key Informant 1:	"…. I think it's a ripple effect from whatever is transpired from HR. Walk the talk. I think they also walk the talk. I know they are role models."
		Key Informant 2:	"…I frequently compared my current work experiences with those of my former organisation. I am confident that OUM is concerned and accountable for the employee's well-being."
		Key Informant 3:	"…Those who have been in service for a year have increments and bonuses. HR has never broken its promises. OUM is one of the best medical benefits compared to my old workplaces."
		Key Informant 4:	"…In terms of salary, promotion and benefits are very good. That thing gives a lot of benefits to employees such as bonuses."
	▪ Motivation and Satisfaction	Key Informant 1:	"…I did not encounter unpleasantness so much and I am motivated to work well."
		Key Informant 2:	"…Aside from that, the tangible benefits provided by OUM are clearly better than those provided by my previous organisation. This is very significant, and it motivates me to continue working with OUM."
		Key Informant 3:	"…I want to say that the first motivation, of course, is that I asked for a job because of worship. The second motivation, of course, is salary. It is the only way I want to increase the stocks of the afterlife."
		Key Informant 4:	"…I think I am competent and satisfied, so I feel motivated. I feel that I want to work."

5   DISCUSSION AND CONCLUSION

This study employed the IPA analysis that addressed two research objectives, (i) to identify their understanding of human resource development and (ii) to examine their lived experience of human resource development at OUM.

All the key informants responded that their understanding of human resource development is two-fold. Firstly, it is about continuous improvement that improves human capital continuously through human resource activities. The human resource activities are not limited to training which assists employees in

achieving organizational goals through fostering personal skills, competencies and knowledge. Secondly, it is about the empowerment of which employees have the freedom and trust to carry out their duties and tasks.

Concerning their lived experiences of human resource development at OUM, it looks like positive feedback. Compared with their previous employment, they feel appreciated, especially when OUM is concerned about its employees' well-being, such as salary, promotion exercise, and bonuses. Besides, human resource development practices are well implemented. All these considerations lead to the most vital aspect for OUM to sustain itself as an ODL leader when these employees are motivated and satisfied in continuously contributing their expertise in education. As academic staff members are in charge of teaching, learning, and research at universities, they are given a lot of attention (Pausits, 2015).

In conclusion, the sustainability of ODL starts with motivated and satisfied employees. This study is significant for ODL universities to learn from human resource development at OUM for it to sustain itself as the leader in ODL in Malaysia.

REFERENCES [Arial, 12-point, bold, left alignment]

[1]   Kaifeng, J., Lepak, D., Jia, J. and Baer, J. (2012). How Does Human Resource Management Influence Organizational Outcomes? A meta-analytic Investigation of Mediating Mechanisms, Academy of Management Journal, Vol. 55 No. 6, pp. 1264-1294.

[2]   Mittal, S. (2013). HRD Climate in Public & Private Sector Banks. Indian Journal of Industrial Relations, Vol. 49 No. 1, pp. 123-131.

[3]   Nguyen, H.T., Leo, P.D, Rewel, J.S.J., Nguyen, T.V, Nguyen, T.H. (2020). Human Resource Development Strategy of Ton Duc Thang University to Improve its Position on the International Rankings. International Journal of Advanced Education and Research ISSN: 2455-5746, pp. 105-110.

[4]   Pausits, A. (Ed.) (2015). Human Resource Management in Higher Education – Case Studies and Future Scenarios, Vol. 1, Donau-Universität Krems, Vol. 1 No. 1, pp. 1-2.

[5]   Pilbeam and Corbridge. (2006). Competencies in People Resourcing. Harlow: Longman Group, Vol. 1 No. 2, pp. 61-88.

[6]   Tomkins, L. (2017). Using Interpretative Phenomenological Psychology in Organisational Research with Working Carers. In J. Brook, & N. King (Ed.), Applied Qualitative Research in Psychology, pp. 86-100.

ACCELERATING TUTORS' DIAGNOSTICIAN PERFORMANCE THROUGH PERSONAL COMPETENCE AND ICT SUPPORT IN WEB-TUTORING AT UNIVERSITAS TERBUKA

Nong Ayu Triyanti Utami Hakim[1], Hery Susanto[2], Rini Febrianti[3]

[1]*Universitas Terbuka (Indonesia)*
[2]*Universitas Terbuka (Indonesia)*
[3]*Universitas Terbuka (Indonesia)*

Abstract

Tutor performance is essential because it navigates the whole array of tutoring practices and deals with learning goals. Performance is assessed with respect to tutors' ability to perform their job duties. One of the common types of tutoring performance is the role of educational diagnostician within which tutors diagnose the extent to which students demonstrate prior knowledge. In relation to the diagnostician role, the present study delves into the role of tutors' personal competence and ICT support in accelerating tutors' diagnostician performance for web-tutoring of Universitas Terbuka. It is an associative study and takes on 100 student samples using simple random sampling. Tutors' personal competence, ICT use and tutor performance are measured using a theory-based questionnaire, while hypothesis testing fits in multiple linear regression model. Results indicate that tutors' personal competence, ICT use and tutor performance fit in a very good category, suggesting that these three variables can significantly contribute to the acceleration of tutors' diagnostician performance in conducting web tutoring, both partially and simultaneously. Building upon the results, we strongly urge the increase in tutors' personal competence, together with the wide-ranging inclusion of ICT use, to enhance tutors' diagnostician performance in web-tutoring implementation.

Key words: personal competence, ICT, diagnostician performance

1 INTRODUCTION

In context, tutoring embodies a learning model in which both active and independent participation becomes precedence within the interaction of a small group of students with the aim of achieving a particular learning objective. At Universitas Terbuka, tutoring is the staple of academic service and student assistance to navigate students toward optimal learning outcomes. Tutoring may take several forms, i.e., face-to-face tutoring, written tutoring, Internet-based tutoring, radio-based tutoring, and computer-based tutoring or commonly known as CAI (Computer Assisted Instruction). Unlike face-to-face course, tutoring calls for 14 – 16 meetings per semester with a course length based on a given course credit. Tutor performance is of utmost importance to tutoring accomplishment. In other words, tutor performance needs improving in ways that tutoring can be successfully accomplished. Wardani and Julaeha (2006) similarly argue, "Tutor performance is one of the key factors that greatly fosters tutoring success. In its basic nature, tutor performance substantially embraces the tenets of the whole tutoring activities to attain optimal learning outcomes. Measurements of tutor performance heavily pertain to the ability and responsibility of a tutor to stimulate a set of tutoring fundamentals, which include constructive, independent, collaborative and contextual principles. One of the basic responsibilities that a tutor is expected to take on, as Grave (2003) puts it, is a diagnostician role within which a tutor diagnoses the extent to which students demonstrate prior knowledge. Further, Harirotunnadhiroh (2013) breaks down the major roles of a tutor: 1) to encourage and boost students' self-learning and critical thinking in an inclusive discussion environment; 2) to assist, accommodate and navigate students toward the development of knowledge, values, attitudes and academic and professional skills autonomously, and/or toward coping with problems in the midst of the independent learning; 3) to provide clear and guided instructions in ways that students can well grasp course materials independently; 4) to communicate with students and provide them with effective feedback both offline and online; and 5) to offer practical support for understanding and enhancing students' overall learning skills. In a general sense, it takes time and effort before a tutor can fully grasp the concept of a diagnostician in both web-based and online tutoring. In fact, the majority of the tutors disregard the importance and relevance of students' prior knowledge in learning engagement – hampering learning performance and tutoring success to a large extent. Because prior knowledge varies by students' educational backgrounds, students can be misled about what they understand when making connections between new information and pre-existing information. Building upon students' prior knowledge is therefore critically substantial to student achievement, which allows a tutor to focus on and adjust tutoring plan. Wardani and Julaeha (2006) further claim that effective tutoring calls for tutors' ability to apply their subject-specific knowledge, to design and conduct educational learning, and to understand students' characters. The present study seeks to model the constructs of tutors' personal competence and ICT use within the conception of tutors' diagnostician performance in web-tutoring. Findings are expected to shed light on the model of tutors' diagnostician performance acceleration through personal competence and ICT use within the implementation of web-tutoring at Universitas Terbuka.

2 LITERATURE REVIEW AND HYPHOTESIS DEVELOPMENT

2.1 Tutor Competence

Competence encompasses a demonstrable set of knowledge, skills, values and attitudes manifested in the habit of thinking and acting. As McAshan claims, competence incorporates the domains of knowledge, skills and abilities of an individual that are integral parts of himself into cognitive, affective and psychomotoric behaviors.

According to Government Regulation Number 19 of 2005 concerning National Education Standards Article 28 paragraph 1, "Educators must have academic qualification and competence that encapsulate a diverse range of learning agent roles, are physically and spiritually healthy, and have the capacity to achieve national education goals." In paragraph 2, academic qualification refers to the minimum level of education that an educator must meet as evidenced by a diploma and or certificate of relevant expertise according to 12 applicable laws and regulations.

To judge from the learning process, a tutor must have competence qualification and education background relevant to his subject-specific expertise. With relevant qualification, he can get well acquainted with the mastery of a given subject matter and thus become a competent tutor. In Government Regulation No. 19 of 2005 concerning National Standards of Education, four components are integral to the equality education, i.e., pedagogical, personality, social, and professional competence. These competences are the cornerstone around which a tutor represents his values, behaviors, aims and practices to conduct effective tutoring. These competencies define his ability not only to teach but also to ensure effective knowledge transfer upon which a strong foundation for growing and developing students' personality and intelligence is built.

One may narrow down the aforementioned conception of tutor competence into two larger groups, i..e., generic and specific competence. While generic competence may be integrated into larger domains (pedagogical, andragogical, personality and social), specific competence is exclusively associated with professional competence. As the name suggests, generic applies to all kinds of tutors, while specific competence appeals to an individual tutor (Hadianti, 2010).

Professional attitude refers to a pattern of tutors' attitudes toward their profession. The pattern manifests in their behavior chains in carrying out their teaching tasks. Soetjipto and Kosasih (2007) reveal that a teacher reflects a chain of professional attitudes on his outlook for laws, professional organization, colleagues, students, workplace, leaders and profession. As such, professional attitudes in tutors cast light on their personality regarding all matters with respect to their profession.

When it comes to professional development, tutors rely entirely on the qualification and what it leads to. In a typical situation, professional tutors demonstrate knowledge, skills and attitudes to a larger extent than the others. To that end, professional tutors must meet a minimum qualification and certification and demonstrate professional ethics and competences, which turn into inherent traits of an individual tutor and hence become a standard for minimum personal competences.

2.2 The Use of Information and Communication Technology

Information and communication technology (ICT) refers to the manner in which an organization turns input into output. An organization must have at least 1 (one) technology to transform financial, human, and physical resources into product or service (Robbins, 2003). Information technology or instructional computer and the Internet commonly apply to two uses in educational landscapes; 1) learning about computers and the Internet, that is, fundamental areas of computer can be an object of study (e.g., computer science); 2) learning with computers and the Internet, that is, information technology accommodates learning in accordance with a given school curriculum, for instance, the Center for Communication Technology for Education and Culture (Pustekkom), Department of Education and Culture of the Republic of Indonesia capitalizes on the development of interactive multimedia CD-based teaching materials (Bambang Warsita,2008).

Information and communication technology (ICT) is commonly a set of technological mechanism to process, store, obtain, display and transmit data in a myriad of forms and ways to produce information that can be useful for the user. ICT, as Haaf and Cummings (1998) claim, is an array of infrastructure and components that enable one to work in information and carry out tasks associated with information processing. As the amalgamation of computer technology and communication technology, ICT does not restrict its conception to computer technologies (hardware and software) for information processing and storage; instead it engages with communication to impart information. Further, Kadir (2005) breaks down ICT into 6 entities, i.e., input technology, output technology, software technology, storage technology, telecommunication technology, processing technology. A decent use of ICTs can improve the quality of information provided in report writing.

The aforesaid arguments concerning ICT use lead to several understanding. First, ICT can be used for information sources and databases. Second, ICT makes information acquisition accessible in ways that the information is easily received and understood. Third, ICT is an approach to skill development, i.e., ICT-based skills using a set of applications in school curriculum.

3 TUTOR PERFORMANCE IN DIAGNOSTICIAN ROLE

Tutor performance is critical to the whole range of tutoring activities and thus to overall accomplishment of learning objectives. Assessments of tutor performance refer to how he or she fulfills his or her job duties and executes his or her required teaching tasks by stimulating the fundamentals of tutoring (constructive, independent, collaborative and contextual) to students.

Taking on the diagnostician role in tutoring environment may take several ways. Prior to diagnostic assessment of students' knowledge, a tutor must become acquainted with the purpose of a curriculum and module-based learning objectives, grasp the material in a teaching scenario, and demonstrate punctuality. A tutor may stimulate students to engage with each other and implement group work. This encourages them to share understanding and provide feedback through discussion and explanation related to the scenario. When they provide feedback, it has little to do with giving the right opinion or answer. Instead, the key focus is to share students' prior knowledge and to embrace the process of being incorrect and learning from failures.

4 HYPOTHESIS DEVELOPMENT

The present research model underpins on previous theoretical studies. The hypotheses are as follows:

H1: Personal competence and ICT use simultaneously have positive and significant effect on tutors' diagnostician performance in web-tutoring.

H2: Personal competence and ICT use partially have positive and significant effect on tutors' diagnostician performance in web-tutoring.

5 METHODOLOGY

5.1 Research Design

The study is designed in an explanatory research to examine hypotheses using testable explanation about a phenomenon based on a scientific process. The study presents two independent variables, i.e., personal competence and ICT use, and a dependent variable, i.e., tutors' diagnostician performance in web-tutoring.

5.2 Participants

The study is cross-sectional (2021.1) using a survey and engages with a population of the entire students of Universitas Terbuka. The target population is the students of Non Basic Education who attended web-tutoring at Universitas Terbuka Makassar. Sampling uses a random sampling model, and the questionnaire is distributed online. The questionnaire captures 100 respondents.

5.3 Instrument

5-point Likert questionnaire is used to collect, measure and analyze the data, from "strongly disagree" at 1 to "strongly agree" at 5.

Table 1. Indicators for Research Instrument

Variable	Indicators	
Personal competence (X1)	X1.1 Responsive to tutoring regulations	A1
	X1.2 Responsive to students' questions	A2
	X1.3 Capable to communicate well with the manager regarding students' needs	A3
	X1.4 Maintain order and security during teaching and learning process	A4
ICT use (X2)	X2.1 Obtain data or information directly from the core source	B1
	X2.2 Relay and present information in the most useful way	B2
	X2.3 Create and process information to obtain new information	B3
	X2.4 Store information for future use	B4
	X.2.5 Share and exchange information that has been obtained	B5
Tutors' diagnostician performance in web-tutoring (Y)	Get acquainted with the purpose of a curriculum and learning objectives in tutoring modules.	Z1
	Stimulate students to interact through group discussion.	Z2
	Demonstrate enthusiasm and fully engage with tutoring activities	Z3

	Encourage students to be attentive and responsive to others' feedback in good manners	Z4
	Provide students with opportunity to think, process and recall before they present their feedback	Z5

6 DATA ANALYSIS

The analysis begins with the process of developing the instrument which is measured using validity and reliability. Multiple linear regression is subsequently completed to acquire the result of model testing, the effect between variables and the dominant variables.

In terms of validity test, an item is a valid measure only to the extent that it scores above 0.40 at a significance level of 95% within a group of items representative of the content of the trait to be measured. In terms of reliability test, Cronbach's Alpha, coefficient and item-total correlation are applied to measure whether each variable is reliable. Each variable scores above 0.60, which indicates internal consistency. The reliability of all variables is therefore desirable. To figure out the effect between variables, p-value must score ≤ 0,05 to make sure that the effect of the independent variables on the dependent variable is significant, at a confidence level of 95% and a maximum deviation level of 5%.

7 RESULTS

7.1 Validity and Reliability

The result of validity and reliability test is presented below.

Table 2 Result of Validity and Reliability Test

Variable	Indicator		Validity	Cronbach's Alpha	Reliability
	Min	Max			
x1	0.259	0.599	Valid	0.602	Reliable
x2	0.270	0.441	Valid	0.693	Reliable
Y	0.255	0.761	Valid	0.672	Reliable

Source : SPSS output (2022)

The result shows that the minimum values stand above 0.2, and the alpha values stand above 0.6. This indicates that the instrument is properly distributed.

7.2 Frequency Distribution

The recapitulation of the frequency distribution of the respondents in the effect of personal competence and ICT use on tutors' diagnostician performance in web-tutoring is presented below.

Table 3 Respondents' Assessment of Tutors' Personal Competence

VAR00002 * VAR00001 Crosstabulation

Count

		VAR00001			
		3.00	4.00	5.00	Total
X1	x11	30	64	6	100
	x12	19	51	30	100
	x13	16	69	15	100
	x14	58	42	0	100
Total		123	226	51	400

Source: SPSS output (2022)

Table 3 shows that the proportion of the responses to tutors' personal competence is predominantly "agree," "neutral," and "strongly agree," indicating that the variable fits into a good category.

Table 4 Respondents' Assessment of ICT Use

VAR00004 * VAR00003 Crosstabulation

Count

		VAR00003			
		3.00	4.00	5.00	Total
X2	X21	49	17	34	100
	X22	47	28	25	100
	X23	43	30	27	100
	X24	0	40	60	100
	X25	0	60	40	100
Total		139	175	186	500

Source: SPSS output (2022)

Table 4 shows that the proportion of the responses to ICT use is predominantly "strongly agree," "agree," and "neutral," indicating that the variable fits into a very good category.

Table 5 Respondents' Assessment of Tutors' Diagnostician Performance

VAR00006 * VAR00005 Crosstabulation

Count

		VAR00005			
		3.00	4.00	5.00	Total
Y	y1	66	25	9	100
	y2	53	21	26	100
	y3	58	23	19	100
	y4	76	13	11	100
	y5	43	49	8	100
Total		296	131	73	500

Source: SPSS output (2022)

Table 5 shows that the proportion of the responses to tutors' diagnostician performance is predominantly "neutral," "agree," then "strongly agree," indicating that the variable fits into a moderate category.

7.3 Inferential Analysis

Multiple linear regression is conducted to see whether the independent variable affects the dependent variable. The recapitulation is presented below.

Table 5. Result of Multiple Linear Regression

Independent Variable	Dependent Variable	estimate	t	Sig t
Estimate	Tutors' Diagnostician Performance (Y)	4.555	4.253	.000
Personal competence (x1)		0.454	7.563	.000
ICT use (x2)		0.327	9.453	.000
R				.794
R^2				.630
F				82.559
Sig F				.000

Source: SPSS output (2018)

The SPSS output can be interpreted as follows:

1. R^2 of 0.630 (63.0%) is the simultaneous effect of personal competence and ICT use on tutors' diagnostician performance in web-tutoring. The remaining 37% constitutes other factors not included in the model.
2. $F_{Cal.}$ of 82.559 with alpha probability level of 0.00 (less than 0.05) indicates that personal competence and ICT use simultaneously have positive and significant effects on tutors' diagnostician performance. Hypothesis 1 is therefore accepted.
3. $T_{Cal.}$ of personal competence is 7.563 with the alpha of 0.000 (less than 0.05), indicating that personal competence has a positive and significant effect on tutors' diagnostician performance in web tutoring, taking into account that the other factors that might affect tutors' diagnostician performance remain constant.
4. $T_{Cal.}$ of ICT use is 9.453 with the alpha of 0.000 (less than 0.05), indicating that the ICT use has a positive and significant effect on tutors' diagnostician performance, assuming that the other factors that might affect tutors' diagnostician performance remain constant. Hypothesis 2 is therefore accepted.

The result resonates well with Wardani and Julaeha (2006) who posit, "Tutor ability in conducting tutoring is one of the determinant factors of tutoring success." This model also justifies Robbins' theory (2008) that underlines the factors affecting employee performance, which include 1) ability, 2) motivation, and 3) individual. Further, Soeharto (2004) argues, "An employee can drive his performance if he has both formal and non formal education, reaches a certain level of work experience, and demonstrates a certain level of willingness." This conforms to the notion of employee responsiveness; when an employee reaches the extent to which a strong sense of responsiveness is valued, he is likely to fulfill performance outcome in accordance with organizational standards.

Sadiman (1993) breaks down a pattern of ICT use in education, i.e., 1) media use in class situations for sustaining teaching and learning processes, and 2) media use outside class situations, which incorporates free or controlled ICT use that is systematically applied to a certain purpose. In a similar sense, Salamah (2012) argues, "*To improve the lecturers' performance, it is necessary for them to have an understanding of the factors that influence the use of IT.*" This argument underscores the necessity of gaining insights into a vast array of components by which ICT use is influenced when it comes to improving teacher performance in teaching-learning affairs.

8 CONCLUSION

Key points of the present findings are highlighted as follows:

1. Personal competence and ICT use simultaneously have positive and significant effects on tutors' diagnostician performance in web-tutoring, indicating that better standards of tutors' performance in their diagnostician role call for the simulatenous improvement of tutors' personal competence and ICT use.
2. Personal competence partially has positive and significant effect on tutors' diagnostician performance in web-tutoring, indicating that striving for the advancement of personal competence is likely to enhance tutors' performance in their diagnostician role.
3. ICT use partially has positive and significant effect on tutors' diagnostician performance in web-tutoring, indicating that the success of tutors' performance in their diagnostician role builds on the improvement of ICT use.
4. The present findings lay out a model for accelerating tutors' performance in their diagnostician role through the constructs of personal competence and ICT use.

9 SUGGESTION

The acceleration model of tutors' performance in diagnostician role suggests applicable policy of sustainable improvement on tutors' personal competence and their ability to leverage ICT infrastructure and components.

REFERENCES

Abdurrahmat Fathoni, 2006, Manajemen Sumber Daya Manusia, Rineka. Cipta. Bandung

Agar tutor memiliki kompetensi tersebut, maka perlu pengembangan kompetensi (Fathoni, 2006)

Grave WD, Jos M, Jeannette H. The role of the tutor in a problem based learning curriculum. Maastricth: Universitaire Pers Maastricht; 2003. p. 7, 10, 20-55.

Haag, S., Cummings, M., & Dawkins, J. (1998). Management information systems. Multimedia systems, 279, 280-297.

Harirotunnadhiroh. 2013. Fungsi dan Tugas Tutor, Fasilitator dalam Pendidikan Orang Dewasa. Tersedia di: https://harirotunnadhiroh.wordpress.com/2013/04/22/fungsi-dan-tugas-tutor-fasilitator-dalam-pendidikan-orang-dewasa/. Diakses tanggal 28 juni 2022.

Hasibuan, Malayu S.P. (2007). Manajemen Sumber Daya Manusia, Jakarta: Bumi Aksara.

Iswanto, Yun & Yusuf, Adi. (2016). Materi Pokok Manajemen Sumberdaya Manusia. Tangerang Selatan : Universitas Terbuka.

Iswanto, Yun. (2016) "Menciptakan Lingkungan Pembelajaran yang Memperkuat Teknologi." . www.ut.ac.id 7-24

Kadir, A & Triwahyun . (2005). Pengenalan teknologi informasi. Penerbit Andi Yogyakarta

Kartono, Kartini. 2008, Pemimpin dan kepemimpinan. Raja Grafindo. Persada. Jakarta.

M.Thoha. 2007. Metode Penelitian. Jakarta: Universitas Terbuka.

Robbins, Stephen P. 2003. Perilaku Organisasi. Index. Jakarta.

Suhaenah Suparno. 2001. Membangun Kompetensi Belajar.: Dikti Departemen Pendidikan Nasional, Jakarta

Utami, W., & Aryanty, N. (2013). Performa Tutor Sebagai Pendiagnosis Dalam Tutorial Menurut Persepsi Mahasiswa. JAMBI MEDICAL JOURNAL" Jurnal Kedokteran dan Kesehatan", 1(1).

Wardani. I.G.A.K; Julaeha Siti; Marsinah Ngadi (2006) Pemantapan Kemampuan Propesional. Jakarta : Universitas terbuka.

William dan Sawyer. 2007.Using Information Technologi. Penerbit : Andi, Yogyakarta

Wursanto, Drs. Ig, 2003, Dasar-Dasar Ilmu Organisasi, Andi Offset, Yogyakarta

1. Overview of the theory of human resources development

1.1 Some theories on human resources management and development

The concept of human capital was first introduced in the first version of the "nature and income" published by American economist Owen Fisher. In 1960, Nobel laureate Thadore W. Schults pointed out in his speech entitled Investment in Human Capital that human capital is a kind of capital embodied in human beings, that human capital is not obtained at no cost, and dependence on human knowledge, skills and experience requires the consumption of scarce resources. The quality and quantity of human capital are related to the survival and development of an organization and is an organization's strategic investment.In order to achieve strategic goals, organizations should make effective use of human capital through a series of human resources management measures such as education, training, incentives and assessment.

The concept of human resource development comes from the American scholar Nadler, who defines human resources development as an enterprise or organizational group that investigates, analyzes, plans and adjusts human resources based on the existing human resources of the organization, according to the strategic objectives and organizational structure changes, so as to improve the existing level of human resources management in an organization or group, make human resources management more efficient and creates greater value for a group (organization). In enterprises or organizational groups, there are two goals for implementing human resources development: one is to improve human talents through development activities, and the other is to enhance human vitality or motivation through development activities. We can say that helping every individual in the organization improve work skills and technology is the main purpose of human resources development. After personal talents are improved, by improving and improving management methods, individuals can have a correct work attitude and enthusiasm for work, which is the secondary purpose of human resources development.

