UUM
Universiti Utara Malaysia

KMICe 2021

www.kmice.cms.net.my | E-ISSN 2773-5761

Proceedings of

KNOWLEDGE MANAGEMENT INTERNATIONAL CONFERENCE (KMICe)

Bridging Knowledge and Technology towards Humanization and Management of Pandemic Issues

1st February 2021 | Virtual Conference

ORGANIZED BY

PUSAT PENGAJIAN PENGKOMPUTERAN
School of Computing
Universiti Utara Malaysia

SUPPORTING PARTNERS

Proceedings of
Knowledge Management International Conference (KMICe) 2021

Editors:

Assoc. Prof. Dr. Fauziah Baharom

Assoc. Prof. Dr. Yuhanis Yusof

Assoc. Prof. Dr. Rohaida Romli

Assoc. Prof. Dr. Haslina Mohd

Dr. Mohamed Ali Saip

Dr. Shafinah Farvin Packeer Mohamed

Dr. Zahurin Mat Aji @ Alon

Copyright © 2021 UUM College of Arts and Sciences.

Published biannually by School of Computing, College of Arts and Sciences, Universiti Utara Malaysia.

All Rights reserved. No part of this publication may be reproduced in any form or by any means without prior permission from the copyright holder.

Printed in Malaysia.

This proceeding is published in electronic format

KMICe website http://www.kmice.cms.net.my

	Cover page	
	Copyright page	i
	Working Committee	ii
	Technical Committee	iv
PID	**Title & Author**	
PID121	Knowledge Work Productivity Measurement for Software Development Process in SMEs *Mohd Zairol Yusoff, Malaysia*	1
PID128	Knowledge Map for kXpert: Humanising the Quest of Finding Experts *Shahrinaz Ismail and Afifah Aliah Ahmad Suhaimi, Malaysia*	6
PID131	Personalized Microlearning Resources Generation and Delivery: A Framework Design *Shin-Yan Chong, Fang-Fang Chua and Tek-Yong Lim, Malaysia*	14
PID133	Knowledge Creation in Malaysia: a SWOT analysis *Tung Soon Seng and Magiswary Dorasamy, Malaysia*	20
PID135	Survey on vulnerability of 4G/LTE network security and improvements *Alyaa Ghanim Suliaman and Zahraa Mazin Taha Alkattan, Iraq*	28
PID136	Updated DeLone and MacLean IS Success Model and Commercial Open Source Software (COSS) Company Success *Shimels Diriba Garomssa, Rathimala Kannan and Ian Chai, Malaysia*	33
PID137	Trust, Commitment, Motivation and Knowledge Sharing Behaviour Among Business Service Professionals *Mohd Misron Omar, Romiza Md Akhir, Noor Raihan Ab Hamid, Yasmin Mohd Misron and Kamilia Mohd Misron, Malaysia*	39
PID145	Students' Acceptance of Automated Essay Scorer-Reflection on an Initiative to Mitigate Disruption to Writing Lessons during Pandemic *Mohammad Radzi Bin Manap, Norkhairi Ahmad and Zulkarnin Zakaria, Malaysia*	45
PID146	An Image-based Fall Detection System using You Only Look Once (YOLO) Algorithm to Monitor Elders' Fall Events *Koh Zhen Long, Hazlina Haron, Maizura Ibrahim and Zeti Darleena Eri, Malaysia*	50
PID147	Monopoly-based Game with Augmented Reality Intervention in Higher Education *Noradila Nordin, Nur Rasyidah Mohd. Nordin and Wafa Omar, Malaysia*	56
PID149	The Influence of Crisis Response on Social Interaction and Public Resilience Based on Importance-Performance Map Analysis (IPMA) *Umar Ali Bukar, Marzanah A. Jabar, Fatimah Sidi, Rozi Nor Haizan binti Nor and Salfarina Abdullah, Malaysia*	62
PID151	The Design of ScI-oTLS: An Internet of Things Platform to Support Collaborative Learning for Science subject in Primary School *Logadarshinni Maratha, Khairul Shafee Kalid and Wan Fatimah Wan Ahmad, Malaysia*	68
PID152	Challenges in Implementing Online Language Assessment-A Critical Reflection of Issues faced amidst Covid 19 Pandemic *Norkhairi Ahmad, Ina Suryani Ab Rahim and Salawati Ahmad, Malaysia*	74
PID154	Test Case Quality: Issues and Limitations in Agile Software Development *Samera Obaid Barraood, Haslina Mohd and Fauziah Baharom, Yemen*	80
PID157	Impact of knowledge management, financial resource, innovation, and foreign direct investment on entrepreneurship *Hui-Shan Lee, Shyue-Chuan Chong, Bik-Kia Sia, Ying-Chyi Chou and Wen-Xiu Li, Malaysia*	88
PID158	Strategies to Enhance Commercialisation Activity: Researcher Perspective *Nabilla Afzan Abdul Aziz; Nurshafiza Ismail and Arif Hartono, Malaysia*	94
PID160	Insights of Research Commercialisation through University Technology Transfer Office *Nurshafiza Ismail, Nabilla Afzan Abdul Aziz and Arif Hartono, Malaysia*	102
PID162	Sentiment Analysis of Arabic Tweets on the Great March of Return using Machine Learning *Saad Tareq Daher, Ashraf Yunis Maghari and Hussam Fares Abushawish, Palestine*	111
PID163	Predictive Analytics on University Student Dropouts from Online Learning Due to MCO *Md Erfan Sultan, Mohd Norshahriel Abd Rani, Nabilah Filzah Mohd Radzuan and Lim Huay Yen, Malaysia*	117
PID165	Assessing the Readiness of Higher Education Institution (HEI) in Malaysia to Accept Generation Alpha using Predictive Analytics *Tan Lik Wei, Mohd Norshahriel Abd Rani and Nabilah Filzah Mohd Radzuan, Malaysia*	124
PID168	A Comparison Study of Software Testing Activities in Agile Methods *Samera Obaid Barraood, Haslina Mohd and Fauziah Baharom, Yemen*	130
PID169	Analysis of Space Management Following the Successful Transformation of the Malaysia Agriculture Expo Park Serdang (MAEPS) Into a Low Risk COVID-19 Quarantine and Treatment Centre *Siti Aisyah Muhammad, Tengku Fauzan Tengku Anuar, Nur Athmar Hashim and Hequan Zhang, Malaysia*	138

