The Role of Goal Orientations and Communication Strategies in Willingness to Communicate in EMI Classrooms

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ABSTRACT

Background: In English-medium instruction (EMI) classrooms, goal orientations, strategies, and communication play pivotal roles in facilitating effective learning. Achievement goal orientations (AGOs) guide and control learner competence-relevant behavior in academic performance. Communication strategies (CSs) are communication aids for learners to cope with problems or breakdowns while speaking the target language. Strategic competence is an indispensable affective-cognitive factor that promotes learners' willingness to communicate (WTC) in a target language.

Purpose: This study aims to investigate the role of AGOs and CSs in predicting WTC and the effect of English proficiency on AGOs and CSs in EMI classrooms.

Method: An online questionnaire survey regarding the perception of AGOs, CSs, and WTC was conducted with 595 university students taking one EMI course in social science and humanity domains in Taiwan. The items were on a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Hierarchical multiple regression was adopted to predict WTC in EMI classrooms. One-way between-group MANOVAs were adopted to examine the individual and joint effect of English proficiency on the AGOs and CSs.

Results: The hierarchical multiple regression model showed that task goal orientations and social affective strategies strongly and positively predicted the university students' WTC in the EMI classroom. Performance-avoidance goal orientations and message reduction and alteration strategies were found to negatively predict WTC in EMI settings. Students' English proficiency neither predicted their WTC nor affected their AGOs in the EMI classroom. High-proficiency students adopted accuracy-oriented, fluency-oriented, and negotiation for meaning while speaking strategies more frequently than low-proficiency students.

Conclusion: It is suggested that a supportive and dynamic classroom environment with higher-order learning tasks involving cooperation, reflection, and objective assessment criteria can be incorporated into EMI programs. Besides, instruction in CSs and the use of multimedia teaching aids can facilitate EFL learners' comprehension of subject-specific materials and encourage them to engage more in EMI classrooms.

KEYWORDS

achievement goal orientations, communication strategies, willingness to communicate, English proficiency, EMI

INTRODUCTION

The importance of communicative competence has been highlighted, but neglected, in the English curricula for primary and secondary education in Taiwan for several decades. According to the English curriculum, in addition to fostering linguistic knowledge and skills, English should be learned for the purpose

of communication[1]. However, the overemphasis on English reading and writing skills in the high-stakes University Entrance Examination has resulted in limited use of speaking skills and strategies in secondary school. Students' English speaking ability is frequently challenged when teacher-student interaction and oral presentations involving communication in English and subject-specific knowledge are required for English-medium instruction (EMI) courses in universities (Chou, 2018; Tsou & Kao, 2017). This lack of opportunity to speak English in high school and necessary English proficiency, along with other situational factors, such as subject-specific topics, has resulted in student reticence and passivity in EMI classrooms (Chou, 2018; Sang & Hiver, 2021; Shao & Gao, 2016). Communication strategies (CSs) may help students overcome these challenges by providing them with alternative ways, such as repetition, code-switching, and message replacement, to communicate their meaning in English. As a result, to what extent communication strategies predict students' willingness to communicate in EMI classrooms is worth examination.

One important variable that influences student motivation and strategy use is achievement goal orientations, which include the goals of developing academic ability, demonstrating ability, and avoiding the demonstration of lack of ability (Elliot & McGregor, 2001; Midgley et al., 1998; Wolters, 2004). These goal orientations provide a framework for how individuals perceive their own academic ability and how they interpret and react to specific learning tasks; this results in different patterns of cognition, motivation, and behavior. A number of researchers have found strong and positive associations between achievement goal orientations, motivation, and use of general learning strategies in academic learning (Lee et al., 2010; Liem et al., 2008; Miller et al., 2021). While most of the literature in East Asian countries and regions has emphasized (1) course design and material development to increase student participation, (2) instructional approaches and assessment practices to improve student comprehension, and (3) academic achievement for individual EMI programs (Gundsambuu, 2019; Jiang et al., 2019; Joe & Li, 2013; Macaro, 2020; Tsou & Kao, 2017), research on strategic and motivational properties in EMI classrooms in Taiwan remains underinvestigated. By understanding how different types of achievement goals and CSs influence students' willingness to communicate (WTC) in EMI classrooms, teachers can provide students with communication support and create a classroom environment that helps students succeed in EMI courses. Thus, the present study investigates the extent to which the roles of achievement goal orientations and communication strategies predict English as a Foreign Language (EFL) university students' willingness to communicate in EMI classrooms.

LITERATURE REVIEW

Achievement Goal Orientations

Goal orientations generally refer to learners' perceptions of their engagement in learning tasks. Achievement goal orientations (AGOs) are future-focused cognitive representations that guide and control learner behavior in terms of belief in academic abilities, engaging in tasks, and academic performance (Elliot & McGregor, 2001; Midgley et al., 1998). Midgley et al. (1998) classified achievement goals into three types: (1) task or mastery goals (i.e. to develop ability and skill), (2) performance-approach goals (i.e. to demonstrate ability), and (3) performance-avoidance goals (i.e. to avoid demonstrating a lack of ability). It was discovered that students with strong mastery goal orientations motivated themselves to develop competence, and increase their knowledge and skills in academic contexts.

One of the major research topics on AGOs has been their effects on students' academic engagement and performance (e.g., Miller et al., 2021; Noordzij et al., 2021; Wolters, 2004), self-regulated learning (e.g., Lim & Lim, 2020; Zhu & Mok, 2018), self-efficacy (e.g., Huang, 2016; Turner et al., 2021), and strategy use (e.g., Adesope et al., 2015; Liem et al., 2008; Somuncuoglu & Yildirim, 1999). Students with strong task goal orientations were found to participate in high-order, interactive, and reflective learning activities (Lim & Lim, 2020; Zhu & Mok, 2018). They have also been found to use more metacognitive and cognitive strategies for processing information and problem solving (Adesope et al., 2015; Liem et al., 2008; Somuncuoglu & Yildirim, 1999). Nevertheless, the associations between the other two types of AGO (performance-approach and performance-avoidance goal orientations) and academic performance have proven inconclusive in the literature. Performance-avoidance goal orientations have been found to have a positive relation with a superficial level of learning strategies (i.e., surface learning) (Liem et al., 2008) and have a negative impact on strategy use and learning outcomes (Adesope et al., 2015; Somuncuoglu & Yildirim, 1999; Wolters, 2004) and self-efficacy in speaking (Turner et al., 2021). On the other hand, Noordzij et al. (2021), in their meta-analysis of induced achievement goals, found no difference in academic performance, induced performance-approach or performance-avoidance goal orientations.

