



Research article

Secondary school teachers psychological status and competencies in e-teaching during Covid-19

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ARTICLE INFO

Keywords:

Covid-19
Motivation
Online teaching
Pedagogy
Psychology

ABSTRACT

Presents problem/focus of study: The Covid-19 outbreak has had a staggering impact on the global economy, public health and safety, trade and education. In Malaysia, the government implemented the Movement Control Order (MCO) as a preventive measure against Covid-19. In education, the learning process has been transferred to online teaching. However, pandemic pedagogy is making learning into completely online either synchronous or asynchronous. Therefore, the current research aims to determine the secondary school teachers' psychological status, competencies in e-teaching and teachers work motivation as well as determine the relationship between secondary school teachers' psychological status and competencies in e-teaching during the Covid-19 outbreak.

Design/methodology/approach: Current research is a descriptive-correlational quantitative survey to determine teachers' psychological status, e-teaching competencies and working motivation during Movement Control Order (MCO) to contain the Covid-19 pandemic. The study sample consists of 595 secondary school teachers selected via convenient sampling. Quantitative data are collected from an online survey through the questionnaires with demographic, psychological status (stress, anxiety and depression), e-teaching competencies (teaching, monitoring and evaluation) and teaching motivation developed by the researchers were distributed during the MCO period. SPSS 25 is applied, Statistical measures such as Cronbach's alpha, means, percentage and standard deviation were employed to analyze the data to obtain the value of the school teachers' psychological status, e-teaching competencies and teaching motivation. Consequently, a Pearson correlation table was created to show the analysis of the school teachers' psychological status and competencies in e-teaching.

Findings: This finding indicated that the teachers' psychological factors in stress, anxiety and depressed are moderate, the teachers' competencies in e-teaching is moderate as well as teachers' working motivations is also the moderate level. However, the highest mean value was found among the variables, this is revealed that despite the challenges during the Covid-19 outbreak, teachers showed positive and strong motivation in conducting e-teaching. Additionally, the result showed a negative relationship between psychological status and e-teaching competencies ($-0.286, p < 0.01$), as well as reported a negative relationship between dimension of psychological status and competencies in e-teaching.

Limitation & recommendations: This study has its limitations. This study is included only Selangor teachers and given that the information obtained from the study was gather from secondary schools, the generalizability might be limited. future research may consider expanding the scope from secondary schools to primary schools' teachers and then to university lecturers. Perhaps the scope is expanding, so more information could be obtaining and help researchers understand the teachers' competencies in e-teaching, psychological status and work motivation.

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1. Introduction

The unprecedented Covid-19 pandemic is affecting almost every country, and none was prepared for it. Consequently, it brings chaos, uncertainties, confusion and panic to every sector, including education. This situation has affected the closure of all educational institutions, and teaching forces have been transferred to the entire country in remote or online forms to ensure the prevention of Covid-19 social distancing practices. During the Covid-19 pandemic, education faced the greatest challenge because of the greatest pedagogical transformation in teaching methods. Traditional classrooms have been taken away from teachers, students and parents, and mobilized classroom or a digital classroom have been replaced (Daniel, 2020; Ali, 2020). Now, teachers teach from home and students learn at home (McCarthy, 2020) because face-to-face classes become security threats (Murphy, 2020). This has never been experienced before and it is overwhelming and full of uncertainties for all, especially teachers for they are to teach in a way they have not done before. Thus, it is important to find out the psychological status of the teacher during this Covid-19 outbreak in order to recognise the issue early.

Now, this brings teaching and learning into a new dimension. Online teaching has replaced face-to-face classrooms and teachers have no choice. The practices in normal pedagogy like application, monitoring and evaluation has been completely converted to some new forms in e-teaching, and this emerging pandemic pedagogy has become necessary for the sustainability of national education system (Yao et al., 2020a,b). In the current research, e-teaching also refers to emergency remote teaching as stated by Hodges et al. (2020). As in the sudden outbreak of Covid-19, it severely affected Malaysia's education movement and schools were temporarily closed. Therefore, emergency remote teaching is applying to replace face-to-face classes until the Covid-19 pandemic abated. Whilst, in order to adapt to emergency remote teaching, e-teaching is the only options. e-teaching is incorporate Information and Communication technologies (ICT) tools into teaching. Hence, teachers use various digital tools in synchronous and asynchronous environments using different technologies devices (such as, laptops, tablets, smart phones) to provide students with learning experiences to support continuing education (Hodges et al., 2020; Dhawan, 2020).

