Interplaying Factors of Students Personal Characteristics in Online Learning Modality: Evidence in Asian Context

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Abstract

Mapping the multidimensional impact of learner attributes on behavior demonstrates the importance of models in learning. To this purpose, we examined the correlations between strategies and student characteristics and utilized regression analysis to determine how learner attributes affect strategy selection. A cross-sectional study of 258 students demonstrated widespread strategy use, as well as statistically significant connections within and between the Strategy Inventory for Language Learning and Student Characteristics of Learning measures. Regression analysis found distinctions in the types of learner characteristics associated with strategy adoption, most notably between direct and indirect strategies. Instrumental motivation predicted both direct and indirect Strategy Inventory for Language Learning scores, but self-efficacy affected memory, cognitive, and compensatory strategies, and perseverance predicted reported metacognitive and emotional strategy choice levels. Additionally, a negative route coefficient occurred between persistence and compensation techniques and between competition and memory strategies, implying mediation and a high degree of complexity in the way learner traits impact behavior. The present study's findings have implications for prospective instructor techniques for motivating students to become fully involved in language learning via the online procedure.

Keywords: language learning, online learning, personal characteristic

1. Introduction

Since the 1970s, when they initially gained popularity (Simon, 2019; Takeuchi, 2019), strategic behaviors in learning have captivated both practitioners and their students, since it was widely recognized that strategic behavior among effective language learners represented a novel teaching paradigm. Students studying English as a second language (ESL) are increasingly resorting to strategy training to boost their L2 proficiency and do better in class (Krishnan et al., 2019; Krishnan et al., 2020). As a result of this, taxonomies of learning strategies (LLS) began to emerge early on in the research on language learning methods (LLS) (Dmitrenko, 2019; Shaswar & Wedin, 2019). Because learning is situated and learning techniques are influenced by a contextual learning environment that incorporates numerous aspects, LLS has been significant in the discipline. With this in mind, identifying and selecting learner techniques that match the requirements of students in the classroom is crucial (McDaniel et al., 2021). As a result of the difficulty of learning other languages over the internet, this matters much (Juraboyev, 2021). There are a number of cognitive and metacognitive methods that students may use to help them succeed in online learning. It was observed that LLS choice might predict online learning results, according to Ariffin et al. (2021).

Because of the unique character of learning settings, learning strategy theory has been established in academic literature. A student's LLS is influenced by the curriculum design. For example, engaging with classmates online, viewing videos, posting homework, attending courses, or participating in online chat sessions all have distinct cognitive and behavioral demands. Few research has examined the impact of learning characteristics on learning outcomes (LLS) among EFL learners in offline settings, which has been facilitated by the fast rise of massive open online courses (MOOCs).

Motivational psychology is the subject of the second group of factors analyzed here. Instrumental motivation and self-efficacy to use English, perseverance, and inclination for cooperative and competitive learning are measured by the student characteristics for learning (SCL) survey created by Artelt et al. (2003). "Instrumental" motivation is part of an integrated/instrumental dichotomy in language acquisition, and refers to those who are motivated by the practical need in their desire to learn English (e.g., earn money, read technical material, or translate documents). Integrative motivation, on the other hand, refers to a person's desire to learn a new language for reasons such as curiosity, attitude, or self-esteem. Student self-efficacy is the conviction that one has the potential to accomplish learning goals, and this belief influences students' desire to take on difficult activities (Peranginangin et al., 2019). Motivation and accomplishment in language acquisition are positively correlated with persistence, or grit, which refers to long-term endurance and love for learning objectives (Teimouri et al., 2020). Students who appreciate competitive learning get a kick out of seeing how they stack up against their peers and obtaining rewards or praise for their efforts. Individual or group competitions and contests with winners and losers may be a part of these competitions. Cooperating with others in order to achieve educational objectives is called cooperative learning (Zaman, 2020).