PID173 **A Review on Usability Requirements of Visually Impaired Users for Accessible E-book Applications** 145
Munya Saleh Ba Matraf, Nor Laily Hashim and Azham Hussain, Yemen

PID174 **Knowledge management in pandemics: Design and Implementation of Social Distancing Mobile Application** 151
Rabi Mustapha, Muhammed Auwal Ahmed and Muhammad Aminu Ahmad, Nigeria

PID175 **Data Visualization for Multimedia Super Corridor Malaysia using Dot Distribution Maps** 156
Mohd Suffian Sulaiman, Amira Yasmin Raimey and Azri Azmi, Malaysia

PID178 **"Do you trust me?" - The Outlook of Belief, Desire and Intention in the Fourth Industrial Revolution** 162
Shahrinaz Ismail, Nordiana Jamaludin and Salama A Mostafa, Malaysia

PID179 **Usability Evaluation Factors in Acquiring Knowledge through Mobile E-Book Applications by Visually Impaired Users** 168
Munya Saleh Ba Matraf, Nor Laily Hashim and Azham Hussain, Yemen

PID180 **Exploring the significance of IoT-Enabled Health Monitoring and Assistive Systems for Elderly NCD Patients in Malaysia** 174
Chinnasamy Malarvizhi and Shamima Raihan Manzoor, Malaysia

PID181 **Towards Central Repository Design for Domain of Interlocking Institutional Worlds: Successful Collaboration Starts with a Sharing Platform** 180
Mohd Ismawira Mohd Ismail, Nor Hidayati Zakaria, Mohammad Nazir Ahmad and Kamarul Faizal Hashim, Malaysia

