

# Learning from the emergency remote teaching-learning in China when primary and secondary schools were disrupted by COVID-19 pandemic

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## Research Article

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# Abstract

China educational system launched the emergency remote teaching-learning (ERT) as the response to the COVID-19 pandemic with the mission of “suspending schools without stopping teaching-learning”. When schools moved to temporary remote instruction, teachers, students and parents encountered challenges in terms of deep remote teaching and learning. In the current study, parent (N=741) and teacher (N=145) from 16 provinces in China gave responses to four open-ended questions in the web-based questionnaires released on wxj.cn. The themes arose from the thematic analysis. The participants emphasized that online teaching-learning can't replace face-to-face one in the brick-and-mortar classrooms in terms of the glitchy technology, engaging students into learning, enhancing students learning and leaning atmosphere. Teachers felt unprepared for teaching online. Teachers and parents also argued that remote teaching-learning only benefit those students with good self-discipline and high autonomy in learning. The current study suggests the provincial governments equipping schools with a standardized online teaching-learning management system (LMS), followed by the instructional technology professional development for ensuring online teaching quality at timely manner. This might make ERT teaching evaluation possible. Schools can develop a checklist of prioritized perspectives and actionable strategies for preparing students and their parents for online learning success.

## Introduction

China education system gave the quick response to COVID-19 which swept across China around the Chinese Lunar New Year in January 2020. Ministry of Education in the People's Republic of China issued emergency school closure initiative for the entire country. School closure policy impacted more than 200 million students from primary to postsecondary education. The emergency remote teaching (ERT) (Hodges, Moore, Lockee, Trust & Bond, 2020) among primary and secondary schools was launched across the country in the ideal of “suspending face-to-face classes without stopping teaching and learning” (停课不停学) on March 6 (Ministry of Education of PRC, 2020a). On February 17, the MOE launched the “National Online Cloud Classroom” (国家网络云课堂, www.ykt.eduyun.cn) which provides free live streaming classes and digital textbooks for meeting the learning needs of 50 million primary and secondary school students along with China Education Network TV Channel 4 “Taking the Same Class” (MOE, 2020b).

Even though the rich teaching and learning resources have been offered by the MOE, it was still challenging for provincial governments to cover the needs in terms of deep remote teaching and learning in large scale, especially for the emergency remote teaching and learning which is different from online teaching and learning (Craig, 2020; Hodges, Moore, Lockee, Trust & Bond, 2020). Then, how should teaching in emergency remote mode be different from the regular school teaching? For answering this question, we might need to explore the aspects being prepared for teachers enhancing student learning in an emergency remote mode. There is no a clear and available guideline for what to teach, how to teach and the workload for teachers and students (Zhang, Wang, Yang & Wang, 2020). Teachers do what they do best to help students' continuous learning (Fifield, 2020). They use the resources available to maximize their students' academic learning. In the current study, the educational resources teachers used

include live broadcasting classes, teacher self-developed lessons, mini-lectures from mini-lecture platforms, MOOCs platforms, and other educational resources platforms. The detailed online resources used by teachers in the current study list in the research finding section.

Besides the resource readiness for teachers' online academic content teaching, teachers encountered the challenges of effective instructional design for teaching in remote mode and classroom management. For example, teachers were powerless when they encountered that not all students either can or being willing to show up for online classes (Ning & Corcoran, 2020). Students' mental health issue arising in emergency remote learning in COVID-19 caught scholars' attention. According to a study initiated by Huazhong University of Science and Technology in Wuhan (Galvin, 2020), 23% of primary school students in Wuhan and Huangshi reported symptoms of depression during school closure and city lockdown. The China's MOE encouraged teachers using online contents for students' mental health and physical wellbeing. Not all schools have the available online mental health courses, even within Beijing (Ning & Corcoran, 2020). In emergency remote teaching-learning, education equity issue with regards to educational technology and mental health education come into sight (Zhang, Wang, Yang & Wang, 2020).

