LANGUAGE LEARNING STRATEGIES ASSESSMENT: A SHIFT TO TECHNOLOGICALLY ENHANCED LANGUAGE LEARNING

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Abstract
In the last three decades, language learning in a traditional classroom setting has been the main context for strategy research. Language learning has undergone significant changes as a result of computer technology. The use of computers in the classroom is no longer seen as a supplementary tool but as an essential part of language learning. As a result of the widespread adoption of technology in everyday communication, the field of language learning has undergone quick and significant transformation. Due to the widespread use of mobile technology and the accessibility of online materials, it is crucial for digital language learners to comprehend and implement effective language learning methodologies, and their teachers must be able and willing to teach these strategies as needed. This article x-rays the concept of language learning strategies (LLS), classification of language learning strategies, a summary of Oxford's assessment guides of language learning strategies and recent studies on language learning strategies that are supported by technology. Among recommendations made are that the curriculum for technology-enhanced language learning should include instruction; more research tools to examine technology-enhanced LLS in addition to conventional research protocols were demanded; Longer-term instruction in language learning strategies with Technology Enhanced Language Learning (TELL) in intact courses should be carried out.
Keywords: Language learning, Language learning strategies, Technology, technology enhanced language learning.

Introduction

Nearly all language learners employ tools, perform actions, or self- regulate their behaviours with some level of conscious thought (Cohen, 2018; O'Malley & Chamot, 1996; Oxford, 1990) to increase the effectiveness or efficiency of their language learning and language use. Oxford's (1990) influential book on language learning strategies (LLS) and O'Malley and Chamot's (1996) work on LLS in the cognitive information-processing model encouraged strategy

assessment and strategy instruction, which resulted in revised theorizations in more recent years (Cohen, 2018; Griffiths & Oxford, 2014; Oxford, 2017).

The application and advancement of language learning strategies has been one of the most significant areas of second language (L2) and foreign (FL) research over the past 30 years. Oxford (1990), Goh (2000) and many other researchers have looked at a wide range of topics relating to language learning strategies. Researchers like Rubin (1975) and Naiman et al. (1978) have already identified techniques reported by students or seen in contexts of language learning that appear to contribute to learning. According to O'Malley and Chamot (1996), these studies showed that students do use learning strategies when learning a second language and that these strategies can be explained and categorized.

A lot of research on learning a second language have been conducted, frequently emphasizing language learning strategies (LLS) (Wong and Nunan, 2011; Oxford, 2017). Numerous studies have demonstrated that using these strategies can help students learn more effectively in the classroom and enhance their mastery of the target language more effectively (Wong and Nunan, 2011). O'Malley & Chamot (1996) studies on second language acquisition have shown that specific language learning strategies can improve learners' performance. In order to facilitate acquisition and mastery of the target language, it is therefore regarded essential to use a variety of acceptable language learning strategies (LLS).

The use of technology to aid and improve language learning has increased in recent years. To assist their instruction, involve students in the learning process, give real-life examples of the target culture, and connect their classrooms, teachers have utilized a variety of technological tools. Some technological tools give teachers the ability to alter instruction, modify in-class activities, and modify homework assignments, all of which improve the experience of learning a language. Technology also continues to gain significance as a tool to help second/foreign language teachers facilitate and mediate language learning for their students. The use of technology can help and improve language learning, but the efficiency of any technological tool depends on the knowledge and skills of the language teacher, who oversees and guides the language programme. The primary goal of learning English is to improve interpersonal communication. Since effective teaching is founded on communication, teaching English has the same objective: to help students become more adept at speaking with others in a second/ foreign language in context.

