Sense of Classroom Community, Foreign Language Enjoyment, Foreign Language Anxiety, and Self Confidence as Predictors of Willingness to Communicate in English as a Foreign Language

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ABSTRACT
The present study sought to scrutinize the contribution of perceived sense of classroom community, enjoyment, anxiety and self-confidence to willingness to communicate. Involving 402 senior high school students (Female: 249, Male: 153), the study was conducted in a sociocultural context which is under-represented in the international literature. Questionnaires gauging classroom community, foreign language enjoyment, foreign language anxiety, self-confidence, and willingness to communicate were administered to all respondents. Multiple regression analysis was calculated to predict students’ willingness to communicate. A significant regression equation was found. Perceived sense of classroom community, foreign language enjoyment, foreign language anxiety, and self-confidence concurrently contributed 21% of the total variance in willingness to communicate. Consistent with the literature, foreign language anxiety turned out to be the strongest negative predictor of willingness to communicate, whereas sense of classroom community, self-confidence, and foreign language enjoyment were all significant positive predictors.

Keywords: sense of classroom community; foreign language enjoyment; foreign language anxiety; self-confidence; willingness to communicate

1. Introduction

Being able to communicate using a foreign language, such as English, constitutes one of the primary goals of foreign language learning (Halupka-Rešetar, Knežević, and Topalov 2018). However, getting foreign language learners to communicate using the target language may prove to be a challenging task as some students are more willing to communicate than others (Halupka-Rešetar, Knežević, and Topalov 2018). It is tempting to expect that more proficient language learners would be more willing to communicate than less proficient ones. This is not always the case as, at times, less proficient learners are even more volitional than more proficient learners when it comes to communicating using the target language (MacIntyre et al. 1998).

Research evidence suggests that willingness to communicate is affected by both student-internal and student-external variables. Amongst the most frequently researched variables include foreign language enjoyment (Dewaele et al. 2017; Li, Jiang, and Dewaele 2018; MacIntyre and Gregersen 2012), foreign language anxiety (MacIntyre 1999; MacIntyre and Vincze 2017; Mesri 2012; Dewaele and MacIntyre 2014), and self-confidence (Lee 2019; Yashima 2002). However, to my knowledge, no
previous research has examined the possible contribution of perceived sense of classroom community to student willingness to communicate, although research evidence indicates that perceived sense of classroom community is critical to social interaction (Rovai 2002) and that social interaction is pre-requisite to communication. Additionally, whereas studies examining the effect of the above variables on WTC do exist, little research has examined the simultaneous contribution of these variables on WTC. The present study sought to fill this gap in research.

2. Literature Review

This section provides discussion on sense of classroom community, foreign language enjoyment, foreign language anxiety, self-confidence, and willingness to communicate respectively. In doing this, the interconnectivity between each variable and willingness to communicate will be demonstrated.

Sense of Classroom Community

A classroom community is defined as “a social community of learners who share knowledge, values, and goals” (Rovai 2002, 322). The author further divides classroom community into two major components referred to as “feelings of connectedness among community members, and commonality of learning expectations and goals” (Rovai 2002, 322). Feeling of connectedness concerns the feeling that community members belong to the group, are accepted by the group, and the feeling that they develop a mutually-beneficial relationship. Commonality of learning expectations and goals pertains to the feeling that community members actively construct knowledge and that the community members help one another learn (Rovai 2002). Simply put, sense of classroom community (hereafter SCC) refers to the feeling of belonging, attachment and being part of the class – feeling of connectedness and mutuality – where classroom community members interact and communicate with one another, help one another achieve their learning goals.

When a strong sense of community is perceived by the students, they tend to be better prepared, engage more actively in class activities (Young and Bruce 2011) and take part in the community’s activities more efficiently (Haar 2018). They participate in class discussion, ask questions, respond to others’ questions, offer help willingly in an attempt to fulfill the group’s learning goals. However, social interaction and willingness to communicate could be jeopardized by a weak sense of classroom community.

Furthermore, sense of community is strongly related to course satisfaction, in that students who perceive a strong sense of community tend to be more satisfied with the course compared to those who experience a weak sense of community (Baturay 2011). In addition to affecting social interaction and course satisfaction, sense of community has also been reported to affect learning outcomes and retention (Small 2014), motivation, attitude and behavior (Vieno et al. 2007), well-being, self-efficacy, motivation and self-esteem (Battistich et al. 1997) and has been identified as a determinant of effective instruction (Haar 2018).

All in all, not only are students who experience a strong sense of community more likely to perform better academically, they are also more likely to communicate with their classmates more easily and willingly (Alm 2016; Baturay 2011; Wenger
and to remain in the course. By comparison, students who perceive a weak sense of community tend to experience alienation and isolation (Wenger 1999) and are, therefore, less willing to communicate (Rovai 2002). However, the extent to which perceived sense of classroom community could impact on willingness to communicate in a foreign language classroom setting remains to be seen.