The second set of factors is motivated psychology-related. Artelt et al. (2003) created the student characteristics for learning (SCL) survey, which assessed instrumental motivation, self-efficacy for English use, persistence, preference for cooperative learning, and preference for competitive learning. Instrumental motivation is a subcategory of the instrumental-integrative dichotomy in the context of language acquisition. It refers to motivation that stems from a desire to learn English for practical reasons (e.g., earn money, read technical material, or translate documents). By contrast, integrative motivation refers to the desire to learn a language for intrinsic reasons such as interest or attitude. Self-efficacy refers to a person's conviction in his or her own ability to effectively complete learning objectives and has an effect on students' willingness and effort when confronted with difficult assignments (Baaij et al., 2020). Persistence, or grit, refers to long-term commitment and enthusiasm for learning goals and has been demonstrated to be positively associated with students' motivation and achievement in language acquisition (Teimouri et al., 2020). Competitive learners like working for a reward or recognition depending on how their performance compares to that of others. Individual or group competitions can be held in conjunction with contests that include winners and losers. Cooperative learning, on the other hand, requires cooperation, collaboration, and group thinking in order to accomplish learning objectives (Silalahi & Hutauruk, 2020).

2. Literature Review

An early pioneer in second language acquisition literature, Rubin (1975) introduced the first language learning approaches into the literature. Developing a new language learner's self-efficacy and self-determination is a collection of "specific actions, behaviors, processes, or techniques" that the learner employs. For successful language learning, you need to be actively involved in the process (Hiver et al., 2020). In the acquisition, storage, or retrieval of information, certain behaviors and cognitive processes are referred to as learning procedures by the learner (Abuhassna et al., 2020, Magulod, 2018a, 2018b, 2019). Keep in mind that these performances and mental processes are purpose-driven, well-positioned, and flexible in nature. LLS has been shown to have a positive correlation with second language proficiency, and researchers think that successful learners use a broad range of strategies. (Jaekel, 2020; Jung & Lee, 2019; Ranjan et al., 2021). Pupils may benefit from imitating strategies used by their more advanced peers, according to the theory of language learning. Enhancing the academic abilities and motivation of students is done by establishing learning environments that are conducive for successful LLS (Güzel & Aydin, 2019, Veluri et al, 2021, De Souza et al, 2021, Arcinas, 2021a, 2021b, Charernnit et al, 2021). Early researchers have made substantial contributions to the understanding of LLS categories. It is possible to learn using one of four different methods. A learner's motivation, attitudes, and sentiments, as well as their ability to choose and structure information, are all factors in a person's ability to digest information (i.e., creative and critical thinking, recovery, and transfer). This is in line with Karimpour et al. (2019), who postulated four types of learning strategies: cognitive, metacognitive, social, and emotional. There are a number of different categories, but Oxford's (1990a) taxonomy is the most commonly researched one of them all. To assist pupils, Oxford categorizes language learning strategies into two categories: instant mental aid and long-term support. For Oxford's (1990a) direct tactics, memory, and cognitive

strategies are included (Oxford, 1990a), as well as compensating approaches (i.e.,

overcoming L2 limitations by guessing intelligently). Using indirect strategies like metacognitive, emotional, and social ones are all instances of this (i.e., cooperating with others).

2.1 Motivation and Language Learning Strategies

Learner motivation is frequently linked to language learning techniques (Mokhtari, 2020). Ryan and Legault (2020) describe intrinsic and extrinsic motivation, respectively, as conduct that is motivated by an individual's interest or pleasure (i.e., intrinsic) or by an external desire (i.e., extrinsic) (i.e., extrinsic). To learn a language for the purpose of advancing one's profession, one may use instrumental motivation, an extrinsic motivational factor that relates to the practical, pragmatic nature of the endeavor (Rozmatovna, 2020). There was a strong association between the frequency and choice of reported LLS and both intrinsic and extrinsic motivations, with the largest correlation shared with affective strategies and the lowest correlation shared with memory strategies. Shin and So (2018) found that greater degrees of determination, mastery goal orientation, and internal management positively influenced the employment of compensatory and social tactics. A favorable link between LLS and motivation was reported by Ranjan & Philominraj (2020). LLS and motivation predicted success in L2 writing performance when both were included in the same regression model. In addition, Asty (2019) found that students described the employment of motivational control tools as useful in maintaining and commencing a task. There is a strong correlation between motivation and the usage of different LLS, according to these data. Students that are highly driven are more likely to use a variety of tactics (Almusharraf & Bailey, 2021). According to Torres & Alieto (2019), instrumental motivation among Asian EFL students is stronger than intrinsic motivation, although precisely how instrumental motivation links to the choice of learning modalities is unknown.

