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**TRANSLATION OF SOME DOCUMENTS FROM SPANISH TO
ENGLISH AND FROM ENGLISH INTO SPANISH FOR LICEO
SANTA BÁRBARA DE HEREDIA**

Thesis Submitted to Obtain the Bachelor in English

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I want to thank Professor Catalina Guerrero Troyo for the incredible support that she has given me in this entire process.

Dedication

I dedicate this dissertation paper to the only person who has shown genuine support to me and who wants only the best for me, my mom.

Abstract

This thesis main focus is to analyze the effect of the procedures and methods used to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia. This analysis will be done by using several translation procedures. To find the most precise representation for the target's language culture, so that the source language meaning is not lost, and the main message is understood by the reader.

This dissertation paper is focused on studying and answering the following research question: What is the effect of using translation techniques to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia?

This investigation was carried out by Sharom Daniela Mendoza Monge and the method applied was to translated some documents from English to Spanish and from Spanish to English. Through this process of translation, the investigator found out that there is an effective method of translating documents through communicative translation. The investigator concluded that through the correct uses of translating methods an effective translation was able to be created.

Resumen

El enfoque central de esta tesis es analizar el efecto que los procedimientos y métodos usados para traducir los siguientes documentos *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* del español al inglés y *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* del inglés al español para el Liceo Santa Bárbara de Heredia.

Este trabajo de tesis está enfocado en estudiar y responder la siguiente pregunta de investigación: Cuales son los efectos de usar técnicas de traducción a la hora de traducir los documentos *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* del español al inglés y *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* del inglés al español para el Liceo Santa Bárbara de Heredia?

Esta investigación se llevó acabo por Sharom Daniela Mendoza Monge y el método aplicado fue traducir los documentos de inglés a español y de español a inglés. A lo largo del proceso, el estudiante descubrió que el método más efectivo para traducir es por medio de la traducción comunicativa. El estudiante concluyó que el análisis y usso correcto de los métodos de traducción ayudar a crear una versión de traducción efectiva.

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Chapter I

Introductory Framework

This study is focused on translating two documents, one from English to Spanish and another one from Spanish to English, in the most accurate and natural way. Its main goal is to create a document that in its translated form is perceived by the reader as if it had been originally written in that language. The following chapter explains what will be investigated and what tools will be used throughout that process, the objectives, the importance of this research, some background history, knowledge of translation and some of the limitations that may be encountered along the way. This is the root of the investigation, and it will guide the reader understand this study.

1. Problem Statement

The focus of this thesis is to analyze the effect of the procedures and methods used to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia. This analysis will be done by using several translation procedures. The idea is to find the most precise representation for the target's language culture; therefore, that the source language meaning is not lost, and the main message is understood by the reader.

These documents were requested to be translated to be used as research sources for high school investigations and homework's for Liceo Santa Bárbara de Heredia. These two documents are dissertation papers with formal and informative language and content. The institution needs both documents in its original form and in their translated version as

homework activities for their students in eleventh grade. They will be used as sources of investigation to teach them how to paraphrase, quote, and cite formal documents as practice for their English and Spanish courses as university students. Even though the audience for these translated documents are students, they still have to be translated using the formal and technical vocabulary each text requires for they will be used for educational purposes.

This dissertation paper is focused on studying and answering the following research question: What is the effect of using translation techniques to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia?

1.1 Objectives of the Investigation

Setting objectives is crucial for any dissertation paper, for they define the main and sub-reasons why the investigation is taking place. In addition, they are used as a compact guide to organize the material, to know what to work on, investigate, and to have an idea of what type of results will be expected. The following are the general and specific objectives of this thesis.

1.1.1 General Objectives

To analyze the effect of the translation techniques at the time of translating some documents from Spanish into English and from English into Spanish for Liceo Santa Bárbara de Heredia

1.1.2 Specific Objectives

- To translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia
- To apply various translation techniques to the documents in order to achieve a clear and accurate target text
- To evaluate the effect of the translation techniques applied on the documents
- To create a glossary with the most relevant terminology found in both texts

1.2 Justification

The main purpose of this investigation is, as stated on the main objective, to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia. The main goal is to create a translation to the target language that is clear, natural, and accurate; as if it was originally written in that specific target language. This study wants to examine the overall process of translation and prove the reasons why it is important to actually study its techniques in order to deliver an almost original version of the source language text. In terms of the practical application of my research, different types of translation methods procedures will

be used, including word by word translation, literal translation, faithful translation, but most importantly semantic and communicative translation depending on the text and message that must be put into the target language.

Since this will be an inter-linguistic translation, meaning translation into two different languages, then the decoding and re-encoding process will be applied in which the background knowledge will be used to figure out the meaning and convey the accurate meaning into the target language text. This research is also focused on reviewing the importance of several techniques to help other translators review tools. These tools can help them deliver a message in the target language during any formal translation process. Moreover, they can help them convey it as pure as possible. That is the reason why, semantic and communicative translation are required to be incorporated.

1.3 Antecedents

Even though translation is considered to be a modern field of study, it has in fact been around for a very long time. In this section Spanish and English history in terms of their development in the translation process will be explained.

The Tower of Babel is a Biblical myth found in Genesis 11: 1-9 that describes why people around the world spoke different languages and translation's origin. After the flooding, as Earth was being repopulated, a tower was being built in Babylon. This tower was meant to reach heaven and its main purpose was for humans to make a name for themselves. When God saw that the human's-intentions and unity were going against God's plan, He decided to confuse people's mean of communication, which up until that point was a common language for all mankind, which caused them to speak an innumerable

amount of different languages and made it impossible for them to understand each other. (Fairchild, 2019) Ever since this event, it is said that translation has been necessary in order to communicate, understand each other and to bring different cultures together.

Another antecedent is the thesis submitted to obtain the Bachelor in English at the UIA by Juan Alberto Rodríguez Madriz. This paper focused on explaining why his specific documents were important for society to translate. One of his translations was for the Costa Rican *Cuerpo de Bomberos*. Through his translation he wanted to help fireman in Costa Rica to apply the same procedures that had proven to work with the fire department in the United States of America. His second document focused on helping make awareness to people that had been victims of sex trade and human trafficking. He focused his thesis on a social approach to demonstrate how translation can help communicate a message for social well-being.

Rodríguez concluded that close readings, creating a glossary, constantly checking a dictionary and translation methods and procedures were of great help for his translations. Close readings helped him identify the general topic of his translations and it also helped him find the main words and its equivalent in the target language. He informs the reader how important text analysis is given that it helps the translator become more familiar with the source text and its elements and by doing so it aids the translator beforehand to solve issues that may arise along the process of translation. The creation of a glossary enabled him to save time, which is a very crucial feature for any translator. He also mentioned how normal dictionaries, synonym dictionaries, and technical dictionaries from English to Spanish and from Spanish to English helped him in the translation process to find the correct term and to gain knowledge and become informed about the topic.

Some other aspects of his conclusions were about the translation methods, the procedures and the impact they have on the translation because they assist the translator to stay away from a literal translation. It also enabled the translator to render clear ideas and an appropriate message. Thanks to all of these features the target audience will be able to understand the texts because the translation procedures allowed the production of an accurate, natural, and communicative target text.

1.4 Scope

At the end of this investigation, there will be two translated documents from English to Spanish and from Spanish to English. Each one of them will have specific sections analyzed by using certain translation procedures in order to explain why the translator decided to transfer the message in that specific way. Some of the limitations that this research and the translating process may encounter are that some of the vocabulary may be very technical and very specific, which can eventually affect overall understanding of the translated document. The biggest challenge is to remain faithful to the original message of the source text but trying to translate it in a way that sounds natural.

This thesis main focus is to analyze the effect of procedure and methods used to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia. This analysis will be done by using several translation procedures. These procedures will be used to find the

most precise representation for the target's language culture, so that the source language meaning is not lost and the main message is understood by the reader.

Chapter II

Theoretical Framework

This chapter's main principle is to define the tools that will be used in the process of translating both documents from English to Spanish and from Spanish to English.

Throughout every section, the reader will learn new definitions and terms that will help them understand the process of analysis and translation of the texts. In addition, the chapter includes information about glossaries, as they are of great importance when transferring meaning from one language to another.

2. Text Analysis

In order to deliver an optimal translation, it is fundamental to know the texts at its fullest. Newmark (1988) explained that it is important during the source-text analysis stage to just read the entire document in order to understand it and to analyze it from a translator's point of view instead of a linguist's one. By doing this it is crucial as well to know the style and intention of the text in order to determine which translating techniques can be useful during the translation process.

2.1.1 Text Styles

There are different types of text styles. In this section the narrative, descriptive, discussion, and dialogue type of text styles, will be described. The first one is the narrative, and its purpose is to entertain, inform or express ideas usually through the process of storytelling. In terms of structure the narrative text is usually has five parts which are composed of an exposition, rising action, climax, falling action and denouement. There are

different narrative subtypes and more structures depending on the complexity of the text like detective or science fiction, memoirs, fables, historical narratives and flashbacks, digressions and multiple perspectives (Phillips, 2017). On the other hand, the descriptive text is meant to describe, as for example what a person or thing is like and to involve senses through imagery of delicate descriptions. The general structure of a descriptive text includes the identification of the object that will later be described for its colors, features and more (British Course, 2017).

In addition to the narrative and descriptive text, there is also the discussion text style. The main purpose of this type of text is to find a common ground between two different opinions, thoughts or ideas. The discussion text will have a problematic discourse, and this will be discussed from different perspectives. This type of writing is generally found in social, philosophical and even historical genres (British Course, 2017). Finally, as part of the previous three types of text there is the dialogue text. This is a technique used by writers to engage two or more characters in conversation with one another. Dialogue text is mainly seen in the genre of fiction, but it can also be found in poetry, non-fiction, drama, amongst others. It helps character development, creates the tone of the narrative, it can create conflict, and in general it makes a literary piece much more enjoyable and interesting (LiteraryDevices Editors, 2014).

2.1.2 Stylistic Scales

When analyzing a text, it is important to recognize different stylistic scales used, this is so because through this the translator can determine the type of text he or she is translating and its intention.

2.1.2.1 Scale of formality

In this section, the scales intimate, casual, consultative, formal, and frozen will be described. The intimate register or scale of formality is a language between close friends, lovers or family, examples of these are the usage of inside jokes where the parties involved have a high level of trust. The casual register is also similar to the intimate one for it is a language between friends with vernacular and loose sentence speech. In contrast to the previous scales of formality, the following registers increase in formality. The consultative one is used in news casts, in work environments between the employee and the employer and it is a less formal standard English. The formal language is commonly used in speeches, in formal meetings, and in school lessons. Finally, the frozen register is a language that never changes like in weddings and events related to the law (Young, 2012).

Moreover, according to Newmark (1988), there are eight types of scales of formality. Taboo being the most informal type and officialese being the most formal one. Newmark provides several examples of phrases that mean the same thing but whose words vary depending on their level of formality. Taboo language is understood to be phrases and words that in certain contexts can be inappropriate. The example provided by Newmark for taboo language is “lay off the fucking nosh”. The usage of the curse word automatically locates the phrase as taboo. Slang language is an informal language that uses specific words that a particular group of people understand; the example given by Newmark is “lay off the nosh.”

The following scale of formality is colloquial language which is a casual and conversational type of communication. The words, expressions and language used is

everyday ordinary language used by common people. The example given in Newmark's book for this type of language is "You can't feed your face here." Going up the scale, following colloquial language is informal language. Informal language is characterized by spontaneous conversations that come naturally in real life. This type of language is used when people know and feel comfortable around each other, and so their way of speaking becomes more relaxed. The example provided by Newmark is "Please don't eat here." This language is still considered informal but not inappropriate for speech or for establishing casual conversation.

Neutral language is the next level in the scale of formality, according to Newmark (1988). This type of language and choice of words does not indicate that the person speaking approves or disapproves of something. "Eating is not allowed here." This is the example provided by Newmark for this type of language; it sounds general and straight to the point. The following type of language is formal. Newmark's example is "You are requested not to consume food in this establishment." This type of language is used in situations where natural language is unsuitable. It calls for the reader's logical side of the brain. Specific choices are made when writing, for the choice in words, attention to grammar and vocabulary is crucial. When formal language is taken to writing no contractions, slang, colloquialism or first-person pronouns are used.

Going up the scale is official language and the example provided by Newmark is "The consumption of nutriments is prohibited." Just by reading the example, an evident change of tone and choice of words is seen. Official language is a language given to a country, state, or jurisdiction. Because of its legal and formal status, it is generally used in legal and formal documents. Finally, the last level in the stylistic scale of formality is officialese

language. Newmark's example is self-explanatory "The consumption of any nutriments whatsoever is categorically prohibited in this establishment." This type of language is meant to impress the reader and increase the authority.

All this level of scales of formality are the different types of texts a translator can encounter in the process of translating a document. It is important to know how to identify which type of formality it is in order to deliver an accurate representation of the text in the target language.

2.1.2.2 Scale of Generality or Difficulty

This scale determines the level of complexity of the documents that will be translated. Simple texts have low difficulty of terminology, popular texts have a now a day's life vocabulary and neutral texts have a balance of complexity and simplicity in its vocabulary. On the other hand, educated language is commonly used in textbooks for educational or instructional purposes. Technical text contains vocabulary that is intended to educate on a particular subject and which is found in manuals or operator manuals, while opaquely technical texts are writings comprehensible only to an expert (Essays, 2013).

According to Newmark (1988) there are six types of generality or difficulty levels. Simple language is at the first level of the scale. An example can be "The floor of the sea is covered with rows of big mountains and deep pits," as the simple language that he uses is straight forward and do not contain complex vocabulary. By using common everyday words, any type of reader is able to understand the message of the text.

Going up the scale is popular language. "The floor of the oceans is covered with great mountain chains and deep trenches" is an example of this scale as the language is still

understandable for the general population, yet it uses more compound words. Following popular language is, neutral language. According to Newmark, this type of language uses basic vocabulary only that is still easy to understand. His example is “A graveyard of animal and plant remains lies buried in the earth’s crust.” All the words are of general knowledge and it is a sentence that the reader can comprehend.

Moving up the scale of generality or difficulty is educated language. Newmark’s example is “The latest step in vertebrate evolution was the tool-making man.” In this example there is a change in tone making it sound more serious and intended for educational purposes, meaning that it is a type of language where facts are mentioned.

Technical language is the following type of language going up the scale. This type of language is meant to be helpful for stating instructions and talking about specific content. Not everyone can grasp the core message of what is being said for the choice of words become more professional. Newmark’s example is “Critical path analysis is an operational research technique used in management.” After reading it, only someone that knows about the topic will be able to clearly understand what is being said.

Finally, according to Newmark, the last level of scale of formality or difficulty is opaquely technical which is only comprehensible to an expert. “Neuraminic acid in the form of its alkali-stable methoxy derivative was first isolated by Klenk from gangliosides” this is the example given by Newmark and after reading the sentence it is evident that only people educated in the topic will be able to understand the statement. This type of text requires a lot of technical research in order to deliver the exact meaning when translating.

2.1.2.3 Scale of Emotional Tone

There are three types of emotional tones which are the intense, factual and understandable tone. The intense emotional tone uses abundant intensifiers like “enormously unsuccessful, heartwarming welcoming, absolutely wonderful.” The factual emotional tone is a little bit cooler and uses words like “considerable, personable, significant.” Finally, the understandable emotional tone is defined by Newmark as cold and the example given is “Not undignified.”

In terms of formality and emotional tone there is an evident correlation for in official style texts the type of emotional tone used is factual, while on emotive texts tend to use slang and colloquialisms. Newmark emphasizes the importance of taking into consideration the impersonality, formality, informality, stiffness and understatement of certain languages in order to deliver a faithful translation (Newmark, 1988).

2.1.3 Text Function

In order to know what types of translating techniques and procedures to use, it is crucial to know the text's function. There are three types and they will be explained to help the translator define in which way to properly transform the text to its target language without losing the essence of the original text's function.

2.1.3.1 Informative

Informative texts core is to state facts, realities, theories and ideas. These types of texts are found in academic papers, textbooks, journalism amongst others. It is a non-fiction type of writing whose intention is to inform the reader about a specific topic. According to Newmark (1988), in terms of translation, texts that are about any topic of knowledge are most of the time informative, while literary subjects are considered to be expressive. For

informative texts, there are certain language features used. It is generally characterized in English by having passives, present and perfect tenses in its writing; it has clear and coherent connections to state mostly facts. It can have certain rhetorical questions to engage the readers interest and specific examples. It has a very literal language, with the use of multi-noun compounds, no metaphors, neutral language.

It has a basic structure that includes an introduction, development and a conclusion. It presents information and defines them. It uses formal language focuses on the main topic and straight to the point. It seeks to be objective and truthful and not beautiful. They also offer data, definitions and descriptions of certain phenomena. They offer knowledge or additional knowledge that augment what people already know (Write Texts, n.d.)

2.1.3.2 Expressive

Expressive writings show feelings and emotions in the mind of the speaker/writer. According to Newmark (1988), there are three types of expressive writings which are serious imaginative literature, authoritative statements and autobiography/essays/personal correspondence. Serious imaginative literature includes lyrical poetry, short stories, novel and plays. The most intimate one is lyrical poetry, for play are meant to be presented to a bigger audience that includes in its language cultural expressions.

The second type of expressive function is authoritative statements. In these types of texts their reliability and linguistic status stems directly from the author. These texts end up having a personal imprint in them because they come from the voice of a specific author. Some examples of authoritative statements are documents, political speeches, legal

documents, philosophical, scientific and academic work written by ministers, party leaders or acknowledge authorities.

Finally, Newmark defines autobiographies, essays and personal correspondence as expressive anytime they are personal effusions and the readers are a distant background. Newmark states the importance of identifying the type of text a translator will translate for expressive text must be translated with naturalness, for a lot of personal dialect, unconventional syntax, strange words, idioms, metaphors and colloquial expressions are used.

2.1.3.3 Vocative

The vocative text's purpose is for the reader to act, feel, think, and react to what he is reading. It is a call for action. According to Newmark (1988), vocative texts have an intimate relationship with the readership. The author addresses the reader in a personal manner by using "you", indicatives, infinitives, imperatives, subjunctives, passives, first and/or family names, tags like "please", and all of these to create a specific type of relationship of equality, power, persuasion, command or request. This type of text is found in propagandas, popular fiction persuasive writings, publicity and instructions. It is a text that it is immediately comprehensible by the audience/reader because its main purpose is to attract the audience into believing or doing what it is being asked for them.

2.1.4 Translation Methods

In this sections, two types of translation methods will be defined. These have been proven to be the most faithful and accurate ways to effectively translate a document for its target language readers.

2.1.4.1 Sematic translation

According to Newmark (1988), a semantic translation focuses mostly on the aesthetic value. It targets more on how beautiful and natural the text sounds while compromising the meaning were necessary so that it sounds better to the target language reader. Newmark also mentions that the semantic translation is likely to translate cultural words to cultural neutral third or functional terms but not for cultural equivalents. This type of translation is more flexible and allows the translator's intuitive empathy to develop the documents translation.

2.1.4.2 Communicative Translation

As stated by Newmark (1988), "It attempts to render the exact contextual meaning of the original in such a way that both content and language are readily acceptable and comprehensible to the readership." Therefore, this method focuses on naturalness and readability. It is appropriate for pragmatic text translations. It gives the translator a freer space to prioritize the message that must be communicated.

Communicative translation is supposed to be smoother, clearer, more direct and conventional. Difficult passages are translated in a more generic manner so that the message from the source language does not suffer a change in meaning in the target language. Its main focus is that the target text will be understood by the target audience. This method is supposed to display the exact contextual meaning as the source language text in such a way that the content, language meaning is not lost in the process.

Newmark (1988) says that semantic and communicative translation are the two methods that fulfil the two main aims of translation, accuracy, and economy. A semantic translation

is more likely to be economical even if at the end the text is poorly written. A communicative translation is focused on the readership while a semantic translation is written at the author's linguistic level. Communicative text is used to translate informative and vocative texts while the semantic translation is used for expressive texts. They both treat items in a text similarly like dead metaphors, technical terms, slang, normal collocations, standard notices, and ordinary language. In expressive texts, cultural components are transferred intact. In informative texts cultural components are transferred and explained with neutral terms and in vocative texts they are replaced by equivalents.

Newmark also states that the communicative translation is social, concentrates on the message and the main force of the text. It tends to be simple, clear, brief, under-translate and is written in a resourceful and natural style, and that is why the translation is often better than it is original. On the contrary, the semantic translation is normally inferior to its original and focuses on following the thought process of the author, it tends to over-translate and aims to reproduce pragmatic impact.

2.2 Translation Procedures

This section of the theoretical framework will describe the types of procedures that will be used to analyze the final translated document. Each procedure will be defined in order to understand how the process of translation works and why sometimes one procedure is chosen over another one in order to enhance meaning and naturalness while still remaining accurate.

2.2.1 Transposition

This method involves a grammar change from the source language to the target language. There are an abundant number of shifts and transpositions that one encounters in the process of translation. An example of this would be a shift in the position of an adjective, for example in Spanish one would say “ojos verdes” which translated into English it would change to “green eyes”.

Another type of transposition is the change from singular to plural for example in “furniture” in English changes to “muebles” in Spanish. English gerunds are often translated in the target text by verb-noun, a noun infinitive, subordinate clauses or infinitives. Another type of transposition occurs when the literal translation is grammatically possible in the target language but does not sound natural; in this case the translator must find alternative translation that will better fit the target reader. According to Newmark (1988), the replacement of a virtual lexical gap by grammatical structure is another important type of transposition. Transposition is the only procedure that deals with grammar. Newmark considers that transposition is a combination of stress and grammar, and that sometimes it is necessary to retain the word order so that the stress in the text is preserved.

2.2.2 Modulation

Modulation has several definitions, one of them was defined by Vinay and Darbelnet (1988) as “A variation through the change of viewpoint, of perspective and very often of category of thought.” Newmark (1988) remarks that “It occurs when the translator reproduces the message of the original text in the TL text in conformity with the current norms of the TL, since the SL and the TL may appear dissimilar in terms of perspective.”

This means that there is a variation of the form of the message, found by a change in the point of view. It takes place when the transposition or literal translation is grammatically correct but does not sound natural.

There are many types of modulations, an example is when there is a change from positive to negative or vice versa. This type of modulation is considered to be Newmark's most important one. An example of this is in English "Summer isn't far away" would change to Spanish as "El Verano se aproxima." The other types of modulation are abstract for concrete, cause for effect, one part for another, reversal of terms, active for passive, space for time, intervals and limits and change of symbols. Newmark also mentions that active for passive and reversal of terms are one of the most common modulations that translators encounter and usually make the language sound more natural.

2.2.3 Omission

According to Newmark (1988), omission is used to omit words or sentences because of different constructions in the two languages. By removing those words, meaning should not change. Changes are barely syntactical yet not grammatical. An example of this is the omission of the auxiliary verb can plus an infinitive. In English the sentence is "This problem can be solved in two days," when translated into Spanish it would change to "Este problema se resuelve en dos días."

Vinay and Darvelnet define omission as the process of dropping a word from the source language while translating. This can happen because of cultural clashes in which the translation has to look for equivalents. If there are no equivalents, the translator may choose to omit the word. They also mention an example which is that Arab translators tend to omit

English taboo words like 'shit' and 'fuck off' (and their variations) for the sake of respecting the Arab culture and readers because these words are generally not tolerated by their culture (Dabelnet, 1958)

2.2.4 Amplification/Expansion

This procedure inserts words or phrases that will help understand better the meaning of the message. This is done by describing and adding additional information that will not alter the original message. In other words, this procedure helps “to neutralise or generalise a SL cultural word by using a description” (Newmark, 1988). An example of this is an amplification of a verb like “to endanger” in English that when translated in Spanish would be “poner en peligro.”