Broadly speaking, all natural people who can complete the work are human resources. In a narrow sense of theory, human resources refer to the sum of people with the ability to work who can promote economic and social development. In the personnel management and human resources development of colleges and universities, the human resources we face are the sum of faculty and staff inside and outside the college. The faculty and staff who sign long-term employment contracts within the college and the faculty and staff who are employed through various forms of external employment are the human resources we need to manage and develop. In the personnel work of colleges and universities, administrators, full-time teachers, part-time teachers, teaching assistants, logistics personnel and even retired personnel are all within the scope of human resources management and development. In particular, retired teachers who return to school education and teaching activities through re-employment is a very common form of human resources application, so sufficient attention must also be paid to this group.

Compared with other human resources, human resources in institutions of higher learning are different, and they have their own distinctive characteristics: first, they are structurally high-level and personalized independence. Colleges and universities are places where senior professionals gather. The structure of human resources is relatively high. At the

same time, they advocate freedom and are eager to realize the value of life. Second, they are the high-energy and value scarcity of majors. Human resources in colleges and universities have excellent professional knowledge, professional skills and professional quality. They take the initiative to carry out research on professional issues. They are leading figures in the professional field, and their social value is difficult to predict and measure. Third, the high complexity of labor and the difficulty of evaluation. The labor of college teachers is mainly based on thinking labor, there are no fixed models and rules, the difficulty of work is high and complexity, the results of teaching and scientific research are also very dominant, and it is difficult to evaluate the work; fourth is the high mobility and diversity of demand in the market. The material and spiritual needs of human resources in colleges and universities are diverse, and they yearn for better development opportunities. They rely on their unique advantages in the professional field to become a highly mobile resource.

In modern organizational group management, everything related to people is related to human resources management and development, but as a department responsible for human resources management and development, its main work can be briefly summarized into the following four categories: talent selection, talent training, use and talent retention. These four types of work have both intersections and influences.

The selection of talents is the first step and very important step in human resources management and development. If you can select the right talents in the recruitment process, you will be more prosperous in the further training and application of talents in the future. In the process of talent selection, managers must have considerable management knowledge, clearly understand the professional responsibilities and recruitment needs of the position, and have certain identification ability. At the same time, a complete recruitment and inspection system is also very necessary. A mature and complete selection recruitment system can efficiently complete recruitment and selection tasks, save workload and improve work efficiency. At present, in colleges and universities in China, holding centralized written examinations and interviews is the most common method for recruiting faculty and staff. This recruitment method can effectively screen a large number of talents, and the subsequent physical examination and review links are an effective supplement to the examination process.

The main work of human resources management and development is the cultivation of talents. The development of social organizations and groups is driven by every participating individual, and the cultivation of each individual is to strengthen the driving force of development. In the cultivation of talents, the most important thing is to implement the principle of teaching according to aptitude. Because everyone's personal qualities and learning experience are different, and their skills are different from those they lack, in the cultivation of talents, appropriate training plans must be arranged according to each person's characteristic. The content of the training should be arranged according to the needs of the job and professional needs, and the duration of the training can be long or short. In colleges and universities, the training of faculty and staff is different from that of students. The focus of enterprise education is practicality. In the training of faculty and staff, it is necessary to fully combine teaching practice to avoid false vacancies and ensure the practicality of training. At the same time, attention must also be paid to the selection of trainees. We must try our best to ensure the participation training plan of business

backbones with high ability but busy work. idle people should not be allowed to make up in the training course, which will affect the enthusiasm of the business cadres and other faculty and staff.

Good use of talent is the main goal of human resources management and development. Therefore, when arranging positions for talents, we must pay attention to the recruitment of large materials. Large materials and small use are a waste of human resources, and small talents and large use are easy to cause organizational losses. When assigning specific work, we should fully consider the physical and mental requirements of personnel to enrich the work. At the same time, we should ensure a more labor, high-quality and high-priced compensation mechanism to improve the enthusiasm of talents to work.

Of course, ensuring a reasonable compensation mechanism is also an important means to retain talents for the organization. If human resources continue to flow out of the organization, it is a serious dereliction of duty in human resources development and management, which will shake the foundation of the development of the organization and put the organization into trouble. It is even more important to retain talents in institutions of higher learning. If faculty and staff continue to lose, it will lead to faults in teaching work and affect the normal operation of the school. In particular, once doctoral, master's and other highly educated talents terminate their contracts with the school and are lost to other universities or enterprises, it will have a serious impact on the overall human resources pattern of the school, reduce the school's competitiveness at the social level, and then affect the enrollment and teaching work in the later stage.

1.2 Significance of human resources management and development in the open university system

We know that human resources are also an important part of the means of production, so if we want to analyze and study human resources, we must use economic research methods and research models. From the perspective of economics, the most important significance of human resources management and development for modern enterprises is to enable enterprises to constantly adapt to the external and internal changes of enterprises.These changes do not only exist in a specific industry, but also take shape with the continuous development and change of society.

The so-called external environmental changes refer to some changes that occur at the social level. Their fundamental source lies in the changes in social productivity represented by science and technology. The continuous strengthening of productivity will lead to the continuous refinement of the social division of labor, which will affect the distribution of social strata and changes in social values. For example, before the reform and opening up, China did not have systematic open education, but after the reform and opening up and the great development and changes of social productivity, people began to realize the importance of continuous learning and lifelong learning. After the general demand for learning in society, China's open education system has taken root and developed from the radio and television university system and continued to grow.

In the dramatically changing external environment, the internal and inevitable changes of social organizations are also constantly changing. In the process of the development of the organization, the internal division of labor will definitely be constantly refined. With the continuous upgrading of social competition, the refinement of the division of labor within the

organization is an inevitable trend. Within the education system, the new teaching team building makes the responsibilities of each faculty and staff more detailed, and the tasks undertaken by each individual will become more and more professional. At the same time, due to the high development of information technology, many tasks that once required a lot of manpower can be done through computers and remote network systems. Through an efficient human resources management and development model, it is the responsibility of the human resources management development department in colleges and universities to continuously introduce highly educated and high-quality professional and technical personnel into colleges and universities, and constantly improve the overall quality of teachers and staff.

2. Current Situation of Teacher Team Construction of Inner Mongolia Open University

2.1. A brief history of the development of Inner Mongolia Open University

The predecessor of Inner Mongolia Open University was the Inner Mongolia Radio and Television University established in 1979 in accordance with Comrade Deng Xiaoping's instructions to establish the National Radio and Television University. In August 2020, the Ministry of Education issued the National Open University Comprehensive Reform Plan, requiring provincial radio and television universities to transform and develop into open universities. In December 2020, the People's Government of Inner Mongolia Autonomous Region approved the change of the name of Inner Mongolia Radio and Television University to Inner Mongolia Open University.

Inner Mongolia Open University is not only a school-run entity, but also a school-running system covering urban and rural pastoral areas in the whole region. The school has 12 league branch schools, 1 mining area, and 81 learning centers, forming an open university higher education network covering all leagues (cities) and flags (counties) in the whole autonomous region.There are more than 2,000 faculty and staff in the opening system in the region. The school has two campuses in the east and west, covering an area of 58,648.89 square meters and a total construction area of 30,359.89 square meters. The school headquarters has 25 teaching and management institutions, with a total of 269 on-the-job faculty and staff, of which 91 have deputy senior professional and technical titles.

The school has taken the initiative to serve local economic and social development, and has initially formed a new model of education informatization integration, one way, one platform, to meet the needs of data centers of various scales and business requirements. Develop and build the Inner Mongolia Lifelong Education Network, better open digital learning resources and services to the society, and provide more residents with online and offline educational resources and activities. The school, the Organization Department of the Party Committee of the Autonomous Region, the Department of Education of the Autonomous Region and the Department of Finance of the Autonomous Region have organized and implemented the "One College Student in One Village" project, which has trained more than 12,000 skilled and applied high-level professionals for the construction and rural revitalization of new rural pastoral areas in the autonomous region. Actively explore a new model of continuing education for migrant workers, which attaches equal

importance to both academic and non-degree education, and use Internet technology and information-based teaching service management platform to provide one-stop support services for migrant workers. Up to now, a total of 14,757 migrant workers have been enrolled in the project to study and realize their dreams. The school has built 372 "open big bookstores" in the region, providing more than 37 million yards of book reading resources for the people in the region, and basically forming a scholarly network with "open big bookstore" as the basic point and radiating the whole region.

The school has always been committed to promoting lifelong learning for all, taking root at the grassroots level and serving the society, insisting on exploring the deep integration of technology and education, using the network platform and digital learning resource bank to provide academic education, as well as various forms and rich online lectures and open courses to the people of the region, improving the scientific and cultural quality of citizens, meeting the diversified and personalized learning needs of members of society, creating a new "Internet without walls", giving full play to the main role of the school in improving the comprehensive quality of the people, promoting the all-round development of people, building a lifelong education system, and building a learning society in the autonomous region.

2.2 The role and position of teachers in open universities

Under the new distance education model, we need three types of teachers: first, they are "designers" who can carry out curriculum development and teaching design. Their responsibility is to build a course from scratch and convert the knowledge on books into multimedia content on the teaching platform; second, teachers, tutors and organizational managers, who are mainly responsible for teaching interaction, who are responsible for the interactive work of teaching and tutoring students, and the work content is similar to that of teachers and counselors in ordinary colleges and universities; and finally, personnel who are mainly engaged in supportive work, who are responsible for supporting users of the teaching platforms and studying the further development and management of the teaching platform.

At present, the teacher positions within the National Open University System are divided into four levels, namely, the presiding teacher of the National Open University (Central TV University), the responsible teachers of the Provincial Open University (Provincial Radio and Telecom University), the tutor of Mengshi Radio and Telecom University, and the instructor of Qixian teaching points or workstations.The responsibilities between the fourth-level teachers are reflected in the name. In teaching practice, the teaching work relationship between teachers at each level is from top to bottom, closely linked and interlocked, among which provincial open university teachers are in the key link from top to bottom. In normal teaching work, provincial open university teachers should often contact the teachers of the National Open University, obtain teaching plans, courses, professional rules and other contents, digest and absorb them, communicate and guide teachers and students of prefectural and municipal TV University in a timely manner through teaching and research activities, implement teaching plans and teaching links, provide teaching support services, and monitor the quality of teaching. The responsible teachers of provincial TV University are not only the implementers of teaching activities, but also the managers of teaching implementation links. For the Open University, the competentness of

provincial open university teachers is related to the implementation of the teaching plan, teaching concept and teaching goals of the open university, and the level of teaching quality of open universities.

2.3 Current situation of talent work at Inner Mongolia Open University

For Inner Mongolia Open University, there is a big gap between the size and quality of the current talent team and ordinary colleges and universities. Although it has the largest number of students in the Inner Mongolia Autonomous Region, the number and average quality of teachers have not reached the level of other universities. After the historic transformation from Radio and Television University to the Open University, the Open University needs to shoulder more historical missions in the new era. It should meet the learning needs of the people for the continuous diversification and personalized development of the people and promote the fair education path for members of society. It is an important support for building a learning society and a lifelong education system with Chinese characteristics. It is of great practical significance to do a good job in the talent work of Inner Mongolia Open University, select and recruit outstanding talents adapted to the strategic development of the Open University, and improve the quality of education and teaching.

Today, with the rapid development of distance education technology, teachers of open education themselves must constantly re-learn and constantly update their knowledge. In the management of faculty and staff, the human resources management and development department must also continue to provide more and better protection and support for teachers in terms of system construction and resource allocation.

According to the data of 2015, the distribution of professional and technical positions in teacher positions at that time was: 10 senior, accounting for 9.7%; 43 deputy seniors, accounting for 41.7% of teacher positions; middle-level 39, accounting for 37.9% of teacher positions; 11 junior high school, accounting for 10.7% of teacher positions. It can be said that in the past seven years, the professional title structure of Inner Mongolia Open University has been relatively stable and has not changed much. It can also be said that the proportion of senior talents of Inner Mongolia Open University is increasing slowly.

Judging from the statistics of academic degrees, as of June 2022, there were 3 teachers with doctoral degrees at the Open University of Inner Mongolia, and 140 teachers with master's degrees, accounting for 1% and 52% of the total faculty and staff respectively. Compared with the data of 2915, the number of new recruits with master's degrees has increased significantly, while the number of people with doctoral degrees has not increased.

In terms of age structure, due to the recruitment of new faculty and staff every year in the six years from 2016 to 2022, the proportion of faculty and staff aged about 30 of Inner Mongolia Open University has increased significantly, accounting for about half of the total number of faculty and staff of the school. The continuous youth of school faculty and staff is an important achievement of human resources management and development of the Open University of Inner Mongolia.

In terms of on-the-job training, the staff training of Inner Mongolia Open University is divided into two categories: academic upgrading and professional training. In terms of

academic upgrading, the school has introduced various management systems to encourage faculty and staff to study for academic qualifications and degrees on the job. In terms of professional training, Inner Mongolia Open University has established a new teacher team management department - Teacher Evaluation Office since 2018. In 2021, this department was renamed the Party Committee Correction Office - Teacher Evaluation Center, which is mainly responsible for the on-the-job training of all faculty and staff, especially full-time and part-time teachers.   At present, the faculty and staff of Inner Mongolia Open University should not only participate in various trainings organized by the National Open University University, but also participate in the relevant training of professional and technical personnel in the Inner Mongolia Autonomous Region. The teaching and management departments of the school will also hold various training activities from time to time to time, including online and offline, long-term and other modes. These trainings are all completed on domestic online platforms and offline institutions. In recent years, no teacher has received training from abroad.

3.   Problems in human resources development of Inner Mongolia Open University

At present, the human resources management and development work of Inner Mongolia Open University is constantly developing well, but in the process of development, there are still certain problems. As a manager, we must fully understand these problems and constantly try to solve them.

3.1. The academic level of faculty and staff still needs to be improved.

From the above data, it can be seen that at present, among the faculty and staff of Inner Mongolia Open University, there are the largest number of master's degrees, which is a good phenomenon, but as a leader in discipline development and teaching, faculty and staff with doctoral degrees will obviously have more advantages. Only three doctors are not enough for the development of a school. As of June 2022, two faculty and staff of the school have been admitted to doctoral students and are studying part-time. Therefore, the school has decided to introduce new employees from the starting point of doctoral students from 2022. By July 2022, only three people with doctoral degrees have been recruited through various means. It can be said that the competitiveness of Inner Mongolia Open University in the recruitment market is still not enough to attract more highly educated and high-level talents to enter the school.

3.2. There are many majors, but there are not enough teachers in the corresponding major.

There are only 185 full-time and part-time teachers at Inner Mongolia Open University, which leads to each teacher to undertake teaching tasks ranging from 2 to more than a dozen courses. At the same time, because some professional disciplines cannot be recruited to join, some professional courses are managed by teachers of relevant majors. The lack of teachers leads to the significantly weaker teaching of some disciplines than

others in teaching activities. Moreover, this situation has also led to the overburdening of teaching of some teachers and a serious overweight workload, affecting the physical and mental health of these teachers.

3.3 The team of teachers has not formed a stable system.

The core network curriculum of the National Open University has been successively formed from the spring semester of 2017. In the past five years, the teaching team of Inner Mongolia Open University has progressed relatively slowly compared with other provincial universities.
According to the data, as of May 2022, Inner Mongolia Open University has participated in a total of 120 core teaching teams of the National Open University, involving 134 courses and 131 teachers; a total of 8 participating in the first-level coordination team of the National Open University, involving 8 courses and 10 teachers. . This figure does not reach the average level of all provincial branches in the country.

3.4. There is still room for teacher promotion.

In terms of teacher promotion, as mentioned above, At present, there are only 16 teachers and staff with high qualifications at Inner Mongolia Open University, but there are a total of 24 vacancies in full and senior positions, that is to say, 8 full and senior positions are still vacant and no one can be hired. In terms of deputy senior positions, there are currently 8 vacancies in deputy senior positions. The shortage of senior talents at the level that meets the requirements of the position is a major problem faced by Inner Mongolia Open University in the promotion of teachers.

4. Human resources development methods and countermeasures based on the perspective of teacher team building

4.1. Talent introduction and talent recruitment

Constantly improving and improving the talent recruitment work of Inner Mongolia Open University is an inevitable requirement to strengthen the construction of the school talent team, run the open education in the Inner Mongolia Autonomous Region, and better serve the cause of lifelong education.

4.2. Strengthen teacher team building

To set up a high-level curriculum teaching team, it is necessary to start with teachers' ideological management, fundamentally implement the student-oriented teaching concept, strengthen teachers' sense of responsibility and professionalism, stimulate teachers' sense of innovation, and provide more effective support for students' innovative learning. It is necessary to organically combine the cultivation of educational concepts with the construction of teachers' ethics and teachers' ethics, fully implement the educational policies of the Party and the state, focus on the talent training model of the National Open

University, strictly believe in the cause of distance education, create a good public opinion orientation on campus, and build a qualified faculty.

4.3. Standardization of teacher training

Training can take many forms. In addition to offline training modes such as short-term courses and special lectures, it can also rely on the platform of Guokai Learning Network to carry out online refresher training for teachers, so as to effectively help teachers of branches in the autonomous region catch up with the progress of the education and teaching reform of the National Open University and achieve an all-round improvement of teachers' teaching level.

Update the operation mechanism of training work and solve the problem of training funding in a flexible way. You can learn from the economic incentive system under the market economy system and set up a special training fund to promote the transformation of teachers from passive learning to active learning.

4.4 Strengthen the incentive mechanism for building teachers

A considerable resistance in the process of teaching team building is the enthusiasm of teachers. To solve this problem, it is necessary to introduce a new competition and incentive mechanism and propose a new model of fair, fair and sound teacher management.

First of all, we should fully understand the needs of teachers and deepen the reform of the teacher title evaluation system. In terms of professional title evaluation and recruitment, increase the recognition of the work of the network core curriculum teaching team.

Secondly, establish a dual performance appraisal mechanism within and outside the team. On the one hand, the leaders of the network core course teaching team can be granted permission to internal assessment members to encourage benign competition within the team; on the other hand, a review working group including the school and off-campus experts can be set up to evaluate the overall performance of all network core course teaching teams in the school, and establish a complete team access and elimination mechanism to encourage more teachers to participate in the network core course teaching team.

Third, improve the allocation and reimbursement process of funds. The teaching team of the core course of the network can be equipped with teaching assistants to assist the teaching team in the application and reimbursement of research funds. At the same time, we will strengthen cooperation with the school's finance department and scientific research office, so that teachers can focus on specific teaching work and facilitate the construction and development of teaching teams.

Fourth, introduce a third-party evaluation mechanism to assess and evaluate the work performance of the network core curriculum teaching team. After completing the learning task, students can score the teaching resources and teaching activities set up by the network core course teaching team, and the final score will be included in the evaluation standard of teaching results.

4.5. Establish a talent pool for teaching teams

We can build a pool of senior experts and talents according to the actual work needs, grasp the situation of teachers in real time, and fully support the construction of the teaching team.

In the formation of the teaching team, responsible teachers and team leaders can be jointly recruited and re-employed in the whole autonomous region, give priority to the recruitment of high-quality teachers, and integrate the faculty of the whole autonomous region to jointly participate in the construction of the teaching team of the core curriculum of the network. We can also adopt the method of bidding and bidding to fully mobilize the enthusiasm of teachers in the whole autonomous region to participate in the construction of teaching teams.

5. Conclusion

In the human resources management and development of colleges and universities, the construction of teachers is the lifeline of the survival and development of professional teaching teams. A perfect teacher management system is an important guarantee for the online teaching team to fully carry out its work. As a personnel teacher manager, we must fully understand the work needs of teachers and teaching teams, constantly standardize the management system, strengthen service awareness, and provide full system and decision-making support for the formation and operation of the network core curriculum teaching implementation team of Inner Mongolia Open University. Effectively do a good job in human resources management and development, and an important guarantee for remote and open education in the era of big data is an important part of the great cause of meeting the lifelong education needs of the whole society and improving the cultural level of the whole people.

REFERENCES

[1] Zhuhua Weng. The Role and Professional Development of Distance Education Teachers in China [J]. Open Education Research Institute 2012,18(01):98-105.DOI:10.13966/j.cnki.kfjyyj.2012.01.011.

[2] Ruihua Wang. The Role and Training Strategy of Distance Education Teaching Designers [J]. Distance education in China 2014(05):57-60.DOI:10.13541/j.cnki.chinade.2014.05.011.

[3] Xiurong Zhao. Research on the Professional Development of Open Education Teachers Based on Strategic Human Resources Management[D].Inner Mongol Normal University,2016.

[4] Jiaqi Fan. Network Core Curriculum Teaching Implementation Team Building and Mechanism Exploration: Taking Inner Mongolia Radio and Television University as an Example[J].Modern Vocational Education,2021(03):138-139.

[5]Shuqing Zhang . Research on the Problems and Countermeasures of Talent Recruitment in Inner Mongolia Radio and Television University[D]. Inner Mongolia Agricultural University,2020.DOI:10.27229/d.cnki.gnmnu.2020.000377.

SERVANT LEADERSHIP: THE FRAMEWORK OF MODERN LEADERSHIP AND HOW IT RELATES TO STUDENT COMMITMENT AND LOYALTY AT UNIVERSITAS TERBUKA

Hery Susanto[1], Andi Sylvana[2], I Made Gunawan Sanjaya[3]

[1]*Universitas Terbuka (Indonesia)*
[2]*Universitas Terbuka (Indonesia)*
[3]*Universitas Terbuka (Indonesia)*

Abstract

The mindset of digital-era leadership is quite different from that of the traditional 1970s to 2000s leadership: a leader understands not only how to use his authority but also to influence the behaviour of others. Within these roles, a leader connects with a large plethora of personalities, behaviours and maturity levels among subordinates. As leadership gains control of managerial dominions, its key responsibility entails rule-making authority to navigate complexity within formal organizational planning, the design of strict organizational structures, and the evaluation of a program or policy against expected results.

Within a servant-leadership community, the goal is not to rule over people; instead leadership is about serving and leading, and most importantly converging both to complement each other. Servant leadership works best in times of leadership crisis during which credibility and reputation are declining. In the present study, we examine the influence of servant leadership on student commitment and loyalty at Universitas Terbuka. A sample of 50 student respondents is subject to online questionnaires for linear regression analysis. We find positive and significant influence of servant leadership on student commitment and student loyalty, and student commitment on student loyalty. We recommend servant-leadership model that outlines specific leadership traits and how it is effective for student loyalty as the outcome of student commitment.

Key words: servant leadership, commitment, loyalty

1 INTRODUCTION

Organizational survivability largely depends on organizational capacity to change, to adapt to the changing environment or to embrace potential changes in the future. On the other hand, organizational capabilities to develop are defined by organizational abilities to create changes. These changes can be influenced by a multitude of factors, i.e., global competition, government deregulation, technology change, economic change, etc (Kotter, 1996). These factors can force an organization to change, and it must forge ahead with these changes to thrive. Likewise, higher-education organizations in Indonesia must change as they are now in the throes of a major reinvention to meet today's educational needs. One of the reinventions within organizational management that drives higher-education success is leadership.

The conception of leadership remains a substantial management topic along with its integral components and wide-ranging issues. In many cases, the direction to the success of an organization in fulfilling its predefined goals generally centers on the quality of leadership to take on leadership roles and responsibilities. Effective leadership is so vital that it constantly remains the focus of attribution of organizational success.

Terry in Thoha (2010) defines leadership as a set of activities that influence others and navigate them toward organizational goals. The basic construct of leadership encompasses the process of influencing them to identify organizational objectives, encouraging their behaviors to achieve those objectives, and navigating them to improve a certain group and its culture. Leadership embraces a set of demonstrable behaviors of an individual when he engages in the direction of group activities.

In today's organizational cultures, transactional leadership that only focuses on profit-making strategies seems to have been abandoned. A new approach to leadership that can simultaneously drive the improvement of employee performance and organizational services should be encouraged amid the era of disruption. A sense of leadership that prioritizes services for others, i.e., employees, customers, or surrounding communities, is referred to as servant leadership (Greenleaf, 2002).

Servant leadership emphasizes a type, model or style of leadership that is developed to tackle with leadership crisis in which followers lose trust and respect (Musakabe, 2004). This leadership model was first postulated by Robert Greenleaf in Cemgucel and Suatbegec (2012) who elaborates servant leadership as a charismatic leadership dominated by moral influences in the form of humility, relational power, autonomy, moral development of followers, and emulation of leader's service orientation. He further clarifies that the basis of servant leadership is built on the belief that an ideal leader strives to serve others by putting the interest, need, and aspiration of subordinates over his own. Similarly, Spears in Aji and Palupiningsih (2016) claims that the goal of servant leadership is

to serve and to promote positive meaningful relationships by reinforcing dignity and respect, building strong community and team work, and developing leadership listening skills to connect with employees.

The framework of servant leadership and its essential characteristics have long been the subject of numerous studies. Some of these studies have developed proper instruments but lacked the measurement of servant leadership in Indonesia particularly in regards to its relationship with commitment and customer loyalty. A prior study by Drury in Mira and Margaretha (2012) looks at the positive relationship between servant leadership and employees using a sample of 207 employees of five organizations in the south of United States.