**Foreign Language Enjoyment**

Defined as “…the extent to which classroom L2 Learning is perceived as providing pleasure” (Lee 2020, 2), foreign language enjoyment (hereafter FLE), known as positive emotion, plays a pivotal role in foreign language learning (Dewaele et al. 2017). Some examples of positive emotion include joy, amusement, interest, pride, gratitude and love (MacIntyre and Vincze 2017). MacIntyre and Gregersen (2012) argue that positive emotion promotes better ability at noticing language input and language awareness critical to foreign language acquisition. More importantly, positive emotion helps students cope with difficult times when learning, facilitates foreign language learning and promotes overall well-being of the learners (Li, Jiang, and Dewaele 2018).

Students who find their classroom positive and enjoyable are more inclined to communicate with their classmates than those who do not (Lee 2020). A good classroom atmosphere (good teachers, good classmates, enjoyable learning activities) leads to positive learning experience (Dewaele and MacIntyre 2014), thus classroom enjoyment. Classroom enjoyment further enhances social cohesion among classroom community members (MacIntyre and Gregersen 2012), which in turn promotes dynamic social interaction and willingness to communicate (Rovai 2002). Thus, students who experience foreign language enjoyment tend to be more willing to communicate than those who do not experience enjoyment in their learning. In fact, research evidence suggests that classroom enjoyment serves as the best predictor of willingness to communicate in the L2 classroom (Lee 2020).

Foreign language enjoyment and foreign language anxiety were once considered to be a construct of polarity with foreign language anxiety being at one end of the spectrum and foreign language enjoyment at the other. Recent research, however, shows that these two constructs are independent emotion dimensions, in that one could experience enjoyment and anxiety concurrently. Dewaele, MacIntyre, Boudreau, and Dewaele (2016) examined FLE and foreign language anxiety of male and female EFL learners from different parts of the globe. The independent samples t-test suggests that females reported significantly higher FLE scores compared to their male counterparts, but they also reported higher mild anxiety.

FLE can be classified into three dimensions referred to as “FLE-Private, FLE-Teacher, and FLE-Atmosphere” (Li, Jiang, and Dewaele 2018, 183). The first dimension, “FLE-private”, is related to ‘personal pleasure’ as a result of achieving satisfactory progress or certain accomplishment in language learning which, in turn, results in enjoyment. The second dimension, “FLE-Teacher”, refers to teacher’s positive characters such as use of jokes/humour, use of engaging teaching strategies, positive attitude towards students, etc. The final dimension, “FLE-Atmosphere”, is pertaining to the overall classroom atmosphere such as relationship among students, good classmates, positive atmosphere of the class, students having a good time in
class, etc. All these dimensions contribute to FLE (Dewaele and MacIntyre 2014; Dewaele and MacIntyre 2016; Li, Jiang, and Dewaele 2018).

To sum up, students who feel that they have made satisfactory progress in their learning, have good teachers, good friends, good classroom atmosphere are inclined to enjoy their class more than those who do not share a similar experience. Students who experience FLE would, in turn, be more willing to communicate than those who do not experience enjoyment in their learning (Lee 2020). FLE is, thus, a good predictor of willingness to communicate.

Foreign Language Anxiety

Belonging to the negative emotion, foreign language classroom anxiety (hereafter FLCA) is defined as “the worry and negative emotional reaction aroused when learning or using a second language” (MacIntyre 1999, 27). In other words, FLCA refers to the feeling of nervousness, apprehension, tenseness, trepidation and uneasiness resulting from learning or using a foreign language in a foreign language classroom.

Research evidence drawn from a diverse array of foreign language contexts suggests that anxiety is negatively related to willingness to communicate, in that highly anxious students are inclined to be less willing to communicate (Siročić 2014). Not only does a high anxiety level impede student willingness to communicate, but it could also hamper learning and learning experience. In fact, research evidence suggests that FLCA significantly impacts on foreign language learning (MacIntyre and Vincze 2017) as it interferes with acquisition, retention and production of a foreign language (Dewaele and MacIntyre 2014; Gardner 1985; MacIntyre and Gardner 1991; Mesri 2012). Thus, foreign language anxiety correlates negatively with both achievement (Azher, Anwar, and Naz 2010; Mesri 2012) and willingness to communicate (Siročić 2014).

Previous studies examining male and female anxiety levels have yielded conflicting and inconsistent findings. For example, some studies suggested that female students are more anxious than male students (Arnaiz and Guillen 2012); other studies reported quite the opposite (Azher, Anwar, and Naz 2010), and some studies reported a non-significant difference (Sahlan et al. 2021). One possible explanation to these conflicting findings is that determinants of anxiety were not explored in these studies. MacIntyre (1999), for example, found that negative experiences in the past could be an important determinant of anxiety and, given possible differences in student previous learning experience, these conflicting findings are not unexpected.