Amplification is also defined as extending a phrase or sentence to further explain, exaggerate certain aspects, emphasize certain points of a definition, argument or description. This additional information is added in order to strengthen an important point in a speech. It helps exaggerate and/or persuade comedic, serious or argumentative intensions. In creative writing when amplification is used it helps draw attention to the most compelling, thought-provoking, vivid sections of the narrative, and really highlights what is important (Literary Terms, 2015).

2.2.5 Explication

This method is similar to amplification for more words are added when terms are unknown in the target language and additional information is necessary to describe and explain the source term better. An example given by Vázquez Ayora (1988) is in English

“to help resolve the basic question of delegation” to Spanish would be “para resolver los problemas básicos de la delegación de poderes.”

2.2.6 Literal translation

This type of translation is known as a word to word translation in a way that does not alter the meaning of the source and target language. “The SL grammatical constructions are converted to their nearest TL equivalents, but the lexical words are again translated by themselves, out of context” (Newmark, 1988). Moreover, literal translation renders a translation of a text from one language to another one word at a time without focusing on conveying the real meaning and message of the original text. This type of translation is sometimes used for more technical, scientific, legal and technological texts. It tends to sound stiff and it becomes harder for the reader to understand the meaning of the text.

Structural literal translations are a type of literal translation where the structure, word order, punctuation and exact phrasing is maintained from the source language. This are often hard to find in a text because they generally do not necessarily result in grammatically wrong phrases; they produce correct phrases but with a hard to understand meaning. To exemplify how inaccurate literal translation can sometimes be is when translating idioms. If idioms were translated or had to mandatorily be translated in a literal manner, they would make no sense at all in the target language. An example of this is the expression in Spanish “póngase las pilas” literally translated word to word in English would be “Put your batteries on” but whose real meaning is “Work hard”. Literal translations generally occur in small sections of a translation process that makes sense in the target language text (RWS, 2018).

2.2.7 Changes in Punctuation

Punctuation is vital in the process of translation in order to attract and keep the reader's attention. Correct punctuation shows where boundaries are meant to be to help the fluidity while reading the text (1988). Being able to correctly punctuate helps deliver the correct meaning, tone and intention of the source language text. Therefore, it is important for a translator to focus on the punctuation of both, the source and target text, because they can change the meaning of the original text. The translator must also revise and check the punctuation of the source text to understand by context what the real meaning is that the author is trying to convey. An example of this is if the source text in English says "today we will learn how to cut kids" but by context the translator is able to understand that the message is not to cut kids but to show the children how to cut. The Translator must correct the source language text to "today we will learn how to cut, kids" for if this was not corrected it would be translated in Spanish as "hoy aprenderemos a cortar a los niños" instead of being "hoy aprenderemos a cortar, niños." Punctuation must be taken into microscopic analysis in both documents during the translation process because they can also change the original meaning.

2.3 Glossaries

During any translation process, discovery of new words and question of what their meaning in that specific context will arise; therefore, it is important to have a glossary from each original text in Spanish and English. This will help the process of translation to be faster and more accurate, plus as an additional benefit it will help the translator gain knowledge on new words and their meaning. According to the encyclopedia online a glossary is a list of terms in a specific subject accompanied by definitions and explanations.

It is generally located at the end of any book and this is because they are words that pertain to that specific and particular subject. (Encyclopedia.com, n.d)

Glossaries are different from dictionaries because dictionaries are more general collections of words while glossaries have terms that enhance the comprehension of a specific topic. The term glossary is derived from the Greek word glossa which originally identified a body part, the tongue. It later changed to signify a word that was foreign, either to define what it means in another language or what it technically means. These specific types of words are called jargon. They are specific to that topic or subject. They can also include photographs to intensify and further explain its meaning. (Study, NA) They help the reader understand key terms, phrases, detailed concepts, describes abbreviation and more.

Every term must be defined at its fullest in order to help the reader understand what a phrase and term exactly means. It must have solid information that is relevant and benefitting to the reader. The creation and keeping up to date a glossary of words, phrases, and terms helps remove ambiguity for translators. This guarantees that each time a key term appears, it is used consistently and correctly.

Translations should be created before any process of translation. This will save time, reduce errors, ensure consistency and provide peace to both the translator and the client that the document translated will be done according to the agreed guidelines. Glossaries should be specific and contain key terms that are relevant in the documents. They should include abbreviations, acronyms, terms that should not be translated, and repetitive words that are key to the understanding of the document (TML, n.d.)

For this dissertation paper, two glossaries will be created with the most emblematic words that are essential in each document that must be translated. Words will be grouped alphabetically in an ascending mode from A-Z and specific definitions will be located next to each word in order to help the translation process to be smoother.

Chapter III

Methodological Framework

Every section of this chapter including the research approach, research design, information sources, analysis categories, data collection instruments, and collection data process and data analysis will help to develop each objective on this study on a deeper level by explaining the documents nature and the way they will be analyzed.

3.1 Research Approach

In order to develop this topic, it is necessary to understand three different types of research approaches that can be used during an investigation. Those three approaches are quantitative, qualitative, and mixed. Depending on the topic and the type of dissertation paper, one, two or more approaches can be used; but in the case of this study, focused on translation, it is most likely that the qualitative approach will be the most suitable.

3.1.1 Quantitative Approach

The first type of research approach is the quantitative approach. This approach is defined as results through numbers. It is focused on collecting information and data in order to explain it to people or to explain a specific situation (Babbie, 2010). According to Franzo (2011), the quantitative research is used to generate numerical data or usable statistics by quantifying the problem. Through it, behaviors, attitudes, opinions and other defined variables will be able to create numerical results.

The quantitative research generally uses deductive logic; this means that the researcher has to come up with a hypothesis, and they must collect data in order to conclude if the

hypothesis does indeed exist. When analyzing quantitative information, the variables will be in the form of numbers. Variables are ways to measure any characteristic that can have two or more possible values and that varies. These variables must be measurable in order to predict, control and explain a specific phenomenon (Leedy, 1993). Moreover, its main goal is to demonstrate the relationship between two things, an independent and dependent variable. There can be two types of quantitative research, descriptive, subjects are only measured once, and experimental, subjects must be evaluated before and after the treatment (Babbie, 2010). The hypothesis in a quantitative research is highly specific for it is focused “on describing a phenomenon across a larger number of participants thereby providing the possibility of summarizing characteristics across groups or relationships” and it is reported in the form of graphs, tables and numerical values (Rhodes, 2014).

3.1.2 Qualitative Approach

The qualitative research is an investigation of a phenomenon in a deep comprehensive manner, meaning that it describes on a deeper level a topic. It provides understanding on a very profound way of the topic and its effectiveness depends on the researcher’s knowledge, investigation techniques and sources (M.H.P.Sinaga, 2014). Qualitative investigation is also known to be exploratory for researchers use it to help develop hypothesis and ideas that could potentially become quantitative research.

It is mainly used to learn more about fundamental motivations, opinions and ideas. The way of collecting information is considered to be less structured because it can be done through focus groups, interviews, open ended questions and observations; and the sample size is generally small in comparison to the quantitative approach. This approach is meant

to uncover trends in opinions and thoughts and investigate much deeper a problem or the topic proposed (deFranzo, 2011). When working on a qualitative research, most of the time, a small number of participants are involved. This type of investigation requires a lot of time and resources and it cannot be generalized to the whole population like in the case of the quantitative research. As a result, qualitative research ends up helping as gathered theory of a topic that has been analyzed to its deepest form and that can be used as a basis for quantitative studies in specific situations (Rhodes, 2014).

3.1.3 Mixed Approach

Mixed method research may have one or more hypotheses which are a mixture of qualitative and quantitative questions. Its aim is to ask something of what is learned when combining quantitative and qualitative data or it may be about how the mixed approach help the research. This type of approach depends on relational language. According to Techopedia, relational language is a programming language in which data and entities work amongst each other to compute a result. (Techopedia, NA) The types of words and phrases used in the mixed method approach are generally integration, better understanding, comprehensive, connection, fuller understanding, and synergistic. (Leavy, 2017)

Given the definitions of quantitative, qualitative and mixed research, it is evident that the qualitative approach it is indeed the method that fits this investigation the most, and hence it will be used to analyze and develop the objectives stated on Chapter I. The reason for this is that this project is focused on pure investigation of values unrelated to numbers. It is focused on theories of analyzing translations and not on gathering numerical

information. The final product will be only evaluated by specific individuals and it does not have to be proven amongst a part of the population, hence it is a qualitative approach.

3. Research Design

The research design used in this dissertation paper is the phenomenological one. Phenomenology is the study of structures of consciousness as experienced from the first-person point of view. In other words, the study of appearances of things (Stanford Encyclopedia of Philosophy, 2013). Phenomenological studies can be sometimes difficult for the researcher because there is some sort of connection or stake in the situation at hand, and therefore setting aside all personal or prejudgments is necessary in the process. When translating a similar behavior occurs, since it was confided in the translator the task of helping an institution or person out by changing into another language the same message of the original text. This is why specific tools, methods, and procedures will be used to analyze the documents that must be translated so that there is less margin of error and a high level of accuracy in the final result.

3.2 Information Sources

There are three different types of sources that can be used in any type of study. Those types of sources are primary, secondary, and tertiary sources they depend on their proximity to the source of origin. Nowadays because of the easy access to technology, most sources for any investigation can be found in the Internet. They help the researcher develop any project that they are working in. It is important to know if the foundations used to find any particular information are trustworthy or not, in order to deliver a dissertation that has credibility and that it has reliable information as a backup.

3.3.1 Primary Sources of Information

Primary sources are those whose information was provided and created by the first recorders or witnesses of events that occurred. These types of documents include diaries, reports, photographs, letters, memos, financial records, creative works, and newspaper articles amongst many others. Other types of primary sources are “first-hand accounts that were documented later” some examples are memoirs, autobiographies, and oral histories. It is important to highlight that the best primary sources are those that were produced closest to the time period that is being searched.

Primary sources for literature type of works would include writings, speeches, and other direct communications from the author of the work being studied. These types of sources are important because they are an unfiltered window into the past that helps the investigators have a closer access to a specific time period, way of living and thinking.

(Alderman, 2014)

3.3.2 Secondary Sources of Information

Secondary sources, are information that was written by people who did not participate nor were witnesses of the events that happened. The importance of secondary sources is that they explain new and different perspectives, ideas, and positions of the primary sources. Some examples of documents that are considered secondary sources are encyclopedias, scholarly books and articles. In order to guarantee that the information from the secondary source is updated, it is important to look at the source and analyze what other people and studies have said about that specific topic. (The Board of Trustees at the University of Illinois, 2006).

3.3.3 Tertiary Sources of Information

Tertiary sources are sources that compile other sources. Some material is considered tertiary when it lists, simplifies, and summarizes other books ideas and information. These types of tertiary sources are not credited to a particular author. Some examples are almanacs, chronologies, fact books, guidebooks, manual, and directories (Comparative Literature: Primary, secondary & tertiary sources, 2019)

For this dissertation paper, the main sources that have been used so far are secondary and tertiary. Secondary sources have been used in the form of books and digital online information. The textbook by Peter Newmark, investigations about translation and procedures of translation from booklets have been used to deliver translations that are accurate and natural. The only tertiary source that was used throughout this investigation was professor Luis Diego Marin's PowerPoint presentation that he delivered during a Translation II course where he explained and summarized translation's history.

3.3 Analysis Categories

Given that this is a qualitative dissertation paper, in this section the following variables will be discussed and explained.

3.4.1 Translation

Translation refers to written information and it is the communication of meaning from one source language to another language, the target language. Translation has been around for centuries and it started ever after the appearance of written literature. Nowadays, organizations around the world rely on translators to help them translate documents, labels

documentation, promotional material and more while conveying the original and message, by taking cultural and regional differences into account while translating into the target language. Because of sophisticated tools and technology, modern day translators have better access to software tools that helps them deliver much more work done in less time.

3.4.2 Translation Methods and Procedures

In order to deliver well written translated documents translation methods and procedures are necessary as well. Translation methods are the different types of ways that a document can be translated. Newmark, divided them into two mayor sections, translation method with the source language as the emphasis, word-for-word, literal, faithful and semantic translation, and translation method with the target language as the emphasis, adaptation, free, idiomatic and communicative translation. They all try to remain faithful to the document but the mayor difference between all of them is how much permitted change in words or context can be allowed. On the other hand, translation procedures are used for sentences and smaller units of language while translation methods are focused on the message of the whole text. Translation procedures depend on a variety of contextual and grammatical factors. (Newmark, 1988)

3.4.3 Glossaries

Glossaries are the final variable that will be used for this paper. They are highly important for translators because by the words chosen the translator can have a general idea of the type of technical complexity or context the text may have. In also helps to have a quicker understanding of words that are not as common for the reader.

3.4. Data Collection Instruments

Data collection is the process of gathering information that will enable the previous stated research questions to be answered. The importance of this is that the instruments that will be used to collect information will guarantee the integrity of the research. By having appropriate data collection instruments and clear instructions will reduce the possibility of errors in the process (Essays UK, 2017).

3.5.1 Text Analysis Chart

In order to deliver natural and accurate translations in any target language, the usage of text analysis instruments is a helpful tool in the process. The following text helps the translator to analyze deeply both texts from English to Spanish and from Spanish to English. The chart that will be used to analyze the text will be described below in terms of criteria and format.

The text analysis chart will be composed of seven rows and three columns. The size and font will be 12 and Times New Roman. The first row, column number one, contains the name Text analysis. Still on row one, columns two and three, the names of the documents that will be translated will be placed in bold letters, starting with “Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales” and “The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer’s Nuevos Estudios Sencillos.”

On the second row, first column, the name “Text style” will be written in bold and blank spaces will be left on column two and three, for them to be filled with either argumentative, dialogue, narrative or descriptive, argumentative, or dialogue. These choices will depend on the characteristics that each text contains. On the third row the name “Text

Function” will appear in bold and black spaces on the left, columns two and three, will be left for them to be filled with either, vocative which tries to make the reader react towards the text, expressive if the texts is faithful to the author’s thoughts or informative if it only states facts.

On the fourth row the words “Stylistic Scale” will be written on the first column and on the blank spaces next to it the type of stylistic scale found in the text must be mentioned. Under the word “Stylistic Scale”, the word “formality” will be written in bold letters and next to it the blank spaces will be filled with either oficialese, official, formal, neutral, informal, colloquial, slang and/or taboo.

Under the word “formality” the words “generality or difficulty” will be written, and in the blank spaces next to it, row six, columns one and two, it will be filled with the corresponding types like simple, popular, neutral, educated, technical and opaquely technical. Finally, on the last row, the word “Emotional Tone” will be written in bold and in columns two and three depending on each text words like intensive, warm and factual will be written.

	Trabajo de Investigación	The Value of the
	Aprendizaje Significativo	Pedagogical Repertoire
Text Analysis	Implementado en las	for Guitar: Leo Brouwer’s
	Asignaturas de Ciencias	Nuevos Estudios Sencillos
	Naturales y Estudios Sociales	
Text style		

Text Function**Stylistic Scale****Formality****Generality or
difficulty****Emotional Tone**

Table 1 Text Analysis chart. Source: Researcher's own creation

3.5.2 Color-coding

Another instrument that will be used during the translation process and that is necessary in order to analyze the text is color coding. This procedure will be used to analyze fifteen selected paragraphs from each document and every single one of the seven procedures mentioned in Chapter II must be used to analyze each translated text. The seven colors that will be used are green, blue, yellow, red, orange, pink, purple for the following translation procedures respectively transposition, modulation, omission, amplification, explicitation and literal translation. When analyzing the selected fifth teen paragraphs from each document, the color-coding process will help to explain and understand the choices made.

Transposition
Modulation
Omission

Amplification
Explicitation
Literal Translation
Changes in punctuation

Table 2 Color coding procedures. Source: Researcher’s own creation

3.5.3 Glossaries

The final instrument that will be used is the glossary. This is an essential part in any translation process given that new words will be used throughout the document. Two bilingual glossaries, one for the Spanish words and the other for the English words. This will be designed as followed. The table will be 30 rows by four columns. The header of the table, row 1, will have the name “Source Language”, column 1, “Grammatical Category”, column 2, “Target Language”, column 3 and “Short Definition”, column 4. They will all be written in bold and the color of the header will be gray. Starting from row 2, column 1, the words or word pairs chosen will be listed and organized alphabetically.

Source Language	Grammatical Category	Target Language	Short Definition
1.			
2.			
3.			

Table 3 Glossary chart. Source: Researcher’s own creation

3.5 Collection Data Process and Data Analysis

As previously stated in each instrument, the data collection process will be gathered through the usage of three instruments being text analysis, color coding translation procedures and by the usage of a glossary. By having the text analysis, the translator will have a deeper understanding of the type of text they are working with. The translator must have a complete understanding of the topic, the possible people that may read the document, the age-range of the people and the main purpose of the work itself. All of this is necessary so that the translation remains faithful to the original message. Once a translator has truly and deeply analyzed the text it will become easier for him to make his own interpretation and assumptions of what it is being said.

The usage of color coding helps both the translator and the reader to learn what procedures were used in order to have a natural and accurate translation. The importance of color coding is that it breaks the language barrier, so it is easier for people to associate colors with a specific meaning. It helps recognize patterns and it also enhances meaning. In this investigation this will be helpful while analyzing the fifteen paragraphs of each document.

Finally, the glossary is a tool that helps acquire vocabulary and facilitate communication between the translator, author and reader in the process of reading the document and understanding its meaning. By having all of these as tools to collect data, it will make the analyzing process of the texts much easier.

The process of translation is meant to last one month. Half of the month will be focused on translating the document from English to Spanish and the other half of the month on

translating the document from Spanish to English. The glossary is planned to be done a week before starting translating. The process will be divided into sections, meaning the glossary and complete sections of the text will be translated four times a week and sent to the tutor in order to be revised and corrected.

Chapter IV Translations

4.1 Translation from English to Spanish

La importancia del repertorio pedagógico para la guitarra: Nuevos Estudios Sencillos de

Leo Brouwer

Daniel Rojas Salgado

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Resumen

En las últimas décadas, la contribución de Leo Brouwer ha sido significativa para el repertorio de guitarra. En 2001, Leo Brouwer compuso sus Nuevos Estudios Sencillos, y aportó aún más a la pedagogía de la guitarra.

Este artículo analiza la importancia de los estudios para guitarra por medio del análisis y mención de uno de los trabajos interpretados en guitarra Heitor Villa-Lobos 12 Etudes for Guitar.

Asimismo, este trabajo se enfoca en el estudio de la historia de la guitarra cubana desde sus inicios, seguido por la carrera de Brouwer como artista, compositor y pedagogo. El último capítulo separa los estudios en dos secciones principales; las dificultades técnicas e importancia musical para una mejor comprensión y el entendimiento de la filosofía pedagógica de Brouwer.

Introducción

Esta investigación se basa en un interés personal general en varios tipos de estilos musicales, tal como el jazz y la música popular latinoamericana como, por ejemplo: boleros, milongas, sambas y música folk. A pesar de que la música latina forma parte del repertorio estándar de guitarra clásica, esta muchas veces no se toma lo suficientemente en serio. Este punto de vista se basa en el hecho de que no existen muchas obras extensas importantes escritas para guitarra fuera de esa cultura musical. Asimismo, la música latina requiere conocimientos y habilidades desconocidas para tocarse con autenticidad.

Al participar en la grabación de un CD con un cuarteto de guitarra costarricense, se obtuvo la experiencia completa. El CD llamado *Paisajes* fue lanzado en enero de 2015 e incluye obras de guitarra de música de cámara contemporánea de Cuba, Brasil, Chile, Colombia y Costa Rica. Desde entonces, el objetivo personal del sustentante ha sido explorar más la música y los desafíos técnicos de la herencia cultural.

Por mucho tiempo, el compositor, director de orquesta y guitarrista cubano Leo Brouwer ha sido uno de los compositores favoritos de guitarra. Brouwer escribió veinte estudios titulados *Simple Studies* entre 1960 y 1981. La mayoría son parte del repertorio para principiantes y son muy conocidos entre los estudiantes de guitarra. Como guitarrista, el sustentante ha interpretado muchos trabajos del repertorio para solos de guitarra de Leo Brouwer, tales como *Elogio de la Danza*, *Hika: In Memoriam Toru Takemitsu* y *Simple Studies*. Además, obras de música de cámara como: *Toccata*, *Paisaje Cubano Con Rumba*, *Paisaje Cubano con lluvia* y *Acerca del cielo, el aire y la sonrisa*. Cuando Brouwer lanzó sus diez nuevos estudios, *Nuevos Estudios Sencillos*, en 2003, estos inmediatamente llamaron la atención; por lo tanto, se convirtieron en el punto focal de esta tesis.

Capítulo 1: La importancia de los estudios para los guitarristas

A lo largo de la historia de la música occidental, las composiciones presentan a los estudios como una categoría importante para cada uno de los diferentes tipos de instrumentos. Muy a menudo, el objetivo principal es desarrollar y moldear las habilidades técnicas de un instrumento solista a través de una breve composición y por lo general, solo se hace énfasis en una dificultad en particular. Grandes composiciones como *Etudes op.10* de Frédéric Chopin y los estudios obligatorios de piano de Czerny, son buenos ejemplos de obras que inspiraron a muchos artistas durante el siglo XIX y prepararon el camino para un eventual desarrollo musical.

La guitarra clásica no fue la excepción. En 1815, el guitarrista español Fernando Sor, considerado por muchos como uno de los compositores más importantes de guitarra, publicó sus *12 Etudes, Op.6*. Asimismo, muchos otros compositores importantes como Mauro Giuliani (1781-1829), Giulio Regondi (1822-1872) y el guitarrista español Francisco Tárrega (1852-1909) crearon importantes estudios para el repertorio de guitarra.

Sin embargo, se le dará un mayor énfasis a los estudios del conocido compositor brasileño, quien también era guitarrista y le dedicó sus estudios a Andrés Segovia a principios del siglo XX. La serie consta de doce estudios avanzados, los cuales, sin duda, son uno de los estudios más interpretados en conciertos, grabaciones y competencias.

Heitor Villa-Lobos nació el 5 de marzo de 1887 en Río de Janeiro. Su padre, quien era bibliotecario y un gran aficionado a la música le enseñó. A finales del siglo, Villa-Lobos se convirtió en un músico profesional, quien se ganaba la vida como un músico en cafés. Él tocaba el violonchelo. Pese a que nunca estudió en una institución formal de música, Villa-Lobos se convirtió en el compositor latinoamericano más conocido y significativo hasta la fecha. Escribió numerosas obras orquestales, de cámara, instrumentales y trabajos vocales. Su música se vio influida por la música folclórica brasileña y por elementos estilísticos de tradiciones clásicas europeas, tal como se ejemplifica en sus *Bachianas Brasileiras* (Piezas brasileñas Bachian en recuerdo de Bach).

Se estima que estos estudios se compusieron en 1929. Andrés Segovia inspiró casi toda la música de guitarra de Villa-Lobos, luego de que se conocieran y se hicieran amigos cercanos a principios de los años veinte en España. Tamara Elena Livingston-Isenhour y Thomas George Caracas García realizaron una comparación entre los estudios de Villa-Lobos y Chopin:

“Hasta cierto punto, sus trabajos de guitarra rinden homenaje a Chopin, los cuales claramente fueron los estudios modelo que Villa-Lobos utilizó en sus trabajos de guitarra. Estos son estudios de concierto, tal como los estudios de Chopin, fueron creados para recitales y conciertos, sin limitarlos a ser considerados meramente estudios pedagógicos. Los estudios de Villa-Lobos, conscientes o subconscientes,

representan un esfuerzo para legitimar la guitarra como un instrumento de concierto y la educación de la guitarra al mismo nivel del piano.”