It is known that AGOs significantly affect students' motivation, behavior, and performance in various educational settings, but there is very limited study on EMI courses in the literature. To date, much work on AGOs has been carried

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[1] Ministry of Education (2018). English curriculum of 12-Year Basic Education [十二年國民基本教育課程綱要—英語文領域]. https://reurl.cc/y6ZxXq

out on students taking different academic subjects, such as mathematics, science, and psychology in first (L1) and second language (L2). It is thus worth investigating (1) the relationships among EFL university students' AGOs, communication strategies, and their WTC and (2) the extent to which students' AGOs predict their WTC in EMI classrooms.

Communication Strategies

Communication strategies (CSs), also known as interaction strategies, have been considered verbal and nonverbal communication aids that may be used by learners to cope with problems or breakdowns while speaking the target language. These strategies enable learners to remain active interlocutors in communication. Over the past few decades, many studies have explored the taxonomies of CSs (Cohen & Henry, 2020; Goh & Burns, 2012; Nakatani, 2006). For example, CSs have been categorized into three general types by Goh and Burns (2012): cognitive (e.g., paraphrasing, approximation, and formulaic expressions), metacognitive (e.g., planning, self-monitoring, and self-evaluation), and interactional strategies (e.g., exemplification, confirmation checks, and clarification requests). In his Oral Communication Strategy Inventory (OCSI), Nakatani (2006) classified CSs into eight types: (1) social affective (e.g., control anxiety, encourage oneself to speak English, and risk making mistakes); (2) fluency-oriented (e.g., pay attention to the rhythm and conversational flow, and take time to express oneself); (3) negotiation for meaning while speaking (e.g., make comprehension checks, give examples, or repeat oneself to ensure the listener understands); (4) accuracy-oriented (e.g., pay attention to grammar and expression); (5) message reduction and alteration (e.g., reduce the message and use simple expressions); (6) nonverbal (e.g., make eye contact or use gestures and facial expressions); (7) message abandonment; and (8) attempting to think in English.

A number of researchers have adopted the OCSI to explore the CSs used by second and foreign language learners and possible factors, such as cultural background, L1, and anxiety, that influenced their strategy use (Huang, 2010; Ting et al., 2017; Zhang & Liu, 2013). These researchers also discovered a positive relationship between students with higher English proficiency and their use of CSs. Another two intriguing topics prevailing throughout CS research are the effects of (1) speaking tasks on strategy use (e.g., Chou, 2021; Barkaoui et al., 2013) and (2) strategy instruction on increasing speaking ability and WTC in L2 and foreign language classrooms (e.g., Goh & Burns, 2012; Milliner & Dimoski, 2022; Mirsane & Khabiri, 2016). Researchers have discovered that strategy instruction has a significant and positive impact on students' overall speaking performance and the use of problem-solving, interaction, and communication strategies (Goh & Burns, 2012; Milliner & Dimoski, 2022). Additionally, teaching CSs to EFL learners was found to enhance students' WTC in class (Mirsane & Khabiri, 2016).

Effective communication is a fundamental aspect of the learning process and classroom dynamics. CSs can be adopted to help students convey their thoughts, ideas, and opinions to teachers and peers. To understand the role of CS in EMI classrooms and its effect on students' WTC subject-specific knowledge, there is a need to examine (1) the extent to which CSs predict WTC in EMI courses and (2) whether university students with different English proficiency levels vary in terms of their use of CSs in EMI courses.

Willingness to Communicate (WTC) in English

The concept of WTC is derived from communication in L1, which focuses on a person's trait-like and state-like dispositions while speaking (MacIntyre et al., 1999). MacIntyre et al. (1998, p.547) defined L2 WTC as "a readiness to enter into discourse at a particular time with a specific person or persons, using an L2", regarding it as a strong predictor of communication behavior in L2. MacIntyre et al. (1998) noted that factors influencing L2 WTC involve individual antecedents (e.g., personality), affective influences (e.g., attitude, social situation, communicative competence, and strategic competence), motivation, and situated antecedents (e.g., group atmosphere, desire to communicate with a specific person or under a specific context). Peng and Woodrow's (2010) study discovered that WTC can be divided into two categories: WTC in meaning-focused delivery of content knowledge and WTC in form-focused delivery of linguistic aspects.

Studies on L2 WTC have been increasing sharply for several decades, with interests in the relationships among WTC, perceived communicative competence, motivation, and affective factors such as foreign language anxiety and enjoyment (Dewaele, 2019; Lan et al., 2023; Peng & Woodrow, 2010; Shirvan et al., 2019). These studies consistently found a strong correlation between L2 WTC and perceived communicative competence, which is also an important predictor of L2 WTC. Learners' L2 WTC was found to be affected by a variety of individual and situational variables, including personality, attitude, strategic competence, instructional approach, classroom settings, and emotions (Dewaele, 2019; Li et al., 2022; Mirsane & Khabiri, 2016; Peng, 2020; Shirvan et al., 2019; Vafadar & Foo, 2020). In particular, instruction in speaking strategies has been found to enhance students' WTC in language classrooms. Moreover, Peng (2020) discovered that teachers' interaction strategies, gestures, and effective use of audio/video stimuli increased Chinese EFL students' WTC in class. In addition, recent studies have found that students' task goal orientations have a positive impact on their WTC in language classrooms (Karbakhsh & Safa, 2020; Turner et al., 2021). Several studies have examined the association between task goal orientations and WTC in second and foreign language learning. However, there has been far less research on the effects of individual variables, such as English proficiency, different types of goal orientation, and speaking strategies, on EFL university students' WTC in EMI contexts.

Considering the important role of students' WTC in facilitating knowledge transfer and content understanding in academic courses, investigating the effects of its antecedents, say, AGOs as a type of motivational factor, and CSs, on students' WTC can help teachers understand students' motivation and strategy use, and potentially lead to better student-teacher interaction in EMI classrooms. Thus, the purpose of this paper is to examine the predictive power of individual variables on EFL university students' WTC content knowledge in EMI classrooms. Three individual variables were used to predict WTC: students' English proficiency, the three types of AGO, and six types of CS. Based on the preceding research purpose, the four research questions are as follows:

(1) How well do the three measures of AGOs and six measures of CSs predict university students' WTC in EMI courses? How much WTC variance can be explained?

(2) Which variable best predicts the WTC?

(3) If the possible effect of students' English proficiency is controlled for, is the set of variables (AGOs and CSs) still able to predict WTC?

(4) Do students' overall AGOs and CSs in EMI courses vary with their language proficiency?

METHOD

Participants

The participants were 595 university students (mean age: 21.53 years old; female: 70.1%) taking one EMI course from one university in southern Taiwan. The academic departments offered the EMI courses which were either required or optional, including (1) business-related, (2) politics-related, (3) education-related, (4) design-related, and (5) language- and literature-related courses. The students in this university needed to take an English proficiency test, named the *College Student English Proficiency Test* (CSEPT), organized by the university every year, because the test score serves as a graduation threshold for English and as a placement for students studying English for Academic Purposes. The CSEPT has been developed and validated by the Language Training and Testing Center in Taiwan, and with the results aligned with the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR)[2]. The students provided their CSEPT scores from six weeks prior in the questionnaire and the scores were interpreted as CEFR levels according to the CSEPT official website. Of the 595 participants, 121 (20.3%) were placed at CEFR A2, 321 (53.9%) at CEFR B1, and 153 (25.7%) at CEFR B2 levels.