Furthermore, of all language skills, Listening and Speaking are probably the two language components that often provoke the most anxiety with speaking in front of the class being the most anxiety-provoking activity, whereas Reading and Writing incite less anxiety (Tuncer and Doryan 2015). It is worth noting that, whereas a high level of anxiety, also referred to as ‘debilitating anxiety’, is detrimental to foreign language acquisition, a moderate anxiety level, also known as ‘positive anxiety’ or ‘facilitating anxiety’, is required as it could motivate students to learn, leading to knowledge acquisition (Park and French 2013; Mesri 2012).

In a nutshell, research evidence suggests that anxiety is negatively correlated with students’ learning outcomes and their willingness to communicate. As anxiety
levels increase, willingness to communicate will decrease and vice-versa (Dewaele and MacIntyre 2014; MacIntyre and Charos 1996; Yashima 2002), leading some researchers to conclude that anxiety is the best negative predictor of willingness to communicate (MacIntyre and Charos 1996).

Self-Confidence

Defined as a combination of perceived L2 communication competence and communication anxiety over using the target language (Clément's and Kruidenier 1985), self-confidence (hereafter SC), also referred to as linguistic self-confidence or perceived communication competence (Lee 2019; Yashima 2002), is an important variable affecting language learners’ willingness to communicate.

MacIntyre, Clément, Dörnyei, and Noels (1998) made a distinction between ‘state’ and ‘trait-like’ self-confidence. The former refers to “...a momentary feeling of confidence, which may be transient within a given situation” (549), whereas the latter refers to more enduring personal characteristics. A typical example of ‘state’ self-confidence is when a language learner is expected to use a foreign language in a given situation or for a certain purpose, such as delivering a speech in a foreign language. Both ‘state’ and ‘trait-like’ self confidence have been known to impact on language learners’ willingness to communicate.

Language learners who are more confident in the target language proficiency and who have a low to moderate anxiety level are more likely to initiate communication using the target language than those who are lacking confidence and experience debilitating anxiety. Highly confident language learners are more likely to report higher willingness to communicate scores (de Saint Le´ger and Storch 2009). Intuitively, initiating communication in a foreign language volitionally requires a certain degree of confidence in one’s language proficiency. Thus, self-confidence serves as a positive predictor of willingness to communicate.

Willingness to Communicate

Willingness to communicate (hereafter WTC) is defined as “readiness to enter into discourse at a particular time with a specific person or persons, using a L2” (MacIntyre et al. 1998, 547). In other words, WTC refers to willingness to start a communication/ conversation with a person(s) on a specific topic in a specific time. WTC was originally considered to be a fixed “personality-based, trait-like predisposition” regardless of time, situation, and context (Alm 2016, 68). Later research, however, reveals that WTC is an intricate construct and is influenced by both student-internal (personality trait, psychological and linguistic variables) and student-external variables (situational variables, intergroup climate) (MacIntyre et al. 1998). MacIntyre et al. (1998) provided a heuristic model of WTC in a second language context using a pyramid.

The pyramid comprises six layers. At the very bottom of the pyramid, layer VI, is the ‘social and individual context’ which comprises ‘intergroup climate’ and ‘personality’. Above this layer is layer V, which is ‘affective-cognitive context’ encompassing ‘intergroup attitudes’, ‘social situation’, and ‘communicative competence’. Moving up, layer IV, is the ‘motivational propensities’ which consists of ‘interpersonal motivation’, ‘intergroup motivation’, and ‘self-confidence’. Layer III is
referred to as ‘situated antecedents’ comprising the ‘desire to communicate with a specific person’ and ‘state communicative self-confidence’. The second layer is the ‘behavioural intention’, that is, willingness to communicate. Finally, at the very top of the pyramid is ‘communication behaviour’, that is ‘L2 use’.

Since the introduction of the above WTC model, various studies have been conducted on various aspects of WTC, encompassing studies that examined the role of extraversion and introversion (MacIntyre, Clement, and Noels 2007), cultural differences (Wen and Clément 2003), foreign language enjoyment (Dewaele et al. 2017; MacIntyre and Gregersen 2012; Li, Jiang, and Dewaele 2018), foreign language anxiety (MacIntyre 1999; MacIntyre and Vincze 2017; Mesri 2012; Dewaele and MacIntyre 2014), self-confidence (Lee 2019; Yashima 2002), communication competence, self-esteem, communication apprehension, perception of one’s self, and cultural diversity (McCroskey and Richmond 1991).

Arguably, amongst the widely investigated variables influencing WTC include FLCA (Siročić 2014; MacIntyre 1999; MacIntyre and Vincze 2017; Mesri 2012; Dewaele and MacIntyre 2014), FLE (Dewaele et al. 2017; MacIntyre and Gregersen 2012; Li, Jiang, and Dewaele 2018), and SC (Lee 2019; Yashima 2002; de Saint Le´ger and Storch 2009). However, research studies have yielded inconsistent findings pertaining to the roles of these variables. In some studies, for example, enjoyment was reported to be the best predictor of WTC (Lee 2020). In others, however, anxiety was the strongest negative predictor (MacIntyre and Charos 1996).

