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| RESEARCH ARTICLE

The Comprehensive Instructional Language Learning Model: Exploring its Feasibility and Characteristics

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| ABSTRACT

The necessity for a comprehensive theoretical framework is underscored, given that current theories, such as behaviorism, cognitivism, or constructivism, concentrate on distinct facets of language learning. Scholars contend that language learning and teaching necessitate a comprehensive theoretical framework. The theory under consideration is characterized as possessing descriptive, instructional, and evaluative qualities, thereby offering a pragmatic framework for practitioners in English language teaching. This article introduces a comprehensive theoretical framework for language learning that seeks to encompass all the elements inherent in language learning, namely cross-linguistic applicability, psychological adequacy, contextual variables, and a comprehensive and cooperative learning process that is initiated with input, followed by competency building, and ends with engagement. The theory is expounded upon through the utilization of the Evaluative Matrix of a Comprehensive Instructional Language Learning Theory (EMCILLT), which evaluates the various aspects of the teaching-learning experience, utilizing Grice's maxims (1975) quantity, quality, manner, and relevance. This comprehensive model that encompasses all the aspects of the learning process serves as a basis for comprehending and delineating the intricate nature of language learning. Moreover, it assists teachers in engaging in self-evaluation of their instructional strategies and practices and/or in evaluating methods, approaches, and techniques to enhance the overall teaching-learning experience.

| KEYWORDS

Language learning, comprehensive model, learning process, instructional design, input, competency building, engagement

| ARTICLE INFORMATION

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1. Introduction

After thoroughly examining the literature on language learning, it is clear that a comprehensive language learning model must be constructed. Various scholars have argued that a comprehensive learning theory is possible and needed (Tyler, 1948; Spolsky, 1984; Lewis & Grimes, 1999; Illeris, 2002, 2003; 2015; Duchastel & Molz, 2004; Jarvis, 2006).

In his article "The Need for a More Comprehensive Formulation of Theory of Learning a Second Language," Ralph Tyler suggests a list of questions for a comprehensive language learning theory. The list englobes seven questions, even if the list does not encompass all the questions to be asked. The questions hang over the type of target learners, learning objectives in relation to learners' types, nature of second language learning, the role of practice, its quantity and modality, the role of motivation in learning, the effect of prior knowledge in learning, and the effective organization of learning activities.

In his 1984 article titled "Formulating a Theory of Second Language Learning," Bernard Spolsky presents a framework for developing a comprehensive theory of second language learning. He proposes integrating principles from both first and second language learning and subsequently emphasizes the necessity for a comprehensive theory in the field of language acquisition.

Duchastel and Molz (2004) have also called for a unified theory of learning and instructional design through which all the squabbles of education will end. Lewis and Grimes (1999) do believe that a coherent, unified theory of learning will possibly appear due to the growing disputes caused by various viewpoints on what learning is. General learning theories like behaviorism, cognitivism, and constructivism, as well as their variants, tend to rely on a single stance to explain and describe learning, leading to scientific research conflicts and refutations. Therefore, more variants emerge, but none of them is comprehensive. Instead, they arise just to prove their descriptive and explanatory adequacy. Duchastel and Molz (2004) believe that the background of learning theories that are not unified is that "a hypothesis can be made plausible by a theorist, there will be someone else who cannot refrain from over-generalizing the finding. Another paradigm will arise to counter this over-generalization, and will in turn unsuccessfully over-generalize into the area of the competing paradigm" (p. 45).

Correspondingly, Peter Jarvis, in his book "Towards a Comprehensive Theory of Human Learning," in 2006, examines already existing learning theories (behaviorism, cognitivism, emotivism, and experientialism) to conclude that they are incomprehensive and do not explain a complex phenomenon as learning. Aligned with his conclusion after, he acknowledges that a comprehensive theory is likely to be impossible. However, Jarvis endeavors to construct a comprehensive learning theory.

Illeris is another researcher who maintains the same stance about constructing a comprehensive learning theory regardless of his research background – transformative learning. In his entitled publication, "The Development of a Comprehensive and Coherent Theory of Learning" in 2015, he concludes, "I can only maintain that, internationally, there is a fundamental and rapidly growing need for a better understanding of how learning functions and can be improved" (Illeris, 2015, p. 39). The researchers stated above endorse constructing a comprehensive (language) learning theory. Nevertheless, other scholars stand opposingly, like Jonassen, 2003 and Reigeluth, 1999, yet the question about the possibility of a comprehensive language learning theory is worth the attempt.

