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SPECIALTY SECTION
This article was submitted to
Digital Education,
a section of the journal
Frontiers in Education

RECEIVED 15 June 2022
ACCEPTED 22 August 2022
PUBLISHED 28 September 2022

CITATION
Fuchs K (2022) The perceived
satisfaction with emergency remote
teaching: Evidence from Thailand in
higher education during COVID-19.
Front. Educ. 7:969850.
doi: 10.3389/feduc.2022.969850

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The perceived satisfaction with emergency remote teaching: Evidence from Thailand in higher education during COVID-19

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KEYWORDS

emergency remote teaching, COVID-19, distance education, student satisfaction, Thailand

Introduction

In an abrupt and unprecedented move to terminate physical classroom arrangements across the country for all higher education institutions (HEI), the paradigm of emergency remote teaching, or ERT for short, emerged (Hodges and Fowler, 2020; Shim and Lee, 2020). The purpose of ERT is to give students coherent, but temporary and quick access to training and instructional support (Fuchs, 2021). The quick transition concerned not just instructors but also students, who had little time to adjust to the new circumstances (Hodges and Fowler, 2020). COVID-19 has had a significant impact on education (Aguilera and Nightengale-Lee, 2020). Indeed, since the outbreak of the pandemic, more than 91 percent of the world's student population has faced educational obstacles (Silletti et al., 2021).

Amid the COVID-19 outbreak, many educators across the world struggled to modify the format of their lectures to remote teaching within a matter of days (Ferri et al., 2020; Fuchs and Karrila, 2021). This worldwide pandemic revealed a large gap in “distance teaching readiness and training required for emergency remote teaching, including using technology to assure continuity of learning for students at a distance” (Trust and Whalen, 2020, p. 197). Although, there is no systematic approach for HEI on how to handle educational continuity throughout COVID-19's rapid shift that occurred all over the world (Hodges and Fowler, 2020; Whittle et al., 2020; Silletti et al., 2021).

Based on the bibliometric analysis by Karakose et al. (2021a), it can be concluded that the majority of empirical studies have been conducted in a Western context (i.e. American-European origins), therefore, more empirical evidence from Asia is needed to appropriately evaluate the effectiveness of blended learning environments during COVID-19 and beyond. Similarly, Aguayo et al. (2022) argue that more empirical evidence is needed to accurately investigate the paradigm of e-learning in higher education. For example, the perspective of teachers and their digital capabilities is well-documented (Karakose et al., 2021b), wherein the student perspective in developing countries (such as Thailand) is lacking empirical evidence.

Furthermore, [Can and Bardakci \(2022\)](#) suggest that instructional design for distance education (e.g., to eliminate technological infrastructure problems) and improving student-teacher communication are important issues to address in the design of e-learning environments. In a related study with high school students, it is suggested that COVID-19 negatively affects sustainable education by deteriorating the perceived quality of life and increasing internet addiction ([Karakose et al., 2022a](#)). Moreover, it was revealed that COVID-19 had an indirect effect on student burnout and social media addiction ([Karakose et al., 2022b](#)). Although the effects are beyond the scope of the empirical data collection presented in this article, [Karakose et al. \(2022b\)](#) noted that developing digital literacy competencies are a possible way to alleviate the side-effects of studying during COVID-19. Therefore, a better understanding of the student perceptions has the potential for a much-needed baseline of new research.

The scope of the dataset allows for analyzing the perceived satisfaction of undergraduate students in Thailand toward emergency remote teaching (ERT) during COVID-19. Furthermore, different socio-demographic characteristics can be used as moderators and analyzed how these characteristics influence perceived satisfaction. For that purpose, data were gathered *via* a bilingual questionnaire that received 874 valid responses from undergraduate students across three different HEI in Thailand. The dataset provides an informative reference for practitioners and policymakers in higher education to adapt their pedagogy, as well as a secondary data source for educational researchers to analyze undergraduate students' perceived satisfaction with emergency remote teaching in Thailand ([Fuchs and Karrila, 2022](#)).

