Speaking Anxiety among Single-Gender and Co-Educational Schools Students in an Online Learning Context

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Abstract

Speaking anxiety is the fear of utilizing the language orally and it is believed to be affected by gender as distractions by counterpart gender in co-educational schools could trigger anxiety in speaking English. Moreover, due to the COVID-19 Pandemic, educational institutes have shifted to online learning which could also contribute to anxiety. Many studies have been carried out on speaking anxiety among language learners. However, to the best of our knowledge, speaking anxiety among students in single-gender and co-educational schools in an online learning context has not been explored. Therefore, this study aims to investigate the students’ speaking anxiety in three different gender-based types of schools. We adopted a mixed-method research design. The participants were 180 students for surveys and 12 students for interviews. The instruments used were the English as a Second Language Speaking Anxiety Scale (ESLSAS) adapted from Hwa and Peck (2017) which were administered through Google Forms and virtual semi-structured interviews conducted via online meeting platforms. The surveys were analyzed by employing descriptive and inferential analysis whereas the interviews were analyzed by employing content analysis. The findings revealed that the majority of the students experienced low speaking anxiety levels, female students experienced higher speaking anxiety levels than their counterpart gender, and there was a statistically significant difference between the students’ speaking anxiety mean scores in single-gender and co-educational schools. Additionally, within the context of the co-educational schools, female students’ speaking anxiety was significantly higher. The results of the analysis of the interviews indicated the sources of speaking anxiety and coping strategies employed by the students. This study provides pedagogical implications to English language educators.
 Keywords
Speaking Anxiety, Single-Gender School, Co-Educational School, Online Learning

1. Introduction

According to Wong (2009), second language anxiety often occurs in English language classrooms. Anxiety is a critical problem because, despite years of learning English formally as well as informally, students still feel anxious about using it (Jalaluddin et al., 2008). Many researchers such as Cagatay (2015), Karatas et al. (2016), Rafada and Madini (2017), and Mohtasham and Farnia (2017) addressed speaking anxiety issues from different perspectives and by implementing various variables to provide ways for educators to cope with the problem of anxiety.

Lee (2019) asserted that male students were treated differently in co-educational schools than female students. For instance, male students were called out eight times more than female students. This issue may be due to the tendency of male students to yell out answers when asked questions, while female students tend to raise their hands and ask for permission to answer the questions. Moreover, teachers in co-educational schools often encourage male students to solve problems independently, while the teachers often aid female students when they encounter problems. These different treatments may cause problems for both genders as students in co-educational schools do not want to open themselves to possible criticism (Lee, 2019). Therefore, co-educational environments are unfair and do not provide equal educational opportunities for all students (Lee, 2019).

In contrast, in single-gender schools, teachers are free to teach any learning style they deem fit and motivate their students by encouraging impartiality as well as teaching them that failure is just a learning process. Therefore, students in single-gender schools are in a better position to reveal their identities (Dickey, 2014). Besides, there are fewer distractions in single-gender environments, and students feel more comfortable, which leads to increased interactions (Kombe et al., 2016). Therefore, students will show real interest and are free to explore their passions without fear of failure or mockery.

Many studies were conducted on speaking anxiety among language learners, and most of them reported that gender plays a vital role as it can affect speaking anxiety levels when learning the English language. These studies were by Cagatay (2015), Karatas et al. (2016), Rafada and Madini (2017), and Mohtasham and Farnia (2017). However, to the best of the researchers’ knowledge, speaking anxiety among language learners in single-gender and co-educational secondary schools in an online learning context has not been investigated. Therefore, this study intends to investigate the contribution of gender to speaking anxiety of
students in three different gender-based types of schools, compare the mean scores of speaking anxiety in three different gender-based types of schools, to compare the mean scores of speaking anxiety of male and female students in the co-educational school, and to investigate the sources along with the coping strategies of students’ speaking anxiety. Based on these objectives, the following research questions and hypotheses were formulated:

1) What are the speaking anxiety levels of the students in three different gender-based types of schools in an online learning context?
   a) What are the speaking anxiety levels of students in three different gender-based types of schools in an online learning context?
   b) What are the speaking anxiety levels of male and female students in the co-educational school in an online learning context?

2) What is the contribution of gender to speaking anxiety of students in three different gender-based types of schools in an online learning context?
   a) Is there any significant difference between speaking anxiety mean scores among students in three different gender-based types of schools in an online learning context?
      \[ \text{H01: There is no significant difference between speaking anxiety means scores among single-gender (all male) school students, single-gender (all female) school students, and co-educational (mixed-gender) school students.} \]
   b) Is there any significant difference between male and female students’ speaking anxiety mean scores in the co-educational school?
      \[ \text{H02: There is no significant difference between speaking anxiety mean scores of male and female students in the co-educational school.} \]

3) What are the sources of speaking anxiety among students in three different gender-based types of schools in an online learning context?

4) How do students in three different gender-based types of schools cope with speaking anxiety in an online learning context?