Instrument and Measures

The current study adopted a questionnaire survey comprising three sections: three types of AGO from Midgley et al. (1998), the Oral Communication Strategy Inventory (OCSI) from Nakatani (2006), and WTC in meaning-focused delivery from Peng and Woodrow (2010) (see Appendix 1). There are 18 items of AGOs with six of each type from Midgley et al. (1998). To assess task goal orientations, six items were modified (e.g., "*An important reason I complete tasks in the EMI class is that I like to learn new things*" and "*An important reason I participate in the EMI class is that I want to get a better understanding of the content*"). In the case of the performance-approach orientation scale, six items were modified (e.g., "*I would feel truly good if I were the only one who could answer the teachers' questions in English in the EMI class*" and "*Speaking English better than other students in the EMI class is important to me*"). Similarly, another six items from the performance-avoidance orientation scale were modified (e.g., "*One reason I would not speak English in the EMI class is to avoid looking stupid*" and "*In the EMI class, I speak English so that my teachers don't think my English proficiency is lower than others*"). These items were on a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The reliability of the questionnaire (Cronbach's α) was .88 for the task goal orientations, .85 for the performance-approach goal orientations, and .89 for the performance-avoidance goal orientations.

As for CSs, 22 items of six types were modified to fit the EMI context, including (1) social affective strategies (e.g., "*In the EMI class, I speak English so that my teachers don't think my English proficiency is lower than others*" and "*In EMI class, I don't mind taking risks even though I might make mistakes*") with the Cronbach's α of .86, (2) accuracy-oriented strategies (e.g., "*In EMI class, I pay attention to grammar and word order during conversation*" and "*In EMI class, I notice myself using an expression that fits a rule I have learned*") with the Cronbach's α of .76, (3) fluency-oriented strategies (e.g., "*In EMI class, I take my time to express what I want to say*" and "*In EMI class, I pay attention to the conversation flow*") with the Cronbach's α of .87, (4) message reduction and alteration strategies (e.g., "*In EMI class, I simplify the message and use simple expressions*" and "*In EMI class, I replace the original message with another message because I feel incapable of communicating my original intent*") with the Cronbach's α of .82, (5) negotiation for meaning while speaking strategies (e.g., "*In EMI class, I make comprehension checks to ensure the listener understands what I am trying to say*" and "*In EMI class, I give examples if the listener doesn't understand what I am saying*") with the Cronbach's α of .76, and (6) nonverbal strategies (e.g., "*In EMI class, I try to make eye-contact when I am talking*" and "*In EMI class, I use gestures and facial expressions if I can't express myself*") with the Cronbach's α of

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[2]   Language Training and Testing Center (2023). Interpretation of test scores. https://www.lttc.ntu.edu.tw/tw/CSEPT_Test_results

.80. These items were on a 6-point Likert scale ranging from 'almost never' to 'almost always'.

Finally, with regard to the WTC in meaning-focused delivery, five items on a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree', were modified (e.g., *I am willing to discuss content knowledge in English in the EMI class*" and "*I am willing to give an oral presentation to the class in the EMI course*"). The Cronbach's α was .88 for this scale.

Data Collection

A group-administered survey involving the distribution of an online questionnaire (using Google Forms) to individual EMI classes was adopted. For practical purposes, the group-administered survey saves time, encourages a higher response rate, and offers immediate clarification (Denscombe, 2021). The researcher first collected all the EMI courses from the university computer system and randomly selected several of them. Next, the researcher approached the course instructors to obtain their permission. Once the instructor agreed, the researcher went to the classroom and explained the research purpose to the students. To ensure the research was ethical, an informed consent form, including the purpose of the research, anonymity, required completion time, and confidentiality, was provided to the participants. In other words, voluntary participation was guaranteed.

Data Analysis

The template of Google Forms allows the researcher to fix the scale within a certain range, say the six-point Likert scale in the present study, thus avoiding the mistakes resulting from entering data manually. However, to ensure data accuracy, the maximum and minimum values, and frequencies of the variables were examined. In addition, normality and

multivariate outliers were checked by inspecting the Normal Probability Plot (P-P) of the regression standardized residual, the scatterplot, and the Mahalanobis distance (Pallant, 2020; Tabachnick & Fidell, 2021).

To predict WTC in EMI classrooms, hierarchical multiple regression was adopted using IBM SPSS. The variables were added in a hierarchical manner based on the theoretical ground (Pallant, 2020). The participants' English proficiency was presented as their CEFR level (i.e. the categorical variable) and entered in Block 1. Studies have shown that learners' AGOs influenced their strategy use (Adesope et al., 2015; Liem et al., 2008; Somuncuoglu & Yildirim, 1999) and academic engagement (Miller et al., 2021; Noordzij et al., 2021; Wolters, 2004), so the three types of AGO were entered in Block 2. Finally, researchers have found that learners' strategic competence affected their WTC (Mirsane & Khabiri, 2016; Peng, 2020; Vafadar & Foo, 2020), so the six types of CS were entered in Block 3. In addition to the regression analysis, one-way between-group MANOVAs were adopted to examine the individual and joint effect of the one independent variable (i.e., English proficiency) on the composite (overall) dependent variables of AGO and CS.

RESULTS

Correlations

The participants' task goal orientations were moderately and positively correlated with performance-approach goal orientations, CSs, and WTC ($r = .28$ to $.69$, $p < .01$; Table 1). Similarly, positive and moderate correlations were found among performance-approach goal orientations, CSs, and WTC in EMI courses ($r = .20$ to $.50$, $p < .01$). The six types of CS were found to be strongly and positively correlated with

Table 1

Pearson Correlations, Means and Standard Deviations of the Variables (N = 595)

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. Task goals	–									
2. Performance-approach goals	.47**	–								
3. Performance-avoidance goals	.10*	.50**	–							
4. Social affective strategies	.67**	.35**	.02	–						
5. Accuracy-oriented strategies	.51**	.37**	.16**	.69**	–					
6. Fluency-oriented strategies	.57**	.35**	.06	.75**	.71**	–				
7. Message reduction & alteration	.28**	.20**	.11*	.50**	.42**	.45**	–			
8. Meaning negotiation strategies	.48**	.28**	.08	.66**	.63**	.58**	.58**	–		
9. Nonverbal strategies	.43**	.25**	.03	.62**	.53**	.56**	.57**	.59**	–	
10. WTC	.69**	.34**	–.11*	.64**	.50**	.55**	.22**	.43**	.41**	–
Mean	18.39	26.36	22.82	16.84	12.72	16.59	11.96	10.29	7.33	12.59
SD	3.28	5.34	5.04	3.95	3.22	4.11	2.10	2.46	1.68	2.85

Note. * p < .05; ** p < .01.

each other (r = .42 to .75, p < .01). The participants' WTC was related to CSs (r = .22 to .64, p < .01). Performance-avoidance goal orientations had weak and positive correlations with social affective and message alteration and reduction strategies (r = .11 to .16, p < .05) but a negative correlation with WTC (r = −.11, p < .05). In the case of three types of AGO, some researchers have found that task goals are not related to performance-avoidance goals (Liem et al., 2008; Pekrun et al., 2014; Sins et al., 2008), while others have discovered positive associations among the three types of AGO (Karlen et al., 2019; Lim & Lim, 2020). In the present study, it was discovered that the three types of AGO were positively correlated with each other.

