

## **BUKTI KORESPONDENSI**

**JUDUL : CHARACTER EDUCATION TPACK SKILLS TO EMERGENCY  
REMOTE LEARNING DURING THE COVID-19 PANDEMIC**

**JURNAL : JURNAL PENELITIAN DAN PENGEMBANGAN PENDIDIKAN**

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# [JPPP] Editor Decision



Kotak Masuk



I Wayan S... 22/7/2023

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Agnes Widyaningrum:

We have reached a decision regarding your submission to Jurnal Penelitian dan Pengembangan Pendidikan, "Character Education TPACK Skills to Emergency Remote Learning During The Covid-19 Pandemic".

Our decision is to: Revision Required

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# [JPPP] Editor Decision



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Dear Author

please correct according to the reviewer's directions and give color to each sentence that has been corrected.

Thank You

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# [JPPP] Editor Decision



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## Character Education TPACK Skills to Emergency Remote Learning During The Covid-19 Pandemic

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#### Keywords:

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### ABSTRACT

*Technology Pedagogical Content Knowledge (TPACK) is the solution to today's Internet learning issues. This research aims to investigate Character Education TPACK skills to emergency remote learning during the covid-19 pandemic. This research was conducted using a survey technique, with a questionnaire comprised of 33 statements*

*and 5 open-ended questions distributed to 200 teachers in Central Java, Indonesia. The data were examined numerically and subjectively using component analysis and teachers explanation descriptions. The findings show that demonstrated mastery of Character Education's TPACK in their online classes by using different learning media and instructional platforms. Character Education can use creative tasks such as creating videos during the learning process during the pandemic using Indonesian language to generate non-boring learning. This research gives an overview of Character Education's TPACK abilities and some information about the difficulties and benefits of online Character Education learning during the Covid-19 pandemic.*

### 1. INTRODUCTION

The World Health Organization (WHO) has declared the Coronavirus a pandemic. The Covid-19 virus (Corona Virus Disease 2019) has spread to infect almost all countries worldwide. Coronavirus disease 2019 (covid-19) caused by SARS-CoV-2 was first reported in Wuhan, China (Shereen et al., 2020). This disease has infected more than one million people worldwide. WHO has listed covid-19 as a global pandemic, so officially, the 2 current global pandemics are HIV/AIDS and covid-19 (Watkins, 2020). Learning management studies show the need for state readiness in the case of a pandemic in the direction of education (Abdulmir & Hafidh, 2020). The covid-19 pandemic has forced teachers and students to conduct distance learning, which applies to all levels of education (Retnosari & Hakim, 2021). The situation with general education, especially in schools, is different (Basilaia & Kvavadze, 2020). Most

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schools in Indonesia transitioned to emergency remote teaching as a new policy in education from the end of 2019 to early 2022 as a response to the coronavirus disease (Covid-19) (Usak et al., 2020).

The transition in education to an online environment becomes a new challenge for teachers and students (Gomez, 2022; Murphy, 2020). They must quickly adapt to this new environment. Many new problems related to the emergency remote learning implementation (infrastructure and teacher's and students' readiness as the parties involved) have emerged (Arifianto et al., 2021; Saboowala & Manghirmalani Mishra, 2021). The teacher is a role model for students because they are one of the essential factors in education. Their figure significantly influences the student's academic achievement, personality development, and attitude (Paidi et al., 2021). Some studies revealed that teachers have difficulty integrating technology and delivering material meaningfully in their online classes. Technological integration is an effective way for information and communication technology and appropriate educational technological application to achieve the desired learning outcomes (Rahmadi, 2021). In addition, the current quality teachers must master pedagogical and didactic skills in subjects. They also have to master technology and connect it to learning, starting from the plan, organization, and implementation to learning evaluation, students' learning support, and development.

One of the learning management that applies pedagogical knowledge is Pedagogical Content Knowledge (PCK). The PCK model equipped with technology forms a Technological Pedagogical Content Knowledge (T-PACK) model. T-PACK is a theoretical framework that develops Pedagogical Content Knowledge (PCK). PCK was first initiated by Shulman in 1986. Teacher must master Pedagogical Knowledge (PK) and Content Knowledge (CK). Combining PK and CK means that teacher must master the content/material and pedagogy in creating learning. This is stated in Law Number 14 of 2005 concerning teacher competence: teachers must have pedagogic, personality, social, and professional abilities. The combination of PCK capabilities and technology as T-PACK (Pane et al., 2022).