2. Past Studies

In the applied linguistics field, numerous studies have been carried out on speaking anxiety from different angles such as foreign language speaking anxiety, second language speaking anxiety, gender difference in speaking anxiety, and speaking anxiety in online learning.

2.1. Foreign Language Speaking Anxiety

Several studies on foreign language speaking anxiety were carried out by: Cagatay (2015), Han et al. (2016), and Rafada and Madini (2017). Cagatay (2015) conducted a study on anxiety issues in speaking English among language learners. The study was carried out on EFL students of a university in Turkey using a questionnaire as an instrument adapted from Horwitz et al. (1986). Cagatay (2015) discovered that most of the EFL students (69.4%) experienced average anxiety levels when speaking English as their foreign language. Regarding gender differences, his study discovered that female students experienced higher anxiety
levels than their counterpart gender. Han et al. (2016) conducted a study on attitudes of EFL students and teachers toward foreign language speaking anxiety to investigate the influence of communication classes by native and non-native teachers on foreign language speaking anxiety of language learners. Three instruments were used which were the Foreign Language Speaking Anxiety (FLSA) questionnaire, open-ended questions, and interviews. The findings discovered that there was no significant difference between students’ attitudes toward FLSA among students in those classes. Plus, teachers and students had positive attitudes toward making errors when speaking foreign languages, and correction strategies utilized by teachers were believed to impact students’ attitudes toward FLSA.

Rafada and Madini (2017) conducted a study on effective techniques in decreasing Saudi language learners’ speaking anxiety to investigate the Saudi language learners’ perceptions toward speaking anxiety and to provide effective solutions in solving speaking anxiety problems. The data collected using semi-structured interviews revealed that Saudi female students experienced higher speaking anxiety levels than their counterpart gender. Despite that, female students displayed positive attitudes as well as a willingness to develop their English speaking skills. They believed that they could reduce their anxiety through some solutions such as watching English movies, talking to native speakers, and doing more presentations.

### 2.2. Second Language Speaking Anxiety

Several studies on the second language speaking anxiety were carried out by: Latif (2015), Huang (2018), and Miskam and Saidalvi (2019). Latif (2015) conducted a study on adult students’ English language anxiety. The instrument utilized for the study was a survey adapted from the Foreign Language Classroom Anxiety Scale (FLCAS) by Horwitz et al. (1986). The collected data were analyzed by employing descriptive analysis to examine the percentage and mean scores of speaking anxiety. Latif’s (2015) findings revealed that adult students in English classrooms experienced moderate anxiety levels. Huang (2018) conducted a study on various types of anxiety and performance in ESL or EFL speaking evaluation to examine the interactions among anxiety types such as trait, state, language, and test anxieties. The study also aimed to investigate the anxiety’s and gender’s effect on second language speaking assessment performance. Four self-report anxiety scales were utilized; namely, the Trait Anxiety Inventory, State Anxiety Inventory, English Language Classroom Anxiety Scale, and Test Anxiety Scale. The results indicated that trait and language anxieties established the causes of state anxiety, however, test anxiety influenced state anxiety. Moreover, trait and language anxieties were affected statistically, and gender did not contribute to significant differences in anxiety. Miskam and Saidalvi (2019) carried out a study on English language speaking anxiety amongst undergraduate students in Malaysia to explore speaking anxiety levels amongst Malaysian undergraduate students. A survey adapted from Balemir’s (2009) Foreign Language Speaking Anxiety Scale was utilized. The findings discovered that
the majority of undergraduate students experienced moderate speaking anxiety levels. As they reported, one of the leading sources of speaking anxiety was communication apprehension for students experiencing high and moderate anxiety levels. In contrast, for students experiencing low speaking anxiety levels, the dominant source was test anxiety.

2.3. Gender Difference in Speaking Anxiety

Several studies on the gender difference in second and foreign language speaking anxiety were carried out by: Karatas et al. (2016), Mohtasham and Farnia (2017), and Hwa and Peck (2017). Karatas et al. (2016) carried out a study on foreign language speaking anxiety amongst university students to examine gender as a substantial factor in students’ foreign language speaking anxiety. They used the Foreign Language Speaking Anxiety Scale (FLCAS). It discovered that the majority of the students experienced moderate speaking anxiety levels. They also discovered that females suffered higher speaking anxiety levels than males. Mohtasham and Farnia (2017) also carried out a study on gender influences on perceptions among Iranian EFL university students to investigate anxiety levels among Iranian EFL university students and the students’ perceptions of in-class activities through speaking courses as well as to investigate whether gender difference affects the students’ perceptions of foreign language speaking anxiety. The Foreign Language Speaking Anxiety Scale (FLCAS) was utilized. The female students’ speaking anxiety levels were significantly higher than their counterpart gender in impromptu speaking activities. Hwa and Peck (2017) carried out a study on gender differences in speaking anxiety amongst ESL students in Malaysia in a tertiary context to explore speaking anxiety levels among tertiary students in ESL classrooms and to examine speaking anxiety among the tertiary ESL students across genders, through the Foreign Language Speaking Anxiety Scale (FLCAS). The findings revealed that tertiary ESL students in Malaysia had moderate speaking anxiety levels. Besides, female students were more bothered about unsuccessful assessment results and experienced higher anxiety levels than males.