RQs 1–3: Regression Analysis and Predictive Power of the AGO and CS on WTC

Hierarchical multiple regression was adopted to assess the ability of three measures of AGO (i.e., task goals, performance-approach goals, and performance-avoidance goals) and six measures of CSs (social affective, accuracy-oriented, fluency-oriented, message reduction and alteration, negotiation for meaning while speaking, and nonverbal strategies), controlled by the participants' English proficiency to predict their WTC in EMI courses. Preliminary analyses revealed that the tolerance values were between .27 and .93, and the VIF values were between 1.08 and 3.73, suggesting no serious violation of assumptions of multicollinearity. A straight diagonal line from bottom left to top right in the Normal P-P

was shown and the standardized residuals in the scatterplot were between 3.3 and −3.3, suggesting no multivariate outliers and no major deviation from normality (Pallant, 2020; Tabachnick & Fidell, 2021). The Mahalanobis distance was 28.35, which was lower than the critical value of 29.59; and the Cook's distance was .04 (cutoff point: less than 1), again suggesting no violation of multivariate normality.

The participants' English proficiency was entered at Step 1, explaining 0.1% of the variance in their WTC. Surprisingly, the students' English proficiency was not a predictor of their WTC in EMI courses. After the entry of three types of AGO at Step 2, the total variance explained by the model was 48.6% (Table 2). The two measures increased an additional 48.4% of the variance in the WTC after controlling for English proficiency, ΔR^2 = .484, ΔF (3, 590) = 185.32, p < .0005. In the second model, the three types of AGO were all significant predictors. Finally, after entering the CSs at Step 3, the total variance explained by the model as a whole was 55.3%, F (10, 584) = 72.34, p < .0005. The CSs increased an additional 6.7% of the variance in the WTC after controlling for English proficiency and AGOs, ΔR^2 = .067, ΔF (6, 584) = 14.68, p < .0005. In the final model, four variables were significant, with task goal orientations showing the highest beta value (β = .434, p < .0005), followed by social affective strategies (β = .278, p < .0005), message reduction and alteration strategies (β = −.125, p = .001), and then performance-avoidance goal orientations (β = −.069, p = .038).

Table 2

Regression Weights of Independent Variables and Model Summary of the Hierarchical Regression

		Block 1			Block 2			Block 3		
	Variables	**Beta**	*t*	*P*	**Beta**	*t*	*p*	**Beta**	*t*	*p*
Independent variables	D_1 English proficiency (CEFR level)	.038	.937	.349	.021	.716	.474	−.021	−.717	.473
	X_1 Task Goals				.660	19.44	.000	.434	10.723	.000
	X_2 Performance-approach Goals				.087	2.22	.027	.044	1.188	.235
	X_3 Performance-avoidance Goals				−.102	−2.93	.004	−.069	−2.084	.038
	X_4 Social Affective Strategies							.278	5.202	.000
	X_5 Accuracy-oriented Strategies							.053	1.204	.229
	X_6 Fluency-oriented Strategies							.074	1.549	.122
	X_7 Message Reduction & Alteration Strategies							−.125	−3.395	.001
	X_8 Negotiation for Meaning Strategies							.007	.170	.865
	X_9 Nonverbal Strategies							.045	1.132	.258
Model summary	R^2	.001			.486			.553		
	F	.887			139.415			72.336		
	p	.349			.000			.000		
	ΔR^2	.001			.484			.067		
	ΔF	.887			185.321			14.683		
	p of ΔF	.349			.000			.000		

RQ4: One-Way MANOVA Results of English Proficiency, Achievement Goal Orientations, and Communication Strategies in EMI courses

A one-way between-groups MANOVA was conducted to investigate English proficiency differences in AGOs in EMI courses. There was no statistically significant difference among the students of three levels of English proficiency on the combined dependent variables, $F = 1.43$, $p = .198$; Wilks' $\lambda = .99$; partial $\eta^2 = .01$ (Table 3). When the dependent variable results were considered separately for the purpose of reducing Type 1 error, the α level was adjusted by dividing the original α level of .05 by the number of factors in each component (Pallant, 2020). In this case, the cut-off point for the significant level of each dependent variable was .017 (.05/3). Thus, there was no statistically significant difference among the students of three levels of English proficiency on the three individual dependent variables.

A one-way between-groups MANOVA was performed to investigate English proficiency differences in CSs (social affective, accuracy-oriented, fluency-oriented, message reduction and alteration, negotiation for meaning while speaking, and nonverbal strategies) in EMI courses. There was a statistically significant difference among English language proficiency on the combined dependent variables, $F = 3.15$, $p < .0005$; Wilks' $\lambda = .94$; partial $\eta^2 = .03$. Again to reduce Type 1 error, when the results of the six dependent variables were considered separately, three differences reached statistical significance using a Bonferroni adjusted α level of .008 (.05/6): accuracy-oriented, fluency-oriented, and negotiation for meaning while speaking strategies (Table 4).

Post hoc comparisons were measured using the Tukey HSD test. The results indicated that in accuracy-oriented strategies, CEFR A2 students ($M = 11.91$, $SD = 3.57$) tended to emphasize the subject and verb of the sentence, pay attention to grammar and word order during conversation, or try to talk like a native speaker less frequently than the CEFR B1 ($M = 12.83$, $SD = 3.14$) and B2 students ($M = 13.14$, $SD = 3.00$). Next, the mean scores in fluency-oriented strategies showed that the CEFR B2 students ($M = 17.84$, $SD = 3.73$) adopted fluency-oriented strategies (e.g., taking time to express what they want to say or paying attention to the conversation flow) more frequently than the CEFR B1 ($M = 16.46$, $SD = 3.98$) and A2 students ($M = 15.36$, $SD = 4.50$). For negotiation for meaning while speaking strategies, the CEFR B2 students ($M = 10.76$, $SD = 2.27$) made comprehension checks to ensure that the listener understood what they wanted to say or gave examples if the listener did not understand what they were saying more frequently than their CEFR A2 peers ($M = 9.80$, $SD = 2.86$).