When applying their educational system, every school prioritizes character education. Even in the United Kingdom and the United States, character education has promoted political participation because the government and educators see character education as a tool for overcoming societal issues (Jerome & Kisby, 2019). Since 1966, the British government has been designing character education incorporated into the national curriculum. Character education was developed in the mid-1990s through the Knowledge is Power Program (KIPP) institutions in America (Jerome & Kisby, 2019). Character education has started to be developed in Indonesia as part of the government's cultural education and national character initiative. This nationwide trend is the primary cause of the increasing worry about implementing character education in schools. According to the National Plan, the first goal is to realize a national character, which includes rivalry, good conduct, and Pancasila-based values (Law No. 17/2007). Furthermore, that it represents Indonesian culture's varied and accepting characteristics (Hastasari et al., 2022). Although the Indonesian government only started character education in 2010, schools have long integrated character education into their educational structure (Hastasari et al., 2022; Prayitno et al., 2022). National elements of the character education are related to the expressions and words in which every regional location in Indonesia is different. Consequently, it causes problems for teachers in which they have difficulty explaining learning material to students because it is not easy to make sure they understand the material being explained (Lestiyawati, 2020; Rahman et al., 2021). Teachers find it difficult to control the writing sources for the students or their honesty in conducting assignments. Using one medium repeatedly by the teacher causes students to feel not interested and bored in being involved in the next online class.

Previous studies have shown that T-PACK research on various content has been carried out by researchers abroad in English study programs (Lim et al., 2021) and social sciences (Cuhadar, 2018). T-PACK research in Indonesia has been conducted in biology (Zulyusri et al., 2022), Indonesian language (Prasetyo et al., 2022), and physics study programs (Setiawan et al., 2019). Very little T-PACK research relates to character education. There was almost no PCK research that concerns character education specifically. There is very little research on PCK development related to character education with experienced teacher subjects, not pre-service and in-service teachers (Abidin, 2019). However, several PCK studies relate to learning outcomes in the form of certain characters. The characters examined include creative and curious characters; confident and meaning-filled characters; affective, perceived control, cognitive belief, efficacy state; teacher attitude; social responsibility and self-actualization; and solving skills (Zeng et al., 2022). Teacher education intervention positively affected TPACK (Ning et al., 2022). Students and teachers must adapt to work and study online, considering the Covid-19 pandemic that directly and permanently changes future education. Teachers have to adapt quickly by conducting emergency remote learning. This adaptation can be carried out by improving the teachers' TPACK skills and their skills to use online learning technology. Therefore, this study aims to explore character education' TPACK skills to carry out emergency remote learning during the Covid-19 pandemic. In this

study, the authors describe the use of online learning technology for the character education, the current TPACK skills of character education, and the advantages and problems encountered by emergency remote learning. It is hoped that this research will provide an overview of character education' TPACK skills and some information related to the problems and advantages faced in emergency remote character education learning for teachers and policymakers to create a better learning system.

## 2. METHOD

In this study, a survey technique with a quantitative and qualitative strategy was used as a research design. This study had 5 stages: 1) introduction, 2) tool creation, 3) survey execution in Central Java, 4) data analysis, and 5) synthesis, and reporting. Respondents in this research were teachers from Central Java province in Indonesia. Random sampling was used to pick individuals by distributing the Google Form inquiry link. The questionnaire was distributed to Character Education teachers from primary, junior high, senior high, and vocational high schools, both public and private. Total 200 teachers accepted this study. This study's questionnaire included 33 closed statements and 5 open statements such as strongly agree, agree, neutral, disagree, and strongly disagree. Meanwhile, the open statements about character education' TPACK and their recommendations for implementing learning during the Covid-19 outbreak were adapted from the literature and previous research by Fuad, et al. (2020) and Ariyani, et al. (2023). The quantitative statistics, as stated in the frequency distribution and percentage and displayed in the tables were used to evaluate close statements in the questionnaire. Furthermore, the quantifiable data comprising the TPACK components was evaluated using Spearman correlation and factor analysis. The results of these analyses were used to support the reliability and validity of the questionnaire's assertions (Akoglu, 2018; Janse et al., 2021; Schober et al., 2018). Meanwhile, open statements from the questionnaire were examined qualitatively. The qualitative data was reduced to get representative themes, which were then displayed in a table and removed from the conclusion.

## 3. RESULTS AND DISCUSSION

### Results

#### Demographics

The demographics of the respondents are shown in [Table 1](#).