Prior to delving into the intricate concepts of language acquisition, it is imperative that I elucidate the terminology that will be employed:

1. We need a theory that provides a detailed examination of the teaching-learning process, describes the different constructs that define learning, explains how learning occurs, and can be translated into a model.
2. The choice of "teaching-learning process" and not "learning process" is a matter of (a) inclusion of the learner to be an active agent in learning and the teacher or instructor to be a facilitator, and (b) emphasis, as I believe that we should cast light on teaching and learning.
3. There is a need for a theory of language learning (TLL) rather than a theory of language teaching (TLT) because a language teaching theory primarily focuses on the teacher and teaching methods or approaches (including teaching skills, the teacher's charisma, personality, and background.), while a language learning theory focuses on learning facets – the cognitive, social, and affective processes.
4. The criteria of a TLL and a TLT are distinct but related and overlap.
5. Adopting a "good" teaching theory is not sufficient and does not necessarily mean that learning occurs; simply because what determines the occurrence of learning is not solely related to teaching and the teacher as a person; rather, it is pertaining to the learning process and other factors.
6. The theory can encompass all areas of learning – language-related learning and non-language-related learning, e.g., learning a language, learning how to ride a bike, and solving mathematical equations. Moreover, learning a language includes learning a first, second, and foreign language.
7. We see learning as instruction-oriented and explicit, not incidental and implicit.

2. Why do we need a Theory?

The questions " Why do we need a theory of learning?" and " Why do we need a comprehensive theory of learning?" are two more questions that stem from the question, why do we need a theory? Through a theory, we can explain how a phenomenon works and describe it. With the existing (language) learning theories, which have a point of view of language learning, as each one views learning from a particular perspective, e.g., cognitive language learning theories that explain language learning and acquisition on a cognitive basis, a comprehensive language learning theory is needed and valuable, but then, Why is a comprehensive language learning theory highly needed? A comprehensive theory is needed to account for the elements that affect learning and stages and the learning process constructs. Accordingly, the extant and contemporary learning theories do not fully explain human learning, including language learning. Thus, a comprehensive theory is desired to learn more about how humans learn, in general, and specifically how humans learn an L2 or L3, whose findings will be converted and translated to practical implications that will provide more insightful guidelines to teachers and learners, found new research paradigms, and formulate new research inquiries and solutions.

The same view is supported by Tyler (1948) as follows: "[…] for experiments, experience, or any empirical data to contribute much to an understanding of a complex phenomenon like the learning of a second language, they need to be related to a relatively comprehensive formulation of theory (p. 559). To conclude, we need a theory to explain and describe learning as a phenomenon and a comprehensive one to account for all the elements that comprise learning.

3. How Can a Theory Comprehensively Account for Learning?

There is a need for a comprehensive language learning theory to explain thoroughly how learning occurs, what the learning process constructs are, and what factors affect them. In a comprehensive language learning theory, all the elements should be covered, and none should be counted out. Therefore, as the word comprehensive implies, all the components should be taken into consideration. A language learning theory can comprehensively account for learning if it establishes the following aspects.

3.1 Cross-linguistic Applicability

If language learning is comprehensive, it should be comprehensive so that the theory accounts for learning in every single language L1, L2, L3 … L_x. So, if a language learning theory is not applicable in L1 but is applicable in L2, then it is not cross-linguistically applicable. Hence, it is not comprehensive. In other words, a language learning theory is comprehensive when it applies to all languages and their aspects. In the same regard, Chomsky (1957; 1975) believes that a learning theory is universal as long as its principles apply to all languages. "The strongest possible proof of the inadequacy of a linguistic theory is to show that it literally cannot apply to some natural language" (Chomsky, 1957, p. 34).

3.2 Psychological Adequacy

Psychological adequacy here refers to the compatibility between the language learning theory and the psychological mechanisms responsible for language processing. Accordingly, Illeris (2003) believes in the importance of integration in considering (1) the external interaction process and (2) the internal psychological process as two essential processes for comprehensive language learning. For a language learning theory to be comprehensive, it should be psychologically adequate. A language learning theory is comprehensive if it accounts for all the aspects that shape learning – cognitive and noncognitive factors. Cognitive factors pertain to cognitive skills and competencies (Douglas, 1980; Gardner & MacIntyre, 1992). Psychological adequacy also includes noncognitive factors, which are conceptually different from cognitive factors (See Kafka, 2016, for a list of measuring instruments of psychological factors that affect learning). Various studies have investigated the role and significance of cognitive and noncognitive factors in learning. Although they have examined different cognitive and noncognitive factors, it has been shown that they play an essential role in learning – learning an academic discipline such as language (Bowles & Gintis, 1976, 2002; Butler, 2019; Lee & Shute, 2010). Moreover, empirical evidence has demonstrated that variations in occupational and earnings outcomes can be attributed to noncognitive qualities in the context of education (Farkas, 2003). A comprehensive learning theory is comprehensive when it considers both the cognitive and noncognitive factors during the learning process.

