Indonesian High School English Teachers’ Attitudes towards the Use of Instructional Technology during the Covid-19 Pandemic

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ABSTRACT

The present quantitative study was conducted to investigate Indonesian high school English teachers’ attitudes towards the uses of instructional technology (IT) during the Covid-19 pandemic-driven online learning. The study used a survey method of distributing an online questionnaire several months into the Covid-19 pandemic, within July 2020. 114 Indonesian high school English teachers participated in the study. It found that the teacher participants generally had positive attitudes towards the uses of IT in English online classes. They believed that IT improved teacher-student relationships, creativity, and innovation, as well as brought positive changes towards their teaching. However, more than half of them also reported that they had more failures than success stories when using IT during the pandemic. They did not believe that IT made learning more effective either. These seemingly ambivalent attitudes may be attributed to the sudden changes from the face-to-face mode of instruction to the online one during the pandemic leading to the unpreparedness of all parties involved including teachers. Based on the findings, implications and contributions are stated alongside the possible limitations and directions for future studies.

Keywords: Teachers' Attitude, Instructional Technology, English Teachers’ Attitude

INTRODUCTION

Instructional technology (IT) refers to the use of both traditional and modern technological tools in classroom instruction to provide efficient learning experiences (Yaratan & Kural, 2010). Smaldino et al. (2014) defined IT as “the integration of teachers’ and students’ use and knowledge of tools and techniques to improve students’ learning”. The wide range of technological tools and techniques used in the classroom provides benefits for teachers in accessing large amounts of digital information, meeting the needs of students, and accommodating various student learning styles. As for the students, they use technological tools to engage in active hands-on learning experiences to be able to accomplish the learning goals (Smaldino et al., 2014). Hence, IT signifies the teachers’ and students’ use of technological tools and techniques to facilitate English language learning.
Before the Covid-19 global pandemic, IT was encouraged in education to meet the demands of the fourth industrial revolution (4IR). Education is imbued with the concepts of technology-facilitated instruction, massive open online courses (MOOC), internet-of-things, and artificial intelligence (Nordin & Norman, 2018; Oke & Fernandes, 2020). Despite the advancement of technological innovations, the use of technology in instruction was predominantly limited to the use of electronic teaching materials and computer-assisted instructional activities (Oke & Fernandes, 2020). Instead of endorsing student-centred learning enhancing students learning experience, this situation seemed to be compatible with teacher-centred approach where teachers were actively involved in teaching and providing information and learners were the receivers.

In recent years, studies about the uses of IT in EFL classes in Indonesia have received immense attention from researchers. Some studies have discussed the role, implementation, and importance of IT in EFL classes to transform and optimise learning in higher education (Isnawati, 2017; Mulyati, 2019; Oktaviani & Mandasari, 2020; Subekti, 2020; Subekti & Kurniawati, 2020). In a similar direction, some studies in this field have been conducted in middle school contexts. For example, studies conducted by Hidayati (2016), Irzawati and Atmanegara (2017), and Susanti and Tarmuji (2016) investigated the uses of IT in English classes among the Indonesian senior high school students, whilst a quantitative study conducted by Lailiyah and Cahyono (2017) investigated the uses of IT among English school teachers. Lailiyah and Cahyono (2017) found that 16 of 23 teacher participants reported high confidence in using IT, whilst the other seven reported a medium level of confidence.

Furthermore, though not specifically in English teaching contexts, there are also several studies investigating middle school teachers’ use and knowledge of IT in various learning contexts (Barton & Dexter, 2020; Ntemngwa & Oliver, 2018; Ottenbreit-Leftwich et al., 2018; Şen & Hava, 2020; Steiner & Mendelovitch, 2017; Yaratan & Kural, 2010). A considerable number of studies have also been devoted to investigating middle school teachers’ ability in using IT in the Indonesian context (Muhaimin et al., 2020; Saripudin et al., 2020; Setiawan & Phillipson, 2020; Surahman et al., 2020). A study by Muhaimin et al. (2020) involving Indonesian science teachers, for example, found that “technology integration for schools in rural areas is different compared to the schools in cities and urban areas” (p. 1), suggesting geographical area may play a part in the extent to which IT was incorporated in the class instruction.

