

A Review of Educators' Experiences in Conducting Emergency Remote Teaching During Pandemic COVID-19

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The pandemic of COVID-19 has dreadfully forced a global shut down of educational activities and caused a crisis-response where schools and institutions prompted online learning to serve as the alternative educational platform. The migration from face-to-face teaching into an online system had led to a tremendous problem since most educators had little or no training at all. Thus, this study aimed to produce a review of educators' experiences in conducting emergency remote teaching during pandemic. This paper presented a review of empirical studies published between January to December 2020. A systematic search was conducted in Scopus. The inclusion criteria were primary studies of teachers' experiences in conducting emergency remote teaching (ERT). The included studies were reviewed based on their methodology, setting and population, scopes of study and thematic coding of teachers' experiences. The findings of this study indicated that there was room for improvement in teachers' profession and online instructional models to prepare for the unknown incoming crisis.

Keywords: Education; Experience; COVID-19; Emergency Remote Teaching

I. INTRODUCTION

An implementation of suspending classes without stopping learning (Zhang, 2020) policy which means suspending offline teaching at school and turning to online education (Zhang, 2020) was embraced to ensure the continuity of education in almost all affected countries. Plenty of research addresses this sudden shift of education format as 'emergency remote teaching' (ERT) which means a temporary shift of instructional delivery due to crisis circumstances (Bozkurt & Sharma, 2020; Ferri *et al.*, 2020; Hodges *et al.*, 2020). Educators believe that this migration is temporary and everything will go back to normal when the pandemic is over. Though emergency remote teaching is different from online learning (Hodges *et al.*, 2020), we would like to see this fly-by-night transformation as a catalyst to educational technology. Some research indicated that there was a significant change in teachers' perception regarding their resolutions to implement technology in their

lessons in a post-corona era (Husain *et al.*, 2021; van der Spoel *et al.*, 2020; Videla *et al.*, 2020). Teachers and educators are the key players in teaching. As perception influences behaviour (Tilea *et al.*, 2020), teachers' perception on the implementation of remote teaching is fairly essential in developing effective teaching for future development of online learning.

The global online education has grown by leaps and bound, and has accelerated in an instant under the pandemic (Dhawan, 2020). The teachers' experiences during this period helps scholars to discover the feasibility of more pedagogies, strategies, and technologies. Thus, this study aimed to explore the educators' experiences in implementing emergency remote teaching during pandemic.

II. METHODOLOGY

The selection of articles was done using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

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(Moher *et al.*, 2009). The review process involved five phases, namely (1) identifying relevant studies; (2) screening by titles and abstracts; (3) selecting studies based on the criteria; (4) identifying studies included in qualitative synthesis; and (5) collating, summarising and reporting the result.

The articles are primarily drawn from the Scopus databases. Google Scholar and ResearchGate were also used to search for relevant information. The key terms which were used for literature search were ‘*emergency remote teaching*’, ‘*education during COVID-19*’, ‘*teachers or educators experiences*’. These journal articles were published from January to December 2020.

The criteria for selection studies were the studies that gave open-access to full articles, and were published in English as journal articles only. The inclusion criteria included the studies that used the general population community, which are educators from all levels; studies that measure educators’ experiences as outcome; and studies that reported on primary data, either in quantitative or qualitative design. The review excluded all review papers, and studies about special needs education, education in medicine or dental, and studies that focused on teaching Science and Mathematics subjects. Most of the articles did not include key terms like ‘*experience*’ in title, the researcher had to screen the abstract and content of the literature, synthesise and extract the relevant data that met the criteria of selection.

There were 46 articles that were found to be related to educators’ experience and perceptions. As a final point, the journal articles that had the most citations of the specific topic during the period of conducting this study were selected. There was a total of 11 articles shortlisted to be in this study. Figure 1 presented the review procedure using Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).

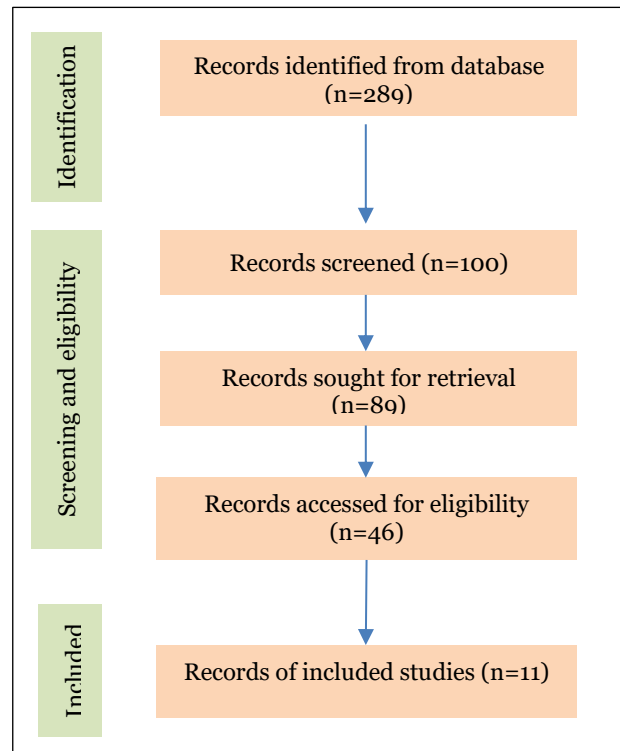


Figure 1. Review procedure using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