3.3 Contextual Variables

Besides psychological factors that affect learning and should be considered in a comprehensive theory of learning, contextual variables also have to be considered, as supported by Larsen-Freeman and Long (1991); "further, both group and individual social and psychological factors must surely have some role in a comprehensive theory of SLA" (p. 447). If language learning is comprehensive, it should account for contextual variables and not neglect them. Contextual variables include social and environmental variables such as family income and classroom setting. The contextual variables affect the learner and the language, affecting the learning process, and consequently, learning occurs or does not. "Further, both group and individual social and psychological factors must surely have some role in a comprehensive theory of SLA" (Larsen-Freeman & Long, 1991). Many variables affect language learning (learning a second language) in particular and academic achievement in general, e.g., learning strategies, student engagement, school climate, and environmental, social, economic, and cultural factors. They must be considered when planning pedagogical materials (Fathman, 1976; Byrnes, 2003; Gosa & Alexander, 2007; Stankov & Lee, 2008; Lee & Shute, 2010).

3.4 Learning Process

If a language learning theory is comprehensive, it should take into account all the constructs of the learning process – input, competency building, and engagement. It is undeniable that input plays a significant role in language learning and acquisition. Chomsky (1975) although does not believe in a learning theory. He holds that if there is one, it should have input and output as its main components. It has also been recognized that input is essential in language learning (Krashen, 1981; 1985; Ellis, 1997). It is further specified that input has to be comprehensible for learning to occur. Nevertheless, other researchers have provided empirical evidence that input, even in its comprehensible form, is insufficient in language learning; learners have to produce output through interaction for learning to occur and input to be intake (Harley & Swain, 1984). Therefore, Engagement refers to the participation of learners using the language learned to communicate, which encompasses behavioral, cognitive, affective, and social aspects. The transition from input to output, I believe, has to undergo some linguistic competency building – building

competency does not solely include speaking but reading, writing, and listening as well. Input and output are identified as the beginning and end of a learning process. Additionally, "educators must first identify or propose an end result […] because how you identify and measure the end product (Output) will influence the selection of important predictor variables" (Gage & Berliner, 1992; Hummel & Huitt, 1994; McIlrath & Huitt, 1995; Huitt, 2003). Competency building is achieved through meaningful and comprehensible practices, depending on the target learners and objectives. It is worth noting that *practice* is used broadly for any activity or routine that helps learners improve their language proficiency over time.

The learning process is described as having two properties: A quantitative property that says whether all the components of the learning process are taken into consideration and involved or not, as well as to what extent they are (a comprehensive aspect of language learning), and a qualitative property, on the other hand, that focuses on the quality of the learning process to say whether learning is cooperative and discursive or not then to what extent it is (a cooperative aspect of language learning). Accordingly, learning is considered to be cooperative and discursive.

4. Why Do We Need a Model?

Science is in the embryo, and the need for a theory is apparent, but the need for a model is also desirable, especially in the science of applied linguistics. A theory can be turned into a model to provide more practicality. "Any theory is but a model of some natural phenomenon, a descriptive structure that identifies its main elements and processes, generally setting them in a causal structure that has explanatory and predictive value" (Duchastel & Molz, 2004, p. 45). The construction of a theory represents the foundation of a model; thus, what is the language learning model type that is needed and is presented here? The proposed model exhibits a high level of comprehensiveness and provides valuable instructional and evaluative components. In the subsequent discussion, I will expound upon these attributes.

So far, we have seen the different concepts of the comprehensive language learning theory and concluded that a language learning model solely comprehensive in character is not enough; one can ask the question, Why is it so? To answer this question, let us reflect on the following question: Have you ever seen a school that issues a driver's license without giving students some driving guidelines? As there should not be a driving school that issues driver's licenses without ensuring that students take some driving practice that is instruction- and practice-based; then, language learning is subject to the same condition of instruction. Can a language learning theory, even if it is comprehensive, be sufficient and efficient alone? On the contrary, language learning theories are supplemented with instructional design–linking science (Reigeluth, 1983).