Vondey in another study in 2010 (in Mira and Margaretha, 2012) probes the relationship between servant leadership and OCB (Organization Citizenship Behavior) using a sample of 130 employees in various industries in the United States in which he finds a substantial relationship between the two variables. Mira and Margaretha (2012) investigate the effect of servant leadership on commitment and OCB, and find that servant leadership has positive effect on commitment by 16,8% and on OCB by 33,7%, with the remaining accounting for other predictors.

Building on the prior studies, the present study looks at how servant leadership approaches student commitment and loyalty at Universitas Terbuka. As one of the operational units for Universitas Terbuka, UPBJJ-UT Makassar (Unit Program Belajar Jarak Jauh-Universitas Terbuka—a regional subset of Universitas Terbuka) has a strategic role when it comes to providing educational services for its students. These include registration service, academic administration service, Learning Material (Bahan Ajar—BA), Face-to-Face Tutoring (Tutorial Tatap Muka—TTM), examination service, Online Examination System (Sistem Ujian Online—SUO), and graduation-related service. The effectiveness of these service domains becomes the benchmark around which Universitas Terbuka demonstrates the characteristics of servant leadership for students to the extent to which they are committed and devoted to the services, along with their tendency to select Universitas Terbuka as their platform to develop their knowledge and competencies. The study seeks to analyze the effect of servant leadership on student loyalty at Universitas Terbuka, both direct and indirect, through the construct of commitment.

2 LITERATURE REVIEW

2.1 Servant Leadership

Servant leadership embodies a type of leadership that begins with a sincere feeling that one wants to serve, to give priority to others' needs, to solve a problem with others, and to assist others toward a mutual goal.

First coining the term, Greenleaf in Vondey (2010) characterizes servant leader as one who stresses the importance of the growth and dynamics of his followers, his own and his community. He therefore puts others' needs before his personal ambitions. In a similar sense, Herbert in Iswanto (2017) understands servant leadership in its capacity to develop a leader that makes others' well-being top priority, which includes the well-being of his employees, customers and community. Further, servant-leadership traits incorporate a holistic work approach, a sense of community and the sharing of power.

2.2 Commitment

Robbins and Judge (2007) refer commitment to a circumstance in which an individual is in favor of an organization and its objectives, and to his desire to retain his membership in the organization. Mathis and Jackson in Sopiah (2008) define organizational commitment as a degree to which an employee trusts and willingly embraces organizational goals, and remains in the organization. Commitment corresponds to a facet of behavior that demonstrates an effort to retain and maintain a long-term engagement between two parties in a meaningful relationship. It is based on the belief of both parties that the other party will not do something harmful or risky. In other words, commitment underlies an enduring intention to maintain a valued relationship, in which each party works together to remain connected to each other.

2.3 Loyalty

Loyalty is not a novel conception in marketing studies and has constantly evolved with its numerous variations. Oliver (1999) defines loyalty as a strong sense of commitment to do repeat business consistently, i.e., repurchasing and re-subscribing, with selected products and services in a long run. In this sense, customers come back to one's business for another purchase of the same products or services despite the potential of situational influences and marketing efforts that may cause behavioural changes in a competitive market. A loyal customer has a specific presupposition of what to buy and from whom. In addition, loyalty shows a condition from a certain time period that stipulates purchase decision occurs no less than twice (Griffin, 2005).

3 RESEARCH HYPOTHESIS

Based on the existing literature review, the present study proposes a hypothesis; servant leadership has positive and significant effect on student loyalty to Universitas Terbuka, both direct and indirect, through student commitment.

4 METHODOLOGY

4.1 Research Design

The study is an explanatory research, which aims for identifying relationships between variables and the extent to which a variable influences another (Sugiyono, 2008).

Identification of Variables

Identifying variables is based on the key research properties:

1. Servant leadership, which is strictly based on the classification of indicators proposed by Burbato and Wheeler (2006). Behaviors that stimulate servant leadership are defined in 8 dimensions that deal with 38 items of questions. The number of items in each dimension is 4 items concerning altruistic calling; 4 items concerning emotional healing; 5 items concerning persuasive mapping; 5 items concerning organizational stewardship; 6 items concerning humility; 5 items concerning service; and 5 item concerning vision.

2. The variable that depends on the first-stage analysis is commitment, which comes as a free variable on the second-stage analysis. Commitment, as Moorman, Zaltman and Deshpande (1992) put it, is an enduring desire to maintain a relationship. The indicators of commitment are developed by Anderson and Weitz (1992), which include (1) student pride; (2) a sense of belonging; (3) attentiveness to the success of Universitas Terbuka; (4) on-going support to Universitas Terbuka; and (5) attitudes as an on-going supporter of Universitas Terbuka.

3. Loyalty as a free variable is directed more toward behavior that demonstrates routine repurchases based on decision-making processes. The indicators include (1) being an active student; (2) encouraging others to apply to Universitas Terbuka; (3) providing information about Universitas Terbuka to others; and (4) ruling out its competitors that provide the same services.

Data Sources and Data Collection

Data are taken from both primary and secondary sources. Data collection involves two stages, i.e., library study that has close relation to the research interest and primary-data collection through a research instrument using a questionnaire and interview.

Population and Sample

The population comprises the entire students of UPBJJ-UT Makassar, both in Elementary Education and Non Elementary Education programs, who are re-registered from 2013.1 to 2017.1.

Sampling adopts simple random sampling. The sample size is defined using Maximum Likelihood Estimation (MLE) and Structural Equation Modeling as part of path analysis that requires a sample of at least 5 times the number of the variable indicators or estimated paramaters. The study uses 3 latent variables, i.e., servant leadership that consists of 8 indicators, commitment of 5 indicators, and loyalty of 4 indicators, which amounts to 20 (variables + indicators) x 5 = 100 samples.

Data Analysis

Testing data involves path analysis to look at the pattern of relationship that reveals the influence of a variable or a set of variable on another variable, both direct and indirect.

DESCRIPTIVE STATISTICAL ANALYSIS

Descriptive statistical analysis is presented to the associations between the research constructs.

Description of Servant leadership

Servant leadership (X1) is measured using 8 items of questions that represent the indicators of the construct. Table 1 presents the respondents' answers to servant leadership.

Table 1. Frequency/ Percentage of the Indicators of Servant Leadership

Indicator	Respondents' Answer Distribution										Mean	Category
	SD		D		N		A		SA			
	F	%	F	%	F	%	F	%	F	%		
X11	0	0.0	0	0.0	24	24.0	48	48.0	28	28.0	4.04	Sgt Tinggi
X12	0	0.0	0	0.0	34	34.0	30	30.0	36	36.0	4.02	Sgt Tinggi
X13	0	0.0	0	0.0	9	9.0	57	57.0	34	34.0	4.25	Sgt Tinggi
X14	0	0.0	0	0.0	10	10.0	53	53.0	37	37.0	4.27	Sgt Tinggi
X15	0	0.0	0	0.0	2	2.0	39	39.0	59	59.0	4.57	Sgt Tinggi
X16	0	0.0	0	0.0	8	8.0	41	41.0	51	51.0	4.43	Sgt Tinggi
X17	0	0.0	0	0.0	11	11.0	31	31.0	58	58.0	4.47	Sgt Tinggi
X18	0	0.0	0	0.0	14	14.0	41	41.0	45	45.0	4.31	Sgt Tinggi
Total Mean											4.30	Sgt Tinggi

Source: Questionnaire results (2022)

Description
SD: Strongly Disagree
D: Disagree
N: Neutral
A: Agree
SA: Strongly Agree
"Sgt Tinggi": Very High

The overall responses to servant leadership in Table 1 are good and positive with a total mean of 4.30, which fits into a very high category (in a range between 4.01 and 5.00).

The fifth indicator (X1.5) organizational stewardship scores the highest response with a mean of 4.57 in a very high category, while the second indicator (X1.2) emotional healing has the lowest score with a mean of 4.02 in a very high category.

Commitment

Commitment (Y1) is measured using 5 items of questions that represent the indicators of the variable. Table 2 presents the respondents' answers to commitment.

Table 2. Frequency/ Percentage of the Indicators of Commitment

Indicator	Distribution of Respondents' Answers										Mean	Category
	SD		D		N		A		SA			
	F	%	F	%	F	%	F	%	F	%		
Y11	0	0.0	0	0.0	0	0.0	25	25.0	75	75.0	4.75	Sgt Tinggi
Y12	0	0.0	0	0.0	2	2.0	44	44.0	54	54.0	4.52	Sgt Tinggi
Y13	0	0.0	0	0.0	8	8.0	41	41.0	51	51.0	4.43	Sgt Tinggi
Y14	0	0.0	0	0.0	12	12.0	31	31.0	57	57.0	4.45	Sgt Tinggi
Y15	0	0.0	0	0.0	1	1.0	53	53.0	46	46.0	4.45	Sgt Tinggi
Total Mean											4.52	Sgt Tinggi

Source: Questionnaire results (2022)

The overall responses to commitment in Table 2 are good and positive with a total mean of 4.52, which fits into a very high category. The first indicator (Y1.1), i.e., student pride scores the highest response with a mean of 4.75 in a very high category, while the third indicator (Y1.3), i.e., attentiveness to the success of Universitas Terbuka has the lowest score with a mean of 4.43 in a very high category.

Loyalty

Loyalty (Y2) is measured using 4 items of questions that represent the indicators of the variable. Table 3 presents the respondents' answers to loyalty.

Table 3. Frequency/ Percentage of the Indicators of Loyalty

Indicator	Distribution of Respondents' Answers										Mean	Category
	SD		D		N		A		SA			
	F	%	F	%	F	%	F	%	F	%		
Y21	0	0.0	0	0.0	8	8.0	41	41.0	51	51.0	4.43	Sgt Tinggi
Y22	0	0.0	0	0.0	3	3.0	38	38.0	59	59.0	4.56	Sgt Tinggi
Y23	0	0.0	0	0.0	34	34.0	2	2.0	64	64.0	4.30	Sgt Tinggi
Y24	0	0.0	0	0.0	6	6.0	39	39.0	55	55.0	4.49	Sgt Tinggi
Total Mean											4.45	Sgt Tinggi

Source: Questionnaire results (2022)

The overall responses to loyalty in Table 3 are good and positive with a total mean of 4.45, which fits into a very high category. The second indicator (Y2.2), i.e., encouraging others to apply to Universitas Terbuka, scores the highest response with a mean of 4.56 in a very high category, while the third indicator (Y2.3), i.e., providing information to others about Universitas Terbuka, has the lowest score with a mean of 4.30 in a very high category.

5 INSTRUMENT TESTING

Instrument testing of the study involves a questionnaire as a measurement device for collecting the data. Instrument testing calls for the process of validity and reliability for questionnaire answers to obtain hypothesis results in a most reliable and valid manner.

Validity Test

Testing the validity of an instrument involves calculating the correlation coefficient between the item score and the total score at a significance of 95% or $α = 0.05$ (Santoso, 2015). In this scenario, validity testing correlates the answer score that is obtained from each item with the total score of all items. Validity is carried out using Pearson's product-moment correlation coefficient. The testing criterion to define item validity is $r ≥ 0.194$ (R_{Table}). The validity results of each variable item are presented in the tables that follow.

Servant Leadership

Validity testing for the variable servant leadership is presented in Table 4.

Table 4 Validity Result of Servant Leadership (X_1)

Item (Indicator)	r_{cal}	r_{table}	Status
X11	0.460	0.194	Valid
X12	0.275	0.194	Valid
X13	0.477	0.194	Valid
X14	0.259	0.194	Valid
X15	0.370	0.194	Valid
X16	0.468	0.194	Valid
X17	0.586	0.194	Valid
X18	0.595	0.194	Valid

Source: primary data (2022)

In Table 4, the Correction Item Total Correlation (r_{cal}) of servant leadership (X1) ranges between 0.259 - 0.595, which is higher than the r_{table} (0.194). This indicates that $r_{cal} > 0.194$ (r_{table}), suggesting that each statement item for servant leadership in the questionnaire is valid. The questionnaire is thus able to reveal what it claims to measure and can be used for further analysis.

Commitment

Validity testing for the variable commitment is presented in Table 5.

Table 5 Validity Result of Commitment (Y1)

Item (Indicator)	r_{cal}	r_{table}	Status
Y11	0.316	0.194	Valid
Y12	0.355	0.194	Valid
Y13	0.457	0.194	Valid
Y14	0.653	0.194	Valid
Y15	0.305	0.194	Valid

Source: primary data (2022)

In Table 5, the Correction Item Total Correlation (r_{cal}) of commitment (Y1) ranges between 0.305 - 0.653, which is higher than the r_{table} (0.194). This indicates that r_{cal} > 0.194 (r_{table}), suggesting that each statement item for commitment in the questionnaire is valid. The questionnaire is thus able to reveal what it claims to measure and can be used for further analysis.

Loyalty

Validity testing for the variable loyalty is presented in Table 6.

Table 6 Validity Result of Loyalty (Y2)

Item (Indicator)	r_{cal}	r_{table}	Status
Y21	0.386	0.194	Valid
Y22	0.369	0.194	Valid
Y23	0.347	0.194	Valid
Y24	0.360	0.194	Valid

Source: primary data (2022)

In Table 6, the Correction Item Total Correlation (r_{cal}) of loyalty (Y2) ranges between 0.347 - 0.386, which is higher than the r_{table} (0.194). This indicates that r_{cal} > 0.194 (r_{table}), suggesting that each statement item for loyalty in the questionnaire is valid. The questionnaire is thus able to reveal what it claims to measure and can be used for further analysis.

Reliability Testing

Testing for reliability means testing the consistency of a measuring instrument. A good instrument must be consistent with the measured item. The reliability of the instrument is analyzed using Cronbach's alpha in SPSS. The acceptable range (cutoff point) for Cronbach's alpha is ≥ 0.60, though this is not an absolute standard (Sekaran, 2011). In other words, the reliability of the instrument is acceptable if the coefficient of the measured reliability is ≥ 0.60. The result of reliability testing for each variable is presented in Table 7.

Table 7 Result of Instrument Reliability

Variable	Cronbach's Alpha	Cutoff Point	Status
Servant leadership (X_1)	0.720	0.60	Reliable
Commitment (Y_1)	0.752	0.60	Reliable
Loyalty (Y_2)	0.723	0.60	Reliable

Source: primary data (2022)

In Table 7, reliability testing using Cronbach's alpha results in a measurable coefficient of ≥ 0.60. Based on data processing, the alpha (reliability coefficient) for servant leadership (X1) is 0.720; commitment (Y1) 0.752; and loyalty (Y2) 0.723. Because the alpha is above the threshold (cutoff point) 0.60, all variables indicate an acceptable level of reliability.

MULTIPLE LINEAR REGRESSION ANALYSIS

Multiple linear regression analysis is run to explain the relationship between the independent variable and dependent variable.

Regression Analysis on the Effect of Servant Leadership on Commitment

The result of regression analysis to explain the effect of servant leadership on commitment based on SPSS 19.0 is presented in Table 8.

Table 8 Regression Output of the Effect of Servant Leadership on Commitment
Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	3.625	1.805		3.341	.001
Servant leadership (x1)	.552	.032	.871	17.514	.000

a. Dependent Variable: commitment (Y1)

Source: primary data (2022)

The equation of multiple regression resulted from the analysis output is Y1 = 3.625 + 0.552 X_1. The equation indicates that the effect of servant leadership on commitment is positive; the improvement of servant leadership brings about a positive direction to commitment.

Regression Analysis of the Effect of Servant Leadership and Commitment on Loyalty

The result of regression analysis to explain the effect of servant leadership and commitment on loyalty based on SPSS 19.0 is presented in Table 9.

Table 9 Regression Output of the Effect of Servant Leadership and Commitment on Loyalty
Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	0.504	1.043		0.483	.630
Servant leadership (x1)	.165	.058	.298	2.827	.006
Commitment (y1)	.514	.092	.588	5.583	.000

a. Dependent Variable: loyalty (Y2)

Source: primary data (2022)

The equation of multiple regression resulted from the analysis output is Y2 = 0.504 + 0.165 X_1 + 0.514 Y_1. The equation indicates that the effect of servant leadership and commitment on loyalty is positive; the improvement of servant leadership and commitment brings about a positive direction to loyalty.

6 PATH ANALYSIS

Path analysis is adopted to study the effect of servant leadership on commitment and to see whether the effect of servant leadership on loyalty is mediated by commitment as Figure 1 presents below.
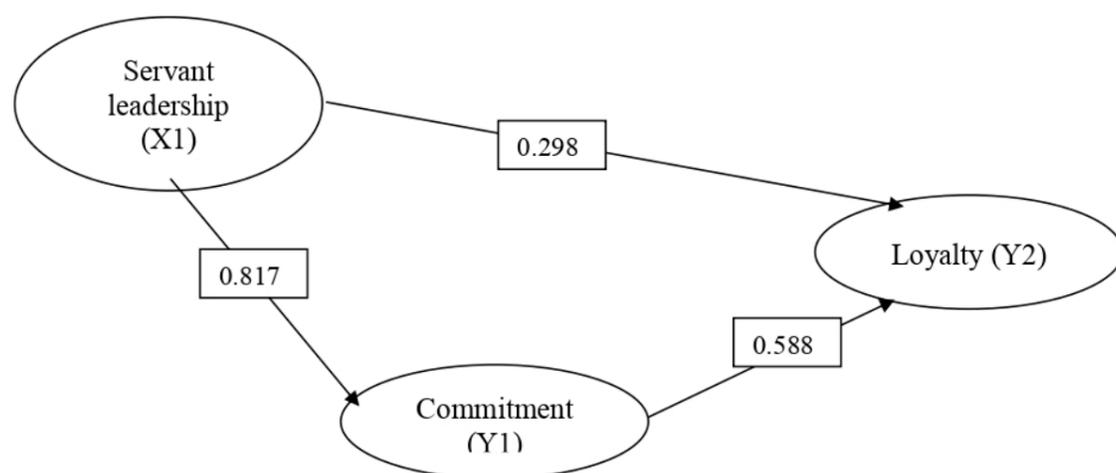

Figure 1. Path Analysis

Figure 1 presents the effect between variables, both direct and indirect, and the total effect.

To better facilitate the analysis of functional relationship between variable, coefficient values are arranged in Table 10.

Table 10 Direct Effect

Independent Variable	Dependent Variable	Symbol	Beta Coefficient	Sig	SE
Servant leadership (X1)	Commitment (Y1)	X1--> Y1	0.817	0.000	0.032
	Loyalty (Y2)	X1--> Y2	0.298	0.006	0.058
Commitment (Y1)		Y1--> Y2	0.588	0.000	0.092

Source: appendix of computing results

The direct effect of servant leadership on commitment

Beta coefficient of servant leadership (X1) on commitment (Y1) is 0.817 with an SE of 0.032 at a significance of 0.000 (less than 0.05). The finding indicates positive and significant effect between servant leadership (X1) on commitment (Y1). Hypothesis that servant leadership has effect on student commitment at Universitas Terbuka is therefore accepted.

The direct effect of servant leadership on loyalty

Beta coefficient of servant leadership (X1) on loyalty (Y2) is 0.298 with an SE of 0.058 at a significance of 0.006 (less than 0.05). The finding indicates positive and significant effect between servant leadership (X1) on loyalty (Y2). Hypothesis that servant leadership has effect on student loyalty at Universitas Terbuka is therefore accepted.

The direct effect of commitment on loyalty

Beta coefficient of commitment (Y1) on loyalty (Y2) is 0.588 with an SE of 0.092 at a significance of 0.000 (less than 0.05). The finding indicates positive and significant effect of commitment (Y1) on loyalty (Y2). Hypothesis that commitment has effect on student loyalty at Universitas Terbuka is therefore accepted.

Indirect Effect

In order to observe the significane of indirect result, Sobel test is adopted; z-value $= a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)$. a = coefficient x→ y. Result indicates there is indirect effect between the variable independent servant leadership on commitment and loyalty as Table 11 presents below.

Table 11 Indirect Effect

Description	Symbol	Coefficient
Indirect effect of servant leadership (X1) on loyalty (Y2) through commitment (Y1)	X1--> Y1--> Y2	0.480

Source: appendix of output

The result of indirect effect in Table 11 is interpreted below.

The indirect effect of servant leadership on loyalty through commitment

The indirect effect of servant leadership (X1) on loyalty (Y2) results from multiplying beta coefficients that make up the effect of servant leadership (X1) on commitment (Y1) and that of commitment (Y1) on loyalty (Y2), i.e., 0.817 x 0.588 = 0.480. This indicates that the indirect effect of servant leadership (X1) on loyalty (Y2) through commitment (Y1) is 0.480. The indirect effect of servant leadership (X1) on loyalty (Y2) is higher than the aforementioned direct effect (0.298) in Table 10. This indicates that the indirect effect between servant leadership and loyalty is statistically significant. Hypothesis that servant leadership has effect on loyalty through student commitment at Universitas Terbuka is therefore accepted.

Total Effect

Based on the scheme presented in Figure 1, the total effect of the independent variable servant leadership on loyalty is presented in Table 12.

Table 12 Total Effect

Independent Variable	Dependent Variable	Coefficient
Servant leadership (X1)	Loyalty (Y2)	0.778
Commitment (Y1)		0.588

Source: appendix of computing results

The total effect in Table 12 is interpreted below.

1. The total effect of servant leadership (X1) on loyalty (Y2) is defined by the sum of the direct effect and indirect effect, i.e., 0.298 + 0.480 = 0.778. This suggests that servant

leadership can enhance loyalty through the sum of direct effect and indirect effect as much as 0.778.

2. The total effect of commitment (Y1) on loyalty (Y2) is 0.588, suggesting that commitment can enhance loyalty through the sum of direct effect and indirect effect as much as 0.588.

7 DISCUSSION

The results and outcomes of the present study are explored and explained in terms of how they fit with existing studies and theories.

The Effect of Servant Leadership on Commitment

The positive effect of servant leadership on commitment suggests that the improvement of servant leadership leads to positive direction to commitment, assuming that the other factors affecting the level of servant leadership remain constant. The positive and significant effect is evident in the result of path analysis that makes up the direct effect between the two variables. A similar finding by Wike Santa Mira and Meily Margaretha (2012) indicates that there is positive, significant relationship and effect of servant leadership on organizational commitment. I Gede Hendry Kamanjaya et al. (2017) construct the same variables and present a positive and significant association between servant leadership and commitment among employees.

The result is also in line with Greenleaf's argument (2002) that defines servant leadership as a model of leadership that begins with a sincere feeling that one wants to serve and to serve first. It fully embraces the notion of serving. A servant leader copes with reprimands at workplace in a calm, measured approach without imposing his will on others. Washington et al. (2007) argue that servant leadership and organizational commitment are closely associated with each other. A servant leader has vital responsibilities to serve the needs of followers and to strive for their well-being and prosperity. In turn, the followers demonstrate full commitment to job performance in order to fulfil the success of the leader and organizational goals. This makes servant leadership and organizational commitment intertwined in many ways (Mukasabe, 2004).

The managerial implication of the effect of servant leadership on commitment lies in the valued and long-term relationship between Universitas Terbuka and the students that needs consistent maintenance and evaluation. Both parties work together to maintain the relationship by enhancing servant leadership with several traits. First, altruistic calling embodies a strong desire of Universitas Terbuka for making a positive difference in student life, putting their best interest ahead of its own, and striving to fulfil their needs. Second, emotional healing concerns with the commitment and skills of Universitas Terbuka to restore and boost student spirit. Third, wisdom encompasses the components of wise reasoning to understand student situation and its implication. Fourth, persuasive mapping explores the

extent to which Universitas Terbuka demonstrates skill to map problems, conceptualize the highest possibility for the occurrence and urge students to act on opportunities. Fifth, organizational stewardship measures the extent to which Universitas Terbuka prepares itself to make positive contribution to community through community-service programs for community-based development and to foster a sense of community within the organization. Sixth, humility underscores a trait of modesty with which Universitas Terbuka puts students' interest and their achievement over its own. Seventh, vision helps Universitas Terbuka focus on the organizational commitment to mutual goals by encouraging all members to define and promote the direction to which the organization is leading. Last but not least, the notion of service stresses the emphasis of providing professional support as the core tenet of organizational operations at Universitas Terbuka and demonstrating the quality of service behaviors to students.

The Effect of Servant Leadership on Loyalty

The positive effect of servant leadership on loyalty suggests that the improvement of servant leadership brings about positive direction to loyalty, assuming the other factors that affect the level of servant leadership are constant. The positive and significant effect is evident in the result of path analysis that makes up the direct effect between the two variables. A similar finding by Ahmad Ritaudin (2016) indicates that servant leadership positively and significantly affects loyalty. Mateus Krisna Murti (2018) constructs the same variables and presents a positive and significant association between servant leadership and employee loyalty.

Donghong et al. (2012) shed light on servant leadership driven by key components of leadership integrity and finds positive association between the two constructs. Servant leadership is considered effective and relevant to recent times as its relationship with employee loyalty has become a growing concern. Liden et al. (2008) find that servant leadership facilitates a positive work environment, and empowers a sense of belonging and loyalty to an organization.

The managerial implication of the effect of servant leadership on student loyalty at Universitas Terbuka lies in the manifestation and sustainability of student satisfaction in capitalizing on facilities and/or services provided by Universitas Terbuka. This satisfaction leads students to remain with the organization for a lengthy period as they become invested in working toward organizational objectives.