**Table 1.** Characteristics of respondents' socio-demographic

Demographics Variables	N	Percentage (%)
Gender		
- Male	45	22,5
- Female	155	77,5
Education		
- Diploma	50	25,0
- Bachelor	125	62,5
- Master	25	12,5
Level		
- Elementary School	40	20,0
- Junior High School	55	27,5
- Senior High School	75	37,5
- Vocational High School	30	15,0
School of Teaching		
- Public	125	62,5
- Private	75	37,5

Source: Primary data analysis (2023)

The majority of respondents are female (77,5%), education bachelor (62,5%), level Senior High School (37,5 %), and school of teaching public (62,5 %).

**The technology used in Character Education online learning**

During the Covid-19 pandemic, the online class taught by the Character Education teacher was greatly aided by Internet access and technology such as platforms, applications, and media that teachers can use to explain skills and teaching materials to students, precisely Character Education material. The survey results showed the media used by Character Education teachers during internet learning.

**Table 2.** Technology-based media used in online learning

Types of Media	N	Percentage (%)
Telegram	4	2.0
Website	4	2.0
Google Meet	4	2.0
LMS	7	3.5
E-Learning	7	3.5
Sispensek	4	2.0
Video	7	3.5
Google Form	15	7.5
Pin Smart	4	2.0
Youtube	10	5.0
WhatsApp	47	23.5
Microsoft Office	4	2.0
Zoom Meeting	24	12.0
Google Classroom	59	29.5

Source: Primary data analysis (2023)

Table 2 depicts the 14 different learning platforms, apps, and media they use. Almost half of the Character Education teachers who agreed to participate in this research stated that Google Classroom was their primary medium for delivering material and assigning homework. Furthermore, because of its simplicity of use, WhatsApp was the second most popular form of media. Zoom Meeting was selected for teleconference video so students could communicate immediately in real-time. A competent platform with numerous benefits, such as Sispensek, is less appealing to Character Education. Teachers can quickly recap the outcomes of tasks in Sispensek by monitoring and measuring student attitudes during learning. This absence of interest is due to Sispensek's need for an account, which the school typically gives. Meanwhile, not every institution provides access to this tool. Only a few of the fourteen kinds of media are frequently used, while most Character Education infrequently use others.

**TPACK skills of Character Education**

**Table 3.** Cronbach's Alpha reliability measurement for all indicators

No	Questionnaire Components	Frequency Response					Cronbach's Alpha	Loading Factor	Communalities
		1	2	3	4	5			
Technology Knowledge									
1	I understand how to handle technical issues in the classroom.	24	20	16	44	96	0.805	0.821	0.770
2	I am comfortable with electronics.	24	18	16	42	100	0.835	0.853	0.844
3	I stay up to date on key technological advancements.	26	16	18	66	74	0.775	0.787	0.677
4	I enjoy experimenting with novel technology.	12	20	20	62	86	0.806	0.829	0.788
5	I am well-versed in a variety of tools.	16	50	12	60	62	0.701	0.684	0.689
6	I have the necessary technological abilities to use technology.	4	46	22	56	72	0.670	0.661	0.698
7	I have numerous chances to engage with various technologies.	10	44	28	46	72	0.748	0.745	0.762
Content Knowledge									
8	I am well-versed in the subject of Character Education.	20	18	24	66	72	0.861	0.856	0.732
9	I typically use logical reasoning.	8	44	24	50	74	0.874	0.875	0.765
10	I use various methods and techniques to	8	20	24	58	90	0.803	0.808	0.653