2.4. Speaking Anxiety in Online Learning

Several studies on speaking anxiety in online learning have been conducted. Punar and Uzun (2019) conducted a study on the influence of Skype Conference Call on English language speaking anxiety. The study found that online learning tool as Skype could affect foreign language learners’ speaking anxiety as it could reduce English language learners’ speaking anxiety since the online learning caused the students feeling less anxious to speak English. Besides, the results showed that gender impacted speaking anxiety levels where female students experienced higher speaking anxiety levels than their counterpart gender. Campbell (2015) conducted a study to compare face-to-face presentations and webinars on speaking anxiety in the presentation. The study revealed that most students experienced more speaking anxiety in face-to-face presentations than in
webinars. However, the study revealed that most students preferred to deliver face-to-face presentations rather instead of webinars as they considered themselves more experienced in face-to-face presentations. A study by Abd Halim et al. (2018) on speaking anxiety was conducted in digitalized learning using Skype. The findings discovered that Skype, as one of the e-learning tools, was able to reduce speaking anxiety among students and further improve their speaking skills.

As this literature review indicates, numerous studies have been done on speaking anxiety in ESL and EFL classrooms. However, the topic of speaking anxiety among students in single-gender and co-educational schools in online learning context is under-researched. Therefore, this current study intends to fill the gap by investigating the students’ speaking anxiety in single-gender and co-educational schools in online learning context.

3. Method

A mixed methods (quantitative and qualitative methods) research design was implemented in conducting this study. The methods utilized in collecting and analyzing the data are presented in this section.

3.1. Participants

This study’s participants were secondary school students from three different gender-based types of secondary schools in Malaysia, which are single-gender (all male), single-gender (all female), and co-educational (mixed-gender) schools in Terengganu. Terengganu was chosen to control the cultural, economic, and societal variations that might affect the data. Form five students from each school were selected using the stratified random sampling technique. This sampling method was utilized because of gender factor that may affect the students’ speaking anxiety either in single-gender or co-educational school. The decision to choose Form Five students is because they are expected to be more competent in English as they have experienced English lessons formally for five years. Thus, ensuring that they would give accurate responses to the questionnaires and interviews (Yeap, 2012). To control the factor of English proficiency levels of the students, the results of the previous oral test conducted by their teachers were referred in which the students who scored below moderate and low levels of the oral test were chosen as participants.

According to the calculation of sample size using a formula by Van Dessel (2013), 151 from 250 Form Five students need to participate in this study to achieve precise results on the mean scores of speaking anxiety. However, 20% of extra samples were added to account for non-response or missing data. Therefore, 180 of Form Five students participated in the quantitative part of this study. As for the qualitative part, the number of cases in this study is 12 cases, four cases from each type of school. We collected our data from these cases through virtual semi-structured interviews. According to Creswell (1998), the recommended range for number of cases in interviews is between 5 and 25 for a phenome-
nological study. We stopped data collection after we reached a data saturation point (Guest et al., 2006) after 12 interviews.

3.2. Instrument

The instrument utilized for quantitative part in this study was a 32-item survey questionnaire named English as a Second Language Speaking Anxiety Scale (ESLSAS) adapted from Hwa and Peck (2017). The ESLSAS was initially revised from Horwitz et al.’s (1986) Foreign Language Classroom Anxiety Scale (FLCAS) since it is the best-known instrument and widely utilized as assessment scales for the foreign and second language anxiety which initially aimed to measure levels of anxiety among foreign language learners (Hwa & Peck, 2017). Since this study’s focus was to investigate speaking anxiety levels in the online ESL classrooms, several items had to be modified. For instance, the term ‘foreign language’ in FLCAS was substituted with ‘English language’ in the ESLSAS (Hwa & Peck, 2017). The ESLSAS was then changed into online surveys using Google Forms that offered a free, efficient, and a practical method of data collection and direct data entry (Darmi & Albion, 2014) particularly during the Pandemic.

A pilot study was done to examine the reliability of the ESLSAS. It was tested on Form Five students from three different types of schools in Selangor. The pilot study was done with the help of the teachers in those schools. Five participants (Form Five students) from each school were chosen to answer the online ESLSAS via Google Form with the assistance from the teachers. Then, the reliability of the items was tested by analyzing the data using SPSS. The Cronbach’s Alpha for these items was found as .82 which demonstrated good internal consistency reliability for the scale (Goforth, 2015). No further modifications were made as the adapted questionnaire showed good reliability.

Another instrument utilized for qualitative part in this study was virtual semi-structured interviews. We used this method for data collection because it allowed direct observation of moods, opinions, intentions, and views of the cases (Ohata, 2005). Besides, interviews also provide participants with opportunities to share their particular experiences in certain situations occurring in their lives. The questions for virtual interviews were revised from Young (1994), Ohata (2005), Tanveer (2007), and Diao and Paramasivam (2013).