Another potential, but least researched, variable affecting WTC is SCC, despite research evidence pointing to the critical role of SCC in social interactions and communications (Rovai 2002; Suardika et al. 2020). This paper argues that, although SCC was scarcely discussed in WTC literature, its relevance to the discussion of WTC is self-evident. In fact, SCC can be conveniently grouped into layer VI of the WTC pyramid (inter group climate), layer V (intergroup attitudes, social situation), and even layer IV (intergroup motivation). The present study sought to fill this gap in research by including SCC in the model along with other widely investigated variables so that the extent to which WTC could be accounted for by these variables, either simultaneously or individually, could be demonstrated.

To sum up, WTC is a complex construct which is influenced by both student-internal (personality trait, linguistic variables such as language proficiency, anxiety, self-confidence just to name a few) and student-external variables (situational variables, intergroup climate, social and cultural variables). An ecological perspective is, therefore, required to understand WTC in a foreign language classroom.

Research Questions

The purpose of this research was to answer the following questions:
1. What proportion of the total variation in WTC is explained by SCC, FLE, FLA, and SC concurrently?
2. How much of the total amount of variance in WTC is accounted for by SCC, FLE, FLA, and SC individually?
3. Of the four predictor variables, which variable serves as the strongest predictor of WTC?
4. Does students’ WTC, SCC, FLE, FLA, and SC vary depending on gender?
3. Methods

Respondents

The present study involved 402 respondents (Female 249 = 61.9%, Male 153=38.1%) from a senior high school – SMAN 5 – located in Kendari, Southeast Sulawesi, Indonesia. These respondents were recruited using a convenience sampling technique. Students from year 1 to year 3 in this particular school were all informed of the research and were invited to participate. Participation was encouraged, but completely voluntary. About 31.16% of the total population (1290) took part in this study. The number of respondents by gender across the three different years of enrolment is presented in the following table:

<table>
<thead>
<tr>
<th>Year of Enrolment</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>153</td>
<td>249</td>
<td></td>
</tr>
</tbody>
</table>

Note that the proportion of male and female students was imbalanced which reflected the actual proportion in the entire populations. The ages of the respondents ranged from 14-20 (mean = 16.24, SD = 1.04). Consent from these respondents was sought prior to the study. Respondents understood that participation in the study was completely voluntary and that they were allowed to withdraw anytime during the study without having to justify their decisions.

Green (1991) suggests that a minimum sample of 50 with an additional 8 observations per term is required for a regression analysis. Since there were 5 variables involved, the minimum sample would be 90 (50 + (8*5) = 90), which was well below the sample size of the present study.

Instrumentation

Five different questionnaires were employed in the present study: Sense of Classroom Community Questionnaire, Foreign Language Classroom Anxiety Questionnaire, Foreign Language Enjoyment Questionnaire, Self-Confidence Questionnaire, and Willingness to Communicate Questionnaire.

1. Sense of Classroom Community Questionnaire

The sense of classroom community questionnaire was developed by Rovai (2002) to specifically gauge sense of classroom community. The questionnaire consisted of 20 items measuring two dimensions of classroom community: connectedness (10 items, \( \alpha = 0.92 \)) and learning (10 items, \( \alpha = 0.92 \)). The scale reliability was reported to be 0.93. Respondents were presented with 20 statements pertaining to their perceived sense of classroom community and they were to respond to each statement based on their experience in the classroom by indicating the extent of their agreement with each of the statements. In doing this, 5 different options were provided: (1) strongly disagree (2) disagree (3) neutral (4) agree (5) strongly agree.

2. Foreign Language Classroom Anxiety

Encompassing 33 items, foreign language classroom anxiety was originally developed by Horwitz, Horwitz, and Cope (1986). The internal consistency of this questionnaire was reported to be 0.93. In this questionnaire, respondents were to
respond to 33 statements designed to tap their “communication apprehension, test anxiety, and fear of negative evaluation in the foreign language classroom” (129). Participants were to indicate the extent of their agreement with these statements by selecting one of the following options: (1) strongly disagree (2) disagree (3) neutral (4) agree (5) strongly agree. Positively worded items were reverse coded prior to the analysis so that higher scores were associated with a higher anxiety level.

3. Foreign Language Enjoyment

Developed by Dewaele and MacIntyre (2014), the foreign language enjoyment questionnaire consisted of 21 items, in which case respondents were asked to indicate the extent of their agreement with the 21 statements based on their first-hand experience learning English as a foreign language. To this end, five possible options were provided: (1) strongly disagree (2) disagree (3) undecided (4) agree (5) strongly agree. The reliability of the scale, as indicated by Cronbach alpha, was reported to be 0.86, which indicated high reliability.

