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# Language Learning through Digital Media: Investigating the Strategies among Selected International Students in the Philippines

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**Abstract.** This study attempts to investigate the language learning strategies used by international students in Manila, Philippines, in five areas: planning and organizing, remembering, thinking and understanding, compensating, and interacting. Using the snowball sampling technique, the researcher identified and interviewed ten (10) international students from different colleges and universities for this descriptive research. The findings revealed that the use of digital media has become common for participants in various areas of language learning strategies. For instance, the usefulness of Google Translate, Dictionary+, YouTube, Netflix, mobile language translators, and other language learning applications such as Mango, Drops, Rosetta Stone, Babbel and Mondly were recognized, alongside writing new words, interacting with people, and conversing using a second language (L2). Given the significance of digital media in L2 learning, the researcher developed the digital media-assisted language learning (DMALL) paradigm to contribute to language learning research. This study will cater to a specific context to address the needs of international students in the Philippines. Hence, determining the difficulties and the strategies will form an integral part of the academic curriculum plan or design that will substantially assist the L2 needs of the growing number of international students in the country.

**Keywords:** digital media; digital media-assisted language learning; international students; language learning; strategies

## 1. Introduction

The field of language learning strategies (LLS) research remains controversial. As the area continues to develop, specific vital issues are still highlighted based on over-generalizations, conflicting results, inconsistency among subjects, contextual factors, dissenting categorizations, lack of empirical support, etc. (Rose, 2012; Vlckova et al., 2013; Wu, 2008;). Through LLS research, greater emphasis has been placed on the role of the learner through effective strategy use toward efficient

learning. Over the last twenty years, a significant shift in language research can be witnessed due to the multiplying interest of researchers to focus on what learners employ to achieve learning (Tseng, 2005). Furthermore, the pioneer works (particularly their language taxonomies) of Joan Rubin, Rebecca Oxford, J. Michael O'Malley, Anna Uhl Chamot, and Hans Heinrich Stern have become the subject of subsequent research claiming the irregularities between their particular taxonomies, lack of consistency among subjects, disregard of context, instrumentalities, and other issues. However, these criticisms benefit the LLS research field as they ignite a generation eager to unravel more about it.

Since the mid-1970s, LLS has received attention due to the profuse number of findings claiming the importance of strategy use toward second language (L2) acquisition (Zare, 2012; Zareva & Fomina, 2013). The respective works of Wenden and Rubin, Oxford, O'Malley and Chamot, and Stern have stood as the pioneers during the shift in trend. Notably, many of their initial studies have been conducted based on the "good" language learner concept, which assumes that all learners tend to employ the same strategies in L2 learning. Hence, if the "bad" ones can utilize the strategy used by the good language learners, successful L2 learning is achieved (Fazeli, 2011; Wong, 2005; Zare, 2012). Notwithstanding, recent studies concentrate on individual differences in strategy preferences and the complex relationship between language performance and strategy usage (Gamage, 2003).

The ability to converse effectively and employ the appropriate language in all situations constitutes good language learners. Studies have found that language learners typically adopt proper learning techniques and using language learning strategies increases their learning outcomes (Su, 2005). Every language learner employs a specific set of language learning techniques, although there are variations in how frequently and which techniques are used. According to Chamot and Kupper (1989), all individuals used language learning methods regardless of aptitude. Nevertheless, the breadth of techniques used and how they were applied set good language learners apart from poor effective language learners. Efficient or good language learners employ suitable, varied, and viable tactics to finish the task (Su, 2005).

While distinct learners tend to use varied language learning strategies, Tigarajan et al. (2016) discovered that individuals utilize various language learning strategies to become good language learners, and a few of these strategies are exceptional. This finding corresponds to the one mentioned above because it sought to obtain insights into good language learners and their strategies. This is also connected with a study by Du (2018), who looked at the disparities between successful and unsuccessful EFL Chinese university students' use of listening strategies for various listening questions. According to the study, each person's listening approach is highly unique because it varies on their degree of linguistic proficiency.

Given these findings from relevant studies in language learning, this research was conducted to investigate and determine the effective language learning strategies

of international students in Manila, Philippines. Specifically, this study will answer the following questions:

1. What strategies are they using to help them plan and organize their language learning?
2. What strategies are they using to help them remember new language items?
3. What strategies help them to think about and understand the new language?
4. What strategies are they using to help them compensate for lack of knowledge?
5. What strategies are they using which involve interaction with other people?