DISCUSSION

The Predictive Power of AGOs on WTC in EMI Classrooms

The regression model showed that of the three types of AGO, task goal orientation was a stronger predictor of WTC than performance-avoidance goal orientation in the EMI classroom, while performance-approach goal orientation did not predict WTC at all. The students who participated in the EMI class to obtain a better comprehension of the content and to strengthen their professional knowledge were more willing to participate in the discussion of the content knowledge and give presentations in English. Recent studies have shown that students' task goal orientations positively affect their WTC in English (Chou, 2022; Karbakhsh & Safa, 2020; Turner et al., 2021). The findings in the current study corresponded to those of past studies in that students with stronger task goal orientations were more willing to communicate for the purposes of comprehending and producing subject-specific knowledge in English. Studies on the antecedents of task goals showed that classroom context, the evaluation system, students' psychological needs for academic competence, and satisfaction with learning have positive impacts on their task goal orientations (Ames, 1992;

Table 3

One-way MANOVA Results of English Proficiency and Achievement Goal Orientations

Variables	Group	N	M	SD	*F value*	*p value*	*η^2*
Task Goal Orientations	CEFR A2	121	18.33	3.34	.08	.920	.00
	CEFR B1	321	18.38	3.24			
	CEFR B2	153	18.48	3.34			
Performance-approach Orientations	CEFR A2	121	26.69	5.28	.86	.423	.00
	CEFR B1	321	26.45	5.28			
	CEFR B2	153	25.90	5.52			
Performance-avoidance Orientations	CEFR A2	121	23.82	5.72	3.66	.026	.01
	CEFR B1	321	22.75	4.81			
	CEFR B2	153	22.18	4.85			

Table 4

One-way MANOVA Results of English Proficiency and Communication Strategies

Variables	Group	N	M	SD	*F value*	*p value*	*η²*
1. Social Affective Strategies	CEFR A2	121	15.93	4.43	4.45	.012	.02
	CEFR B1	321	16.95	3.87			
	CEFR B2	153	17.31	3.62			
2. Accuracy-oriented Strategies	CEFR A2	121	11.91	3.57	5.42	.005	.02
	CEFR B1	321	12.83	3.14			
	CEFR B2	153	13.14	3.00			
3. Fluency-oriented Strategies	CEFR A2	121	15.36	4.50	13.16	.000	.04
	CEFR B1	321	16.46	3.98			
	CEFR B2	153	17.84	3.73			
4. Message Reduction and Alteration Strategies	CEFR A2	121	11.62	2.45	3.33	.036	.01
	CEFR B1	321	11.94	2.06			
	CEFR B2	153	12.27	1.86			
5. Negotiation for Meaning while Speaking Strategies	CEFR A2	121	9.80	2.86	5.26	.005	.02
	CEFR B1	321	10.26	2.35			
	CEFR B2	153	10.76	2.27			
6. Nonverbal Strategies	CEFR A2	121	7.01	1.82	4.46	.012	.02
	CEFR B1	321	7.32	1.61			
	CEFR B2	153	7.61	1.67			

Hengsadeekul et al., 2014; Karbakhsh & Safa, 2020). As task goal orientations were the strongest predictor of students' WTC in EMI courses, it is suggested that a supportive and dynamic classroom environment with higher-order learning tasks involving cooperation, reflection, and objective assessment criteria can be incorporated into EMI programs.

It is worth noting that although there is no research evidence to support the direct effects of performance-approach and performance-avoidance goal orientations on WTC in either general English or EMI courses, it was found that the students with stronger performance-avoidance goal orientations tended to have less WTC in the EMI classroom. Researchers have found that language learners' reticence and passivity in language classrooms can often be attributed to their fear of negative evaluation, making mistakes, and embarrassment (Sang & Hiver, 2021; Shao & Gao, 2016). This explained why performance-avoidance goal orientations, which refer to learners' avoidance of demonstrating a lack of ability (Elliot & McGregor, 2001; Midgley et al., 1998), negatively predicted WTC in the EMI classroom in this study.

Relationship between AGOs and CSs in EMI Classrooms

The results from previous research have shown that task goal and performance-approach orientations positively impacted learners' use of metacognitive or cognitive strategy

and academic achievement (Liem et al., 2008; Lim & Lim, 2020; Miller et al., 2021; Wolters, 2004; Zhu & Mok, 2018). Macaro (2021) also highlights that students' goal orientations and prior knowledge of both language and content are likely to affect their strategic use in EMI classrooms. In the present study, the correlations showed that students with strong task and performance-approach goals employed CSs more frequently in EMI classrooms. While past studies have investigated the positive effects of AGOs on the use of general learning strategies for various academic subjects (Adesope et al., 2015; Liem et al., 2008; Somuncuoglu & Yildirim, 1999), the present findings agree with these studies in that university students with stronger task and performance-approach goal orientations adopted CSs more frequently in EMI classrooms.

Unlike task and performance-approach goal orientations, researchers have discovered that performance-avoidance goal orientations have a negative impact on learning outcomes and strategy use (Adesope et al., 2015; Somuncuoglu & Yildirim, 1999; Wolters, 2004). Contrary to previous research, the results of the current study revealed a positive relationship between performance-avoidance goal orientations and two types of CS (accuracy-oriented and message reduction and alteration strategies). To avoid looking stupid and like they cannot express their thoughts accurately in English, students tend to pay attention to grammar and word order during conversations, simplify their messages,

and use simple expressions while speaking English. Research into the factors that affect AGOs found that tasks with diversity and variety, well-structured and effective teaching in classroom settings, assessment systems that dissuade comparing oneself to peers but instead promote self-reflection and self-improvement, and learning activities that take into account students' psychological needs for competence and satisfaction all had a positive influence on their AGOs (Ames, 1992; Karbakhsh & Safa, 2020). Therefore, it is suggested to introduce a classroom setting that fosters support and interaction, incorporates diverse learning activities, promotes cooperative learning, encourages self-reflection, and establishes transparent assessment standards in EMI classrooms.

The Predictive Power of CSs on WTC in EMI Classrooms

According to MacIntyre et al. (1998), one's strategic competence is an important antecedent of WTC. Of the six types of CS, only two types significantly predict university students' WTC in the EMI classroom, with social affective strategies (e.g., actively encouraging oneself to express opinions or not mind taking risks and making mistakes) being a stronger predictor than message reduction and alteration strategies. Much work has been done to ascertain the influence of CSs on improving speaking ability and WTC in language classrooms (Goh & Burns, 2012; Mirsane & Khabiri, 2016; Vafadar & Foo, 2020). Tai and Tang (2021) investigated the mediating role of anxiety in the relationship between learning strategies and EMI avoidance in postgraduate business programs in Taiwan and discovered that students' use of high-level learning strategies, such as organization, critical thinking, metacognitive self-regulation, effort regulation, and peer learning, reduced their anxiety and encouraged their participation in EMI classes. Furthermore, in a meta-analysis study on the effectiveness of strategy-based instruction on academic performance, Donker et al. (2014) discovered that planning and task value were the most effective strategies, and instructing metacognitive knowledge enhanced the effectiveness of strategies. The current study enhances the findings of these studies by discovering the strong, positive effect of social affective strategies on assisting students in discussing and presenting and on increasing their WTC subject-specific knowledge in EMI classrooms. To enhance students' WTC in EMI classrooms, researchers have suggested that encouraging strategy use and self-regulation skills (Pun & Jin, 2021; Tai & Tang, 2021) and providing multimedia stimuli (e.g., audio/video/picture) help prompt students' WTC in class and maintain students' learning motivation and interest (Mirsane & Khabiri, 2016; Peng, 2020; Vafadar & Foo, 2020). It is thus recommended that instruction in CSs and the use of multimedia teaching aids facilitate EFL learners' comprehension of subject-specific materials and encourage them to engage more in EMI classrooms.