Emergency remote teaching is a temporary shift of face-to-face instruction to a fully remote mode due to the emergent circumstance (Craig, 2020; Hodges, Moore, Lockee, Trust & Bond, 2020). It is not a blended or hybrid instruction delivery with well-planned instructional design. This temporary shift might diminish the quality of teaching and learning. The instructional design models or frameworks for blended or hybrid instruction or for online teaching and learning might not be applicable to emergency remote teaching and learning. Currently, there is not a blueprint of instruction design available for teachers in emergency remote teaching. The empirical evidences for emergency remote teaching-learning is far inadequate. Teachers and researchers haven't had much to borrow from previous ERT cases. Hodges, et. al. (2020) suggest using Universal Design for Learning (UDL) principles for designing teaching and learning, which focus on ensuring all students learning with the design of learning environment as a flexible, inclusive and student-centered one, including accessing all learning materials, learning activities and assignments (Meyer, Rose, & Gordon, 2014). It is still important to identify the issues emerging in emergency remote teaching learning first. For example, do teachers need to teach new learning content? How long for each online class will be good enough? What types of support and professional training do teachers need? How should teachers communicate with parents? How much are parents supposed to get involved into emergency remote teaching-learning process? If students push back against online learning, what online integrity or online learning norms should teachers and school develop? The scholars asked the similar questions with regards to emergency remote teaching-learning for further discussion (Zhang, Wang, Yang & Wang, 2020; Chen, 2020). The current study findings gave some empirical implications to these questions which might be helpful for identifying the effective instructional design and teaching strategies for emergency remote teaching-learning.

The threat of COVID-19 forced primary and secondary schools in China moving teaching and learning online which enables the flexibility of teaching and learning anywhere and anytime. Teachers and students felt stressful in the process of pursuing quality of online teaching and learning. The hurry switch

from face-to-face instruction to online could seal the perception of online teaching and learning as a weak option (Craig, 2020; Hodges, Moore, Lockee, Trust & Bond, 2020). In the current study, parents carried a stigma for online teaching and learning incomparable to face-to-face teaching and learning. They believed that emergency remote teaching is the only option for implementing “停课不停学” (suspending classes without stopping teaching-learning) during the COVID-19 pandemic. Parents and teachers didn't see much further advantage of online teaching and learning in the scenario of high-stakes standardized tests nationwide in China. The parent participants in the current study pinpointed the corresponding issues emerging in emergency remote teaching and learning, including educational technology infrastructure, online instruction strategies, students' eye health, student time management, students' self-discipline and autonomous learning ability in remote learning, etc. The parent participants were concerned that only those well self-disciplined students would get authentic benefits in the emergency remote learning and online learning.

The empirical research literature with regards to teachers' experiences of emergency remote teaching and students' experience of remote learning is limited worldwide. The current case study tentatively pictures what the emergency remote teaching and learning in China looks like from teachers' and parents' perspectives. The issues identified in the current study might give the practical indications for adjusting educational programs for meeting the needs of students and teachers in emergency remote learning. The most important contribution of the current study would help people understand evaluating emergency remote teaching-learning for informing the needs of emergency remote teaching-learning in the future. The current study also raises a question for further discussion with regards to online teaching and learning: “What can be transferred when face-to-face teaching and learning is switched to online format or vice versa”?

## Method

The researcher defines that current research as a case study because it examines a “contemporary phenomenon within its real-life context” (Yin, 2003, p. 13). This case study would tentatively work as “a way of conceptualizing” (Schram, 2006, p.107) emergency remote teaching-learning when classes were realistically disrupted by COVID-19 in China, and also as “a way of encapsulating” (Schram, 2006, p.107) teacher' and parents' experiences of emergency remote teaching-learning. This contextual embedded study has the ability to draw attention to what can be learned from the single case (Schram, 2006) in China about the emergency remote teaching-learning.

The current study tentatively answers the overarching research question “What does the emergency remote teaching and learning in China look like?” In order to answer this question, the following sub-questions would be helpful to encapsulate “emergency remote teaching-learning”.

1. How did teachers view emergency remote teaching-learning in China?
2. How did parents view emergency remote teaching-learning in China?