PID182 **Verification of an Integrated Computational Model of Self-Efficacy, Motivation and Anxiety for a Human Mental State** 186
Naseer Sanni Ajoge, Azizi Ab Aziz and Shahrul Azmi Mohd Yusof, Nigeria

PID183 **Agile Approach and Adaptability into Complex Environment Management and Operation: A Case of Malaysia Battlement Against Covid-19** 191
Mohamad Firdaus Mat Saad and Aliza Abdul Latif, Malaysia

PID184 **Design and Development of Quranic Parables Information System: A Web based System for Understanding Quran Verses** 196
Shakir Zufayri Osman, Shafinah Farvin Packeer Mohamed and Syed Sultan Bee Packeer Mohamed, Malaysia

PID185 **WasteBOT: Conceptual Design of Smart Bin and Web Service for IoT Waste Management System** 205
Manmeet Mahinderjit Singh, Wong Khang Siang, Nor Saralyna Azwa Kamaruddin, Muhammad Rafie Mohd Arshad, Mohd Halim Mohd Noor and Nur Intan Raihana Ruhaiyem, Malaysia

PID186 **System Dynamics Model for Financial Management Among University Students** 211
Che Rohayu Darlynie Che Mohd Khalid, Hasimah Sapiri, Masnita Misiran and Zahayu Md Yusof, Malaysia

PID187 **The Development of an e-Driver: Creating Awareness of Ethics in Driving via Game-Based Learning** 217
Muhammad Syafiq Saharudin, Ismassabah Ismail, Norzilah Musa, Zainab Othman and Nurul Hidayah Mat Zain, Malaysia

PID188 **Strengthening Curriculum Structure of Software Engineering Programme** 223
Yanti Rosmunie Bujang, Wang Hui Hui, Nurfauza Jali, Tan Ping Ping, Edwin Mit, Azman Bujang Masli, Cheah Wai Shiang, Abdul Rahman Mat, Norazian binti Mohamad Hamdan, Mohamad Johan bin Ahmad Khiri, Wee Bui Lin, Eaqerzilla Phang and Mohamad Asyraf bin Khairuddin, Malaysia

PID189 **Perception and Usage of Cloud Storage for E-learning in University of Samarra Staff during the period of Covid-19 pandemic: A Pilot Study** 230
Omar Hamid Flayyih and Husam Abdulhameed Hussein, Iraq

PID190 **Developing an Evaluation Framework for Immersive Learning Experiences for Software Engineering Project Course** 237
Nurfauza Jali, Norazian Mohamad Hamdan, Cheah Wai Shiang and Suriati Khartini Jali, Malaysia

PID191 **A systematic literature review: The conceptual of educational game design with augmented reality** 243
Irma Shayana Samaden, Ibrahim Ahmad, Mohd Edzwan Zahri, Sazilah Salam and Ismahafezi Ismail, Malaysia

PID192 **Automated Fish Egg Counting System using Image Processing** 250
Nor Hazlyna Harun, Nooraini Yusof, Mohamad Ghozali Hassan and Maizatul Fatihah binti Mohd Salleh, Malaysia

PID197 **Knowledge Sharing on the Acceptance of Smart Waste Management System: Moderating Effects of Local Cultures** 257
Mohd Khairul Maswan Mohd Redzuan, Norshita Mat Nayan, Mohammad Nazir Ahmad and Nor Hazila Mohd Zain, Malaysia

PID198 **The Current Practices and Required Knowledge for Non-Functional Requirements Elicitation in Agile Context: A Pilot Study in Jordan** 265
Mohammed Saleh, Fauziah Baharom, Farvin Packeer Mohamed and Aniza Mohamed Din, Malaysia

PID200 **Personal Knowledge Acquisition: Do Educators Acquire New Knowledge during the Movement Control Order?** 271
Dewi Izzwi Abdul Manan, Kalsom Salleh, Jamaliah Said and Muhamad Nizam Jali, Malaysia

PID201 **Route Planning Mobile Application in Transportation Management** 277
Ong Xun Sheng, Yuhanis Yusof and Norliza Katuk, Malaysia