This study will cater to a specific context to particularly address the needs of the international students in different colleges and universities in Manila, Philippines. Hence, an extra leap will be achieved toward creating a program or curriculum that will substantially assist the L2 needs of the growing number of international students in the country. Determination of both the difficulties and the strategies will form an integral part of the academic curriculum plan or design.

## **2. Literature Review**

### **2.1 Defining Learning Strategies**

Learning strategies can be defined as any sets of operations, steps, plans, or routines used by the learner to facilitate obtaining, storing, retrieving, and using information (Wenden & Rubin, 1987). Cohen (2007), on the other hand, defines a learning strategy as a conscious mental activity that contains a goal or intention, an action to reach this goal, and a learning activity. As Oxford (1999) puts it, it is a “conscious movement towards a goal.” She adds that autonomy and self-regulation serve as a theoretical framework for understanding the purpose of language learning strategies.

The following definitions for learning strategies are also notable:

1. They are particular thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information (O’Malley & Chamot, 1990).
2. They are processes consciously selected by learners. They may result in actions taken to enhance the learning or use of a second or foreign language through storage, retention, recall, and application of information about that language (Cohen, 1998).
3. They are specific actions the learner takes to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations (Oxford, 1990).

### **2.2 Foreign LLS Research Studies**

Various studies have been made to cater to the specific context of a particular language. Languages such as Korean (Magno, 2010) and Chinese (Chen & Hung, 2012; Jie & Xiaoqing, 2006; Kao & Craigie, 2013; Wu, 2008; Xuesong, 2006) in different settings such as China, Taiwan, and Hong Kong, Arabic (Ruba et al., 2014; Yusri et al., 2013), Russian (Zareva & Fomina, 2012), Spanish (Del Angel & Gallardo, 2014; Judge, 2011), and Malaysian (Ahmad Tarmizi et al., 2022; Wong, 2005) are some of the subjects of these studies.

Studies of LLS use of Spanish (L1) learners have concluded the importance of cognitive and metacognitive functions in learning English (L2). Spanish adults who are engaged in business affairs recognize the importance of English to understand a vast number of people (Judge, 2011); hence, they do not only frequently use cognitive and metacognitive strategies but also social strategies. On the other hand, Mexican students need effective strategy use and personal and family complements to achieve academic success (Del Angel & Gallardo, 2014). Overall, both studies have rebutted some claims of Oxford (1990), such as the infrequency of social strategy usage as seen in Judge (2011) and the emphasis on the good language learner to identify effective LLSs as witnessed in Del Angel and Gallardo (2014).

Given that the Orang Asli indigenous students are not native Malay speakers and are not proficient in the language, Ahmad Tarmizi et al. (2022) noted that it was essential to investigate this group's experiences in learning and acquiring a second language. This is supported by related studies and scientific reports on the Orang Asli indigenous students' low and subpar educational status. Investigating their Malay language learning and experiences will also help students improve their learning abilities and second language proficiency. Wong (2005) and Yusri et al. (2013) also focused on Malaysian subjects in their LLS Research. The study by Wong (2005) utilized pre-service teachers (defined as having a one-year diploma in the Education course) to identify a correlation between LLS and language self-efficacy and concluded that a positive correlational relationship between the two exists. In addition, high self-efficacy teachers tend to use a more significant number of LLS (primarily cognitive, social, and metacognitive) than low self-efficacy ones.

In terms of the use of integrative (i.e. due to practical reasons such as getting a job, passing a subject, etc.) and instrumental (i.e. due to willingness to communicate with other people or learn their culture) motivation, a study conducted in the Malaysian context also discusses that there is no significant difference between genders in learning L2 (Spanish). Simply put, gender tends to inappropriately determine if a learner is integratively or instrumentally motivated in learning Spanish as L2. However, Malaysian L2 learners tend to be instrumentally motivated rather than integratively. In addition, females show a significantly higher level of instrumental motivation than males (Khong et al., 2017).