Technology-Enhanced Language Learning

Technology-enhanced language learning, commonly known as TELL, examines how technology affects the teaching and learning of a second language (L2). Technology Enhanced Language Learning (TELL) can be defined as any

language learning activity that makes use of technological tools and/or means to increase effectiveness, motivation, and flexibility in learning style. Technology- enhanced language learning is the practice of using a computer or other technology advancement to display multimedia in addition to a traditional classroom setting. It's crucial to remember that TELL is a technique that can be utilized in conjunction with a teaching method to aid in teaching rather than a teaching method itself. With the use of technology, students have more opportunities for real world communication with native speakers and other language learners at different proficiency levels inside or outside of the classroom. TELL strongly backs computer-mediated communication (CMC). According to research and evidence, CMC is particularly effective in assisting students with speaking and writing in a second/foreign language, which is crucial to the TELL teaching process (Kranthi, 2017; Radhakrishnan, 2017.) For linguistically disadvantaged students whose speech abilities are insufficient to enable complete expression of ideas in the target language, the process can be accurately summarized as bridging the gap between written and oral communication. Technology-enhanced language learning improves the teaching and learning of languages by using computer technology, including hardware, software, and the internet.

The world of second language (L2) teaching and learning is changing quickly as a result of 21st-century technological advancements like computer- assisted language learning, data-driven technology, online and blended learning approaches, and emerging technologies like online games, virtual and augmented reality and immersive classrooms. Even in the digital age, LLS practices and knowledge are still crucial for effective learning, and there are methods for overcoming different difficulties in digital learning (Oxford & Schramm, 2007).

Classification of Language Learning Strategies

According to Rubin (1975), one of the first studies in LLS, learning strategies are "the techniques or devices which a learner may use to acquire knowledge." She established two main categories of learning techniques in 1981, as well as a variety of subcategories: those that contribute directly to learning and those that contribute indirectly to learning. She classified the six different forms of direct learning strategies (clarification/verification, monitoring, memorization, guessing/inductive inferencing, deductive reasoning, and practice) and the two different categories of indirect learning strategies (creating opportunities for practice and production tricks).

Learning strategies are "the special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information, (p.1) " according to O'Malley and Chamot (1996). Depending on the degree or kind of processing required, they classified learning strategies into three categories: metacognitive

strategies, cognitive strategies, and social/affective strategies. Metacognitive strategies include planning for learning, paying attention to the learning task, and assessing one's level of learning. Cognitive methods entail interacting with the material to be learnt, manipulating the material physically or mentally, or using a particular method when learning something new. Interacting with others or employing affective control to support learning tasks are examples of social and affective methods.

Learning strategies, according to Oxford (1990), " are steps taken by students to enhance their own learning", and they are "especially important for language learning because they are tools for active, self-directed involvement, which is essential for developing communicative competence," (p. 1). She categorized LLS into two main classes—direct and indirect—and six subcategories. Direct language learning strategies engage the target language directly, whereas indirect strategies facilitate and manage language learning without directly using the target language (Oxford, 1990). In helping the learner develop autonomy, direct and indirect strategies complement one another.

She categorizes strategies into six classes based on factor analyses: *memory strategies* (such as grouping or using imagery, help students store and retrieve new information) *cognitive strategies* (such as summarizing or reasoning deductively, enable learners to understand and produce new language by many different means). *Compensation strategies* (like guessing or using synonyms, allow learners to use the language despite large gaps in knowledge). *metacognitive strategies* (allow learners to control their own cognition by using functions such as centering, arranging, planning and evaluating). *affective strategies* (help to regulate emotions, motivations, and attitudes). *social strategies* (help students learn through interaction with others). Memory, cognitive and compensation strategies are considered to be in the direct class, whereas metacognitive, affective, and social strategies are considered to be in the indirect class. The Strategy Inventory for Language Learning (SILL), which Oxford and other researchers have extensively used for their studies on learning strategies, is based on these six categories.

Chamot (2005) defined strategies quite broadly as "procedures that facilitate a learning task, they are most often conscious and goal driven" (p. 112). Ortega (2009) defined learning strategies as "conscious mental and behavioral procedures that individuals engage in with the aim to gain control over their learning process" (p. 208). Anderson, (2005), states that "Strategies are the conscious actions that learners take to improve their language learning" (p. 757). **Language Learning Strategies Assessment Techniques.**

According to Oxford (1990), some of the most important strategy assessment techniques include observations, interviews, "think aloud" procedure, note-taking, diaries or journals, and self-report surveys.