No	Questionnaire Components	Frequency Response					Cronbach's Alpha	Loading Factor	Communalities
		1	2	3	4	5			
	improve my knowledge of Character Education content.								
Pedagogical Knowledge									
11	I understand how to evaluate students achievement in class.	6	46	16	36	96	0.783	0.765	0.696
12	I can modify my instruction based on what the students understand or do not understand.	16	26	26	36	96	0.632	0.592	0.356
13	With various students, I can modify my teaching approach.	8	48	38	22	84	0.710	0.696	0.488
14	I can evaluate students learning through a variety of methods.	0	20	58	76	46	0.739	0.798	0.944
15	In the classroom, I can employ many instructional strategies.	8	26	50	46	70	0.746	0.727	0.717
16	I am well-versed in students' comprehension and misconceptions.	0	22	68	64	46	0.721	0.783	0.952
17	I can plan and handle classes.	16	54	24	40	66	0.734	0.714	0.627
Pedagogical Content Knowledge									
18	I can select an effective instructional strategy to direct students' thoughts and learn about Character Education.	0	18	52	70	60	0.739	0.711	0.506
19	I can select an effective teaching strategy to direct students' reading, thinking, and learning.	0	24	58	68	50	0.816	0.825	0.681
20	I can adjust my instruction based on what students comprehend to improve thinking and learning Character Education	0	14	44	64	78	0.816	0.832	0.693
Technological Content Knowledge									
21	I know the technology that can be used to comprehend and practice Character Education content.	0	10	44	60	86	0.869	0.859	0.738
22	I can select the most effective technology for comprehending Character Education content.	0	10	50	86	54	0.857	0.859	0.737
23	I grasp how to plan and handle classes while using technology to help students learn Character Education material.	0	2	40	74	84	0.823	0.832	0.693
Technological Pedagogical Knowledge									
24	I can select technology for a successful instructional strategy.	2	6	44	84	64	0.694	0.709	0.503
25	I can select technology that improves students understanding.	0	10	50	86	54	0.796	0.827	0.684
26	The teacher education program has made me consider more deeply how technology can influence my instruction in class.	0	22	68	64	46	0.860	0.876	0.768
27	I consider how to use technology in the classroom thoughtfully.	0	28	64	58	50	0.740	0.726	0.527
28	I can apply what I've learned about technology to different teaching tasks.	6	46	62	46	40	0.744	0.698	0.488
TPACK									
29	I can teach the proper topic by combining Character Education material, technology, and instructional methods.	0	10	54	90	46	0.760	0.766	0.587
30	I can select classroom technology that improves what I teach, how I teach, and what students learn.	0	22	40	78	60	0.850	0.848	0.720
31	I can apply techniques learned in classroom classes that combine material, technology, and instructional approaches.	0	24	60	68	48	0.781	0.767	0.589
32	I can assist others in my school and/or county	0	14	44	64	78	0.849	0.852	0.726

No	Questionnaire Components	Frequency Response					Cronbach's Alpha	Loading Factor	Communalities
		1	2	3	4	5			
33	coordinate content, technology, and instructional approaches. I can select technology that improves the substance of an issue.	0	10	44	60	86	0.876	0.882	0.778

The questionnaire given to Character Education contained 33 statements. Table 3 demonstrates that Cronbach's Alpha reliability measurement for all indicators was greater than 0,7, indicating that all assertions on the indicators are reliable. In general, the findings of the loading factor and communality measurements were greater than 0,5, implying that the questionnaire comments reflect the measured factors.

Table 4. Correlation of TPACK components

	TK	CK	PK	PCK	TCK	TPK	TPACK
TK	0.428	1	0.641	0.478	0.439	0.536	0.455
CK	0.505	0.641	1	0.624	0.584	0.689	0.616
PK	0.528	0.478	0.624	1	0.722	0.707	0.850
PCK	0.565	0.439	0.584	0.722	1	0.803	0.842
TCK	0.513	0.536	0.689	0.707	0.803	1	0.781
TPK	0.515	0.455	0.616	0.850	0.842	0.781	1
TPACK	0.428	1	0.641	0.478	0.439	0.536	0.455

Table 4 displays the findings of the component correlation tests. According to the correlation findings, each variable has a favorable association with the other. The correlation values among factors were generally greater than 0,4, implying that each factor frequently correlates with and supports each other for TPACK.

**Discussion**

The findings show that demonstrated mastery of Characer Education's TPACK in their online classes by using different learning media and instructional platforms. Online learning forced teachers, particularly Character Education, to use technologies such as learning media and online platforms to help distribute materials and tasks. The primary cause is the ease with which media can be accessed and used. Teachers believe they invest significant time studying how to use media/platforms. For example, developing or presenting topic matter diverts attention away from the instructional activity. This is particularly true for older teachers, who have a different level of internet proficiency than younger teachers (Fuad et al., 2020). According this research, Google Classroom, WhatsApp, and Zoom Meeting are three of the most popular platforms among teachers. They are also favorite choices for online learning of biology (Zulyusri et al., 2022) and Indonesian language (Prasetyo et al., 2022). Some teachers use other media/platforms to keep students interested and waiting for surprises in the next class. In addition to media variations, teachers offered materials and tasks via videos posted to YouTube. It also seeks to make students feel challenged and intrigued in creating new things. Many studies in different disciplines have investigated the role of social media in shaping and reflecting teenagers' views, behavior, and experiences (Literat, 2021).

Another finding from the survey findings is that effective media/platforms are still rarely used by teachers because they are unfamiliar with them or need to be provided access to them. Their institution needs to have such an educational tool. The government's efforts during the Covid-19 epidemic show that they prioritized education in Indonesia (Salehudin et al., 2021). With the government's help, it is anticipated that infrastructure will be well distributed throughout Indonesia, allowing teacher' quality in planning online classes to be maintained. For use in the classroom, teachers should pay closer attention to the kinds of media that promote social contact and collaboration. Both factors are critical in offering a successful distance learning setting. Teachers will find it simpler to educate and provide meaningful learning if they can grasp their students' experiences and perceptions (Literat, 2021).