As a holistic approach, servant leadership within the framework of student loyalty engages both Universitas Terbuka and students on the basis of emotional relationships. These relationships result not only from student satisfaction and positive student experience during academic trajectories, but also from the overall qualities of academic services they receive from Universitas Terbuka. Similar to its relationship with commitment, the conceptual

relationship between servant leadership and student loyalty at Universitas Terbuka underpins on the facet of altruistic calling, emotional, healing, persuasive mapping, organizational stewardship, humility, service, and vision. These facets helps Universitas Terbuka to develop servant leadership and build student loyalty.

The Effect of Commitment on Loyalty

The positive effect of commitment on loyalty suggests that the improvement of commitment brings about positive direction to loyalty, assuming the other factors that affect the level of commitment are constant. The positive and significant effect is evident in the result of path analysis that makes up the direct effect between the two variables. A similar finding by Denis Lapasiang (2017) indicates that organizational commitment positively and significantly affects loyalty. Ken Hermanto Agung (2006) constructs the same variables and presents a positive and significant association between organizational commitment and employee loyalty.

Nielsen (1998) also proposes the construct of loyalty in commitment modelling and emphasizes that the improvement of organizational commitment navigates toward the improvement of employee loyalty. Nielsen believes that a high-committed organization will lead to positive relationships with customers when they have good experience with the service of the organization. Morgan and Hurt (1994) further clarify that commitment makes up the key components of marketing relationships that incorporate loyalty behavior, which is commonly proposed in wide-ranging literature. Highly-committed customers will generate positive feeling and attitude toward the organization and demonstrate a desire to retain their membership in the organization (Dimitriades, 2006).

The managerial implication of the effect of commitment on student loyalty at Universitas Terbuka lies in the manifestation and sustainability of student satisfaction in capitalizing on facilities and/or services provided by Universitas Terbuka. This satisfaction is associated with student behavior that demonstrates routine repurchases based on decision-making processes. The improvement of student commitment and loyalty underpins on standard measures, including being an active student, encouraging others to apply to Universitas Terbuka, providing information about Universitas Terbuka to others, and ruling out its competitors that provide the same services.

8 CONCLUSION

Key findings on the statistical relationship between servant leadership, student commitment and student loyalty are highlighted below.

1. Servant leadership has positive and significant effect on student commitment, indicating that the improvement of servant leadership navigates toward higher student commitment.

2. Servant leadership has positive and significant effect on student loyalty, indicating that the improvement of servant leadership navigates toward higher student loyalty.

3. Student commitment has positive and significant effect on student loyalty, indicating that the improvement of student commitment navigates toward higher student loyalty.

4. Servant leadership has indirect effect on student loyalty through student commitment, indicating that the improvement of servant leadership navigates toward higher student commitment, and in turn toward student loyalty.

9 SUGGESTION

Suggestions are provided with respect to knowledge development and practical interest.

1. In terms of the positive effect of servant leadership on student commitment and student loyalty, both direct and indirect, retaining servant leadership is necessary to bring about a sense of improvement in student commitment and loyalty by accomplishing personal leadership approaches to student engagement.

2. Servant leadership is recommended to be a reference for leaders of Universitas Terbuka in regards to organization-policy making associated with the sustainable improvement of student commitment and student loyalty.

REFERENCES

Ahmad Ritaudin. (2016). Pengaruh Servant Leadership Style Terhadap Loyalitas Karyawan Melalui Peran Mediasi Kepuasan Karyawan (Study Pada Karyawan PT. Bank Syariah Mandiri Malang).

Aji, Muhammad dan Palupiningdyah. (2016). Pengaruh Servant Leadership terhadap Kinerja Karyawan dengan Burnout sebagai Variabel Intervening. *Management analysis Journal 5 (3) (2016).*

Barbuto, J.E & Wheeler, D.W. (2006). Scale Development and Construct Clarification of Servant Leadership (Electronic Version) *Group and Organization Management, 31. 300-326.*

Denis Lapasiang. (2017). Pengaruh Kepercayaan Dan Komitmen Terhadap Loyalitas Nasabah Pada Pt. Pegadaian (Persero) Cabang Karombasan Manado. Jurnal EMBA Vol.5 No.3 September 2017, Hal.3068-3077

Donghong, Ding, Lu, Haiyan, Song, Yi and Lu, Qing, (2012). "Relationship of Servant Leadership and Employee Loyalty: The Mediating Role of Employee Satisfaction", Scientific Research, Vol. 4,208- 215.

Greenleaf, R. K. (2002). Servant-leadership: A journey into the nature of legitimate power and greatness (L.C. Spears, Ed.) (25th Anniversary Edition). New York: Paulist Press.

Griffin, J. (2005) *Customer Loyalty: Menumbuhkan dan Mempertahankan Kesetiaan Pelanggan*. Jakarta: PT Penerbit Erlangga

Gucel,Cem dan Begec, Suat. (2012). The Effect of The Servant Leadership on Organizational Citizenship Behavior: Case Studi of A University. *International Journal of Social, Sciences and Humanity Studies. Vol 4 No. 1. 2012.*

Handoyo, Seger. (2010). Pengukuran *Servant Leadership* Sebagai Alternatif Kepemimpinan di Institusi Pendidikan Tinggi pada Masa Perubahan Organisasi. *Makara, Sosial Humaniora. Vol. 14 No. 2. Desember 2010: 130-140.*

I Gede Hendry Kamanjaya dkk. (2017). Pengaruh *Servant Leadership* Terhadap Komitmen Organisasional Dan Kinerja Pegawai (Studi Pada Pegawai Negeri Sipil Di Rsud Wangaya Kota Denpasar). https://ojs.unud.ac.id/index.php/EEB/article/view/29833

Ika Riskiyati. (2012). "Pengaruh Kepuasan Terhadap Loyalitas dengan Mediasi Komitmen Pada Nasabah Bank BCA KCP Ngoro Mojokerto". Journal of Business and Banking. Vol 2. No. 2. November 2012. Pp 241-254

Irving, J. A. (2005). *Servant Leadership and the Effectiveness of Teams*. Disertation of Doctor of Philosophy in Organizational Leadership.

Iswanto, Yun. (2017). Kepemimpinan Pelayanan Era Modern. *Jurnal Administrasi Kantor. 5 (2): 157-172.*

Ken Hermanto Agung. (2006). Analisis Pengaruh Kualitas Layanan, Komitmen Dan Kepercayaan Terhadap Loyalitas Konsumen (Studi Kasus Pada Nasabah Tabungan Simpeda Bank Jateng). Program Magister Manajemen Fakultas Ekonomi Universitas Diponegoro Semarang

Kotter, J.P. (1997). Leading Change. Boston : Harvard Business School Press.

Liden et al., (2008). Servant Leadership: Development of Multideminsional Measure and Multi-Level Assesment. Leadership Quartely, 19, 2 (april): 16-17

Mateus Krisna Murti. (2018). Pengaruh Servant Leadership Terhadap Loyalitas Karyawan Dengan Kepuasan Kerja Sebagai Variabel Intervening (Studi Pada Mirota Batik (Hamzah Batik) Yogyakarta). Program Studi Manajemen Fakultas Ekonomi Universitas Sarjanawiyata Tamansiswa Yogyakarta.

Moorman, Christin, Gerald Zaltman, and Rohit Deshpande. (2002). Relationships Between Provider and Users of Market Reseat : The Dinamic of Trust Within and Between Organization. *Journal Marketing Research. Volume XXXIX, 314-28.*

Musakabe, H. (2004). *Mencari Kepemimpinan Sejati, di Tengah Krisis dan Reformasi.* Jakarta: Penerbit Citra Insan Pembaru.

Oliver, R.L. (1999) 'Whence Consumer Loyalty?'. *Journal of Marketing. 63: 33- 44.*

Sugiyono. (2014). *Metode Penelitian Manajemen*. Bandung: CV Alfabeta.

Vondey, M. (2010). The Relationships among Servant Leadership, Organizational Citizenship Behavior, Person-Organization Fit, and Organizational Identification. International *Journal of Leadership Studies. 6(1), hal. 4-27.*

Washington, R., Clayton, H.R., Sauser, W.I., Sutton, C.D., dan Flowers, G.T. (2007). Emprical Relatonship among Servant, Transformaional, and Transactional Leadership: Similarities, Differences,and Correlations with Job Satisfaction and Organizational Commitment. Disertation of Doctor of Philosophy

Wike Santa Mira dan Meily Margaretha. (2012). Pengaruh Servant Leadership Terhadap Komitmen Organisasi Dan Organization Citizenship Behavior. Jurnal Manajemen, Vol.11, No.2, Mei 2012. https://media. neliti.com/media/publications/112922-ID-pengaruh-servant-leadership-terhadap-kom.pdf

IMPLICATIONS OF DIGITAL TECHNOLOGY IN ACCELERATING THE ROLE OF PERSONAL AND SOCIAL COMPETENCE FOR TUTOR PERFORMANCE

Yasir M.Pidu[1], Hulaifi[2] , Nong Ayu Triyanti Utami Hakim[3]

[1]*Universitas Terbuka (Indonesia)*
[2]*Universitas Terbuka (Indonesia)*
[3]*Universitas Terbuka (Indonesia)*

Abstract

Digital technology has made the integration of all kinds of media into the very essense of human life possible. Such media results from technological advances in their physical form, while at the same time shaping how societies communicate, interact, make transactions and socialize. Its logical consequence is the ever-emerging information overload—producing greater needs for more digital technologies to access, disseminate and capitalize on the information. In connection with education, distance learning has risen with digital technology at its helm—resulting in better personal and social competence among tutors and subsequently leading to effective performance. This study probes the role of digital technology in enhancing the role of tutors' personal and social competence. The goal is to incorporate both roles in the acceleration of tutor performance in distance-learning landscape. In total, 64 respondents of tutors that engage in online tutoring of Universitas Terbuka in 2021 are selected for moderated regression analysis (MRA) using IBM SPSS 21. Findings show that 1) tutor personal and social competence, and tutor performance are statistically very good, 2) personal and social competence significantly affects tutor performance, both partially and simultaneously, and 3) digital technology contributes to the role of tutor personal and social competence in accelerating tutor performance. These findings point to the urgency of digital technology for providing insights into the role of tutor personal and social competence in the construct of tutor performance and therefore have implications for optimal support of digital technologies for online tutoring of Universitas Terbuka.

Key words: Personal competence, social competence, tutor performance

1 INTRODUCTION

Personal competence is one of tutor competences that is inextricably intertwined with the others, i.e., pedagogical competence, social competence and professional competence. Personal competence is a demonstable set of knowledge, skills and behavior integral to tutor's traits when he carries out his professional duties. In a specific sense, ersonal competence incorporates the amalgamation of knowledge, skills and application in tutor's ability to conduct tutoring.

Based on national education standards, personal competence within educators includes; 1) decent and stable personality and actions with respect to legal norms and social norms, the pride of being a teacher, and actions consistent with objective moral laws; 2) mature personality with autonomy traits to make choices regarding the direction of his own action as an educator with work ethics; 3) strengths of wisdom that manifest in actions that benefit students, institution and society, and openness to thoughts and actions; 4) authoritative traits that represent positive effects on students in a way that he is respected and valued; and 5) noble characters and qualities of a positive role model by demonstrating practices in terms of religious precepts (faith and piety, honesty, sincerity and helpfulness) and serving as an exemplar to inspire students.

Like many other teaching professions, tutors are a key role model for students, who inspire and encourage them to strive for greatness. Through their perceived personal qualities, noble characters, accountability, and authoritativeness, tutors affect students in a way that drives them to have an inclination to demonstrate positive attributes. In tutoring, a tutor is expected to have effective interaction with students and to give influence to them to achieve learning objectives in a certain social context that is tailored to the existing culture, environment and circumstance. Tutors should also integrate effective communication skills, be it oral and written, into positive, meaningful tutor-student relationship that draws upon the principles of a strong sense of community and bonds with a spirit of togetherness in order to achieve optimal performace.

Mulyasa (2006) sheds light on the emphasis of social competence for an educator in order to communicate and interact effectively and efficiently with students, fellow educators, parents/guardians, and the surrounding society. Social skills drive attractiveness, empathy, collaboration, altruism, role-model qualities and communicative skills. These attributes shape and affect the performance of an educator.

In higher-education environment, new and emerging information technologies are crucial to the way day-to-day operational administration and teaching-learning processes are carried out. Technological advances have reached much of how education is done by greatly enhancing performance and exerting optimal outcomes in higher-education institutions. Benefits from their use are ubiquitous and continuous. For instance, Universitas Terbuka as a pioneer of distance education leverages the effective use of digital learning tools, which has garnered both domestic and international recognition. On that basis, these tools are expected to play a pivotal role in accelerating the role of personal and social competences in tutor performance. The present study seeks to probe the role of information and communication technology in moderating the effect of personal and social competences on tutor performance in higher-education landscape.

2 LITERATURE REVIEW AND HYPHOTESIS DEVELOPMENT

2.1 Personal Competence

The term competence embodies the construct of knowledge, skills and behavior as a set of ability of an individual to perform on a given task. In other words, competence begets the mastery of knowledge, skills, values and attitudes combined that manifests in the habit of thinking and acting in carrying out one's professional duties. Article 1 of Law Number 14 of 2005 point 10 describes the same thing, showing that competence refers to a set of knowledge, skills and behavior a teacher and a lecturer must possess and excel at in a professional sense. Competence can also be understood as the accumulated outcome of ability, knowledge, skills, attitude, character, understanding, appreciation and expectation that underpin one's characteristics to fit into a particular job in order to achieve quality performance (Sagala, 2010).

The pattern of personality traits reflects much of how a tutor performs his duties and interacts with students. A healthy, unified personality with the aforementioned construct of personal competence is the cornerstone around which a tutor can achieve success in his professional trajectory.

Empowering personality competence allows a tutor to become a role model in order to develop students' characters. Demonstrating positive desirable qualities which students can look up to and rely on helps shape how they behave and ultimately how they attain learning objectives.

Personal competence, as Surya Dharma (2008) puts it, has a great bearing on educators' performance, suggesting that education is not only about transferring knowledge but also instilling values and virtues in the nature and structure of one's personality and consciousness structure.

Personality competence of an educator identifies and combines certain kinds of dispositions for the purpose of optimal teaching, which include but are not limited to noble and role-model qualities to which students look up, personal integrity, strong desire for self-improvement, openness in carrying out core duties, and self-control when coping with problems.

2.2 Social Competence

Social competence reflects an interactional ability of a tutor to become part of tutoring activities. Muchtar Iskandar (2010) defines social competence as one's ability to keep up with workloads and to adapt to his surrounding environment at the time of performing his professional duties.

E. Mulyasa (2006) breaks down specific indicators that develop social competence of an educator: 1) communicating in oral, written, and/or sign language in a polite language which involves developing an effective rapport with students, forming mutual respect in the rapport, and fostering the rapport in a nurturing and loving manner; 2) engaging with the functional components of internet and communication technology; 3) becoming well acquainted with students, fellow educators, education staff, heads of educational unit, and parents/ guardians; 4) engaging with the surrounding community with respect to norms of politeness and the existing value system; 5) nurturing a strong sense of community and bonds with a spirit of togetherness, which encourages an educator to demonstrate passion for work without coercion for building trusting stakeholder relationships. These indicators give rise to a sense of togetherness with an emphasis on building emotional relationship in a group discussion.

The important role of social competence lies in two aspects, i.e., the personal role of a tutor to foster positive relationships with multiple members of class in a polite and flexible manner. Mulyasa stresses the emphasis of social competence on tutors' interactive abilities that contribute to supportive and effective communication with students, fellow educators, parents/ guardians, and the surrounding society. These interactive skills beget attractiveness, empathy, collaboration, altruism, role-model qualities and communicative skills. These components in turn promote tutor performance.

2.3 Tutor Performance

Performance describes the extent to which one carries out a job duty well in an organization. Schermerhorn (2003) identifies five entities to assess both organizational and individual performance, i.e., knowledge, skill, ability, attitude, and behavior. He further claims that ability and skill represents individual factors of each employee. An employee who demonstrates better competence, knowledge, and skills is likely to accomplish a predefined desired outcome. To become a top achiever, or a high-performing tutor, he or she must be able to showcase his or her ability through a test as a means to assess his or her eligibility to practice teaching skills, i.e., imparting subject knowledge. Tutor competences do not restrict their measurable pattern to being knowledgeable about a given subject.

Within the context of tutor performance, there are five dimensions in which an tutor can gain effectiveness of job-related behavior. 1) Tutoring preparedness includes preparation for tutoring plans, tutoring materials and tutoring assignment for students. 2) The ability to apply subject-specific knowledge helps a tutor to pursue a subject material and ensures students have all-round resources they need to get in-depth understanding of the subject. Oftentimes, a tutor must actively explore and re-explore the knowledge to gain subject mastery. 3) A tutor must acquire the art of teaching and find appropriate delivery strategies to impart knowledge in a way that students get a rigorous understanding of the knowledge. 4) A tutor should benefit from good communication skills to get students engaged, motivated and active in tutoring activities. 5) Discipline helps a tutor to arrange tutoring activities and tasks in a proper structure such as using class time efficiently, assigning task on schedule, and posting grade announcement on time.

2.4 DIGITAL TECHNOLOGY IN TUTORING PROCESS

Distance-learning students are typically called upon to regulate their own learning, which entails not only self-reliance, but also problem-solving skills. However, independent learning has little to do with working on one's own; rather distance-education institutions provide a multitude of learning support systems that meet students' needs. Belawati in Adnan (2007) argues that distance-learning services provide guidance, support and resources to complement students' academic affairs, such as registration, learning processes and examination-related administrations. In a more narrow sense, these learning services focus on enhancing learning environment by providing assistance for students

to understand course materials and to navigate them in learning processes. Material-related services are commonly tutoring classes.

At Universitas Terbuka, internet-based tutoring (commonly known as *tuton*) or web-based tutorial (WBT) is provided for students in online classes. Tutoring may take place at the headquarter of Universitas Terbuka and at each Distance-Learning Program Unit (Unit Program Belajar Jarak Jauh or UPBJJUT)—a regional subset of Universitas Terbuka. Tutoring generally provides 6 to 8 initiations and assigns 3 different assignments in the related semester. The cost of material development and tutoring implementation is charged to the budgeting faculty and UPBJJ, while students bear the cost of the Internet access. In a specific sense, *tuton* aims for the optimal ICT use to supplement learning environment, to implement interactive and communicative learning strategies in a remote environment, and to provide an alternative for remote students who have access to the Internet to obtain optimal learning services. *Tuton* is especially favorable to students when it comes to fast service; students can get immediate responses and feedback from tutors regarding course materials. Nevertheless, unlike students in urban areas, those who live in remote areas have significant obstacles when involved in online classes that require sufficient internet facilities. Further, some students are not willing to undertake online classes and prefer offline classes according to their needs and availability. It is, however, worth noting that *tuton* charges less for the same benefits.

3 METHODOLOGY

3.1 Research Design

The study is a survey research, which approaches data set by analyzing facts that support the area of interest, and solve the research problems. Quantitative approach is adopted to test a given set of theories by measuring relationships between variables.

3.2 Technique of Data Collection

Data collection entails a systematic process of gathering information to achieve research goals. Data set includes professional competence, social competence, information and communication technology, and tutor performance. Data collection uses an online questionnaire (Google form).

3.3 Participants

The population comprises the entire online tutors who attend tuton 2021.1 and a sample unit of 50 online tutors. Sampling deals with purposive sampling based on pre-established criteria, i.e., a minimum of 2-year tutoring experience and certification in tutoring training.

3.4 Instrument

Likert-scale questionnaire is applied to provide 5 possible responses to a question or a statement from 1) strongly disagree to 5) strongly agree.

The variables along with their indicators are:

a. **Personal Competence**

Personal Competence refers to tutor's ability to develop meaningful interaction with students on the basis of noble characteristics, integrity, self-improvement and openness in tutoring processes. The indicators are formulated below:

1. Noble characteristics and a role model for students
2. Personal integrity as a tutor
3. Strong passion for self-improvement
4. Openness in fulfilling core job duties
5. Self-control in coping with problems

b. **Social Competence**

Social competence looks at tutor's ability to adapt to workloads and his surrounding community at the time of carrying out his job duties. The indicators are formulated below:

1) Engaging in oral communication which involves developing effective relationship with students
2) Leveraging information and communication technology
3) Associating with students in a social context
4) Corresponding to tutoring supervisors and fellow tutors in a polite manner

c. **Use of Digital Technology**

Digital technologies include tools and resources integrated into tutoring activities. The indicators are formulated below:

1. Use of e-learning in tutoring
2. Online modules
3. Automatic reporting of student grades
4. Online library
5. Other electronic devices that are integrated into classrooms

d. **Tutor Performance**

1. Tutor's knowledge that is measured in terms of in-depth subject-specific knowledge of a given course or module
2. Tutor's ability to carry out online tutoring with respect to RAT (Tutoring Activity Design) and SAT (Tutoring Lesson Plan)
3. Tutor's ability to respond to student discussion
4. Tutor's ability to assess student assignment
5. Tutor's attitude and behavior that include punctuality in conducting online tutoring and reporting tutoring grades

4 ANALYTICAL TOOLS

4.1 Moderated Regression Analysis (MRA)

Absolute difference value is tested using the following regression equation:

$$Y = \alpha + \beta_1 ZX_1 + \beta_2 ZX_2 + \beta_3 ZM + \beta_4[ZX_1\text{-}ZM] + \beta_5[ZX_2\text{–}ZM] + e$$

Where

Y = Tutor performance

α	= Constant
ZX1	= Standardized personal competence and information technology
ZX2	= Standardized social competence and information technology
ZM	= Standardized information technology
ZX1-ZM	= Interaction measured by absolute difference value between ZX1 and ZM
ZX2-ZM	= Interaction measured by absolute difference value between ZX2 and ZM
$\beta 1$-$\beta 4$	= Multiple regression coefficient
e	= Error term

4.2 Simultaneous Significance Test (F-Test)

F-test is adopted to measure the extent to which the independent variable has a positive and significant effect on the dependent variable (Ghozali, 2011). F-test is conducted in several stages:

1. Calculating the level of significance at 0,05 atau (5%)
2. Identifying degree of freedom (df) F_{table} = 2 ; n-k-l.
3. Formulating Ho and Ha

   H0 : β = 0, suggesting there is no significant effect between the independent variable and dependent variable

   Ha : β > 0, suggesting there is a significant effect between the independent variable and dependent variable

4. Identifying F_{cal}

   Prior to the simultaneous significance, F_{cal} is calculated and compared with F_{table} using the formulation below (Ridwan, 2009).

$$Fcal = \frac{\frac{r^2}{k}}{\frac{(1-R^2)}{n-k-1}}$$

   <u>Where</u>

   F_{cal} = calculated f value

   R = multiple regression coefficient

   k = the number of independent variable

   n = sample size

   Decisions for Research Hypotheses

   If F_{cal} > F_{table}, hypothesis that there is a positive and significant effect of the independent variable on the dependent variable is accepted.

   If F_{cal} < F_{table}, hypothesis that there is a positive and significant effect of the independent variable on the dependent variable is rejected.

4.3 Partial Test (T-Test)

T-test is adopted to see whether there is effect of each independent variable individually on the dependent variable (Ghozali, 2011). The stages to follow in a t-test are:

1. Identifying the null hypothesis (H_0) and alternative hypothesis (H_1)

   H_0 : β_1 = 0, suggesting that the independent variable is not a significant explanatory variable for the dependent variable.

   H_1 : β_1 > 0, suggesting that the independent variable is a significant explanatory variable for the dependent variable.

2. Level of significance (α = 0.05)

   n = sample size

3. Defining test criteria

   H_1 is rejected t_{cal} < t_{table}

   H_0 is rejected t_{cal} > t_{table}

4. Identifying t_{cal}

   A partial significance test calculates the partial effect of variable X on variable Y. the correlation result is then tested using the following partial significance test (Ridwan, 2009).

$$t\ hitung = \frac{r\sqrt{n-2}}{\sqrt{n-r^2}}$$

   Where

   t_{cal}= t value

   r = correlation coefficient

   n = sample size

5. Undertaking hypothesis decisions

   If t_{cal} > t_{table}, H_0 is rejected, suggesting a positive effect between variables.

   Apabila t_{cal} < t_{table}, H_0 is accepted, suggesting no effect between variables.

4.5 Coefficient of Determination (R^2)

A testing model involving R^2 assumes that the independent variables in a multiple linear regression model represent the other independent variables in influencing the dependent variable, with the effect size expressed in percentages. Coefficient of determination ranges from 0 (zero) to 1 (one). A low R^2 value (0) indicates that the independent variables do not explain much in the variation of the dependent variable. On the contrary, a R^2 value close to 1 (one) indicates that the independent variables provide almost all information needed to predict the variation of the dependent variable (Ghozali, 2011). The coefficient of determination is used to detect the best accuracy in the regression analysis by comparing the coefficient of determination; the closer its value is to 1 (one), the more variability the model explains.

5 RESULTS

5.1 Personal Competence

Respondents' answers to personal competence are presented in Table 1.