Thus far, slightly less attention has been paid to English middle school teachers’ ability in using instructional technology, seen from fewer studies conducted investigating this topic (Dewi et al., 2019; Lie et al., 2020). Dewi et al. (2019) in their qualitative study found that teachers considered various aspects when designing technology-integrated lessons. These were “identifying goals, analysing learners, planning instructional activities, and choosing the technology tools” (p. 92). This suggested the complex process which may result in effective technology-enhanced instruction. A study by Lie et al. (2020) involving various language teachers at high schools in various regions in Indonesia found that their teacher participants still struggled in enhancing their students’ engagement in online learning. Several factors reported were the teachers’ prior exposure to online learning, their knowledge about IT, and the support system. However, they reported a renewed sense of commitment to improve their competence and professional practices (Lie et al., 2020).

Furthermore, despite the aforementioned numerous studies about middle school teachers’ ability in using IT, only a few have studied middle school teachers’ attitudes.
in using IT (e.g., Ahmed et al., 2020; Raygan & Moradkhani, 2020; Williyan & Sirniawati, 2020). To be more specific, most previous studies have overlooked middle school English teachers’ attitudes towards the uses of IT during the Covid-19 pandemic leading to school closures from on-site face-to-face activities. School closures had demanded all education levels switch from conventional face-to-face to online teaching. The rapid transition from face-to-face to online had compelled teachers to learn and incorporate IT providing learners with a rich, effective, and student-centred learning environment (Carrillo & Flores, 2020), almost abruptly. As though these teachers were demanded to be able to do so much despite various degrees of readiness for doing so due to the abrupt changes. This may affect high school teachers’ attitudes towards the use of IT during online learning. Concerning this, in response to the Indonesian government policy about the enactment of online learning in all education levels during the Covid-19 pandemic, Indonesian teachers were expected to be adaptive and creative in integrating IT into their instructional activities. This situation also applied in English as a Foreign Language (EFL) classes where English teachers were encouraged to make effective uses of IT to facilitate learning during the Covid-19 pandemic. Therefore, investigating English teachers’ attitudes in using IT during the Covid-19 pandemic is essential.

The present study aims to investigate high school English teachers’ attitudes towards the uses of IT during Covid-19 online learning. Furthermore, exploring the attitudes of English teachers in using IT during Covid-19 pandemic-driven online learning is quite essential. It is because the sudden shift of teaching from face-to-face to online learning might have caused circumstances where teachers were unprepared to teach at a distance and to make full use of IT as the means of instructional activities (Williyan & Sirniawati, 2020).

Considering the aforementioned rationales, the present quantitative study attempts to investigate Indonesian high school English teachers’ attitudes towards the uses of IT during the Covid-19 pandemic-driven online learning

**METHOD**

**Research design**

The present study used a quantitative design of distributing an online questionnaire to collect data. The use of quantitative design was aimed to gather data involving many participants with the possibility of generalisation (Gray, 2014). The study used a Google Form questionnaire consisting of a few items asking the participants’ background information and thirteen items investigating high school teachers’ attitudes on the use of IT. The Indonesian language was used as the introductory language of the questionnaire. The objectives of the study, our identity, and the targeted participants were provided in the introduction part of the questionnaire. This part was then followed with several items asking the respondents’ background information such as gender and whether they were truly High School teachers of English. To ask whether they were High School teachers of English was considered very important because the present study used an "open sample", in which we, the researchers, did not personally know the respondents. Hence, to maintain the validity of the obtained data, it was important to ensure that the respondents participating in the study were the targeted participants representing the population of Indonesian High School English teachers.

Furthermore, the thirteen questionnaire items consist of several categories. These categories are (1) Teachers’ feelings when dealing with IT (item numbers 1, 2, and 6),
(2) Teachers’ degree of efforts in utilizing IT (item numbers 3, 4, and 9), (3) Perceived effects of IT towards the success of instruction (item numbers 5, 7, 8, 10 and 11), and (4) Perceived professional identity development associated with the use of IT (item numbers 12 and 13).