In this situation, teachers are required to master the application of e-teaching and technology-based pedagogical skills, such as distributing learning materials through Google Classroom; having discussion through Zoom; and, monitoring student learning goals, as well as evaluating students' learning outcomes through any chosen application to ensure the continuity of school curriculums (Al-Awidi and Aldhafeeri, 2017). In some countries, the evolution of e-learning has developed and practiced quite extensively where teachers and students are getting comfortable and used to the new mode of teaching and learning. Teachers are adopting e-teaching and they are now comfortably transforming the normal practices of application, monitoring and evaluation to a new dimension (Stanojević et al., 2017). Therefore, the current study aims to examine secondary school teacher at e-teaching competencies, psychological status and work motivation during the Covid-19 pandemic.

1.1. Literature review

The teaching with the assistance of ICT tools has been widely used worldwide, e-teaching is also considered to be efficient, easy-to-use and it can enhance teaching and learning (Zhou et al., 2020), but it is mainly at tertiary level education. Moreover, there are problems with the availability of hardware among teachers and students, and in the internet systems. Students who are less able and stay in remote areas are more likely to be unable to enter in the learning group. However, teachers still have the responsibility to continue the syllabus to maintain the rapport between teachers and students, so that teachers can understand the academic needs of student and help students maintain their motivation to learn (Sulaiman et al., 2017). The teacher's motivation is very important

because it can encourage teachers to be high in teaching spirits. Therefore, it is important to study the level of motivation among secondary school teachers in the face of this Covid-19 situation.

The transition from face-to-face classrooms to online teaching is full of challenges and stressful, because all teachers need to instantly acquire new skills in e-teaching (Byrne and Donlan, 2020). Teachers are facing sudden changes in their pedagogical routines. For instance, students' responses may not be available immediately and teacher feedback may not be reached to students immediately. Eventually, teachers need to spend more time and energy to modify pedagogy strategies, which puts pressure on teachers. Moreover, according to a research, during the pandemic, teachers would also face psychological problems such as stress, anxiety, depression and insomnia due to the pandemic create havoc in the lives of teachers (Dhawan, 2020). The psychological state of this teacher is important to ensure that teachers are mentally and emotionally prepared in the face of difficult and challenging situations.

On the other hand, teachers who are less competent in computer use have to immediately make themselves competent. This is not that easy and it take time and energy. Consequently, the process may likely incur stress, pressure and anxiety too. Being used to face-to-face situation they can be burdened by difficulty to apply questioning strategies to evaluate learning and expand students' imagination and thinking. Teachers most likely feel unhappy for they are not sure about the outcome of what they are teaching and, it is understandable that teachers can easily get panic under the circumstance (Merrill, 2020).

However, teachers should understand that the sudden switch of teaching mode and the implementation of online teaching and learning may require trial an error basis with constant evaluation and upgrading, far from conforming to ordinary standard (Merrill, 2020). Despite the stress and challenges teachers should always remember that this is a crisis response measure and it is unprecedented (Merrill, 2020). The emergence of pandemic pedagogy has become necessary and teachers need to quickly adapt to the changes in teaching methods. The source of work stress by students' misbehaviour, task load, time constraints, and interpersonal relationships and rewards are the factors that contributing to teacher work stress (Ooi and Ismail, 2015) are now replaced by other new ones. Thinking about the new challenges and urgent demands may cause stress to some teachers and, they are simultaneously worried about the safety and well-being of their family members, and the burden of overthinking may lead to anxiety and depression (Jadhav, 2020), at worse, these excessive pressures and stresses may cause burnout, and affect teaching effectiveness (Ismail, Sulaiman and Roslan, 2020). In addition, the long-term effects of natural disaster could develop certain mental health issues, such as stress, anxiety, posttraumatic stress disorder (PTSD) and depression (Gaston et al., 2019).

Similarly, based on the study done by Aperribai et al. (2020), the teachers' psychological status was definitely affected during MCO, but the aspects that may be affected have not yet been explored, for instance e-teaching competencies. Thus, the current study aims to explore the relationship between teachers' psychological status and e-teaching competency, either positively or negatively correlated with the variables of e-teaching competency. Is there a positive correlation (such as: positive psychological status is associated to positive competencies in e-teaching and vice versa) or a negative correlation (such as: positive psychological status is associated with negative competencies in e-teaching and vice versa). The present Covid-19 pandemic maybe causing teachers to experience some mental health issue, which may directly or indirectly affect their motivation in online teaching during the MCO period.