## Data collection

A substantial amount of data came from the two questionnaires (one for teachers and one for parents) which the researcher developed in a web-based Chinese survey and questionnaire platform “wjd.cn” (问卷网). Each questionnaire consists of 4 open-ended questions and 3 demographic questions. Czaja and Blaire (2004) recommend targeting survey participants who are the most knowledgeable individuals who can provide accurate information. In the current study, it is important to seek feedback from teachers and parents who have involved in emergency remote teaching and learning process in COVID-19 pandemic. They should have an accurate overview of emergency remote teaching-learning. An outsider Chinese reviewer with expertise in secondary education and education survey design in “问卷网” reviewed the questionnaires. Based on the feedback, minor revisions of the Chinese wording to the questionnaires were made before the questionnaires went live, including the changes to text for consistency of terminology “remote teaching-learning” (远程教学-学习).

With the approval by the university’s Institutional Review Board (IRB), the links of the questionnaires along with the recruiting letter was spread out among the potential teacher participants and parent participants via Chinese social media platform “WeChat” respectively. The potential participants include primary and secondary school teachers in emergency remote teaching and parents who have children studying in emergency remote learning. The researcher employed snowball sampling strategy (Gail, Gail & Borg, 2007). Possible respondents received the link to the web-based questionnaire on “问卷网” between April 23- May 15, 2020. The questionnaires were closed on May 23. The total number of respondents: teacher (N= 145, covering primary and secondary education); parent (N=741, with different educational backgrounds, 35% with high school diploma, 33% with Bachelor degree and 3.24% Master degree and 29% others). The research participants came from 16 different provinces. The subjects that teacher participants taught cover Chinese language arts, math, biology, chemistry, physics, history, geography and others.

The questionnaires gathered information on emergency remote teaching-learning (ERT) as the response to COVID-19 pandemic. Four open-ended questions asked for the challenges and achievement in ERT, what kind of professional development teachers need, attitude towards remote teaching-learning and the suggestions for remote teaching-learning. The participants primarily input their response to the questions in the Questionnaire via their social media WeChat. A more detailed information of questionnaire questions is available in the finding section.

## Data analysis

The questionnaires captured the qualitative data from the responses to the open-ended questions. The researcher used thematic analysis to analyze these qualitative data for searching across the data set to identify repeated patterns of meaning within data with six phases of thematic analysis (Braun & Clarke, 2006). In Phase one, familiarizing with data, the researcher of the current study read the data searching

for meaning and patterns around teachers' and parents' viewpoints on emergency remote teaching and learning. In Phase two and three, the researcher initiatively coded and searched for the potential theme around emergency remote teaching-learning as the response to COVID-19 pandemic. At the same time, the researcher identified the further codes. Then the researcher manually coded the data by highlighting the recurring patterns in the data, created a category map for each code with a brief description and the examples from the raw data. In Phase four, five and six, the researcher reviewed the themes, defined and naming the themes and produced the final report with the examples from the participants' responses as the supporting evidence.

A rigorous thematic analysis can produce trustworthy findings (Braun & Clarke, 2006; Nowell, Norris, White & Moules, 2017). The researcher conducted this study during the school closure due to the COVID-19 pandemic with the social distancing requirement. Cooperation with other researcher(s) became challenging. For the trustworthiness of the study findings, the researcher followed the following trustworthiness criteria (Guba & Lincoln, 1989; Tobin & Begley, 2004): credibility; transferability; dependability; confirmability; audit trails; reflexivity. For credibility, the researcher triangulation was addressed via inviting an outsider Chinese reviewer in China with expertise in secondary education and education survey design who reviewed the questions of the questionnaire for ensuring them understandable and identifiable to the Chinese readers. For transferability, the researcher would provide thick description so that those who seek to transfer the findings to their own emergency remote teaching-learning context can decide the transferability. For the confirmability, the researcher gave full and equal attention to each data item and clarified the reasons for theoretical, and analytical choices through the study. For dependability and audit, the researcher ensured the research process is traceable and clearly documented. Other researchers with the similar study of emergency remote teaching-learning in COVID-19 pandemic could arrive at the comparable research conclusion. In the process of the research, the personal reflection journal was recorded, especially developing a codebook and insights information about online teaching for k-12 teachers.