2.2 Persistence and Language Learning Strategies

When it comes to mastering objectives and study tactics, persistence (also known as perseverance or grit) has been shown to be connected with favorable outcomes (Xiao & Sun, 2021). As a result of this perseverance, the student may overcome barriers or problems that stand in the way of their learning objective (Moreno-Marcos et al., 2019). Persistence is one of the few student traits that hasn't been extensively explored in the context of LLS (Han & Lu, 2018; Kayaoglu, 2013). Prior to LLS's fundamental qualities, like planning, managing learning, and asking for support from others, a person must have a strong commitment to accomplishing their objectives. Persistence and LLS choice seem to be strongly linked in the new research. Han and Lu (2018), for example, discovered a positive association between LLS and goal-setting and accomplishment motivation among 193 students, with the exception of emotional LLS. There was a considerable link between goal-setting measures and the use of cognitive, compensatory, and metacognitive techniques (e.g., specific goals, a strong commitment to goals, and mastery goals). As a learning element, task perseverance was shown to be substantially linked to knowledge advancement, attitudes, as well as the development of abilities among 94 Japanese learners (Jung & Lee, 2019).

2.3 Self-Efficacy and Language Learning Strategies

In learning a second language as the second learner feature of interest, self-efficacy is described as confidence in one's own capacity to attain desired objectives, and as a consequence, it has been proved to predict performance (Talsma et al., 2019). It is widely accepted that self-efficacy is a key motivator for learning since it reliably predicts favorable outcomes related to academic achievement, domain knowledge, and learner engagement (Torres & Alieto, 2019). For students with greater levels of self-efficacy, research shows that they are more likely to succeed in a particular topic or task than students with lower levels of self-efficacy (Talsma et al., 2019). Akamatsu et al. (2019) found strong connections between self-efficacy beliefs (e.g., perceived skills) and the use of strategy in self-regulated learning (thoughts and actions that impact the process of learning). LLS has been linked to self-efficacy in a number of research, and the results consistently show a correlation (Jaekel, 2020; Mutlu et al., 2019). A number of studies have questioned the previously established link between high levels of self-efficacy and LLS usage. Jaekel's (2020) study enrolled students in Germany's Year 9 Content and Language Integrated Learning (CLIL) and normal English as a foreign language (EFL) programs. Structural equation modeling revealed that (1) there was no difference in LLS use between CLIL and EFL students after adjusting for a variety of confounding factors. (2) LLS usage was associated with lower language competency, whereas self-efficacy was associated with better language proficiency. These findings imply that students may be best assisted by increasing their self-efficacy while also exercising caution in their strategy selection.

2.4 Cooperation-Competition and Language Learning Strategies

According to Melander Bowden (2019), problem-solving with the involvement of the whole class fosters student

engagement in the classroom. Additionally, students' awareness, comprehension, and management of the process of obtaining information that is necessary for desirable learning outcomes are enhanced by cooperative learning. It has been shown that cooperative learning increases student engagement and boosts academic achievement (Wyman & Watson, 2020) when instructors put students into small groups and have them work together to attain common learning objectives. (Korkmaz & Öztürk, 2020; Yusuf et al., 2019). Students in the second year of their university education in Vietnam participated in quasi-experimental research to examine the impact of cooperative learning on their learning styles. Increased levels of cognitive and metacognitive techniques were reported by students who received cooperative learning training. Students in the experimental group used help-seeking and peer learning strategies more often than those in the control group, whereas the control group exhibited no changes in strategy choice or frequency of strategy usage (Tran et al., 2019). Cooperative learning students employed more cognitive, metacognitive, and social LLS than students who preferred studying language alone, according to a cross-sectional survey (Cavic et al., 2019). It has been shown that learner traits and learning techniques can be modeled using the SILL; however, these studies are limited in that learner attributes are only examined on a univariate level, apart from each other. Using the following methodologies, researchers were able to explain how learner traits (memory, cognition, and compensatory) impact both direct and indirect tactics (metacognitive, emotional, and social). Motivational psychology (Dörnyei, 2019; Henry, 2019) is connected to LLS theory in univariate investigations (Asty, 2019). Motivation, persistence, self-efficacy, and cooperative learning are all examined in learning strategy theory at the univariate level of analysis (Likitrattanaporn, 2018). The dearth of research into how these learning aspects affect strategy selection and strategy training approaches is a consequence. This necessitates a more detailed, multivariate study of the impact of learning aspects on strategy choice.