In Malaysian case, teachers are reported to have positive attitude towards the integration of e-learning and e-teaching, but they are not ready for total transformation to e-teaching and e-learning yet (Ranjit Singh and Chan, 2014). This is a good sign of positivism and it is interesting to see how the unprecedented enforcement of e-learning due to Covid-19 affects the teachers in terms of application, monitoring and evaluation. In this case, the critical factor is the status of teachers'

motivation pertaining to the shift from face-to-face pedagogy to online pedagogy. Despite all the challenges, it is the motivation and the drive of the teachers that will ensure the effectiveness and the success of this sudden e-learning emphasis and, it must be noted that professional stress and pressure can cause demotivation among teachers (Han and Yin, 2016.) Among others teachers can be demotivated due to conceptualization and operationalization, pedagogical outcomes, ambiguous roles and changes of measurement in the pedagogical process.

Therefore, current study applied quantitative research design to examine secondary school teacher at e-teaching competencies during the Covid-19 pandemic. This study also aims to examine the psychological status and work motivation of the secondary school teachers during the Covid-19 pandemic. In the meantime, numerous studies have adopted qualitative research approach, but in order to comply with the Standard Operating Procedure set for MCO to prevent the Covid-19 transmission chain, online quantitative surveys are more suitable to ensure the safety of participants and researchers. In addition, the flexibility of qualitative research methods is low, and it is difficult to recruit participants in the current epidemic (Eyisi, 2016). Therefore, quantitative research methods are adopted. Quantitative research approach allows statistical data to be used as a tool to save energy, reduce time costs and the results present in data (numbers, percentages, line graphs, bar chart and etc) provide a straightforward answer to the research questions.

2. Research objective

1. To determine teachers' psychological status (stress, anxiety, depression) during the Covid-19 outbreak.
2. To determine teachers' competencies in e-teaching (application, monitoring, evaluation).
3. To determine examine teachers' working motivation.
4. To determine the relationship between secondary school teachers' psychological status and competencies in e-teaching during Covid-19.

3. Methodology

3.1. Research methodology

This is a descriptive-correlational quantitative survey to determine teachers' psychological status, e-teaching competencies and working motivation during Movement Control Order (MCO) to contain the Covid-19 pandemic. Quantitative research was chosen because it able to obtain information about a given phenomenon and because to adhere the Standard Operating Procedure set for the MCO, online quantitative survey is suitable to ensure that the safety of participants and researchers and the subjectivity of the researchers are not affected (Queirós et al., 2017).

3.2. Sampling and data collection

A total of 595 responses received from the secondary school teachers in good condition and they are selected via convenient sampling. Convenience sampling could be considered as a limitation of this study, it is a specific type of non-probability sampling method that could lead to the under-representation or over-representation of particular groups in the sample. This limitation undermines the ability to generalize from the sample to the population (Sulaiman et al., 2021). The data for this study were collected through an online self-administered survey questionnaire. The survey questionnaire technique is chosen was due to the advantages it offers, for instance, time-efficient and flexible, interactivity without interviewer bias, personalized messages and questions, cost-effectiveness, targeted sample selection and desensitize sensitive subjects less processing errors (Chang and Vowles, 2013). Since the current study would like to examine secondary school teachers' psychological status, e-teaching competencies and work motivation, therefore similar characteristics of the participants are captured. The secondary school teacher participated

in the online survey questionnaire are national secondary school teachers with at least 2 years of teaching experiences, and they are from the same district (Hulu Langat, Selangor, Malaysia), have experienced Movement Control Order (MCO), and performed the *Pengajaran Dan Pembelajaran Di Rumah* (PdPR) known as Home teaching and learning, during the Covid-19 outbreak also called e-teaching as described in the current study.

The on-line questionnaires are distributed to all teachers over a period of two weeks and they are selected through convenience sampling method. In addition, prior to the data collection for this study, the ethics permission has been approved by Professor Dr. Muhammad Nazrul Hakim Abdullah from Malaysia Association of Research and Education for Educator.

3.3. Instrumentation

The instrument was originally developed in Malay Language, and three (3) native Malay Language experts were invited to evaluate the content of the translation instrument to ensure the content validity of the instrument and the translated instrument tested through pilot tests. The instrument is divided into 2 parts, the first part includes 4 demographics part related to the respondents' background, and the second part is to collect data from the respondents pertaining to their psychological status (stress, anxiety and depression), e-teaching competencies (teaching, monitoring and evaluation) and teaching motivation. This instrument consists of seven (7) constructs; 1) teachers' stress level; 2) teachers' anxiety level; 3) teachers' depression level; 4) teachers' e-teaching competencies; 5) teachers' monitoring in e-teaching; 6) teachers' evaluation in e-teaching; and, 7) teachers' motivation. Each construct consists of ten (10) items with Likert scale: 1 = Strongly Disagree to 5 = Strongly Agree, to enable respondents to make the most appropriate choices (Likert, 1932). The Cronbach Alpha value of each construct is presented through Table 1 below.