4. Self Confidence

Participants were also requested to judge their overall confidence in their English language proficiency in a scale of 1 – 5 with 1 indicating highly inconfident, 2 inconfident, 3 not sure, 4 confident, and 5 highly confident respectively. Since there was only one item (“I feel confident with my English proficiency”), the questionnaire was not piloted. However, efforts were exerted to ensure that all participants understood the questions before they completed the questionnaire.

5. Willingness to Communicate Questionnaire

Encompassing 27 items, the questionnaire was developed by MacIntyre, Clément, and Conrod (2001). The questionnaire tapped the following dimensions of WTC: Speaking in class, in English (8 items, α = 0.81), Reading in class (to yourself, not out loud) (6 items, α = 0.83), Writing in class, in English (8 items, α = 0.88), Comprehension in class (5 items, α = 0.83). Respondents were presented with 27 statements concerning their feelings about communication with their classmates in English and they were to indicate how likely they would be willing to speak in English in each of the situations provided by selecting one of the following options: “(1) almost never willing (2) sometimes willing (3) willing half of the time (4) usually willing and (5) almost always willing”. Negatively worded items were reverse-coded prior to the analysis.

Data Collection

To collect the data, five different questionnaires (SCC, FLE, FLA, SC, and WTC) were administered to 402 respondents. The questionnaires were designed using Google Form (https://forms.gle/92KWaJ3AfkJUSWdb8). All questionnaires were translated into Indonesian, the respondents’ mother tongue, to ensure that all items were properly understood. Participants completed the questionnaire at their own time and pace outside the class and were assured that whatever responses they gave would not affect their grades. More importantly, informed consent was sought from the participants.
Variables
Five variables were involved in the present study – four independent variables, also referred to as the predictor or explanatory variables (SCC, FLE, FLA, abd SC) and one dependent, also known as the outcome or response variable (WTC).

Data Analysis
A number of analyses were performed in the present study using SPSS version 16. To answer Research Questions 1-3, multiple and simple regression analyses were performed. For Research Question 4, an independent samples t-test was run.

4. Result
An initial Pearson correlation analysis showed that all independent variables were significantly related to WTC (p < .000) as seen in the following table:

Table 2. Pearson correlation analyses between Predictor Variables and WTC

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Pearson r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCC</td>
<td>.31</td>
<td>.00</td>
</tr>
<tr>
<td>FLE</td>
<td>.24</td>
<td>.00</td>
</tr>
<tr>
<td>FLA</td>
<td>-.38</td>
<td>.00</td>
</tr>
<tr>
<td>SC</td>
<td>.31</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note that SCC, FLE, and SC were all positively related to WTC, whereas FLA was negatively linked to WTC. This suggested that, as students’ perceived SCC, FLE, and SC increased, their WTC would also rise accordingly. However, as they FLA rose, a decrease in their WTC was expected. Simply put, all predictor variables were significantly related to WTC.

Intercorrelations between predictor variables also showed that these variables were all related to one another. As seen from table 3 below, SCC, FLE, and SC were positively correlated, whereas FLA were negatively linked to SCC, FLE and SC. Pearson correlation analyses among predictor variables are presented in the following table:

Table 3. Pearson correlation analyses between Independent Variables

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>SCC</th>
<th>FLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCC</td>
<td>–</td>
<td>-.56**</td>
</tr>
<tr>
<td>FLE</td>
<td>.56**</td>
<td>–</td>
</tr>
<tr>
<td>FLA</td>
<td>-.35**</td>
<td>-.10*</td>
</tr>
<tr>
<td>SC</td>
<td>.17**</td>
<td>.14**</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed)
** Correlation is significant at the 0.01 level (2-tailed)

Note that no variables are highly correlated. High correlations are those correlations above 0.8 (Field 2013). When variables are highly correlated, multiple regression analysis cannot be performed due to violations of the assumption of ‘no multicollinearity’. Multicollinearity occurs when Tolerance is smaller than 0.1 and VIF is bigger than 10 (Field 2013). As seen from table 4 below, all Tolerance values are much bigger than 0.1 with all VIF values being much smaller than 10. The assumption of ‘no multicollinearity’ was therefore met.

Furthermore, inspections of the assumption of homoscedasticity, as indicted by the scattered dots with no obvious patterns showing a random distribution of positive and negative residuals (Figure 1) and the assumption of normally distributed errors
(Figure 2) also revealed that there were no violations to these assumptions. Finally, and most importantly, the relationship between dependent variable to each of the predictor variables appeared to be linear (Figure 3 and Figure 1). This, in turn, justified the application of multiple regression analysis with the current data.