There were four possible responses. These were “strongly agree” (5 points) indicating a very positive attitude, “agree” (4 points), “disagree” (2 points), and “strongly disagree” (1 point) indicating a very negative attitude. Item number 2 and number 3 were negative items and thus were reverse scored. These were items in which “strongly agree” indicated a very negative attitude whilst “strongly disagree” indicated a very positive attitude.

The link of the questionnaire was distributed through various platforms such as WhatsApp, Facebook, and Instagram through the help of our acquaintances in the language teaching field such as university lecturers and high school teachers residing in various regions in Indonesia. The questionnaire was distributed during the period of 17 July 2020 up to 25 July 2020.

Participants and ethical considerations

In total, 124 respondents filled the Google Form questionnaire. Of these 124 respondents, 10 respondents indicated that they were not High School English teachers in responding to one of the background questionnaire items. Thus, their questionnaire data were entirely disregarded and excluded from further analysis. Eventually, the present study obtained, as the participants, 114 Indonesian High School teachers of English from various regions of Indonesia. As mentioned previously, our acquaintances in the language teaching field helped share the questionnaire link to High School English teachers in their respective circles of acquaintances. As we, the researchers, did not personally know the participants, who resided in various regions in Indonesia, the recruitment of the participants was purely based on their interest in participating in the study. This, however, showed that the present study fully employed the ethical principle of autonomy in which those participating in the study willingly did so without any coercion (Israel & Hay, 2006). Furthermore, monetary benefits were also given to some randomly selected participants who indicated they were willing to accept monetary reward if selected, which was the implementation of beneficence or doing good (Gray, 2014).

Additionally, the present study was conducted simultaneously with a quantitative study by Subekti and Kurniawati (2022) investigating the teacher participants’ level of their work engagement as well as the relationship between their work engagement and their attitudes towards the use of IT, the focus of the present study. Both studies involved exactly the same participants.

Data analysis

After the Google Form questionnaire data were obtained in the form of an Excel file, the data were then moved to SPSS 24 for further analysis. To answer the research question, descriptive statistics to find means and percentages were employed. The order of the data collection and analysis could be observed in Figure 1.
RESULTS AND DISCUSSION

Of the 114 teacher participants of the present study, 40 participants were male whilst the other 84 were female. Furthermore, the thirteen items about the High School teachers’ attitudes on the use of IT had .78 Cronbach’s alpha coefficient indicating that these items had a quite high internal reliability.

Related to the objective of the present study, the general description of the participants’ attitudes towards the uses of IT could be observed in Table 1.

Table 1. High school teachers’ general attitudes towards the use of IT

<table>
<thead>
<tr>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>30.00</td>
<td>65.00</td>
<td>51.42</td>
<td>7.02</td>
</tr>
</tbody>
</table>

As seen in Table 1, the mean score of the participants’ overall responses was 51.42 indicating that on average their response for each item was at 3.95 (approaching “agree” response). This suggested that in general, the teacher participants had a quite positive attitude towards the uses of IT in pandemic-driven online learning. It was also partly supported by the fact that the maximum composite score was 65 indicating the average response for each item was at 5.00 (equal to “strongly agree”). However, it should also be noted that the minimum composite score was 30, indicating the average response for each item was at 2.31, indicating a quite negative attitude towards IT.

The detailed responses of the participants in the form of mean scores, standard deviation (SD), and percentages in each item could be observed based on the aforementioned four questionnaire categories.

Category 1. Teachers’ feelings when dealing with IT

This category encompasses item numbers 1, 2, and 6. The findings in this category could be observed in Table 2.

Table 2. Teachers’ feelings when dealing with IT

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>During the pandemic, I have the pleasure of learning new things related to instructional technology for English teaching.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Indonesian High School English Teachers’ Attitudes towards the Use of Instructional Technology during the Covid-19 Pandemic

As seen in Table 2, the findings in this category were dominated by the teacher participants' generally positive attitudes. Item number 1, for example, produced a high mean score of 4.77. 77.2% of the participants strongly agreed whilst the rest agreed to the statement. Findings on item number 2 suggested that 86% of the participants did not feel overwhelmed using IT in English class. Furthermore, item number 6 produced a mean score of 3.91 with 81.6% of the participants indicating their confidence in using IT to teach English.