Table 1 presents the pilot test Cronbach Alpha values for each construct of the questionnaire. The pilot test of Cronbach Alpha's teachers' psychological status (stress, anxiety and depression) and teaching e-teaching competencies (application, anxiety and evaluation) are stress (0.906), anxiety (0.920), depression (0.845), application (0.813), monitoring (0.856), evaluation (0.891) and teachers' working motivation are (0.957), respectively, with high reliability. This shows that each variable has a good item and can be used in actual research (Lim, 2007).

However, for the actual study of the Cronbach Alpha value of each construct are tested. The first three columns are the constructs of teachers' psychological status, stress, anxiety and depression, and the Cronbach Alpha values are .929, .922 and .611 respectively. The next three columns are the construct pertaining to teachers' competency in e-teaching for application, monitoring and evaluation, and the Cronbach Alpha values are .817, .859 and .881. The last column is the working motivation of the teachers with Cronbach Alpha value of .964. The minimum acceptable reliability value is .60 (Hair et al., 2006) and, since all the constructs range between .611 to .964 which are higher than .60, so the questionnaire is valid and reliable.

Table 1. Reliability and quantity of items in every construct.

Construct	Number of Items	Pilot Test Cronbach Alpha	Cronbach Alpha
Stress	10 items	0.906	0.929
Anxiety	10 items	0.920	0.922
Depression	10 items	0.845	0.611
Application	10 items	0.813	0.817
Monitoring	10 items	0.856	0.859
Evaluation	10 items	0.891	0.881
Working Motivation	10 items	0.957	0.964
TOTAL	70 items		

3.4. Data analysis

In the current study, SPSS 25 (software) was applied for data analyze. In quantitative data analyses, the researcher applies statistics to analyse as statistics is a mathematical procedure (Creswell, 2011). The statistical measures such as Cronbach's alpha, means, percentage and standard deviation were employed to analyze the data to obtain the value of the school teachers' psychological status, e-teaching competencies and teaching motivation. Consequently, a Pearson correlation table was created to show the analysis of the school teachers' psychological status and competencies in e-teaching.

4. Findings

As stated early, the respondents in the current research are secondary school teachers who currently provide services at government secondary schools. Nonetheless, Table 2 is describing the demographic variable from these 595 secondary schools' teachers. There are 87 male teachers (14.6%) and 508 female teacher (85.4%) participating in this current research. In addition, the age of these teacher is 21–50 years old and above. Among them, there are 34 (5.7%) teachers are between 21 to 29 years old, and 164 (27.6%) teachers are between 30 to 39 years old, there are 210 (35.3%) teachers aged between 40 to 49 years old, and the remaining 187 (31.4%) teacher are over 50 years old. Along with, teachers experience in teaching also obtained, between a year to fifteen years, only 37 (6.2%) teachers have a teaching experience less than 5 years, there are 48 (8.1%) teachers with 5–9 years of teaching experience, 135 (22.7%) teachers with 10–14 years of teaching experience and 375 (63.0%) also the most participant has above 15 years of teaching experience. Majority teachers' obtained an undergraduate degree with 491 (82.5%), Master degree, 100 (16.8) and only 4 (0.7%) teachers obtained a PhD.

Table 3 is the teachers' responses regarding their psychological status, such as stress, anxiety and depression, as well as their competencies in e-teaching regard application, monitoring and evaluation and teachers' motivation to work. These responses answer to the first research question, to determine teachers' psychological status (stress, anxiety, depression) during the Covid-19 outbreak and the result would be presented by the mean scores in Table 3, with the lowest mean in psychological status variable, stress (2.71), follow by depression (2.75) and anxiety (2.82). Also according to Table 3, the second research question, to determine teachers' competencies in e-teaching (application, monitoring, evaluation) show is having lowest mean scores in application (2.87), monitoring (3.19) and evaluation (3.25). However, the third research question is to determine examine teachers' working motivation,

Table 2. Demographic variable.

Demographic	Respondent	Frequency	%
Gender	Male	87	14.6
	Female	508	85.4
	Total	595	100.0
Age	21–29	34	5.70
	30–39	164	27.6
	40–49	210	35.3
	50 above	187	31.4
	Total	595	100.0
Work Experience	2–4 years	37	6.20
	5–9 years	48	8.10
	10–14 years	135	22.70
	15 years and above	375	63.0
	Total	595	100.0
Qualification	Bachelor	491	82.5
	Master	100	16.8
	PhD	4	0.70
	Total	595	100.0

Table 3. Psychological status and e-teaching on teachers' work motivation during the movement control order (MCO).