On the other hand, L2 research in the Chinese context has focused on different perspectives such as parental support (Xuesong, 2006), LLS use (Wu, 2008), personality type (Chen & Hung, 2012), coping strategies (Kao & Craigie, 2013), and learning styles (Jie & Xiaoqing, 2006). Studies by Xuesong (2006) and Wu (2008) are clear examples of the social strategy used by Chinese students. Xuesong (2006) explains the direct involvement of parents as advisors, coercers, and nurturers and their indirect involvement as advocates, facilitators, and collaborators. On the other hand, Wu (2008) emphasized the more significant popularity of social/affective strategies among Chinese English learners in Hong Kong compared to cognitive and metacognitive ones. Three contextual factors

have been implied to influence LLS use. These are the (1) role of English in Hong Kong, (2) education system, and (3) Confucianism.

The particular studies of Jie and Xiaoqing (2006), Chen and Hung (2012), and Kao and Craigie (2013) tend to focus more on the learner as an individual rather than the learner as a societal member. For instance, Chen and Hung (2012) explained significant relationships of strategy use in introverted/extroverted, sensing/intuitive, and judging/perceiving personality types. Those who are extroverts and intuitive are reported to use cognitive, metacognitive, and social strategies more. On the other hand, Jie and Xiaoqing (2006) emphasized the influence of learning styles on strategy choice. The study has claimed that learning style tends to be the most influential variable to consider in strategy choices. Furthermore, Kao and Craigie (2013) determined positive thinking as the most often used strategy for learners to avoid anxiety.

Other studies on particular languages are also noteworthy and contributory to the field. For instance, Ruba et al. (2014) found that most of the selected Pakistani students did not utilize learning strategies in learning English. They explained that this lack of utilization was due to a lack of awareness and opportunity. The study argues that teachers have shortcomings in exposing students to strategic practices, and students are reluctant to practice or improve their knowledge. Nor Shaid et al. (2022) also attempted to fill this research gap by carefully examining how business students at a public university in Malaysia improved their English-speaking abilities in an L2 classroom setting, as there is still much work to be done to thoroughly investigate the changing aspect of SLL.

On the other hand, Magno's (2010) research somehow invalidated the SILL of Oxford since he argues that most of the classifications (except compensation strategies) did not accurately predict the English proficiency of Korean students. He added that the months of formal study in English significantly predicted L2 ability. However, Zareva and Fomina's (2012) results speak otherwise. They believed not only in the usefulness of the SILL in identifying the strategy scope of Russian university students but also in evaluating the effectiveness of their learning programs. Differences have been found between the strategic use of first and final year students. Generally, they explained that Russian university students have strategy use ranging from high to medium, indicating the growing trend to communicative approaches aside from the traditional ones.

### **2.3 Taxonomies of Language Learning Strategies**

To provide a more straightforward understanding of L2 learning strategies, O'Malley (1985), Rubin (1987) and Oxford (1990) have developed their taxonomies that classify these strategies. Oxford's Strategy Inventory of Language Learning (SILL) classified into two: (1) direct strategies, which directly involve processing or using the second language being learned, and (2) indirect strategies, which allow the learner to manage themselves concerning the following: planning, organizing, monitoring, evaluating, maintaining motivation, lowering anxiety, and learning with others. Meanwhile, O'Malley's Taxonomy of Language Learning Strategies focused on (1) metacognitive, which involves planning,

thinking, monitoring, and evaluating one's own learning; (2) cognitive, which is more limited to specific learning tasks and they involve more direct manipulation of the learning material itself; and (3) socio-affective strategies, which are linked to social-mediating activity and transacting with others. On the other hand, Rubin's Language Learning Strategies are somewhat similar to Oxford (1990), and classify learning strategies into two types: direct and indirect. Direct strategies refer to learning strategies, while indirect strategies refer to communication and social strategies.

Other taxonomies such as those of Bialystok (1981), Willing (1988), Ellis and Sinclair (1989), and Stern (1992) have also contributed to the categorization of language learning strategies. As Zare (2012) puts it, these studies have not only helped classifying strategies but also in creating instructional frameworks which take into consideration the particular classifications. However, Zare (2012) considers these taxonomies relatively the same and comparing their impact on language teaching methodologies seems senseless.