Research design

Sampling and procedure

The data were collected in three individual phases from three different universities in Thailand. The sample was selected based on the convenience sampling methodology, which according to [Stratton \(2021\)](#), is the most common form of non-probability sampling and participants are drawn from a close population group (p. 373). The included data were collected from full-time undergraduate students in different disciplines (including business studies, science, computing, medicine, language and cultural studies, mathematics, and tourism and hospitality management). The learning environment at the time of sampling was that traditional on-site classes were shifted to virtual classrooms in Microsoft Teams or Zoom with the support of an LMS (learning management system). An LMS is “a software application that facilitates the virtual administration and delivery of course content” ([Bradley, 2021](#), p. 75) between the course instructor and students.

TABLE 1 Sample from Prince of Songkla University in Phuket, Thailand.

Characteristics		University A
Gender	Male	58
	Female	159
	Prefer not to say	2
Year of study	Year 1	50
	Year 2	83
	Year 3	43
	Year 4 or above	43
Age range	18 years old	6
	19–20 years old	122
	21–22 years old	68
	23 years or above	23
Nationality	Thai	184
	Foreign	35
Preferred mode	Virtual classroom	54
	Traditional classroom	165

TABLE 2 Sample from Khon Kaen University in Khon Kaen, Thailand.

Characteristics		University B
Gender	Male	111
	Female	252
	Prefer not to say	–
Year of study	Year 1	79
	Year 2	208
	Year 3	76
	Year 4 or above	–
Age range	18 years old	7
	19–20 years old	281
	21–22 years old	56
	23 years or above	19
Nationality	Thai	292
	Foreign	71
Preferred mode	Virtual classroom	94
	Traditional classroom	269

The questionnaire to obtain the sample was self-administered electronically with a bilingual option, i.e., English and Thai languages shown simultaneously. After a rigorous screening process, 51 responses were excluded from the analysis. The redundant responses included 16 responses from another university, 14 responses from international exchange students, and 21 incomplete responses. The 16 responses from other universities were removed since they could potentially deplete the sampled results ([Tables 1–3](#)) neither they were large enough to stand on their own as a separate sample. The 14 responses from international exchange

students were dismissed since the course selection and nature of stay (usually limited to 5 months) differed substantially from the remainder of the sample. Furthermore, 21 responses had incomplete fields, i.e., blank responses, that did not allow for further analysis. A total of 874 eligible responses were included as a population sample for the data analysis. The level of confidence for precise sampling was quantified at 95% ($p <$

0.05). Based on included responses, the characteristics of the participants were summarized by their gender, nationality, year of study, age range, institution, and preferred mode of study (Tables 1–3). The ratio between female and male students is the result of a large representation of tourism and hospitality students in the sample, which is generally more attended by female than male students.

TABLE 3 Sample from Mae Fah Luang University in Chiang Rai, Thailand.

Characteristics		University C
Gender	Male	98
	Female	192
	Prefer not to say	2
Year of study	Year 1	83
	Year 2	106
	Year 3	91
	Year 4 or above	12
Age range	18 years old	7
	19–20 years old	220
	21–22 years old	46
	23 years or above	19
Nationality	Thai	277
	Foreign	15
Preferred mode	Virtual classroom	90
	Traditional classroom	202

The first phase of the data collection took place at the Prince of Songkla University in Phuket, Thailand. The preliminary findings from this isolated sample were previously reported by Fuchs and Karrila (2021). The data was gathered in the first quarter of 2021 collected during a nationwide ERT policy as a result of the forthcoming spread of the coronavirus pandemic. Henceforth, this sample is referred to as University A ($n = 219$). The sociodemographic variables of the sampled participants are summarized in a tabular format (Table 1).

The second phase of the data collection took place at Khon Kaen University in Khon Kaen, Thailand. The preliminary findings from this isolated sample were previously reported by Fuchs and Karrila (2022). The data was gathered in the second quarter of 2021 collected during a nationwide ERT policy as a result of the forthcoming spread of the coronavirus pandemic. Henceforth, this sample is referred to as University B ($n = 363$). The sociodemographic characteristics of the sample are summarized in Table 2.