## Findings

The total number of respondents: teacher (N=741, covering primary and secondary education); parents (N=145, with different educational backgrounds). The research participants came from 16 different provinces. The subjects of teacher participants teaching cover Chinese language arts, math, biology, chemistry, physics, geography, history etc. Since the purpose of the current study is picturing emergency remote teaching-learning in China responding to COVID-19 pandemic, the researcher highlighted the perspectives of teachers' and parents' reflections and feedback on ERT. Therefore, the differences among 16 provinces, parents' demographic information, the different subject learning contents, and the differences among teachers between primary schools and secondary schools wouldn't be the concern in the current study.

The respondents provided qualitative comments to the four questions in the questionnaires. Their comments and viewpoints enriched our understanding the emergency remote teaching-learning. Their

responses expressed the following themes: a) educational technology; b) quality of remote teaching-learning; c) remote teaching different from face-to-face teaching; d) student self-discipline; e) necessary professional development for teachers.

### **Widely various educational technologies applied in emergency remote teaching-learning**

The commonly used educational technology platforms and tools for teachers' remotizing teaching included DingTalk (Alibaba), Tencent (live streaming classes, WeChat apps for assignment collection and grading or feedback; QQ instant message; QQ classroom), Classin and SeeWo (EasiCare 腾讯课堂). The teacher participants also used various software for developing their own multimedia lessons. They also used the accessible online mini-lessons or mini-lecture videos (慕课) and online educational resources in their own teaching, such as zxxk.com (学科网) and zhiue.com(智云教育), provincial TV broadcasting classes, koolearn.com (可可英语), etc. Teachers from the same province didn't use the same remote teaching platforms and resources. This brings the challenge for teaching evaluation in emergency remote mode.

### **Factors impacting the quality of emergency remote teaching-learning**

#### ***Parents' viewpoints***

Parents participants pinpointed the challenges for the quality of emergency remote teaching. First, remote teaching is incomparable to face-to-face teaching. In the remote teaching-learning, teachers used limited interactive online instructional strategies to motive and engage students into learning. Some parents expected teachers using skillful questioning strategies and frequent checking-in with students for ensuring their attention in learning. Some parents suggested to use synchronous video conference for monitoring students' learning. Some parents suggested teachers giving positive reinforcement for encouraging and engaging students into learning. In addition, the humor language and creative teaching strategies would be helpful for enhancing students' interest in learning. Compared to face-to-face teaching, the learning contents in remote mode couldn't be taught in great detailed way. Parents complaint that students were easily lost. If students can't understand teacher's teaching and their problems can't be solved immediately, the quality of remote teaching-learning would be degraded.

Secondly, glitchy technology for online classroom and unstable internet connection greatly impacted the quality of remote teaching-learning. For example, parents complained about live classes and microphone offline. That greatly impacted the teaching and learning efficiency. Parents also pointed out that it was overwhelming for students taking the class and finishing other learning activities such as assignments and quiz on different platforms. Students and their parents were really confused. Some parents suggested using a well-developed learning management system in which students can finish all learning activities along with teachers' monitor.

Thirdly, teachers couldn't monitor and assess students learning outcome in a formative and effective way due to the limited instruction time in remote mode. Teachers had no extra time to meet students' individual needs in learning. Some parents said that teachers had no way to do whole class assessment

and individual assessment for ensuring students learning outcomes like what they did in face-to-face classes. If students didn't ask questions after each remote class, teachers had no way to effectively evaluate whether their students understood the learning content or not.

### ***Teachers' viewpoints***

For teacher participants, the primary factors impacted the quality of remote teaching consist of: 1) remote classroom management; 2) inadequate competence of teaching online 3) not finding effective way of doing the whole class assessment or formative assessment; 4) heavy and multilayered workload; 5) hard to meet all students learning needs.

Firstly, teachers encountered the big challenge of classroom management. Teachers said that it was hard to monitor students in remote learning. Some students pushed back against learning in remote mode such as late or no submission of required assignment, silence or "disappearance" in class interactions with teachers and other students. Teachers pointed out students lack of self-discipline in remote learning would greatly impact their learning outcomes. They called parents and students or kept communication with them via social media "WeChat" with regards to engaging students into learning.