3.3. Data Collection

This study’s aims and instructions to answer the questionnaire were explained briefly in the Google form along with the consent form to be filled out before answering the questionnaire. The participants were given a week to answer and submit the questionnaire online. If the participants encountered any problem while answering the questions, they could contact the researchers via email. Once the respondents completed the questionnaires, the data from the online questionnaires were then transferred into SPSS for analysis.

For data collection through virtual semi-structured interviews, four students from each school, 12 students in total, were chosen. The interview sessions were
done virtually using e-learning platforms that they were using in online classes during the Pandemic. The interviews were recorded to investigate the sources and coping strategies of speaking anxiety in online learning context. The interviews comprised open and closed questions to obtain sufficient information from the participants. The process of collecting data for the virtual semi-structured interviews took six weeks.

3.4. Data Analysis

The quantitative data obtained from the score of the ESLSAS were analyzed via Statistical Package for the Social Sciences (SPSS, Version 25) through descriptive and inferential analysis to answer the first and second research questions, respectively. Descriptive statistics was used to investigate speaking anxiety levels among students in three different gender-based types of school and between genders in the co-educational school. To determine the levels of speaking anxiety we followed the demarcation points proposed by Horwitz et al. (1986): Students who scored ≥ 96 were considered the low level of speaking anxiety group. Scores ranging between 96.1 and 127.9 exhibited moderate levels, and scores ≤ 128 indicated high speaking anxiety levels. Then, we calculated the frequency and percentage values for each of these categories to summarize the findings of the first research question.

To address the second research question, inferential statistics methods were used. A one-way ANOVA was run to test the first null hypothesis; that is, to compare the significance of difference among speaking anxiety mean scores of students from the three types of schools; namely, single-gender (all male) school, single-gender (all female) school, and co-educational (mixed-gender) school. An independent samples t-test was run to test the second null hypothesis; that is, to test the significance of the difference between speaking anxiety mean scores of male and female students in the co-educational school.

To investigate the sources and coping strategies of speaking anxiety in online learning context, the third and fourth research questions, respectively, we analyzed the interview data thematically. Content analysis was employed to analyze the collected data. In this study, the said phenomenon would be speaking anxiety in online learning context. The recorded interview sessions were transcribed and coded for categories using Nvivo software. Coding is a method of concurrently filtering the raw data by sorting them into categories (Davidson, 2009). These units were coded according to frameworks adapted from several sources such as: Debreli and Demirkan (2015), Sioson (2011), Tsiplakides and Keramida (2009), Ohata (2005), Kitano (2001), Young (1994), MacIntyre and Gardner (1991), and Horwitz et al. (1986).

4. Results and Discussion

4.1. Speaking Anxiety Levels of Students (RQ1)

This section answers the first research question that focused on speaking anxiety
levels of students in three different gender-based types of schools in online learning context.

4.1.1. Speaking Anxiety Levels of Students in Three Different Types of Schools (RQ1a)

This section answers the first sub-research question that focused on speaking anxiety levels among students in three different gender-based types of schools in the online learning context. The data were illustrated using the descriptive data presented in Table 1.

The descriptive data revealed that, in single-gender (all male) school, 40 respondents (22.2%) experienced low speaking anxiety levels, 20 respondents (11.1%) experienced moderate speaking anxiety levels, and no respondent experienced high speaking anxiety levels. On the other hand, in single-gender (all female) school, 41 respondents (22.8%) experienced low speaking anxiety levels, 19 respondents (10.6%) experienced moderate speaking anxiety levels, and no respondent experienced high speaking anxiety levels. Besides, in co-educational (mixed-gender) school, 20 respondents (11.1%) experienced low speaking anxiety levels, 33 respondents (18.3%) experienced moderate speaking anxiety levels, and only 7 respondents (3.9%) experienced high speaking anxiety levels.

The findings turned out to be different from several previous studies such as studies by Latif (2015), Hwa and Peck (2017), and Miskam and Saidalvi (2019). They showed that the ESL learners experienced moderate speaking anxiety levels. Considering the fact that all these studies were conducted in face-to-face classroom settings, it leads us to the assumption that students find it less anxiety provoking to speak in online settings. What seems to be confirming this assumption is that our findings were supported by studies by Campbell (2015) and Abd Halim et al. (2018) who reported online learning platforms seemed reduced speaking anxiety levels among their participants. Their studies revealed that

Table 1. Frequency and percentage of speaking anxiety levels.

<table>
<thead>
<tr>
<th>Types of School</th>
<th>Speaking Anxiety Levels</th>
<th>Scores</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-gender (all male)</td>
<td>Low</td>
<td>Less than 96</td>
<td>40</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>96 - 128</td>
<td>20</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>More than 128</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Single-gender (all female)</td>
<td>Low</td>
<td>Less than 96</td>
<td>41</td>
<td>22.8</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>96 - 128</td>
<td>19</td>
<td>10.6</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>More than 128</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co-educational (mixed-gender)</td>
<td>Low</td>
<td>Less than 96</td>
<td>20</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>96 - 128</td>
<td>33</td>
<td>18.3</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>More than 128</td>
<td>7</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>180</td>
<td>100</td>
</tr>
</tbody>
</table>
language learners were more comfortable in online classrooms than face-to-face classrooms.