Supporting Zare (2012), Gamage (2003) states that the discussion regarding strategy classifications remains open since certain key issues remain unaddressed, such as the relativity of strategy use to different cultural backgrounds, learning environments, and language-specific tasks. Hence, extra-precaution should be exercised in applying results of studies utilizing these taxonomies to other groups which have not been used as the subjects of the respective study. For instance, strategy studies for adults should not be applied to those of children since there exists conspicuous psychological and sociological differences between the two groups (Purdie & Oliver, 1999). Indeed, overgeneralization is one threat in establishing a good classification or inventory of learning strategies. Wenden and Rubin (1987) have provided four criteria which must be considered upon creating a strategy inventory:

1. The inventory must be understood by the majority of participants (sentence structure, use of jargons, grammar, language used)
2. It must be comprised of selective strategies needed for a particular language skill (for instance, skills related to memory differ from skills related to conversation)
3. It contains strategies applicable to a specific language setting (strategy use in the learning English differs from strategy use in learning Filipino)
4. It must be bounded by strategies which are the most often used.

Criticisms and issues regarding strategy classifications or language taxonomies began when Rebecca Oxford released her once widely used Strategy Inventory of Language Learning (SILL). Some issues regarding SILL include over-emphasis of quantity over quality of strategy use (Tseng et al., 2006) and neglect of context such as culture and education (Woodrow, 2005). Woodrow (2005) argued that the SILL lacks reliability since it does not cater a specific sample and suggested that qualitative methods should be furthered. Combining these key issues in her study, Rose (2012) calls for more context-specific studies which employ more qualitative methods.

### 3. Methodology

The study used a qualitative approach, a scientific methodology developed by observing a person's or a group's behavioral tendencies (Babbie, 2014). This study concentrated on recounting the experiences of international students in Manila, Philippines, in learning their second language. Accordingly, this study was classified as descriptive research since it seeks to elucidate "what" exists beyond experiences, understanding, and language learning strategies (Shields & Rangarajan, 2013).

Through the snowball sampling technique, this research selected ten (10) international students from different universities and colleges in Manila as participants. The study made use of in-depth online interviews during the data gathering. Using an in-depth interview guide, the participants were subjected to an in-depth online interview on various platforms, including Zoom and Google Meet. In-depth interviewing (IDI) is a qualitative data collection technique that involves rigorous one-on-one interviews with a small number of respondents to understand better their perspectives on a specific concept, initiative, or situation (Boyce & Neale, 2006). A reflexive critical dialogue with oneself was also chosen as the method the researchers would use to stick to the narrative case study strategy. As a result, this calls for the Bevan-proposed descriptive, structural interview questions of modes of appearing to understand the phenomenon (methods of appearing in natural attitude) (Bevan, 2014). For instance, the researcher created an interview guide that included theme topics that the interviewer wanted to cover throughout the session as he explored the experiences of the chosen participants in learning their second language, English and/or Filipino (the national language of the Philippines).

Also, with the participants' consent, the interview was recorded and transcribed. The transcripts of each participant were then familiarized. The researcher employed inductive thematic analysis in a reflexive manner (Braun & Clarke, 2019; Charmaz, 2006). The codes were initially investigated using open coding. Lastly, the researcher used axial coding to connect and classify the categories into themes.

**Table 1: Profile of the participants**

Participant	Nationality	First Language
Participant 1	Sudanese	Arabic
Participant 2	Arabic	Arabic
Participant 3	Eritrean	Arabic
Participant 4	Arabic	Arabic
Participant 5	Eritrean	Arabic
Participant 6	Arabic	Arabic
Participant 7	Palestinian	Arabic
Participant 8	Arabic	Arabic

Participant 9	Sudanese	Arabic
Participant 10	Arabic	Arabic

#### 4. Results and Discussion

The presentation of the results is divided into five areas of strategies of language learning: (1) planning and organizing; (2) remembering; (3) thinking and understanding; (4) compensating for lack of knowledge; and (5) interaction with other people.

##### 4.1 Strategies in Planning and Organizing Language Learning

The participants used different strategies to plan and organize their language learning. Most of them used their speaking skills as their strategy because they believed they could plan and organize their language learning through practice. Some of them also used electronic books and dictionaries to acquire new vocabulary. At the same time, one of the participants highlighted that watching movies over Netflix and listening to music over YouTube served as strategies that helped them plan and organize their language learning (see Table 2).