Variable	Mean	Standard deviation (SD)
Stress	2.71	0.8435
Anxiety	2.82	0.7470
Depression	2.75	0.5247
Application	2.87	0.5644
Monitoring	3.19	0.5877
Evaluation	3.25	0.5534
Work Motivation	3.36	0.7376

and teacher's work motivation has the highest mean scores among variable which is 3.36. The overall mean value of each variables is higher than the mean value of 2.5, but all are less than 3.5. Therefore, it can be inferred that the teachers' psychological factors in stress, anxiety and depressed are moderate, the teachers' competencies in e-teaching is moderate as well as teachers' working motivations is also in the moderate level (according to Table 4).

Table 5: Mean and standard deviation for psychological status (stress, anxiety, depression).

Table 5.1, Table 5.2, and Table 5.3 lists the mean and standard deviation of the respondents' psychological status and pertains to the first research question, to determine teachers' psychological status (stress, anxiety, depression) during the Covid-19 outbreak.

First, according to Table 5.1, the overall mean score of teachers' stress level is 2.71 (SD = .305). At the same time, according to Table 5.2, the overall mean score of teachers' anxiety level is 2.82 (SD = .482), hence, the overall teachers' depression level is 2.75 (SD = .832). Therefore, according to Table 5.1, Table 5.2, and Table 5.3, compared with stress, anxiety and depression, the mean of teachers' psychological status in anxiety level is the highest, whilst the mean score of stress is the lowest. However, the difference between the mean score of stress and depression is only a slight difference of 0.04. Correspondingly, there are two points more than three, these are teachers feel pressure due to they feel many barriers (mean = 3.21) and they are experiencing "excessive thinking" (mean = 3.17).

Likewise, the highest mean score of anxiety factor among the teachers during the period of MCO. The factors that causes teachers to worry is that teachers "worry about themselves and their family" (mean = 3.77), which higher than the 3.5 score on Table 5.2, and another factor close to 3.5 score is that teachers' become "sensitive to sad news" (mean = 3.44). However, an extreme low mean score item is a reverse item about teacher able to keep "rational thinking (-)", therefore, on average, rational thinking is not an important factor that contribute to teachers' anxiety.

Whereas, Table 5.3 is describing the teachers' depression emotion during the MCO. There are three highest points in the table, but two items have a mean score higher than 4.00 and one item has the mean score higher than 3.5. The item mean score of 4.00 and above is describe averagely teachers depress because of "I'm always positive about what's going on" (mean = 4.01) and "I'm always looking forward to doing the daily" (mean = 4.00). Following the item above the 3.5 is "I feel less happy with the current situation" (mean = 3.75).

Table 6: Mean and standard deviation for e-teaching competencies (application, monitoring, evaluation).

Table 6.1, Table 6.2, and Table 6.3 is presents the mean and standard deviation of the respondents' e-teaching competencies. In regards to the second research question, through tables 6, to determine teachers' competencies in e-teaching (application, monitoring, evaluation), as each mean and standard deviation shows from each item construct items of the e-teaching competencies' variable. Table 6 shows that the overall mean score of teachers' competencies in application e-teaching is 2.86 (SD = .473), while the overall mean score of teachers' competencies to monitor through e-teaching is 3.19 (SD = .351), also the overall teachers' competencies in evaluation through e-teaching is 3.25 (SD = .42). Therefore,

Table 4. Determines the psychological level (stress, anxiety and depression) e-teaching competencies (application, monitoring and evaluation) and working motivation.

Mean Scale	Mean Level	Mean Stress	Mean Anxious	Mean Depression	Mean Application	Mean Monitoring	Mean Evaluation	Mean Working Motivation
1.00–2.33	Low							
2.34–3.67	Moderate	2.71	2.82	2.75	2.87	3.19	3.25	3.36
3.68–5.00	High							

Table 5.1. Mean and standard deviation for stress.

Items	Mean	SD
Feeling uneasy	2.87	1.201
Tend to overreact	2.35	1.258
Too anxious	2.44	1.065
Feel irritated easily	2.55	1.103
Feeling calm	2.43	.881
Many barriers	3.21	1.054
Easily offended	2.54	.983
Excessive thinking	3.17	1.069
Difficult to focus	2.82	1.045
Emotions change quickly	2.76	1.068
Total-STRESS	2.71	.305

Table 5.2. Mean and standard deviation for anxiety.

Items	Mean	SD
Worry about myself and my family	3.77	.947
Sudden panic	2.63	.972
Rational thinking	2.01	.576
Feeling scared suddenly	2.70	.993
Tired easily	2.81	1.015
No energy	2.79	1.001
Scary things thought	2.73	1.050
Focus is diminish	2.82	1.036
Sensitive to sad news	3.44	.972
Confused easily	2.51	1.045
Total-ANXIETY	2.82	.482

Table 5.3. Mean and standard deviation for depression.