El estudio número uno evoca asociaciones a un Preludio, a pesar que el manuscrito de 1928 no contiene ningún subtítulo técnico. Sin embargo, debido a su similitud con Prelude no.1 en Do mayor del Well-Tempered Clavier, el patrón de arpegio constante y la admiración de Villa-Lobos por la música de Bach, le recuerda al oyente un Preludio. Este estudio es un trabajo requerido en el repertorio de un estudiante, debido a la utilización de la mano derecha, dado que posee un arpegio fijo durante todo el estudio (Figura 1) y Villa-Lobos proporciona digitaciones para realizarse con la mano izquierda para casi todos los acordes. Por tanto, esto les permite a los guitarristas enfocarse y desarrollar su técnica con la mano derecha a través de un viaje musical de enriquecidas armonías.

A un nivel muy avanzado, Villa-Lobos compuso el estudio número dos; el cual se enfoca no solo en arpegios, como lo hizo el estudio número uno, ya que contiene muchos desafíos para ambas manos. A diferencia del estudio número uno, adquirir una buena digitación para ambas manos es un requisito básico para los guitarristas que quieren alcanzar agilidad y destreza en su trabajo. Si no fuera por las repeticiones de barras en muchas medidas, esto se consideraría un pequeño estudio de solo veintisiete medidas. Además, el estudio requiere diferentes técnicas para la mano izquierda, tales como medias barras y ligaciones complejas, todo lo cual exige muchas habilidades del estudiante.

Es necesario saber que las ligaciones son una técnica fundamental en guitarra. Villa-Lobos compuso el estudio número tres basado en ligaciones ascendentes y descendentes. Los estudios número 9 y 10 son de suma importancia, dado que poseen pasajes significativos para practicar las ligaciones (Figura 2), las cuales son desafiantes. Ni

Carcassi, ni Giuliani, ni Regondi lograron crear un estudio que se enfocara en ligaciones musicales, tal como lo hizo Villa-Lobos.

Al parecer durante la vida de Villa-Lobos, muchos guitarristas famosos como Segovia, no pudieron tocar el estudio número tres satisfactoriamente, ya que no se pueden encontrar grabaciones de dicho estudio. Incluso hoy, sigue siendo un estudio muy difícil de ligaciones donde se incluyen cinco diferentes variaciones, combinaciones de dedos y barras fijas. Por lo tanto, el estudio número tres ha sido acertadamente nombrado parte de los estudios con un mayor nivel de dificultad.

El estudio número siete de Villa-Lobos es una de las contribuciones más importantes para la literatura de guitarra. Escalas, voz principal, acordes y trinos demuestran su diversidad en menos de tres minutos. Su lirismo y sus patrones rítmicos despiertan el estudio y lo hacen trascender más allá de lo que exige su función técnica. Cabe recalcar que el estudio número siete es una pieza comúnmente requerida en audiciones, concursos y conciertos debido a su alto nivel de virtuosismo.

Los estudios número once y doce deben encontrarse entre los estudios de conciertos. En su libro *The guitar in the Latin-American Music [La Guitarra en la Música Latinoamericana]* Néstor Guerdin indica que el estudio número once “tiene un sabor a Macumba y Batuque y que este estudio es el más africano de todos”.

Dicho estudio desarrolla una melodía en el bajo con acordes rotos percusivos-tímbricos y otros efectos idiomáticos a la guitarra. Existe un gran contraste entre el canto brasileño, como los coros, y la ornamentación ligeramente impresionista que imita un arpa. El último estudio es una de las obras más revolucionarias escritas por Villa-Lobos. Este posee un intenso movimiento para la mano izquierda a través del diapasón. Asimismo, presenta una simple estructura de A - B - A, dado que la indicación *Un peu plus animé* requiere que el

artista finalice vívida y rápidamente una hermosa sección que concluye el viaje musical de uno de estos importantes estudios de la guitarra clásica.

En conclusión, el enfoque armónico de Villa-Lobos en sus estudios está claro y bien elaborado. El compositor brasileño no utiliza firmas de clave planas para proporcionar digitaciones más fáciles para las manos, pero maximiza el empleo de todo el diapasón con la otra mano.

Debido a su extensa lista de obras y sus cualidades musicales, Villa-Lobos es considerado el compositor latinoamericano más importante de la primera mitad del siglo XX. Tal como un puente entre la música de guitarra del pasado y el futuro, sus doce estudios, *Five Preludes* y su concierto de guitarra son considerados como el pilar del repertorio de la guitarra clásica.

El pedagogo de guitarra Abel Carlevaro (virtuoso artista, compositor de guitarra clásica y maestro nacido en Montevideo, Uruguay en 1916. Estableció una nueva escuela de técnicas de instrumentos e incorporó un nuevo enfoque al sentarse y tocar guitarra, con base en los principios anatómicos) señaló que Villa-Lobos contribuyó en gran medida al mundo de la guitarra clásica, debido a que estableció la guitarra moderna, a través de nuevas y extensas posibilidades musicales y técnicas, mejorando así el repertorio para dicho instrumento. A través del tiempo, otros guitarristas compusieron varios repertorios para guitarra, tales como Andrés Segovia, Angelo Gilardino y Leo Brouwer.

Capítulo 2: El legado de Leo Brouwer para los guitarristas

La historia de la guitarra en Cuba comenzó con la conquista española y continuó durante la Colonia, desde el siglo XVI hasta el siglo XIX. Sin embargo, en el siglo XX, el guitarrista cubano Severino López introduce la guitarra clásica en la isla. Él estudió en España con el guitarrista Miguel Llobet, quien era alumno de la escuela de Tárrega. Clara

Romero (1888-1951) fue otra guitarrista importante. Ella fundó la moderna Escuela Cubana de Guitarra. Estudió en España con Nicolás Prats y en Cuba con Félix Guerrero. Asimismo, inauguró el Departamento de guitarra en el Conservatorio Municipal de La Habana en 1931. Su discípulo más importante fue su hijo, Isaac Nicola (1916-1997), quien estudió en París con Emilio Pujol y también fue discípulo de Francisco Tárrega.

Después de la Revolución Cubana de 1959, Nicola, junto con otros maestros y guitarristas importantes, establecieron la base para un sistema didáctico integral de guitarra. Esta escuela cubana formó importantes guitarristas y compositores, dado que muchos de los estudiantes de Nicola se convirtieron en guitarristas relevantes en la historia cubana; como por ejemplo Jesús Ortega, Marta Cuervo y Leo Brouwer. Probablemente, el alumno más importante es Leo Brouwer, un revolucionario de la escuela de la guitarra cubana debido a sus contribuciones a la técnica y repertorio para guitarra.

2.1 Brouwer como artista

El guitarrista, director y compositor Leo Brouwer, nació el 1 de marzo de 1939 en La Habana, Cuba. Sus primeros pasos con la guitarra comenzaron a una edad muy temprana. Su padre, quien era médico y guitarrista aficionado con gran interés en la música de Villa-Lobos, Tárrega y otros, lo introdujo en la guitarra. De 1953 a 1955 comenzó sus estudios formales de guitarra con Isaac Nicola, quien acercó a Brouwer por primera vez a la música renacentista y barroca. Influida por su experiencia al observar a Nicola interpretando obras importantes, Brouwer obtuvo una mejor comprensión de la música. A los 17 años, dio sus primeras interpretaciones con un repertorio seleccionado, el cual su profesor ordenó cronológicamente.

Ganó importancia rápidamente como solista en la escena de la guitarra, y, por lo tanto, participó en muchos festivales en Europa del Este como resultado de la relación entre Cuba

y la Unión Soviética. Grabó para Deutsche Grammophon, RCA y ERATO.

Desafortunadamente, décadas después, Brouwer tuvo que terminar su carrera como solista, debido a una lesión en uno de sus dedos derechos mientras él se encontraba de gira.

“A finales de los 70, fui a Nueva York para tocar en la famosa sala "Y"; serie de conciertos "Grandes Virtuosity" (Segovia, Yepes, Lagoya y yo). Tuve un accidente en un dedo (mano derecha). Me quedé en la casa de M. Barrueco, quien me ayudó sin éxito, así que cambié en una noche una técnica de veinte años, al tocar con tres dedos".

Como director, Brouwer dirigió muchas orquestas, como la Filarmónica de Berlín, La Sinfónica de La Habana y de Córdoba en España (fue director de esta orquesta de 1992 a 2001). Hoy, Brouwer participa activamente en simposios, conferencias y festivales de guitarra y a menudo viaja a países latinoamericanos y Europa.

Entre las primeras composiciones de Brouwer se encuentran obras como: *Suite no.2 en Re Mayor* (1955), *Pieza sin título* y *Preludio*, ambos compuestos en 1956, los cuales principalmente presentan elementos folklóricos cubanos. Brouwer es autodidacta en composición, armonía y contrapunto, continúa componiendo para guitarra solista, otros instrumentos y música de cámara. De acuerdo con Kronenberg, entre las obras más importantes de esta época, se encuentra *el Fuga No.1* (1957),"... la cual es una obra contrapuntística multifacética para tres voces, sostenida igualmente por contornos rítmicos de origen africano". Asimismo, *Tres Apuntes*, compuesta en 1959, fue su solo de guitarra más desarrollado en ese momento. Pocos años después, ya como un artista más maduro, pero con poca educación formal en composición estudia en Juilliard School of Music (1959–60). Compuso *Elogio de la danza* (1964), la cual fue la culminación de su "misión para estructurar un trabajo más riguroso", según Brouwer.

La musicóloga Victoria Eli Rodríguez clasificó las composiciones de Brouwer en tres Fases diferentes: la primera, nacionalista (1955–62); la segunda, de vanguardia (1962–67); y la tercera, en el cual los elementos de vanguardia disminuyen, particularmente después de 1980, surge un proceso creativo descrito por el compositor como "nueva simplicidad".

Durante la década de 1960, Brouwer se involucra en otras instituciones cubanas, tales como cinemas y fue nombrado director del ICAIC (Instituto Cubano del Arte e Industria Cinematográficos). Como jefe del Grupo de Experimentación Sonora en ICAIC, creado en 1969, dirigió y enseñó a músicos cubanos como Silvio Rodríguez y Pablo Milanés. Estos finalmente fundaron el movimiento en la música cubana conocido como Nueva Trova, el cual reavivó la música cubana que comenzó desde sus propias raíces.

Aparte de enseñar, Brouwer asistió a muchos festivales en ciudades europeas como Darmstadt, Venecia, Zagreb, Berlín, Varsovia y Colonia; participó en el Festival de Otoño de Música en Varsovia en 1961. Esto representó un gran estímulo para la segunda fase compositiva de Brouwer. Los estrenos musicales y las actuaciones de compositores internacionales de vanguardia como Stockhausen, Penderecki, Nono y Henze tuvieron un tremendo impacto en Brouwer. Después de su regreso del Festival, compuso obras de vanguardia como Sonograma I para piano preparado (1963), así como obras para la guitarra como Canticum (1968), La espiral eterna (1970), Per Suonare a due (1972), Parabola (1973-74) y Tarantos (1973-74). En estas composiciones, Brouwer incorporó técnicas compositivas europeas y modeladas, como por ejemplo duraciones de notas imprecisas y fue influido por otros campos (como el trabajo artístico de Paul Klee o Kandinsky).

La tercera y actual etapa compositiva de Brouwer surgió a partir de la necesidad de volver a sus raíces, como una forma de relajación después de muchos años de música de vanguardia. Sobre esto, Brouwer declaró:

"Cada vez fui más abstracto y hermético. No podía comunicarme, y esto, para mí, es fundamental. Fue como volver a casa. Suavicé un poco mi estilo, quizás con algo de simplicidad [...]. Mi nuevo estilo forma parte de un movimiento general hacia la simplicidad, basado en la música de nuestros países."

Según Brouwer, su última etapa compositiva presenta elementos de la música popular, clásica y de vanguardia, y culmina en lo que él define como "Nueva Simplicidad". La intención de Brouwer es enriquecer el repertorio para guitarra a través de trabajos extensos en formas tradicionales, tales como sonatas o variaciones. Generalmente, todas estas obras están dedicadas a guitarristas relevantes de todo el mundo. Algunas obras significativas de esta etapa son *El Decamerón Negro*, compuesta en 1981 para un solo de guitarra, la cual fue dedicada a la guitarrista Sharon Isbin. Él le dedicó su primera sonata de guitarra al guitarrista británico Julian Bream en 1990 y es comúnmente interpretada por muchos guitarristas. Después de la muerte del compositor japonés Toru Takemitsu, Brouwer le rindió homenaje en su composición *Hika: In Memoriam Toru Takemitsu* (1996). Brouwer comenta:

"...amado por mí y uno de los más maduros, cuya música se ha tocado últimamente y que parece haber motivado a algunos grandes guitarristas: [*Hika*] *In Memoriam Takemitsu*. Takemitsu, uno de los genios del siglo XX, quien fue un gran amigo cuyo talento no puedo dejar de admirar".

Los conciertos para guitarra más importantes de Brouwer son *Concerto Elegiaco* (1986), *Concerto de Toronto* (1990) y *Concerto de Bolos* (1997). Además, entre las obras más recientes de Brouwer se pueden encontrar tres sonatas de guitarra: *Sonata del Caminante* (dedicada a Odair Assad) compuesta en 2007, *Sonata del Decamerón Negro* (dedicada a

Costas Cotsiolis) compuesta en 2012, y *Sonata del Pensador* (dedicada a Ricardo Gallén) compuesta en 2013. Asimismo, sus composiciones han adquirido un alto valor pedagógico.

2.2 Brouwer como un pedagogo

Brouwer ha escrito más de cien trabajos tales como artículos y ensayos para conferencias de música o notas para CD. La mayoría de estos siguen siendo desconocidos para muchos guitarristas. Su conocimiento sobre obras de autores como Umberto Eco, Fernando Ortiz y Alejo Carpentier, demuestra su educación integral.

Por esta razón, él ha publicado algunos escritos pedagógicos; por ejemplo, un documento basado en la ornamentación barroca denominado “Basic Ornamentation in Early Music-Renaissance e Esercizi per la double barocca (Ornamentación Básica en Música Antigua -Renaissance e Esercizi per la double barocca) y un método de estudio, titulado “Scales For Guitar, A Study Method” (Escalas para Guitarra, un método de estudio) el cual publicó en colaboración con importantes guitarristas pedagogos en 1992.

El libro *Gajes del Oficio* impreso en 2006 es una compilación de los artículos de Brouwer, los cuales escribió entre 1964 y 2003. Estos han sido publicados para simposios, revistas y conferencias musicales. La última sección de este libro *Sobre la técnica guitarrística* presenta las reflexiones de Brouwer sobre los problemas más comunes en el área las técnicas de la guitarra moderna. (Ver apéndice)

2.2.1 Reflexiones pedagógicas

La percepción de Brouwer sobre las capacidades técnicas y limitaciones de la guitarra se ve afectada en gran medida por sus estudios bajo la tutela de Isaac Nicola y sus experiencias como artista de conciertos por más de tres décadas. Además, se inspiró en otros instrumentos y estilos musicales, como el laúd y el flamenco, los cuales ampliaron el alcance de las posibilidades en el timbre de la guitarra.

Además, Brouwer busca un estudio más efectivo y se enfoca en problemas principales durante el proceso de aprendizaje. Una concienciación continua durante el tiempo de práctica es fundamental para resolver problemas técnicos. Por ejemplo, un hábito común de los guitarristas es repetir pasajes difíciles muchas veces, mientras se cometen errores repetidamente. En tal caso, se pierden muchas horas de práctica, sin mencionar que se debe dedicar mucho tiempo en corregir errores que se han convirtieron en parte de la memoria muscular. Brouwer afirma que los pasajes solo pueden corregirse si se encuentra tanto el problema como la solución. Él asegura que “Los errores están principalmente en el mismo lugar y por la misma razón. Por lo tanto, es importante detectarlos lo antes posible y comenzar a corregirlos”.

Brouwer rechaza la práctica de rutina, tal como las escalas monótonas, dado a que menudo pueden tocarse de forma apresurada. La fuerte dependencia del uso del metrónomo limita las posibilidades para componentes musicales como dinámica, forma y tiempo musical; incluso, una persona puede pasar por alto fácilmente el movimiento de las manos y de los dedos que son esenciales para la economía del movimiento.

Con respecto de la práctica de técnica a menudo descuidada, Brouwer comenta "... las ligaciones de la mano izquierda generalmente se hacen sin la presión adecuada, contrario a lo que se piensa, y generalmente se excede ". Un malentendido común del vibrato es:

"El guitarrista vibra pensando en la belleza, lo cual es un error (trata de hacer vibrar cada nota del Preludio No.3 Villa-Lobos y te estarás engañando a ti mismo). El vibrato no es belleza, es intensidad. El vibrato lento es generalmente utilizado en notas grandes o pasajes tranquilos ".

La práctica de los elementos musicales a menudo se pasa por alto. Frecuentemente, el objetivo principal de los guitarristas es el desarrollo del *legato* en la guitarra y prestan poca

atención a otras articulaciones como al staccato, *tenuto*, etc., las cuales, según Brouwer, son los secretos de una buena interpretación. Brouwer recomienda integrar las intenciones musicales en la práctica personal; por ejemplo, cantar internamente mientras se toca, para así dar forma a la dirección de la melodía.

El compositor cubano también critica la falta de indicaciones musicales y referencias en el repertorio de guitarra, dado que posee un efecto negativo en la interpretación en general. Por lo tanto, "cuando se interpreta a Giuliani, uno debe escuchar a Rossini y a sus contemporáneos, o al interpretar a Scarlatti, uno debe escuchar la versión original en piano-forte". Según el guitarrista español, José María Gallardo del Rey, el guitarrista promedio dedica poco tiempo y esfuerzo en tener una educación musical completa. La mayor parte del tiempo se dedican solo a la guitarra, tal vez debido a su lugar especial dentro del mundo de la música. En general, hay poco conocimiento de las obras de orquesta, por ello muchos directores critican a los guitarristas. Brouwer, por lo tanto, alienta a los estudiantes de guitarra a ser creativos y a aplicar nuevas técnicas e ideas musicales en sus interpretaciones. En sus palabras, "el artista no es artista porque fue a una escuela de artes. Sí, se gradúa, pero luego ¿qué hace? "

Finalmente, Brouwer compara la planificación de un concierto de guitarrista con un evento deportivo. Si un trabajo causa un gran problema, este debe excluirse del repertorio y, por circunstancias, debe retomarse nuevamente en otro momento. Por supuesto, es importante mantener el repertorio anterior. Las piezas antiguas que se estudian a lo largo de los años, generalmente se pasan por alto y son subestimadas; dado que los estudiantes se enfocan en un nuevo repertorio para cumplir con sus requisitos de grado o para prepararse para alguna competencia.

Brouwer recomienda interpretar según los límites de la persona. Si un guitarrista usa al 80% de sus habilidades en velocidad o dinámica, aún quedará algo para después y el rendimiento será más preciso. Uno solo debe utilizar el 100% de sus habilidades en puntos climáticos.

En las últimas décadas, Leo Brouwer ha jugado un papel clave en el cambio generacional que se dio en el mundo de la guitarra clásica. Él comenzó a componer debido al poco repertorio que existía en su tiempo, sin saber cuán pedagógicamente valiosas serían sus obras en el futuro.

2.2.2. Repertorio pedagógico

La contribución de Brouwer a la pedagogía de la guitarra se originó después de darse cuenta del vacío existente en cuanto al repertorio de guitarra en comparación con el de otros instrumentos. En 1960 y 1961, Brouwer compuso las dos primeras series de sus *Estudios Simples*, las cuales fueron seguidas por las series III y IV (1981) después de un largo período de reflexión y madurez.

"Entonces comencé a aprender el llamado gran repertorio, y en cierto momento, en los años 50 me percaté de que había muchas lagunas" (Mckenna 1988) "Mientras Brahms escribe dos conciertos para piano, Chopin otros dos, y Beethoven cinco, la guitarra, con algunas excepciones, no ofrece una base sólida ante dichos instrumentos colosales como el piano, el violín o el violonchelo". (Betancourt 1998)

Los primeros diez estudios son considerablemente más cortos, están diseñados para estudiantes principiantes y presentan ritmos afrocubanos. Estos sirven como una introducción a la música contemporánea. Todos interpretan en las dos primeras posiciones en la guitarra. Ninguno de estos diez estudios muestra alguna indicación metronómica, lo

que les permite más libertad a los estudiantes, así como menos tentación de tocar rápido, lo cual es un hábito común entre principiantes.

Las últimas dos series están dirigidas a estudiantes más avanzados. Su longitud es mayor en comparación con los primeros diez estudios. Además de las indicaciones de tempo, dinámica y articulación, parte de las grandes demandas técnicas de estas series son las escalas, pasajes rápidos, ligaciones musicales dobles, etc.

Brouwer no solo pretendía proporcionar estudios accesibles para principiantes, sino también proporcionar material desafiante. Asimismo, los estudios de Brouwer se centran en problemas singulares y aíslan asuntos diversos de la guitarra. Según el guitarrista David Tanenbaum, los *Estudios Simples* de Brouwer son adecuados para la programación de conciertos y tienen una posición importante en el repertorio de guitarra.

El legado de los antiguos estudios de Leo Brouwer representa un avance significativo del instrumento. A principios del siglo XX, la guitarra no tenía un gran repertorio, lo cual resultó en el hecho que la técnica de guitarra no fuese lo suficientemente explorada.

Brouwer remarcó:

“No teníamos un quinteto de Brahms para guitarra, no teníamos L'Histoire du Soldat de Stravinsky, no teníamos música de cámara de Hindemith, no teníamos ninguna sonata de Bartók. Entonces, como era joven, ambicioso y loco, me dije que, si Bartók no escribía sonatas, tal vez yo podría hacerlo”.

De esta manera, Brouwer creó composiciones que trataban con desafíos técnicos básicos para guitarristas, los cuales han enriquecido el repertorio de guitarra hasta hoy. Después de toda esta producción musical, el compositor pensó que esto no era suficiente. Por lo tanto, compuso una nueva serie de diez estudios en 2001, titulados Nuevos Estudios Sencillos, que presentaron características similares a la serie anterior.

Capítulo 3: Nuevo repertorio para guitarristas: Nuevos Estudios Sencillos

En el 2001, veinte años después de las series III y IV, Leo Brouwer compuso sus Nuevos Estudios Sencillos. El trabajo compositivo y pedagógico realizado por Brouwer durante este período se refleja en el enfoque que utilizó para crear esta nueva colección. Esta pedagogía es el resultado de sus propios procesos creativos. En consecuencia, al analizar los Nuevos Estudios Sencillos, la persona se introduce al lenguaje musical maduro.

3.1. Diferencias con los estudios simples

Sus antiguos estudios simples son una colección de veinte piezas compuestas para mejorar las diferentes habilidades técnicas de un estudiante, las cuales se escribieron en dos etapas diferentes: series I-II en 1960 y 1961 y la serie III-IV en 1981 (cada uno de ellos contiene cinco estudios). Todos los estudios se reunieron en una sola colección, hoy denominada Estudios Sencillos. Estos no solo se han utilizado en Cuba, sino que son valioso material pedagógico a nivel mundial. Asimismo, se puede decir que los Nuevos Estudios Sencillos son una colección única de diez estudios organizados de manera diferente en términos de dificultad, musicalidad, antecedentes, y como recurso pedagógico para estudiantes y profesores. Debido a la publicación relativamente reciente de los Nuevos Estudios Sencillos y el bien merecido estado de los antiguos Estudios Simples, la nueva colección aún no se ha establecido como material para desarrollar la técnica en currícula académicos de guitarra.