**Table 2: Strategies in planning and organizing language learning of the participants**

Participant	Strategies of the Participant
Participant 1	"E-books. Actually I found first because the vocab, and the grammar and actually... especially classic stories, this the one like will really make your English suave."
Participant 2	"If I find a new word I would just write it and try to practice on it, read the online dictionary...Google Translate also."
Participant 3	"By talking to one another it can do. That's the best strategy, by chatting to one (another) and mostly reading...that helps."
Participant 4	"Talking, you will know you are good...because when you start talking, you remove the [shyness] in you and uhh how you feel afraid."
Participant 5	"If I came like....for the university, and the prof told me go to introduce something about yourself, like that. Like when I see the book he feels smiling like that... or anyone he feels smiling or share it from me, I feel like, I do something great. I focus on someone who's better than me..if I do something wrong, tell me what was the wrong I will make it correct next time."
Participant 6	"uhhhh try me to translate for the people... and like uhhh I have many friends they came to Philippines, and he doesn't know how to speak English, they ask me to translate for them... so I'm the one to translate for them. Even if I am not very good in English, but I'm better than them...so I guess."
Participant 7	"All the day I talk in English everybody talk English so you can learn faster."
Participant 8	"I'm starting to movies and songs like in YouTube. I'm a good listener...I was a kid we have no TV. so I watch movie every week. Movie that wouldn't translate in Arabic and I'll try to understand."



Participant 9	"If I didn't I start to memorize I see and then search it on the internet and that I can really memorize it."
Participant 10	"Talk to people don't be shy even it's wrong try to learn from it."

Learning strategies can be considered conscious and intentional movement or control by a learner towards a language goal (Bialystok, 1990; Pressley & McCormick, 1995 as cited in Oxford, 2003). A strategy chain (as coined by Oxford) is a "set of interlocking, related, and mutually supportive strategies." In her study, Oxford (2003) provides a clear example of a strategy chain, starting from how the learner plans his/her specific actions:

*"Let us consider Divna, whose goal is to conduct research in chemistry with the help of articles written in the L2. [...] To meet the need, she plans a manageable task: finding and reading one L2 article per week on chemistry until she develops a rapid reading rate and is able to identify and understand published research findings. Other strategies [...] might include scheduling time each week to search for an article in the library or on the Internet, [...]. In addition, she could use strategies such as skimming for the main points, reading carefully for supporting details, keeping a notebook for L2 scientific vocabulary, using the dictionary to look up difficult words, guessing the meaning of words from the context, and making a written outline or summary if needed."*

In the case of selected international students in Manila, Philippines, the students plan and organize their learning by utilizing social strategies, classified as the indirect strategies of Oxford (1990) or the SILL, O'Malley's (1985), and Rubin's (1987). The respondents tend to plan that they have to utilize L2 in communicating with other students around the university; on the other hand, some organize their learning by planning to watch movies, read e-books, and search over the internet.

#### 4.2 Strategies in Remembering New Language Items

One component of learning a new language is the strategy of remembering. Based on the interview conducted with the participants, most of them used to write the new vocabularies they encountered and tried to look for their meaning in a dictionary or search over the internet. From there, they would start memorizing the new words and using them in their daily conversation (see Table 3).

**Table 3: Participants' strategies in remembering new language items**

Participant	Strategies of the Participant
Participant 1	"Writing...I write with my hand... I even uhm I repeat it, one, twice, three until I saved it in my mind. "Yeah actually, writing... it's more better than just listening because it let you like get it fastly."
Participant 2	"I just write It down on my phone then just repeat that. I just write the word then try to use it."

Participant 3	"Memorizing...just say it always...it's important that I save it on my phone, then If I already memorized it, then just delete it from my phone."
Participant 4	"Picture...first time for me when I learn English, if some word I don't know it, my friend will Google it for me, picture...and show it to me."
Participant 5	"If I saw a movie and I see a new word, I would try to use it. For example a sentence, and I will try to use it in my life, when someone he talked to me in English, I will try my best to use the new word."
Participant 6	"Say it... say it many times and write it...write in your phone, in your dictionary...by hand like if you know some words...I just find it in my online dictionary and I still save it on my phone. So that when I come back to home, I will write it many times...and then it will sink in my mind."
Participant 7	"I if I know new... something new, you have to...say that every day in my chat in Facebook or even face to face. I have to use it so I will not forget it."
Participant 8	"By listening to rap music on my iPod or music applications....and listening to it I remember all English."
Participant 9	"I try to write it and then memorize it and I can remember that."
Participant 10	"I'm using pictures and I save on my phone and I have online translator like application."