It is important to note, however, that despite the participants’ generally positive attitudes in this category, 14% of the participants felt overwhelmed and 18.4% reported their lack of confidence in using IT to teach in class.

Category 2. Teachers’ degree of efforts in utilizing IT

This category encompasses item numbers 3, 4, and 9. The findings in this category could be observed in Table 3.

Table 3. Teachers’ degree of efforts in utilizing IT

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3.70</td>
<td>1.00</td>
<td>2.6</td>
<td>17.5</td>
<td>66.7</td>
<td>13.2</td>
</tr>
<tr>
<td>4</td>
<td>3.31</td>
<td>1.19</td>
<td>5.3</td>
<td>32.5</td>
<td>50.9</td>
<td>11.4</td>
</tr>
</tbody>
</table>
As seen in Table 3, this category produced relatively mixed findings. Item numbers 3 and 4 had quite high standard deviation levels indicating the spread out values among the participants' responses in these items. These items also had relatively low mean scores, indicating the participants' rather minimum efforts in utilising IT in class. Item number 3, a negative item, had a mean score of 3.70 (SD = 1.00). 20.1% of the participants agreed to the statement, indicating a negative attitude, whilst 60.9 disagreed with the statement indicating a positive attitude. Next, item number 4 produced the mean score of 3.31 (SD = 1.19), the lowest mean score of all questionnaire items. 62.8% of the participants reported that their efforts in providing online learning had not been optimal. Different from item numbers 3 and 4 with the findings on the participants' rather negative attitudes towards IT, item number 9 produced a high mean score of 4.14, suggesting their generally positive attitudes. 90.3% of the participants indicated that they explored various kinds of technological tools to support me teaching English online.

**Category 3. Perceived effects of IT towards the success of instruction**

This category encompasses item numbers 5, 7, and 8, and 11. The findings could be observed in Table 4.

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3.39</td>
<td>1.23</td>
<td>16.7</td>
<td>32.5</td>
<td>30.7</td>
<td>5.3</td>
</tr>
<tr>
<td>7</td>
<td>4.20</td>
<td>.83</td>
<td>37.7</td>
<td>53.5</td>
<td>8.8</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>3.54</td>
<td>1.18</td>
<td>20.2</td>
<td>48.2</td>
<td>28.9</td>
<td>2.6</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Perceived effects of IT towards the success of instruction
Indonesian High School English Teachers’ Attitudes towards the Use of Instructional Technology during the Covid-19 Pandemic

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>3.89</td>
<td>.99</td>
<td>23.7</td>
<td>59.6</td>
<td>14.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>

During the pandemic, I feel that the use of instructional technology helps me nurture teacher-student relationships.

Saya merasa pemanfaatan teknologi pembelajaran selama pandemi dapat membantu saya memelihara hubungan guru-siswa.

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.87</td>
<td>1.04</td>
<td>24.6</td>
<td>57.9</td>
<td>14.9</td>
<td>2.6</td>
</tr>
</tbody>
</table>

As seen in Table 4, the present study found mixed results on the participants’ views on the effects of IT on the success of instruction. Item number 5 produced a mean score of 3.39 (SD = 1.23), the second-lowest mean score of all. Whilst 49.2% of the participants either strongly agreed or agreed that the use of IT during the pandemic made learning more effective, the other 50.8% disagreed. Furthermore, as seen in item number 8, 68.5% of the participants disagreed with the statement, "I feel that I have found more success stories than failures in the use of instructional technology during online learning in English class," indicating their negative experiences in using IT for teaching. In comparison, item numbers 7, 10 and 11 produced quite high mean scores of 4.20, 3.89, and 3.87 respectively, indicating perceived positive effects of IT towards the success of instruction. In item number 7, 92.2% of the participants reported that IT use in online learning brought positive changes to the way they taught. In item number 10, 83.3% of the participants indicated their agreement that the use of IT helped motivate students in learning. In item number 11, 82.5% of the participants agreed that IT uses helped nurture teacher-student relationships.