The third phase of the data collection took place at the Mae Fah Luang University in Chiang Rai, Thailand. The findings

TABLE 4 Characteristics of the participants organized by their institution.

Characteristics	“University A”	“University B”	“University C”	Total
Gender	219	363	292	874
Male	58	111	98	267
Female	159	252	192	603
Prefer not to say	2	–	2	4
Year of study	219	363	292	874
Year 1	50	79	83	212
Year 2	83	208	106	397
Year 3	43	76	91	210
Year 4 or above	43	–	12	55
Age range	219	363	292	874
18 years old	6	7	7	20
19–20 years old	122	281	220	623
21–22 years old	68	56	46	170
23 years or above	23	19	19	61
Nationality	219	363	292	874
Thai	184	292	277	753
Foreign*	35	71	15	121
Preferred mode	219	363	292	874
Virtual classroom	54	94	90	238
Traditional classroom	165	269	202	636

*Foreign degree student, however, nationality not further specified. The bold values stand for the subtotals of each characteristic.

TABLE 5 Description of the characteristics in the dataset [adopted from the original study by Fuchs and Karrila (2021)].

Column	Data label	Explanation
Sociodemographic questions		
Column A	Institution	Khon Kaen University, Prince of Songkla University, Mae Fah Luang University
Column B	Gender	Male, Female, Prefer not to say (unspecified)
Column C	Age	18 years old, 19–20 years old, 21–22 years old, 23 years old or above
Column D	Year	Year 1, Year 2, Year 3, Year 4 or above
Column E	Nationality	Thai, Foreign (unspecified)
Column F	Preferred Mode	Traditional classroom, Virtual classroom
Statements about the perceived importance		
Column G	Question 1	“The teacher begins the class with a review of the previous class”
Column H	Question 2	“The teacher presents the material in an interesting and engaging way”
Column I	Question 3	“The teacher presents the material in an organized and coherent way”
Column J	Question 4	“The teacher is knowledgeable about the content of the course”
Column K	Question 5	“The teacher is friendly and patient with the students”
Column L	Question 6	“The course material is well and professionally prepared”
Column M	Question 7	“The course material is easy to access in the LMS”
Column N	Question 8	“Students are engaged to actively participate in the discussion”
Column O	Question 9	“I am learning something which I consider valuable”
Column P	Question 10	“I am finding the course challenging and stimulating”
Statements about the perceived performance		
Column Q	Question 11	“The teacher begins the class with a review of the previous class”
Column R	Question 12	“The teacher presents the material in an interesting and engaging way”
Column S	Question 13	“The teacher presents the material in an organized and coherent way”
Column T	Question 14	“The teacher is knowledgeable about the content of the course”
Column U	Question 15	“The teacher is friendly and patient with the students”
Column V	Question 16	“The course material is well and professionally prepared”
Column W	Question 17	“The course material is easy to access in the LMS”
Column X	Question 18	“Students are engaged to actively participate in the discussion”
Column Y	Question 19	“I am learning something which I consider valuable”
Column Z	Question 20	“I am finding the course challenging and stimulating”

from this isolated sample were not previously published. The data was gathered in the third quarter of 2021 collected during a nationwide ERT policy as a result of the forthcoming spread of the coronavirus pandemic. Henceforth, this sample is referred to as University C ($n = 292$). The sociodemographic characteristics of the sample are summarized in Table 3.