PID202 **Defining Core Knowledge Elements of Adaptive Augmented Reality (A2R) through Conceptual Model Analysis** 284
Norshuhada binti Shiratuddin and Tehn Hock Kuan, Malaysia

PID203 **E-Waste Recycling Awareness in Young Adults in Malaysia: An Interactive Courseware** 290
Musyrifah Mahmod, Lee Angie, Emy Ezura A Jalil and Nor Farzana Abd Ghani, Malaysia

PID205 **Fight against Phishing Attacks among Internet Banking User: A Knowledge Management Technique** 296
Fadare Olusolade Aribake and Zahurin Mat Aji, Malaysia

PID206 **Automated Feedback Generation for Automatic Programming Assessment: Its Conceptual and Initial Analysis of Mapping Studies** 302
Ahmed Abdulsalam Abdulmajeed Al-Athwari and Rohaida Romli, Malaysia

PID208 **Automated Garment Measurement Prototype: A Contactless Means** 309
Nor Iadah Yusop and Shubashini A/P Thinagaran, Malaysia

PID209 **The Design and User Acceptance of IoT-based Access and Entrance Control System Using Voice Recognition** 315
Ling Zhong Li, Mohd Samsu Sajat, Yuhanis Yusof, Yousef Fazea and Harja Santana Purba, Malaysia

Personal Knowledge Acquisition: Do Educators Acquire New Knowledge during the Movement Control Order?

Dewi-Izzwi, A. M.[1],Kalsom Salleh[2], Jamaliah Said[3] and Muhamad Nizam Jali[4]

[1]*Kolej Universiti Poly-Tech MARA, Malaysia, {dewi@kuptm.edu.my}*
[2]*Malaysian Institute of Accountants, Malaysia, {mdchom@gmail.com}*
[3]*Accounting Research Institute, UiTM, Malaysia, {jamaliah533@uitm.edu.my}*
[4]*Institute of Graduate Studies, Kolej Universiti Poly-Tech MARA, Malaysia, {nizam@kuptm.edu.my}*

ABSTRACT

The pandemic COVID-19 leads to the online teaching and assessment methods to be adopted by the education institutions in Malaysia In response to this, questions are raised in terms of whether educators can acquire new knowledge, what new knowledge they gained, and whether demographic profile matters. Online survey was conducted where 151 responses from educators in Malaysia were analyzed. Result shows that majority of the respondents admitted of gaining new knowledge during the MCO period. Furthermore, personal knowledge acquisition does differ in terms of gender, academic qualification, and years of experience. As for what knowledge they gained, thematic content analysis showed that educators learned technical, non-technical, and spiritual knowledge. This research could contribute to the knowledge management process of education institution in Malaysia.

Keywords: COVID-19 pandemic, knowledge management, education, training and development, adversarial

I INTRODUCTION

During the peak time of Covid-19 pandemic, it can be seen that education institutions around the world were closed down. In 18 March 2020, Malaysian government took the same action, disrupting teaching and learning in all types of education institutions – universities, colleges, schools, and kindergarten (Perutusan Khas, 2020). The movement control order (MCO) that led to the closing down of education institutions did not only affect the students' learning, but also the educators' teaching and assessments processes.

In order to ensure learning process continue during MCO period, online teaching and assessments are subsequently conducted by education institutions in Malaysia. However, online teaching and assessments is not without challenges. For example, not all students possess the relevant learning tools and infrastructure such as high speed access to the Internet, computer, tablets or smartphones. The digital gap makes the educators unable to teach effectively and provide just treatment (Wan Ya Shin, 2020). Online learning makes students distracted and uninterested with the teaching and assessment methods (Hassan et al, 2020). This may be due to the feeling of lonely due to the lack of classroom's jokes, nuances, and social interactions. Furthermore, there are also cases where educators unable to cope with the sudden changes from face-to-face to online instructions due to their inability or uncomfortable to handle digital technology in the education system (Bernama, 2020). Besides teaching, educators also have to face the difficulties in conducting students' assessments due to the issue of their dishonesty and commitment (Guangul et al, 2020).