Observations

Many language learning strategies take place in the mind and are invisible to the teacher. In terms of conventional observation schemes, "invisible" or "mentalistic" strategies include strategies like associating/ elaborating, using imagery, and guessing intelligently. The behaviours that can be immediately observed, however, that provide insight into how students are currently approaching language learning are collaborating with peers, asking for clarification or verification, and overcoming limitations in speaking through gesture or mime. A teacher can select a good scale from a number of scales that have been published and are easily accessible, while keeping in mind that any observation scale will miss many mentalistic strategies, or they can create their own observation form, by making a list of the strategies they believe are significant and that they would like to observe. It may be beneficial to record observation sessions on video. It offers a permanent record of the sessions, allowing you to review them in detail at a later time. While the videotape medium will lose some ancillary information—activity that occurs beyond the picture's frame—it will also record behaviour(s) that you would not notice upon first viewing.

Interviews and Think –Aloud Procedures

These techniques can be used together or separately. Totally unstructured interviews, in which there is no particular questioning technique or no data coding form, are difficult to use because they require one to create all the categories for analyzing and interpreting after the interview. Slightly more structured techniques are easier to handle. Semi- structured interviews are very useful for gathering information on students' strategies. During think-aloud, the student lets his or her thoughts flow verbally in a stream-of-consciousness fashion without trying to control, direct, or observe them. Conversely, think-aloud techniques are employed in one-on-one interviews where students are asked to complete a linguistic task and then explain how they did it. In most cases, they entail immediate reflection.

Note-Taking

Note-Taking is a self-report technique that can be extended to any language task. It is especially valuable when paired with interviewing. There are three note taking techniques for strategy assessment. First a group of students is asked to record their learning difficulties when performing a language task and to use these notes in an interview. A second use of note taking involves a daily grid and occurs prior to the semi-structured interview, already mentioned. A third technique asks students to take notes on a grid, describing the strategies they employ; then they rate those strategies in terms of frequency of use, employment, usefulness, and efficiency. These note-taking schemes impose a bit of useful structure on students as they keep track of their strategy use.

Diaries or Journals

Diaries or Journals are forms of self-report which allow learners to record their thoughts, feelings, achievements, and problems as well as their impressions of teachers, fellow students, and native speakers. Keeping a diary or journal is a very useful learning strategy in itself and this strategy can be used to help learners become aware of their whole range of strategies. Though learners are often asked to share their diaries with the teacher, students can also share their diaries among themselves. In addition, some teachers have used diaries as a stimulus to class discussions of strategy use. Since they assess the effectiveness of particular learning strategies in relation to particular language tasks, this strategy can assist students in developing their metacognitive awareness (Rubin, 2005).

Self-Report Surveys (Questionnaires)

Self-Report Surveys are instruments used to gather systematic, written data on language learning strategy use. These surveys can vary from less structured to more structured. Less structured self-report surveys, also called subjective surveys, do not provide much organization for students in terms of the responses elicited. Such surveys contain open-ended questions designed to get the learner to describe his or her language learning strategies freely and openly in writing. More-structured surveys, also called objective surveys, usually ask simple multiple-choice questions which can be objectively scored and analyzed. Because more-structured surveys, use standardized categories for all respondents, such surveys make it easier to summarize results for a group and objectively diagnose problems of individual students. However, the most popular technique for gathering data is through questionnaires, which entails requesting feedback from students on their methods for approaching and completing various activities. The Strategy Inventory for Language Learning (SILL), created by Oxford in 1990 as a result, has been applied in relevant studies all around the world (Bessai, 2018; Maqbool, S., Ismail, S. A. M. M. & Maqboo, S., 2020; Musa & Osa-Omoregie, 2017).