Secondly, teachers identified their inadequate competence of teaching online. For example, some teachers expected to have developed the capability of using ed-tech software to develop multimedia lectures for remote teaching. Normally, teachers learned from their colleagues about the new software or apps for creating multimedia lectures. They also noticed that they were not well-prepared for teaching online. For example, some teachers encountered teaching time management issue in remote teaching mode. Some teachers encountered the online interaction issues while some teachers encountered the issues of online interactive strategies, and the strategies for monitoring students' learning and engaging students into learning.

Thirdly, teachers didn't find the effective way of doing the whole class assessment or formative assessment. Due to short of time in remote teaching, teachers either didn't find the effective way of giving immediate feedbacks to students' learning and create the immediate interactions and communication with students and their parents. Ensuring students' quality of remote learning, teachers pointed out the importance of cooperation with parents who could monitor their children's learning at home in synchronous online class. Teachers expected to know more about students learning through the communications with parents.

Fourthly, workload was heavy. Time was consuming for creating multimedia lectures, looking for the available online resources for lecture preparation, and grading assignments. Some teachers said that some of the learning content were hardly clarified in online mode. They had to offer additional offline tutoring. In most cases, teachers tutored students individually and with small groups.

Fifth, it was hard to meet all students learning needs. Some teachers highlighted the importance of student's self-discipline in remote teaching and learning. For the students with great self-discipline, they

could follow the instructions. For the students with poor self-disciplining ability, teachers needed to teach them self-discipline. In the remote large-size class with most of students at the two ends of the learning ability spectrum, meeting all students learning needs would be impossible.

### **Remote teaching different from face-to-face teaching in three ways**

According to parent participants' and teacher participants' viewpoints, remote teaching is different from face-to-face teaching in the following perspectives: instructional language different; instructional strategies different; interaction and communication different; role of teachers and parents changing.

Some parents and teachers specifically stated the arts of language in remote teaching, including teacher's ability of well-organizing their language in the instruction and oral presentation skills. The teacher's lectures are expected to be interesting, innovative and attractive aiming at engaging students into learning in online context. What type language in remote teaching can be defined as "interesting, innovative and attractive" should be studied in future. Parents also mentioned that teachers' oral presentation/ lecture should go smoothly without nonsense words or the words/topics distracting student attention. In addition, what the "arts of language" in remote teaching refers to is not clear yet.

The research participants had a common viewpoint about instructional strategy for remote teaching different from that in face-to-face teaching in brick-and-mortar classrooms. In the remote teaching, teaching is student-centered. The interactive instruction and immediate feedback are expected. The various and flexible instructional strategies and the teaching-learning contents presented with multiple formats are necessary for motivating and engaging students into learning. In this process, teachers are required being patient and patient. Teachers are required to follow students learning pace. Some teachers defined these as the role of teachers changing.

The research participants thought interaction and communication different in remote teaching. In remote teaching-learning, they emphasized the necessary for teachers to integrate interactive learning activities and give special attention to creating more opportunities for interactions and dialogue between teachers and students. Different from face-to-face teaching, teachers need the intentional and thoughtful plan for instructional design aiming at developing a learning community via effective communication and interactions between teachers and students.

The research participants also mentioned the roles of teachers and parents in remote teaching-learning different from their roles in face-to-face classrooms in two ways. First, besides teaching online, teachers were expected to tutoring students' learning offline via social media. Besides teaching academics, teachers were expected to be social emotional educators and psychologists who can take care students' mental health and take intervention actions when their students suffer from the depress induced by the COVID-19 pandemic and the social isolation induced by "stay-at-home" policy. Meanwhile, parents' role changed as well. Parents became the supervisors and facilitators of student learning. Sometimes, these parents became tutors when their children couldn't understand teacher's teaching. Or they sought for online resources for helping their children. Sometimes, the parents became coordinators of the remote

teaching-learning. They bridged the gap between their children and teachers, especially their younger age children. Parents helped their children submitting assignments to the designated platforms. They also helped their children scheduling virtual meeting time for asking teachers questions. However, parents and teachers both felt powerless when children had worse self-discipline in remote learning.