The Predictive Power of English Proficiency on WTC and the Influence of English Proficiency on AGOs and CSs

In language learning studies, researchers have found that students' English proficiency positively predicts their WTC in FL classrooms (Darasawang & Reinders, 2021; Tan & Phairot, 2018). However, in EMI courses where subject-specific knowledge and English are integrated, data from the current study seem to contradict earlier findings. The results showed that the students' English proficiency neither predicted their WTC nor influenced their AGOs in the EMI classroom. Researchers have found that students frequently report language difficulties in understanding subject-specific words and the content of in-class materials, producing academic essays, and participating in discussion in a number of EMI studies (Evans & Morrison, 2011; Jiang et al., 2019; Joe & Li, 2013; Tsou & Kao, 2017). The participants' frequent use of message reduction and alteration strategies in this study supports the fact that expressing ideas regarding subject-specific knowledge in English is a major obstacle in the EMI classroom. In contrast to the students' English proficiency, their task goal orientations (as a type of motivation) and social affective strategies were both positive and strong predictors of their WTC in EMI classrooms.

Studies investigating the relationship between English proficiency and the use of CSs in general English courses have shown that high-proficiency students adopt CSs more frequently than low-proficiency students (Huang, 2010; Ting et al., 2017; Zhang & Liu, 2013). The present study showed that students' overall CSs varied with their English proficiency in their EMI classrooms, and it also enhances the findings of previous studies by showing that CEFR B2 students adopt accuracy-oriented, fluency-oriented, and negotiation for meaning while speaking strategies more frequently than CEFR A2 students in EMI classrooms.

CONCLUSION

This study examined the role of AGOs and CSs in EFL university students' WTC in EMI classrooms. The hierarchical multiple regression model showed that the two strong, positive predictors of the students' WTC were task goal orientations (i.e., goals to motivate oneself to increase one's knowledge and develop competence in academic settings) and social affective strategies. Performance-avoidance goal orientations and message reduction and alteration strategies, on the other hand, negatively predicted WTC. The participants' general English proficiency neither predicted their WTC nor influenced their AGOs but affected the CSs they adopted in the EMI classroom, especially the accuracy-oriented, fluency-oriented, and negotiation for meaning while speaking strategies.

Even though the body of research has offered insights into EMI classrooms, several limitations need to be considered. First, since the participants in these EMI courses majored in social science, arts, and humanities, the results cannot be generalizable to students in the hard sciences. Further research involving science EMI courses would be of great interest and value. Second, the method of investigation is not without problems, since only students' self-reported data from the questionnaires were collected. Additional research using classroom observation would be of great interest and value in understanding student–student and teacher–student communication in EMI classrooms. Finally, only receptive skills were assessed in the English proficiency test, which may limit our interpretation of its predictive power on students' WTC in EMI classrooms.

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REFERENCES

Adesope, O. O., Zhou, M., & Nesbit, J. C. (2015). Achievement goal orientations and self-reported study strategies as predictors of online studying activities. *Journal of Educational Computing Research, 53*(3), 436–458. https://doi.org/10.1177/0735633115603989

Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*(3), 261–271. https://doi.org/10.1037/0022-0663.84.3.261

Barkaoui, K., Brooks, L., Swain, M., & Lapkin, S. (2013). Test-takers' strategic behaviors in independent and integrated speaking tasks. *Applied Linguistics, 34*(3), 304–324. https://doi.org/10.1093/applin/ams046

Chou, M.-H. (2018). Speaking anxiety and strategy use in learning English as a Foreign Language in full and partial English-medium instruction contexts. *TESOL Quarterly, 52*(3), 611–633. https://doi.org/10.1002/tesq.455

Chou, M.-H. (2021). An integrated approach to developing and assessing EFL students' speaking ability and strategy use. *Language Education & Assessment, 4*(1), 19–37. https://doi.org/10.29140/lea.v4n1.428

Chou, M.-H. (2022). Investigating the mediating role of foreign language anxiety in students' task goal orientations, perceived communication competence, English ability, and willingness to communicate in EMI classrooms. *English Teaching & Learning, 46*(3), 235–254. https://doi.org/10.1007/s42321-022-00116-7

Cohen, A. D., & Henry, A. (2020). Focus on the language learner: Style, strategies and motivation. In N. Schmitt & M. Rodgers (Eds.), *An introduction to applied linguistics* (3rd ed., pp. 165–189). Routledge.

Darasawang, P., & Reinders, H. (2021). Willingness to communicate and second language proficiency: A correlational study. *Education Sciences, 11*(9), 517. https://doi.org/10.3390/educsci11090517

Denscombe, M. (2021). *The good research guide: For small-scale social research projects* (7th ed.). Open University Press.

Dewaele, J. M. (2019). The effect of classroom emotions, attitudes toward English, and teacher behavior on willingness to communicate among English foreign language learners. *Journal of Language and Social Psychology, 38*(4), 523–535. https://doi.org/10.1177/0261927X19864996

Donker, A. S., De Boer, H., Kostons, D., Van Ewijk, C. D., & van der Werf, M. P. (2014). Effectiveness of learning strategy instruction on academic performance: A meta-analysis. *Educational Research Review, 11*, 1–26. https://doi.org/10.1016/j.edurev.2013.11.002

Elliot, A. J., & McGregor, H. A. (2001). A 2 X 2 achievement goal framework. *Journal of Personality and Social Psychology, 80*(3), 501–519. https://doi.org/10.1037/0022-3514.80.3.501

Evans, S., & Morrison, B. (2011). The student experience of English-medium higher education in Hong Kong. *Language and Education, 25*(2), 147–162. https://doi.org/10.1080/09500782.2011.553287

Goh, C. C. M., & Burns, A. (2012). *Teaching speaking: A holistic approach.* Cambridge University Press.