Research instrument

The survey questionnaire was divided into three sections with a total of 27 items and was adopted from an earlier case study (Fuchs and Karrila, 2021). The first component of the survey questionnaire was designed to gather information about the participant's socio-demographic profile. The second and third sections contained 10 items each, wherein the participant was able to express their view on a 5-point Likert-type scale with “pre-coded responses for Not Important At All (1), Not Very Important (2), Somewhat Important (3), Very Important (4),

and Extremely Important (5) in the second section. Similarly, the third section had pre-coded Likert-type responses for Not At All Satisfied (1), Not Very Satisfied (2), Somewhat Satisfied (3), Very Satisfied (4), and Extremely Satisfied (5)” (Fuchs and Karrila, 2021, p. 119). Otherwise, the items in the second and third sections of the questionnaire were identical to compare the perceived importance and performance of each item (Table 5). The questions and organization of the administered questionnaire were scrutinized for validity by three senior colleagues. Moreover, the questionnaire was tested with 10 students for comprehension of the questions. These preliminary examinations generated minimal modifications to improve the clarity of the questionnaire.

Ethics statements

Before attempting the questionnaire, the participants were informed about the aim of the study and its purpose. Moreover,

it was made clear to the participants that their participation is voluntary and that they had the right to withdraw at any stage. Furthermore, it was explained to the students that their participation would have no impact on their academic performance. The information gathered would be treated with confidentiality (i.e., anonymized in all reporting). For ethical reasons and to protect the participants' identities, some specific information in the socio-demographic profile was generalized before disclosure in this paper. Namely, some specific minority nationalities were labeled as "foreign" rather than displaying the specific nationality as this could potentially expose the participant's identity. The participating students were of legal age (i.e. 18 years or above), and therefore, no consent from their legal guardians was obtained. However, all participating students gave informed consent to participate in the study.

Empirical results

Table 4 shows the summarized results of the three samples based on the 874 responses included in the dataset. The sociodemographic characteristics include information about the participant's reported gender, year of study, age range, nationality, and preferred classroom arrangement (i.e., traditional on-site classroom or virtual emergency remote teaching).

The accompanying dataset can be further analyzed and discussed based on the data labels and statements shown in Table 5, as well as a copy of the survey can be accessed through the digital object identifier in Mendeley Data at doi: <https://doi.org/10.17632/44mm73sgws.1>.

Conclusion

The scope of the dataset allows for analyzing the satisfaction with ERT as perceived by undergraduate students in Thailand during the global coronavirus pandemic. Furthermore, different sociodemographic characteristics can be used as moderators and analyzed how these characteristics influence perceived satisfaction. For example, the dataset permits the study of socio-demographic characteristics that influence the perceived satisfaction of these undergraduate students. The empirical data functions as an insightful reference for educators and policymakers in higher education to adjust their pedagogics based on the performance of specific items in the questionnaire. Moreover, the data acts as a secondary data source for researchers in higher education to examine the perceived satisfaction of undergraduate students' perception of ERT. Finally, the dataset offers graduate students and early-career

researchers authentic data that allows them to practice their data analytics skills with real-world data.

Data availability statement

The dataset has been deposited into an open repository and is available under the following permanent digital object identifier in Mendeley Data at <https://doi.org/10.17632/44mm73sgws.1>.

Ethics statement

The studies involving human participants were reviewed and approved by the Research Committee of the Faculty of Hospitality and Tourism, Prince of Songkla University. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

Author contributions

The author confirms being the sole contributor to this work and has approved it for publication.

Funding

The empirical work was supported by the Faculty of Hospitality and Tourism, Prince of Songkla University through the Fast Track Data Collection Grant.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