Items	Mean	SD
Not interested for daily activities	2.52	.984
Being positive	4.01	.671
Feel hopeless	2.01	.864
Sudden sadness	2.36	1.006
Act as usual	2.27	1.479
Unhappy with current situation	3.75	.868
Don't want to talk	2.24	.981
Angry easily	2.37	1.610
Looking forward daily life	4.00	1.369
Not interested to know	1.91	.883
Total-DEPRESSION	2.75	.832

according to Table 6.1, Table 6.2, and Table 6.3, compare with the teachers' e-teaching competencies mean score in application, monitoring, and evaluation the mean score of evaluation is the highest, whilst the mean score of application e-teaching is the lowest. However, the different between monitoring and evaluation mean scores is just a different of 0.06.

Table 6.1. Mean and standard deviation for e-teaching application.

Items	Mean	SD
Suitable for all	2.77	1.024
Suitable small groups	2.22	.794
Problem-based teaching	3.27	.875
Ideal platform	3.36	.867
Stimulate student creativity	3.33	.856
Get feedback easily	2.79	1.282
Active involvement	2.76	.917
Not focus	2.35	.785
Difficulty delivery lesson	2.26	.819
Interesting and fun	3.44	.765
Total-APPLICATION	2.86	.473

Table 6.2. Mean and standard deviation for e-teaching monitoring.

Items	Mean	SD
Identify easily	3.59	.860
Appropriate for all	3.49	.794
Students attendance	3.78	.733
Teaching materials	3.14	.868
Communicate easily	3.20	.877
Good interaction	3.10	.846
Ensured student participation	2.55	.979
Complete assignments	2.99	.950
Assignment submission on time	3.05	.953
Student can follow	3.02	.876
Total-MONITORING	3.19	.351

Table 6.3. Mean and standard deviation for e-teaching evaluation.

Items	Mean	SD
Various platform	3.57	.741
Easy conduct	3.16	.826
Easily keep track	3.27	.850
Classroom-based	3.36	.864
Students cooperate	3.01	.857
Provide rubric	3.37	.798
Preparation took times	2.18	.739
Refer easily	3.51	.791
Easily evaluate	3.46	.793
Save and review easily	3.61	.750
Total-EVALUATION	3.25	.42

However, there is a positive sign that teacher can conduct e-teaching during the MCO. Regarding to the highest mean score of the perspective in application e-teaching, and the highest mean score is perceiving e-teaching is "fun and interesting" (mean = 3.44), following by the factor of teachers feel e-teaching is the "ideal platform on-line teaching" (mean = 3.36), e-teaching enable teachers "implement teaching activities that

stimulate student creativity" (mean = 3.33) and "problem-based teaching activities can be conducted" (mean = 3.27). However, the two low mean score item is reverse item "On-line teaching is suitable for small groups" (mean = 2.22) and "Teachers find it difficult to deliver well-organized and organized teaching" (mean = 2.26).

In addition, the highest mean score of the item in e-teaching monitoring, several factors are higher than the mean score of 3.5, there is teachers can more easily "recognize the student's attendance/participation in Google Classroom" (mean = 3.78) and "easily identify students actively participating in the meeting" (mean = 3.59). However, the lowest man score is teacher difficulty in make all the student participant in class discussions (mean = 2.55).

When teaching take place, evaluation would be taking place as well. However, through e-teaching, the mean value of teachers' competencies in e-teaching evaluation is 3.25. Table 6 is regarding the mean and standard deviation of e-teaching in evaluation. Regarding the highest mean of the perspective in e-teaching evaluation, several factors is above the mean of 3.5. First, the highest mean value of teachers towards e-teaching evaluation is "easy to save and review" (mean = 3.61), following by teacher use a "variety of platforms to evaluate learning" (mean = 3.57) and "teachers can easily refer to my friends when preparing materials for e-evaluation" (mean = 3.51).

Last but not least, Table 7 pertained to the third research question, to determine examine teachers' working motivation. The overall e-teaching of teachers' teaching motivation is the highest, with a mean value of 3.35. According to the table, teachers' teaching motivations are all higher than the mean value of 3. Table 7 is regarding the mean and standard deviation of teacher motivation to work during the MCO. Pertaining to the highest and lowest mean of the perspective in teachers' working motivation, the highest mean is teachers' teaching motivation is "developed my professionalism as an educator" (mean = 3.62), where lowest mean is teachers find it fun and more interested in using e-teaching (mean = 3.16).