Category 4. Perceived professional identity development associated with the use of IT

This category encompasses item numbers 12 and 13. The findings could be observed in Table 5.

<table>
<thead>
<tr>
<th>No</th>
<th>Mean</th>
<th>SD</th>
<th>Strongly Agree (%)</th>
<th>Agree (%)</th>
<th>Disagree (%)</th>
<th>Strongly Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>4.39</td>
<td>.71</td>
<td>During the pandemic, the use of instructional technology has played an important role in increasing my professionalism as an English teacher. <em>Pemanfaatan teknologi pembelajaran di masa pandemi berperan penting dalam peningkatan profesionalisme saya sebagai guru Bahasa Inggris.</em></td>
<td>48.2</td>
<td>47.4</td>
<td>4.4</td>
</tr>
<tr>
<td>13</td>
<td>4.46</td>
<td>.60</td>
<td>During the pandemic, the use of instructional technology has made me more creative and innovative. <em>Pemanfaatan teknologi pembelajaran di masa pandemi membuat saya menjadi lebih kreatif dan inovatif.</em></td>
<td>50</td>
<td>48.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

The study found quite uniform findings of the participants’ highly positive attitudes in this category. Item number 12 produced a mean score of 4.39, 95.6% of the participants either strongly agreed or agreed that IT use during the pandemic
increased their professionalism as English teachers. Finally, item number 13 produced a mean score of 4.46. 98.2% of the participants reported that IT uses made them more creative and innovative in teaching.

The participants generally reported positive attitudes towards IT uses during the Covid-19-driven online learning with the average of their response on each item being at 3.95 on the scale of 1 up to 5. This finding was promising considering that teachers' positive attitudes could have an impact on the success of the learning process (Saripudin et al., 2020). Furthermore, considering that Indonesian high schools were very heterogeneous, for example in terms of locations whether they were located in urban or rural areas with different available facilities, the participants' generally positive attitudes may give an overview of the teachers' uses of IT in English class at many high schools in Indonesia. Though not conducted in an EFL context, a study by Muhaimin et al. (2020) involving Indonesian science high school teachers found that rural high school teachers’ attitudes variable was the strongest driver predicting the intention to use IT in teaching.

Related to the first questionnaire category on the teachers' feelings when dealing with IT, albeit being the minority, several participants reported they felt overwhelmed and not confident in using IT in teaching English. This finding was different from the finding of a study by Lailiyah and Cahyono (2017) where they found all of their 23 teacher participants reported medium to high confidence in using IT to teach English. However, it was important to note that the study by Lailiyah and Cahyono (2017) was conducted before the Covid-19 pandemic where the use of IT was arguably more limited compared to the uses of IT during the pandemic-driven online learning where IT uses became no longer a supporting necessity but rather an obligatory to keep instruction going (Subekti, 2020). Thus, several participants in the present study may feel unprepared in utilising IT effectively for the success of English instruction (Williyan & Sirniawati, 2020). Besides the sudden shift from the face-to-face to online mode of instruction, several other factors could be attributed to these participants’ feeling overwhelmed and lack of confidence. Son (2018) mentioned several challenges such as dealing with technical problems, preparing appropriately designed activities, and gaining their students’ support, for example, whether students would actively be engaged in a task requiring them to use certain IT.