La organización se encuentra entre las diferencias más significativas de los Estudios simples y los Nuevos Estudios Sencillos. Brouwer lo hizo aludiendo a cada uno de ellos a compositores específicos, de ahí la descripción Omaggio (palabra italiana para homenaje o tributo), y propuso sugerencias de presentación al final de cada ejercicio. Los Estudios Simples de la serie I-II no ofrecen ninguna guía explicativa y las series III-IV solo

proporcionan breves especificaciones en el subtítulo de cada estudio. Sin embargo, los Nuevos Estudios Sencillos representan la idea de Brouwer sobre cómo abordar una nueva pieza: obtener una visión general de los antecedentes musicales de la obra y las dificultades técnicas que el intérprete posiblemente podría encontrar durante una presentación. Thiago Emanuel observó más de cerca los Nuevos Estudios Sencillos de Brouwer y comentó lo siguiente sobre las contribuciones pedagógicas que encontró en el trabajo:

“La presencia en el puntaje de un texto más claro sobre los objetivos y contenidos (técnicos y expresivos) de cada estudio, les permiten a los estudiantes conocer con mayor claridad las competencias que deben alcanzar”.

La Tabla 2 ejemplifica la diferencia mencionada con respecto de las indicaciones técnicas existentes en tres estudios diferentes, tomados de los Estudios Simples (series I y III) y de Los Nuevos Estudios Sencillos. Todos ellos compuestos para el pulgar derecho.

Los Estudios Simples de Brouwer desarrollan muchas habilidades técnicas requeridas para cualquier guitarrista intermedio o avanzado. En dichos estudios, estudiantes y profesores pueden encontrar esos estudios arpegios, acordes, ligaciones (tanto simples como dobles), adornos, cruce de cuerdas, trémolo, legato, así como estudios polifónicos, afrocaribeños y patrones rítmicos irregulares. Los Nuevos Estudios Sencillos siguen el mismo camino con casi todos los elementos anteriores (excepto por las dobles ligaciones dobles y ejercicios de adorno). Además, la nueva colección incluye otras técnicas utilizadas en la guitarra, como rasgueado (término utilizado para describir la técnica de rasguear las cuerdas de la guitarra en una dirección hacia abajo o hacia arriba con el pulgar u otros dedos de la mano derecha.) (Estudio II y VII), notas simples repetidas (Estudio VII), armónicos (Estudio VIII) y scordatura (un término utilizado con mayor frecuencia en relación con los instrumentos de cuerda arqueados y punteados, especialmente laúdes y

violines, para denotar una afinación en la que una o más cuerdas tienen un tono diferente al normal.) (Estudio IX, caída F de la sexta cuerda como una opción alternativa). Los estudios a escala están excluidos de ambas colecciones. Sin embargo, Leo Brouwer y Paolo Paolini escribieron un método de escala en 1992, *Scale per chitarra, metodologia dello studio* (Ediciones Ricordi), que compensa la ausencia de las escalas en las obras pedagógicas de Brouwer.

Ambas colecciones compuestas por Leo Brouwer representan desafío técnico y musical para cualquier guitarrista. Ninguno de ellos está organizado según su dificultad progresiva o cualquier otro criterio pedagógico. Algunas excepciones aparecen en Estudios simples (series III y IV), dado que agrupan estudios de doble ligaciones XIII y XIV y estudios de adornos XVI, XVII y XVIII juntos. En general, los Estudios Simples de la serie I - II y los Nuevos Estudios Sencillos tienen una dificultad intermedia, y la serie de estudios simples III - IV explora técnicas más difíciles e inusuales (dobles ligaciones en los estudios XIII y XVI, adornos complejos en los estudios XVI, XVII y XVIII, así como patrones de notación aleatoria con secciones de ligadura intrincadas en el estudio XX).

Los Nuevos Estudios Sencillos presentan el mismo tipo de orden. Brouwer solo especifica en el apéndice del estudio I que está diseñado para estudiantes principiantes. Las tres diferentes etapas de composición de la colección representan una fase artística diferente en la vida de Brouwer. En 1961, él era un joven compositor y alumno de Isaac Nicola; en 1981, Brouwer se encontraba al final de su carrera como solista virtuoso y el 2001 describe el período del compositor maduro y pedagogo.

3.2. Valor pedagógico

Tal como se mencionó anteriormente, los Nuevos Estudios Sencillos son una obra pedagógica poco explorada, creada por el compositor Leo Brouwer. Al comparar las características musicales de los estudios simples, su lenguaje contrasta en la forma en que cada estudio presenta el material de los diferentes compositores a quienes él les rinde homenaje. Los desafíos técnicos y musicales de los estudios preparan al estudiante para futuras presentaciones de las mejores obras de Leo Brouwer. El siguiente análisis de los Nuevos Estudios Sencillos demuestra su valor pedagógico para los estudiantes y los profesores de guitarra. Desde una perspectiva musicológica, los estudios ya han sido explorados en investigaciones anteriores y en curso.

3.2.1. Desafíos técnicos

Todos los diez estudios encontrados en los Nuevos Estudios Sencillos presentan diversos retos que los estudiantes y los maestros de guitarra deben considerar al leer cada calificación. De esta manera, Leo Brouwer insiste en que los guitarristas deben tener suficiente preparación como para manejar elementos musicales esenciales, aparte del período, estilo o compositor.

Articulación

Brouwer claramente especifica el tipo de articulación que desea ejecutar en cada estudio. Todos los estudios presentan al menos un tipo de articulación, la cual se puede clasificar en legato, marcato, staccato y tenuto. El estudiante puede encontrar esas indicaciones en forma escrita (debajo del equipo de música), en su notación gráfica estándar o como una descripción técnica al final de cada estudio. A veces se utilizan diferentes tipos de articulaciones simultáneamente en combinación. Por ejemplo, la sección rítmica del estudio V combina legato, marcato y staccato, tal como se muestra en la Figura 3.

Figura 3: Articulaciones combinadas en una sola medida, estudio V (m. 25, rítmico)

En algunos casos, un estudio presenta un tipo de articulación dominante con pequeñas apariencias de otro tipo para crear énfasis y contraste. Como se especifica en su apéndice, el estudio I contiene un estilo legato y Brouwer inserta una articulación de marcato en las cuentas aisladas 4/8, creando un desequilibrio en medio de las medidas 12/8. De esta manera, el compositor genera un carácter a largo plazo con algunas métricas yuxtapuestas.

Figura 4: Ejemplo de articulación a largo plazo, estudio I (mm. 1-6)

Control dinámico

Asimismo, Brouwer explora varias posibilidades dinámicas en la guitarra. Este enfoque es característico de sus obras más importantes y en su material pedagógico. Respecto del primer movimiento de Brouwer, *Elogio de la Danza*, Bogdan Vasile Focsaneau remarca:

“Motivos primarios o partes constituyentes, elementos armónicos, dinámicas, marcas de tempo y técnicas instrumentales funcionan como marcadores para analizar unidades de nivel de superficie, que luego se interpretan en el contexto de la frase”.

Las indicaciones dinámicas se pueden encontrar en los Nuevos Estudios Sencillos como texto expresivo o notación musical gráfica. Estas van desde *ppp* como la indicación dinámica más baja (estudio I) hasta *f molto* y *ff* utilizados para acentos (estudios X y II, respectivamente). Además, Brouwer utiliza dinámica para efectos a corto y largo plazo, los cuales se indican como *subitos*, ondulados dinámicas, secciones largas con *crescendos* y *diminuendos* y textos expresivos dinámicos como *perderosi* (palabra italiana para “perder”). Esos contrastes dinámicos ayudan a los estudiantes a controlar su energía y su ritmo durante la ejecución de cada estudio, especialmente en la mano derecha. Un ejemplo representativo de estos desafíos se puede encontrar en el estudio IV (ver Figura 5).

Figura 5: Contraste dinámico a corto y largo plazo, Estudio IV (mm. 1-12)

Desafíos técnicos específicos

Adicionalmente, Brouwer exige muchos desafíos técnicos específicos en cada uno de los Nuevos Estudios Sencillos. Algunas de dichas habilidades no se abordaron en los Estudios Simples, tales como el *legato* de la melodía de la voz superior, notas repetidas a la derecha, armónicos naturales y rasgueados. Apéndices autoexplicativos para cada estudio y la claridad de notación sobre la puntuación son dos características que le ayudan a los estudiantes a tener una mejor orientación mientras aprenden los estudios. En comparación con la colección de estudios anteriores, los Nuevos Estudios Sencillos agregan la complejidad de algunas de las técnicas exploradas previamente. Por ejemplo, el estudio VIII prepara al alumno a realizar barras parciales con la mano izquierda, tal como en el estudio IV de Estudios Simples. Sin embargo, el estudio VIII de *Omaggio a Villa-Lobos* utiliza tres notas de acordes y cambios de barra del segundo al cuarto y quinto puesto, mientras que al estudio IV anterior presenta solo barras de dos notas en primera y segunda posición. Esta diferencia en dificultad está claramente representada en la Figura 6.

Figura 6: Estudios Simples IV y Estudio de Nuevos Estudios Sencillos VIII.

Los estudiantes y los maestros pueden encontrar una cantidad importante de desafíos técnicos de coordinación en los nuevos Estudios Sencillos, ya sea para una mano específica o para ambas manos:

- Técnicas para la mano izquierda: ligaciones y barras de mano izquierda.
- Técnicas para la mano derecha: color de tono y cambio de timbre, rasgueado, combinaciones de dedos con alteraciones específicas, ejercicios para los dedos, arpeggios, notas repetidas y trémolo.
- Técnicas para ambas manos: *legato* en melodía de voz alta y armónicos.

Una característica importante de dichos estudios es que la mayoría combina al menos dos habilidades de técnicas diferentes. Algunos de los estudios requieren mejorar una técnica previa para manejarlos más fácilmente. En la Tabla 3, se clasifican de una sola habilidad (1) siendo la más baja (estudio VI), al cinco (5) siendo las habilidades técnicas más altas requeridas (estudio II). Ya que esta información no es suficiente para determinar la dificultad de cada pieza, un análisis detallado también debe considerar otros aspectos, tales como la cantidad de desafíos técnicos diversos, marcas de tempo (incluso la cantidad de indicaciones de tempo, velocidad y carácter que estas especifican), duración de la pieza y otras características musicales relacionadas con la composición específica del estudio.

Tabla 3: Desafíos técnicos específicos presentados en los nuevos Estudios Sencillos (por número de estudio).

3.2.2. Significado musical

Además de presentar técnicas básicas para guitarra, los Nuevos Estudios Sencillos tienen un significado musical. La filosofía pedagógica de Leo Brouwer se representa como simples estudios, centrándose en un tema en específico a lo largo del estudio. Además, contiene referencias musicales sobre otros compositores, por lo que Brouwer incluye sus nombres en el título de cada estudio y utiliza material idiomático específico de sus obras.

Cada colección refleja ideas creativas que Brouwer utilizaba en sus composiciones en ese momento. Como Ariza mencionó:

Algunos elementos de los Estudios Simples son muy similares a otros trabajos de la época (1959 - 1981), fundamentalmente *El Decamerón Negro* (1981) y *Preludios Epigramáticos* (1981). (...) Sin embargo, los *Nuevos Estudios Sencillos* son una reinterpretación o reelaboración de algunas de sus obras de concierto.

El estudio V (Omaggio a Tárrega), por ejemplo, tiene una sorprendente similitud con la temática del material de El Decameron Negro. Los pasajes del estudio X (Omaggio a Stravinsky) recuerdan trabajos anteriores, tal como el estudio XX de sus *Estudios simples* (serie IV). En ambos trabajos Brouwer utiliza dos técnicas de composición: la primera, minimalistas y progresivas fórmulas de ligaciones, y segundo, la repetición de ligaciones *ad libitum*. La notación utilizada en cada estudio es diferente. (Ver Figura 7) *Paisaje Cubano con Lluvia* (1985), para el cuarteto de guitarra, cada guitarrista juega con las ligaciones para recrear una metáfora de la tormenta que se avecina (Ver Figura 8).

Figure 7: 1) Estudios simples XX, 2) Estudio X, apéndice, Nuevos Estudios Sencillos.

Figure 8: Ligaciones usadas en *Paisaje Cubano con Lluvia* (extracto, sección F)

Muchas de las piezas de Brouwer combinan estilos serios compositivos con ritmos folclóricos. Los ritmos cubanos son una característica importante de sus obras. Isabel Hernández comenta:

"¿Quién se atreve a decir que hay música popular y música seria, una es para las masas y otra para las minorías, o que la música de concierto es música elitista [...]?" -aseguró Brouwer.

Londoño en su análisis de los Nuevos Estudios Sencillos demuestra la importancia de la clave cubana como elemento rítmico presentado en el estudio III. El estudio V, su sección rítmica, tiene dos elementos fundamentales de la música cubana, clave y cáscara. Estos ritmos son contrastantes, pero complementarios en la sección de este estudio. La figura 9 muestra el ejemplo de un patrón básico de 2-3 claves y cáscara, usado en el extracto del Omaggio de Tárrega realizado por Brouwer, donde se sintetizan dichos elementos rítmicos.

Figure 9: Síntesis de los Nuevos Estudios Sencillos, Estudio V (m. 25).

Otros ritmos latinoamericanos (Danza Paraguaya y Tango) se representan en los estudios II y VII. Tal como lo demostró Londoño, Brouwer utiliza algunos de esos motivos rítmicos, como un tributo a dos compositores latinoamericanos, Agustín Barrios Mangoré y Astor Piazzolla. Aquí, como a lo largo de su carrera, Brouwer les da el crédito a otros músicos de la herencia musical de América Latina.

Además de Barrios y Piazzolla, otros compositores importantes son mencionados en los *Nuevos Estudios Sencillos*. Sus nombres aparecen en el subtítulo del estudio respectivo y las características compositivas idiomáticas se pueden reconocer en todo momento.

Si se, por ejemplo, compara la sección *Poco meno* del estudio VIII (*Omaggio a Villa Lobos*) con el Estudio VII, (sección *Moins*) de Heitor Villa-Lobos, puede verse un tratamiento textural similar. Ambos extractos muestran una textura de tres partes muy clara (melodía de voz alta, acompañamiento de arpegio y bajo en ritmos fuertes).

Figura 10: Estudio VII de Villa-Lobos y estudio VIII de Brouwer.

Un paralelo similar se puede observar en el estudio X. Este hace referencia a la obra de Igor Stravinsky, *Rito de primavera*, segundo movimiento (*Danzas de las chicas jóvenes*). Aquí, Brouwer utiliza los acordes *obstinato* agresivos y ligaciones rápidas del ballet. Las figuras 11 y 12 ilustran la correlación de los dos trabajos en las secciones A, B y C.

Figura 11: *Rito de primavera* de Igor Stravinsky - Baile de las chicas jóvenes (extractos)

Figure 12: Nuevos Estudios Sencillos (Study X, mm. 13 – 18, 30 – 32). (pasajes)

3.3. Sugerencias prácticas

En general, es relevante que los estudiantes sigan las indicaciones técnicas y musicales descritas. Aunque las indicaciones de tiempo se consideran importantes para el compositor,

el tiempo depende de los objetivos específicos y las necesidades expresivas de los estudiantes. Brouwer remarca que:

El tiempo debe ser relativo a las necesidades y al desarrollo del alumno. No puede ser tan lento que no se pueda cantar, o tan rápido que no se pueda articular claramente. (...) Solo una recomendación: sigue la intuición de tus sentidos y pulsaciones. Los dedos son sabios.

Considerando los requisitos técnicos y musicales de la nueva colección de estudio de Brouwer algunas sugerencias prácticas se describen a continuación. Estas siguen la filosofía de Brouwer en cuanto a identificar y resolver problemas mientras se estudia una nueva pieza.

Estudio I - *Ommagio a Debussy*

Tempo: Tempo di Giga (Comodo): un tiempo cómodo (ver tempo sugerido en el apéndice del estudio).

Sugerencias:

1. Ligaciones: practique ligaciones ascendentes y descendentes con cuerdas abiertas y dedo 2 o 3 colocados en la (tercera cadena). El pulgar derecho debe ser fuerte al puntear para lograr el *marcato*.
2. Arpeggio: antes de leer el estudio practique el arpeggio derecho *p, i, m* con cuerdas abiertas. Asegúrese de que el patrón rítmico sea uniforme. Adicionalmente, el pulgar de la mano derecha debe puntear la cuerda un poco más fuerte que el resto de los dedos, para que la melodía en el bajo sea más fuerte que el acompañamiento. Practique la dinámica del arpeggio.

Estudio II - Ommagio a Mangoré

Tempo: *Vivace* - en referencia a los bailes paraguayos (aproximadamente 170 BPM por cuarto de nota).

Sugerencias:

1. Ligaciones: practique las ligaciones ascendentes, dedos 1 y 4, y ligaciones descendentes, dedo 3

y la cuerda abierta (cuarta cuerda). Las ligaciones se deben tocar con el pulgar derecho.

Aunque las ligaciones solo aparecen en las medidas 2, 4, 29 y 31, son importantes para la estructura polifónica de la frase en la que ocurren.

2. Color de tono: el estudio tiene dos secciones contrastantes, con forma A (mm. 1 - 11) - B (mm. 12-27) - A (mm. 28-40). Las secciones A se deben tocar con un color de tono de la mano derecha entre *natural* y *metálico* (cerca del puente) de la guitarra. Por el contrario, la Sección B se debe tocar *dolce* (por encima del sonido del hoyo de la guitarra y cerca de los trastes).

3. Alternación del dedo de la mano derecha: Brouwer especifica en el apéndice del estudio que alternación del dedo de la mano derecha se debe practicar en forma aislada al estudio.

Así, se pueden considerar estudios complementarios, tal como el estudio de Mauro Giuliani, 17 de sus 120 estudios para la mano derecha. (Figura 13)

Figura 13: Estudio no.17 (Mauro Giuliani 120 Estudios para la mano derecha)

4. Legato y alternación de la mano derecha: el Legato en la sección B debe lograrse mediante cambios precisos en la mano izquierda en cada medida. La mano derecha debe acentuar la melodía (tocada con *a* o *m*). El índice debe ser la nota más débil. La proporción de intensidad entre los dedos de la mano derecha debe permanecer uniforme cuando se cambia la dinámica general.

Estudio III - Ommagio a Caturla

Tempo: Moderato assai: consulte la sugerencia del tiempo marcado.

Sugerencias:

1. Dinámica y color de tono: los estudiantes deben seguir la dinámica como de onda reguladora (incluso si comienza desde *pianissimo*). La indicación *come eco* debe tocarse como un *pianissimo* poco metálico (cerca del puente).
2. Patrón rítmico del pulgar: este estudio se enfoca en el pulgar derecho. La línea de bajo lleva la melodía, en un ritmo afrocubano (derivado de la clave y tumbao cubanos). Por lo tanto, el pulgar debe producir un tono *cantabile*, pero, con una noción rítmica precisa. Este estudio es una introducción a otros trabajos complejos con influencias afrocubanas.

Estudio IV - Homenaje a Prokofiev

Tiempo: *Vivace* - cuarto de nota c. 170-190 BPM. Ligeramente menos - corchea c. 220 - 240 BPM.

Sugerencias:

1. Dinámica y tono de color: el estudio se divide en tres secciones, *Vivace - Poco meno - Vivace*. Para ambas secciones de *Vivace*, se sugiere utilizar un color de tono normal con la mano derecha. La parte de *Poco Meno* se debe tocar al sonido del hoyo, cerca de los trastes.
2. Articulación del pulgar: el pulgar derecho debe moverse en forma independiente del acompañamiento. Una sugerencia para lograr el *staccato* es preparar el pulgar para la siguiente nota (en la cuarta cuerda) inmediatamente después de tocar la nota anterior.

Estudio V - Ommagio a Tárrega

Tempo: *Comodo* - cuarto de nota c. 70 - 85 BPM.

Sugerencias:

1. Trémolo: comparado con el estudio III de Brouwer (Estudios Simples, serie I), *Ommagio a Tárrega* es una introducción más fácil al trémolo. Se recomienda practicar primero el estudio V para mejorar la técnica del trémolo de la mano derecha. Además, el trémolo del estudio V también puede tocarse por *p, m, i*.

2. Sección Rítmica: la mano derecha debe dar énfasis a las notas que toca el pulgar (ya que lleva el patrón rítmico afrocubano descrito en 3.2.2). Por lo tanto, todas las articulaciones escritas por Brouwer deben seguirse en orden para lograr el efecto deseado. La digitación para la mano derecha se ilustra en la figura 14 (el símbolo [p] indica la preparación del pulgar como se menciona en el estudio IV).

Figura 14: Digitación con la mano derecha en el estudio V, sección Rítmica, m. 25.

(extracto)

Estudio VI - Ommagio a Sor

Tempo: *Tempo libero*: consulte la sugerencia del tiempo marcado

Sugerencias:

1. Arpegio: este estudio puede extenderse a cuatro fórmulas diferentes para la mano derecha, siguiendo las sugerencias del apéndice. De esta manera, los estudiantes pueden practicar arpegios básicos con tres y cuatro dedos, mientras manejan el tempo y dinámica al mismo tiempo. Las fórmulas se resumen en la Figura 15 (patrón del arpegio 4 que no se especifica en la partitura). El pulgar derecho debe puntear más fuerte que los otros dedos.

Figura 15: Fórmulas de la mano derecha para el estudio VI, m. 1. (extracto)

Estudio VII - Ommagio a Piazzolla

Tempo: *Allegro*: consulte la sugerencia de tempo en la partitura.

Sugerencias:

1. Notas repetidas y la articulación de la mano derecha: las notas repetidas tocadas con *i* y *m* deben practicarse tanto con movimientos libres como con descansos. De esta manera, los estudiantes desarrollarán fuerza, velocidad y precisión como preparación para las escalas.

Adicionalmente, el *staccato* debe tocarse cuidadosamente, silenciando la cuerda con la mano derecha cuando sea necesario. Por ejemplo, los dedos *i* y *m* en las medidas 5 - 6, 32 y 40.

2. Ligado: la sección B y las medidas 36 a 39 se centran en los ligados descendentes. Se recomienda estudiar esta sección a ritmo lento para mejorar el sonido de las notas arrastradas.

Estudio VIII - Ommagio a Villa-Lobos

Tempo: *Tranquilo* y *Mosso*: consulte la sugerencia de tempo de la partitura. *Poco meno*: cuarto de nota c. 90-100 BPM.

Sugerencias:

1. Armónicos: los estudiantes deben tocar la cuerda con su mano derecha entre el agujero de sonido y el puente, para producir un tono claro mientras se toca de forma natural las armonías en trastes VII y XII.

2. Media barra: los estudiantes deben relajar su dedo índice entre turnos de las medias barras. Los otros dedos necesitan guiar el movimiento de la mano izquierda para reducir la tensión, el dedo número uno tiene que moverse lo menos posible para alcanzar eficientemente la siguiente media barra.

3. Legato: en la sección *Poco meno*, los estudiantes deben coordinar movimientos entre las manos para evitar cualquier interrupción de la línea melódica superior. Los acompañamientos siempre deben ser tocado de una forma más tranquila en comparación con la melodía.