Language learning strategies assessment techniques enumerated above had been the techniques that had been in use. With the introduction of technology to the language classroom, it is no longer suitable to consider technology to be a supportive tool in a face-to-face language classroom because of the rise in its use (Nunan, 2000). Technology is much more than this. Technology is now being used to assess LLS of second language learners. Learners are increasingly challenged to investigate methods for efficient language learning in digital contexts (Oxford & Lin, 2011). New pedagogical designs that incorporate strategy instruction and new research methodologies for LLS are required in light of the changing nature of language learning. With digital resources now widely accessible, pedagogical design and research for language learning strategies have to take into account new opportunities and challenges. As a result, there are new

factors to take into account when teaching second languages. Some current studies on technology-enhanced language learning strategies in the four major language skills of listening, speaking, reading and writing will be reviewed in this study.

Studies on the Effectiveness of Strategies for language learning skill areas in TELL

The Strategy of Inventory for Language Learning (SILL) (Oxford, 1990) was used by Chang and Chang (2014) to analyze the English listening comprehension strategies of 48 Taiwanese college students while they were using YouTube videos as their source of self-dictation practice. The metacognitive questions on SILL assess how effectively students are employing learning strategies such as planning, goal-setting, organizing, paying attention, observing, and looking for opportunities to make learning successful. The listening comprehension scores of students who applied the metacognitive strategies suggested in the SILL significantly increased. They enhanced their listening comprehension by creating dictation questions, remembering strategies usage, and taking into account their listening difficulties

A semester-long project was conducted by Hung (2016) with 60 Taiwanese EFL students. The project required students to perform a 3-minute video presentation, which was followed by two more 2-minute videos that provided spoken feedback. In addition to examining the strategies which students employed to offer video-mediated voice feedback, the researcher also looked at how students behaved strategically when producing video-mediated peer feedback. The most often used strategies, according to Hung's research, were paying attention to other people's verbal comments, marking ideas for future adjustments, speaking with peers, editing language for accuracy, and regular practice.

Based on their technology-assisted research with 137 sixth-grade English language learners in Western Cape, South Africa, Klapwijk and Toit (2009) advocated increasing reading comprehension strategy training with a blended approach. An interactive, multimedia course on CD-ROM, an online assessment of the comprehension test, and a booklet to lead the students through the lesson's components were all included in the instructional technique. The interactive multimedia lesson included three reading strategies: activating prior knowledge, summarizing, and looking back. It also included a brief video clip, interactive exercises, and simple sound effects. The benefits of technology, including quick feedback, self-paced learning, and exposure to a variety of media (audio and video), lowered teachers' burden while also encouraging students to read, according to the study.

A Wiki-based collaborative writing environment was created by Tang, Xie, and Wang (2011) for their e-Commerce Specialty English course at a Chinese university. In this environment, students could use one of four different sorts of

tools to complete writing assignments: Peer review and feedback, an online semantic annotator that enables learners to conceptually model semantic relations, tag web resources, semantic search that facilitated search and retrieval options, and page histories that recorded each significant review version are just a few of the tools used to support collaborative learning in groups. Peer evaluation, cooperation and information sharing, and keeping track of the steps of the writing process were determined to be three effective learning strategies. The evaluation's conclusions showed that group work, audience awareness, and student involvement may all be improved through collaborative writing on wikis.

Language Learning Strategies Use and Language Learning Achievement

The findings in the area of language learning strategies have repeatedly demonstrated that the use of language learning strategies leads to better proficiency or achievement in mastering the target language (Lee, 2003; Rahimi, Riazi and Saif 2008; Griffiths, 2003; Hong, 2006). It has been found that successful language learners have reported to use more and wider range of learning strategies than less-successful students. Griffiths (2003) found a strong positive correlation between learning strategy use and language proficiency. The findings revealed that advanced language learners have reported to employ learning strategies more frequently than elementary students. In this regard, language teachers should take their students learning strategies into consideration and try to recognize and identify students' learning strategies in order to support less successful students to achieve success and master the target language. Teachers can identify these strategies through observations, language diaries, questionnaires, interviews and so on. By doing so, teachers will be able to assist language learners to recognize and appreciate the power of language learning strategies in the process of second or foreign language learning. Through learning strategies, teachers can also help the students to maintain their motivation, autonomy, and confidence and try to accomplish the goal of learning the target language.