2.5 Research Questions

First, the present study aims to explore the link between learner characteristics and reported levels of language learning techniques, and secondly, investigate the effect of self-efficacy, instrumental motivation and effort, and perseverance on EFL students' choice of learning approach. To actualize the intended aims of this present study, the two dominant research questions are as follows: (1) how do self-efficacy, motivation, preferences, and persistence relate to cooperative online learning? (2) What is the interplay of self-efficacy, motivation, preferences, and persistence to the level of language learning strategies of students?

3. Method

3.1 Research Design

The link between LLS and learning qualities was examined in this cross-sectional survey. A cross-sectional study is a sort of observational study that examines data from a subset of a population at a certain period in the educational research. When it comes to online education, there are just a few universities that allow coeducational courses in South East Asia (Al-Ghaith et al., 2010).

3.2 Context and Participants

In the context of the present study, the respondents examined synchronously in the online platform using Explico, an online-based student assessment and learning platform using artificial intelligence. The setting of this study was I One state institution in the Philippines. The respondents were composed of 258 students, 95 of whom were males and 163, all of whom were females, from its English department. All of the students were enrolled in the same portion of a third-year English literature course that was taught online. These classes were created with the express intention of helping students better comprehend literary allusions to various societal and political situations.

3.3 Instrumentation

The study utilized sets of tools to attain the objectives of this study. The Student Characteristics as Learners (SCL) and the SILL (Strategy Inventory for Language Learning) questionnaires were used to gather data. For the purpose of studying linguistic strategy usage, the SILL was administered by Oxford (1990b). There are six strategy fields: memory, cognitive, compensatory, metacognitive, emotional, and social strategies in the questionnaire. The answers of the participants responded using a Likert scale of 1 to 5. An analysis of student characteristics as learners was conducted using the SCL (Artelt et al., 2003). Many changes have been made to the questionnaire, but its basic structure remains the same. For the first three sections of the survey, participants must indicate their level of instrumental motivation, their level of commitment to their studies, their level of self-efficacy, their level of confidence in their abilities, and their level of preference for cooperative or competitive study methods. Student feedback was solicited on a Likert scale of five points. SCL and SILL reliability coefficients ranged from 0.78 to 0.86 for the SILL and 0.69 to 0.75 for the SCL categories.

The Explico, as an online platform, was used to design and disseminate the survey, which was emailed to the students' email addresses and to FB messenger groups where the whole class was located. To ensure that students understood the survey questions, each question was explained in advance. Participants in the online survey were told, in the poll's welcome message, that completing the survey signified their agreement to participate in this study. Instructors encouraged students to do an outside survey before receiving their quiz marks, but students were advised that the survey results would only be available to the researcher, and the teacher had no access to them. To ensure that participants were able to answer the questions honestly and completely, they were given enough time to finish the survey. To top it all off, participants were made aware that the information they provided was private and secret and that no additional credit would be given to those who provided it.

3.4 Data Analysis

IBM SPSS was used to examine the data (version 24.0). The size and correlation of the variables of interest were measured using the mean score and Pearson correlation values. Analysis of the impact of various student variables on strategy selection was carried out using multiple linear regressions. More than one explanatory and several dependent variables may be predicted by using multiple linear regression (Mardia et al., 1979). It was necessary to do six different multiple linear regressions for each SILL group. In the beginning, Cook's Distance and Mahalanobis Distance were used to discover outliers in each survey, and eight were found and eliminated. Instrumental motivation, perseverance in learning, self-efficacy, propensity for cooperative learning, and competitive learning were all assessed using colinearity diagnostics. No collinearity impact was seen in the correlations between SILL and SCL variables. Between 1.96 and 4.58, VIF values for the SILL and SCL subcomponents were much below the acceptable limit of 10. (Hair et al., 1995). Tolerance levels varied from.227 to.508, much beyond the.20 thresholds (Weisburd & Britt, 2013).