Due to these practical challenges, educators in Malaysia have to scramble to acquire new knowledge on how to manage their online classroom and student' assessments. They need knowledge on how to teach students who cannot be reached online (Jan, 2020). They need to have knowledge to manage interactions with students to develop and maintain their interest (Huang, 2020). They need to acquire the knowledge on how to use various live platforms such as Microsoft Teams, Zoom and Google Meet (Banoo, 2020) to conduct online teaching environment and to select the best teaching platform that suit to their students' needs (Ramlee Mustapha, 2020). They also

need to have the knowledge in conducting the remote assessment (Guangul et al, 2020).

In other words, in response to the changes from offline to online pedagogy, it is expected that educators must acquire new knowledge to help them with the whole new teaching and assessment process – is this true? And if educators gained the new knowledge, what are they? In addition, according to Carley (1986), individual knowledge acquisition is rather limited. Hence, another question raised – is there any different between the demographic profile of educators and the acquisition approach of new knowledge during the MCO? Based on these questions, a small research was conducted and this paper is prepared to present the research findings.

II LITERATURE REVIEW

A. Personal Knowledge Acquisition

Knowledge acquisition is a part of knowledge management process, where individuals gain knowledge either through observation, reading or practices. Knowledge acquisition is important as it provides the foundation to respond to the changes in the environment (Khan et al., 2020). As for educators, knowledge acquisition is important because the new knowledge gained enable them to cope with the changes in the teaching and learning environment. That is, by acquiring new knowledge the educators are able to know the various tools and platforms for online classes, how to manage the online interaction with students, and how to conduct online assessment. Overall, new knowledge is crucial for educators to strengthen their capability.

Knowledge gained however can be grouped into two basic types – explicit and tacit (Becerra-Fernandez & Sabherwal, 2010). Explicit knowledge is knowledge that can be put into words, documented and shared. For example, the characteristics of a good educator. Tacit knowledge on the other hand is not easily put into words, documented and shared because it involves intuition and experiences. For example, being an effective educator that able to adapt to students' diverse background and teaching context requires years of interactions, practices, learning from mistakes, and skills. These mixtures of being an effective educator involve ambiguous relationship and thus are not easy to explain.

B. Demographic Profile and Knowledge Acquisition

Past studies have been conducted to determine the role of demographic profile on personal knowledge acquisition. But, the findings were contradictory. For example, a study conducted by Jansen et al. (2010) revealed older people had problem with recording of information. Since memory correlates with knowledge (DeMarie-Dreblow, 1991), the study implies that age played a role in knowledge acquisition process. Later, Pacharapha & Ractham (2012) found that whether individuals are expert or novice did contribute to the knowledge acquisition.

However, there are studies that found individual factors did not influence knowledge acquisition. For example, Rotgans & Schmidt (2016) concluded that individual's interest was not a significant predictor of knowledge acquisition.

III METHODOLOGY

The research objectives were to determine whether educators gained new knowledge during MCO, whether online resources and tools are beneficial, and whether there is any different between the demographic profile of educators and the acquisition of new knowledge during the MCO. This research paper would also like to identify what new knowledge have been acquired by educators in Malaysia. Therefore, the respondents for this research paper were lecturers, teachers, and tutors who worked in the various types of academic institution including public and private universities, colleges, schools and even kindergarten.

Data was collected in May 2020 through online questionnaire, where a total of 151 responses were collected. In the online survey questionnaire, besides their demographic profiles, respondents were asked on whether they have gained new knowledge during the Covid 19 - MCO period to strengthen their capability as lecturers, teachers or tutors, and

whether online resources and tools available aided their online classes. The questionnaire was in categorical format. Hence, descriptive statistics were mainly used to analyze the data.

In order to know what kind of new knowledges gained by educators during the Covid 19 -MCO period, an open-ended question (i.e. "what new knowledge have you gained during the MCO period?") was asked. Responses were examined using content analysis, and grouped using thematic method.

IV FINDINGS

A. Demographic Profiles

Table 1 show the frequency of gender, qualification and years of experience of respondents. Results show that majority of the respondents were female (83.4%), hold master degree (58.9%), and have been educators for more than 10 years (70.1%).