Table 1 Frequency and Percentage of the Indicators of Personal Competence

Indicators	Distribution of Respondents' Answers					Mean	Category
	SD	D	N	A	SA		
Noble characteristics and a role model for students (X11)	0	0	8	26	0	3.76	High
Personal integrity (X12)	0	0	13	21	0	3.62	High
Strong passion for self-improvement (X13)	0	0	23	11	0	3.32	High
Openness in fulfilling core duties (X14)	0	0	27	7	0	3.21	High
Self-control in coping with problems (X15)	0	0	5	19	0	3.79	High
Total mean						3.54	High

Source: Questionnaire results (2022)

SD: Strongly Disagree

D: Disagree

N: Neutral

A: Agree

SA: Strongly Agree

The overall respondents' answers to personal competence fit into a high category, with the fifth indicator—self-control in coping with problems (X1.5)—resulting in the highest value with a mean of 3.79. The fourth indicator—openness in fulfilling core duties (X1.4)—comes with the least value of the variable, raking in 3.21.

5.2 Social Competence

Respondents' answers to social competence are presented in Table 2.

Table 2 Frequency and Percentage of the Indicators of Social Competence

Indicators	Distribution of Respondents' Answers					Mean	Category
	SD	D	N	A	SA		
Engaging in oral communication which involves developing effective relationship with students (X21)	0	0	15	19	0	3.56	High
Leveraging information and communication technology (X22)	0	0	15	19	0	3.56	High
Associating with students in a social context (X23)	0	0	10	24	0	3.71	High
Corresponding to tutoring supervisors and fellow tutors in a polite manner (X24)	0	0	0	28	6	4.18	Very high
Total mean						3.75	High

Source: Questionnaire results (2022)

The overall respondents' answers to social competence fit into a high category, with the fourth indicator—corresponding to tutoring supervisors and fellow tutors in a polite manner (X24)—leading with a mean of 4.18, and the first indicator—engaging in oral communication which involves developing effective relationship with students (X21)—coming in last with a mean of 3.56.

5.3 Tutor Performance

Respondents' answers to tutor performance are presented in Table 3.

Table 3 Frequency and Percentage of the Indicators of Social Competence

Indicators	Distribution of Respondents' Answers					Mean	Category
	STS	TS	N	S	SS		
Tutor's knowledge (Y11)	0	0	6	28	0	3.82	High
Tutor's ability to carry out online tutoring with respect to RAT and SAT (Y12)	0	0	28	6	0	3.18	High
Tutor's ability to respond to student discussion (Y13)	0	1	27	6	0	3.15	High
Tutor's ability to assess student assignment (Y14)	0	0	10	24	0	3.71	High
Tutor's attitude and behavior (Y15)	0	0	0	11	13	4.54	Very high
Total Mean						3.68	High

Source: Questionnaire results (2022)

The overall feedback on tutor performance in Table 3 is positive with a mean of 3.68, which fits into a high category (from 3.01 to 4.00). The fifth indicator—tutors' attitude and behavior (Y15)—outperforms the other indicators with a mean of 4.54, which fits into a very high category. The third category—Tutor's ability to respond to student discussion (Y13)—comes in last with a mean of 3.15, which fits into a high category.

5.4 Validity and Reliability

The results of validity and reliability that represent each variable is presented in Table 4.

Table 4 Reliability Result

Variable	Validity	Cronbach's Alpha	Cut of Point	Status
Personal Competence (X_1)	Valid	0.769	0.60	Reliable
Social Competence (X_2)	Valid	0.828	0.60	Reliable
Tutor Performance (Y_1)	Valid	0.886	0.60	Reliable
ICT Use (M)	Valid	0.731	0.60	Reliable

Source: primary data (2022)

5.5 Hypothesis Testing

Partial Test (T-Test)

Table 5 Outputs of Partial Test (T Test)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	16.717	1.791		9.332	.000
Personal Competence (x1)	.554	.208	.627	2.658	.012

a. Dependent Variable: Tutor Performance (Y)

Source: primary data (2022)

The resulting t_{cal} for personal competence on tutor performance is 2.658 at a significance of 0.012, indicating a significant finding as the significance value scores less than 0.05. The t_{cal} is higher than t_{cal} that stands at 1.690, which indicates strong evidence against the null hypothesis. H0 is therefore rejected in favor of H1.The finding indicates that personal competence (X1) has significant effect on tutor performance (Y).

Table 6 Outputs of Partial Test (T Test)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	16.131	1.379		11.697	.000
Social Competence (x2)	.530	.225	.640	2.356	.025

a. Dependent Variable: Tutor Performance (Y)

Sumber : Source: primary data (2019)

The resulting t_{cal} for social competence on tutor performance is 2.356 at a significance of 0.025, indicating a significant finding as the significance value scores less than 0.05. The t_{cal} is higher than t_{cal} that stands at 1.690, which indicates strong evidence against the null hypothesis. H0 is therefore rejected in favor of H1.The finding indicates that social competence (X2) has significant effect on tutor performance (Y).

5.6 Coefficient of Determination (R^2)

The coefficient of determination or R squared looks at the percentage or the extent to which the strength of independent variables predicts the dependent variable. R squared ranges between 0 and 1 and is converted into percentages.

Table 7 Output of Simultaneous Correlation

Model Summary

Model	R	R Square	Adjusted R Squared	Std. Error of the Estimate
1	.865^a	.749	.733	.674

a. Predictors: (Constant), personal competence   (x1), social competence (x2) Digital Technology (M)

Source: Primary data (2022)

The resulting R squared is 0.749 or 74.9%, indicating that personal competence and social competence can predict tutor performance as much as 74.9%, with the remaining 25.1% accounting for unknown predictors.

5.7 Simlutaneous Significance Test (F-Test)

The Anova table looks at the simultaneous effect of personal competence and social competence on tutor performance. The output based on SPSS 19.0 is presented below.

Table 8 Output of F Test

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	42.033	2	21.017	46.258	.000^a
Residual	14.084	31	.454		
Total	56.118	33			

a. Predictors: (Constant personal competence (x1),social competence (x2), digital technology (M)

b. Dependent Variable: tutor performance

Source: Primary data (2022)

Hypothesis testing using f test in SPSS Statistics 22.0 results in an f_{cal} of 46.258, which scores higher than an F_{table} of 2.88 at a significance of 0.000. The finding indicates that personal competence and social competence have significant effect on tutor performance.

5.8 Moderation Testing

Table 9 Partial Test (T Test) for Moderation

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	16.717	1.791		9.332	.000
Personal Competence (x1)	.554	.208	.627	2.658	.012
Digital Technology (M)	.042	.007	1.412	5.981	.000

a. Dependent Variable: tutor performance (Y)
Source: Primary data (2022)

Based on the absolute difference value in Table 9, the moderating variable ICT use (M) has a t_{cal} of 5.981, higher than the t_{table} of 1.690 at a significance level of 0.000 (which is statistically significant < 0.05), which indicates strong evidence in favor of H1. The interaction between personal competence and tutor performance (b_2) stands at a significance of 0.012, as does the interaction between personal competence and tutor performance (b_3). The finding indicates that ICT use can enhance the effect of personal competence on tutor performance.

Table 10 Partial Test (T Test)
Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	16.131	1.379		11.697	.000
Social Competence (x2)	.530	.225	.640	2.356	.025
Digital Technology (M)	.045	.008	1.455	5.354	.000

a. Dependent Variable: tutor performance (Y)
Source: Primary data (2022)

Testing the absolute difference value in Table 10 shows that the moderating variable ICT use (M) has a t_{cal} of 5.354, higher than the t_{table} of 1.690 at a significance level of 0.000 (statistically significant at < 0.05), which indicates that the variable of ICT use belongs to a quasi-moderator category. In a quasi-moderator role, personal competence is independently associated with the dependent variable and moderates ICT use on tutor performace. The finding indicates that ICT use can enhance the effect of personal competence on tutor performance.

Table 11 Output of Simultaneous Correlation
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873[a]	.763	.747	.655

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873[a]	.763	.747	.655

a. Predictors: (Constant), Social Competence (X2), Digital Technology (M)
Source: Primary data (2022)

The result of coefficient of determination in Table 11 shows an R squared of 0.763 (76.3%), suggesting that social competence and ICT use can predict tutor performance as much as 76.3%, with the remaining 23.7% accounting for unknown predictors. The percentage grows from 0.749 or 74.9% in the previous model.

6 RESULTS

As personal competence and social competence exert significant effect on tutor performance both partially and simultaneously, the strength that underlies personal and social competence becomes the benchmark for superior tutor performance. The strength can then be used to capture what makes a tutor a top-achieving educator. Constructing both competencies in performance framework can help look at whether an individual tutor has fulfilled his or her objectives in a professional sense.

The construct of competency also helps specify which characteristics a tutor requires to achieve superior performance. Integrity, for example, refers to a tutor's ability to demonstrate work ethics as he or she becomes an ideal role model for students. In this sense, Hamzah (2007) argues that a teacher should be an example for the pupil, because in its essence the role of a teacher represents a group of individuals in a community whom the pupil looks up to and learn from. Tutors' roles in general are not only about imparting knowledge but also instilling values and virtues in the nature and structure of students' personality and consciousness structure to strive for greatness. Oemar Hamalik (2002) shares the same argument; teacher's responsibilities involve carrying out educational activities in the sense of providing guidance and teaching to students.

In a similar sense, National Education Ministry (Depdiknas) (2009) claims that personal and social competences are key competences that underlie other competences, given its strong interrelationship with values and attitudes, motivation, and commitment. As such, personal and social competences are critical to building optimal organizational performance. The present findings corroborate Kadarsih's findings (2014) that highlight the positive effect of auditors' professionalism and competence on their performance, both in a simultaneous and partial modeling. In another study, Agung Iskandar (2013) argues that competent employees are predisposed to high-performance work and optimal outcomes. Further, Ferris, Munyon, Basik, and Buckley (2008) probe the conceptual framework of performance and conclude that a work mechanism combines social components, personality, knowledge, politics, and work relations. The analysis of relational framework between ICT use, personal and social competences, and tutor performance leads to statistical evidence in which ICT use as a moderator variable can strengthen the association between the competences and tutor

performance. This points to the importance of monitoring and enhancing ICT use to contribute to competence management and in turn to foster higher-performing tutors.

7 CONCLUSION

Key highlights of the present findings are:

1) The construct of personal and social competence, and tutor performance fits into a high and very high category.

2) Personal and social competence have significant effect on tutor performance, both in simultaneous and partial testing modeling.

3) ICT use can moderate positive association between personal and social competence and tutor performance.

These findings point to the urgency of digital technology for providing insights into the role of tutor personal and social competence in the construct of tutor performance and therefore have implications for optimal support of digital technologies for online tutoring of Universitas Terbuka.

REFERENCES

Agung Iskandar, Y. (2013) Pengembangan Pola Kerja Harmonis Dan Sinergis, Antara Guru, Kepala Sekolah, dan Pengawas. Jakarta: PT. Bestari Buana Murni. Edisi Pertama.

Akib, H., & Saleh, S. (2015). Pengaruh Kepala Sekolah Sebagai Supervisor Terhadap Kinerja Guru Di Smk Negeri 7 Makassar. Jurnal Office, 1(2), 141–147.

Amanda, M. O., Salam, R., & Saggaf, S. (2017). Pengaruh Supervisi Kepala Sekolah Terhadap Kinerja Guru Di SMK Negeri 1 Bungoro Kabupaten Pangkep. In Prosiding Seminar Nasional Himpunan Sarjana Ilmu-ilmu Sosial (Vol. 2, pp. 149–154).

Belawati, T. 2007. Pengembangan Bahan Ajar. Jakarta: Universitas Terbuka

Cattelino, E., Morelli, M., Baiocco, R., & Chirumbolo, A. (2019). From external regulation to school achievement: The mediation of self-efficacy at school. Journal of Applied Developmental Psychology, 60, 127–133. https://doi.org/https://doi.org/10.1016/j.appdev.2018.09.007

Darma, Surya. 2008. Penulisan Modul. Jakarta: Direktorat Tenaga Kependidikan Direktorat Jendral Peningkatan Mutu Pendidik dan Tenaga Kependidikan Departemen Pendidikan Nasional

Ferilli, G., Sacco, P. L., & Noda, K. (2015). Culture driven policies and revaluation of local cultural assets: A tale of two cities, Otaru and Yūbari. City, Culture and Society, 6(4), 135–143. https://doi.org/https://doi.org/10.1016/j.ccs.2015.05.002

Ferris, G. R., Munyon, T. P., Basik, K., & Buckley, M. R. (2008). The performance evaluation context: Social, emotional, cognitive, political, and relationship components. Human Resource Management Review, 18(3), 146–163

Inprasitha, N. (2014). Perceptions on Professional Development of Supervisors in the Nonproject and Project Schools Using Lesson Study. Procedia - Social and Behavioral Sciences, 116, 2069–2073. https://doi.org/https://doi.org/10.1016/j.sbspro.2014.01.521

Irvin, D. W., Ingram, P., Huffman, J., Mason, R., & Wills, H. (2018). Exploring paraprofessional and classroom factors affecting teacher supervision. Research in Developmental Disabilities, 73, 106–114. https://doi.org/https://doi.org/10.1016/j.ridd.2017.12.013

John R. Schermerhorn, Jr, 2003, Manajemen, edisi kelima, Andi Yogyakarta.

Kadarsih, S. (2014). Pengaruh Profesionalisme Dan Kompetensi Terhadap Kinerja Auditor Badan Pengawas Keuangan. Jurnal Dinamika Manajemen, 2(1), 47–58.

Moleong, Lexy J. (2002). Metodologi Pendidikan Kualitatif. Bandung: Penerbit PT Remaja Rosdakarya

Montecinos, C., Walker, H., & Maldonado, F. (2015). School administrators and university practicum supervisors as boundary brokers for initial teacher education in Chile. Teaching and Teacher Education, 49, 1–10. https://doi.org/https://doi.org/10.1016/j.tate.2015.02.011

Mukhtar dan Iskandar. (2010). Desain pembelajaran berbasis teknologi informasi dan komunikasi. Jakarta: Gaung Persada Press

Mulyasa, E. (2003). Managemen Berbasis Sekolah. Bandung : Penerbit PT Remaja Rosdakarya.

Mulyasa, E. (2006). Kurikulum Tingkat Satuan Pendidikan. Bandung: Penerbit PT Remaja Rosdakarya. Notoatmodjo, Soekidjo. (2003). Pengembangan Sumber Daya Manusia. Jakarta: Rineka Cipta.

Mulyasa, E.(2004). Kurikulum Berbasis Kompetensi. Bandung: Penerbit PT Remaja Rosdakarya.

Mulyasa. (2006). Menjadi Guru Profesional Menciptakan Pembelajaran Kreatif dan Menyenangkan. Bandung: Penerbit PT Remaja Rosdakarya.

Pidarta, M. (2009). Supervisi Pendidikan Kontekstual. Rineka Cipta.

Sagala, S. (2010). Supervisi Pembelajaran dalam Profesi Pendidikan: Membantu Mengatasi Kesulitan Guru memberikan Layanan Belajar yang Bermutu. Bandung: Alfabeta.

Sagala, Syaiful. 2006. Konsep dan makna Pembelajaran. Bandung: Alfabeta.

Sahertian, P. A. (2000). Konsep dasar & teknik supervisi pendidikan: dalam rangka pengembangan sumber daya manusia. Penerbit Rineka Cipta.

Sudjana, N. (2011). Supervisi Pendidikan Konsep dan Aplikasinya Bagi Pengawas Sekolah. Bekasi: Binamitra Publishing.

Sudjana, N. (2012). Pengawas dan Kepengawasan: Memahami Tugas Pokok, Fungsi, Peran dan Tanggung Jawab Pengawas Sekolah. Bekasi: Binamitra Publishing

THE LEARNING DESIGN & COURSE CREATION WORKSHOP: PEDAGOGY AND IMPACT

Tom Olney[1], Daphne Chang[2], Lin Lin[3]

[1] Senior Manager: Learning & Teaching, Faculty of STEM, The Open University (UK)
[2] Senior Lecturer, Faculty of STEM, The Open University (UK)
[3] UKOU Representative in China and Project Manager for LDCC Workshops, Business Development Unit, The Open University (UK)

Abstract

The Open University, UK (UKOU) has a long relationship with the Chinese Open University sector. Since 2014 this relationship has included staff from the UKOU facilitating the Learning Design & Course Creation (LDCC) Workshop as a human resource development activity for the design of online and distance learning (ODL). The LDCC Workshop has been delivered in both face-to-face and online distance settings. By November 2022 around 850 Chinese staff, from at least eight different institutions, will have participated in 33 instances of the LDCC Workshop. The LDCC Workshop model aims to align UKOU learning design frameworks and practices with constructivist and student-focused pedagogies. Through a series of structured, collaborative activities it challenges participants to design an ODL course of their own in a compressed timeframe and offers opportunities for a re-examination of their own design practices. This model has been adopted to maximise support for, and manage changes to, the professional teaching identities of participants who may be required to adapt from designing traditional education to ODL. Previous evidence of the impact of the LDCC Workshop has been consistently gathered by the facilitators and fed back into further developments and publications. This presentation will describe in detail the rationale, model and strategies adopted by the LDCC Workshop and report on the unpublished findings of some in-depth impact interviews with past participants which were conducted in 2022.

Key words: professional development, learning design, impact

INTRODUCTION & CONTEXT

An increasing percentage of educators and executive leaders in higher education (HE) believe online and distance learning (ODL) will be a fundamental component of their future teaching and learning offerings [1] but research also suggests that substantial gaps exist between the perceived skills and competencies of educators to design and implement ODL approaches, and the professional development (PD) available to them [1], [2], [3]. For example, in a 2018 study of distance educators, staff at leading ODL higher education institution, University of South Africa (UNISA), perceived themselves as having low levels of competency in the roles of technology expert and instructional designer, when compared with other roles such as knowledge expert, and self-identified a need for increased levels of future PD to support these roles [2]. However, such PD must be designed carefully to mitigate high levels of educator anxiety [1], support changing professional teaching identities [4], and improve perceptions of quality [3], [5].

Rapidly growing student numbers and an increasing demand for quality teaching in the ODL sector of Chinese HE is driving rapid educational change [5], [6], [7]. To help manage this change a need for PD for the effective design of ODL has been identified [3], [8], [9]. The Learning Design & Course Creation (LDCC) Workshop is a model of PD that has been specifically developed to support both the OU network, and the wider ODL education community, in China. It synthesises ODL educational principles and examples of practice currently in use at the UKOU to address the kinds of challenges and changes identified above.

Since around 2010, learning design (LD) has been in use in UK, European and Australian HE educational settings for designing ODL and whilst specific implementations vary depending on context, the three principles of *guidance*, *representation* and *sharing* remain consistent [10]. The interpretation of LD that is currently in practice at the UKOU, and reflected in the LDCC Workshop, has its foundation in the findings from the OU Learning Design Initiative (OULDI) which ran from 2007 to 2012. The UKOU and 13 other higher education institutions participated in the *Institutional Approaches to Curriculum Design and Delivery* programme which was co-funded by the not-for-profit Joint Information Systems Committee (JISC) and the European Union (EU) [11]. Wide ranging interviews with staff at these institutions revealed a multitude of design practices. As a consequence of the OULDI, since 2012 LD practitioners at the UKOU have sought to embed constructivist approaches that are student-focused and based around the three principles of:

    i. encouraging design conversations and collaboration in design
    ii. using tools, instruments, and activities to describe and share designs
    iii. developing learning analytics (LA) approaches to support and guide decision-making

In the daily life of the UKOU, LD workshops provide a mechanism for bringing together multi-disciplinary staff in teams to design new curriculum. Outputs from these workshops are then recognised as key components in an internal quality assurance process [12]. The pedagogy of the LDCC Workshop provides a structured way to present design for ODL educational principles, tools, activities, and examples of practice currently in use at the UKOU which, for simplicity, are referred to collectively as LDCC approaches. Whilst some evidence of the effectiveness of PD that aligns LD frameworks with constructivist and student-focused pedagogies does exist (see below) further detailed work is necessary to explore the specific nature and extent of impact in the Chinese HE context.

In a previously published study [13], feedback from the LDCC Workshop was used to demonstrate impact on 5 Belarussian ODL design teams tasked with creating five ODL courses as part of the Enhancement of Lifelong Learning in Belarus (BELL) Project. The study used the Academic Professional Development Effectiveness Framework (APDEF) indicators [14] to demonstrate that the pedagogy and content of the LDCC Workshop was effective in preparing the design teams to design and create their chosen modules [13]. Another published study [3], mapped feedback from 220 LDCC Workshop participants from three Chinese OUs against the Instructional Design Competencies Framework provided by the International Board of Standards for Training, Performance, and Instruction (IBSTPI) to demonstrate how learning design could enhance quality. Based on this analysis, the study suggested conceptualising competencies required for Chinese ODL designers around being *a professional*, *a collaborator*, *a communicator*, and *a student-focused educator* [3]. Current research [15], that employed a survey of 134 Chinese LDCC Workshop participants explored the pedagogy of the LDCC Workshop in detail and suggested the likelihood that there were important impact narratives around the extent of practical implementation, perceptions of difficulty of implementation and impacts on professional teaching identity waiting to be uncovered. To reveal these narratives in-depth interviews with 14 LDCC Workshop participants from five Chinese OUs were conducted in 2022, and these interviews form the evidence base for this AAOU22 conference presentation.

The research question that guides this conference presentation is:

RQ. What evidence is there that LDCC Workshop participants went on to implement any of the LDCC approaches into their own design for ODL practice?

METHODS

Ethics approval for this study was secured from the UKOU Human Research Ethics Committee (HREC). Previous participants were approached by their institutions and information and consent forms were provided. In total, 14 previous participants from five different OUs agreed to take part in the study. The ten-question interview instrument focused on four areas of interest: a. establishing identity, b. impact on practice, c. institutional context & support, and, d. impact on professional identity, and was shared with the interviewees prior to interview. Interviews were facilitated by Author[2] & Author[3] in a mixture of English and Mandarin using MS Teams software. The interviews ranged in length from 1 to 2 hours. Interview audio/visual files were downloaded to a secure MS Teams site along with automatically generated initial transcripts. The original audio/visual files were securely shared with professional translators hired for the purpose and based in China, who checked the transcription and completed full translations into English. These English transcriptions were anonymised then checked for accuracy and nuanced meaning by an interpreter who had previously worked as a translator during the LDCC Workshop, and Author[3].

An inductive thematic coding approach was employed by Author[1] and another UKOU researcher to ensure consistency of analysis. Once initial narratives had been established, transcriptions were imported into NVivo12 software for detailed analysis.

RESULTS

The analysis allowed for the identification of six 'student-focused learning design implementation narratives' which are summarised here and organised according to the extent of agency (from low to high) expressed in the interviews. The narratives are not exclusive, meaning that interviewees may appear in more than one, and that the themes are often interrelated. Interviewees are identified by a number, e.g. #01, and institution, e.g. OUZ, in square brackets, e.g. [#01-OUZ] where direct reference is required.

1. 'Looking for Opportunities' Narrative.
This narrative was evidenced in four of the interviews: [#05-OUY], [#06-OUV], [#08-OUV] and [#10-OUY]. It is characterised by interviewees being motivated to implement at least one of the LDCC approaches into their practical work but feeling that they did not have the agency to do so. As one interviewee said, 'Maybe I want to implement it, but to be honest, I lack the conditions to implement' [#08-OUV]. Interviewees identified certain enablers that they felt, if present, might help them to implement. These included improved technology, institutional guidance or support, better cooperation within the OU system and between departments, and responsibility for a reduced volume of students.

2. 'Student Profiles' Narrative
This narrative was evidenced in three of the interviews: [#03-OUV], [#07-OUY] and [#09-OUY]. It is characterised by the interviewees making changes to their practice to get to know their students better as inspired by the student profiles activity in the LDCC Workshop. These interviewees indicated they had started scholarship initiatives to improve the gathering of learning analytics or feedback from their students to enable the adjustment of learning designs based on that data. They interpreted these initiatives as being closely associated with the more general student-focused pedagogy discussed in the LDCC Workshop.

3. 'Indirect OU Inspiration' Narrative
This narrative was evidenced in three of the interviews: [#09-OUY], [#11-OUY] and [#12-OUV]. It is characterised by the interviewees making changes to their practice as inspired by ODL approaches not necessarily core to the LDCC Workshop but referred to in passing, or inspired by other parts of the UKOU, or in conversations with UKOU staff. However, these initiatives were design based and included, for example, the development of introductory module videos, a screen reader for visually impaired students, audio texts for commuters, case studies, animations, and a mobile learning app. As one interviewee put it, 'every time I was awarded or being acknowledged, I got the idea from the [UK]OU' [#11-OUY]. In general, interviewees in this narrative were motivated by a desire to improve the experience of study and were able to exhibit some agency over the design of their module in implementing these improvements.

4. 'Learning Design Framework' Narrative
This narrative was evidenced in two of the interviews: [#11-OUY] and [#13-OUW]. It is characterised by the interviewees changing the organisation of a module around the concept of time rather than, '…like before that we simply offer them [students] the universal teaching materials and resources platform, and ask them to arrange the study themselves' [#13-OUW]. The implementation of this fundamental LDCC approach into practice was driven by a perceived need to improve student motivation to study and provide a more structured learning experience.

5. 'Constructivist' Narrative
This narrative was evidenced in one of the interviews: [#14-OUX]. It is characterised by the interviewee adopting the constructivist LDCC pedagogy into the internal teacher professional development and training approach in that institution. In this implementation past participants drew on their LDCC modelled constructivist experience to design teacher training that was activity-based and outcome-orientated in which, 'teachers are more like a guide…rather than simply passing on the knowledge'

[#14-OUX]. This implementation was driven by a motivation to enhance the quality of the education provided.