4. Results and Discussion

4.1 How Self-Efficacy, Motivation, Preferences, and Persistence Relate to the Personal Characteristics of the Students in Cooperative Online Learning

Table 1 displays the correlations between the variables of interest and their mean scores. In addition to Pearson correlations, mean scores for the SILL and SLA categories are shown. The cognitive strategy category had the strongest relationships with compensatory, metacognitive, and social strategy categories, whereas the social strategy category had the worst associations. According to the mean ratings for each category, all of the strategies were used to their full potential (Oxford, 1990a). There was a correlation between gender and LLS selection. According to previous research (Ahsanah, 2020), women used strategies at a slightly greater rate than men, showing that men utilize strategies within a narrower scope.

Table 1. Correlations and mean scores for study variables (n = 175)

	Age	Male/ Female	1	2	3	4	5	6	7	8	9	10	11
1 Memory	.07	.27*											
2 Cognitive	.07	.16	.56**										
3 Compensation	.03	.34**	.54**	.78**									
4 Metacognitive	.12	.34*	.43**	.56**	.58**								
5 Affective	.16**	.23**	.55**	.54**	.56**	.65**							
6 Social	.03	.23**	.54**	.66**	.53**	.53**	.54**						
7 Motivational (instrumental)	.02	.17	.56**	.43**	.55**	.52**	.34**	.62**					
8 Personal	.18*	.16	.52**	.46**	.33**	.62**	.45**	.54**	.63**				
9 Sel-Eficacy	.05	.27*	.63**	.34**	.44**	.54**	.42**	.45**	.52**	.74**			
10 Cooperative	.03	.04	.35**	.34**	.24**	.33**	.23**	.46**	.19*	.33**	.28**		
11 Competition	.04	.03	-.17	.16*	.26**	.34*	.13	.25**	.22**	.12*	-.06	.24**	
α			.86	.82	.72	.78	.72	.83	.77	.76	.78	.77	.79
Mean	2.54	1.7	3.80	3.92	3.85	4.08	3.72	3.94	4.52	4.38	4.14	3.53	3.83
SD	.456	0.46	0.79	0.62	0.68	0.65	0.70	0.78	0.77	0.69	0.79	0.79	0.89

Note: *p < .05, **p < .01

Compared to the SILL approach categories, the Pearson r correlation ratings for student attributes were found to be lower. SLA revealed statistically substantial connections across all interactions except compensation, which had the least common link with other factors. There was a strong association between student attributes and self-efficacy, with competition having the lowest correlation (see Table 1). The SCL scales provide the following results: There was a correlation between effort and persistence and a high level of engaged instrumental motivation, which suggests

that these learning traits are important decision-makers. In this sample, the preference for collaboration was shown to be the lowest. However, it should be highlighted that even though this is the lowest score, anything over 3.5 is still a factor in determining students' educational choices. Students' usage of language learning strategies and depth of learning features will be documented in the first research question.

3.2 What Is the Interplay of Self-Efficacy, Motivation, Preferences, and Persistence to the Level of Language Learning Strategies of Students?

Standardized beta weights and significant regression model results are shown in Table 2. Regression analyses were used to determine how motivation, self-efficacy, perseverance in learning, preference for cooperative learning, and preference for competitive learning predicted the reported choice of memory techniques. A significant regression equation was obtained for the memory category. For each participant's projected usage of memory methods, the sum of the constant, self-efficacy, perseverance, collaboration, and competition (SLA) variables is equal to 1.25 (strongly agree).