Table 1. Demographic Profiles

	N	%
Gender		
Female	126	83.4
Male	25	16.6
Qualification		
Certificate	1	0.7
Adv diploma/Diploma	2	1.3
Bachelor	39	25.8
Professional	1	0.7
Master	89	58.9
PhD/DBA	19	12.6
Years of experience		
10-14 years	36	23.8
15-19 years	27	17.9
20-24 years	20	13.2
25-30 years	11	7.3
5-9 years	35	23.2
Less than 5 years	10	7.9
More than 30 years	12	7.9

B. Knowledge Acquisition during MCO

Table 2 shows the frequency of educators that gained new knowledge during MCO. The result shows majority of the respondents acknowledged that they had gained new knowledge (92.1%), there was still 7.9% perceived that they did not acquire new knowledge.

Table 2. Knowledge Acquisition

	N	%
Yes	139	92.1
No	12	7.9

C. Difference between Gender and Knowledge Acquisition

The chi-square test shows significant relationship between gender and knowledge acquisition, X^2 (1, N=151) = 16.5, p = 0.000. Cross tabulation analysis shows that 58.3% respondents who perceived they did not gain new knowledge were male; whereas 87.1% respondents who answer "yes" were female. Comparing between male and female, 28% males (7 out of 25) and 4% females (5 out of 126) said "no". The details of cross tabulation result are shown in Table 3.

Table 3. Gender and Knowledge Acquisition

		Gain New Knowledge					
		No		Yes		Total	
		N	%	N	%	N	%
Gender	Male	7	58.3	18	12.9	25	16.6
	Female	5	41.7	121	87.1	126	83.4
	Total	12	100	139	100	151	100
Chi-square		16.5					
df		1					
Sig (p) value		.000					

D. Difference between Qualification and Knowledge Acquisition

The chi-square test shows significant relationship between academic qualification and knowledge acquisition, X^2 (5, N=151) = 12.5, p = 0.029. Across qualification, all certificate holders felt he or she did not gain new knowledge. On the other hand, all diploma and professional certificate holders believed that they acquired new knowledge. As for bachelor, master and doctorate degree holders, majority of them learned new knowledge. The details of cross tabulation result are shown in Table 4.

Table 4. Qualification and Knowledge Acquisition

		Gain New Knowledge					
		No		Yes		Total	
		N	%	N	%	N	%
Qualification	Cert	1	8.3	0	0.0	1	0.7
	Adv dip / Diploma	0	0.0	2	1.4	2	1.3
	Bach	4	33.3	35	25.2	39	25.8

	Prof	0	0.0	1	0.7	1	0.7
	Mast	6	50.0	83	59.7	89	58.9
	PhD/ DBA	1	8.3	18	12.9	19	12.6
	Total	12	100	139	100	151	100
Chi-square		12.5					
df		5					
Sig (*p*) value		.029					

E. Difference between Years of Experience and Knowledge Acquisition

The chi-square test shows significant relationship between years of experience and knowledge acquisition. However, the significant value is at 10%, making the relations almost insignificant, X^2 (6, N=151) = 11.5, p = 0.073. By comparing the distribution of "yes" and "no" answer, majority of the respondents from each category (except group of less than 5 years) concurred that they acquired new knowledge during the MCO period. As for respondents that came from less than 5-years' experience as educators, 30% said "no" and 70% said "yes" to the question of gaining new knowledge. There is an interesting finding when readers or researchers look at the composition of "no" answer; where 25% have experience less than 5 years, and 33.3% have experience between 10 and 14 years. The details of cross tabulation result are shown in Table 5.