The possible reason for this result could be because the students might be better prepared to participate in online classes. Due to that, the students would have enough time and resources such as through notes or the internet search engines. In face-to-face classes, the students could not use the internet due to the prohibition of mobile phones and laptops. Therefore, the students would feel more comfortable to participate in online classes as they could search for information on the internet.

Moreover, Akhter (2020) asserted that teachers are expected to be more creative in teaching in online classes as they can use online teaching materials such as videos or games rather than conventional teaching materials in face-to-face classes. In addition, online classes can change the focus on the students which will allow them to learn at the time, pace, and space that they want (Khan & Kuddus, 2020; Tom & Kumar, 2021). Hence, the students would find the e-learning environment not only less stressful but also more enjoyable than face-to-face settings.

4.1.2. Speaking Anxiety Levels between Male and Female Students in the Co-Educational School (RQ1b)

This section addresses the second sub-research question that focused on speaking anxiety levels between male and female students in the co-educational school in an online learning context. The data were analyzed using frequency as shown in Table 2.

The interesting result that the descriptive data in Table 2 revealed was that, in the co-educational school, the number of male students \((f = 14)\) who had low anxiety was twice as much as female students \((f = 6)\). Additionally, the number of female students \((f = 5)\) suffering from high anxiety levels was twice as much as male students \((f = 2)\).

<table>
<thead>
<tr>
<th>Types of School</th>
<th>Speaking Anxiety Levels</th>
<th>Scores</th>
<th>Gender</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-educational (mixed-gender)s</td>
<td>Low</td>
<td>Less than 96</td>
<td>Male</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>96 - 128</td>
<td>Male</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>More than 128</td>
<td>Male</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Female</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>
The findings were seen to be aligned with those of the previous studies by Hwa and Jaya (2014), Cagatay (2015), Karatas et al. (2016), Marinho et al. (2017), Mohtasham and Farnia (2017), Hwa and Peck (2017), and Punar and Uzun (2019), which discovered that female students frequently experience higher speaking anxiety levels compared to their counterpart gender. Despite the different context and situations of these previous studies with this study, the findings confirm the claims that female students were significantly more nervous in speaking English compared to their counterpart gender. The possible reason for this result could be because of female students’ sensitivity to anxiety and male students’ reluctance to admit feelings of anxiety (Hwa & Peck, 2017).

4.2. Comparisons of Students’ Speaking Anxiety (RQ2)

This section answers the second research question that focused on the comparisons of speaking anxiety levels of students in three different gender-based types of schools in online learning context as well as between genders in the co-educational school.

4.2.1. Comparison of Students’ Speaking Anxiety in Three Different Types of Schools (RQ2a)

The next research question compared speaking anxiety mean scores among students in three different gender-based types of schools in online learning context. The data were analyzed using descriptive (M and SD) and inferential statistical methods (One-way ANOVA) to address this research question.

According to Table 3, the highest mean score among these three groups was recorded for the co-educational school students (M = 102.48, SD = 16.121). The mean scores for the other two school types were almost the same with single-gender (all female) school students scoring slightly higher (M = 88.88, SD = 12.562) than single-gender (all male) school students (M = 87.20, SD = 4.209).

Table 3. Descriptive statistics for speaking anxiety and types of school.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td></td>
</tr>
<tr>
<td>Single-gender (all male)</td>
<td>60</td>
<td>87.20</td>
<td>14.209</td>
<td>1.834</td>
<td>83.53</td>
<td>90.87</td>
<td>62</td>
</tr>
<tr>
<td>(all female) school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>85.64</td>
<td>92.13</td>
<td>64</td>
</tr>
<tr>
<td>Co-educational (mixed-gender) school</td>
<td>60</td>
<td>102.48</td>
<td>16.121</td>
<td>2.081</td>
<td>98.32</td>
<td>106.65</td>
<td>74</td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>92.86</td>
<td>15.852</td>
<td>1.182</td>
<td>90.52</td>
<td>95.19</td>
<td>62</td>
</tr>
</tbody>
</table>
Before conducting a one-way between-subject ANOVA, homogeneity of variances test (Levene’s test) was conducted. As stated by Griffith (2010), the equal variance value assumed is valid if the significance value of the Homogeneity of Variances Test (Levene’s Test) is higher than .05. According to Table 4, since the significance value for Levene’s test was large ($p = .152$), which was higher than .05, the assumption was met. Therefore, the data collected were valid to run the one-way ANOVA test.

A one-way ANOVA was carried out to test the first null hypothesis below; that is, to compare the speaking anxiety mean scores among single-gender (all male) school students, single-gender (all female) school students, and co-educational (mixed-gender) school students in online learning context:

**H01**: There is no significant difference between speaking anxiety means scores among single-gender (all male) school students, single-gender (all female) school students, and co-educational (mixed-gender) school students.

Table 5 illustrates the ANOVA test’s results.