Another integral part of the strategy chain used by the international students is writing down new vocabulary they have encountered. In the relevant taxonomies of L2 learning, note-taking or memorization falls under the cognitive strategies of all three taxonomies: O'Malley (1985), Rubin (1987) and Oxford (1990). Based on these taxonomies, cognitive strategies involve a learner's conscious and direct manipulation of their learning material. Note-taking, listening to music for better memory (auditory representation), and watching movies reflect cognitive strategies.

#### **4.3 Strategies in Thinking and Understanding New Language**

The participants used different strategies to think and understand a new language. These are some of their techniques: (1) use an English translator through a cell phone, (2) consult Dictionary+, (3) surf the net like Google, (4) watch YouTube videos and Netflix, (5) enroll in English courses, and (6) utilizing language learning applications like Rosetta Stone, Babbel and Mondly (see Table 4).

**Table 4: Participants' strategies in thinking and understanding new language**

<b>Participant</b>	<b>Strategies of the Participant</b>
Participant 1	"It's something important to me because if I didn't get it right. I have to know, I don't pass it, I have to know."
Participant 2	"I use digital application such as Rosetta Stone and Mondly to better think and understand the language."
Participant 3	"I'm not going to understand because it's meant to be hard unless I have some idea about that language, that time I will think what's the word or the meaning. Most of the time, I used translation application."
Participant 4	"First time for me, I start to use my text message [in English] everybody's using this communication... text we use only just call. So this technique is a strategy helped me by English... write my text by Arabic and use translation to English."
Participant 5	"When I want a new language, I must use it. I must use the Dictionary+ (plus) app. I feel so bad about it... Because I hate dictionaries...I feel like I hate it but like... I must do it!"
Participant 6	"...as the help of my dictionary...actually dictionary is very important for me...it's application on my phone."
Participant 7	"I am using Rosetta Stone and Babel... language learning software."
Participant 8	"I just read but more or listen and watch YouTube videos and Netflix. I listen to rap songs and expose myself to new words."
Participant 9	"Learn the basics through online courses like in YouTube and then taking English courses in school."
Participant 10	"Using Google to improve my English words."

The growing relevance of computer-assisted language learning (CALL) can be seen in the students' strategies to think and understand new languages. Using Google, Dictionary+, YouTube, and translation applications has assisted students in learning new vocabularies. Closely connected with CALL is mobile assisted language learning (MALL). Although learning through MALL may take longer than CALL, MALL assists learners by giving them enough freedom (autonomy) to learn L2 in terms of time and space. An essential advantage of MALL is that it allows learners to learn without the usual classroom or computer laboratory setting (Miangah & Nezarat, 2012).

The result can imply that searching techniques can assist the students in utilizing the internet in the maximum way possible to learn L2. For instance, in the context of Korean EFL students, there has been a significant increase in the overall gain score (pre-test and post-test) of students after they have undergone Google Search Techniques (GST) training, focusing on article collocations and paraphrasing. Two important implications have been made on this study: (a) it maximizes

learning outcomes from formulating search phrases, using different Google sub corpora, and interpreting search results of frequency and contextual information; (b) if incorporated into L2 writing instruction, GST can enhance learners' autonomy through consultation of weak writing points and useful DDL tools or dictionaries (Han & Shin, 2017).

Aside from Google, another tool used by the students is YouTube. It has been one of the most accessed tools to learn L2. Language teachers recognize the use of YouTube by uploading L2 learning instructions on the site. However, some limitations to using the website exist, including the lack of privacy on YouTube, limited access to schools, and difficulty for instructors to assess its effectiveness. In Alhamami (2013), a novel rubric classified into five categories (i.e., video characteristic, attractiveness, clarity, reaction, and content) has been developed to assist both instructors and students in determining the appropriate videos for the target audience and creating compelling language learning videos based on LL theories.

#### 4.4 Strategies in Compensating the Lack of Knowledge of New Language

The result showed that most participants used digital tools, gadgets, and/or applications to compensate for their lack of knowledge of the new language. These are Dictionary+, Google Translate, cellphone translators, and digital applications like Mango, Drops, Rosetta Stone, Babbel and Mondly. Other participants found YouTube and Netflix more helpful in understanding the language (see Table 5).