Conclusion

This study reviewed the literature on assessment of language learning strategies in TELL settings. The technology-assisted language learning strategies examined show the distinct uses of technology by students and teachers in the modern era. The 21st century's rapid technology advancements have made it possible to learn a language at any time, anywhere, and on any device.

The target language can be learned easily by the language learner, by using language learning strategies, which are specific acts, behaviours, tactics, or approaches. All language learners employ language learning strategies during the learning process. It is not reasonable to support the notion that all language learners use the same language learning strategies or that they should be taught

how to use and develop the same strategies in order to become successful learners because these factors, among others, affect how language learners learn the target language. These factors include age, gender, personality, motivation, self-concept, life experience, learning style, excitement, and anxiety. Studies on language learning strategies and strategy training should go beyond describing taxonomies of language learning methods and aim to find answers to a variety of issues, such as: Which language learning techniques seem to work best with which learners in what contexts? Do language learning strategies or training in language learning strategies easily transfer between L2 and FL contexts? What part does language proficiency play in the training and usage of language learning strategies? How long does it take to train particular language learners in particular learning strategies? How can the effectiveness of language learning strategies be evaluated and measured? Are some language learning strategies more easily mastered in formal classroom settings than informal ones? Answers to these and many other questions from research in many contexts are anticipated to pave the way for developing the theory that seems necessary for more language learning strategies to be applicable to L2 teaching practice at the moment.

In conclusion, a lot has changed in the world of technology since computers were first used in teaching and learning languages in the 1980s. It has changed from being an instructional tool to a crucial instrument for teaching and learning languages. It has changed from being a notion to becoming a reality. The theory, practices, and research of computer-aided learning are being updated through new projects. Technology has provided and will continue to provide research findings and useful insights into language learning strategies that increase the effectiveness of L2 learning.

Recommendations

First, given that technology is present both within and outside of language classes, it is recommended that more research tools be made available to examine technology-enhanced LLS in addition to conventional research protocols. It is necessary to include strategies that were absent from the old LLS frameworks. Second, the majority of TELL-based strategy research has examined the efficacy of a technology frequently incorporating only short-term interventions, due to unique and non-generalizable technical infrastructures. Longer-term (a semester) instruction in language learning strategies with TELL in intact courses (Zhou, 2016) seem to be more suited for use in digital environments. It is necessary to conduct more study to better understand how L2 teachers and students in the 21st century manage strategies in technology-normalized daily classroom activities.

Third, language learners find new learning methods challenging and actively seek out new learning strategies (Oxford & Lin, 2011). The availability

of new technologies and language learning resources has expanded far more quickly than the level of training for language teachers. The curriculum for technology-enhanced language learning should include instruction. Language teachers' increasing understanding and commitment to assisting their students in developing awareness of and proficiency in using optimal LLS are crucial for the successful implementation of new language learning technology tools and new types of learning strategies. This necessitates a revision in the curricula for the training of language teachers. Language teachers working in digital settings must be prepared in addition to being knowledgeable about traditional teaching methods and evaluations of language learning integrate the new technology into classroom instruction and design technology enhanced pedagogy with LLS orientation for their students..

Finally, a new era for L2 learning research, including strategy research, has been ushered in by innovative technologies. This new approach to research involves a lot of unknowns. Expanding and diversifying research on language learning strategies and the efficacy of strategy-based instruction is necessary to account for new forms of learning and human-computer interactions.

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