III. RESULTS AND DISCUSSION

After synthesising the data, an overview on research methodology, setting, population and scope of study of included studies were presented in three categories. Table 1 provides the characteristics of all studies in this review, including research design of each study, outcome and findings, setting and samples of each study, and thematic coding of teachers’ experience which was developed by the authors. The details of each thematic coding would be further discussed in each section.

Table 1. Characteristics of studies in teachers’ experiences.

Author	Samples	Findings	Themes
(MacIntyre <i>et al.</i> , 2020)	language teachers from all levels (n=600)	Positive correlation between psychological outcomes and approach coping.	Stress and burnout
(Kim & Asbury, 2020)	elementary and secondary educators (n=24)	6 themes: uncertainty, finding a way, worry for vulnerable, importance of relationship, teachers’ identity, reflections	Stress and burnout

(Giovannella <i>et al.</i> , 2020)	secondary and primary educators (n=336)	Increased positively in digital skill, sustainability of online education and mental setting	Opportunity for development
(Fauzi & Khusuma, 2020)	elementary educators (n=45)	Problems faced: facilities, network and internet, planning and implementation, collaboration with parents.	Facilities, instructional pedagogy, interaction
(Korkmaz & Toraman, 2020)	Educators from all levels (n=1016)	Barriers found: internet connection, lack of interaction, difficulty in providing feedback and teaching, students' motivation	Facilities, instructional pedagogy, interaction
(van der Spoel <i>et al.</i> , 2020)	Educators from all levels (n=200)	Changes in perception; teachers' gender and prior experience has small effect on ICT use.	Positive point of view, digital skill
(Nambiar, 2020)	educators from university (n=70)	Satisfaction: interaction between students and educator, technical support, structured modules and modifications of practical classes.	Satisfaction
(Aliyyah <i>et al.</i> , 2020)	elementary educators (n=67)	4 themes: instructional strategies, challenges, supports, and motivation	Pedagogy, facilities, supports Motivation
(Sahoo, 2020)	educators from all levels (n=318)	Factors: Internet connectivity, electricity supply, personal space, digital skills, lack of interaction.	Internet, facilities, digital skill
(Asbury & Kim, 2020)	secondary educators (n=24)	4 themes found: heroes or villains; key workers or not; voiceless and disrespected; and appreciated locally.	Motivation
(Alea <i>et al.</i> , 2020)	educators from all levels (n=2300)	Teachers' experience, specialisation and geographic location is correlated to readiness	Readiness

A. Thematic Category

These eleven articles were chosen to represent each thematic coding. An overview of these selected articles was presented in three categories, namely research methodology, setting, population and scope of study

1. Study methodology

Of these 11 selected journal articles, 9 of the studies adopted a quantitative research design, and 3 of them were conducted using a qualitative research design. This result is aligned with other studies which were not included in this review. Most of the studies about educators' experiences were conducted through a quantitative design. These studies adopted questionnaires in data collection and descriptive statistics in data analysis. Meanwhile, for studies that adopted qualitative

design, a case study or phenomenology method were adopted, semi-structured interviews were used to collect insights of teachers' experiences. All these studies were cross-sectional except 1 study adopted longitudinal qualitative research design (Asbury & Kim, 2020) to assess teachers' motivation in implementation of emergency remote teaching. Based on the review, none of these studies adopted a mixed method to study teachers' experience in ERT.

2. Study setting and population

Most studies related to teachers' experience in conducting emergency remote teaching were focused on educators from all levels, namely elementary, secondary school and university. However, there were 2 out of 11 studies (Aliyyah *et al.*, 2020; Fauzi & Khusuma, 2020) involving sample educators only from elementary school, meanwhile there

were two studies focused only on educators in university. The sample size for quantitative research ranged between 70 to 2300. The sample size for qualitative research ranged from 24 to 45.