Furthermore, related to the second questionnaire category on the teacher participants’ degree of efforts in utilising IT to teach English, the teachers generally reported that albeit their efforts to learn various kinds of technology, these efforts had not been optimal. 20% of them even reported using overly simple IT to teach. This finding may be closely related to resources available in each high school context where these participants worked. A study in Bangladesh by Mondol and Mohiuddin (2020) found that their participants had weak internet connectivity, contributing to an ineffective online learning process. Some regions in Indonesia where the present study’s participants taught may also have a slightly similar condition with this Bangladeshi context where good internet connectivity was a privilege. Hence, this condition could affect the participants' efforts in utilising IT in teaching where they may have wanted to use certain IT, but could not do so because of the connectivity issue. Another factor could be their students' conditions. That was whether they had supporting resources such as supporting gadgets and sufficient internet credits (Lancker & Parolin, 2020). For these intertwined reasons, teachers may have to think twice when designing class instruction during online learning.
Regarding the third questionnaire category on perceived effects of IT towards the success of instruction, more than 50% of the participants believed that during the pandemic the use of IT did not make learning more effective and 68.5% reported more failures than success stories in using IT during the online learning. This finding was in contrast with many authors’ ideas stating that IT helped facilitate better learning (Smaldino et al., 2014; Yaratan & Kural, 2010). However, this seemingly contradictory finding may also be explained. On one hand, during the pandemic situation, IT in education became an obligation, without which learning could not take place. On the other hand, most parties involved in the education business may not be ready for the sudden changes. Teachers who were accustomed to teaching face-to-face very probably were not familiar with IT (Lie et al., 2020). Furthermore, many students who were accustomed to ‘receiving’ whatever their teachers taught in the face-to-face mode of instruction were probably not ready to learn more independently at home without the physical presence of their teachers (Subekti, 2020). In addition to that, the availability (and unavailability) of resources such as supporting gadgets and good internet connectivity both teachers and students had could also play a part in affecting the degree of the success of instruction (Lancker & Parolin, 2020).

There was another finding from the third questionnaire category which may also be related to the findings in the fourth questionnaire category on perceived professional identity development associated with the use of IT. The teachers reported their positive attitudes that IT improve the teacher-student relationship and brought positive changes in their teaching. They believed that IT uses during the pandemic-driven online learning increased their professionalism, creativity, and innovation as English teachers. These findings may suggest that despite the hardship the teacher participants experienced during the online learning, they perceived that the experiences helped them grow as teachers. These findings were in line with the findings in a study by Lie et al. (2020) in which their teacher participants gained a renewed sense of commitment to improve their capacity to better educate their students during the pandemic and despite the pandemic.

Despite the implications to language teaching and the contributions, the study also has limitations. The first was related to the outliers in the data. Though the study found the teacher participants’ generally positive attitudes towards IT, few reported negative attitudes. Due to the study being quantitative, the study may not do justice to this minority’s voice. Secondly, the data of the present study were collected only several months into the pandemic, at the beginning of the 2020/2021 academic year. Hence, the findings should be seen within the timeframe where many teachers were not as accustomed to online learning as they were now almost two years into the pandemic.

Furthermore, directions for future studies could be suggested as follows. First, conducting a qualitative study focusing on a few English teachers having negative attitudes towards IT could also be worthwhile to investigate the contributing factors of these attitudes. Secondly, it could also be essential to conduct a qualitative study using interviews where high school English teacher participants could reflect on their professional identity development driven by their various online teaching experiences. Whether or not, or to what extent they grow as teachers could be further investigated in such studies. Last but not the least, it could be important to conduct a quantitative study investigating Indonesian high school English teachers’ attitudes towards IT when the pandemic was contained and instruction has been shifted back to the face-to-face mode.
CONCLUSION
The present study has several implications and contributions. First, the teachers’ views that IT uses during the pandemic-driven online learning improved their professionalism and increased their creativity and innovation as teachers suggested that teachers could push themselves beyond their comfort zone of teaching face-to-face. Teachers are encouraged to always be open-minded in continuously finding new ways of teaching using whichever means necessary, including utilising IT in teaching. Secondly, the finding that teachers encountered more failures than success stories during the pandemic suggested that teaching was not easy, let alone teaching during such a difficult time as the Covid-19 pandemic affecting almost all aspects of life. Thus, teachers could also be more realistic with their students' learning goals, adjusting the amount of teaching, without letting their students not learn anything. Furthermore, the present study contributed to the literature in the field in the way that it provided an overview of the Indonesian high school English teachers' attitudes towards the uses of IT during the Covid-19 pandemic, which may not have been specifically investigated previously. Considering that more than 100 participants from various regions in Indonesia participated in the study, the study may offer generalisable data.

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AUTHOR CONTRIBUTION STATEMENT
All authors have contributed their work accordingly to their authorship roles. Therefore there is no complicated issues in this project.

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