Estudio IX - Ommagio a Szymanowski

Tempo: *Lento assai* - cuarto de nota entre 50 - 55 BPM.

Sugerencias:

1. Melodía *legato*: los estudiantes deben ser conscientes de la necesidad del *legato* cuando usan la media barra dentro de una frase musical. El ejercicio para el dedo izquierdo número 1 es para hacer un cambio preciso entre su posición de media barra en el primer traste y en la posición de la nota C (segunda cuerda, primer traste). Además, ayuda a estudiar los movimientos de la mano izquierda despacio para mantener la melodía del *legato*. En la sección B, *canta il basso* es una expresión italiana que significa "canta el bajo". En otras palabras, la línea de bajo debe sonar como solista. De nuevo, el pulgar derecho debe tocarse más fuerte que el acompañamiento, mientras se sigue la dirección de cada frase (especificada con la dinámica ondulatoria).
2. *Scordatura*: soltar la sexta cuerda a F es opcional. Puede servir como una introducción simple a la *scordatura* en la guitarra. Esta característica solo es necesaria en las medidas 9-10, pero ayuda a mantener el *legato* con una digitación fácil para la mano izquierda (como se sugiere en la Figura 16).

Figura 16: Digitación sugerida de la mano izquierda en el estudio IX (m. 8-10)

Estudio X - Ommagio a Stravinsky

Tempo: *Toccata* - cuarto de nota entre 115 - 130 BPM.

Sugerencias:

1. Ligaciones: el estudio X se centra en las ligaciones y se considera algo complementario al estudio XX de Brouwer (Estudios simples, serie IV). Debe estudiarse a tiempo lento con un aumento de velocidad progresiva. La pieza puede ser rítmicamente organizada en cuatro patrones diferentes, tal como se ilustra en la Figura 17. Se recomienda identificarlos y cantarlos (con los acentos) antes de tocar los patrones en la guitarra.

Figura 17: Patrones rítmicos en el estudio X (mm. 4 - 12, 16 - 23, 27 - 29 y final)

2. Articulaciones del pulgar: la preparación del pulgar debe practicarse en cuentas de 1 - 3, 13 - 15 y 24 - 26. Los estudiantes deben seguir las mismas sugerencias descritas en el Estudio IV - *Omaggio a Prokofiev*.

3. Rasgado: los acordes acentuados en las medidas 1 - 3, 13 - 15 y 24 - 26 pueden tocarse punteando las cuerdas con los dedos de la mano derecha *p, i, m, a*. Este ejercicio desarrollará fuerza en todos los dedos. Para producir un mayor *marcato* en los acordes, los estudiantes también deben practicarlos *rasgueando*.

Conclusión

Tal como para cualquier instrumento, los estudios de guitarra son importantes para desarrollar habilidades técnicas y musicales. Los estudios de guitarra de Carcassi, Aguado, Sor y Villa-Lobos y los de Brouwer pertenecen a los estudios más importantes para dicho instrumento.

A lo largo de esta investigación se ha demostrado que los Nuevos Estudios Sencillos de Brouwer poseen gran valor pedagógico para el repertorio de guitarra. Los desafíos técnicos y musicales ayudan a resolver problemas básicos en la guitarra mientras se refieren a otros compositores. Se pueden realizar más investigaciones sobre la categorización y los arreglos de los estudios con respecto de su dificultad y compositor o estilo al que se refieren.

Debido a que se ha publicado poco sobre el tema, este estudio es una importante contribución a la pedagogía de la guitarra. Además de proporcionar una mejor comprensión de los Nuevos Estudios Sencillos en particular, este documento también provee una idea de la pedagogía y da luz sobre sus otros trabajos. El tiempo dirá si van a existir más estudios en un futuro cercano.

4.2 Translation from Spanish to English

Universidad de Costa Rica

ESCUELA DE ORIENTACIÓN Y EDUCACIÓN ESPECIAL PSICOPEDAGÓGICA
DEL ADOLESCENTE

RESEARCH WORK

SIGNIFICANT LEARNING IMPLEMENTED TO THE SUBJECTS OF NATURAL
SCIENCES AND SOCIAL STUDIES

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CHAPTER I. GENERAL ASPECTS

Introduction

This work deals with a bibliographic research on the Theory of Significant Learning and its application to design didactic techniques in different subjects of high school education. This is given as new knowledge that is incorporated in a substantive manner in the cognitive structure of the student, relating the new knowledge to the previously acquired; however, it is also necessary that students are interested in learning what is being provided (Ausubel, Novak and Hanesian, 1983). For this reason, there is an obligation to learn how to work with elements that are better designed towards the student's needs, taking into account that the evaluation must be applied with sufficient validity.

It is expected to obtain sufficient theoretical information in relation to the types of significant learning, the social and cognitive factors that influence it, the importance of evaluation during the process, and the development of didactic techniques where the principles consulted can be applied, to achieve the objectives of the teaching-learning process.

One must bear in mind that these are never ending topics, because new challenges and questions may arise during the teaching process, such as: in the technological field, the roles that must be played, in both family and social settings, school diversity, and generational changes, among others. Therefore, the teacher must arrive to the classroom

with new attractive materials to catch the attention and interest of the individuals, make use of motivation, continue researching, and looking for new ways to challenge the students.

To elaborate didactic techniques, it must be addressed topics related to science and social studies in high school. These are the study areas of this research; it allows the option of applying what is collected during the teaching practice.

Problem

How to design teaching techniques to obtain meaningful learning proposed by David Ausubel in the subjects of Natural Sciences and Social Studies, for high school students?

General Objective

Show teaching techniques to address Natural Science and Social Studies topics in high school education, based on the principles proposed by David Ausubel on significant learning.

Specific objectives

- Develop a bibliographic review on the theory of significant learning proposed by David Ausubel.
- Create didactic techniques to achieve significant learning in the subjects of Natural Sciences and Social Studies.

CHAPTER II. TERORICAL FRAMEWORK

Educational Psychology

The role of psychology in education dates back to ancient times, to Plato and Aristotle, who studied topics such as: relationship amongst teachers and students, the teaching,

teaching methods, learning sequence, among others. However, it consolidated in 1890 when the field of psychology was created at Harvard University by William James, who dedicated himself to the training of professors under the lectures entitled Psychology Talks for Professors. For the 1940s and 1950s, educational psychology prioritized the study of individual differences, learning behaviors and evaluation; among the 1960s and 1970s, it focused on the study of learning and cognitive development. During this time, the Meaningful Learning Theory arises led by David Ausubel (Woolfolk, 2010).

At present times, this discipline has its own theories, research methods, problems, and techniques. Research is carried out to better understand the teaching-learning process, and thus improve the educational practice (Woolfolk, 2010). The studies carried out try to analyze learning problems such as: ways to improve learning abilities; to find out the ideal ways to achieve objectives, through motivation and maximizing the organization of the presentation of learning materials; to discover cognitive characteristics, the students' personality and the social and interpersonal factors that influence the learning process; in addition, aspects that interfere with the acquisition and conservation of long-term knowledge, among others (Ausubel, Novak and Hanesian, 1983).

One of the contributions of educational psychology to improve teaching work is Ausubel's Educational Learning Theory, which aims to give a complete view of the teacher's performance and educational techniques to favor the student is learning.

Learning Types Proposed by David Ausubel

Learning achieved in educational centers can be classified into two categories, the first one includes learning by reception and discovery, and the second one includes mechanical or repetitive and significant learning.

Reception learning is obtained when, the information that the student learns or it is expected to learn, is given entirely by the teacher. In other words, the student is not the one who discovers it, it is based on already known final results. The role of the student is to be able to reproduce it in the future. Moreover, discovery learning is obtained when the content to be learned is not given, as it has to be found by the student. In this type of learning, the student must “reorder the information, integrate it to the existing cognitive structure, and reorganize or transform the integrated combination, so that the desired final product is produced or the relationship among means and ends needed is discovered” (Ausubel, Novak and Hanesian, 1983, p. 35).

On the other hand, meaningful learning occurs when there is a relationship between previous knowledge and new knowledge, making a cognitive integration and interaction between what it was learned and what is already known (Aznar, Giménez, Fanlo and Escanero, s.f.). Furthermore, learning by repetition happens when the information acquired is stored arbitrarily without being able to relate it to previous information (Ausubel, Novak and Hanesian, 1983). It has to be kept in mind that both, learning by reception and discovery, can be considered repetitive or significant.

Significant learning by reception is essential during the educational process because “it is the human mechanism per excellence used to acquire and store the vast amount of ideas and information represented by any field of knowledge” (Ausubel, Novak and Hanesian,

1983, p 47). This is classified into three types: learning representations, learning concepts, and learning propositions.

Representation learning is considered to be the most important one. It consists on being able to give meaning to symbols, whether they are objects, events or concepts. It is carried out when there is a substantial and representative association of the contents with the cognitive structure; that is, when a relationship between the word and the real object is achieved, but it is not possible to categorize it. Concept learning is related to the previous one. It consists on using symbols to represent the concepts in the same way that other unitary referents are represented. This type of learning can be acquired through two processes: through training, which consists on learning from concrete experiences, stages, and hypothesis testing; and through assimilation, which refers to learning abstract meanings and when from certain characteristics they are related to ideas already established in the cognitive structure, and the new conceptual meaning is learned. In other words, to be able to categorize concepts (Ausubel, s.f.).

The learning of propositions is achieved when individual concepts are combined or related to express ideas with more substantial and different meaning to the one of each individual concept. In summary, it can be said that the first two types of significant learning are unitary, while the third one is composed (Ausubel, s.f.). In Figure 1, you can see the relationship among the types of learning, already described, and when they are considered significant.

Figure 1. Learning by reception and learning by discovery can be found in a separate continuum of learning through repetition and meaningful learning (Adapted from Novak, 1977).

Significant Learning	exchange and adaptation of meanings	well-designed audio instruction tutorial	Scientific investigation, musical creation
	Collaborative activities		
	master classes, textbook content	laboratory work in high schools	Routine research or intellectual production
	Copy, memorize, reproduce		
Mechanical learning	Multiplication tables	application of formulations in problem-solving situations	Puzzle solution by trial and error
	Learning through reception	Learning through guided discovery	Learning through self-discovery

Source: M. Moreira, Institute of Physics of UFRGS, s.f.

When concept and proposition learning is achieved, the existing information of the individual is restructured. "This process of new information with pre-existing segments of cognitive structure is called inclusion" (Ausubel, Novak and Hanesian, 1983, p. 62). It can be carried out in two ways: derivative inclusion, which occurs when learning a specific example of a concept; on the other hand, correlative inclusion refers to a type of learning that is an extension, restructuring, or change of a proposition already learned (Ausubel, Novak and Hanesian, 1983).

Depending on the assimilation process, significant learning can be divided into: subordinate, supraordinate, and combinatorial learning. Assimilation is defined as the process that arises from the reciprocal relationship between new information or material and the existing one, to create a new differentiated cognitive structure (Ausubel, s.f.).

Subordinate learning occurs when new information is included together with the previous knowledge of the apprentice; that is, when the new content depends on the information that already exists. An example of this is concepts and propositions learning. Supraordinate learning arises when the content to be learned is related to concrete and already established subordinated ideas. In other words, a concept is learned from ideas that depend on this new concept. Finally, combinatorial learning is characterized by the lack of a supraordinate or subordinate relationship between the new information to the already existing one. However, they are related in a parallel and general manner to create a differentiation. In synthesis, generalization from analysis (Ausubel, s.f.).

Factors that Influence Meaningful Learning

For meaningful learning to be achieved during the teaching process, "the meaning of the material that the student gets is the meaning that the teacher has on the material and

transmits it to the student (Gowin, 1981, cited by Rodríguez, 2010, p. 22). In order to achieve this, there are a number of variables that must be taken into account like motivation, classroom environment, the teacher, the personality of each student, among others.

Motivation is important for long-term learning; however, it is not considered as significant for the short-term one. This variable has a catalytic effect, but not in the retention of knowledge. One can talk about three motivational (intrinsic) aspects: cognitive impulse, affiliative impulse, and self-improvement. The first one is considered the most important one, as it refers to the desire to know, and perceives knowledge as its own reward. The affiliative impulse constitutes the individual's desire to pass the course or school year; however, it decreases as adolescence progresses. Finally, the motivation of self-improvement corresponds to the impulse to raise the status by setting goals to be achieved (Ausubel, Novak and Hanesian, 1983).

Reward and punishment intervene in the motivational process of learning. The first functions as an incentive, since obtaining such a reward is synonymous to achieving the objective; however, it is associated to repetitive and mechanical learning. Therefore, this is not a characteristic of meaningful learning. On the other hand, punishment leads the individual to avoid the actions that led him to it and promotes a lack of motivation towards the punished action. The latter one is considered less suitable for learning, because it tells the student that what he did is wrong and that he must change it; nevertheless, it does not tell him how. Reward indicates that what it has been done must be repeated, that is, what he did, was correct (Ausubel, Novak and Hanesian, 1983). Both, reward and punishment, can be considered extrinsic and intrinsic motivation.

The teaching-learning process is carried out in a very heterogeneous environment, as sometimes they must live with different genders, ages, culture, interests, learning categories, among others. However, the adolescent is in a stage, where socialization is fundamental for personal satisfaction. For these reasons, a teacher is always uncertain about what is the ideal way to work in class. Ausubel, Novak and Hanesian (1983) comment that the interaction among students within the class, that is, group work favors learning depending on its nature since there will be assignments that are more effective if they are done individually.

If the task is simple and it is worked in groups, its resolution serves as a stimulus and causes a spirit of competition among peers. If the assignment is more elaborated (such as problem solving), it is more likely to be achieved if done in groups than individually; however, this does not mean that the whole group can achieve what it was established, because it is more likely that there will be at least one student in the group that manages to solve the problem correctly. Nevertheless, teamwork also encourages students to spend much of their time talking about topics outside the study (Ausubel, Novak and Hanesian, 1983)

The size of the group also plays an important role in the performance of the assigned work. Small groups are more recommended than large ones, because individual opinions tend to be taken into account to reach a product, while in large groups, the most active students or leaders tend to individualize the solution. On the other hand, the success achieved together serves as a stimulus for those students who alone would not have been able to obtain the correct result, generating a net gain. Nevertheless, when it comes to critical work (not to be confused with a work that encourages discussion), where the

student needs to feel the ideas and position, or where a lot of concentration is needed, individualized work is more recommended (Ausubel, Novak and Hanesian, 1983).

Rodríguez (2010) proposes two conditions for meaningful learning to take place: the first one is the students. If the student's predisposition to learn is positive, then it will be achieved; otherwise, it will not. Second, the professor must teach through meaningful material, so that there is a relationship between the knowledge to be learned with the one the students already possess. This must be prepared in a logical order; that is, content is not the only important thing, since the way in which it is presented is also substantial.

The Teacher in the Teaching-Learning Process

The teacher is undoubtedly a fundamental variable for the teaching-learning process to be beneficial. There are three aspects that the teacher is expected to fulfill: first, from the cognitive perspective, his knowledge must be broad and persuasive; second, to have the ability to present, in an orderly and clear way, the information to be conveyed, with the help of the appropriate material. Thirdly, the language used to communicate with their students is adequate for the cognitive maturity of each individual. However, the most important thing is that they have the capacity to motivate and guide the learning activity (Ausubel, Novak and Hanesian, 1983).

In regards to personality, it is affirmed that a cordial teacher improves the learning results in their students, since the latter ones identify him as a comprehensive, benevolent, and attentive professor. In addition, he provides them with emotional support and understands the adolescent stage, so this motivates the apprentice. Moreover, this is usually more valued by supervisors, principals and co-workers. An enthusiastic teacher commonly

has positive results in his work, due to their intellectual and intrinsic motivation to learn and teach (Kounin, Gump and Ryan, 1961; cited by Ausubel, Novak and Hanesian, 1983).

On the other hand, a teacher who cannot manage discipline in the classroom, can be considered as an obstacle to learning. However, students perceived punishment as an excessive action, which can generate aggressive attitudes and misconduct and thus it can diminish the student's interest in learning. Contrary to the above, good discipline is seen as a consequence of interesting classes and a pleasant relationship among teachers and students (Ausubel, Novak and Hanesian, 1983).

Cognitive Elements that Interfere with Significant Learning

When analyzing the process through which students come to understand the contents in the curriculum, and as a result of the distinctive methodology of each teacher's particular mediation, the concept of meaningful learning is proposed as idealization, since it is sought to fulfill the primary objective of the educational task of the teacher in relation to their students: comprehension and understanding of the subject. Therefore, the teacher must follow the previously mentioned principles that justify this concept and the application of a specific methodology based on them. To achieve this, we must consider aspects that can influence its development in a certain way; among them are the cognitive factors that interfere with this type of learning. The main factor of influence is the so-called existing cognitive structure, which includes both, the knowledge already implicit in the cognitive structure of the individual and their ability to function in a determined field, so that to define it is considered the premise that

“In the mind of the individual there is a structure in which the organization and integration are processed: the cognitive structure, understood as the total content of the ideas of an individual and its organization, or the content and organization of his ideas, in a determined area of knowledge.” (Moreira, n.d)

According to the above, this existing cognitive structure in the individual, to achieve the desired learning, comes to fulfill the function of “substrate,” since there the new ideas, knowledge, and concepts proposed in the educational process will sprout, thus solidifying meaningful learning.

On the other hand, it is established that the cognitive structure of an individual is affected by substantial nature factors, where it can be considered the same curricula that has been established to organize the subject to be covered; these must have at least clear objectives to be achieved, that allow the development of each of the topics to be interesting, so that they catch the students attention and at the same time, motivates them to learn and value the importance of what they are being taught. These objectives must be inclusive, so that they contemplate an update regarding the advances that are currently being generated, related to the subject they are working on. Besides, it must show the value of the contents, or how they are included in the activities that are carried out day by day. Because of this, it is necessary to use materials that serve as a clear representation of what it is being explained, so in this way the students, through concrete visualization of examples, can be able to establish relationships with what they have seen and reality.

As part of the improvement of the educational mediation process to achieve meaningful learning, it is necessary to take into account the progressive differentiation, which should

be applied to the development of the covered topics; according to Ausubel et al., this is applied “when the most general and inclusive ideas of discipline are presented first, and then they are progressively differentiated in accordance with the details and specificity” (1989, p. 173). Therefore, this way of working the contents consists on covering, first the generalities, and then gradually deepen into specific details and subtopics, to understand the last ones, so the student has strong bases and tools to master them. This concept, as a methodological proposal, is sustained in the natural sequence in which the cognitive development of the human being is constructed, so it is achieved the creation of the structure that makes up all the content stored in the memory, based on the understanding of the simplest knowledge, as constituents of the necessary solid foundation to achieve a really meaningful learning of the most specialized ideas, basically lies on the idea of communicating the explanation of the organized topics in an ascending hierarchical order, according to their level of depth.

Another factor, along with the progressive differentiation mentioned above, is the so-called sequential organization, whose conception is based on aligning the issues as a sequence. Each one of these constitutes a pillar for the understanding of the following one, so they as a chain, where each ring remains intertwined to the previous and subsequent one, like a bridge between what it has already been learn and what is new. This consolidation among the subjects fosters in the students the perception that the union of a series of things constitutes something of greater relevance, but at the same time, each of these components are an important part to create the final product.

As a complement to the principles that support Ausubel's model, regarding the scope of complete and well-founded learning it is presented, the idea of an integrated reconciliation of the cognitive structure, Moreira simplifies its complexity by defining it as,

“The opposite to the usual practice of textbooks to compartmentalize knowledge in chapters and subchapters. According to such principle, teaching must explicitly explore the relationships between knowledge by stating the differences and similarities, reconciling real or apparent inconsistencies, integrating or changing similar ideas.” (2012, p.7)

According to the above, a critique of the standardized use of textbooks in elementary schools as the main educational support tool for students is provided. This is due to the way they structure the contents, since they are drafted in prose and compressed in the information that these contain and therefore, this prevents the interrelation of the concepts and subjects, also due to the saturation of text. For its part, the integrated reconciliation seeks that the material given to the students provides a space and a signage that state the connections among the key terms of each of the topics, so that they give the student the possibility, together with the teacher's mediation, to establish a network where relationships and the importance of each concept seen is defined. Furthermore, by means of diagrams, images or other illustrative form, the union of knowledge is shown, thus comprising the formation of a total complement.

Finally, it can be found the consolidation principle as the final product of the teaching-learning process, which establishes that

“Before new materials are introduced, the understanding of the new subject and success in the sequentially organized learning, must be ensured. This type of learning presupposes that the preceding units have been learned in a stable, clear,

and organized manner. The new subjects in the sequence should not be introduced without the precedents being dominated by the students” (Actis Di Pasquale, E. 2007)

This principle is one of the most important aspects under a teaching modality governed in meaningful learning, since it is the main rule to achieve the greatest possible understanding of the contents. This is because by not making progress until understanding, requires a greater mental effort, but it assures that the student constructs a solid base, where they can grow calmly in the next topics to be covered.

Teaching Materials that Favor Meaningful Learning

In the educational mediation process, it is known that the teacher is evidently the main character when teaching the students, Moreover, it must be stated that they get support from the teaching materials, which UNESCO’s Regional Education Program defines as,

“Those tangible instruments that use print, oral, or visual means that aid in the achievement of the educational objectives and the development of curricular content. In addition to exposing and demonstrating content, they interact with those who use them to support the learning of new concepts, the exercise and development of skills, and the verification of elements” (1989, p.9)

These instruments, according to the above, are very relevant complements so the teacher can improve his teaching methodology and create a greater impact on his students during the lessons, since they help and stimulate the senses, reaching many times, more attention than a common master class taught by the same teacher. Among these materials it can be found ideas such as the creation of schematics, concept maps, application of a laboratory where certain processes are simulated or demonstrated, or the projection of visual audio material that more explicitly and clearly represents some of the proposed topics.

Learning through Discovery

According to Barrón 1993, learning through discovery is a "self-regulating problem-solving activity, which requires hypothesis testing as the logical core of the discovery act." This agrees with Ausubel, Novak and Hanesian, (1983), since they state that learning through discovery suitable for learning the scientific method.

It should be noted that there are several principles that must be considered when talking about learning through discovery, which are mentioned by Barrón 1993:

- By nature, the human being is constantly discovering new knowledge.
- It presupposes a reformulation of previous concepts that are installed in the cognitive system.
- It finds its starting point from identifying problems, and it is developed through the resolution of problems.
- The resolution of problems must be self-regulated.
- It is associated with the production of errors.
- It is always influenced by the individual's socio-cultural experiences.
- It can be pedagogically promoted.

However, in contrast to this, there are several myths created around this type of learning in which Ausubel, Novak and Hanesian, (1983) make emphasis to not take them as true. For example, all knowledge is discovered by oneself or that the ability to solve problems is the most important goal of education. On the other hand, Ausubel also denies that discovery is a source of motivation by itself and also, he states that not all children should be critical and creative thinkers. According to Ausubel, "Learning through discovery simply does not constitute a primary feasible method of transmitting large bodies of knowledge related to

the content of the subjects under study." (Ausubel, Novak and Hanesian, 1983), as many educators might believe.

Since learning through discovery is related to the innate ability of the human being to discover things, it is possible to use it in all matters of the educational system. As noted by Ausubel, Novak and Hanesian (1983), it is especially suitable learning during childhood, since the method of discovery was a child-centered teaching technique that originated in the educational philosophies of Rousseau and Foebel. Therefore, in the first years of institutionalized education, it is possible to make students discover the knowledge that they want to acquire, since it starts from the idea that they will learn from a basic level.