Table 2. Regression analysis with SCL variables as predictors of LLS choice

	B	*SE*	Beta	*t*	*p*	*F*	*R*2	Adj. *R*2
Memory	1.143	.343		2.444	.001**	25.4	.422	.412
Motivation	.234	.234	.113	1.344	.455			
Persistence	.212	.345	.432	3.111	.012*			
Self-efficacy	.432	.321	.567	2.876	.001**			
Cooperation	.455	.0.65	.345	3.245	.002*			
Competition	.467	.055	.444	2.445	.001**			
Cognitive	2.45	.432		3.222	.002**	23.5	.423	.432
Motivation	.33	.076	.432	4.322	.001**			
Persistence	.322	.077	.765	0.234	.656			
Self-efficacy	.345	.088	.233	3.432	.001**			
Cooperation	.123	.023	.049	.432	.345			
Competition	.432	.044	.048	.345	.454			
Compensation	1.150	.222		.567	.001**	20.32	.432	.3.44
Motivation	.344	.070	.413	5.20	.001**			
Persistence	.654	.100	-.271	-2.633	.003**			
Self-efficacy	.234	.088	.494	4.805	.002**			
Cooperation	.211	.060	-.011	-.155	.546			
Competition	.321	.052	.169	2.476	.011*			
Metacognitive	.345	.262		2.437	.018*	43.2	.125	.541
Motivation	.123	.058	.455	5.189	.005**			
Persistence	.546	.083	.321	3.215	.001**			
Self-efficacy	.324	.054	.654	1.740	.084			
Cooperation	.876	.050	.543	2.053	.045*			
Competition	.033	.043	.123	.176	.865			
Affective	1.22	.563		3.014	.003**	14.35	.498	.234
Motivation	.043	.659	-.65	-.074	.941			
Persistence	.432	.767	.213	2.333	.019*			
Self-efficacy	.543	.077	.435	1.876	.054			
Cooperation	.256	.065	.456	2.432	.004**			
Competition	.022	.033	.025	.543	.434			
Social	.546	.312		.543	.543	18.34	.433	.432
Motivation	.123	.054	.443	4.444	.001**			
Persistence	.432	.211	.221	1.222	.160			
Self-efficacy	.323	.022	.446	1.456	.056			
Cooperation	.432	.022	.521	1.345	.012			
Competition	.434	.033	.122	1.654	.063			

Note: *p < .05, **p < .01

Memory approaches were employed for each point of increase in self-efficacy, persistence, and teamwork. The competitiveness of the route was determined to be negative. The cognitive category had a significant regression equation. Motivated and self-confident individuals use cognitive strategies more often. Next, a significant regression equation was found in the compensation category. Motivation, self-efficacy, competitiveness, and tenacity all have a role in the deployment of compensation techniques by participants. Motivation and self-efficacy usage dropped,

while participants' compensating techniques, self-rewarding, and competitiveness were not reduced. A positive correlation shown in Table 1 was predicted to hold true in the regression analysis. In light of the negative path coefficient between persistence and compensating techniques, more research is warranted.

A significant regression equation is found in the metacognitive sub-component of indirect strategy categories. Each point rose in motivation, each point increased in perseverance, and each point increased in the cooperative learning scale resulted in an increase in the use of metacognitive methods. A significant regression equation was obtained for the emotional approach category. Affective methods were used more often by participants than direct LLS strategies, suggesting that collaboration is more crucial to indirect LLS tactics than direct ones. Only instrumental motivation had a statistically significant route coefficient in the last category of social tactics.

In direct longitudinal research, motivation and self-efficacy were shown to influence cognitive methods. There was a strong correlation between compensation and motivation and self-efficacy when learning and performing direct LLS. LLS compensation was negatively affected when persistence was incorporated in the regression model. An effective compensating method is to make intelligent guesses to fill in knowledge gaps and eliminate the need to search up new terminology or seek help from other people. In the case of L2 learners who aren't proficient, compensating for their lack of knowledge may cause them to pick less-demanding strategies instead. There was a wide range of effects on learning characteristics predicted by indirect LLS approaches. Self-discipline was followed closely by teamwork in predicting metacognitive skills in students. However, only motivation had a significant beta weight coefficient for social LLS when it came to predicting cooperativeness and persistence. Direct LLS was predicted by self-efficacy, whereas indirect LLS was predicted by persistence. According to this, both direct and indirect strategy use is connected to the motive of instrumentality regardless of manner. We are now attempting to situate these findings in the context of previous studies on language acquisition processes.

Students' unique qualities impact strategy selection in diverse ways, as the study's findings show. When it comes to predicting second language acquisition among adult EFL learners, instrumental motivation was shown to have the greatest statistically significant positive connections to language learning method categories. One negative route coefficient to the compensation strategy category indicates mediation, whereas three positive path coefficients to direct strategy categories indicate persistence. Self-efficacy was a major predictor for direct approach categories (i.e., memory, cognitive, and compensation). Finally, the reported usage of social language acquisition techniques was exclusively predicted by instrumental motivation. Research questions one and two are now explained in the context of language acquisition strategy theory.