- Aguayo, J. M. B., Valdes, J. H., Cordoba, V. H. M., Nájera, M. J., Vázquez, F. R. S., Muñoz, E. M., et al. (2022). Digital activism in students of a university in central Mexico in the COVID-19 era. *Adv. Mob. Learn. Educ. Res.* 2, 297–307. doi: 10.25082/AMLER.2022.01.014
- Aguliera, E., and Nightengale-Lee, B. (2020). Emergency remote teaching across urban and rural contexts: perspectives on educational equity. *Inf. Learn. Sci.* 121, 471–478. doi: 10.1108/ILS-04-2020-0100
- Bradley, V. M. (2021). Learning management system (LMS) use with online instruction. *Int. J. Technol. Educ.* 4, 68–92. doi: 10.46328/ijte.36
- Can, Y., and Bardakci, S. (2022). Teachers' opinions on (urgent) distance education activities during the pandemic period. *Adv. Mob. Learn. Educ. Res.* 2, 351–374. doi: 10.25082/AMLER.2022.02.005
- Ferri, F., Grifoni, P., and Guzzo, T. (2020). Online learning and emergency remote teaching: opportunities and challenges in emergency situations. *Societies* 10, 86. doi: 10.3390/soc10040086
- Fuchs, K. (2021). Students' perceptions concerning emergency remote teaching during COVID-19: a case study between higher education institutions in Thailand and Finland. *Perspect. Glob. Dev. Technol.* 20, 278–288. doi: 10.1163/15691497-12341595
- Fuchs, K., and Karrila, S. (2021). The perceived satisfaction with emergency remote teaching (ERT) amidst COVID-19: an exploratory case study in higher education. *Educ. Sci. J.* 23, 116–130. doi: 10.17853/1994-5639-2021-5-116-130
- Fuchs, K., and Karrila, S. (2022). Satisfaction with remote teaching in Thai higher education. *Educ. Sci. J.* 24, 206–224. doi: 10.17853/1994-5639-2022-2-206-224
- Hodges, C. B., and Fowler, D. J. (2020). The COVID-19 crisis and faculty members in higher education: from emergency remote teaching to better teaching through reflection. *Int. J. Multidiscip. Perspect. High. Educ.* 5, 118–122. doi: 10.32674/jimphe.v5i1.2507
- Karakose, T., Ozdemir, T. Y., Papadakis, S., Yirci, R., Ozkayran, S. E., Polat, H., et al. (2022a). Investigating the relationships between COVID-19 quality of life, loneliness, happiness, and internet addiction among K-12 teachers and school administrators—a structural equation modeling approach. *Int. J. Environ. Res. Public Health* 19, 1052. doi: 10.3390/ijerph19031052
- Karakose, T., Polat, H., and Papadakis, S. (2021b). Examining teachers' perspectives on school principals' digital leadership roles and technology capabilities during the COVID-19 pandemic. *Sustainability* 13, 13448. doi: 10.3390/su132313448
- Karakose, T., Yirci, R., and Papadakis, S. (2022b). Examining the associations between COVID-19-related psychological distress, social media addiction, COVID-19-related burnout, and depression among school principals and teachers through Structural Equation Modeling. *Int. J. Environ. Res. Public Health* 19, 1951. doi: 10.3390/ijerph19041951
- Karakose, T., Yirci, R., Papadakis, S., Ozdemir, T. Y., Demirkol, M., Polat, H., et al. (2021a). Science mapping of the global knowledge base on management, leadership, and administration related to COVID-19 for promoting the sustainability of scientific research. *Sustainability* 13, 9631. doi: 10.3390/su13179631
- Shim, T. E., and Lee, S. Y. (2020). College students' experience of emergency remote teaching due to COVID-19. *Child. Youth Serv. Rev.* 119, 105578. doi: 10.1016/j.childyouth.2020.105578
- Silletti, F., Ritella, G., Iacobellis, B., Semeraro, C., Episcopo, E., Cassibba, R., et al. (2021). Distance learning in Higher Education during the first pandemic lockdown: the point of view of students with special educational needs. *Qwerty-Open Interdiscip. J. Technol. Cult. Educ.* 16, 30–46. doi: 10.30557/QW000042
- Stratton, S. J. (2021). Population research: convenience sampling strategies. *Prehosp. Disaster Med.* 36, 373–374. doi: 10.1017/S1049023X21000649
- Trust, T., and Whalen, J. (2020). Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. *J. Technol. Teach. Educ.* 28, 189–199. Available online at: <https://www.learntechlib.org/primary/p/215995/>
- Whittle, C., Tiwari, S., Yan, S., and Williams, J. (2020). Emergency remote teaching environment: a conceptual framework for responsive online teaching in crises. *Inf. Learn. Sci.* 121, 311–319. doi: 10.1108/ILS-04-2020-0099