Learning theories provide a source and basis to construct and verify instructional strategies, tactics, and techniques. They also provide the grounds for intelligent and reasoned strategy selection. Learning theories often explain relationships among instructional components and the instruction design, indicating how specific techniques/strategies might best fit within a given context and with specific learners (Keller, 1979). Moreover, they allow for a reliable prediction (Richey, 1986 – as cited in Raible, (2022)).

Therefore, the language learning model that is needed is instructional. The instructional aspect of the model functions as a bridge to translate relevant aspects of the comprehensive learning theory into optimal instructional actions. Furthermore, an instructional design theory implies a cognitive theory, while a language learning theory does not necessarily imply a cognitive theory. A cognitive theory explains and describes how the brain works by highlighting certain points. An instructional design model provides instructions on how to learn better based on the highlighted points by the cognitive theory. In other words, instructional design theory instructs how the brain works. Therefore, a cognitive theory is a sequitur for instructional design theory, and a learning theory is a non-sequitur for a cognitive theory.

The objective behind implementing an instructional and evaluative model is to intelligently and intelligibly evaluate any language learning theory or teaching practice and provide instructions and recommendations. Note learning is perceived to be cooperative and discursive. The evaluative and instructive dimensions of the model are carried out by the four Gricean maxims, namely quantity, quality, manner, and relevance. The Evaluative Matrix of a Comprehensive Instructional Language Learning Theory (EMCILLT) is:

1. Comprehensive because it includes all aspects of learning mentioned above.
2. Instructional because it (a) functions as a bridge between the learning theory and how to achieve the learning goals, (b) intends to instruct on how to account for learning comprehensively, and (c) is based on a cognitive theory.
3. Evaluative, because it permits educators to (self) evaluate their teaching practices.
4. A matrix because it takes the form of a chart with criteria.

5. The Evaluative Matrices

Table 1

The Evaluative Matrix for a Comprehensive Instructional Language Learning Theory (EMCILLT)

Evaluated Component	Scoring		Score
Cross-linguistic Applicability	Incomprehensive (0 pts)	Absence of cross-linguistic applicability	
	Comprehensive (5 pts)	Presence of cross-linguistic applicability	
Psychological Adequacy	Incomprehensive (0 pts)	The component takes into account a few to none of the cognitive and noncognitive traits.	
	Partially comprehensive (1-3 pts)	The component takes into account a few to some of the cognitive and noncognitive traits.	
	Comprehensive (4 - 5 pts)	The component takes into account most to all of the cognitive and noncognitive traits.	
Contextual Variables	Incomprehensive (0 pts)	The component takes into account a few to none of the contextual variables.	
	Partially comprehensive (1-3 pts)	The component takes into account few to some of the contextual variables.	
	Comprehensive (4-5 pts)	The component takes into account most to all of the contextual variables.	
Learning Process	Incomprehensive (0 pts)	None of the constructs of the teaching-learning process are integrated.	
	Partially comprehensive (1-3 pts)	Some of the teaching-learning process constructs are integrated comprehensively (in quantity, quality, manner, and relevance).	
	Comprehensive (4-5 pts)	All the teaching-learning process constructs are integrated comprehensively (in terms of quantity, quality, manner, and relevance).	
		Total Scoring	

The table below illustrates the matrix character of the EMCILLT in evaluating a teaching-learning component. The word component can refer to a constituent under evaluation, and the scoring depends on the degree of comprehensiveness – from incomprehensive to comprehensive. The component can be a theory, a model, an approach, a class, or a lesson plan. For instance, if the component under evaluation is a lesson plan, the following questions can be raised to evaluate its descriptive and evaluative character.

1. Is the lesson plan applicable to teaching in other languages?
2. Are psychological factors considered in designing the lesson plan?
3. Are contextual factors considered in designing the lesson plan?
4. Is the lesson plan comprehensive and cooperative enough?
    a) Is the lesson plan comprehensive?
    b) How comprehensive is it in implementing a lesson's components from input to output?
    c) How comprehensive is it in terms of quantity, quality, manner, and relevance?
5. Is the lesson plan cooperative?
    a) How cooperative is it?
    b) How cooperative is it in implementing activities that demand cooperation in learning?
    c) How cooperative is it in quantity, quality, manner, and relevance?