It was shown that there was a correlation between LLS and learner attributes. Students' learning styles and foreign language acquisition are influenced by strategy utilization, according to the results of this study. According to Pearson correlation analysis, there was a positive association between the SLA and SILL categories, except for a few outliers with the competitiveness scale. Cooperative learning preferences have been shown to be a good fit for LLS training, as shown by this study (Zhou & Intaraprasert, 2019). To study a second language, students use different methods depending on their learning preferences; some like to work in groups while others prefer to work alone. When it comes to learning tactics, though, competition is less of a factor. Students' language abilities may be enhanced by this association between motivation and other SILL strategy categories, which suggests that instrumental motivation is an important antecedent to language acquisition in the English classroom. Students must notice their own learning via metacognition, initiate and cooperate with others, and finally participate in communication with other members in order to be self-reliant learners. At each stage, instructors play a vital role in fostering classroom motivation by familiarizing students with degrees of collaboration and competition, as well as fulfilling the demands of various learning methods (van Leeuwen & Janssen, 2019; van Leeuwen & Rummel, 2019).

For all areas of strategy usage, the group of students polled in this research indicated high levels of method use, according to the findings of this study (Oxford, 1990a). This finding is consistent with recent research (Ahsanah, 2020) that indicated that Asian EFL learners employed cognitive, metacognitive, and compensatory techniques most often. In addition, female participants in this research utilized more LLS than male participants, which is consistent with the literature on LLS (Arebi & Alishah, 2020; Tran, 2021). The instrumental motivation was scored higher than the other SLA categories by participants, who also indicated heightened levels of student learning characteristics.

Self-efficacy, instrumental motivation, perseverance, and preferences for cooperative and competitive learning were examined in the second research question. Self-efficacy, perseverance, and cooperative learning behavior were shown to be associated with greater strategy utilization in the memory category (e.g., visualizing concepts, connecting sounds, reading aloud). Contrary to expectations, the competition had a detrimental impact. This might be because learning languages from a sociocultural perspective emphasize meaningful relationships among persons as

the most important motivating factor. This could explain why the route coefficient is negative (Vygotsky, 1978). Pawlak (2021) stated that emotional strategies correlated most strongly with SILL categories. This research found that memory strategies correlated least. Due to a lack of consideration of many elements, this discrepancy may be explained.

Both motivation and self-efficacy revealed statistically significant route coefficients in the cognitive category model for cognitive LLS. Self-efficacy has been shown to be a substantial predictor of direct LLS, which is consistent with earlier results (Jaekel, 2020; Passiatore et al., 2019; Saito, 2020). Self-efficacy and drive are important determinants of compensating methods, much as cognitive LLS.

Persistence (Kutscher & Tuckwiller, 2019), which had a negative path coefficient with the compensatory strategy group, also seems to be at odds with previous studies. The relationship between persistence and compensation techniques may be explained by the way compensation strategies are implemented. A study by Mochizuki (1999) found that compensation methods are utilized less often by highly skilled L2 speakers because they have fewer gaps in their knowledge and are more persistent in searching for new terms. Their less successful peers, on the other hand, may not be willing to put in the effort to look up unfamiliar phrases or seek assistance from others. While compensation tactics may be beneficial for more advanced learners who have a larger vocabulary to draw upon, less advanced L2 learners resort to compensation strategies in order to avoid the effort of learning new material.

Indirect strategy categories (i.e., metacognitive, emotional, and social) are affected by student attributes in a somewhat different way than direct strategy categories (i.e., memory, cognitive, and compensation). Motivation, tenacity, and, to a lesser degree, collaboration all play a role in the adoption of metacognitive methods. Consistent with previous research, the results on perseverance and metacognitive methods were found to be in agreement with existing literature (Gurung et al., 2020; Jung & Lee, 2019; Sumarno, 2020). Cooperation and perseverance both exhibited favorable route coefficients with the employment of emotional strategies in the study of affective learning. Anxious kids might benefit from the use of affective methods, which help pupils control their emotions. Persistence in LLS is shown by learners who are determined to achieve their objectives, which includes preparing, adapting, and seeking assistance from others.