6. 'Learning Design Process' Narrative
This narrative was evidenced in four of the interviews: [#01-OUZ], [#02-OUZ], [#04-OUZ] and [#09-OUY]. It is characterised by the mandated implementation of LDCC approaches into curriculum standards and practice to enhance quality and achieve higher accreditation. LDCC approaches such as vision statement, learning outcomes, student profiles and activity type classifications have been 'adapted…', so that they, '…are easier for teachers from our school to understand and apply' [#04-OUZ] and are included in a module specification report for which institutional approval is required. For OUZ, this constitutes the implementation of a complete learning design process adopted from the LDCC Workshop.

CONCLUSIONS AND FUTURE WORK

The 14 interviews revealed a variety of implementations of LDCC approaches into practice and demonstrate that the LDCC Workshop provided an effective PD activity for many of the Chinese OU staff who participated. The narratives suggest that implementation was dependent on both the interviewees agency and appropriate enablers being in place to support implementation. The interviews also demonstrate that many participants placed value on the constructivist, student-focused pedagogy of the workshop itself as a model for their own practice. For example, 'the focus is more on us practicing than simply having lecturers talk, which reflects the features of being student-centred, so I think this training activity, this way of teaching is excellent' [#08-OUV]. For other Chinese HE faced with the challenges of guiding and supporting their staff in designing quality ODL, the LDCC Workshop should be viewed as providing a valuable model. These elements of the study will be expanded on in the AAOU22 conference presentation.

The interviews also provide a rich source of data and information about the impact of the LDCC Workshop on changes to the professional identity of the participants that is out of scope here. This has been highlighted as a underrepresented concern of PD for the design of ODL (Philipsen et al, 2019) and future work will, therefore, involve the applying of the Personal Interpretive Framework approach (Kelchtermans, 2009) to the interviews to uncover some of these narratives.

REFERENCES

[1] JISC (2020) *Learning and teaching reimagined: Synthesis of audience surveys.* https://repository.jisc.ac.uk/8153/1/learning-and-teaching-reimagined-synthesis-of-audience-surveys.pdf Accessed 01 August 2022

[2] Roberts, J. (2018). Future and changing roles of staff in distance education: a study to identify training and professional development needs. *Distance Education, 39* (1), pp.37-53 https://doi.org/10.1080/01587919.2017.1419818

[3] Olney, T., Li, C. & Luo, J. (2021) Enhancing the quality of open and distance learning in China through the identification and development of learning design skills and competencies, *Asian Association of Open Universities Journal*,16 (1), pp.61-78. https://doi.org/10.1108/AAOUJ-11-2020-0097

[4] Philipsen, B., Tondeur, J., Pareja-Roblin, N., Vanslambrouck, S., Zhu, C. (2019) Improving teacher professional development for online and blended learning: a systematic meta-aggregative review. *Educational Technology and Research Development.* 67, pp. 1145–1174. https://doi.org/10.1007/s11423-019-09645-8

[5] Li, W. and Chen, N. (2019) Chapter 2: China in Zawacki-Richter O & Qayyum A (Eds) *Open and Distance Education in Asia, Africa and the Middle East.* Springer Briefs in Education: Singapore. https://doi.org/10.1007/978-981-13-5787-9

[6] Qi, Y & Li, W (2018) The Open University of China and Chinese approach to a sustainable and learning society. *Exploring the Micro, Meso and Macro: Proceedings of the European Distance and E-Learning Network (EDEN) 2018 Annual Conference, Genova, 17-20 June 2018.* https://doi.org/10.38069/edenconf-2018-ac-0067

[7] Zhang, W. and Li, W. (2019) Transformation from RTVUs to Open Universities in China: current state and challenges. *International Review of Research in Open and Distributed Learning.* 20(4), pp.1-20. https://doi.org/10.19173/irrodl.v20i4.4076

[8] Guan, Q., & Meng, W. (2007). China's new national curriculum reform: Innovation, challenges, and strategies. *Frontiers of Education in China, 2*(4), pp.579-604. https://doi.org/101007/s11516-007-0043-6

[9] Zhu, X., Liu, J. (2020) Education in and After Covid-19: Immediate Responses and Long-Term Visions. *Postdigital Science & Education 2, pp.*695–699 https://doi.org/10.1007/s42438-020-00126-3

[10] Dalziel, J., Conole, G., Wills, S., Walker, S., Bennett, S., Dobozy, E., Cameron, L., Badilescu-Buga, E. & Bower, M. (2016) The Larnaca Declaration on Learning Design. *Journal of Interactive Media in Education.* 1(7), pp. 1-24 https://doi.org/10.5334/jime.407

[11] Conole, G & Wills, S. (2013) Representing Learning Designs – Making Design Explicit and Shareable. *Education Media International.* 50(1), pp.24-38 https://doi.1080/09523987.2013.777184

[12] Galley, R. (2015) Learning Design at the Open University: introducing methods for enhancing curriculum innovation and quality. *Quality Enhancement Report Series* (1), Institute of Educational Technology (IET), The Open University. http://article.iet.open.ac.uk/Q/QE%20report%20series/2015-QE-learning-design.pdf Accessed 22 October 2021

[13] Olney, T. & Piashkun, S. (2021). Professional development for sustaining the 'pivot': the impact of the Learning Design and Course Creation Workshop on six Belarusian HEIs. *Journal of Interactive Media in Education*, 2021(1), 10 https://jime.open.ac.uk/articles/10.5334/jime.639/

[14] Chalmers, D. & Gardiner, D. (2015). An evaluation framework for identifying the effectiveness and impact of teacher development programmes. Studies in Educational Evaluation, 46, pp.81-91 https://doi.org/10.1016/j.stueduc.2015.02.002

[15] Olney, T., Rienties, B., Chang. D. & Banks, D. (2022) The Learning Design & Course Creation Workshop: impact of a professional development model for training designers and creators of online and distance learning. *Unpublished manuscript.*

STRENGTHENING ACADEMICIANS WORK PERFORMANCE IN OPEN DISTANCE LEARNING HIGHER EDUCATION INSTITUTIONS: THE ROLE OF SELF-EFFICACY AS A MEDIATOR

Zahir Osman[1], Noral Hidayah Alwi [2], Bibi Nabi Ahmad Khan[3]

[1] Open University Malaysia (MALAYSIA)

[2] Open University Malaysia (MALAYSIA)

[3] Open University Malaysia (MALAYSIA)

Abstract

This study aims to assess the direct and indirect relationships between leadership style, organizational culture, self-efficacy, and employee performance in open distance learning (ODL) higher education institutions in Malaysia. This study is essential because learners and the management of open distance learning higher education institutions have expressed concerns about the performance of academicians. Thus, the purpose of this study is to provide solutions to ODL higher education institutions for improving academicians' work performance. The research framework of this study consists of two independent variables which are leadership style and organizational culture, self-efficacy as a mediator, and performance as a dependent variable. The primary data used in this study and was collected by employing a survey questionnaire which was adopted and adapted from previous studies. 323 clean data were used in the data analysis by using the structural equation modeling technique. The Structural Equation Modeling (SEM) technique was adopted for this study to analyze the measurement model and structural model. The findings of this study show that both leadership style and organizational culture have a positive and significant direct influence on self-efficacy and performance. Further, the findings also confirm that self-efficacy significantly mediates the relationship between leadership style and organizational culture with performance. This study will give significant input to the management of ODL higher education institutions to develop strategies to improve the performance of academicians. The research model in this study is the first being used in studying the academicians' performance in ODL higher education institutions in Malaysia.

Keywords: Self-Efficacy, Academic Performance, ODL Higher Education Institutions

1 INTRODUCTION

Every country recognises the importance of education. Many organizations around the world are working hard to achieve their short-term and long-term goals as they have been set from the beginning of their planning. Various methods will be used by most organizations to ensure that the goals of the organization will always be achieved by using all the resources available in the organization (Johan & Lars, 2019). The performance of academic staff is a topic that is regularly discussed and attracts a lot of attention because it has an influence on the quality of higher education delivered to students (Ahmad et al., 2017). As Malaysia aspires to become a high-income country, the educational system must be able to create quality and highly skilled human capital that satisfies the industry's demand. The government will prioritise thorough reforms of the national educational system under the 12th Malaysia Plan (12MP) and address any inconsistencies in the labour market (NST, 2021). Additionally, as a result of economic expansion, higher education has taken a leading role in a nation's employment opportunities, income growth, export earnings, and state and national development. Higher education cannot be transformed alone by the government. According to EC (2012), HEIs should concentrate on three important things which are enhancing student skills, addressing social issues, promoting innovation and regional participation, and revising performance management systems to reward and incentivise best practices There are many parties involved in higher education, including the government, the students' employers, and the students themselves. These parties are frequently viewed as the colleges' and institutions' consumers (Raaper, 2019; Lomas, 2007). They want HEIs to provide high-quality educational services in the form of outreach, high-impact research, and education that will ultimately benefit their business, industry, and society as a whole. Some higher education students are graduating from their institutions with inadequate skill sets and capacities for a variety of reasons (HBR,2019). HEIs are supposed to provide the most disadvantaged people of society with high-quality, inclusive higher education services (EC, 2012). They can work together with other organisations on research and education initiatives to address common issues pertaining to creative, multidisciplinary ecosystems (Reichert, 2019).

Many universities and colleges have established policies and guidelines for the administration of personnel, but not for "managing" their human resources, even though intellectual capital is the primary asset of knowledge-based organisations (Guest and Clinton, 2007). HEIs that are not providing their stakeholders with adequate service quality typically get bad reviews and ratings. This might have a severe impact on their league standings and international rankings over time. Leaders of HEIs should be aware of both the observable and elusive characteristics of their higher education services. Therefore, there is room for them to assess their performance on a regular basis in terms of their resources, education, research, and participation. The successful accomplishment of organisational goals depends heavily on human resources, one of the organization's resources. The success of a company depends on the performance of its employees, which is necessary for both individual employee success and the development of its human resources. Enhancing these employees' performance is advantageous for both the business and the workers themselves in addition to the company. However, in many situations, the performance of higher education depends a lot on the work performance of the academic staff. Ministry of Higher Education oversees higher education in Malaysia (Ismail et al., 2011; Ismail & Abidin, 2010; MOHE, 2015). In higher education institutions, managing academic staff members is difficult. Academic staff are free to determine their own priorities and objectives in accordance with the standards established by their disciplines rather than the institutional demands of the organisations that employ them (Iglesias-Pradas et al., 2021, Alwi et al., 2022). Therefore, the work performance of academic staff plays an important role in the progress of a higher education institution and the prosperity of society (Abba and Mugizi, 2018). One of the important resources found in the organization is the staff working in the organization. The work performance exhibited by the staff in the organization is very important to achieve the goals of the organization. Like other organizations that emphasize the performance of their staff, online distance learning (ODL) higher education institutions also strive to ensure that their academic staff shows excellent work performance to ensure that students get the best teaching quality (Osman, 2020). The work performance of academic staff is very important for ODL higher education institutions to continue to compete in the education sector for long-term survival. Many problems regarding the work performance of the academic staff of ODL higher education institutions in many countries are described as having a lot to do with the leadership style of the top management in the organization (Alwi et al., 2022). The failure of top management leadership in the organization will have an impact on academic staff, especially exhibiting excellent work performance. In Malaysia, there are three ODL higher education institutions namely Open University Malaysia, Asia e-University, and Wawasan Open university which is fully ODL higher education institutions. With a completely online teaching method, ODL higher education institutions have the challenge of ensuring that their academic staff can display excellent work performance so that their students will receive quality education through online distance learning. This study is very significant especially for ODL higher education institutions to plan and formulate effective strategies to ensure that their academic staff can show high work performance. This study will also benefit the Ministry of Higher Education to formulate policies to develop academic staff in Malaysia to a higher level in the future. The purpose of this study is to evaluate the direct and indirect influence of leadership style and organizational culture on the self-efficacy and work performance of academic staff in ODL higher education institutions.

2 LITERATURE REVIEW

2.1 Leadership style

The role of a leader is to communicate the company's mission, objectives, and values. Defining, imparting, evaluating, and rewarding the culture they want to foster are the leaders' responsibilities (Schein, 2010). Business success and expansion are facilitated by ethical leadership. Honesty, integrity, trust, and justice are fostered by ethical leaders. When CEOs have strong ethical beliefs, employees are more engaged and happier. An environment at work that is peaceful, collaborative, and trustworthy is produced by effective leadership. Leaders must set an example by acting in a way that is compatible with the company's values. Influential leaders model the actions that employees should take in order to completely embrace company values (Jackson et al., 2015). It is a leader's duty to turn an organization's mission into quantifiable outcomes. A good leader demonstrates real interest in the advancement of their staff. They consequently freely impart their information to others. They offer the knowledge required to follow it and aid team members in developing career paths.In order to inspire followers and accomplish corporate goals, a leader must have a certain set of traits (Rivai et al., 2011). To be a good leader, a person must be able to determine the type of leadership style that will work best for the organisation to both inspire and educate its personnel.

2.2 Organizational culture

The hidden social structure of an organisation is its culture, which has a long-lasting effect on people's attitudes and behaviours. Cultural norms determine what is endorsed, frowned upon, acceptable, or disapproved of within a group (Groysbrg et al., 2017). When properly matched with people's values, ambitions, and wants, culture may unleash immense energy toward a common goal and foster an organization's capacity to grow (Brenyah & Darko, 2017). Adapting freely and independently, culture can also change with chances and circumstances. The cultures of different organisations are not all created equal. There may be unhealthy and unsupportive norms and behaviours within a firm. The ability to build a high-performance culture, however, lies with the organisation. A high-performance culture includes establishing specific company objectives, outlining employee tasks, fostering a trusting environment, and enticing staff members to continuously improve and reinvent themselves (Groysbrg et al., 2017).

2.3 Self-efficacy

Self-efficacy plays three key roles in influencing people's behaviour choices, performance capacity, and mentality in the face of challenges (Bandura, 1977). High self-efficacy, often known as confidence in one's talents, increases the likelihood that a person will accept hard tasks. Additionally, those with a high feeling of self-efficacy are more driven to work hard and persevere for a long time in the face of challenges (Margolis and McCabe, 2003). When faced with challenges, those who lack self-confidence or self-efficacy are more likely to quit up than those who have these traits (Bandura, 1982). Additionally, self-efficacy affects how people think and feel (Ulandari et al., 2019). Additionally, those with low levels of self-efficacy tend to dwell on their shortcomings while interacting with others and potential issues with themselves, which increases the risk of psychological stress and focuses more on failure and negative outcomes (Bandura and Cervone, 2000). These actions and ways of thinking have an impact on how well employees perform at work.
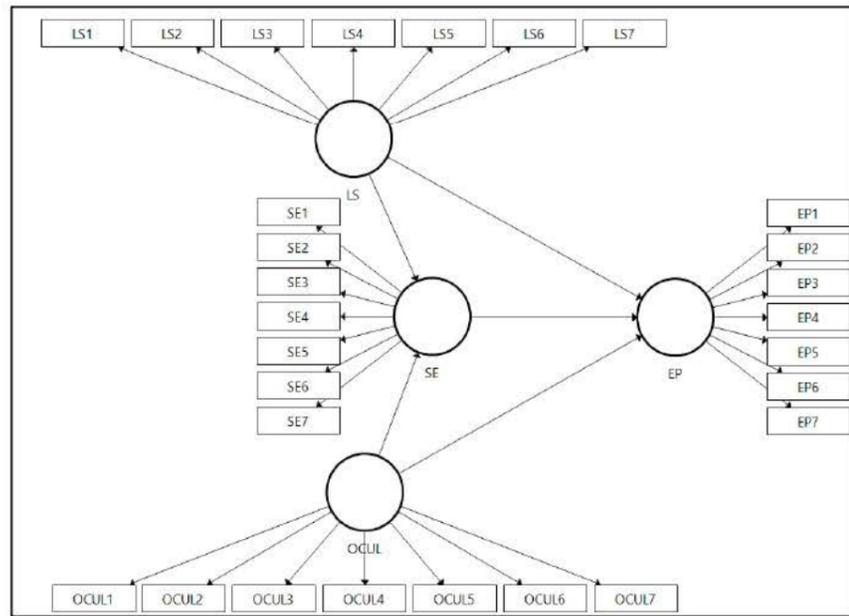
2.4 Academic work performance

Work performance is the end result of an individual putting in the necessary effort or seriousness to complete a task given to him with his knowledge, expertise, and sincerity in accordance with the duties assigned to him (Garnida, 2017). According to Adnyani & Dewi (2019), work performance is a talent acquired by an employee to accomplish a variety of tasks connected to job demands. Academicians always play an imperative role in education system in any part of the world to ensure the success of their higher education institutions and they always deemed as an important asset to their institutions (Osman Z, 2020). Students' academic performance largely depends on the academic staff performance and other factors such as students' self-efficacy, time management and motivation (Osman et al., 2018). According to Noordin & Jusoff, (2009), academicians' positive performance in their work will result better performance of the higher education institutions and eventually will make the higher education institutions more sustainable in the future

Study by Widayati and Putranto (2015) showed there was a positive and significant relationship between leadership style and employee performance. Osman Z, (2020), in his study has revealed that self-efficacy has a positive and significant influence on the relationship between leadership styles and academic employees' performance in Malaysian online distance learning (ODL) higher education institution. The findings suggested that it is very important for the leaders in ODL higher education institutions to adopt suitable leadership styles and promote self-efficacy to ensure the high level of academic employees' performance. Study by Anra Y. et al., (2017) on 255 lecturers in Jambi University, Indonesia revealed that there was a direct effect of organizational culture on performance. As such, they suggested, enhancing the lecturer performance can be done by improving the organization cultural.

2.5 Research Hypotheses:

H1: There is a relationship between leadership style and academic employee work performance in ODL higher education institutions.

H2: There is a relationship between leadership style and academic employee self-efficacy in ODL higher education institutions.

H3: There is a relationship between organizational culture and academic employee work performance in ODL higher education institutions.

H4: There is a relationship between organizational culture and academic employee self-efficacy in ODL higher education institutions.

H5: There is a relationship between employee self-efficacy and academic employee work performance in ODL higher education institutions.

H6: There is a mediating effect of employee self-efficacy on the relationship between leadership style and academic employee work performance in ODL higher education institutions.

H7: There is a mediating effect of employee self-efficacy on the relationship between organizational culture and academic employee work performance in ODL higher education institutions.

Figure 1: Re-specified Model

Note: LS=Leadership Style   OCUL=Organizational Culture   SE=Self-Efficacy
EP=Employee Performance

Figure 2: Specified Model
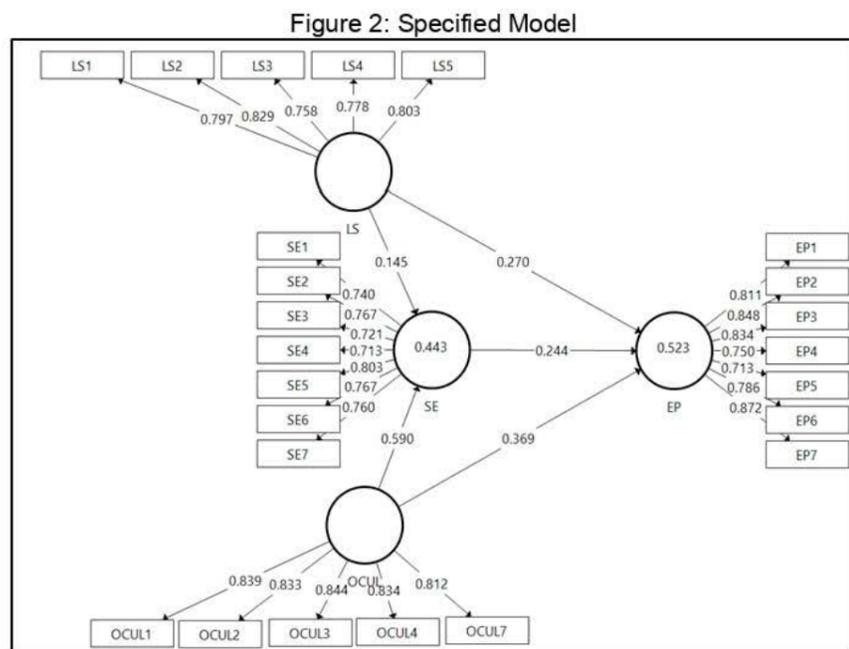
Note: LS=Leadership Style   OCUL=Organizational Culture   SE=Self-Efficacy
EP=Employee Performance

3   METHODOLOGY

Academic staff working with ODL higher education institutions were selected to participate in this study. This study targets ODL employees from three ODL higher education institutions, namely Open University Malaysia, Wawasan Open University, and Asia e-University. This research was conducted over a period of three months. The research questions were shared with the targeted respondents via email using the non-probability sampling method, which was snowball sampling, to collect data. Snowball sampling was used for this study because the population frame could not be obtained. This study uses a survey questionnaire that has been designed with a careful evaluation of past studies by taking appropriate measurements that are always used and have reliability and validity. A total of 26 observed variables include exogenous variables and the endogenous variable measurement. Leadership style construct has 5 measurement items, organizational culture construct has 7 items, self-efficacy has 7 measurement items, and family employee performance has 7 items. A five-point Likert scale was used starting from strongly disagree to strongly agree. Out of a total of 541 questionnaires that have been distributed, 412 have been successfully returned. This showed that the response rate was 76.1% and was sufficient to analyze the data using the Structural Equation Modelling (SEM) technique. After going through the data screening process and removing all outliers using the Mahalanobis Distance procedure, 398 questionnaires have been verified and are ready to be used in data analysis. Table 1 depicts the respondents' profiles of the sampled ODL academic employees. Smartpls3 was used to perform the analysis of multivariate data and test the proposed hypotheses in this study. Additionally, the model measurement and structural model evaluation procedures were performed by using Smartpls3 as well. The PLS-SEM technique was adopted for this study because of its assessment ability (Hair, Black, Babin, & Anderson, 2010).

Table 1: Respondents' Profile

		Frequency	Percentage
Gender	Male	221	56%
	Female	177	44%
Age	21 – 30 years	54	14%
	31 – 40 years	136	34%
	41 – 50 years	106	27%
	51 – 60 years	89	22%
	61 years of age or older	13	3%
Marital Status	Single	111	28%
	Married	226	57%
	Divorced	32	8%
	Widowed	29	7%
Position	Lecturer	118	30%
	Senior Lecturer	168	42%
	Associate professor	89	22%
	Professor	23	6%
Annual Income	<RM60,000	48	12%
	RM 60,000-80,000	89	22%
	RM 80,000-100,000	133	33%
	RM 100,000-120,000	35	9%
	RM 120,000-140,000	55	14%
	RM 140,000-160,000	21	5%
	>RM 160,000	17	4%

Education	Bachelor	38	10%
	Master	77	19%
	PhD	283	71%
Terms of Employment	Full Time	318	80%
	Part-Time	63	16%
	Contract	17	4%

4 DATA ANALYSIS

4.1 *Common Method Bias*

The variance inflation factors (VIF) greater than 3.3 occurrences signified the non-existence of the collinearity problem and it also indicates the model is not facing a problem of common method bias. Hence, if the VIFs at all factor-level resulting from a full collinearity test are equal to or less than 3.3, it shows that the model is free from any issue with common method bias (Kock, 2015)

Table 2: Collinearity Statistics (VIF)

	LS	OC	SE	EP
LS		1.465	1.458	1.477
OC	1.372		1.517	1.516
SE	2.864	2.376		1.578
EP	2.521	2.566	1.592	

Note: LS=Leadership Style   OCUL=Organizational Culture

SE=Self-Efficacy EP=Employee Performance

4.2 *Measurement Model*

This study uses the PLS-SEM approach to evaluate the path and model, then verify the reliability and validity of the developed measurement. Hair, Hult, Ringle, and Sarstedt (2017), stated that reliability and validity are two important criteria in PLS-SEM to study outer model goodness. First, the outer model was evaluated to check the reliability and validity of measurement items and the statistical results showed that the Average Variance Extracted (AVE) had reached the constructs' AVE ranging from 0.568 to 0.693 (Table 3) which is higher than the minimum requirement of 0.5 and this has been confirming the existence of convergent validity for all constructs (Hair, Sarstedt, Ringle & Mena, 2012). Composite reliability as illustrated in Table 3 ranges from 0.895 to 0.927 for first-order constructs and met the threshold of 0.70 and above (Hair et al., 2017). Next, to confirm the existence of discriminant validity in this study, measurement items' cross-loading for each construct was evaluated. The results of statistical results show that all the item loadings for the respective constructs are greater than the respective cross-loadings as shown in table 2. To further confirm the discriminant validity, Hetrotrait-Monotrait (HTMT) ratios were calculated and the results of the statistical results show all the ratios for the four constructs is <0.9 as found in Table 3 (Henseler, Ringle, & Sarstedt 2015). The full bootstrapping was performed for HTMT. Hence, this study established the reliability and validity of the latent constructs (Hair, Hult, Ringle & Sarstedt, 2014).