### **Student's self-discipline in emergency remote learning**

The parent participants were concerned about their children's self-discipline ability in remote learning. The parents argued that remote learning is fine for well self-disciplined students while it is challenging for students without or with worse self-discipline ability. They even believed that students with worse self-disciplinary ability would learn nothing in remote teaching-learning. They viewed that "self-discipline ability" can widen the learning gap between students with good self-discipline ability and those with worse self-discipline ability. For the quality of remote teaching and learning, parents' supervising and teachers' monitoring are always expected.

### **Necessary professional development for teachers**

Teacher participants didn't receive the professional training for remote teaching. Inexperience of teachers in emergency remote teaching felt powerless in classroom management. They also felt poor-prepared for remote teaching in terms of designing interactive teaching and learning. The teacher participants indicated the necessary professional development for online teaching in the following perspectives: the techniques for (synchronous and asynchronous) online classroom management; the skills and strategies for interactive learning and online interactions with students; the techniques and strategies for engaging students into learning such as effective online teaching; the techniques and the strategies for whole class assessment and individual student assessment in online classes; the techniques for giving meaningful feedback; the instructional technology application in teaching and learning, especially the software for mini-lecture development; mental health education.

## **Discussion**

Due to the COVID-19 pandemic, emergency remote teaching-learning has become the universal response to "school closure without stopping teaching and learning" around the world. Emergency remote teaching-learning has become the "touchstone" for testing a country's educational technology infrastructure at national and local levels, and for testing in-service teachers' readiness for teaching online. The effective online teaching heavily relies on the stable and available educational technology infrastructure. The research participants in the current study encountered glitchy technologies for online classes or unstable internet connection which greatly impacted the quality of remote teaching-learning. The available educational technology tools and/or platforms in educational technology market in China might not fit well in the emergency remote teaching. The mostly used online resource was MOOCs (massive open online courses at national and provincial levels). The parent participants indicated using a learning management system (LMS) in which teachers and students can finish all teaching and learning activities.

Another challenge is in-service teachers being lack of professional development of instructional technology. Teacher participants didn't think that they were well-prepared for teaching in remote mode. The effective online teaching relies on teachers' online teaching competence (Smith, 2005; Albrahim, 2020) and previous experience. Online teaching is not widely applied in Chinese schools and many teachers had no previous online teaching experience (Zhang, Wang, Yang & Wang, 2020). Responding to the emergency remote teaching-learning, some teachers received the types of training during the school closure. These training might not meet teachers' needs for emergency remote teaching. The common issues encountered in emergency remote teaching include classroom management, engaging students into learning, learning assessment and dealing with students pushing back against online learning. In addition, teaching time management became challenging too. Teacher participants taught themselves about online class design via watching the examples of videoed mini-lectures (□□) for understanding online teaching. Teachers also learned from each other about educational technology for online teaching. They shared with each other about the effective strategies for engaging students into learning in online and remote mode. These teacher participants in emergency remote teaching-learning built up their own professional learning network. For long-term plan, the educational administration departments at provincial level should initiate professional development workshops with regards to the issues these teachers encountered in their online teaching.

The third challenge is the accountability of emergency remote teaching. Due to the nature of emergency remote teaching-learning, currently, there is no way to evaluate the effectiveness of emergency remote teaching (Hodges, Moore, Lockee, Trust & Bond, 2020). It remains unclear of the effective practices for emergency remote teaching-learning, such as the effective working instruction strategies and pedagogical principles. Therefore, how much of these remote teaching experiences can be generalized to online teaching or emergency remote teaching in future is unknown. However, one thing is clear here. Teachers' competence of applying technology into teaching (ISTE, 2019) and the competence of instructional design developed in the emergency remote teaching-learning (ISTE, 2019) can be transferred to online teaching and to teaching with educational technology integration in the brick-and-mortar classrooms when schools reopen. Ideally, teachers can use the digital tools and resources to enhance students' learning, engage students into learning, and deepen and facilitate students extensive learning. No matter in online teaching or in brick-and-mortar classrooms, teachers need always sequel students' learning first and technology second (Kolb, 2017).