Questions 1 to 3 inform us about the descriptive character of the lesson plan in considering the cross-linguistic applicability and psychological and contextual factors integration in designing the lesson plan. While questions 4 and 5 tell us how comprehensive and cooperative the teaching-learning process is, which is put in the form of a table (see Table 2). The evaluation uses Grice's (1975) maxims: quantity, quality, manner, and relevance. The evaluation is carried out as follows.

- Level 1: You verify that the learning process integrates input, competency building, and communicative acts, and none is counted out.
- Level 2: You evaluate each construct of the learning process's quantity, quality, manner, and relevance. After the evaluation, you score each construct based on each criterion and provide improvement instructions.

Table 2
The Evaluative Instructional Teaching Learning Matrix (EITLM)

Evaluated Component			Evaluation Criteria	Evaluation	Scoring[1]	Instruction
The Quantitative Character	How comprehensive the learning process is	Input	Quantity			
			Quality			
			Manner			
			Relevance			
		Competency Building	Quantity			
			Quality			
			Manner			
			Relevance			
		Communicative Acts	Quantity			
			Quality			
			Manner			
			Relevance			
The Qualitative Character	How cooperative the lesson is in terms of activities that incorporate cooperation in learning		Quantity			
			Quality			
			Manner			
			Relevance			
Total score						

6. Conclusion

The objective of this research is to investigate the feasibility of developing a comprehensive language model and its characteristics that take into consideration all potential factors and variables that may impact the learning process. The development of a comprehensive language learning model necessitates the consideration of several factors, including cross-linguistic applicability, cognitive and non-cognitive variables, contextual factors, and a learning process that integrates input, competency building, and engagement. Hence, the study contributes to and fills the research gap on the need for an all-encompassing language learning model called for by researchers such as Tyler (1948); Spolsky (1984); Lewis and Grims (1999); Illeris (2002; 2003; 2015); Duchastel and Molz, (2004); Jarvis, (2006). It also conforms with Chomsky's belief (1957; 1975) that a language learning theory is universal as long as its principles are applicable across languages. It confirms that cognitive and noncognitive factors affect learning, as researchers such as Kafka (2016) and Lee and Stankov (2016) have shown in their studies. The language learning model developed in this study aligns with the principles of cross-linguistic applicability and psychological adequacy, as well as the importance of contextual variables in facilitating and promoting language learning, as posited by scholars such as Gosa and Alexander (2007), Stankov and Lee (2008), and Lee and Shute (2010). A learning process that includes input, competency building, and engagement is another facet of a comprehensive language learning model. Chomsky (1957) necessitates the inclusion of input and output as its main components. Ellis (1997) and Krashen (1981) add that input has to be comprehensible. The necessity of output is highlighted by other scholars as well, such as Harley & Swain (1984). Since learning is perceived as cooperative and discursive, the design language learning model believes that competency building is another mandatory component in the learning process; hence, it is considered the linking bridge between input and output. For a language learning theory to be comprehensive, it should also be descriptive and evaluative. The descriptive quality says that a theory should be applicable cross-linguistically, taking into consideration psychological factors, cognitive and noncognitive factors, and contextual variables (social and environmental variables). The evaluative character of a theory that is comprehensive should (1) fully consider learning to have input as a beginning and output as an ending of the learning process, with the target competency building in the middle, and (2) regard learning as

[1] The scoring system is as follows: you give a score to each evaluation criterion (quantity, quality, manner and relevance) of 0 to 5 points depending on how comprehensive each of the evaluated component.

- Incomprehensive (0 pts)
- Partially comprehensive (1-3 pts)
- Comprehensive (4-5 pts)

discursive and cooperative. Each of (1) and (2) is evaluated to be either comprehensive or not based on four evaluation criteria: quantity, quality, manner, and relevance (Grice, 1975).

The Evaluative Matrix of a Comprehensive Instructional Language Learning Theory (EMCILLT) is a tool that comprehensively allows us to account for learning, (self)evaluate teaching-learning practices, and write instructions and recommendations on how to render an incomprehensive view of language learning comprehensive. The present model needs to be tested with different courses, themes, levels, and cohorts of students. When assessing the Comprehensive Learning Model's impact on learners, it is important to assess their vocabulary knowledge at regular intervals. Future research using this model also has to focus on the model's effectiveness and viability in an instructor-led class. To determine its validity and applicability, subsequent studies may examine the efficacy of learner-centered or technology-infused learning environments. Hopefully, the present model will inspire educators to investigate its effectiveness and think about how it may be used to improve their classrooms.

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