The use of social LLS was predicted by an individual's desire to use English in a social setting, which is referred to as a "social strategy." Because the purpose of learning a new language is frequently to communicate with others, collaborative and social LLS are critical. Earlier studies have shown a link between instrumental motivation and the employment of LLS, such as cognitive and compensatory techniques as well as metacognitive and social strategies. The present research confirms those results. (Rozmatovna, 2020). It's possible that students who have a clear need for their learning objective, ideally an internal need that goes beyond merely passing the exam, would be more motivated to communicate with others. This research is also consistent with results by Abdelrahman (2020), which found that greater degrees of determination, mastery goal orientation, and internal control positively influenced the use of cognitive, metacognitive, compensatory, and social strategies. Learners were heavily influenced by instrumental motivation when it came to making strategic decisions. Students that are highly driven are more likely to use a variety of tactics (Pawlak, 2021; Rachmawati & Putri, 2019). Preliminary studies (e.g., Han & Lu, 2018, Jung & Lee, 2019) demonstrate that persistence is strongly linked to LLS choice, especially with goal-setting measures (e.g., specific goals, a strong commitment to goals, and mastery goals). There is a considerable correlation between task perseverance and EFL learners' improvement in terms of their attitudes and abilities. By adding degrees of collaboration and rivalry in the classroom, instructors may impact classroom motivation. They can also motivate behavior that encourages learners to be persistent and increases diverse ways of learner engagement (Liao et al., 2019). Applied foreign language learning and the features of language acquisition will benefit from the findings. Non-cognitive (e.g., emotional and social) elements are also taken into account, which may help learners become self-directed and effective language learners.

5. Conclusions

It is obvious from the results of this study that the building of key aspects of language acquisition has an impact on strategy utilization. There is a high correlation between second LLS choice and their learning qualities that fit with motivational techniques, including self-efficacy, instrumental motivation, and perseverance. A student's ability to create their learning goals and reflect on their learning process is enhanced when they use metacognitive, cognitive, memory, social, compensatory, or emotional techniques.

6. Limitations, implications, and Future Research Direction

However, this research has some limitations, including the fact that only two questionnaires were used to measure EFL

Asian learners' opinions of learner characteristics. There has to be a combination of qualitative and quantitative methodologies used in a future study to have a better understanding of how students utilize these and other tactics not captured by the SILL. An investigation of strategy utilization was not conducted in this research, but rather an investigation into the prevalence of use and how learner characteristics were related to that use.

In addition, since the study only looked at one public school in PHILIPPINES, generalizing its results to other locations, age groups, or educational levels may be inappropriate. This research also did not take into account the growing results of confounding factors like age and gender since the data did not support it. Research on the elements that impact the selection of a strategy is strongly recommended. However, it is possible that other factors (such as language aptitude, views, social and cultural background, motivation, attitude, and personality) have significant effects and consequences while the variables included in the current study may shed light on some of the differences in reported strategy use among the EFL learners.

Several conclusions may be drawn from this research. A lack of study on EFLs in the Middle East and Asian EFLs was found in the evaluated literature. Furthermore, it is recommended that further study be conducted to have a better understanding of the use of LLS by Asian EFL students. In addition, foreign language teachers and students need to be taught how to use strategy in the classroom. An educational motivation and curriculum development might benefit from this research. Overall, new research shows that LLS is an effective technique for helping students overcome communication barriers. According to Namaziandost et al. (2020), students were more secure in their capacity to communicate even when they didn't completely comprehend all of the languages by studying diverse strategies and a set of basic phrases. Students' problems with oral and writing communication may be improved by the use of various LLS, as this research shows. EFL students may also benefit from this method since it may help them learn and move through the English language more quickly and, ultimately, build self-awareness of their learning processes. Pedagogical implications should also be considered in further studies. Our findings, if they are consistent with those of other parallel studies, EFL institutions should consider taking the necessary methods to eradicate gender inequalities so that both males and females feel more self-confident and motivated, and interested in their work, regardless of their gender.

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