3. Scope of study

Based on the analysis, studies that were carried out in Asia emphasised teachers' experience more on technological and facilities problems (Alea *et. al.*, 2020; Aliyyah *et. al.*, 2020; Fauzi & Khusuma, 2020; Nambiar, 2020; Sahoo, 2020). On the contrary, studies in Western emphasised more on teachers' notion and feeling (Asbury & Kim, 2020; Giovannella *et. al.*, 2020; Kim & Asbury, 2020; Korkmaz & Toraman, 2020; van der Spoel *et al.*, 2020). All of the above studies measure educators' perception and experiences in conducting emergency remote teaching. Educators from all over the world were found to face various challenges in implementing emergency remote teaching. After analysing data using thematic analysis, five main themes were developed to conclude the educators' experience in emergency remote teaching.

B. Thematic Coding

Teachers' experiences in conducting emergency remote teaching varied from study to study depending on the research objectives. Here, the authors summarised the findings and coded them in five main themes.

1. Challenges in infrastructure

The utmost challenge faced in remote teaching during pandemic was poor infrastructure and lack of stable internet connection (Alhumaid *et. al.*, 2020; Fauzi & Khusuma, 2020; Ferri *et. al.*, 2020; Joshi *et. al.*, 2020; Karakaya *et. al.*, 2020; Mohalik & Sahoo, 2021; Oyedotun, 2020). This situation occurred in many developing countries (Adarkwah, 2021), where students or educators did not have inadequate internet connection service to access the online remote teaching and learning.

2. Teacher technology readiness

Teachers lack of knowledge and skills (Alea *et. al.*, 2020; Ferri *et. al.*, 2020; Joshi *et. al.*, 2020; Karakaya *et. al.*, 2020;

Malekolkalami, 2020; Oducado *et al.*, 2021) to conduct online teaching and learning activities as they did not have any experiences or training in online teaching. On the other hand, due to the short time of preparation, teachers were not able to master the skill and then construct effective instructional materials for emergency remote teaching. Thus, educators faced problems in delivering course content online (Lee *et. al.*, 2021; Malekolkalami, 2020; Oyedotun, 2020; Portillo *et al.*, 2020) due to the limitation in digital-based education setting.

3. Teacher satisfaction and motivation

Many studies indicated that teachers' motivation in remote teaching during pandemic was affected by psychological and social factors instead of instructional obligation (Aliyyah *et al.*, 2020). Teachers' motivation and satisfaction is also influenced by the attitude and behaviour of stakeholders (Tilea *et al.*, 2020). As teachers have to work hard to look for creative ways to engage students to promote students' enthusiasm for learning, this is the key factor which affects teachers' satisfaction. Some teachers were feeling angry and frustrated by what they perceived as the government's refusal to consult with them as a profession, and their failure to communicate effectively (Asbury & Kim, 2020).

4. Stress and burnout

A study conducted claimed that a low level of social interaction within the pandemic context can lead to teacher burnout (Al-Marouf, Salloum, Hassanien, & Shaalan, 2020; MacIntyre *et. al.*, 2020; Panisoara, Lazar, Panisoara, Chirca, & Ursu, 2020) especially when they were unable to collaborate with parents (Fauzi & Khusuma, 2020) and students in providing help or feedback (Joshi *et. al.*, 2020; Korkmaz & Toraman, 2020). Another study indicated that some teachers felt stressed and isolated and had poor confidence in online platforms (Mohalik & Sahoo, 2021). Educators perceived a higher workload as well as negative emotions in conducting emergency remote teaching as they were shortcoming in training and digital skills (Portillo *et al.*, 2020); experienced medium to high level of stress due to technical barriers (Klapproth *et al.*, 2020); and thus affected

their motivation and continuance intention toward online teaching (Panisoara *et al.*, 2020).

5. Opportunity for development (Mutton, 2020)

Majority of teachers agreed that online learning was a better choice for learning during a pandemic period but did not agree with it as an alternative to the traditional approach of learning (Mohalik & Sahoo, 2021). Educators believed that this migration helped them to upgrade their skills as teachers (Nambiar, 2020) as this is a gender push for personal growth and self-development as they could explore different instructional pedagogy (Giovannella *et. al.*, 2020; Oyedotun, 2020).

IV. LIMITATION

The final 11 articles were selected based on the number of citations within the time frame when the study was conducted. These articles were published within May to December 2020. The result might not be applicable to any study out of the time frame.

VII. REFERENCES

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V. CONCLUSION

As conclusion, educators' experience in conducting emergency remote teaching could be concluded in five main themes, namely challenges in infrastructure and facilities, technology readiness, satisfaction and motivation, stress and burnout and the optimistic side of the pandemic as it is an opportunity for development in education. While this study unveils the educators' experiences in conducting emergency remote teaching, some future studies are eagerly needed to support the profession of education. For instance, evaluating the effectiveness of emergency remote teaching, analysing the instructional pedagogy that is used by the educators or developing a more appropriate instructional model to prepare for unknown incoming crises. This review hopes to give valuable information for future investigation.

VI. ACKNOWLEDGEMENT

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