Table 3: Construct Reliability & Validity and Cross Loadings

Constructs	Item	Loadings	CA	CR	AVE
Employee Performance	EP1	0.811	0.908(0.885,0.924)	0.927(0.911,0.939)	0.646(0.595,0.688)
	EP2	0.848			
	EP3	0.834			
	EP4	0.750			
	EP5	0.713			
	EP6	0.786			
	EP7	0.872			
Leadership Style	LS1	0.797	0.854(0.818.0.880)	0.895(0.870,0.912)	0.630(0.571,0.673)
	LS2	0.829			
	LS3	0.758			
	LS4	0.778			

	LS5	0.803			
Organizational Culture	OCUL1	0.839	0.889(0.865,0.907)	0.919(0.902,0.930)	0.693(0.647,0.728)
	OCUL2	0.833			
	OCUL3	0.844			
	OCUL4	0.834			
	OCUL7	0.812			
Self-efficacy	SE1	0.740	0.873(0.848,0.897)	0.902(0.884,0.919)	0.568(0.522,0.618)
	SE2	0.767			
	SE3	0.721			
	SE4	0.713			
	SE5	0.803			
	SE6	0.767			
	SE7	0.760			

Note: 95% confidence with 5,000 sub-samples bootstrapping, CA=Cronbach Alpha   CR=Composite Reliability

AVE=Average Variance Extracted

Table 4: Hetrotrait-Monotrait (HTMT) Ratios

	EP	LS	OCUL
LS	0.574(0.480, 0.651)		
OCUL	0.712(0.641, 0.785)	0.477(0.376, 0.566)	
SE	0.652(0.553, 0.743)	0.453(0.318, 0.563)	0.729(0.657, 0.792)

Note: 95% confidence with 5,000 sub-samples bootstrapping

4.3   Structural Model

The structural model evaluation was done by calculating the path coefficient together with the determination coefficient (R2) Value (Hair et al., 2012). 5000 sub-samples bootstrapping by employing PLS were made to validate the significance level of the path coefficient. Table 4 depicts the statistical results of the hypotheses testing of path coefficients (Beta), t-statistics, p-value, f2, Q2_predict, and confidence interval. For hypothesis 1, the statistical result shows that leadership style has a positive and significant influence on employee performance (ß=0.270, t=6.079, p=0.000), therefore H1 is supported. Then, for hypothesis 2, the statistical result shows that leadership style has a positive and significant relationship with self-efficacy (ß = 0.145, t = 2.801, p=0.005), thus H2 is supported. For hypothesis 3, the statistical result showed that organizational culture positively and significantly influenced employee performance (ß=0.369, t=6.987, p=0.000), therefore H3 is supported. For hypothesis 4, the statistical result revealed that organizational culture positively and significantly influenced self-efficacy (ß=0.590, t=13.796, p=0.000), therefore H3 is supported. For hypothesis 5, self-efficacy has a positive and significant influence on employee performance (ß=0.244, t=3.933, p=0.000), hence H5 is supported. Hypothesis 6, shows that self-efficacy has a mediating effect on the relationship between leadership style and employee performance (ß=0.035, t=2.173, p=0.030), hence confirms H6 is supported. For hypothesis 7, the statistical result shows that self-efficacy significantly mediates the relationship between organizational culture and employee performance (ß=0.144, t=3.692, p=0.000), therefore H7 is supported. The summary of the hypotheses testing results is presented in Table 5. Table 4 also depicted the effect size which measured the extent of an effect that was independent of the sample size. The values of f2 were in the range of 0.020 to 0.150 (small), 0.150 to 0.350 (medium), or larger or equal to

0.50 (large) (Cohen, 1992). In this study, the range of effect size was from 0.070 to 0.511 (small to large). Then, Table 5 showed that Q2 values were greater than zero signifying that the values were well rebuilt and exhibited the model has a fairly strong predictive relevance.

Table 4: Hypotheses Testing Results, Effect Sizes & Predictive Relevance

	Beta	T Values	P Values	f2	Q2_predict	LLCI 2.5%	ULCI 97.5%	Decision
H1: LS -> WP	0.270	6.079	0.000	0.122		0.183	0.360	Supported
H2: LS -> SE	0.145	2.801	0.005	0.031		0.039	0.253	Supported
H3: OCUL -> WP	0.369	6.987	0.000	0.154		0.270	0.479	Supported
H4: OCUL -> SE	0.590	13.796	0.000	0.511		0.507	0.675	Supported
H5: SE -> WP	0.244	3.933	0.000	0.070		0.103	0.356	Supported
H6: LS -> SE -> WP	0.035	2.173	0.030			0.011	0.074	Supported
H7: OCUL -> SE -> WP	0.144	3.692	0.000			0.064	0.217	Supported
WP					0.332			
SE					0.246			

5   DISCUSSION & CONCLUSION

The competition between institutions of higher learning in offering online distance learning to prospective students who wish to continue their studies at institutions of higher learning is becoming increasingly intense. The existing ODL higher education institutions had to compete with conventional higher education institutions especially after the Covid-19 pandemic hit the whole world. In order to face this fierce competition, ODL higher education institutions need to ensure that their academic staff shows encouraging work performance. This is very important to ensure that students who study with ODL higher education institutions get the quality of learning as expected. This study was conducted to evaluate the direct and indirect relationship between the influence of leadership style and organizational culture on employee self-efficacy and employee performance. From the statistical results, it is clear that leadership style has a direct influence on self-efficacy (ß=0.145) and academic employee performance (ß=0.270). This clearly shows that leadership style plays a role in influencing the self-efficacy of the academic staff of ODL higher education institutions. It is very important for all top management of ODL higher education institutions to display the right leadership style in order to stimulate their academic staff to increase self-efficacy. The right leadership style that can be accepted by academic staff is very necessary for forming self-efficacy that leads to the improvement of academic staff's work performance. Increasing self-efficacy is instrumental in ensuring that the work performance of academic staff can be improved as expected. Similarly, the direct relationship between leadership style and academic employee performance clearly shows that if the right leadership style is practiced in ODL higher education institutions, it can increase the work performance of academic staff to a better level. The influence of leadership style on academic employee performance can be strengthened through self-efficacy as a mediator. From the above statistical results, it is clear that self-efficacy has a significant mediating effect on the relationship between leadership style and academic employee performance (ß=0.035). This means it is necessary for ODL higher education institutions to formulate an effective strategy to strengthen the effective leadership style as well as increase self-efficacy to an optimal level to ensure that the work performance of academic staff will increase effectively.

Organizational culture in an organization plays a very important role so that employees can produce work performance as expected by an organization. Therefore, the management of the organization needs to ensure that the organizational culture practiced by the employees is an organizational culture that can improve the performance of their employees. For ODL higher education institutions, creating a positive organizational culture is very important to ensure academic staff can display quality work performance when dealing with students while carrying out teaching duties. The data analysis above, clearly shows that organizational culture has a very positive and significant direct influence on self-efficacy (ß=0.590) and on work performance (ß=0.244). The existence of a positive culture in ODL higher education institutions will stimulate the belief of academic staff in their respective abilities to carry out the behaviors required to produce certain performance achievements. Organizational culture in any organization has a very strong

influence on employees. It can be a catalyst to achieve progress in an organization or be an obstacle to progress. Organizational culture can be one of the reasons for academic staff of ODL higher education institutions to stay in their organization or be a reason for them to leave their organization to work. With today's working environment, ODL higher education institutions must strive to ensure an organizational culture that can encourage academic staff to exhibit excellent work performance in the organization. The formation of an organizational culture that can attract the interest and ability of academic staff to do their job with excellence, will create more stability in ODL higher education institutions. All ODL higher education institutions need to be aware that a strong and career-oriented organizational culture environment, increases high self-efficacy which will ultimately lead to excellent work performance. The results of the above statistical analysis clearly show that self-efficacy has a positive and significant mediating effect on the relationship between organizational culture and the work performance of academic staff in ODL higher education institutions (ß=0.244). Therefore, it is very important that the management of ODL higher education institutions formulate a long-term strategy to further strengthen the organizational culture in the future to ensure that the self-efficacy of academic staff can continue to be improved to produce excellent work performance. The main theoretical contributions of this study are that the first study operationalizes and tests an intricate theoretical model that connects existing constructs from the human resource management literature. Then, address the existing research gap by examining and finding empirical evidence for leadership style, organizational culture, self-efficacy, and employee performance in the education context. After that, all constructs were integrated into an established model from the human resource management literature, specifically to test self-efficacy as a mediator in the relationship between leadership style and organizational culture with employee performance. The presented model and the empirical results have practical implications for both human resource management and management. This study found that leadership style, organizational culture, and self-efficacy are important and play a role in the formation of employee performance. These elements are very important from the perspective of academic staff when leadership style and organizational culture have a direct and indirect relationship with self-efficacy as a mediator. For the management of ODL higher education institutions, the findings from this study emphasize the need to treat academic staff more seriously than offering academic staff good financial value and high-quality service. The mediation analysis, clearly shows from the perspective of academic staff, that self-efficacy is very much important when linked to employee performance. ODL higher education institutions need to formulate strategies to build self-efficacy in their respective organizations to show support to academic staff to build and maintain long-term relationships. This can be done with the management taking a correct and positive leadership style approach and introducing a positive organizational culture, conducive and acceptable to the academic staff.

In conclusion, this study clearly shows that leadership styles and organizational culture play a very important role in influencing the self-efficacy and work performance of the academic staff of ODL higher education institutions directly and indirectly. From the point of view of management implications, ODL higher education institutions need to pay serious attention so that the right leadership style can be applied to the highest leadership of the organization in order to be able to lead academic staff in a direction that can improve work performance more. Likewise, organizational culture, it plays a very important role that allowing academic staff to have a higher level of self-confidence and increase confidence in their ability to carry out their academic duties and subsequently exhibit a higher quality of work. In order to carry out studies in the future, it is suggested that other variables can be included in the study model such as university image, organizational support, and peer influence to be studied whether they have an influence on the work performance of academic staff.

REFERENCES

[1] Abba, H. D., & Mugizi, W. (2018). Performance of academic staff in polytechnics: an analysis of performance levels in North West geo–political zone of Nigeria. Arts & Humanities Open Access Journal, 2(3). https://doi.org/10.15406/ahoaj.2018.02.00056

[2] Adnyani, N. L. P. R., & Dewi, A. A. S. K. (2019a). Pengaruh Pengalaman Kerja, Prestasi Kerja Dan Pelatihan Terhadap Pengembangan Karier Karyawan. E-Jurnal Manajemen Universitas Udayana, 8(7), 4073. https://doi.org/10.24843/ejmunud.2019.v08.i07.p03

[3] Ahmad, A. R., Sunari, S. N. B., Soon, N. K., Farley, A., & Ismail, R. (2017). Rationale for the Performance-Based Research Fund at Malaysian Higher Education Institutions. Advanced Science Letters, 23(4), 3053–3056. https://doi.org/10.1166/asl.2017.7650.

[4] Alwi, N. H., Osman, Z., Ismail, Z., & Khan, B. N. A. (2022). Higher Educations Employees Work From Home Productivity During The Covid-19 Outbreak: The Role Of Motivation As Mediator. Asian Journal of Management, Entrepreneurship and Social Science, 2(02), 17-35.

[5] Adnyani, N. L. P. R., & Dewi, A. A. S. K. (2019a). Pengaruh Pengalaman Kerja, Prestasi Kerja Dan Pelatihan Terhadap Pengembangan Karier Karyawan. E-Jurnal Manajemen Universitas Udayana, 8(7), 4073. https://doi.org/10.24843/ejmunud.2019.v08.i07.p03

[6] Anra Y., Yamin M. (2017) Relationships between Lecturer Performance, Organizational Culture, Leadership, and Achievement Motivation. Foresight and STI Governance, vol. 11, no 2, pp. 92–97. DOI: 10.17323/2500-2597.2017.2.92.97Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. Psychological review, 84(2), 191.

[7] Bandura, A. (1982). Self-efficacy mechanism in human agency. American psychologist, 37(2), 122.

[8] Bandura, A., & Cervone, D. (2000). Self-evaluative and self-efficacy mechanisms of governing the motivational effects of goal systems.

[9] Brenyah, R. S., & Obuobisa-Darko, T. (2017). Organisational culture and employee engagement within the Ghanaian public sector. Review of Public Administration and Management, 5(03).

[10] European Commission (2012) 'Supporting growth and jobs: an agenda for the modernisation of Europe's higher education system'. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels COM 2011 567 final.

[11] Garnida, D. (2017). Pengaruh Pendidikan, Pengalaman Kerja dan Prestasi Kerja terhadap Pengembangan Karir Pegawai di Dinas Pekerjaan Umum Kabupaten Kutai Timur. EJournal Pemerintahan Integrattif, 5(4), 626–635

[12] Groysberg, B., Lin, E., & Serafeim, G. (2017). Does Financial Misconduct Affect the Future Compensation of Alumni Managers?

[13] Guest, D. E., & Clinton, M. (2007). Human resource management and university performance. Leadership Foundation for Higher Education.

[14] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis (7th Ed.). Englewood Cliffs: Prentice Hall.

[15] Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Thousand Oaks: Sage

[16] Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. Journal of the Academy of Marketing Science, 40(3), 414–433.

[17] HBR (2019), "6 Reasons Why Higher Education Needs to Be Disrupted", Harvard Business Review, Cambridge, MA, USA. https://hbr.org/2019/11/6-reasons-why-higher-education-needs-to-be-disrupted

[18] Henseler, J., Ringle, C. M., and Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling, Journal of the Academy of Marketing Science, 43(1): 115-135.

[19] Iglesias-Pradas, S., Hernández-García, Á., Chaparro-Peláez, J., & Prieto, J. L. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. Computers in human behavior, 119, 106713.

[20] Ismail, R., & Zainal Abidin, S. (2010). Impact of workers' competence on their performance in the Malaysian private service sector. Business and Economic Horizons (BEH), 2(1232-2016-101133), 25-36.

[21] Ismail, R., Yussof, I., & Sieng, L. W. (2011). Employers' perceptions on graduates in Malaysian services sector. International Business Management, 5(3), 184-193.

[22] Johan Söderlind & Lars Geschwind (2019) Making sense of academic work: the influence of performance measurement in Swedish universities, Policy Reviews in Higher Education, 3:1, 75-93, DOI: 10.1080/23322969.2018.1564354

[23] Johnson, L., Becker, S.A., Cummins, M., Estrada, V., Freeman, A., Hall, C., (2016). NMC Horizon Report: 2016 Higher Education Edition, NMC Horizon Report.

[24] Kock, N. (2015) Common method bias in PLS-SEM: A full collinearity assessment approach, International Journal of e-Collaboration, 11(4), 1-10

[25] Lomas, L. (2007). Are students customers? Perceptions of academic staff. Quality in Higher Education, 13(1), 31-44.

[26] Margolis, H., & McCabe, P. P. (2003). Self-efficacy: A key to improving the motivation of struggling learners. Preventing School Failure: Alternative Education for Children and Youth, 47(4), 162-169.

[27] Ministry of Higher Education (MOHE) (2015). University Transformation Programme Green Book. Putrajaya: Ministry of Higher Education Malaysia.

[28] Mugizi, W., & Dahiru Abba, H. (2018). Performance of academic staff in polytechnics: an analysis of performance levels in North West geo–political zone of Nigeria. Arts & Humanities Open Access Journal, 2(3). https://doi.org/10.15406/ahoaj.2018.02.00056

[29] Noordin, F., & Jusoff, K. (2009). Levels of job satisfaction amongst Malaysian academic staff. Asian social science, 5(5), 122-128.

[30] New Straits Times (2021). PM tables 12th Malaysia Plan.

[31] Osman, Z. (2020). Indirect Relationship among Leadership Styles, Self-Efficacy and Academic Employees' Performance in Malaysian Online Distance Learning Higher Education Institutions. International Journal of Academic Research in Business and Social Sciences, 10(8). https://doi.org/10.6007/ijarbss/v10-i8/7717

[32] Osman, Z., Mohamad, W., Mohamad, R. K., Mohamad, L., & Sulaiman, T. F. T. (2018). Enhancing students' academic performance in Malaysian online distance learning institutions. Asia Pacific Journal of Educators and Education, 33, 19-28.

[33] Raaper, R. (2019). Students as consumers? A counter perspective from student assessment as a disciplinary technology. Teaching in Higher Education, 24(1), 1-16.

[34] Reed, M. J., & Kennett, D. J. (2017). The Importance of University Students' Perceived Ability to Balance Multiple Roles: A Comparison of Students with and without Disabilities. Canadian Journal of Higher Education, 47(2), 71–86. https://doi.org/10.47678/cjhe.v47i2.187965

[35] Reichert, S. (2019). The role of universities in regional innovation ecosystems. EUA study, European University Association, Brussels, Belgium.

[36] Rokhman, W., Rivai, H. A., & Adewale, A. (2011). An examination of the mediating effect of islamic work ethic on the relationships between transformational leadership and work outcomes. Gadjah Mada International Journal of Business, 13(2), 125-142.

[37] Schein, E. H. (2010). Organizational culture and leadership (Vol. 2). John Wiley & Sons.

[38] Ulandari, L., Amry, Z., & Saragih, S. (2019). Development of Learning Materials Based on Realistic Mathematics Education Approach to Improve Students' Mathematical Problem Solving Ability and Self-Efficacy. International Electronic Journal of Mathematics Education, 14(2), 375-383.

[39] Widayanti A. t. and Putranto N. A. R. (2015). analyzing the relationship between transformational and transactional leadership style on employee performancet. tx bandung. Journal of Business and Management. Vol 4, No. 5, 2015: 561-568.

[40] Wilkes, L., Cross, W., Jackson, D., & Daly, J. (2015). A repertoire of leadership attributes: An international study of deans of nursing. Journal of Nursing Management, 23(3), 279-286.

DEVELOPING SELF-REGULATED LEARNING SKILLS IN UNIVERSITY STUDENTS STUDYING IN THE OPEN & DISTANCE LEARNING ENVIRONMENT BY USING THE COLLABORATIVE LEARNING METHOD

DE SILVA D.V.M

1Senior Lecturer
Department of Secondary and Tertiary Education
Faculty of Education
The Open University of Sri Lanka

Abstract

Open and Distance Learning (ODL) is regarded as the most effective way to increase access to education while improving the quality of education, promoting peer collaboration and giving students a greater sense of independence and commitment to learning. However, students studying in the ODL environment face more difficulties and challenges than students in conventional systems. Available literature has shown that students with self-regulated learning (SRL) skills are more likely to succeed in ODL than those who do not. Research studies revealed that with a variety of effective teaching methods, teachers can teach self-regulated processes to their students and improve their self-regulated learning skills leading to reduced drop-out rates. The main aim of this study was to examine the suitability of the collaborative learning method to use to develop SRL skills in university students studying in the ODL environment. This study adopted an action research approach. Twenty-four (24) Bachelor of Education students and three (03) educators of the Open University of Sri Lanka participated in the study. Zimmerman & Moylan's (2009) self-regulated cycle of learning model was used as the intervention framework. The Motivated Strategies for Learning Questionnaire (MSLQ, 1991) was used to measure students' SRL skills. Observations, focus group discussions and reflections were used to collect qualitative data and were analysed using content analysis. Statistical Package for the Social Sciences was used to analyse Quantitative data. The findings of the study showed that the collaborative learning method contributed to the development of many self-regulated learning skills among university students studying in ODL environment.

Keywords: Self-regulated learning skills, Open and Distance Learning environment, collaborative learning method

1 INTRODUCTION

Open and Distance Learning (ODL) is fast becoming an accepted and indispensable part of mainstream education systems in both developed and developing countries. According to UNESCO (2002) [1], the term open and distance education reflects both the fact that all or most of the teaching is conducted by someone distant from the student in time and space, and includes greater dimensions of openness and flexibility, whether in terms of approach, curriculum or other elements of the structure. It provides open opportunities for students to study regardless of geographic, socio-economic or other limitations. The Commonwealth of Learning (2003) [2] stated that open and distance learning refers to education and training in which the central feature of the open and distance learning experience is the use of learning resources rather than classroom attendance. According to Telly (1997) [3], open learning (OL) together with flexible learning (FL) and distance learning seems to have created the concept of open and distance learning (ODL). Calvert (2006) [4] revealed that Open Distance Learning (ODL) is currently considered the most viable means of widening access to education while improving the quality of education, promoting peer collaboration and giving students a greater sense of autonomy and responsibility for learning.

However, university students studying in ODL settings can be identified as a special group because they are dispersed and physically separated from the institution and do not have the same support systems as institutional students. Das (2010) [5] pointed out that inefficient time management, lack of sustained motivation, lack of support from home or the workplace, and lack of modelling are other constraints they face. The absence of an immediate teacher, isolation from peer groups and irregular contacts in the

study centre sometimes become the main obstacles to their learning. However, the number of students learning in open and distance learning environments around the world has grown exponentially over the past few years. However, despite such growth, ODL institutions continue to face low graduation rates as some of the enrolled students do not complete their qualifications within the regulated specifications and some drop out of the system (Khumalo, 2018) [6].

To overcome this situation, university students in an open and distance learning environment must be "independent learners" and should be responsible for their studies. This is where the importance of self-regulated learning (SRL) becomes a crucial factor. If students study in an ODL environment with a self-regulated learning character, they can behave as independent learners, which is an essential feature for open and distance learning (Corno, 2001) [7]. Further, SRL is not a fixed trait, but rather a skill that can be developed and refined through experience and practice in applying self-regulated learning strategies (Zimmerman, 2015) [8].

Therefore, to help these students become self-regulated learners, educators in ODL environments should promote self-regulated learning among their students using appropriate strategies and tools. With these reasons in mind, the researcher of this study used the collaborative learning method in an ODL environment in Sri Lanka to develop self-regulated learning (SRL) skills in university students.

1.1. Aim and Objectives

The main aim of this study was to examine the suitability of the collaborative learning method to use to develop self-regulated learning skills in university students studying in the ODL environment.

The objectives of the study were,

1. To identify self-regulated learning skills of Bachelor of Education students studying in the open and distance learning environment.
2. To plan and implement an intervention to use the collaborative learning method to develop self-regulated learning skills in Bachelor of Education students studying in the open and distance learning environment.
3. To assess the impact of the intervention.

2 REVIEW OF THE LITERATURE

According to Bandura's social cognitive theory (1986) [9], people are seen as self-organizing, proactive, self-reflective, and self-regulating rather than as organisms shaped and controlled by environmental forces or driven by hidden inner impulses. This perspective emphasized that self-regulation is a combination of self-observation, self-judgment, and self-reaction). Ephclides; Niemivirta; & Yamauchi (2002) [10] also agreed with the social cognition perspective and stated that self-regulated learning is an active, self-directed process in which students monitor, regulate, and control their cognition, motivation, affect, behaviour, and environment to achieve their goals. Reed et al (2020) [11] stated that self-regulation refers to the effortful control over one's thoughts, emotions, choices, impulses, and behaviours. All these definitions revealed that self-regulated learning (SRL) is a complex process that includes cognitive, motivational and contextual elements. Furthermore, Pajares (2002) [12] pointed out that by using this social cognitive theory as a framework, teachers can work to improve the emotional state of their students and correct their faulty self-believes and thinking habits (personal factors), to improve their academic skills, self-regulatory practices (behaviour) and alter school and classroom structure, which may undermine student achievement (environmental factors)

Vygotsky's constructivism (1978) [13] believes that learning and development is a collaborative activity and that children are cognitively developed in the context of socialization and education. Children's perception, attention, and memory abilities are transformed by the vital cognitive tools provided by cultures, such as history, social context, tradition, language, and religion. For learning to occur, the child first makes contact with the social environment on an interpersonal level and then internalizes this experience. In a Vygotskian classroom, dynamic support and considerate guidance are provided based on the student's needs, but no will or force is dictated. Students are exposed to discussions, collaborative research, electronic information resources, and project groups working on problem analysis. This collaborative learning enables students to actively reconstruct their knowledge through mutual dialogue, discussion, sharing, and reconceptualization.

This study also aimed to develop self-regulated learning in university students by initiating collaborative learning among them, creating and guiding them to become independent and self-regulated learners. Therefore, the ideas of Vygotsky's social constructivist theory were used in the intervention of this study.

The literature provides much evidence to show that collaborative learning helps students improve many skills. Laala & Ghodsi (2012) [14] stated that collaboration is a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and respecting the abilities and contributions of their peers. Hatami (2015) [15] explained the term 'collaborative learning' more broadly. According to this explanation, collaborative learning requires working together to achieve a common goal. This collaboration is more than a cooperation. Collaboration encompasses the entire learning process. This can include students teaching each other, students teaching the teacher, and of course, the teacher teaching the students. More importantly, students are responsible for each other's learning as well as their own, and that achieving a goal means students have helped each other's understanding and learning. Johnson & Johnson (1999) [16] emphasized that it helps to build students' self-esteem, which is a very important factor in self-regulation. Kuhl (1985) [17] revealed that collaborative learning helps to develop critical thinking skills and increases retention of information and interest in the subject matter. Laal & Ghodsi (2012) [14] summarized the benefits of collaborative learning into four main categories; social, psychological, academic and assessment. Further collaborative teaching techniques utilize different assessments. By using the above strategies during the intervention, the researcher and other educators also tried to create a learning environment where students could construct their own knowledge, which helps students develop the skills needed to be self-regulated learners. Collaborative learning is very useful for university students because, as Edwards & Clear (2001) [18] stated, collaborative learning brings students directly into contact with the subject rather than leaving them outside as passive observers, as sometimes happens in lectures with a large number of students. Thus, collaborative learning leads students to engage in higher-order thinking and practice, to explore a given problem with their peers, and to arrive at different solutions or outcomes, rather than relying on simple rote memorization skills. According to Jarvela & Jarvenoj (2011) [19], socially constructed self-regulation occurs when students work in collaborative learning groups and helps reduce the sense of isolation among open and distance students. Clifford (2016) [20] also revealed that collaborative learning proved to be the most effective education delivery strategy in the distance education system.