**Table 5: Participants' strategies in thinking and understanding new language**

Participant	Strategies of the Participant
Participant 1	"Dictionary+ (Plus) and also I'm using the Engineering one...the vocabulary is so hard actually. I also use language application like Mango."
Participant 2	"Search it on the internet and ask someone. I always use Rosetta Stone and Mondly apps."
Participant 3	"First, I'll try to search for the definition, if I couldn't understand the definition so I'll use Google Translator so it's more easier...from English to Arabic."
Participant 4	"Dictionary...I use it before but not really...Google. Google Translation. YouTube, helpful. Movies, helpful."
Participant 5	"Watching movies on and Netflix."
Participant 6	"Yeah Google... the translator, YouTube no (not better than dictionary)... I have some dictionary in my... uhhh its name is dict + (plus). It's very good because it doesn't need internet so... just write the word and it will give the meaning and you will have example also."
Participant 7	"I use translation on my cellphone yeah. It's offline so I can use it always... But I depend my learning on Rosetta Stone and Babbel application."

Participant 8	"Student feel about my new language. I don't know. Sometimes I use Mango and Drops application as my online tutor."
Participant 9	"Sometimes using Google Translate and then I search it on the internet or ask my friend."
Participant 10	"Talk to someone else and try to ask to your English mistakes."

Specific actions mentioned by the participants can otherwise be classified as cognitive strategies under O'Malley (1985) and Learning-Cognitive Strategies under Rubin (1987). The use of CALL and MALL has also been mentioned. However, compensating strategies have been used by Participant 10 to overcome his limitations in speaking L2. On the other hand, Participant 2 utilizes both CALL (or cognitive) and social strategies to further compensate for his lack of knowledge. Within a particular strategy chain, an individual tends to employ different strategies based on the three taxonomies by Oxford, O'Malley, and Rubin.

For instance, a study by Daflizar (2020) showed that most exercises students regularly participated in entailed using technology. To help their pupils learn English effectively, teachers must encourage them to use technology effectively. Motivation, guidance for which tools to use, suggestions for metacognitive and cognitive methods, technology usage in the classroom, and incorporating technological resources in homework are all possible aspects of a teacher's role.

#### 4.5 Strategies in Interacting with Others

In terms of interaction with other people, the participants used different strategies to understand them. Some of these are (1) showing pictures of what they meant; (2) asking the person they are talking to to repeat what they are saying; (3) being friendly and pleasant to the person they are talking to; (4) speaking slowly; and (5) employing texting and translating application (see Table 6).

**Table 6: Strategies used in interaction with other people**

Participant	Strategies of the Participant
Participant 1	"Sometimes yeah, (sign language) because the communication of people...you have to be...so If didn't get you, I will get you somewhere along the meaning that I want you to know. Maybe I'll show you a picture...or something close to what I mean."
Participant 2	"I would try my best to understand them. Explain and why he couldn't understand me like uhh I would just ask him to repeat what he say...I try my best to understand what he say."
Participant 3	"I cannot interact if I cannot understand or it's going to be hard if I don't know what he's talking about so I always have translating software on my phone."
Participant 4	"First of course you have to be nice, and you have to be friendly because sometime the Filipino...sometimes they are afraid with the foreigner so you need to be friendly and you need to be nice...because sometimes they are afraid to speak in English."

Participant 5	"...I'm speaking so fast so someone he cannot understand me; I speak so slow. After this, if he doesn't understand me, I'll show him like a video or a picture, or I'll give him example or anything. I'll make anything, to understand."
Participant 6	"The text...it's very good, if they are all silent, or they are scared. I think the text it's very good, it's better. But also I guess he should do the talk."
Participant 7	"Always I text...yeah. I try to know my people talk English. If they say Arabic, I don't like to talk to them too much."
Participant 8	"Sometime I use texting and translating app."
Participant 9	"Interaction to different people like this."
Participant 10	"Talking to people. Formal and informal talking to them."

Given the recognition of CALL and social strategies as important tools for international students involved in this study, a virtual social platform may be developed to further enhance their L2 learning. Among the three taxonomies, social strategies commonly pertain to communicating and interacting with other people. The integration of social strategies and virtual platforms can be witnessed in a study by Etxebarria et al. (2012) wherein focus is given to social strategies and how they are utilized by the students in a Moodle platform. However, results show that students tend to underutilize Moodle tools to improve four kinds of social strategies, namely: asking, cooperating, empathizing, and practicing. A study that can fill the gap between Moodle tools and the appropriate social strategy to address has yet to be created.