Table 8 showed the relationship between psychological status and competency e-teaching during COVID-19 among teachers. Besides, the Table also reported the relationship between dimension of psychological status (stress, anxiety and depression) and competency e-teaching (application, monitoring and evaluating). Overall, the result showed a negative relationship between psychological status and competency e-teaching (-0.286 , $p < 0.01$), as well as reported a negative relationship between dimension of psychological status and competency e-teaching.

5. Discussion and conclusion

The current study was conducted during the Movement Control Order (MCO) in preventing towards the epidemic Covid-19 outbreak. During the period of MCO, schooling has been break off, academics have been interrupted, yet, teaching and learning has shifted to online classroom.

Findings from the study indicated that, during the MCO, the teachers' psychological status highest mean is anxiety, depressed and stress. Even though anxiety is an inseparable part of people's daily life (Sulaiman et al., 2013), during the Covid-19 outbreak, based on the findings, the teachers feel angst the most is due to the worried about themselves and family members. However, the highest mean value of depression is "I'm always positive about what's going on" and "I'm always looking forward to doing the daily" these item projects show that teachers are still have positive thinking during MCO. After this, teachers "feel less happy with the current", the anxious and depression level in line with Jadhav (2020), MCO leads to isolation oneself, therefore, being far away from family could lead to overthinking and consequent teachers feel anxiety and depression among teachers. Above all, from the current findings, the teachers' source of stress is "obstacles" and "overloaded of thinking", because e-teaching has become a mandatory requirement to the current pandemic pedagogy, however, this new practice would lead to an increase in the amount of task load and influence teachers stress level (Ooi and Ismail, 2015).

Table 7. Mean and standard deviation for work motivation.

Items	Mean	SD
Fun and interesting	3.16	.907
Confident in usage	3.19	.851
Easy to use	3.23	.880
Motivation for further teaching	3.33	.864
Develop my profession	3.62	.841
Make the work more systematic	3.38	.848
Get more creative	3.56	.832
Satisfied using	3.26	.870
Easier to manage	3.33	.813
Will continue to be use	3.46	.852
Total-WORK MOTIVATION	3.35	.152

Table 8. Pearson correlation between psychological status and competencies in e-teaching.

Variables/Dimension	e-Teaching	Application	Monitoring	Evaluation
Psychological Status	-0.286**	-0.296**	-0.186**	-0.290**
Stress	-0.293**	-0.306**	-0.197**	-0.286**
Anxiety	-0.275**	-0.284**	-0.181**	-0.276**
Depression	-0.194**	-0.196**	-0.112**	-0.216**

N = 595; **p < 0.01.

For e-teaching competencies for application, monitoring and evaluation, this study finds that application has lower mean scores compared to monitoring and evaluation. This situation cuts across the group but the range between the highest and the lowest score is small, which means they generally have the same problem and more or less at the same level. There seem to be the issue of choosing and operating the various tools among respondents. They seem to struggle using and application the applications or tool but they can monitor and evaluate the learning process well. Monitoring and Evaluation it is quite surprising that these two have higher mean scores. This may be due to their competencies to synthesize and adapt the normal teaching and learning procedures into e-learning mode. Teachers maybe applying suitable and reasonable ways of evaluation to suit the situation. Teachers competencies to make appropriate adjustments enable monitoring and evaluation to function accordingly.

The findings of e-teaching implication concurs with Unal and Unal (2012) view that good teachers must provide effective and conducive environment for optimal learning and ready with preventive problems strategies help ensure good learning. Ministry of Education Malaysia also published to manual of teaching and learning at home to help teachers carry out teaching and learning at home as an alternative learning of new norms (Ministry of Education, 2020). At the same time, the schools also need to carry out a professional development course to exposes teachers with the new norm in e-teaching. In addition, the study found that during the MCO, teacher competencies in application, monitoring and evaluation e-teaching, the highest mean value was that teachers found e-teaching to be "fun and interesting", and teachers is getting easier and capable to identify student attendant in e-teaching. At the same time, teacher able to utilize in e-teaching, teacher also find evaluation records are easier to refer and save. In contrast with Ranjit Singh and Chan (2014), from the current research, teachers seem to able to conduct comprehensive and fully e-teaching right now.

Likewise, the impact of natural disaster and prolonged disaster could cause people emotion down (Gaston et al., 2019). During the outbreak of COVID-19, teachers' psychological status was at a moderate level and competencies in conduct e-teaching lesson is also at the moderate level. Fortunately, teachers' work motivation is also moderate and it is the highest overall mean among the variables. Starting from the highest item

“e-teaching has developed my professional as an educator”, this indicates that the findings imply that e-teaching provide teachers with professional development opportunities (Toropova et al., 2020), this showed teacher are in a very positive motivation in teaching through e-teaching even though in the circumstance of epidemic Covid-19.