3   METHODOLOGY

3.1   Research Design

This study adopted an action research approach. Action research is a practical way of looking at one's own practice to see if it is what the researcher feels it should be. If the researchers feel that the practice is satisfactory, they will be able to explain how and why they believe this to be the case and provide evidence to support the research claims (McNiff and Whitehead, 2000) [21]. Dick (2000) [22] summarized the features of action research as a cyclical, participatory, reflective, flexible and responsive approach. The features of this study are also compatible with these features. Further, the flexible nature of action research gives the researcher the power to interpret and integrate self-regulated learning strategies and tools as the researcher feels like it. For all these reasons, an action research approach was the most suitable design for this study and this approach ensured its compatibility with the social cognitive perspective of the study.

3.2   The Intervention Process

The intervention process was implemented according to the four phases of the action research cycle, namely plan, act, observe and reflect.

Plan: In the initial planning phase, the study population and sample were decided. After consultation with the existing literature, a self-report instrument, designed and published by Pintrich; Blacksmith; Garcia; McKeachie, in 1991[23], namely the Motivated Strategies for Learning Questionnaire (MSLQ), was chosen to assess students' self-regulated learning skills. It was translated into Sinhala because all the students who participated in the study use Sinhala as their mother tongue. The different models that exist in the literature were then consulted to select an appropriate model for the intervention. Based on these findings, Zimmerman & Moylan's (2009) [24] self-regulated learning cycle model was chosen to be used as a framework during the intervention to integrate the collaborative learning method into the teaching and learning process, as it reflects Bandura's (1986) [9] social cognitive theory, where this research study is also located within. It views self-regulated learning as an open-ended process. This model consists of three phases namely Forethought Phase, Performance Phase and the Self-reflection

Phase. The way of implementing the collaborative learning method in these three phases was planned in cooperation with three (03) educators who were participants of this study.

Act: The MSLQ (1991) [23] was administered to students prior to the intervention to understand participants' current level of self-regulatory learning skills. The collaborative learning method was implemented within the day schools of the Comparative Education course, which is a compulsory course of the Bachelor of Education study programme due to the researcher and three educators involved in the teaching process of this course.

The intervention was implemented in three phases of the Zimmerman & Moylan (2009) [24] self-regulatory cycle of learning model over a period of six (06) months. According to the existing literature, SRL behaviour is context specific. Therefore, the procedure followed in implementing the collaborative learning method in a one-day school comparative education course has been explained below as an example to give an idea of how to use the collaborative learning method to develop SRL skills.

At the beginning of the forethought phase, the educator provided an introduction to the lesson and had a short discussion with student participants to brainstorm about 'Contemporary Educational problems in Sri Lanka'. Through the discussion, three main educational problems present in Sri Lanka were selected for the group work and those were the main goals for the learning activity. Student participants were grouped into six groups and four members were assigned to each group (each student participant was given a number and they formed their groups according to the number that they received). Then the educator explained the academic task along with its collaborative learning structure and instructed them to study the given educational problem in Sri Lanka which was assigned for the group. Each group was assigned to study one educational problem in Sri Lanka and to find out relevant information under the sub-topics which were indicated in the given worksheets. The module of the subject, additional reading materials, and worksheets were used to facilitate the intervention.

Each group researched the relevant facts and prepared their presentations during the performance phase. The educator scaffolded the student participants and facilitated the learning process. At the end of the performance phase, each group presented their findings. Before presenting their findings, they completed a self-assessment checklist. The purpose of implementing this checklist was to guide students to reflect on how they engaged in group work. By completing it, the students were able to self-assess the success of their preparatory work and correct their mistakes before completing the group work.

At the end of the day school (in the self-reflection phase) all the student participants were guided to write a reflection about the learning activity that they had engaged in.

At the end of the process, the MSLQ (1991) [23] was again administered to assess the level of SRL skills of student participants.

Observe: The researcher observed the entire implementation process and how the students practiced the introduced method and tools, their interactions, their limitations related to the process, the individual work of the students and the learning environment as a whole.

Reflect: By analyzing all the data collected through various sources and tools, the researcher constantly reflected on the process. It helped to assess the impact of the intervention.

3.3 Population and Sample

The population consisted of university students in the ODL environment in Sri Lanka. Twenty-four (24) Bachelor of Education (BEd) students and three (03) educators at the Open University of Sri Lanka were the participants (a convenience sample). The participants were selected from Open University because currently, it is the leading and pioneer institution that delivered programmes from a distance mode in Sri Lanka.

3.4 Data collection

Motivated Strategies for Learning Questionnaire (MSLQ)

The Motivated Strategies for Learning Questionnaire (MSLQ, 1991) was used to assess students' self-regulatory learning skills. It is both a motivational and strategically oriented self-report instrument that has been applied and validated at various educational levels, both university and non-university. Before it was used on the student participants, the researcher translated it into Sinhala according to the guidelines of the World Health Organization (WHO, 2014) [25], which included four steps, forward

translation, expert panel Back translation, pre-testing and cognitive interview and final version. Furthermore, the internal consistency reliability of the translated MSLQ was tested using Cronbach's alpha test, and for all subscales of the MSLQ, Cronbach's alpha coefficient was 0.7 or greater than 0.7. This meant that the internal consistency reliability of these subscales is in an acceptable state (Kline, 2000; George & Mallery, 2003) [26]. The final version of the translated MSLQ was administered to students before and after each intervention conducted through the comparative education course. The aim of this step was to measure students' self-regulated learning skills to get an overall idea of the effectiveness and appropriateness of the method and tools that were used to develop self-regulated learning skills during the intervention.

Observation

The researcher acted as a participant observer and conducted unstructured observation to try to gather in-depth information to understand students' self-regulatory practices, other types of interactions, components of the learning environment, motives, challenges, and other detailed information about the intervention. According to Chadwick; Bahr & Albrecht (1984) [27] for the social scientist, observation is essential and provides accurate descriptions of situations.

Reflections

The process of reflection helps to bring the unconscious into consciousness and thus opens up to scrutiny (Orange, 2016) [28]. It also provides insight into the experiences, opinions, thoughts and feelings of the participants. Therefore, the researcher gathered in-depth information about the intervention through reflections. After implementing and practicing the collaborative learning method the researcher reflected on each action the researcher took and the entire process of the intervention. Student participants were also guided to self-reflect on the process and its impact.

Focus group discussions

After implementing the collaborative learning method, three educators and the researcher led a group discussion to evaluate the appropriateness of the method used to develop self-regulated learning skills in students. Another goal of the focus group discussion was to identify the challenges faced by the three educators in implementing the collaborative learning method.

Data collected through different methods were triangulated to strengthen the validity of the data evaluation and study findings and to provide a comprehensive understanding of how to use the collaborative learning method to develop self-regulated learning skills in student participants.

3.5 Data Analysis

Qualitative data were analyzed using content analysis. During the process of content analysis, the researcher first coded and then grouped the data collected through different methods and tools (observation, reflection, group discussion) into some main categories. These categories were created to achieve the objectives of the study. The researcher created five main categories, namely: the impact of the method used (category 1), the impact of the tools used (category 2), challenges (category 3), methods to overcome them (category 4) and the overall impact of the intervention (category 5). To ensure confidentiality, all participants were coded with a number.

Quantitative data collected from the self-report instrument (MSLQ) were analyzed using the Statistical Package for the Social Sciences (SPSS for Windows, version 16.0) to understand the levels of self-regulatory learning skills of student participants as a whole (as a class).

4 FINDINGS AND DISCUSSION

4.1 Self-regulated learning skills of BEd students studying in the open and distance learning environment

There was a noteworthy improvement in the self-regulated learning skills of the student participants after implementing the collaborative learning method within the day schools of the Comparative Education course (see Table 1).

Table 1: Self-regulated learning skills of B.Ed students before and after interventions

Self-regulated learning skills	The average class mean value (Before and after intervention)	
	Comparative Education	
	Before	After
Intrinsic goals orientation	5.15	6.36
Extrinsic goal orientation	5.5	6.33
Task value	5.45	6.31
Control of learning beliefs	5.53	6.45
Self-efficacy	5.41	6.29
Test Anxiety	4.29	3.06
Rehearsal	4.98	6.13
Elaboration	5.22	6.06
Organisation	5.07	6.32
Critical thinking	5.11	5.99
Metacognitive self-regulation	5.02	6.03
Manage and regulate the time and study environment	4.99	6.32
Effort regulation	4.97	6.14
Peer learning	4.55	6.36
Help seeking	5.08	6.45

The above results revealed that the collaborative learning method that was used during the intervention was effective and suitable to be used in developing self-regulated learning skills of students studying in the open and distance learning environment.

4.2 Findings of the intervention

Findings based on the researcher's observations about forethought phase

Each group established a group goal. Student participants set their individual goals according to their preference to complete the group activity. (Although the educator provided the guidelines for the group activity, group members shared the workload among them according to their preferences and each member took the responsibility for a part of the activity)

Since there were only four members in the group, each student had to complete part of the group activity. Clifford (2016) [20] also pointed out that a moderate group size of 4–5 is ideal because groups that are too large create "freeloading" where not all members participate and small groups of 3 or less lack sufficient diversity and may not allow divergent thinking. occur. The findings of Hetmanska & Bernacki (2014) [29] also revealed that the optimal number of group members is 4-5 people in collaborative learning.

Group members had strategic plans to achieve their group goal. (Each group discussed how to complete their activities, how they would present their findings and the time periods needed for each activity)

Findings based on the researcher's observations of the performance phase

Group members discussed, argued, and tried to explain individual viewpoints to others during group work. These behaviours helped student participants to be active in their process of knowledge acquisition and directed them to think critically during the learning process. Johnson & Johnson (1999) [16] also revealed that collaborative learning helps to develop the critical thinking of students.

The group goal and individual goals oriented the student participants toward the learning activity and it helped to regulate their effort successfully. Locke & Latham (2003) [30] also stated that goals affect performance by affecting effort, persistence, and direction of attention, and by motivating strategy development.

Student participants managed the time given appropriately. (Educator assigned a time period for the whole group work but not for sub-activities that happened within the group. But group members of each group tried to divide that assigned time period into small sections to complete their tasks)

During the group work, student participants worked together, communicated with each other, and helped each other when necessary and it was observed that they were very freely learnt in a pleasant learning environment. According to the existing literature, this type of learning environment promotes the creativity of students and reduces their anxiety. Research findings of Ghaffari (2013) [31] confirmed this fact and stated one effective way to reduce the anxiety of students is collaborative learning because this learning environment provides opportunities to share ideas and help each other.

This collaborative learning environment fostered social interactions well. For an example, they always interact with their peers in their groups to organize their group work and with the educator to clarify the facts that they needed. Johnson et al (2007) [32] pointed out that collaborative learning creates a strong social support system because when students are actively involved in interacting with each other they are able to understand their differences and learn how to resolve social problems which may arise and collaborative learning helps students to resolve differences in a friendly manner.

Peer learning occurred within this learning environment. Student participants learnt from each other whenever necessary. Reflections of student participants also revealed this and they were presented below. According to Barkely et al (2005) [33] through peer learning, students teach each other by addressing misunderstandings and clarifying misconceptions and it often occurs during collaborative learning.

The self-evaluation checklist which was provided during the performance phase directed students to reflect on how they engaged in the group work. By filling its students were able to make self-judgments about the success of their preparatory work and to correct their faults before completing the group work. Joachim & Matthias (2010) [34] also stated that self-evaluation during collaborative learning fosters orientation regarding their own learning behaviour and facilitates meta-cognition. Further, they point out that self-evaluation provides insights into group processes.

When groups present their findings, peers asked questions to clarify the facts and to get more information about the topics discussed. Group members of each group answered the questions adduced by their peers and the educator. After each group presentation educator and the peers provided their comments for further development. Through these students were encouraged to clarify, review and edit their ideas. It helped to identify the gaps and to enhance their understanding through the collaborative learning environment. Spiller also (2012) [35] pointed out that when students engaged in commentary on the other's work, their own capacities for judgment and making intellectual choices are heightened.

At the end of the presentations, the educator summarized the lesson by linking the new information with the existing knowledge. Highlighting and repeating the key points of the lesson continuously (rehearsal) and summarizing by linking the new facts with the existing knowledge (elaboration) helped to retain the main facts in students' minds. This was reflected through student participants' reflections and they were given below. Kihlstrom (2011) [36] also revealed that elaborative rehearsal is very effective both for transferring information from short-term memory to long-term memory and for storing information in long-term memory.

During the presentations, the strengths of each group were reinforced through positive feedback by the educator and peers. This developed a positive feeling in students about themselves and their abilities. This was reflected through their reflections given below. Janine (2016) [37] stated that the self-efficacy of students can be developed by reinforcing their strengths and helping them to identify steps or paths to achieve their goals. Therefore, the positive feedback given during this learning activity also fostered their self-esteem and self-efficacy. Positive self-efficacy is a feature of a self-regulated learner and Janine (2016) [37] further pointed out that positive self-efficacy directs students for lifelong learning which is very important for students in higher education.

Findings based on student participants' reflections on the learning activity

- Many student participants reported that working in a group facilitated their learning, motivated them and helped them retain facts easily through group discussions and class discussions during presentations. They expressed it like this:

"Within the group we discussed many facts, argued, and explained obscure facts with examples and it helped me to know many points related to the class. This educational activity was very interesting. After the lesson, the teacher summarized the lesson. It helped me understand the lesson and remember the facts." (Student Participant no.5)

"This learning activity developed knowledge because the group method was used during the teaching-learning process and provided opportunities to understand facts through discussions and to present them. It was so interesting." (Student participant no. 21)

- Some students' reflections indicated that they were able to present facts logically during this learning activity.

Student participant no.9 commented as follows:

"It was a challenge for me to present the facts clearly to others because I had to answer the questions, they asked me. Through this learning activity I was able to present the points logically".

Student Participant no.20 also agreed with the above idea and commented as follows:

"During today's lesson, I was challenged to explain and logically present information to others. I think I succeeded because the other groups and the lecturer praised how I did it".

- Many reflections have revealed that positive feedback from peers and the teacher and the confidence gained from achieving their goals support students' self-efficacy (self-evaluation of their ability to master the task). Some of them commented like this:

"I think I did it successfully because the other groups and the lecturer praised how I did it" (Student Participant no.20)

"Through this learning activity, I was able to present points logically." (Student Participant no.9)

"Our group completed the task successfully and we were able to answer all of the others' questions. (Student participant no. 6)

- Students were able to identify their weaknesses when they engaged in the activity, based on the feedback they received from peers and the teacher and by completing a self-assessment checklist. The following comments revealed this point.

"When we explained our facts to others, we were able to identify our weak points." (Student participant no. 21)

"My group members pointed out my mistakes and I was able to correct them before the presentations." (Student Participant no.7)

"The Self-Assessment Checklist was very useful for me because by completing it I identified some crucial things that I had not done and it helped me to do them before the presentations." (Student Participant no.17)

All the findings that emerged through the observations of the researcher and reflections of student participants revealed that this learning activity helped to improve the metacognition of student participants. Therefore, according to student participants' reflections and the researcher's observations the collaborative learning activity was successful in developing SRL skills.

Findings obtained after analyzing the data of the focus group discussion with the three educators

- The collaborative learning method motivated students to work towards a goal.
- It directed students to construct their knowledge within a constructivist learning environment.
- Because of the collaborative learning method students built up positive relationships with peers which is very essential in the open and distance learning environment.
- Collaborative learning provided opportunities to develop students' creativity and critical thinking skills.

Challenges faced by the educators and measures to overcome

The main challenge was the very limited number of face-to-face contacts with the students. To overcome this situation learning groups and group assignments which allowed students to practice the collaborative learning method were used. Further behaviours and the progress of students were monitored during learning activities. To monitor students' progress, reflections of students, checklists and records of assignment marks were used.

Another challenge was to provide additional information requested by some students during learning activities. To overcome this problem, educators provided students with relevant links (links to websites, links to open educational resources, links to e-books, magazine articles, blogs, etc.) and a list of book references for students to direct them to self-study.

• Developing other educators' knowledge and understanding of self-regulated learning was also a challenge and to overcome that carefully planned awareness session was conducted.

Impact of collaborative learning method

- Assigned work by the educator provided students with a goal to achieve as a group through their collective effort.
- Providing the freedom to organize their group work according to their preferences oriented them to prepare their own strategic plans which regulated them towards their goals and to manage the time appropriately to complete their work within the allocated time period.
- Working with peers motivated students and fostered social interactions well.
- The collaborative learning environment promoted the creativity of students and reduced their anxiety.
- Providing opportunities for fruitful discussions among peers and with the educator assisted students to develop higher order thinking skills and metacognitive skills.
- It helped students to construct their knowledge and to be more responsible learners.
- The self-evaluation checklist which was provided during the performance phase directed students to reflect on their work and make self-judgments about the success of their work and to correct their faults by themselves.
- By reinforcing the strengths of each group during the presentations through positive feedback by the educator and the peers helped to foster the self-esteem and self-efficacy of student participants.

5   CONCLUSIONS /RECOMMENDATIONS

Based on the research findings, the impact of the intervention was positive. Therefore, the collaborative learning method is recommended for educators as a self-regulated skill development strategy that can be adopted in an open and distance learning environment in Sri Lanka.

REFERENCES

[1]   UNESCO (2002), Open and distance learning, Trends,Policy and strategy consideration. Retrieved January 02, 2015, from http://unesdoc.unesco.org/images/0012/001284/128463e.pdf

[2]   Common Wealth of Learning.(2003). Open and distance learning for development, Retrieved from February 15, 2013, from http://www.col.org/resources/Pages/default.aspx.

[3]   Tella, S. (1997). An 'Uneasy Alliance' of Media Education and Multiculturalism, with a

View to Foreign Language Learning Methodology (4th ed., pp.14-17). Media Education Centre, University of Helsinki, Department of Teacher Education, OLE Publications.

[4]   Calvert, J. (2006). Achieving Development Goals - Foundation: Open and Distance Learning, Lessons and Issues. Retrieved from http://pcf4.dec.uwi.edu/overview.php

[5]   Das. (2010, November). Learner support service in Open and Distance Learning: Issues and Evidences from the State of Assam, paper presented at sixth Pan Commonwealth Forum on Open Learning, Indira Gandhi National Open University.

[6]   Khumalo,S.S. (March 22nd 2018). Improving Student Success Rate in Open Distance Learning Settings through the Principle of Constructive Alignment, Trends in E-learning, Mahmut

Sinecen, IntechOpen, DOI: 10.5772/intechopen.75637. Available from: https://www.intechopen.com/books/trends-in-e-learning/improving-student-success-rate-in-open-distance-learning-settings-through-the-principle-of-construct

[7]   Corno, L. (2001). Volitional aspects of self-regulated learning. In B. Zimmerman & D. Schunk (Eds.), Self-regulated learning and academic achievement: Theoretical perspectives (2nd ed., pp.191-225). Mahwah, NJ: Erlbaum.

[8]   Zimmerman, B. J. (2015). Self-regulated learning: Theories, measures and outcomes. International encyclopedia of the social & behavioural sciences: Elsevier. Retrieved December 20,2016, from http://www.sciencedirect.com/science/article/pii/B9780080970868260601.

[9]   Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. New Jersey: Prentice-Hall.

[10]   Efklides, A., Niemivirta, M., & Yamauchi, H. (2002). Introduction: Some issues on self-regulation to consider. Psychologia, 45, 207-210. doi: 10.2117/psysoc.2002.207.

[11]   Reed, R. G., Combs, H. L., & Segerstrom, S. C. (2020). The Structure of Self-Regulation and Its Psychological and Physical Health Correlates in Older Adults. Collabra: Psychology, 6(1). https://doi.org/10.1525/collabra.297

[12]   Pajares, F. (2002). Overview of social cognitive theory and of self-efficacy. Retrieved November 04, 2013, from http://www.emory.edu/EDUCATION/mfp/eff.html

[13]   Vygotsky, L . (1978). Interaction between learning and development in Mind in   Society (pp.79-91). Harvard University Press, Cambridge.

[14]   Laala, M., Ghodsi, S. M. (2012). Benefits of collaborative learning. Procedia-Social and Behavioral Sciences, 31, 486-490. Retrieved October 01, 2016, from www.sciencedirect.com/science/article/pii/s1877042811030205.

[15]   Hatami, A. (2015). The effect of collaborative learning and self-assessment on self-regulation. Educational Research and Reviews, 10 (15), pp.2164-2167. doi: 10.5897/ERR2015.2349

[16]   Johnson, D.W., Johnson, R. T. (1999). Learning together and alone. Needham Heights, MASS: Allyn and Bacon.

[17]   Kuhl, J. (1985). Volional mediators of cognition behavior consistency: Self-regulatory process and action versus state orientation. In J. Kuhl, & J. Beckmann (Eds.), Action control from cognition to behaviour (pp.101—128). Berlin: Springer-Verlag

[18]   Edwards, M. A., Clear, F. (2001). Supporting the collaborative learning of practical skills with computer-mediated communications technology. Educational Technology & Society, 4 (1), ISSN 1436-4522. Retrieved April 20, 2016, from www.ifets.info/journals/4-1/edwards.html.

[19]   Jarvela, S., Jarvenoja, H. (2011). Socially constructed self-regulated learning and motivation regulation in collaborative learning groups. Teachers college record, 113(2), 350-374. Retrieved July 15, 2016, from http://www.researchgate.net/publication/230555576-socially-constructed-self-regulated-learning-and-Motivation-Regulation-in-collaborative-learning-Groups.

[20]   Clifford, M. (2012, November 8). Facilitating collaborative learning: 20 things you need to know from the pros [Web log message]. Retrieved www.opencolleges.edu.au/informed/features/facilitating-collaborative-learning-20-things-you-need-to-know-from-the-pros.

[21]   Mc Niff, J., Whitehead, J. (2000). Action research: Principles and practice (2nd ed.). New Fetter Lane, London, Routledge.

[22]   Dick, B. (2000). A beginner's guide to action research, Retrieved January 02, 2015, from http://www.scu.edu.au/schools/gcm/ar/arp/phd.html.

[23]   Pintrich, P., Smith, D., Garcia, T., & McKeachie, W. (1991) A manual for the use of the motivated strategies for learning questionnaire (MSLQ). Ann Arbor, MI: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning (NCRIPTAL).

[24] Zimmerman, B. J., & Moylan, A. R. (2009). Self-regulation: Where metacognition and motivation interact. In D.J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), Handbook of metacognition in education (pp.299-315). New York: Routledge.

[25] World Health Organization. (2014). Process of translation and adaptation of instrument. Retrieved January 05, 2014, from file:///D|/WHO%20%20Process%20of%20translation%20and%20adaptation%20of%20instruments.htm

[26] George, D., & Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference 11.0 update (4thed.). Boston: Allyn & Bacon. Retrieved from www.scirp.org/.../reference/ReferencesPapers.aspx?ReferenceID=1592722

[27] Chadwick; Bahr & Albrecht. (1984). Social science research methods, the University of Michigan, Prentice-Hall.

[28] Orange, A. (2016). Encouraging reflexive practices in doctoral students through research journals. The Qualitative Report, 21(12), 2176-2190. Retrieved February, 02, 2014 from http://nsuworks.nova.edu/tqr/vol21/iss 12/2

[29] Hetmanska, A. K., & Bernacki, J. (2014, September). Creating collaborative learning groups in intelligent tutoring systems, paper presented at 6th International conference, ICCC12014, Seoul, Korea.

[30] Locke, E. A & Latham, G. P. (2003). Building a practically useful theory of goal setting and task motivation, American Psychologist, 57(9), 705-717. Retrieved from https://pdfs.semanticscholar.org/880d/44760cdd878e78d345d50536f 28799723493.pdf.

[31] Locke, E. A & Latham, G. P. (2003). Building a practically useful theory of goal setting and task motivation, American Psychologist, 57(9), 705-717. Retrieved from https://pdfs.semanticscholar.org/880d/44760cdd878e78d345d50536f 28799723493.pdf

[32] Johnson, D.W., Johnson, R. T., & Smith, K.A. (2007). The state of cooperative learning in postsecondary and professional settings. Educational Psychology Review, 19(1), 15-29. doi: 10.1007/s10648-006-9038-8

[33] Barkely, E. F., Cross, K. P., & Howell, M. C. (2005). Collaborative learning techniques: A handbook for college faculty. San Francisco: Jossey- Bass.

[34] Jocchim, G., & Matthias, G. (2010). Using feedback to enhance collaborative learning: An exploratory study concerning the added value of self and peer assessment by first year students in a blended learning lecture. Retrieved from ERIC database. (EJ 905930)

[35] Spiller, D. (2012). Assessment matters: self assessment and peer assessment, Teaching Development unit, The University of Waikato.

[36] Kihlstrom, J. F. (2011, March). How students learn and how we can help them, paper presented to working group on how students learn, University of California, Berkeley. Retrieved August 30, 2016, from socrates.berkeley.edu/kihltrm/GSI-2011.htm

[37] Janine, D. (2016). Fostering self-efficacy in higher education students. Journal of university teaching & learning practice, 13 (1). Retrieved August 30, 2016, from http://ro.uow.edu.au/jutlp/vol13/iss1/9