In this book, Ausubel mentions the uses and advantages of learning through discovery as follows: "It is essential to verify the significance of knowledge and to teach the scientific method and effective skills to solve problems. As an attached pedagogic technique, it can be rather useful to increase the significance of the material mainly introduced through expository methods. Finally, there are several cognitive and motivational factors that undoubtedly improve the learning process, retention and transferability of potentially significant ideas that have been learned through discovery" (Ausubel, Novak and Hanesian, 1983). Also, he comments its uses in the evaluation of learning outcomes and problem solving.

On the other hand, in the language area, if these are related to the student's mother tongue, it can be given references and use previous knowledge so the student can discover the functioning of the target language. In some practical subjects such as plastic arts, and sports, it is easy to let students experience and make use of mistakes and self-regulation while still complying with the imposed programs by the regulatory entity; in the case of Costa Rica, the Ministry of Public Education.

In the case of other subjects such as social studies or science, the method through discovery implies the students to have prior knowledge to guess and verify hypotheses. That is why the scope and limitations of a method like this, must be carefully established. Ausubel, et al, state that,

"But from a practical point of view, it is impossible to consider the pedagogical feasibility of learning through discovery as the main mean to of teach subject's content, without taking into account the exaggerated duration of such procedures" (Ausubel, Novak and Hanesian, 1983).

Duration is the main limitation, since a curriculum must be complied within a certain time that is determined by the regulator, it is not possible to use learning through discovery all the time during the teaching process in the educational system. On the other hand, another limitation, as mentioned by Ausubel, Novak and Hanesian, (1983) from their personal point of view, is the fact that knowledge exists as part of popular culture, which is not learned through self-discovery, but through direct knowledge transfer:

"Quite apart from its lack of literal validity, the claim that each man must discover by himself every fraction of the knowledge he really wishes to possess is, in essence, a repudiation of the very concept of culture; since the most unique attribute of human culture, that distinguishes it from any other kind of social organization in the animal kingdom, is precisely the fact that the discoveries accumulated over millions of years can be transmitted to each successive generation in the course of childhood and youth, and doesn't need to be discovered again through every generation "(Ausubel, Novak and Hanesian, 1983).

Problem solving and creativity: Ausubel, et al., define both, problem solving and creativity based on learning through discovery, as well as the types of meaningful learning. Within problem solving, one of the most influential factors is language thanks to the acquisition of concepts. Whereas for creativity, there is a debate about its definition, since there is a lot of confusion when defining it. "Creativity is the supreme problem-solving expression, which involves new or original transformations of ideas and the generation of new integrative (supraordinate) and explanatory principles" (Ausubel, Novak and Hanesian, 1983).

Concept Maps as a Viable Alternative to Achieve Meaningful Learning

"It is clear that psychological learning theories are increasingly oriented to the analysis of the interaction among learning materials and psychological processes which they are processed by the individual. At the same time, teachers have discovered that their work should not only be aimed at providing knowledge and ensuring certain learning products or results (...), but that they should also promote the processes through which these products can be achieved (that is, learning strategies)" (Pozo, 1990, p. 201).

According to Ausubel (1976) in order to learn significantly, the student must relate new knowledge from the previous concepts that they already had to improve them and to build new cognitive schemes that allow the easy assimilation of new knowledge.

In this case, concept maps are an ideal tool for students to improve their significant learning processes, as they link or start from a main concept or idea and break it down to secondary concepts and ideas that are related directly with the first concept. Its simple use allows teachers to develop extensive topics in a short time with a high degree of

effectiveness in terms of the knowledge given to students, since prior knowledge is involved.

This tool allows students and teachers to exchange ideas by improving their relationship and letting Lev Vigotsky's constructivist approach to be applied. Knowledge is not only linear and given by authoritarian figure of a teacher, but rather it allows this to be a guide in the student's learning. On the other hand, a conceptual map is defined as: "a technique that simultaneously represents a learning strategy, a method to capture the most significant part of a topic, and a schematic resource to represent a set of conceptual meanings, included in a structure of propositions" (Novak, JD and Gowin, DB, 1999). This author talks about a proposition structure, given that concept maps respond to an organized construction of terms.

As described by Novak (1999), the use of concept maps in the learning process is useful, since due to their characteristics, concept maps are inclusive. They have to do with the hierarchy of concepts and their level of understanding and the integration of new relationships among previous and new concepts.

"Since significative learning is easily achieved when new concepts or conceptual meanings are encompassed under other broader concepts, more general and inclusive concepts are placed at the top of the map, and progressively more specific and less inclusive concepts, in the lower one" (Simón Cuevas, A.J. 2005 p.7).

Elements that constitute a conceptual map: According to Rodríguez (2007), conceptual maps consist on the following four components:

- Concepts or nodes: those are the words used to name objects, events, facts, qualities, among others.

- Linking words: they are used to join ideas, so they have a logical order.
- Propositions: they are the concepts attached by linking words, to finally obtain a meaning.
- Lines: They are used to join concepts; the arrows are used in case that there is no subordination.

Advantages of the use of concept maps: Rodríguez (2007) states that this technique has a series of advantages, within these we can mention:

- They represent an orderly tool for the projection of concepts in terms of their hierarchy and complexity.
- They allow a progressive differentiation of concepts and allow linking previous knowledge with new ideas to improve cognitive structures in students.
- Its use allows students to improve the understanding of the concepts by remembering what they have learned and that from them they can build logical knowledge structures that allow meaningful learning.

How to build a concept map

- You must have a focused idea. To structure a focused question that centers the concept map in the context of the desired information.
- Concept selection, you should look for key concepts that help to formulate the concept map. It is suggested to create a list of 15 to 25 concepts.
- Concept hierarchy, you have to sort the concepts according to their level of inclusion and relevance. This is carried out from top to bottom according to the previous levels.

-Build a preliminary map, match the selected terms and group them to form a hierarchical organization of concepts. Observe which ones have value for the concept map; those that are repeated or those that result irrelevant, and thus can be eliminated.

-Review, this process is important because it allows us to observe errors in the preliminary maps, as the hierarchy and the order of the concepts. It allows us to search for cross-links that help to join the concepts to be able to relate them and better explain the main idea with the secondary ones of a concept map.

-A concept map can be defined as finished when it allows high levels of cognitive performance and the synthesis of knowledge, as well as if the message or information on the map is easily understandable, as you must be able to communicate clearly the desired message.

Meaningful Learning Assessment

The teaching-learning process is not exempted from being evaluated in a summative way, since its purpose is to facilitate of learning and teaching, the issuance of value judgments and guidance. This is the opposite, in most students because they see evaluation as a scary challenge. "It is necessary to find out what the student already knows before trying to provide more knowledge" (Ausubel, Novak and Hanesian, 1989, p.514).

Therefore, to assess the student is of utmost importance, as this instrument is used to measure the information that he has acquired, so the teacher will realize how he is doing the work, if his ideas are understood, or if he has to make use other tools to show clearly what he intends to teach the student. Moreover, the professor can check if the student is auditory, or visual, or if they have a special situation.

The teacher must be clear about what he wants to know regarding the student, since in this way he can accurately choose the technique to be evaluated; thus, for the evaluation to have an educational benefit, it must have the following elements: validity, reliability, representativeness, discriminatory power, and feasibility. “You can apply exams of two or more items, you can also use trials or tests, without neglecting the standardized test that is not well seen by all teachers, it eliminates subjectivity and variability, and incurs in criticism. If the test lacks any of this information, it would lack reliability” (Ausubel, Novak and Hanesian, 1989, p.526).

In terms of the principles of mediation and evaluation, “mediation and evaluation are fundamental parts of learning in the classroom; therefore, of educational psychology. If our attitude towards education is really serious, we have to specify the ways to measure the student’s learning outcomes as individuals and to find out if they match our educational purposes. In addition, these have to inform us if our students are actually being educated or not” (Ausubel, Novak and Hanesian, 1989, p.514). The student in his learning process must constantly be tested to confirm that he is receiving the correct information, because if he did not receive the information correctly, it would be necessary to find new means to help him.

“Evaluation is important at the beginning, during, and at the end of any teaching sequence. The desired learning outcomes must be communicated first to induce and structure the teaching process harmoniously. Secondly, it is necessary to determine the degree of progress towards the goal during the course of learning - the same as feedback and motivation for the student as means of monitoring the effectiveness of teaching. Finally, it is important to

evaluate the final learning outcomes in relation to the objectives, from the point of view of the student's achievements and from the point of view of the teaching methods and materials." (Ausubel, Novak and Hanesian, 1989, p.514).

If the teacher creates a sequential assessment order, which is very important to create, it will be guaranteed that the information is being processed, positively or negatively.

Undoubtedly, assessment is extremely important, as through it teachers are going to realize their mistakes or the information gaps required by the individual, so that they can face them, through different work methods, conceptual maps that summarize, visualize, and focus the information that is required for the student to store. A teacher must use all the means at his disposal to measure students through a test, must be objective at the time of creating an exam, and be clear on what he really teaches and seeks to know about what the students have learned.

In summary, there are three different ways of interpreting the scores of the assessment:

- "In the first method, the performance shown by students regarding the norm is judged by their own level of ability, determined by their scores on an aptitude test, on a pre-test, on a previous assessment test, or on an initial execution test during the course.

- The second method evaluates the correctness of the student's performance in relation to his classmates. It is necessary to group, accompany, and individualize teaching, as well as making important decisions about the educational and vocational future of the student.

- Both kinds of evaluations are essential and none excludes the other. Each of these techniques concerns a relative norm of execution, but in one case the individual constitutes his own norm and in the other, his execution is related to group norms” (Ausubel, Novak and Hanesian, 1989, p. 532).

The authors are very clear on the application of a test, which would be executed according to what they seek to know in terms of the student’s knowledge or lack of it in certain periods in which he to assess his knowledge. These must be specific to follow the guidelines, to assure if the teaching - learning was consciously provided and with attractive methods, and students were satisfied with the information stored and valued as a source of required knowledge.

The key for a successful evaluation is that the information prior provided the one that must be taken into account to create the test. The items must be prepared objectively, as well as consistency of the subject, where the student is able to follow the thread and does not wander without knowing where to start.

They also provide us with a varied range of techniques regarding conceptual maps to take advantage of them in the classroom. The teacher must not afraid of innovating and taking advantage of all the tools around him, and at his disposal, so the student values the environment where he is developing and can interpret the past, the present, and the future; thus learning to use their reasoning, so that they are thinking individuals that act according to their needs and intellectual development.

CHAPTER IV CONCLUSIONS

Depending on the research and the work done, the following conclusions can be reached:

- To achieve meaningful learning, one has to follow all the logistics regarding the preparation of the topics and the didactic material, so that the student psychologically achieves the expected processing by establishing the connections among his previous knowledge and the new material that he was taught.
- The disposition and attitude of the students must be taken into account; if it is negative, then extrinsic motivation can be used to change the student's attitude.
- In order for the meaningful learning to take place, the student must relate the new knowledge to the one already learned; therefore, the teacher must use appropriate and well-developed teaching materials.
- Learning through reception is also considered meaning learning, and not only learning, through discovery, although the latter is more representative.
- Concept maps or mental models are an appropriate strategy to achieve meaningful learning since the student schematizes what he has learned and the teacher can assess whether he can transmit the information properly or not.
- Assessment is a way for the teacher to verify if the student got what he wanted to teach. That is, evaluation also allows the teacher to be aware of his performance as a guide and as a teaching model.
- In the search for meaning learning, an active researcher and teacher is required, someone who really contemplates the factors that influence the way students learn, and adapts their teaching methodology under the conditions in which they work, also following the principles that characterize that specific type of learning.

CHAPTER V

DATA ANALYSIS

All throughout this chapter the process of transforming, cleaning and modeling the data of paragraphs from Spanish to English and English to Spanish will be analyzed in order to discover useful information of the translation process. This purpose of this section is to extract information and take decisions and make conclusions of the results observed.

This chapter will show the results of the translated documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish. It will also include the text analysis section, color coding process, a total of 60 paragraphs, 15 paragraphs from the original English document and the same 15 paragraphs translated to Spanish, plus 15 paragraphs from the original Spanish document and the same 15 paragraphs translated into English, and the two glossaries made during the elaboration of the translation which include specific words from each of the documents given to the translator.

5.1 Analysis and Interpretation of the Results

In this section, the objectives from Chapter I will be developed in order to analyze the translated documents and guarantee that a faithful translation is delivered. Text analysis, which include text styles, stylistic scales, scales of formality, generality or difficulty, emotional tone, text function translation methods, procedures and glossaries will help the translator analyze and effectively translate the any document that is given to him.

5.1.1 Text Analysis

The first process used to analyze both documents was through the process of text analysis. The first aspect taken into consideration was text styles. As discussed in Chapter II, there are several types of text styles which include narrative, descriptive, discussion and dialogue. Both documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* are narrative texts. These particular documents are both dissertation papers that are meant to inform the reader about a specific topic. The dissertation paper *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* is about stating how meaningful learning can help both the teacher and the student progress better if they work together. The other dissertation paper is about the impact that the guitarist Leo Brouwer has had on the new generation of guitarists.

In terms of their stylistic scale of formality, both documents language is formal. They are documents that are part of the final process of education in each student's career. The predominant type of language used in both documents is neutral language. The reader is able to understand the idea and the topic of each document, yet the dissertation paper about Leo Brouwer exhibits touches of technical language, for there are words that are specific to musicians and that on a first glance reading only they would be able to understand.

For the scale of generality or difficulty both documents are considered educated. They use formal terminologies that are specific for each branch of knowledge, and in terms of their emotional tone dissertation paper focused on guitar is understandable and not

exaggerate even if it includes words that are specific for music students. On the other hand, the dissertation paper Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales attempts to use in its original Spanish version a text with several intensifiers that categorizes it as factual. In addition, both texts are informative papers that try to prove a point by stating facts and evidence to support their ideas. Finally, after analyzing the documents the translator opted to categorize both documents as semantic, for the main objective is to deliver a message that is true to the original text and were many abundant literal translations are used.

The following chart is a summary of the elements used to analyze the translated documents:

Text Analysis	Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales	The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos
Text style	Narrative	Narrative
Stylistic scale of formality	Formal	Formal
Stylistic scale of generality	Educated	Educated
Stylistic scale of Emotional tone	Understandable	Understandable
Text Function	Informative	Informative

Type of translation	Semantic	Semantic
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Table 4 Shows the analysis criteria for Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales from Spanish into English and The Value of the Pedagogical Repertoire for Guitar: Leo Br. Source: Researcher’s own creation

5.1.2 Color Coding

The color-coding technique was used to identify the translation techniques applied to the documents. Each color is categorized to a procedure, green is assigned to transpositions, blue to modulations, yellow to omissions, red to amplifications, orange to explicitation, pink to literal translation, and purple to changes in punctuation. Two paragraphs will be used to create the comparison, the first one will be the paragraph of the original source language text and the second one, marked with colors will be the target language text. Some colors will be present in the first paragraph to mark omissions.

Transposition
Modulation
Omission
Amplification
Explicitation
Literal Translation
Changes in punctuation

Table 5 Shows the colors chosen by the translator to identify each translation technique applied in the translated documents. Source: Researcher’s own creation

5.1.2.1 Translation from Spanish into English of the document *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales*

Paragraph 1

Este trabajo contiene la consulta bibliográfica sobre la Teoría del Aprendizaje Significativo y su aplicación para el diseño de técnicas didácticas en diferentes asignaturas de educación secundaria; esto porque los nuevos conocimientos se incorporan en forma sustantiva en la estructura cognitiva del estudiante, relacionando los nuevos conocimientos con los anteriormente adquiridos, pero también es necesario que el discente se interese por aprender lo que se está suministrando (Ausubel, Novak y Hanesian, 1983). Por tal motivo, surge la obligación de aprender a trabajar con elementos mejor diseñados hacia las necesidades del estudiante, tomando en cuenta que la evaluación debe ser aplicada con suficiente validez.

Translation

This work deals with a bibliographic research on the Theory of Significant Learning and its application to design didactic techniques in different subjects of high school education. This is given as new knowledge that is incorporated in a substantive manner in the cognitive structure of the student, relating the new knowledge to the previously acquired; however, it is also necessary that students are interested in learning what is being provided (Ausubel, Novak and Hanesian, 1983). For this reason, there is an obligation to learn how to work with elements that are better designed towards the student's needs, taking into account that the evaluation must be applied with sufficient validity.

Paragraph 2

Se espera obtener la información teórica suficiente en relación con los tipos de aprendizaje significativo, los factores sociales y cognoscitivos que influyen en este, la importancia de la evaluación en el proceso y la elaboración de técnicas didácticas aplicando los principios consultados, para lograr cumplir los objetivos en el proceso enseñanza-aprendizaje.

Hay que tener en cuenta que estos temas son de nunca agotarse, debido a que surgen cada vez nuevos retos e interrogantes en la labor docente como: en el campo tecnológico, los roles que se deben desempeñar tanto en el ámbito familiar como social, diversidad escolar, cambios generacionales, entre otros.

Translation

It is expected to obtain sufficient theoretical information in relation to the types of significant learning, the social and cognitive factors that influence it, the importance of evaluation during the process, and the development of didactic techniques where the principles consulted can be applied, to achieve the objectives of the teaching-learning process.

One must bear in mind that these are never ending topics, because new challenges and questions may arise during the teaching process, such as: in the technological field, the roles that must be played in both family and social settings, school diversity, and generational changes, among others.

Paragraph 3

Por ello, el maestro **está en la obligación** de presentarse en el aula con nuevos materiales atractivos para obtener la atención e interés del individuo, hacer uso de **la** motivación, seguir investigando y buscando nuevos retos para los estudiantes.

Para la elaboración de técnicas didácticas, se abordarán temas de ciencias y estudios sociales, en secundaria. Ya que son las áreas de estudio de los participantes de esta investigación, permitiendo así, la opción de aplicar lo recolectado en la práctica docente.

¿Cómo diseñar técnicas didácticas para contribuir en la obtención de un aprendizaje significativo propuesto por David Ausubel en las asignaturas de Ciencias Naturales y Estudios Sociales, para estudiantes de secundaria?

Translation

Therefore, the teacher must arrive to the classroom with new attractive materials to catch the attention and interest of the individuals, make use of motivation, continue researching and looking for new ways of challenging the students.

To elaborate didactic techniques, it must be addressed topics related to science and social studies in high school. These are the study areas of this research; it allows the option of applying what is collected during the teaching practice.

How to design teaching techniques to obtain meaningful learning proposed by David Ausubel in the subjects of Natural Sciences and Social Studies, for high school students?

Paragraph 4

El papel de la psicología en educación se remonta desde tiempos antiguos, en épocas de Platón y Aristóteles, quienes estudiaron temas como: relación entre profesores y estudiantes, la labor docente, métodos de enseñanza, secuencia del aprendizaje, entre otros. Sin embargo, se empezó a consolidar en 1890 cuando se creó el campo de la psicología en la universidad de Harvard por William James, quien se dedicó a la formación de profesores bajo las conferencias tituladas *Pláticas de psicología para profesores*. Para los años 1940 y 1950 la psicología educativa prioriza en el estudio de diferencias individuales, conductas de aprendizaje y evaluación, entre las décadas de 1960 y 1970 se enfoca en el estudio del

aprendizaje y desarrollo cognoscitivo, y es durante en esta época que surge la teoría del aprendizaje significativo liderada por David Ausubel. (Woolfolk, 2010).

Translation

The role of psychology in education dates back to ancient times, to Plato and Aristotle, who studied topics such as: the relationship amongst teachers and students, the teaching process, teaching methods, learning sequence, among others. However, it consolidated in 1890 when the field of psychology was created at Harvard University by William James, who dedicated himself to the training of professors under the lectures entitled *Psychology Talks for Professors*. For the 1940s and 1950s, educational psychology prioritized the study of individual differences, learning behaviors and evaluation; among the 1960s and 1970s, it focused on the study of learning and cognitive development. During this time, the Meaningful Learning Theory arises led by David Ausubel (Woolfolk, 2010).

Paragraph 5

En la actualidad, esta disciplina posee sus propias teorías, métodos de investigación, problemas y técnicas; se realizan investigaciones para comprender mejor el proceso enseñanza-aprendizaje, y así mejorar la práctica educativa. (Woolfolk, 2010). Los estudios realizados tratan de analizar problemas en el aprendizaje como: formas de mejorar las capacidades para aprender; averiguar cuáles son las formas idóneas para lograr objetivos, mediante la motivación y maximizando la organización de presentación de materiales de aprendizaje; descubrir características cognoscitivas, la personalidad del estudiante y los factores sociales e interpersonales que influyen en el proceso de aprendizaje; además, aspectos que interfieran en la adquisición y conservación del conocimiento a largo plazo, entre otros. (Ausubel, Novak y Hanesian, 1983).

Translation

At present times, this discipline has its own theories, research methods, problems and techniques. Research is carried out to better understand the teaching-learning process, and thus improve the educational practice (Woolfolk, 2010). The studies carried out try to analyze learning problems such as: ways to improve learning abilities; to find out the ideal ways to achieve objectives, through motivation and maximizing the organization of the presentation of learning materials; to discover cognitive characteristics, the students' personality and the social and interpersonal factors that influence the learning process; in addition, aspects that interfere with the acquisition and conservation of long-term knowledge, among others (Ausubel, Novak and Hanesian, 1983).

Paragraph 6

Se considera el aprendizaje por recepción cuando, la información que el estudiante aprende o se espera que lo haga, es dado totalmente por el docente. es decir, el estudiante no es quien la descubre, se basan en resultados finales ya conocidos. y el papel del estudiante es poder reproducirlo en el futuro. Mientras que el aprendizaje por descubrimiento es cuando el contenido que se desea aprender no es dado, este es hallado por el estudiante. en este tipo de aprendizaje el discente debe “reordenar la información, integrarla con la estructura cognoscitiva existente, y reorganizar o transformar la combinación integrada de manera que se produzca el producto final deseado o se descubra la relación entre medios y fines que hacía falta” (Ausubel, Novak y Hanesian, 1983, p. 35).

Translation

Reception learning is obtained when the information that the student learns or it is expected to learn, is given entirely by the teacher. In other words, the student is not the one who discovers it, it is based on already known final results. The role of the student is to be

able to reproduce it in the future. Moreover, discovery learning is obtained when the content to be learned is not given, as it has to be found by the student. In this type of learning the student must “reorder the information, integrate it to the existing cognitive structure, and reorganize or transform the integrated combination so that the desired final product is produced or the relationship among means and ends needed is discovered” (Ausubel, Novak and Hanesian, 1983, p. 35).

Paragraph 7

El aprendizaje de representaciones es considerado el más importante y consiste en poder darle significado a símbolos, ya sea objetos, eventos o conceptos se efectúa cuando se da una asociación sustancial y representativa de los contenidos con la estructura cognoscitiva, es decir, cuando se logra una relación entre la palabra y el objeto real, pero no se logra categorizarla. El aprendizaje de conceptos está relacionado con el anterior consiste en representar con símbolos los conceptos de igual forma que otros referentes unitarios también lo son. Este tipo de aprendizaje puede adquirirse mediante dos procesos: por formación, la cual consiste en aprender a partir de experiencias concretas, por etapas y a prueba de hipótesis; y por asimilación, esta hace referencia al aprendizaje de significados abstractos y cuando a partir de ciertas características se relacionan con ideas ya establecidas en la estructura cognoscitiva y se aprende el nuevo significado conceptual. Es decir, poder categorizar conceptos (Ausubel, s.f.)