Table 5. Experience and Knowledge Acquisition

		Gain New Knowledge					
		No		Yes		Total	
		N	%	N	%	N	%
Years of Experience	<5y	3	25.0	7	5.0	10	6.6
	5-9y	1	8.3	34	24.5	35	23.2
	10-14y	4	33.3	32	23.0	36	23.8
	15-19y	3	0.0	24	17.3	27	17.9
	20-24y	0	8.3	20	14.4	20	13.2
	25-29y	1	0.0	10	7.2	11	7.3
	>30y	0	0.0	12	8.6	12	7.9
	Total	12	100	139	100	151	100
Chi-square		11.5					
df		6					
Sig (*p*) value		.073					

F. Types of New Knowledge Acquired

Based on the content analysis, responses from the open-ended question about *"what new knowledge acquired…?"* can be categorized into three themes:

1. Technical knowledge

During MCO, educators learn about digital platforms, software, gadgets and other hardware that enhance online teaching and assessments such as WebEx, Google Meet, Zoom, and even internet infrastructure.

According to one of the respondents, "*belajar buat tandatangan digital*" (learn of how to make digital signature) is one of the new knowledges that she gained. Another respondent said that she learned on how to make online documentations.

2. Non-technical knowledge

During online classes throughout MCO period, respondents also gained knowledge on how to deal with their students that came from diverse background because communication through physical and online interactions are not the same. And respondents agreed that they became more patience and had higher sense of empathy. Thus, they learned on managing their emotion better.

One of the respondents stated that "*masa tu, saya belajar bagaimana deal dengan pelajar OCD dan ADHD*" (during that time, I learned on how to deal with students with 'obsessive-compulsive disorder' and 'attention deficit hyperactivity disorder).

3. Spiritual knowledge

It seemed that two respondents had learned unique new knowledge as compared to other respondents. One of them discovered that he still has lots of things to learn in order to become a better educator (self-awareness). Another one had learned on

how to appreciate his family relationship during MCO period, and thus gained new knowledge about the value of family relationship.

V DISCUSSION AND CONCLUSION

Result shows that there are differences between demographic profiles and acquiring new knowledge during Covid 19 - MCO period. In this case - gender, academic qualification, and years of experience as educators played an important role in acquiring knowledge.

Gender. More males did not gain new knowledge. This may be due to the nature of males who are interested in understanding how things work, and knowing general knowledge since early age (Baron-Cohen, 2003; Su et al., 2009). Since internet of things and technology fall under those particular interests, it is postulated that male educators have already equipped with the necessary digital skill before MCO period.

Qualification. Only educator with certificate qualification did not gain new knowledge, compared to other group where majority acquired new knowledge. However, since there is only one respondent out of 151 with certificate, deduction on finding is difficult. If the respondent work in higher education institution, the reason may be because his or her teaching responsibility did not require much of high-level knowledge. If the respondent teach technical content, maybe there is not much materials and tools available during MCO to help him or her. Consequently, he or she felt that no new knowledge was acquired.

Years of experience. Interestingly, among those who answer "no", albeit 8%, majority of the respondents either work less than 5 years, or between 10-14 years. Based on situational leadership theory, this may be because of the willingness and ability level of the respondents (Hersey and Blanchard, 1977). For those who were less than 5 years' experience, they may be incapable to learn new knowledge as they are still lacking the necessary knowledge and skills to search for new knowledge, and did not know what to do. As for those who have been educators for 10 to 14 years, while capable, they may be at a situation of complacency and unwilling to acquire new knowledge.

In term of the kind of new knowledge gained, analysis showed that educators acquired technical, non-technical and even spiritual knowledge. Some of these knowledges such as the type of media and solutions to help teaching and assessment are considered as explicit knowledge as they can easily learned and shared. But knowledge such as identifying the right mix and mode of hardware, solutions, and channels; and metacognitive knowledge such as discovering oneself position and values, requires experimentations and reflections. These knowledges are tacit in nature, which will be difficult to be learned by others.

Nevertheless, majority of the respondent gained new knowledge. Adversarial growth theory proposes that individuals grow and develop themselves to cope with adversity event (Linley, 2004). Research findings concurred with the theory where educators strived to gain new knowledge to be better educators in responding towards adversity situation – the turnaround of teaching and assessment processes from physical to online during the MCO period.

Knowledge acquisition is just a part of the knowledge management process. Hence this research is merely an exploratory study and the preliminary stage of knowledge management process for the education institution in Malaysia during Covid 19 pandermic and new norms practices. Future research may focus to expand into retaining and dissemination of personal knowledge, which could complement education institutions' knowledge management practices.