Multiple regression analysis (Enter) was calculated to predict students’ WTC based on their reported SCC, FLE, FLA, and SC scores. A significant regression equation was found \( F(4, 397) = 27.6, p = .000 < .05 \) with an adjusted R\(^2\) of .21. This suggests that 21% of the total variance in WTC was accounted for by SCC, FLE, FLA, and SC concurrently and another 79% was explained by other variables not included in the model. Results of multiple regression analysis with WTC as dependent variable are presented in the following table:

<table>
<thead>
<tr>
<th>Variable</th>
<th>( B )</th>
<th>( SE )</th>
<th>( Beta )</th>
<th>( t )</th>
<th>( p )</th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCC</td>
<td>.22</td>
<td>.10</td>
<td>.13</td>
<td>2.32</td>
<td>.02</td>
<td>.60</td>
<td>1.66</td>
</tr>
<tr>
<td>FLE</td>
<td>.23</td>
<td>.11</td>
<td>.12</td>
<td>2.14</td>
<td>.03</td>
<td>.67</td>
<td>1.49</td>
</tr>
<tr>
<td>FLA</td>
<td>-.38</td>
<td>.08</td>
<td>-.25</td>
<td>-4.82</td>
<td>.00</td>
<td>.73</td>
<td>1.38</td>
</tr>
<tr>
<td>SC</td>
<td>.15</td>
<td>.04</td>
<td>.17</td>
<td>3.43</td>
<td>.00</td>
<td>.81</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Student predicted WTC is equal to \(.22(\text{SCC})+.23(\text{FLE})-.38(\text{FLA})+.15(\text{SC})\). This can be interpreted as follows: (a) as SCC increases by 1 point, WTC will rise by 0.22 point with FLE, FLA, and SC held constant; (b) as FLE increases by 1 point, WTC will rise by 0.23 point with SCC, FLA, and SC held constant; (c) as FLA increases by 1 point, WTC will drop by -.38 point with SCC, FLE and SC held constant, and (d) as SC rises by 1 point, WTC will increase by .15 point with SCC, FLE, and FLA held constant. Overall, since the significant values of t-test for predictor variables were all smaller than 0.05 (i.e. 0.02, 0.03, 0.00, and 0.00 respectively), it can be concluded that SCC, FLE, FLA, and SC were all significant predictors of WTC – they all contributed information in the prediction of WTC.
As seen from Figures 3-6 below, FLA is the strongest negative predictor of WTC (contributing 14.5% variance in WTC), followed immediately by SC and SCC (each contributing 9.8% variance in WTC) and FLE respectively (contributing approximately 5.7% variance in WTC). The following figures depict the contribution of each of the predictor variables to WTC.

![Figure 4: Partial regression plot for the effect of SCC on WTC.](image)

![Figure 5: Partial regression plot for the effect of FLE on WTC.](image)

![Figure 6: Partial regression plot for the effect of FLA on WTC.](image)

![Figure 7: Partial regression plot for the effect of SC on WTC.](image)

Independent samples t-test was conducted on SCC, FLE, FLA, SC, and WTC scores of male and female students to examine whether significant differences existed. It turned out that only in two variables did males and females differ: WTC and FLA. Female students were more willing to communicate, but, interestingly, they were also more anxious than males. Results of independent samples t-test for all variables are presented in the following table:

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Results</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>WTC of male and female</td>
<td>$t (359.56) = 2.63, p (0.00) &lt;.05$</td>
<td>Female students were significantly more willing to communicate than male students. Male ($M = 2.7$, $SD = 0.65$), Female ($M = 2.89$, $SD = 0.76$).</td>
</tr>
<tr>
<td>2.</td>
<td>SCC of male and female</td>
<td>$t (400) = .57 p (.57) &gt;.05$</td>
<td>No significant difference was found. Male ($M = 3.41$, $SD = 0.42$) and Female ($M = 3.44$, $SD = 0.45$)</td>
</tr>
<tr>
<td>3.</td>
<td>FLE of male and female</td>
<td>$t (400) = -.64, p (.52) &gt;.05$</td>
<td>No significant difference was found. Male ($M = 3.96$, $SD = 0.37$) and Female ($M = 3.93$, $SD = 0.35$)</td>
</tr>
</tbody>
</table>
4. FLA of male and female  \( t (400) = 3.5, p (.001) < 0.05 \) Female students were significantly more anxious than males, Female (\( M = 3.34, SD = 0.49 \)) and Male (\( M = 3.17, SD = 0.45 \))

5. SC of male and female  \( t (347.82) = -1.50, p (0.13) > 0.05 \) No significant difference was found. Male (\( M = 2.97, SD = 0.76 \)) and Female (\( M = 2.85, SD = 0.85 \))

A correlation analysis between predictor variables (SCC, FLE, FLA, SC) and dependent variable (WTC) by gender was also run to examine the extent of the correlation. Pearson correlation analyses revealed that the correlation was significant for all variables for both males and females:

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables Correlated</th>
<th>Pearson ( r )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SCC Male and WTC Male</td>
<td>.37**</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>SCC Female and WTC Female</td>
<td>.29**</td>
<td>.00</td>
</tr>
<tr>
<td>2.</td>
<td>FLE Male and WTC Male</td>
<td>.21*</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>FLE Female and WTC Female</td>
<td>.27**</td>
<td>.00</td>
</tr>
<tr>
<td>3.</td>
<td>FLA Male and WTC Male</td>
<td>-.34**</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>FLA Female and FLA Female</td>
<td>-.45**</td>
<td>.00</td>
</tr>
<tr>
<td>4.</td>
<td>SC Male and WTC Male</td>
<td>.19*</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>SC Female and WTC Female</td>
<td>.39**</td>
<td>.00</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Finally, a one-way ANOVA was conducted on SCC, FLE, FLA, SC and WTC scores to examine whether these scores varied with year of enrolment. None appeared to be significant. Further analyses on these scores by gender and year of enrollment were performed. A significant effect of year of enrolment on female WTC scores \( F(2,246)=4.63, p= 0.01 \) and on male SC scores, \( F(2,150)= 5.29, p=0.00 \) was detected. Post hoc comparisons using Bonferroni indicated that WTC scores of year 1 female (\( M=3.05, SD=0.77 \)) were significantly higher than WTC scores of year 3 female (\( M=2.70, SD=0.79 \)), \( p (0.01) < 0.05 \) and that SC scores of year 2 male (\( M=3.14, SD=0.68 \)) were significantly higher than those of year 1 male (\( M=2.61, SD=0.84 \)), \( p (0.00) <0.05 \).

5. Discussion

Overall, the multiple regression analysis revealed that all four predictor variables (SCC, FLE, FLA and SC) were significantly related to WTC. In fact, they accounted for 21% of the total variance in WTC. FLA served as the strongest negative predictor for WTC (contributing 14.5% variance in WTC), thus confirming findings of previous studies (e.g., Dewaele & Dewaele, 2018; MacIntyre & Charos, 1996), whereas SCC and SC were the second strongest predictors (each contributing 9.8% variance in WTC), followed immediately by FLE (contributing 5.7% variance in WTC) respectively. Thus, all independent variables proved to be significant predictors for WTC.

By and large, literature suggests that as anxiety level increases, student willingness to communicate will decrease and vice-versa (Dewaele and MacIntyre 2014; MacIntyre and Charos 1996; Yashima 2002) and this widely cited position lent support from the present study. Note that FLA scores were negatively correlated with WTC regardless of gender (see Table 6). However, it is important to make a distinction between ‘facilitating’ and ‘debilitating’ anxiety as research evidence also shows that
anxiety is not necessarily detrimental to learning. On the contrary, a certain level of anxiety is known to facilitate learning (Park and French 2013; Sahlan et al. 2021). The fact that females were significantly more anxious than their male counterparts, but scored significantly higher on WTC, may well be indicative of the presence of facilitating, rather than debilitating anxiety (Dewaele et al. 2016).

Interestingly, although SCC was, to my knowledge, scarcely discussed in previous WTC research, this variable turned out to be a significant predictor for WTC regardless of gender. In fact, SCC contributed more variance to WTC than did FLE – a popular variable in WTC research. A Theory of Psychological Sense of Community proposed by McMillan and Chavis (1986), from which SCC originated (Rovai 2002), was used to account for the importance of SCC to WTC. The theory envisages that members of a classroom community share the feeling of belonging, attachment and being part of the class – feeling of connectedness and mutuality where classroom community members interact and communicate with one another, help one another achieve their learning goals.

In a classroom setting, students are generally gravitated towards communicating with those whom they feel connected to and accepted by, just like the conventional community. When a student feels that he/she belongs to, and is attached to the class, there is a chance that he/she would initiate communications with other students in the class more volitionally. Developing a strong sense of community could, thus, enhance social interaction among the students (Small 2014; Alm 2016; Baturay 2011; Wenger 1999). A strong sense of community leads to dynamic social interaction among community members, in which case community members are willing to communicate with one another in an attempt to reach their learning goals (Rovai 2002; Alm 2016; Baturay 2011; Wenger 1999).

Furthermore, SC also turned out to be another significant predictor for WTC. Needless to say, instinct tells us that a certain degree of confidence is required to be able to initiate communication in a foreign language volitionally. When one is highly confident and experience a low anxiety level, one will be more likely to initiate communication than those who lack such confidence (Lee 2019; Yashima 2002). Perhaps it is safe to argue that it may not be so much about language proficiency level that dictates WTC in a foreign language; rather, it is one’s SC in the target language proficiency. Less proficient, but more confident, language learners may be more likely to communicate in a foreign language than those who are more proficient, but lacking SC (de Saint Le´ger and Storch 2009). The role of SC in WTC can also be explained from the standpoint of Language Acquisition Theory.