Another element that influences the efficacy of online learning is teachers' ability to integrate material, teaching, and technical expertise, also known as TPACK. The seven components of the Character Education teacher's TPACK that were examined demonstrate that they have mastered the Character Education content and the skills required to create a successful classroom setting. Teachers know how to control the classroom, evaluate student learning using various methods, and adjust teaching styles to

**Commented [R1]:** The discussion needs to be elaborated. This discussion needs to be added implicitly, what are the results of this research? Does it answer the goal? Make arguments that lead to the concept of how the research results, give novelty emphasis to the discussion.

improve students' learning and learning practices (Efendi, et al., 2020), but these components have not been able to become a teacher's provision in teaching in the current situation. Technology knowledge is required to wrap subject knowledge and pedagogical knowledge to make online courses that students look forward to. Technological expertise refers to teachers' understanding and ability to use different technologies, technology tools, and associated resources. Character education in school can be broadly classified into three events: the development of instruction from each subject, the development of extracurricular activities and in school culture development, and the strategy development of character education in elementary school subjects such as sports, religious, Indonesian, science, math, natural sciences, and social sciences. Character education can be integrated into educational materials in several ways, including (1) instructional content, (2) material selection, and (3) instructional media integration.

Teachers can use technology in their classrooms to ease the delivery of Character Education materials and tasks. Some teachers, however, need help picking technology that can improve the content of Character Education topics and have trouble supporting others in communicating the use of technology in connecting it to the instruction and content of Character Education. They need help adapting to new media types, so they only use the same kinds of media in their classes. The repetitive environment frequently causes students to be tired and unenthusiastic in class. Teachers can prepare for this by learning how to create autonomous learning products/media, such as videos of learning tasks and podcasts of the topics being taught. Technical abilities in the use of this technology can aid in the creation of more effective learning and the fulfillment of 21st-century teaching skills (I-Ju et al., 2020).

The findings of this study reinforce previous findings which state that online learning significantly impacts teachers' ability to produce effective and efficient learning during the pandemic, particularly in the use of technology (Susanti & Perdana, 2020). Online learning now makes use of new and diverse learning tools. Teachers can provide project tasks in addition to various kinds of learning material to break up monotonous learning. Project-based learning can boost students' ingenuity and interest in engaging in learning (Yamin et al., 2020). Teachers can verify or review all types of online students assignments/projects. They can obtain these assignments at any moment and from any location. These file tasks are readily archived, saving paper. Virtual learning using technology is deemed ecologically beneficial because it reduces the use of paper and transportation emissions (Kaliappen et al., 2021).

During the Covid-19 pandemic, many new studies supported using online learning as an option to face-to-face learning (Afroz et al., 2021; Ariyani et al., 2023; la Velle et al., 2020; Robinson & Rusznyak, 2020; Xue et al., 2022). In addition to the traits of online learning that are regarded by the government's policy of social separation, the impact of online learning makes students more conscious of how to use technology correctly due to educational demands. Teachers and students must acquire digital literacy abilities to adapt to the new world. What was previously coercive had a beneficial effect on their technical skills and understanding. Another advantage is that students learn responsibility for assignments and time management by taking classes and completing homework.

Based on the results of the research and discussion, it can be said that character education-integrated TPACK is feasible to use and positively impacts the online learning process. Character education TPACK can help teachers and students understand character education subject matter during online learning. This research implies that in the future, teachers are expected to be able to increase the use of teaching materials, media, methods, and learning models for appropriate subjects and follow TPACK-integrated character education to create an active, fun, and meaningful learning atmosphere.

#### 4. CONCLUSIONS

The findings show that demonstrated mastery of Character Education's TPACK in their online classes by using different learning media and instructional platforms. Character Education can use creative tasks such as creating videos during the learning process during the pandemic using Indonesian language to generate non-boring learning. Character Education strive to adjust to the changing educational system, which includes the use of media and instructional platforms by teachers during learning activities. The tools and platforms used are diverse, but three stand out for Character Education: Google Classroom, WhatsApp, and Zoom Meeting. Teachers can use technology in their classrooms to make Character Education resources and tasks more accessible. In general, teachers have acquired TPACK skills to prepare for today's online learning; though many teachers continue to provide monotonous online learning, their technological abilities must be improved. This repetitive online learning can be avoided by assigning tasks as homework. This project task can potentially boost students' creativity and interest in engaging in future learning.

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