As Oxford (1990) puts it, language is a social behavior. Indeed, social strategies are an integral part of L2 learning. The strategies of asking, cooperating, empathizing, and practicing are adapted from the taxonomies of Bialystok (1987), O'Malley and Chamot (1990), and Oxford (1990). Employing these strategies contributes to higher self-esteem or confidence, tremendous respect for other people, greater motivation, more opportunities, feedback on mistakes, etc. For the selected international students in this study, the specific actions can be classified as:

1. showing pictures of what they meant (asking)
2. ask the person they are talking to repeat what the person is saying (asking and cooperating)
3. being friendly and pleasant to the person they are talking to (cooperating and empathizing)
4. speaking slowly (empathizing and practicing)
5. employing texting (practicing)

#### 4.6 Digital Media-Assisted Language Learning (DMALL) Paradigm

The results of the participants' strategies for planning and organizing language learning, remembering new language items, thinking and understanding the new language, compensating for lack of knowledge, and interacting with other people can be attributed to the taxonomies of the three language experts.

In the condition of selected international students, their language learning can be categorized under the Oxford, O'Malley, and Rubin taxonomies since the result described different strategies in planning and organizing, remembering, thinking and understanding, compensating and interacting. However, the result showed that integrating digital media such as the internet, cellphone, and computer applications is valuable and helpful in the participants' language learning. Thus, the researcher developed the digital media-assisted language learning (DMALL) paradigm (see Figure 1) since it best describes the participants' strategy.



**Figure 1: Digital Media-Assisted Language Learning (DMALL) Paradigm**

The DMALL arises from the growing recognition of the CALL strategy in research. CALL is a dynamic and broad discipline tied to language autonomy and computer science. CALL can be defined as “any process in which a learner uses a computer, and, as a result, improves his/her language” (Beatty, 2013). It can be argued that CALL improves learners’ autonomy (acquiring learning strategies and taking control of one’s learning). The computer, the internet, and “other related tools such as emails, discussion forums, and online chat environments provide language learners with sociable, collaborative, and authentic learning opportunities where they can take control of their own learning” (Mutlu & Tuga, 2013).

Recognizing the roles new media has to play in learning, and teaching languages involves determining that the internet provides authentic language materials, allows direct contact, and provides immediate connectivity to people worldwide

(ECML, n.d.). Given the convenience digital media can provide, there has been great support for integrating technology in L2 instructions. For instance, in a study conducted in Saudi Arabia, students and instructors strongly supported using technology in EFL learning since it invokes higher student participation and inclines more toward a learner-centered approach. Aside from that, students have significantly improved accentual patterns or pronunciation and writing skills after utilizing technological platforms. However, the role of instructors is still emphasized as crucial as they are the ones who impart to the students the way these platforms or tools should be used (Ahmad, 2012).

Through digital media, mobile technology and/or the internet, the participants have been able to learn new words by searching and/or clicking. Google Translate, Dictionary+, YouTube, Netflix, mobile language translators, and other language learning applications such as Mango, Drops, Rosetta Stone, Babbel, and Mondly are just some of the applications accessed by international students. Based on the participants' responses, the role of new media has been clearly magnified based on improved learners' autonomy (i.e., taking control of their learning at their own pace). An important implication can be made from the results regarding the growing significance of technology in L2 learning and learners' autonomy; hence, the researcher developed the DMALL strategy paradigm to present this significance in L2 learning further.

## **5. Conclusion**

Based on the results, a very effective strategy concerning participants' language learning can be witnessed – the use of digital media in the learning process such as Google Translate, Dictionary+, YouTube, Netflix, mobile language translators, and other language learning applications such as Mango, Drops, Rosetta Stone, Babbel, and Mondly. It is noticeable in the study that each factor involved digital technology because the participants believed that using digital technology could help them learn a different language. Therefore, the researcher concludes that the emerging digital media-based strategy in language learning plays a vital role in the participants' language learning. Even in research, there have been studies explaining the part of CALL. Aside from CALL strategies, writing new words for better memorization, interaction with people, conversing with further comments, and enrolling in English courses have assisted the participants in L2 learning.

In identifying these strategies used by international students in Manila, Philippines, an additional contribution has been made toward creating an inclusive curriculum or program. The growing number of international students in the Philippines is noticeable; given the situation, there is now a need to assist them in learning L2 (Filipino or English), which is essential in the Philippine context. Furthermore, the researchers recommend future studies explore the concept of DMALL as a significant factor in L2 learning. Applying DMALL in different contexts or populations will contribute more to widening DMALL research recognition.



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