Gundsambuu, S. (2019). Internationalization and English as a medium of instruction in Mongolian higher education: A new concept. *Journal of Language and Education, 5*(2), 48–66. https://doi.org/10.17323/jle.2019.8481

Hengsadeekul, C., Koul, R., & Kaewkuekool, S. (2014). Motivational orientation and preference for English-medium programs in Thailand. *International Journal of Educational Research, 66*, 35–44. https://doi.org/10.1016/j.ijer.2014.02.001

Huang, C. (2016). Achievement goals and self-efficacy: A meta-analysis. *Educational Research Review, 19*, 119–137. https://doi.org/10.1016/j.edurev.2016.07.002

Huang, C.-P. (2010). Exploring factors affecting the use of oral communication strategies. *LongHua Technology University Journal, 30*(1), 85–104.

Jiang, L., Zhang, L. J., & May, S. (2019). Implementing English-medium instruction (EMI) in China: Teachers' practices and perceptions, and students' learning motivation and needs. *International Journal of Bilingual Education and Bilingualism, 22*(2), 107–119. https://doi.org/10.1080/13670050.2016.1231166

Joe, Y., & Lee, H. K. (2013). Does English-medium instruction benefit students in EFL contexts? A case study of medical students in Korea. *The Asia-Pacific Education Researcher, 22*(2), 201–207. https://doi.org/10.1007/s40299-012-0003-7

Karbakhsh, R., & Safa, M. A. (2020). Basic psychological needs satisfaction, goal orientation, willingness to communicate, self-efficacy, and learning strategy use as predictors of second language achievement: A structural equation modeling approach. *Journal of Psycholinguistic Research, 49*(5), 803–822. https://doi.org/10.1007/s10936-020-09714-7

Karlen, Y., Suter, F., Hirt, C., & Merki, K. M. (2019). The role of implicit theories in students' grit, achievement goals, intrinsic and extrinsic motivation, and achievement in the context of a long-term challenging task. *Learning and Individual Differences, 74*, 101757. https://doi.org/10.1016/j.lindif.2019.101757

Lan, G., Zhao, X., & Gong, M. (2023). Motivational intensity and willingness to communicate in L2 learning: A moderated mediation model of enjoyment, boredom, and shyness. *System, 117*, 103116. https://doi.org/10.1016/j.system.2023.103116

Lee, J. Q., McInerney, D. M., Liem, G. A. D., & Ortiga, Y. P. (2010). The relationship between future goals and achievement goal orientations: An intrinsic–extrinsic motivation perspective. *Contemporary Educational Psychology, 35*(4), 264–279. https://doi.org/10.1016/j.cedpsych.2010.04.004

Li, C., Dewaele, J. M., Pawlak, M., & Kruk, M. (2022). Classroom environment and willingness to communicate in English: The mediating role of emotions experienced by university students in China. *Language Teaching Research*. https://doi.org/10.1177/13621688221111623

Liem, A. D., Lau, S., & Nie, Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome. *Contemporary Educational Psychology, 33*(4), 486–512. https://doi.org/10.1016/j.cedpsych.2007.08.001

Lim, J. Y., & Lim, K. Y. (2020). Co-regulation in collaborative learning: Grounded in achievement goal theory. *International Journal of Educational Research, 103*, 101621. https://doi.org/10.1016/j.ijer.2020.101621

Macaro, E. (2020). Exploring the role of language in English medium instruction. *International Journal of Bilingual Education and Bilingualism, 23*(3), 263–276. https://doi.org/10.1080/13670050.2019.1620678

Macaro, E. (2021). Learner strategies in an English Medium Instruction context. In B. D. Sabato & B. Hughes (Eds.), *Multilingual perspectives from Europe and beyond on language policy and practice* (pp. 63–82). Routledge.

MacIntyre, P. D., Babin, P. A., & Clément, R. (1999). Willingness to communicate: Antecedents & consequences. *Communication Quarterly, 47*(2), 215–229. https://doi.org/10.1080/01463379909370135

MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal, 82*(4), 545–562. https://doi.org/10.1111/j.1540-4781.1998.tb05543.x

Midgley, C., Kaplan, A., Middleton, M., Maehr, M. L., Urdan, T., Anderman, L. H., Anderman, E., & Roeser, R. (1998). The development and validation of scales assessing student' achievement goal orientations. *Contemporary Educational Psychology, 23*(2), 113–131. https://doi.org/10.1006/ceps.1998.0965

Miller, A. L., Fassett, K. T., & Palmer, D. L. (2021). Achievement goal orientation: A predictor of student engagement in higher education. *Motivation and Emotion, 45*(3), 327–344. https://doi.org/10.1007/s11031-021-09881-7

Milliner, B., & Dimoski, B. (2022). The effects of communication strategy training on speaking task performance. *RELC Journal*. https://doi.org/10.1177/00336882221085781

Mirsane, M., & Khabiri, M. (2016). The effect of teaching communicative strategy on EFL learners' willingness to communicate. *Theory and Practice in Language Studies, 6*(2), 399–407. https://doi.org/10.17507/tpls.0602.24

Noordzij, G., Giel, L., & van Mierlo, H. (2021). A meta-analysis of induced achievement goals: the moderating effects of goal standard and goal framing. *Social Psychology of Education, 24*(1), 195–245. https://doi.org/10.1007/s11218-021-09606-1

Nakatani, Y. (2006). Developing an oral communication strategy inventory. *The Modern Language Journal, 90*(2), 151–168. https://doi.org/10.1111/j.1540-4781.2006.00390.x

Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS* (7th Ed.). Routledge.

Pekrun, R., Cusack, A., Murayama, K., Elliot, A. J., & Thomas, K. (2014). The power of anticipated feedback: Effects on students' achievement goals and achievement emotions. *Learning and Instruction, 29*, 115–124. https://doi.org/10.1016/j.learninstruc.2013.09.002

Peng, J. E. (2020). Teacher interaction strategies and situated willingness to communicate. *ELT Journal, 74*(3), 307–317. https://doi.org/10.1093/elt/ccaa012

Peng, J.-E., & Woodrow, L. (2010). Willingness to communicate in English: A model in the Chinese EFL classroom context. *Language Learning, 60*(4), 834–876. https://doi.org/10.1111/j.1467-9922.2010.00576.x

Pun, J., & Jin, X. (2021). Student challenges and learning strategies at Hong Kong EMI universities. *Plos One, 16*(5), e0251564. https://doi.org/10.1371/journal.pone.0251564

Sang, Y., & Hiver, P. (2021). Using a language socialization framework to explore Chinese students' L2 reticence in English language learning. *Linguistics and Education, 61*, 100904. https://doi.org/10.1016/j.linged.2021.100904

Shao, Q., & Gao, X. A. (2016). Reticence and willingness to communicate (WTC) of East Asian language learners. *System, 63*(4), 115–120. https://doi.org/10.1016/j.system.2016.10.001

Shirvan, M. E., Khajavy, G. H., MacIntyre, P. D., & Taherian, T. (2019). A meta-analysis of L2 willingness to communicate and its three high-evidence correlates. *Journal of Psycholinguistic Research, 48*(6), 1241–1267. https://doi.org/10.1007/s10936-019-09656-9

Somuncuoglu, Y., & Yildirim, A. (1999). Relationship between achievement goal orientations and use of learning strategies. *The Journal of Educational Research, 92*(5), 267–277. https://doi.org/10.1080/00220679909597606

Tabachnick, B. G., & Fidell, L. S. (2021). *Using multivariate statistics* (8th Ed.). Pearson.