The fourth challenge is parents' skeptic attitude towards emergency remote teaching and learning in the current study. Primarily, the skeptic attitude arises from the barriers that prevent the effective online teaching and learning (Collins & Halverson, 2018), including technology accessibility, classroom management, challenges to instruction such as integrating technology into teaching, teachers' authority diluted in online teaching-learning, and the inharmony between assessment in online learning and high-stakes accountability tests across China. The parent participants viewed the MOOCs (massive open online courses) as the great opportunity for their children to see how teachers from elite schools teach the learning contents. Also, the teacher and parent participants viewed this online learning experience as an opportunity for training their children's self-discipline and time management skills. However, most of the

teacher and parent participants believed that remote and/or online teaching-learning only benefit those students who are well self-disciplined and have good time management skills. The parent participants were even concerned that online teaching-learning can make at-risk students worse in learning and result in the big learning gap among students. They emphasized that, in any way, online teaching-learning can't replace face-to-face teaching-learning in the brick-and-mortar classrooms. However, it would be great that there is an online teaching-learning platform for afterschool tutoring in which students can revisit their teachers' in-class lectures and get extra help.

In addition, the parent participants pinpointed that there is no learning atmosphere in online teaching-learning mode. The discourse of "no learning atmosphere" comes from their skeptic attitude towards online teaching and learning. Which piece(s) is/are missing or weakened in remote or online teaching-learning in terms of "learning atmosphere"? Some of parent participants indicated that the relationship between students and teachers are not as close as that built up in face-to-face brick-and-mortar classrooms. The teaching was not as detail as it in face-to-face classroom. The most essential issue is that students can't ask the questions and get the in-time help. The teacher participants said that it was challenging to do in-time formative assessment due to time restriction. Furthermore, something that teachers bring into the classroom while computer can't match, such as inspiration and encouragement, and challenging students' prior beliefs (Collins & Halverson, 2018). In the chaotic emergency remote teaching-learning, teacher's role changed. Parents' role changed too. The more responsibilities of teaching and learning transfers to parents (Collins & Halverson, 2018). It is unclear whether parents are ready for their role change in remote or online teaching-learning. Future study is needed.

The parent participants pushed back against online teaching and learning through their concern about children eye health. They complained that students' eyesight would get destroyed in the remote or online learning. They prefer face-to-face teaching and learning. Some parents believed that students will prefer learning in school more after this emergency remote teaching and learning.

## **Conclusion**

In emergency remote teaching-learning, quality matters. When schools move to temporary remote instruction, there should be a checklist of considerate perspectives and actionable strategies. The prioritized needs include preparing students and their parents for learning success (such as role change, class schedules, explanation of difference between online and face-to-face learning, communication with teacher about their concerns and help, etc.) and preparing teachers for teaching success (instructional technology training, classroom management skills, etc. social emotional education training). These can be applicable in online teaching and learning.

The accountability of emergency remote teaching matters. Teachers from the same province don't use the same remote teaching platforms and resources. This brings the challenge for teaching evaluation in emergency remote mode. The current study suggests the government equipping schools with a standardized online teaching/learning management system and online resources, followed by the

instructional technology professional development for ensuring online teaching quality. Using well-developed learning management system (LMS) might be an option for making evaluation of emergency remote teaching-learning possible.

The current study also raises a question for further discussion with regards to online teaching and learning: "What can be transferred when face-to-face teaching and learning is switched to online format and vice versa"? This is the fundamental question about what impact(s) information technology has brought to traditional education (Collins & Halverson, 2018). Online teaching skills and competencies (Albrahim, 2020; Smith, 2016) can be transferred. As the research participants in the study proposed "being patient" and "language arts for presentation and communication" in online context (Smith, 2009), these are applicable to face-to-face teaching as well. The further study might give attention to compare the skills and competencies for effective online and face-to-face teaching.

## Declarations

### Funding Sources

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

### Declaration of Conflicts of Interest

There is no conflict of interest in preparing this research paper.

### Consent to Participate

The participants consented to participate in the research study on their viewpoint on the emergency remote teaching-learning in China during the school closure due to COVID-19 pandemic.