Translation

Representation learning is considered to be the most important one. It consists on being able to give meaning to symbols, whether they are objects, events, or concepts. It is carried out when there is a substantial and representative association of the contents with the cognitive structure; that is, when a relationship between the word and the real object is

achieved, but it is not possible to categorize it. Concept learning is related to the previous one. It consists on using symbols to represent the concepts in the same way that other unitary referents are represented. This type of learning can be acquired through two processes: through training, which consists on learning from concrete experiences, stages, and hypothesis testing; and through assimilation, which refers to learning abstract meanings and when from certain characteristics they are related to ideas already established in the cognitive structure, and the new conceptual meaning is learned. In other words, to be able to categorize concepts (Ausubel, s.f.).

Paragraph 8

El aprendizaje de proposiciones se logra cuando se combina o se relaciona conceptos individuales para poder expresar ideas con significado más sustancioso y diferente al significado de cada concepto individual. En resumen, se puede decir que los dos primeros tipos de aprendizaje significativos son unitarios, mientras que el tercero es compuesto. (Ausubel, s.f.). En la figura 1, se puede observar la relación entre los tipos de aprendizajes, ya descritos hasta el momento, y cuándo se consideran significativos.

Figura 1. El aprendizaje por recepción y el aprendizaje por descubrimiento se hallan en un continuo separado del aprendizaje por repetición y el aprendizaje significativo. (Adaptado de Novak, 1977).

Translation

The learning of propositions is achieved when individual concepts are combined or related to express ideas with more substantial and different meaning to the one of each individual concept. In summary, it can be said that the first two types of significant learning are unitary,

while the third one is composed (Ausubel, s.f.). In Figure 1, you can see the relationship among the types of learning, already described, and when they are considered significant.

Figure 1. Learning by reception and learning by discovery can be found in a separate continuum of learning through repetition and meaningful learning (Adapted from Novak, 1977).

Paragraph 9

Cuando se da el aprendizaje de conceptos y el de proposiciones se reestructura la información existente del individuo. “A este proceso de la información nueva con los segmentos preexistentes de la estructura cognoscitiva se le llama inclusión” (Ausubel, Novak y Hanesian, 1983, p. 62). Puede llevarse a cabo de dos maneras: inclusión derivativa, se da cuando se lleva a cabo el aprendizaje de un ejemplo específico de un concepto; mientras que la inclusión correlativa, hace referencia al aprendizaje que es una extensión, reestructuración o el cambio de una proposición ya aprendida (Ausubel, Novak y Hanesian, 1983).

Dependiendo del proceso de asimilación el aprendizaje significativo puede dividirse en aprendizaje: subordinado, supra ordenado y combinatorio.

Translation

When concept and proposition learning is achieved, the existing information of the individual is restructured. "This process of new information with pre-existing segments of cognitive structure is called inclusion" (Ausubel, Novak and Hanesian, 1983, p. 62). It can be carried out in two ways: derivative inclusion, which occurs when learning a specific example of a concept; on the other hand, correlative inclusion refers to a type of learning that is an extension, restructuring, or change of a proposition already learned (Ausubel, Novak and Hanesian, 1983).

Depending on the assimilation process, significant learning can be divided into: subordinate, supraordinate, and combinatorial learning.

Paragraph 10

El aprendizaje subordinado se da cuando la información nueva es incluida junto con los conocimientos previos del aprendiz, es decir, cuando el contenido nuevo depende de la información ya existente, ejemplo de esto es el aprendizaje de conceptos y proposiciones. El aprendizaje supraordinado surge cuando el contenido por aprender se relaciona con ideas subordinadas concretas y ya establecidas, es decir, se aprende un concepto a partir de ideas que son dependientes de este nuevo concepto. Y por último, el aprendizaje combinatorio se caracteriza por no existir relación supraordinada o subordinada de la nueva información a la ya existente, sino que se relacionan de manera paralela y general para dar origen a la diferenciación, en síntesis, generalización a partir del análisis. (Ausubel, s.f.).

Translation

Subordinate learning occurs when new information is included together with the previous knowledge of the apprentice; that is, when the new content depends on the information that already exists. An example of this is concepts and propositions learning. Supraordinate learning arises when the content to be learned is related to concrete and already established subordinated ideas. In other words, a concept is learned from ideas that depend on this new concept. Finally, combinatorial learning is characterized by the lack of a supraordinate or subordinate relationship between the new information and the already existing one. However, they are related in a parallel and general manner to create a differentiation. In synthesis, generalization from analysis (Ausubel, s.f.).

Paragraph 11

Dentro de la motivación, es importante para el aprendizaje a largo plazo, sin embargo, no se considera tan significativo para el que es a corto plazo. Esta variable **influye** de manera catalítica pero no en la retención del conocimiento. Se puede hablar de tres aspectos motivacionales (intrínsecos): **el** impulso cognoscitivo, impulso afiliativo y la mejoría del yo. El primero es considerado el más importante, hace referencia al deseo por saber, y percibe el conocimiento como su propia recompensa; **el** impulso afiliativo constituye el deseo del individuo por la aprobación del curso o del año, sin embargo decrece conforme avanza la adolescencia. **Y** por último, la motivación de mejoría del yo, corresponde al impulso por elevar el estatus, estableciéndose metas por alcanzar. (Ausubel, Novak y Hanesian, 1983).

Translation

Motivation is important for long-term learning; however, it is not considered as significant for the short-term one. This variable has a catalytic effect but not in the retention of knowledge. One can talk about three motivational (intrinsic) aspects: cognitive impulse, affiliative impulse, and self-improvement. The first one is considered the most important one, as it refers to the desire to know, and perceives knowledge as its own reward. The affiliative impulse constitutes the individual's desire to pass the course or school year; however, it decreases as adolescence progresses. Finally, the motivation of self-improvement corresponds to the impulse to raise the status by setting goals to be achieved (Ausubel, Novak and Hanesian, 1983).

Paragraph 12

La recompensa y el castigo intervienen en el proceso motivacional del aprendizaje; la primera sirve de incentivo, ya que al obtener dicha recompensa es sinónimo de lograr el objetivo, sin embargo, está asociado a los aprendizajes repetitivos y mecánicos, por ende, no es característico del aprendizaje significativo. Por su lado, **el** castigo, conduce al individuo a

evitar aquellas acciones que lo llevaron a este y promueve la desmotivación a la acción castigada. Esta última es considerada menos apta para el aprendizaje, porque le indica al estudiante que lo que hizo es erróneo y debe cambiarlo, pero no le da indicios de cómo hacerlo; mientras que la recompensa indica que lo realizado debe ser repetido, es decir, que estuvo bien lo que hizo. (Ausubel, Novak y Hanesian, 1983). Tanto la recompensa como el castigo pueden considerarse motivación extrínseca e intrínseca.

Translation

Reward and punishment intervene in the motivational process of learning. The first functions as an incentive, since obtaining such a reward is synonymous to achieving the objective; however, it is associated to repetitive and mechanical learning. Therefore, this is not a characteristic of meaningful learning. On the other hand, punishment leads the individual to avoid the actions that led him to it and promotes a lack of motivation towards the punished action. The latter one is considered less suitable for learning, because it tells the student that what he did is wrong and that he must change it; nevertheless, it does not tell him how. Reward indicates that what it has been done must be repeated, that is, what he did, was correct (Ausubel, Novak and Hanesian, 1983). Both reward and punishment can be considered extrinsic and intrinsic motivation.

Paragraph 13

El proceso de enseñanza-aprendizaje se realiza dentro de un ambiente muy heterogéneo, en ocasiones se deben convivir con diferentes géneros, edades, cultura, intereses, categorías de aprendizaje, entre otras. No obstante, el adolescente se encuentra dentro de una etapa, donde la socialización es fundamental para su satisfacción personal. Por tales motivos, para un docente siempre surge la incertidumbre sobre cuál sería la forma idónea de trabajar en clase. Ausubel, Novak y Hanesian (1983) comentan que la interacción entre estudiantes

dentro de la clase, es decir, en la realización de tareas grupales favorece el aprendizaje dependiendo de la naturaleza de la misma. entonces, van a existir asignaciones que son más efectivas si se efectúan de manera individual.

Translation

The teaching-learning process is carried out in a very heterogeneous environment, as sometimes they must live with different genders, ages, culture, interests, learning categories, among others. However, the adolescent is in a stage, where socialization is fundamental for personal satisfaction. For these reasons, a teacher is always uncertain about what is the ideal way to work in class. Ausubel, Novak and Hanesian (1983) comment that the interaction among students within the class, that is, group work favors learning depending on its nature since there will be assignments that are more effective if they are done individually.

Paragraph 14

El tamaño del grupo también interviene en el desempeño de la labor asignado. los grupos pequeños son más recomendados que los grandes, porque se tiende a tomar en cuenta más las opiniones individuales para llegar a un producto, mientras que los grupos grandes, los estudiantes más activos o líderes tienden individualizar la solución. Por otro lado, el éxito logrado en conjunto sirve de estímulo para aquellos estudiantes que por sí solos no hubiesen sido capaces de obtener el resultado correcto, generando una ganancia neta. Pero, cuando se trata de un trabajo crítico (no confundir con los trabajos que fomentan la discusión) donde el estudiante ocupe palpar sus ideas y posición, o donde se necesite mucha concentración es más recomendable el trabajo individualizado. (Ausubel, Novak y Hanesian, 1983).

Translation

The size of the group also plays an important role in the performance of the assigned work. Small groups are more recommended than large ones, because individual opinions tend to be taken into account to reach a product, while in large groups, the most active students or leaders tend to individualize the solution. On the other hand, the success achieved together, serves as a stimulus for those students who alone would not have been able to obtain the correct result, generating a net gain. Nevertheless, when it comes to critical work (not to be confused with a work that encourages discussion), where the student needs to feel the ideas and position, or where a lot of concentration is needed, individualized work is more recommended (Ausubel, Novak and Hanesian, 1983).

Paragraph 15

El docente sin duda es una de las variables fundamentales para que el proceso de enseñanza-aprendizaje sea provechoso. Existen tres aspectos que se espera que el profesor cumpla: primero, desde la visión cognoscitiva su grado de conocimiento debe ser amplio y persuasivo; segundo, tener la habilidad de presentar de forma ordenada y clara la información que desea transmitir, con ayuda del material idóneo. Y en tercer lugar, que el lenguaje utilizado para comunicarse con sus estudiantes sea adecuado para la madurez cognoscitiva del discente. Sin embargo, lo más importante es que posea capacidad para incitar y guiar la actividad de aprendizaje (Ausubel, Novak y Hanesian, 1983).

Translation

The teacher is undoubtedly a fundamental variable for the teaching-learning process to be beneficial. There are three aspects that the teacher is expected to fulfill: first, from the cognitive perspective, his knowledge must be broad and persuasive; second, to have the ability to present in an orderly and clear way the information to be conveyed, with the help

of the appropriate material. Thirdly, the language used to communicate with their students is adequate for the cognitive maturity of each individual. However, the most important thing is that they have the capacity to motivate and guide the learning activity (Ausubel, Novak and Hanesian, 1983).

5.1.2.2 Translation from English into Spanish of the document *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos*

Paragraph 1

Leo Brouwer's contribution to the guitar within the last decades has been an important significance to the guitar repertoire. In 2001, Leo Brouwer composed his Nuevos Estudios Sencillos, following his large contribution to guitar pedagogy.

This paper analysis the importance of the studies for the guitar throughout the mention and analysis of one of the most performed works on guitar Heitor Villa-Lobos 12 Etudes for Guitar.

Also, the study of the cuban guitar history since its beginnings, following by Brouwer's career as an artist, composer and pedagogue. The last chapter break up the studies in two major sections, technical difficulties and musical significances toward a better comprehension and understanding of Brouwer's pedagogical philosophy.

Translation

En las últimas décadas, la contribución de Leo Brouwer ha sido significativa para el repertorio de guitarra. En 2001, Leo Brouwer compuso sus Nuevos Estudios Sencillos, y aportó aún más a la pedagogía de la guitarra.

Este artículo analiza la importancia de los estudios para guitarra por medio del análisis y mención de uno de los trabajos interpretados en guitarra Heitor Villa-Lobos 12 Etudes for Guitar.

Asimismo, este trabajo se enfoca en el estudio de la historia de la guitarra cubana desde sus inicios, seguido por la carrera de Brouwer como artista, compositor y pedagogo. El último capítulo separa los estudios en dos secciones principales; las dificultades técnicas e importancia musical para una mejor comprensión y el entendimiento de la filosofía pedagógica de Brouwer.

Paragraph 2

The basis for this research is an overall personal interest in various kinds of musical styles, such as jazz and popular Latin American music like boleros, milongas, sambas, and folk music. Though being part of classical guitar standard repertoire, Latin music has oftentimes not been taken seriously enough. Reasons for this view are grounded in the fact that there are not many extensive major works written for the guitar out of that musical culture. Moreover, Latin music requires unfamiliar knowledge and skills in order to be played authentically.

A thorough experience with Latin music was my participation in a CD recording with a Costa Rican guitar quartet.

Translation

Esta investigación se basa en un interés personal general en varios tipos de estilos musicales, tal como el jazz y la música popular latinoamericana como, por ejemplo: boleros, milongas, sambas y música folk. A pesar de que la música latina forma parte del repertorio estándar de guitarra clásica, esta muchas veces no se toma lo suficientemente en serio. Este punto de vista se basa en el hecho de que no existen muchas obras extensas importantes escritas para guitarra fuera de esa cultura musical. Asimismo, la música latina requiere conocimientos y habilidades desconocidas para tocarse con autenticidad.

Al participar en la grabación de un CD con un cuarteto de guitarra costarricense, se obtuvo la experiencia completa.

Paragraph 3

Cuban composer, conductor, and guitarist Leo Brouwer has for a long time been one of my favorite composers for guitar. He wrote his Simple Studies between 1960 and 1981, twenty studies in total. Most of them are part of the repertoire for beginners and well-known among guitar students. As a guitarist, I have performed many works from Leo Brouwer's solo guitar repertoire such as *Elogio de la Danza*, *Hika: In Memoriam Toru Takemitsu*, and *Simple Studies*. Furthermore, I played chamber music works such as: *Toccata*, *Paisaje Cubano Con Rumba*, *Paisaje Cubano con lluvia*, and *Acerca del cielo, el aire y la sonrisa*.

Translation

Por mucho tiempo, el compositor, director de orquesta y guitarrista cubano Leo Brouwer ha sido uno de los compositores favoritos de guitarra. Brouwer escribió veinte estudios titulados *Simple Studies* entre 1960 y 1981. La mayoría son parte del repertorio para principiantes y son muy conocidos entre los estudiantes de guitarra. Como guitarrista, el sustentante ha interpretado muchos trabajos del repertorio para solos de guitarra de Leo Brouwer, tales como *Elogio de la Danza*, *Hika: In Memoriam Toru Takemitsu* y *Simple Studies*. Además, obras de música de cámara como: *Toccata*, *Paisaje Cubano Con Rumba*, *Paisaje Cubano con lluvia* y *Acerca del cielo, el aire y la sonrisa*.

Paragraph 4

When Brouwer released his ten new studies *Nuevos Estudios Sencillos* in 2003, they immediately captured my attention and thus became the focal point of my thesis.

Throughout the history of western music, compositions featured Study1 as an important category within different kind of instruments. Very often, the main goal is to develop and shape technical skills of a solo instrument through a short composition and usually focusing on a particular difficulty. Great compositions such as Frédéric Chopin's *Etudes op.10* and as well as compulsory piano studies from Czerny are good examples of works that inspired many performers during the 19th century, and paved the way for further and musical development.

Translation

Cuando Brouwer lanzó sus diez nuevos estudios *Nuevos Estudios Sencillos* en 2003, estos inmediatamente llamaron la atención, por lo tanto se convirtieron en el punto focal de esta tesis.

A lo largo de la historia de la música occidental, las composiciones presentan a los estudios como una categoría importante para cada uno de los diferentes tipos de instrumentos. Muy a menudo, el objetivo principal es desarrollar y moldear las habilidades técnicas de un instrumento solista a través de una breve composición y por lo general solo se hace énfasis en una dificultad en particular. Grandes composiciones como *Etudes op.10* de Frédéric Chopin y los estudios obligatorios de piano de Czerny son buenos ejemplos de obras que inspiraron a muchos artistas durante el siglo XIX y prepararon el camino para un eventual desarrollo musical.

Paragraph 5

The classical guitar was not an exception. As early as 1815, Spanish guitarist Fernando Sor, considered by many as one of the most important composers for guitar, published his 12 Etudes, Op.6. In addition, many other important composers such as Mauro Giuliani (1781-1829), Giulio Regondi (1822-1872), and the Spanish guitarist Francisco Tárrega (1852-1909) created important studies for the guitar repertoire.

However, major considerations will be given to the studies of the well-known Brazilian composer, who was also a guitarist and dedicated his studies to Andrés Segovia in the early 20th century. The series consists of twelve advanced studies, which are undoubtedly among the most performed studies in concerts, recordings, and competitions nowadays.

Translation

La guitarra clásica no fue la excepción. En 1815, el guitarrista español Fernando Sor, considerado por muchos como uno de los compositores más importantes de guitarra, publicó sus 12 Etudes, Op.6. Asimismo, muchos otros compositores importantes como Mauro Giuliani (1781-1829), Giulio Regondi (1822-1872) y el guitarrista español Francisco Tárrega (1852-1909) crearon importantes estudios para el repertorio de guitarra.

Sin embargo, se le dará un mayor énfasis a los estudios del conocido compositor brasileño, quien también era guitarrista y le dedicó sus estudios a Andrés Segovia a principios del siglo XX. La serie consta de doce estudios avanzados, los cuales sin duda son uno de los estudios más interpretados en conciertos, grabaciones y competencias.

Paragraph 6

Heitor Villa-Lobos was born in Rio de Janeiro on March 5, 1887. He was taught music by his father, a highly-cultured amateur of music and a librarian. By the turn of the century, Villa-Lobos became a professional musician. He earned his living as a café

musician and his instrument was the cello. Despite of the fact that he never studied at a music institution Villa-Lobos became the best-known and most significant Latin American composer to date. He wrote numerous orchestral, chamber, instrumental and vocal works, and his music was influenced by both Brazilian folk music and by stylistic elements from the European classical tradition, as exemplified by his *Bachianas Brasileiras* (Brazilian Bachian pieces in remembrance of Bach).

Translation

Heitor Villa-Lobos nació el 5 de marzo de 1887 en Río de Janeiro. Su padre, quien era bibliotecario y un gran aficionado a la música le enseñó. A finales del siglo, Villa-Lobos se convirtió en un músico profesional quien se ganaba la vida como un músico en cafés. Él tocaba el violonchelo. Pese a que nunca estudió en una institución formal de música, Villa-Lobos se convirtió en el compositor latinoamericano más conocido y significativo hasta la fecha. Escribió numerosas obras orquestales, de cámara, instrumentales y trabajos vocales. Su música se vio influida por la música folclórica brasileña y por elementos estilísticos de tradiciones clásicas europeas, tal como se ejemplifica en sus *Bachianas Brasileiras* (Piezas brasileñas Bachian en recuerdo de Bach).

Paragraph 7

Study number one evokes associations to a Prelude, even though the manuscript of 1928 does not contain any technical subtitle. However, because of its similarity to Prelude no.1 in C major of the Well-Tempered Clavier the steady arpeggio pattern and Villa-Lobos admiration to Bach's music, reminds the listener of a Prelude. This study is a required work of a student's repertoire because of its right-hand demand by having a fixed arpeggio throughout the study (Figure 1) and Villa-Lobos provides left-hand fingerings for nearly all

chords. Thus, enabling guitarists to focus on and develop their righ-hand technique through a musical journey of rich harmonies.

Translation

El estudio número uno evoca asociaciones a un Preludio, a pesar de que el manuscrito de 1928 no contiene ningún subtítulo técnico. Sin embargo, debido a su similitud con Preludio no.1 en Do mayor del *Well-Tempered Clavier*, el patrón de arpegio constante y la admiración de Villa-Lobos por la música de Bach, le recuerda al oyente un Preludio. Este estudio es un trabajo requerido en el repertorio de un estudiante debido a la utilización de la mano derecha, dado que posee un arpegio fijo durante todo el estudio (Figura 1) y Villa-Lobos proporciona digitaciones para realizarse con la mano izquierda para casi todos los acordes. Por tanto, esto les permite a los guitarristas enfocarse y desarrollar su técnica con la mano derecha a través de un viaje musical de enriquecidas armonías.

Paragraph 8

At a very advanced level, Villa-Lobos composed study number two focusing not only on arpeggios, as study number one did, but it contains many challenges for both hands. Unlike the study number one, finding a good fingering for both hands is basic requirement for these guitarists who want to achieve agility and skill fullness with this work. If it were not for bar repetitions in lots of measures this would be consider a small study of only twenty-seven measures. Moreover, the study requires different techniques for the left-hand such as half-bars and complex slurs, all of which demand many skills from the student.

Translation

A un nivel muy avanzado, Villa-Lobos compuso el estudio número dos el cual se enfoca no solo en arpegios, como lo hizo el estudio número uno, ya que contiene muchos

desafíos para ambas manos. A diferencia del estudio número uno, adquirir una buena digitación para ambas manos es un requisito básico para los guitarristas que quieren alcanzar agilidad y destreza en su trabajo. Si no fuera por las repeticiones de barras en muchas medidas, esto se consideraría un pequeño estudio de solo veintisiete medidas. Además, el estudio requiere diferentes técnicas para la mano izquierda, tales como medias barras y ligaciones complejas, todo lo cual exige muchas habilidades del estudiante.

Paragraph 9

Knowing of slurs to be a fundamental guitar technique of slurs on the guitar, VillaLobos composed the study number three based on ascending and descending slurs. Equally important studies number nine and ten possess significant passages for practicing slurs (Figure 2), which are always challenging. Neither Carcassi, nor Giuliani, nor Regondi succeeded creating a study that focuses on slurs as Villa-Lobos did.

During Villa-Lobos lifetime, it seems that many famous guitarists such as Segovia were not able to play study number three satisfactorily, since no recordings can be found of this study. Even nowadays, it remains a very difficult study for slurs including different 5 variations, finger combinations and fixed bars. Thus, study number three has rightly been listed among those studies of a higher level of difficulty.

Translation

Es necesario saber que las ligaciones son una técnica fundamental en guitarra. Villa-Lobos compuso el estudio número tres basado en ligaciones ascendentes y descendentes. Los estudios número 9 y 10 son de suma importancia, dado que poseen pasajes significativos para practicar las ligaciones (Figura 2), las cuales son desafiantes. Ni

Carcassi, ni Giuliani, ni Regondi lograron crear un estudio que se enfocara en ligaciones musicales tal como lo hizo Villa-Lobos.

Al parecer durante la vida de Villa-Lobos, muchos guitarristas famosos como Segovia no pudieron tocar el estudio número tres satisfactoriamente, ya que no se pueden encontrar grabaciones de dicho estudio. Incluso hoy, sigue siendo un estudio muy difícil de ligaciones donde se incluyen cinco diferentes variaciones, combinaciones de dedos y barras fijas. Por lo tanto, el estudio número tres ha sido acertadamente nombrado parte de los estudios con un mayor nivel de dificultad.

Paragraph 10

The study develops a melody in the bass with broken chords percussive-timbral and other effects idiomatic to the guitar. There is a big contrast between the Brazilian singing such as choros and the slightly impressionist ornamentation that imitates a harp. The last study is one of the most revolutionary works Villa-Lobos has ever written. It has intense movement for left-hand across the fingerboard. Featuring a simple structure of A - B - A, the indication *Un peu plus animé* requires the performer to end vividly and fast a beautiful section which conclude a musical journey of these important studies of the classical guitar.