To begin with, Stephan Krashen’s Theory of Language Acquisition comprises five major hypotheses. One of them was referred to as the Affective Filter Hypothesis (Krashen 1987). Amongst the most important postulate is that language acquisition involves ‘affective variables’ or ‘emotional factors’ such as self-confidence, enjoyment, anxiety, and motivation. These emotional factors, so the theory goes, can either facilitate or impede learning (Krashen 1987; Krashen 1985) and presumably communication. For example, [−self-confidence], [−enjoyment] and [+anxiety] may raise the affective filter and create a ‘mental block’ that will prevent comprehensible input, thus language acquisition. Conversely, [+self confidence], [+enjoyment] and [−anxiety] will lower down the affective filter, thus enabling the acquisition of
comprehensible input (Krashen 1987). This implies that self-confidence and enjoyment would be positively correlated, whereas anxiety would be negatively correlated with these two variables, which was exactly the case with the results of the present study.

Not only did affective filter impact on ‘comprehensible input’ as hypothesized by Language Acquisition Theory (Krashen 1985), but it also appeared to affect comprehensible output (Swain 1995), that is, the learners’ productive use of input (layer I in the pyramid of the WTC model). For communication to take place, learners’ affective filter needs to be kept at a low level (i.e. their confidence and motivation should be high, but their anxiety level should be low – layer IV in the pyramid of the WTC model) to facilitate both input and output. Intuitively, language learners would be gravitated towards social interaction and communication with other students in the class if the learning environments are perceived to be engaging, fun, less stressful, and less threatening. In other words, if affective filter is low, then there is a good chance that students will be more volitional in initiating communication and social interaction with other members of the classroom community. However, if affective filter is high (i.e., students feeling highly anxious and highly unconfident), it is humans’ instinct that they would avoid communicating with others, the activity of which may put them in risk psychologically or make them feel insecure and emotionally threatened.

Interestingly, females in the first cohort (year 1) were found to be significantly more willing to communicate than those in the third cohort (year 3). Donovan and MacIntyre (2004) noted that, with males, willingness to communicate would increase with age, but the reverse was true for females. As females get older, their WTC appears to decline. This observation was nearly fully supported. Note that the WTC mean score for year 1 female was 3.05, which decreased to 2.94 in year two and again to 2.70 in year 3 respectively. A significant difference between WTC scores in year 1 and year 3 was observed. For males, however, WTC mean score in year 1 was 2.58 which increased to 2.74 in year 2, then slightly declined to 2.72 in the third year. A significant difference between year 1 and year 2 was found, but the difference between year 1 and year 3 was only approaching a significant level. Further research could be geared towards understanding factors contributing to this seemingly different trend in WTC between males and females, taking into account seniority.

To sum up, the present study suggested that SCC, FLE, FLA, and SC were all significant predictors of WTC and that FLA turned out to be the strongest negative predictor, followed immediately by SCC, SC, and FLE respectively. The major contribution of this paper lies in the inclusion of SCC in the prediction of WTC which, to my knowledge, has scarcely been explored in previous WTC research, although its importance in engendering communication and social interaction is widely recognized.

Limitations

Despite the results, there is a chavezat in interpreting findings of the present study owing to the following limitations. Firstly, the questionnaire measuring self-confidence comprised a single item where respondents were requested to judge their overall level of confidence in their language proficiency in a scale of 1-5. Thus, no
validity and reliability analysis was performed for this variable. However, a single-item questionnaire may be acceptable for measuring job satisfaction (Scarpello and Campbell 1983; Wanous, Reichers, and Hudy 1997) and self-confident questionnaire works in a similar way. Secondly, females far outnumbered males which might have resulted in bias when performing gender-based analyses. Finally, the number of respondents in each cohort (year of enrolment) was also imbalance. This might have introduced bias in the cohort-based analysis. Thus, results of the present study should be considered indicative, rather than definitive.

6. Conclusion

Findings of the present study suggested that SCC, FLE, FLA, and SC were all significant predictors of WTC contributing a total of 21% variance in WTC. SCC, FLE, and SC were all positive predictors, whereas FLE was a negative predictor. Consistent with the literature, FLA turned out to be the strongest predictor of WTC (contributing 14.5% variance in WTC), followed immediately by SC and SCC (each contributing 9.8% variance in WTC) and FLE respectively (contributing approximately 5.7% variance in WTC). Females were significantly more willing to communicate than males, but were also significantly more anxious. This appears to indicate the existence of so-called ‘facilitating anxiety’ which is known to positively impact on learning, in spite of the debates pertaining to whether it is the anxiety per se or whether it is the enjoyment that is responsible for the positive learning outcomes of students who experience both higher anxiety and higher enjoyment levels. Interestingly, female WTC appeared to dwindle with age which worked somehow differently with males. The major contribution of this paper lies in the inclusion of SCC in the prediction of WTC. SCC has largely been ignored in previous WTC research, although its importance in engendering social interaction and communication is well documented in the literature. SCC contributed more variance in WTC than did FLE – a popular variable in WTC research. Further research could be geared toward understanding the role of ‘facilitating anxiety’ and the reason why male and female WTC exhibited a different pattern and whether this trend will hold across different educational levels and contexts.

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Declaration of interest statement

The author reports there are no competing interests to declare.
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