According to the one-way ANOVA results as shown in Table 5, there was a statistically significant difference of speaking anxiety mean scores at $p < .001$ among the students from the three types of schools ($F_{2, 177} = 20.4, p = .000$). Therefore, we had sufficient evidence to reject the null hypothesis and concluded that there was a significant difference between speaking anxiety means scores among these three groups of students. According to the effect size result in Table 5 ($\eta^2 = .187$), which based on Cohen’s (1988) guidelines, is a large effect size as it exceeds .138. It means that the type of school accounts for 18.7% of the variance in the students’ speaking anxiety mean scores.

Furthermore, Tukey’s Honestly Significant Difference (HSD) post hoc test was run as for pair wise comparison of the mean scores of three groups (Table 6).

### Table 4. Homogeneity of variances test (Levene’s test).

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variances</th>
<th>Speaking Anxiety Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene Statistic</td>
<td>Sdf1S</td>
</tr>
<tr>
<td>1.901</td>
<td>2</td>
</tr>
</tbody>
</table>

### Table 5. One-way ANOVA results.

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Speaking Anxiety Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td>Mean Square</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Between Groups</td>
<td>.977</td>
</tr>
<tr>
<td>Within Groups</td>
<td>.187</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
</tr>
</tbody>
</table>
Table 6. Post hoc test results.

<table>
<thead>
<tr>
<th>(I) Types of School</th>
<th>(J) Types of School</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Single-gender (all male)</td>
<td>Single-gender (all male)</td>
<td>-1.683</td>
<td>2.624</td>
<td>.797</td>
<td>-7.88</td>
</tr>
<tr>
<td>Co-educational (mixed-gender)</td>
<td>Co-educational (mixed-gender)</td>
<td>-15.283*</td>
<td>2.624</td>
<td>.000</td>
<td>-21.48</td>
</tr>
<tr>
<td>Single-gender (all female)</td>
<td>Single-gender (all female)</td>
<td>1.683</td>
<td>2.624</td>
<td>.797</td>
<td>-4.52</td>
</tr>
<tr>
<td>Co-educational (mixed-gender)</td>
<td>Co-educational (mixed-gender)</td>
<td>-13.600*</td>
<td>2.624</td>
<td>.000</td>
<td>-19.80</td>
</tr>
<tr>
<td>Co-educational (mixed-gender)</td>
<td>Single-gender (all male)</td>
<td>15.283*</td>
<td>2.624</td>
<td>.000</td>
<td>9.08</td>
</tr>
<tr>
<td>Co-educational (mixed-gender)</td>
<td>Single-gender (all female)</td>
<td>13.600*</td>
<td>2.624</td>
<td>.000</td>
<td>7.40</td>
</tr>
</tbody>
</table>

As shown in Table 6, the post hoc comparisons showed that the co-educational (mixed-gender) school students (M = 102.48, SD = 16.12) scored significantly higher than the students at the other two types of school. In addition, the students at single-gender (all male) school (M = 87.20, SD = 14.21) was not significantly different from the single-gender (all female) school (M = 88.88, SD = 12.56).

Our findings are supported by Lee (2019) who revealed that students in single-gender schools behave differently than students in co-educational schools. As there was a significant difference of speaking anxiety mean scores (according to post hoc test) between single-gender and co-educational schools, it could prove the claim by Lee (2019) that the speaking anxiety could be triggered more in co-educational schools than single-gender schools due to the different environment and distractions by their counterpart gender. In contrast, in single-gender schools, the students seemed to have considerably lower levels of anxiety. Hence, students in single-gender schools were expected to be less anxious than students in co-educational schools.

The possible reason for these findings could be due to the distractions from the counterpart genders in co-educational schools which could make them less responsive, whereas students in single-gender schools would not have this problem as there were fewer distractions in single-gender schools and could lead to increased interactions in the classrooms (Kombe et al., 2016).
4.2.2. Comparison of Male and Female Students’ Speaking Anxiety in the Co-Educational School (RQ2b)

This section answers the fourth sub-research question that focused on the significance of difference between speaking anxiety means scores of male and female students in the co-educational school. The findings were presented with the descriptive data results, homogeneity of variances (Levene’s Test), and independent samples t-test results.

According to Table 7, the mean score for male students in the co-educational school was 97.97, and the standard deviation was 15.155. As for female students in the co-educational school, the mean score was 110.00, and the standard deviation was 15.985.

An independent sample t-test was carried out to compare the speaking anxiety mean scores between male and female students in the co-educational school; that is H02:

H02: There is no significant difference between speaking anxiety mean scores of male and female students in the co-educational school.

According to the results illustrated in Table 8, there was a statistically significant difference between the speaking anxiety mean scores of male (M = 97.97, SD = 15.155) and female students (M = 110, SD = 15.985) in the co-educational school; t58 = −2.992, p < .05. Therefore, it could be concluded that there was a significant difference between speaking anxiety mean scores of male and female students in the co-educational school. Based on the analysis of effect size using online calculators by Becker (1999), Cohen’s d value of .77 was achieved, in which according to Cohen’s (1988) guidelines, is considered a large effect size.