Besides, the study finds working motivation on e-learning for pandemic pedagogy is moderate on the higher end, with the highest score of 3.47 and the lowest is 3.35. This is a good indicator that e-teaching and learning is going to get better and improving despite the challenges. With positive and strong motivation all challenges might be dealt with effectively and sooner e-learning will be smoother and more effective though it may not be able to equate face-to-face sessions. Ineffectiveness or effectiveness of teaching caused by teachers' motivation (Busby et al., 2012), the basic energy and drive that move people to do something. In the context of the study, despite the complexity of the challenges due to contextual and situational factors that need immediate comprehension (Han and Yin 2016) teachers are hanging on fine. This might due to their educations (Van Der Vijver, 2007; Palmer et al., 2019) and computer knowledge and skills that enable them to evaluate the situation rationally, as mentioned by Podolsky et al. (2019).

Besides, the study shows a negative relationship between psychological status and competency e-teaching, as well as reported a negative relationship between dimension of psychological status and competency e-teaching. This results indicates that the lower psychological status can enhance the competency of e-teaching, involving application, monitoring and evaluating among teachers during COVID-19.

Excessive pressures and stress can lead to teacher burnout (Ismail, Sulaiman and Roslan, 2020) and supported by Aperribai et al. (2020), during the MCO, variables related to teaching and teacher's personal conditions are having an impact on teachers' psychological status. Hence, the findings of the current study indicate that there is a negative correlation between the variables of the teachers' psychological status and e-teaching competency during the Covid-19 pandemic. Which is the lower psychological status (such as: stress, anxiety and depression) can have a positive impact on e-teaching competency.

Overall, the study shows that e-teaching during Covid-19 pandemic is promising though every teacher is caught by surprise and overwhelmed. Though they face stress, anxiety and depression but it is at moderate level, and they are not deterred from fulfilling their responsibility. Despite of that e-teaching is conducted effectively by teachers at moderate level on the higher end due to team spirit and cooperation among teachers. It is also driven by strong motivation among teachers to carry out their responsibilities. Last but not least, a negative correlation was determined between Malaysia secondary school teachers' psychological status and competencies in e-teaching during Covid-19.

6. Limitations and implications

This study has identified several important implications for educators as well as educator stakeholders. It is remarkable to concern on the teachers' psychological level especially in the teachers' anxiety. As regard to the Covid-19 outbreak, teachers as normal human being are dealing with the stressful environments at the same time adapting their skills to the new teaching norms. In addition, teachers' e-teaching competencies in e-teaching application, monitoring and evaluation are at a moderate level but contrary to the psychological status, it ought to find ways to improve the competencies in e-teaching as well as promote the work motivation. Even the survey findings indicate that stress, anxiety and depression are at a moderate level, but it is important to prevent any possibility that may increase the teachers' level of stress, anxiety and depression. This is to ensure that teachers' competencies in e-teaching maintain at a better level, at least during this unpredictable conditions during the Covid-19 pandemic.

This study has its limitations. This study is included only Selangor teachers and given that the information obtained from the study was gather from secondary schools, the generalizability might be limited. The

current study applied convenience sampling as a non-probability sampling technique conducted in this study. Future studies can consider random sampling or probable sampling techniques to undermine the generalizations from the sample to the population. Moreover, a more comprehensive study is advisable in order to get a clearer picture of interconnectedness, relationship and influence of various variables on pandemic pedagogy in Malaysia.

Last but not least, future research may consider expanding the scope from secondary schools to primary schools' teachers and then to university lecturers. Perhaps the scope is expanding, so more information could be obtaining and help researchers understand the teachers' competencies in e-teaching, psychological status and work motivation. In this way, future school crisis management could provide recommendations and prevent teachers' attrition. In addition, beside descriptive qualitative methods, further research may include multivariate statistics to enable obtain better understanding from these constructs provided from the teachers along the study.

Declarations

Author contribution statement

Kai Yan Wong and Tajularipin Sulaiman: Conceived and designed the experiments.

Abdul Gaffar Kunchi Mohd: Performed the experiments.

Omrah Hassan @Hussin: Performed the experiments; Wrote the paper.

Amalina Ibrahim and Wan Marzuki Wan Jaafar: Contributed reagents, materials, analysis tools or data.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability statement

The data that has been used is confidential.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

Supplementary content related to this article has been published online at <https://doi.org/10.1016/j.heliyon.2021.e08238>.

Acknowledgements

The authors would like to thanks Malaysia Association of Research and Education for Educators (MAReE) for conducting of this study based on investigation of effect of e-evaluation on work motivation among teachers during the Movement Control Order in COVID-19. The authors are grateful for the contributions of Malaysia teachers and educational psychology and pedagogy.

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