REFERENCES

Banoo, S. (August 17, 2020). Education – Education disrupted. The Edge Markets. Retrieved from http://www.theedgemarkets.com/article/education-education-disrupted

Baron-Cohen, S. (2003). The essential difference: men, women and the extreme male brain. Penguin.

Becerra-Fernandez, I. and Sabherwal, R. (2010). Knowledge management: systems and processes. M.E. Sharpe, Inc.

Bernama. (May 16, 2020). Virtual education and its challenges for teachers. The Sun Daily. Retrieved from http://www.thesundaily.my/local/virtal-education-and-its-challenges-for-teachers-HB2416944

Carley, K. (2986). Knowledge acquisition as a social phenomenon. Instructional Science, 14(3/4), 381-438. Retrieved from www.jstor.org/stable/23369065.

DeMarie-Dreblow, D. (1991). Relation between Knowledge and Memory: A Reminder That Correlation Does Not Imply Causality. Child Development, 62(3), 484-498. doi:10.2307/1131125

Guangul, F. M., Suhail, A. H., Khalit, M. I. and Khidhir, B. A. (2020). Challenges of remote assessment in higher education in the context of COVID-19: a case study of Middle East College. Educational Assessment, Evaluation and Accountability. http://doi.org/10.1007/s11092-020-09340-w.

Hassan, M. M., Mirza, T. and Hussain, M. W. (2020). A critical review by teachers on the online teaching-learning during COVID-19. International Journal of Education and

Management Engineering, 5, 17-27. http://doi.org/10.5815/ijeme.2020.05.03.

Hersey, P. and Blanchard, K. H. (1977). Management of organizational behavior: utilizing human resources. Prentice-Hall.

Huang, J. (2020). Successes and challenges: online teaching and learning of Chemistry in higher education in China in the time of Covid-19. Journal of Chemical Education, 97(9), 2810-2814. https://doi.org/10.1021/acs.jchemed.0c00671.

Jan, A. (2020). Online teaching practices during COVID-19: an observation case study. Manuscript under review. SSHO-D-20000181. Available at SSRN: http://ssrn.com/abstract=3584409

Khan, M. S., Saengon, P., Cheungsirakulvit, T., and Kanchanathaveekul, K. (2020). The moderating effect of strategic fit enhances business performance: empirical evidence from the telecommunication industry. Business Strategy and Development. Retrieved from http://onlinelibrary.wiley.com/doi/epdf/10.1002/bsd2.146

Linley, P.A. (2004). Psychological processes in adversarial growth [Philosophy in Psychology Thesis]. University of Warwick.

Pacharapha, T., and Ractham, V. V. (2012). Knowledge acquisition: the roles of perceived value of knowledge content and source. Journal of Knowledge Management, 16(5), 724-739.

Perutusan Khas (Mac 16, 2020). Perutusan khas YAB Perdana Menteri mengenai COVID-19. Retrieved from https://www.pmo.gov.my/ms/2020/03/perutusan-khas-yab-perdana-menteri-mengenai-covid-19-16-mac-2020-2/

Ramlee Mustapha (June 1, 2020). Challenges of online teaching. New Straits Times. Retrieved from https://www.nst.com.my/opinion/columnists/2020/06/596794/challenges-online-teaching

Rotgans, J. I., and Schmidt, H. G. (2016). How individual interest influences situational interest and how both are related to knowledge acquisition: a microanalytical investigation. The Journal of Educational Research, 111(5), 530-540.

Su, R., Rounds, J., and Armstrong, P. I. (2009). Men and things, women and people: a meta-analysis of sex differences in interests. Psychological Bulletin, 135(6), 859 -884. http://doi.org/10.1037/a0017364

Wan Ya Shin. (April 8, 2020). Pendidikan sepanjang krisis COVID-19. Institute for Democracy and Economic Affairs. Retrieved from http://www.ideas.org.my/pendidikan-sepanjang-krisis-covid-19