The overall research findings from the current attempt answered the research question 2b, which dealt with the significance of difference between speaking anxiety mean scores of male and female students in the co-educational school. The findings were seen to be aligned with those of previous studies by Hwa and

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30</td>
<td>97.97</td>
<td>15.155</td>
<td>2.767</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>110.00</td>
<td>15.985</td>
<td>2.918</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>0.679</td>
<td>0.413</td>
</tr>
</tbody>
</table>
Jaya (2014), Cagatay (2015), Karatas et al. (2016), Marinho et al. (2017), Mohtasham and Farnia (2017), Hwa and Peck (2017), and Punar and Uzun (2019), which revealed that female students were significantly more anxious than male students in speaking English.

The possible reason for this finding could be due to the different learning behaviors of male and female students in co-educational settings. For instance, in Lee’s (2019) study, when asked questions in the classroom, female students were more likely to raise their hands to ask for permission while male students typically yelled out the answers straightaway which did not allow female students to answer the questions. According to Lee (2019), male students tended to be more vocal, active, and work competitively while female students were quieter and worked collaboratively. These different learning behaviors could affect female students’ speaking anxiety not allowing them to participate orally.

4.3. Sources of Speaking Anxiety (RQ3)

This section answers the third research question that focused on the sources of speaking anxiety among students in three different gender-based types of schools in online learning context. The frequency of sources of speaking anxiety is shown in Table 9.

Table 9. Sources of speaking anxiety frequency.

<table>
<thead>
<tr>
<th>No.</th>
<th>Theme (Sources of Speaking Anxiet)</th>
<th>Repeating ideas (F)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>formality of online classroom</td>
<td>Strict environment (6), Pressured to switch on Webcams (5)</td>
<td>11</td>
</tr>
<tr>
<td>2.</td>
<td>fear of oral activities</td>
<td>Scared to answer (4) Dislike to answer orally (6)</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>fear from the teachers</td>
<td>Strict teachers (3), afraid to be scolded (2), hate their names being called out (5)</td>
<td>10</td>
</tr>
<tr>
<td>4.</td>
<td>fear of giving wrong response</td>
<td>Avoid responding to the teachers (4), afraid to make mistakes (5)</td>
<td>9</td>
</tr>
<tr>
<td>5.</td>
<td>fear of wrong pronunciation</td>
<td>Afraid to pronounce words wrongly (8)</td>
<td>8</td>
</tr>
<tr>
<td>6.</td>
<td>fear of wrong grammar</td>
<td>Afraid to make grammatical errors (3), lack of grammar skills (4)</td>
<td>7</td>
</tr>
<tr>
<td>7.</td>
<td>fear of lacking vocabulary</td>
<td>Could not recall some words (4), could not translate words in L1 into L2 (2)</td>
<td>6</td>
</tr>
<tr>
<td>8.</td>
<td>negative self-perception</td>
<td>No confidence (3), thinking that their English was bad (3)</td>
<td>6</td>
</tr>
<tr>
<td>9.</td>
<td>fear of being laughed at</td>
<td>Being laughed at when commit mistakes (3)</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>fear of losing face before their counterpart gender</td>
<td>Uncomfortable due to the presence of their counterpart gender (2)</td>
<td>2</td>
</tr>
</tbody>
</table>
As Table 9 shows, the sources of speaking anxiety which emerged most frequently in our data were “formality of online classroom”, “fear of oral activities”, “fear from the teachers”, and “fear of giving wrong response”. Other sources of anxiety also emerged but not as frequently as the sources mentioned previously. This group of sources, which were related to the students’ language ability, included “fear of wrong pronunciation,” “fear of wrong grammar”, and “fear of lacking vocabulary”. The final group of themes, which also emerged less frequently, was: “negative self-perception”, “fear of being laughed at”, and “fear of losing face before their counterpart gender”. As these results show, the sources of anxiety can be both external and internal. External sources, such as the formality of the online classroom and fear from the teachers, come from the environment where the learner is situated. On the other hand, internal sources, like fear of making linguistic errors and negative self-perception, originate from the learners’ lack of confidence.

The overall research findings from the current attempt answered the third research question, which was about the sources of speaking anxiety among three different secondary school students. The findings were seen to be slightly aligned with previous studies such as studies by: Worde (2003), Ohata (2005), William and Andrade (2008), Lucas et al. (2011), Miskam and Saidalvi (2019), and Taly and Paramasivam (2020). Although the contexts of these studies were different from that of this study, it could be seen that most of the sources of speaking anxiety were quite similar. However, we found that female students in the co-educational school have problems with their counterpart gender as they reported fear of losing face before male students in online classes. This particular finding supported the claim made by Lee (2019) that the distractions from counterpart gender in co-educational school could trigger anxiety. According to Lee (2019), male students tend to be more vocal, active, and work competitively while female students are quieter and work collaboratively. Therefore, this claim could be the reason why the majority of students in single-gender (all male and all female) schools experienced low levels of speaking anxiety while the majority of students in co-educational (mixed-gender) school experienced moderate levels of speaking anxiety. Moreover, this could be a possible reason for the significant difference between the speaking anxiety mean scores of students in single-gender and co-educational schools.