Takeuchi, O., Griffiths, C., & Coyle, D. (2007). Applying strategies to contexts: The role of individual, situational, and group differences. In A. D. Cohen & Macaro, E. (Eds.), *Language learner strategies* (pp. 69–92). Oxford University Press.

Tai, T. E., & Tang, C. W. (2021). The role of graduate students' learning strategies in reducing their English medium instruction avoidance: The mediation effect of language anxiety. *Asia Pacific Journal of Education, 41*(2), 368–384. https://doi.org/10.1080/02188791.2020.1777937

Tan, K. E., & Phairot, E. (2018). Willingness to communicate among Thai EFL students: Does English proficiency matter? *Journal of Asia TEFL, 15*(3), 590–602. https://doi.org/10.18823/asiatefl.2018.15.3.2.590

Ting, S.-H., Soekarno, M., & Lee, P.-Y. (2017). Communication strategy use and proficiency level of ESL learners. *Journal of Asia TEFL, 14*, 162–170. https://doi.org/10.18823/asiatefl.2017.14.1.11.162

Tsou, W., & Kao, S.-M. (Eds.) (2017). *English as a Medium of Instruction in higher education: Implementations and classroom practices in Taiwan*. Springer.

Turner, J. E., Li, B., & Wei, M. (2021). Exploring effects of culture on students' achievement motives and goals, self-efficacy, and willingness for public performances: The case of Chinese students' speaking English in class. *Learning and Individual Differences, 85*, 101943. https://doi.org/10.1016/j.lindif.2020.101943

Vafadar, H. & Foo, T. C. V. (2020). The effects of communication strategies instruction on Iranian intermediate EFL learners' willingness to communicate. *Asian EFL Journal, 24*(4), 130–173.

Wolters, C. A. (2004). Advancing achievement goal theory: Using goal structures and goal orientations to predict students' motivation, cognition, and achievement. *Journal of Educational Psychology, 96*(2), 236–250. https://doi.org/10.1037/0022-0663.96.2.236

Zhang, W., & Liu, M. (2013). Evaluating the impact of oral test anxiety and speaking strategy use on oral English performance. *Journal of Asia TEFL, 10*(2), 115–148.

Zhu, J., & Mok, M. M. C. (2018). Predicting primary students' self-regulated learning by their prior achievement, interest, personal best goal orientation and teacher feedback. *Educational Psychology, 38*(9), 1106–1128. https://doi.org/10.1080/01443410.2018.1497775

APPENDIX 1

Questionnaire Items

Task Goals

TG01 I like to speak English in the EMI class, even if I make a lot of mistakes.

TG02 An important reason why I do tasks (e.g., discussion, conversation, or presentation) in the EMI class is because I like to learn new things.

TG03 I like the tasks in the EMI class best when they really make me think.

TG04 An important reason why I participate in the EMI class is because I want to get a better understanding of the content.

TG05 I participate in the EMI class because I'm interested in it.

TG06 An important reason I interact with classmates and teachers in the EMI class is because I enjoy it.

Performance-approach Goals

PP07 I would feel really good if I were the only one who could answer the teachers' questions in English in the EMI class.

PP08 It's important to me that the other students in my EMI class think that I am good at speaking English.

PP09 I want to speak better English than other students in my EMI classes.

PP10 I would feel successful in school if I spoke English better than most of the other students in the EMI class.

PP11 I'd like to show my teachers that my English ability is higher than the other students while speaking English in the EMI class.

PP12 Speaking English better than other students in the EMI class is important to me.

Performance-avoidance Goals

PV13 It's very important to me that I don't look stupid while speaking English in the EMI class.

PV14 An important reason I practice speaking English in the EMI class is that I don't embarrass myself in English oral communication.

PV15 In the EMI class, the reason I speak English is so my teachers don't think my English proficiency is lower than others.

PV16 In the EMI class, the reason I speak English is so others won't think my English is poor.

PV17 One reason I would not speak English in the EMI class is to avoid looking stupid.

PV18 One of my main goals of not speaking English is to avoid looking like I can't do my work in the EMI class.

WTC (Content Knowledge)

WTC01   I am willing to discuss the content knowledge in English in the EMI class.

WTC02   I am willing to give an oral presentation to the class with notes in the EMI course.

WTC03   I am willing to translate a spoken utterance from Chinese into English regarding the content knowledge in my group.

WTC04   When there is no need talk to the class, I am willing to do a task in English with my peer at my desk.

WTC05   am willing to give an oral presentation to the class without notes in the EMI course.

Communication Strategies (Social Affective)

CS01 In EMI class, I try to enjoy the discussion.

CS02 In EMI class, I actively encourage myself to express what I want to say.

CS03 In EMI class, I don't mind taking risks even though I might make mistakes.

CS04 In EMI class, I try to relax when I feel anxious.

CS05 In EMI class, I try to use fillers when I cannot think of what to say (e.g., well, oaky, you see, you know).

Communication Strategies (Accuracy-Oriented Strategies)

CS06 In EMI class, I try to talk like a native speaker.

CS07 In EMI class, I try to emphasize the subject and verb of the sentence.

CS08 In EMI class, I pay attention to grammar and word order during conversation.

CS09 In EMI class, I notice myself using an expression which fits a rule that I have learned.

Communication Strategies (Fluency-Oriented Strategies)

CS10 In EMI class, I take my time to express what I want to say.

CS11 In EMI class, I pay attention to my rhythm and intonation.

CS12 In EMI class, I pay attention to my pronunciation.

CS13 In EMI class, I pay attention to the conversation flow.

CS14 In EMI class, I try to speak clearly and loudly to make myself heard.

Communication Strategies (Message Reduction and Alteration Strategies)

CS15 In EMI class, I use words which are familiar to me while speaking English.

CS16 In EMI class, I reduce the message and use simple expressions.

CS17 In EMI class, I replace the original message with another message because of feeling incapable of executing my original intent.

Communication Strategies (Negotiation for Meaning While Speaking Strategies)

CS18 In EMI class, I repeat what I want to say until the listener understands.

CS19 In EMI class, I make comprehension checks to ensure the listener understands what I want to say.

CS20 In EMI class, I give examples if the listener doesn't understand what I am saying.

Communication Strategies (Nonverbal Strategies)

CS21 In EMI class, I try to make eye-contact when I am talking.

CS22 In EMI class, I use gestures and facial expressions if I can't express myself.