## References

- Albrahim, F. (2020). Online teaching skills and competencies. *The Turkish Online Journal of Educational Technology, 19(1)*, 9-20.
- Bozkurt, A., & Sharma, R.C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education, 15(1)*, i-vi.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3(2)*, 77-101.
- Chen, X.Q. (2020). Challenge of "school's out, but class's on" to school education: Practical exploration of Chinese schools during the COVID-19 pandemic. *Science Insight Education Front, 5(22)*, 501-516.

- Collins, A., & Halverson, R. (2018). *Rethinking education in the age of technology: The digital revolution and schooling in America*. New York, NY: Teachers College Press.
- Craig, R. (2020). What students are doing is remote learning, not online learning: There is a difference. Retrieved from <https://www.edsurge.com/news/2020-04-02-what-students-are-doing-is-remote-learning-not-online-learning-there-s-a-difference>
- Czaja, R., & Blaire, J. (2004). *Designing surveys: A guide to decisions and procedures*. Thousand Oaks, CA: Pine Forge Press.
- Fifield, A. (2020). In China, 200 million kids have gone back to school. Retrieved from [https://www.washingtonpost.com/world/asia\\_pacific/in-china-200-million-kids-have-gone-back-to-school-online/2020/02/17/e5cc6f10-5131-11ea-80ce-37a8d4266c09\\_story.html](https://www.washingtonpost.com/world/asia_pacific/in-china-200-million-kids-have-gone-back-to-school-online/2020/02/17/e5cc6f10-5131-11ea-80ce-37a8d4266c09_story.html)
- Galvin, G. (2020). With schools closed, Chinese primary school students show signs of depression and anxiety. Retrieved from <https://www.usnews.com/news/healthiest-communities/articles/2020-04-24/study-1-in-5-chinese-children-showed-depression-symptoms-during-coronavirus-lockdowns>
- Guba, E.G., & Lincoln, Y. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between Emergency remote teaching and learning. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- International Society for Technology in Education. (2019). ISTE standards for educators. Retrieved from <https://www.iste.org/standards/for-educators>
- Kolb, L. (2017). *Learning first, technology second: The educator's guide to designing authentic lessons*. Portland, OR: International Society for Technology in Education (ISTE).
- Meyer, A., Rose, D.H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. Wakefield, MA: CAST Professional Publishing.
- Ministry of Education of the People's Republic of China. (2020a). Notice on work arrangements for primary and secondary schools' "suspending classes without stopping learning" (教育部办公厅关于中小学延期开学期间“停课不停学”有关事宜的通告). Retrieved from [http://www.moe.gov.cn/jyb\\_xwfb/gzdt\\_gzdt/s5987/202003/t20200306\\_428342.html/](http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/202003/t20200306_428342.html/)
- Ministry of Education of the People's Republic of China. (2020b). MOE upgrades free online learning platform for students. Retrieved from [http://en.moe.gov.cn/news/press\\_releases/202003/t20200302\\_426337.html](http://en.moe.gov.cn/news/press_releases/202003/t20200302_426337.html)
- Ning, A., & Corcoran, B. (2020). How China's schools are getting through COVID-19. Retrieved from <https://www.edsurge.com/news/2020-04-20-how-china-s-schools-are-getting-through-covid-19>

Nowell, L. S., Norris, J.M., White, D., & Moules, N. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16, pp. 1-13.

Smith, R. D. (2009). Virtual voices: Online teachers' perceptions of online teaching standards and competencies. *Journal of Technology and Teacher Education*, 17(4), 547-571.

Smith, T.C. (2016). Fifty-one competencies for online instruction. *The Journal of Educators Online*, 2(2), 1-18.

Tobin, G.A., & Begley, C.M. (2004). Methodological rigor within a qualitative framework. *Journal of Advanced Nursing*, 3, pp. 68-70.

Zhang, W.N., Wang, Y.X., Yang, L.L., & Wang, C.Y. (2020). Suspending Classes Without Stopping Learning: China's Education Emergency Management Policy in the COVID-19 Outbreak. *Journal of Risk and Financial Management*, 13(55), pp. 2-6.