4.4. Students’ Speaking Anxiety Coping Strategies (RQ4)

This section answers the fourth research question that focused on the coping strategies of speaking anxiety in online learning context. The frequency of coping strategies of speaking anxiety is illustrated in Table 10.

The data collected from 12 interviews indicated that the strategies used by the students were within the categories of Affective, Cognitive, and Behavioral Strategies. The category that emerged the most frequently was the category of affective strategies, including coping strategies such as deep breathing and looking
Table 10. Coping strategies of speaking anxiety frequency.

<table>
<thead>
<tr>
<th>No.</th>
<th>Categories of Speaking Anxiety</th>
<th>Theme (Coping Strategies of Speaking Anxiety)</th>
<th>Repeating ideas (F)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Affective Strategies</td>
<td>Relaxing</td>
<td>Take a deep breath (3), Calm down (2), Pauses (2), Close their eyes for a moment (1)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Requesting for teachers’ helpful comment</td>
<td>Looking at the teachers for comment (2), seek confirmation from the teachers (4)</td>
<td>6</td>
</tr>
<tr>
<td>2.</td>
<td>Cognitive Strategy</td>
<td>Thinking positively</td>
<td>Gain confidence (2), Not focusing on the mistakes (3)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preparing beforehand</td>
<td>Practice (4)</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Avoiding eye-contact</td>
<td>Switch off webcams (5), Look at something else (2)</td>
<td>7</td>
</tr>
<tr>
<td>3.</td>
<td>Behavioral Strategies</td>
<td>Responding immediately to teachers’ questions</td>
<td>Answer immediately (2), Joining discussions (1)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participating in as many oral activities as possible</td>
<td>Volunteer to respond (3), Participate in speaking activities (1)</td>
<td>4</td>
</tr>
</tbody>
</table>

at the teacher for comment. These were followed by less frequent cognitive (e.g. not focusing on the mistakes) and behavioral strategies (e.g. practice).

The findings were seen to be slightly similar from those of the previous studies; such as, Tanveer (2007), Aydin and Zengin (2008), Diao and Paramasivam (2013), and Taly and Paramasivam (2020). Despite the different contexts of the previous studies from that of this study, it could be seen that most of the coping strategies of speaking anxiety employed by the ESL learners were quite similar.

However, one of the most interesting findings of this study was the avoiding eye contact strategy. Although some students had problems with the strictness of the teachers, they would prefer online classes to face-to-face classes because some teachers were considerate with their students by turning off their webcams. It could be seen that some students would be comfortable speaking when their teachers and classmates were unable to view them. Therefore, this strategy could be very effective in reducing speaking anxiety among students in secondary schools.

5. Conclusion

This study showed that the majority of the students in three different gender-based types of schools experienced low levels of speaking anxiety. In general, the secondary school students in three different gender-based types of schools...
felt more comfortable speaking during English class via an online learning platform. However, female students were discovered to experience higher speaking anxiety levels than their counterpart gender in the co-educational school.

There was a significant difference in speaking anxiety mean scores among students in three different gender-based types of schools. Single-gender (all male) students turned out to have the lowest anxiety scores which were only insignificantly higher than Single-gender (all female) students. On the other hand, the students in the co-educational school reported the highest anxiety scores which were significantly different from the other two groups. Additionally, among the co-educational school students, female students reported significantly higher speaking anxiety mean scores than males in online classes.

Ten sources of speaking anxiety were discovered which were: 1) formality of online classroom, 2) fear of oral activities, 3) fear from the teachers, 4) fear of giving a wrong response, 5) fear of wrong pronunciation, 6) fear of wrong grammar, 7) fear of lacking vocabulary, 8) negative self-perception, 9) fear of being laughed at, and 10) fear of losing face before their counterpart gender. Finally, several coping strategies employed by the students were also reported in the categories of affective (relaxing and requesting teachers’ helpful comment strategies), cognitive (thinking positively strategy), and behavioral (preparing beforehand, avoiding eye contact, responding immediately to teachers’ questions, and participating in as many oral activities as possible strategies) strategies.

This study’s findings provide pedagogical implications for English language educators. Special attention needs to be paid to female students, particularly those in co-educational schools as they are expected to suffer from higher levels of anxiety. Teachers’ awareness of the sources reported in this study will allow them to minimize the situations that may trigger students’ anxiety. For example, as our results indicated, sharing webcams can provoke students’ speaking anxiety; therefore, teachers should take every possible step to handle the situation carefully before asking their students to turn on their webcams if needed. The coping strategies discovered in our study will help the students who suffer from high speaking anxiety levels. Teachers can also share these strategies with their students, and encourage them to practice these useful strategies to establish a non-threatening learning environment for their students. For example, teachers should instruct their students to raise their hands and ask for permission before talking or answering their questions. Therefore, according to the findings, these recommendations could be implemented by educators in reducing their students’ speaking anxiety.

Conflicts of Interest
The authors declare no conflicts of interest regarding the publication of this paper.

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