Translation

Dicho estudio desarrolla una melodía en el bajo con acordes rotos percusivos-tímbricos y otros efectos idiomáticos a la guitarra. Existe un gran contraste entre el canto brasileño como los coros y la ornamentación ligeramente impresionista que imita un arpa. El último estudio es una de las obras más revolucionarias escritas por Villa-Lobos. Este posee un intenso movimiento para la mano izquierda a través del diapasón. Asimismo, presenta una simple estructura de A - B - A, dado que la indicación *Un peu plus animé* requiere que el artista

finalice vívida y rápidamente una hermosa sección que concluye el viaje musical de uno de estos importantes estudios de la guitarra clásica.

Paragraph 11

Because of his extensive list of works and their musical qualities, Villa-Lobos is considered the most important Latin American composer of the first half of the twentieth century. As a bridge from past to future guitar music, his twelve studies, Five Preludes, and his Guitar concerto are widely considered as a cornerstone for the classical guitar repertoire.

Guitar pedagogue Abel Carlevaro once noted that Villa-Lobos contributed greatly to the classical guitar world by giving birth to the modern guitar, through new and expanded musical and technical possibilities, enhancing the repertoire for the instrument. Over the time, other guitarists composed more repertoire for guitar such as Andrés Segovia, Angelo Gilardino, and Leo Brouwer.

Translation

Debido a su extensa lista de obras y sus cualidades musicales, Villa-Lobos es considerado el compositor latinoamericano más importante de la primera mitad del siglo XX. Tal como un puente entre la música de guitarra del pasado y el futuro, sus doce estudios, *Five Preludes* y su concierto de guitarra son considerados como el pilar del repertorio de la guitarra clásica.

El pedagogo de guitarra Abel Carlevaro señaló que Villa-Lobos contribuyó en gran medida al mundo de la guitarra clásica debido a que estableció la guitarra moderna, a través de nuevas y extensas posibilidades musicales y técnicas, mejorando así el repertorio para dicho instrumento. A través del tiempo, otros guitarristas compusieron varios repertorios para guitarra, tales como Andrés Segovia, Angelo Gilardino y Leo Brouwer.

Paragraph 12

The guitar history in Cuba began with the Spanish Conquest and continued during the Colony, from the Sixteenth to the Nineteenth Century. However, since the Twentieth Century, the Cuban guitarist Severino López introduces the classical guitar into the island. He studied in Spain with guitarist Miguel Llobet, who was student of Tárrega's school. Another important guitarist was Clara Romero (1888-1951), founder of the modern Cuban School of Guitar. She studied in Spain with Nicolás Prats and in Cuba with Félix Guerrero. She inaugurated the guitar department at the Havana Municipal Conservatory in 1931. The most important disciple was her son Isaac Nicola (1916-1997). Nicola studied in Paris with Emilio Pujol, also disciple of Francisco Tárrega.

Translation

La historia de la guitarra en Cuba comenzó con la conquista española y continuó durante la Colonia, desde el siglo XVI hasta el siglo XIX. Sin embargo, en el siglo XX, el guitarrista cubano Severino López introduce la guitarra clásica en la isla. Él estudió en España con el guitarrista Miguel Llobet, quien era alumno de la escuela de Tárrega. Clara Romero (1888-1951) fue otra guitarrista importante. Ella fundó la moderna Escuela Cubana de Guitarra. Estudió en España con Nicolás Prats y en Cuba con Félix Guerrero. Asimismo, inauguró el Departamento de guitarra en el Conservatorio Municipal de La Habana en 1931. Su discípulo más importante fue su hijo, Isaac Nicola (1916-1997) quien estudió en París con Emilio Pujol y también fue discípulo de Francisco Tárrega.

Paragraph 13

After the Cuban Revolution of 1959, Nicola, along with other important teachers and guitarists, established a basis for a comprehensive guitar didactical system. This Cuban school gave rise to important guitarists and composers. Many of Nicola's students became

relevant guitarists in Cuban history, such as Jesús Ortega, Marta Cuervo, and Leo Brouwer. Probably the most important pupil is Leo Brouwer, being a revolutionary in the Cuban guitar school through his contributions to the technique and repertoire for guitar.

Guitarist, conductor, and composer Leo Brouwer, was born on March 1st, 1939 in Havana Cuba. His first steps with the guitar started at a very young age.

Translation

Después de la Revolución Cubana de 1959, Nicola, junto con otros maestros y guitarristas importantes, establecieron la base para un sistema didáctico integral de guitarra. Esta escuela cubana formó importantes guitarristas y compositores, dado que muchos de los estudiantes de Nicola se convirtieron en guitarristas relevantes en la historia cubana, como por ejemplo Jesús Ortega, Marta Cuervo y Leo Brouwer. Probablemente el alumno más importante es Leo Brouwer, un revolucionario de la escuela de la guitarra cubana debido a sus contribuciones a la técnica y repertorio para guitarra.

El guitarrista, director y compositor Leo Brouwer, nació el 1 de marzo de 1939 en La Habana, Cuba. Sus primeros pasos con la guitarra comenzaron a una edad muy temprana.

Paragraph 14

He was introduced to the guitar by his father, who was a medical doctor and an amateur guitarist interested in the music of Villa-Lobos, Tárrega, and others. From 1953 to 1955 he began his formal guitar studies with Isaac Nicola, who exposed Brouwer to Renaissance and Baroque music for the first time. Impacted by his experience of seeing Nicola playing major works, Brouwer obtained a better understanding of music. At the age of 17, he gave his first performances with selected repertoire. That his professor sorted chronologically.

As a soloist, he soon gained importance in the guitar scene, and thus participated at many festivals in Eastern Europe as a result of Cuba–Soviet Union relationship.

Translation

Su padre, quien era médico y guitarrista aficionado con gran interés en la música de Villa-Lobos, Tárrega y otros, lo introdujo en la guitarra. De 1953 a 1955 comenzó sus estudios formales de guitarra con Isaac Nicola, quien acercó a Brouwer por primera vez a la música renacentista y barroca. Influida por su experiencia al observar a Nicola interpretando obras importantes, Brouwer obtuvo una mejor comprensión de la música. A los 17 años, dio sus primeras interpretaciones con un repertorio seleccionado el cual su profesor ordenó cronológicamente.

Ganó importancia rápidamente como solista en la escena de la guitarra, y, por lo tanto, participó en muchos festivales en Europa del Este como resultado de la relación entre Cuba y la Unión Soviética.

Paragraph 15

An important feature of these studies is that most of them combine at least two different technical skills. Some of the studies require a previous technical improvement in order to handle them more easily. In Table 3, are ranked from a single skill (1) being the lowest (study VI), to five (5) being the highest of demanded technique skills (study II). Since this information is not sufficient for determining the difficulty of each piece, a thorough analysis must also consider other aspects, such as the amount of diverse technical challenges, tempo marks (even the amount of tempo indications, speed, and character they specify), length of the piece, and other musical characteristics related to the study's specific composition.

Translation

Una característica importante de dichos estudios es que la mayoría combina al menos dos habilidades de técnicas diferentes. Algunos de los estudios requieren mejorar una técnica previa para manejarlos más fácilmente. En la Tabla 3, se clasifican de una sola habilidad (1) siendo la más baja (estudio VI), al cinco (5) siendo las habilidades técnicas más altas requeridas (estudio II). Ya que esta información no es suficiente para determinar la dificultad de cada pieza, un análisis detallado también debe considerar otros aspectos, tales como la cantidad de desafíos técnicos diversos, marcas de tiempo (incluso la cantidad de indicaciones de tiempo, velocidad y carácter que estas especifican), duración de la pieza y otras características musicales relacionadas con la composición específica del estudio.

5.1.2.3 Glossary

A glossary is an essential instrument for a translator because it helps in advance to determine what the most repetitive or difficult words are. It helps the translator to save up time and it also helps any other reader to have an idea of what the general topic of each document is. In this section, two glossaries of thirty words each have been created with the most repetitive and specific words from each document. It includes the source language word, its target language word, the grammatical category and a short definition.

Source Language	Grammatical Category	Target Language	Short Definition
Afianzamiento	Noun	Reinforcement or consolidation	Aseguramiento o consolidación de algo

Afiliación	Noun	Membership	Ingreso de una persona dentro de una corporación
Aprendizaje	Noun	Learning	Adquisición del conocimiento de algo por medio del estudio
Auditivo	Adjective	Auditory	Del órgano del oído o relacionado con él
Cognoscitivo	Adjective	Cognitive	Que sirve para conocer
Conceptual	Adjective	Conceptual	Del concepto o relacionado a él.
Conjeturas	Noun	Speculate	Juicio u opinión formado a partir de indicios o datos incompletos.
Constructivismo	Noun	Constructivism	es una teoría según la cual el conocimiento y la personalidad de los

			<p>individuos están en permanente construcción debido a que responden a un proceso continuo de interacción cotidiana entre los afectos, aspectos cognitivos y los aspectos sociales de su comportamiento.</p>
Curriculares	Adjective	Curricular or Educational	<p>Conocimientos que un alumno debe adquirir para conseguir un determinado título académico.</p>
Didáctico	Adjective	Educational	<p>Que sirve, es adecuado o está pensado para la enseñanza</p>

Diferenciación	Noun	Differentiation	Diferencia entre dos cosas
Especificidad	Noun	Specificity	Cualidad de específico
Esquemático	Adjective	Simplified	Que está explicado o hecho de manera simple, únicamente con sus rasgos esenciales
Extrínseca	Adjective	Extrinsic	Que es adquirido o superpuesto a la naturaleza propia de algo.
Factible	Adjective	Feasible	Que puede ser hecho o que es fácil de hacer.
Inclusión	Noun	Inclusion	Efecto de incluir
Índole	Noun	Nature, type	Naturaleza propia de cada cosa, que la

			distingue de las demás.
Integración	Noun	Integration	Acción de incorporar
Intrínseca	Adjective	Intrinsic	Que es propio o característico de la cosa que se expresa por sí misma y no depende de las circunstancias
Jerarquización	Noun	Hierarchical organization	Organización
Logística	Noun	Logistic	Conjunto de los medios necesarios para llevar a cabo un fin determinado de un proceso complicado
Metodológica	Adjective	Methodological	Relacionado a la lógica que estudia los métodos.

Nodos	Noun	Nodes	Puntos que permanecen fijos en un cuerpo vibrante.
Pedagógica	Adjective	Pedagogical	Expuesto con claridad y sencillez, de manera que sirve para educar o enseñar
Secuencial	Adjective	Sequential	Orden, sucesión
Significativo	Adjective	meaningful	Que tiene importancia, valor o relevancia
Síntesis	Noun	Summary	Resumen
Subordinada	Adjective	Subordinate	Que depende de otra
Sustrato	Noun	Substratum	Influencia de la lengua de un territorio sobre lengua que se asienta en él

Viabile	Adjective	Viabile	Que puede llevarse a cabo.
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Table 6 illustrates the difficult terminology found in the translation from Spanish into English. Source: Researcher's own creation

Source Language	Grammatical Category	Target Language	Short Definition
Agility	Noun	Agilidad	The power of moving quickly and easily
Amateur	Noun	Aficionado	A person who engages in an activity for pleasure rather than for money, a person inexperienced in a particular activity.
Articulation	Noun	Articulación	Movements amongst parts
Avant-garde	Adjective	De vanguardia, innovador	The group of artists, writers, musicians

			whose work is considered modern, advanced, or experimental.
Chamber	Noun	Recámara	A usually private room
Composition	Noun	Composición	The process of producing a piece of music and the organization of different parts of a work of art.
Counterpoint	Noun	Contrapunto	the art of combining melodies
Curriculum	Noun	Plan de estudios	All the courses of study given in a school
Didactical	Adjective	Didáctico	Intended for instruction
Fingerboard	Noun	Diapasón	The strip of wood on the neck against

			which the strings are stopped by the fingers.
Folk	Adjective	Popular folclórico	Of or coming from the common people
Fret	Noun	Traste	Any of the ridges of wood or metal set across the fingerboard of a stringed instrument, such as guitar
Harmonies	Noun	Armonías	A consistent, orderly, or pleasing arrangement of parts.
Idiomatic	Adjective	Idiomático	That sounds natural and correct to a native speaker of a language.

Lyricism	Noun	Lirismo	A person who writes the lyrics for songs
Melodic	Adjective	Melódico	Having a pleasant tune
Metronome	Noun	Metrónomo	An instrument that makes repeated clicks, used to mark rhythm in practicing music.
Monotonous	Adjective	Monótono	Unchanging tone
Passages	Noun	Pasaje	A section of a written, spoken, or musical work.
Polyphonic	Adjective	Polifónico	A musical style in which two or more independent and harmonious melodic lines are heard at the same time.

Prelude	Noun	Preludio	A relatively short piece of music serving to introduce another
Repertoire	Noun	Repertorio	All the works that a performing company or artist is prepared to present, or that exist in a certain field.
Scale	Noun	Escala	A succession of musical tones at fixed degrees.
Slurs	Noun	Ligadura	To sing or play two different tones of music in one syllable or without a break
Soloist	Noun	Solista	A person who performs a solo

Stroke	Noun	Rasgueo	A complete movement that is continuously repeated in some process
Symposiums	Noun	Simposio	A meeting or conference for the discussion of some subject.
Tempo	Noun	Tempo, compás, ritmo	The rate of speed of a musical passage or work
Timbre	Noun	Timbre	Unique quality of sound produced by a particular instrument or voice; tone color.
Vibrato	Noun	Vibrato	Effect produced in vocal or instrumental music

	by rapid but slight alternations in pitch.
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*Table 7 illustrates the difficult terminology found in the translation from English into Spanish. Source:
Researcher's own creation*

Chapter VI- Conclusions and Recommendations

In this chapter the translator's analysis of texts results, experience in the process, setbacks and recommendations on this research will be stated. The results of the objectives stated in Chapter I will be discussed in this segment as well.

6.1 Purpose of the Conclusion

By comparing the the objectives that were set in Chapter I versus the results that were obtained throughout the translation process and analysis of both the source and target text, the reader and translator will be able to determine which objectives were accomplished. This comparison and analysis will also serve as feedback material for future translators that have to go through this process.

6.2. Conclusions

6.2.2 To translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia

For this specific objective, the first step that was taken by the translator was to read both documents in a very general manner in order to grasp the idea of the type of text they were going to have to translate. During this first process a general reading was done but then it was followed by a close reading. As it was stated in Chapter I, close reading was able to help the translator become more familiar with the texts that he was going to work on.

Moreover, at this stage of close reading the translator was able to take the opportunity to create a glossary with the most repetitive words, never before seen words by the translator, words that he knew but by context meant something different and finally words that would help him speed his process of translating both documents.

After close reading both documents it was determined that both texts were going to be translated through semantic translation. This is so because both documents are dissertation papers and needed to be translated as faithful to the original text as possible without losing its meaning and through the usage of abundant literal translations.

Both *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* that was translated from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* that was translated from English to Spanish were both written to inform. The source document text in Spanish is a dissertation paper that was written to inform the audience about the importance of having an integral relationship between the teacher and the student to guarantee their understanding and commitment during the school process. The source document text in English is also a dissertation paper but whose main goal was to inform the reader about the great influence that the guitarist Leo Brouwer had and still has on guitar students.

After both the general and close reading, the translator was also able to determine the type of text style to be worked on, which for both cases was narrative. These documents were meant to inform and prove their particular objectives by showing factual evidence.

In terms of the scale of generality, formality, emotional tone, and text function both documents are formal, educated, understandable and informative. They were graduation documents that were meant to be presented as a formal requisite to graduate from their respective careers. By determining the previous factors, the translator was able to decide what type of language, vocabulary and tone he needed to deliver in the target language text in order to stay true to the message of each document but also make it understandable for any person that wants to read it.

Moreover, the translator was assisted by online dictionaries and synonym and antonym dictionaries that helped organized and decide which word fitted more appropriately. The glossary that had been created was of great use during the translation process because it favored the translator to save up time and know almost by heart the translated words that would repeat themselves in the text. It is important to mention that during this process the translator also found lots of setbacks because of grammatical errors and overly embellished wordings in the source texts. This ended up becoming a rework for the translator because he had to not only translate the documents but correct the original one in certain areas in order to deliver the correct message.

6.2.3 To apply various translation techniques to the documents in order to achieve a clear and accurate target text

The translation techniques that were used in the process of translating and analyzing the documents were transposition, modulation, omission, amplification, explicitation and literal translation. After having analyzed all 30 paragraphs, 15 paragraphs in the English

translation and 15 paragraphs for the Spanish translation, it was evident the abundance of literal translation in the translation process.

This procedures of translation are important because they are evidence of how the language changes in the process of translating from one language to another. They also demonstrate the modifications that have to be made in order to transmit the same exact message from the source language into the target one. Moreover, it proves all of the information the translator must be able to manage and know from both languages in order to deliver a faithful translation.

6.2.4 To evaluate the effect of the translation techniques applied on the documents

The majority of the text translated was done unintentionally in a literal manner because most of the formation of words was similar to its translated version in English and Spanish. There were not many explication nor amplification techniques in the process of translation because the type of language was not that technical, so there were not many additional explanations that the reader in the target language had to know in order to understand what was being said.

The most abundant translation techniques aside from literal translation were, transpositions and modulations. Many adjective-noun formation were present in the text that had to be inverted in its target language translation. There were many lexical spaces that had to be filled with grammatical structures in the target language, changes from singular to plural words in both languages, changes from verbs to adjectives or to adverbs were also abundant in the text. Bigger inversions of sentences were made and changes in the entire sentence for the target language were made whose meaning remained the same

but its structure differ. In some instances there were mayor changes in punctuation and sentence structure in the translated version because the original source language text had grammatical mistakes and had to be corrected. For the Spanish to English translation there were bigger modulation changes because in the original text there were many embellishing words that only confused the reader and did not state a clear message.

6.2.5 To create a glossary with the most relevant terminology found in both texts

The creation of the glossary was of great help for the translator before even starting the translation process because this tool was able to give the translator a general idea of the topic of both documents and it helped him save time while translating. Glossaries save up time because the translator does not have to searching for a word that is more technical because he already studied it beforehand and knows what translation word applies for the context of the document. This tool also helped expand the translator's knowledge and vocabulary. By including the most relevant terminology in the glossary, the translator and any other reader can easily get familiarized with the level of complexity that they will have to deal with in their process of translation.

6.3 Restatement of the Research Question

What is the effect of using translation techniques to translate the documents *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* from Spanish into English and *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* from English into Spanish for Liceo Santa Bárbara de Heredia? This question was able to have an answer once all of the techniques from Chapter II and III were put into action. By determining the type of text

both documents were, its scale of formality, emotional tone and generality, the translator was able to determine the type of translation he must deliver which was a semantic one.

When the translator analyzed the first fifth teen paragraphs from each document against their translated version through translating procedures which were transposition, modulation, omission, amplification, explicitation, literal translation and changes in punctuation, the translator was able to identify the techniques used to express the most accurate message in the target language. This translation techniques helped demonstrating how important it is for the translator to master both the source and the target language in order to freely yet faithfully mix and transform grammatical phrases, order of words and choice of words that are going to fit appropriately when delivering the translated message of the documents.

6.4 Recommendations

The following are some recommendations for future translators that are in the process of creating their dissertation papers. One of the most important points is to have the documents that the students have to translate ahead of time. The students should create a calendar of set goals for a certain period of time in order to have their work organized and on time. The students must also have the professor who is going to check their grammar and the philologist who is in charge of checking their translated documents ahead of time as well.

If the students have the documents that they must translate ahead of time, it would be ideal for them to start translating them. Having the glossary and the paragraphs that the translator will analyze picked ahead of time, it will save students a lot of time. Given that in

this dissertation paper the original text had many grammatical mistakes, the translator must also give them time to check properly and correct the original text in order to deliver a correct translation in the source language.

According to Newmark (1988) all translators must familiarize themselves with the text that they have to translate. They must understand both text and its terminology in order to deliver a well-rounded translation. This is why creating a glossary is vital for future translators because they will have a strong base for most used, technical and complex words in order to master them for translation purposes.

Overall, this dissertation is a warm up – type of environment of what translators will face in the future when they work as a full time translator. They have to get used to deadlines, working on time, asking precise questions to his client, and always having a great attitude in order to deliver a document that is professional and of high quality.

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AneXos

THE VALUE OF THE PEDAGOGICAL REPERTOIRE FOR GUITAR:
LEO BROUWER'S NUEVOS ESTUDIOS SENCILLOS

by
Daniel Rojas Salgado
April 2017

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Abstract

Leo Brouwer's contribution to the guitar within the last decades has been an important significance to the guitar repertoire. In 2001, Leo Brouwer composed his *Nuevos Estudios Sencillos*, following his large contribution to guitar pedagogy.

This paper analysis the importance of the studies for the guitar, throughout the mention and analysis of one of the most performed works on guitar Heitor Villa-Lobos *12 Etudes for Guitar*.

Also the study of the cuban guitar history since its beginnings, following by Brouwer's career as an artist, composer, and pedagogue. The last chapter break up the studies in two major sections, technical difficulties and musical significances toward a better comprehension and understanding of Brouwer's pedagogical philosophy.

Introduction

The basis for this research is an overall personal interest in various kinds of musical styles, such as jazz and popular Latin American music like boleros, milongas, sambas, and folk music. Though being part of classical guitar standard repertoire, Latin music has oftentimes not been taken seriously enough. Reasons for this view are grounded in the fact that there are not many extensive major works written for the guitar out of that musical culture. Moreover, Latin music requires unfamiliar knowledge and skills in order to be played authentically.

A thorough experience with Latin music was my participation in a CD recording with a Costa Rican guitar quartet. The CD *Paisajes* has been released in January 2015 and features contemporary chamber music guitar works from Cuba, Brazil, Chile, Colombia, and Costa Rica. Since then, my personal goal has been to further explore the music and its technical challenges of my cultural inheritance.

Cuban composer, conductor, and guitarist Leo Brouwer has for a long time been one of my favorite composers for guitar. He wrote his *Simple Studies* between 1960 and 1981, twenty studies in total. Most of them are part of the repertoire for beginners and well-known among guitar students. As a guitarist, I have performed many works from Leo Brouwer's solo guitar repertoire such as *Elogio de la Danza*, *Hika: In Memoriam Toru Takemitsu*, and *Simple Studies*. Furthermore, I played chamber music works such as: *Toccata*, *Paisaje Cubano Con Rumba*, *Paisaje Cubano con lluvia*, and *Acerca del cielo, el aire y la sonrisa*.

When Brouwer released his ten new studies *Nuevos Estudios Sencillos* in 2003, they immediately captured my attention and thus became the focal point of my thesis.

Chapter 1: The value of studies for guitarists

Throughout the history of western music, compositions featured Study¹ as an important category within different kind of instruments. Very often, the main goal is to develop and shape technical skills of a solo instrument through a short composition and usually focusing on a particular difficulty. Great compositions such as Frédéric Chopin's *Etudes op.10* and as well as compulsory piano studies from Czerny are good examples of works that inspired many performers during the 19th century, and paved the way for further and musical development.

The classical guitar was not an exception; as early as 1815, Spanish guitarist Fernando Sor, considered by many as one of the most important composers for guitar, published his *12 Etudes, Op.6*. In addition, many other important composers such as Mauro Giuliani (1781-1829), Giulio Regondi (1822-1872), and the Spanish guitarist Francisco Tárrega (1852-1909) created important studies for the guitar repertoire.

However, major considerations will be given to the studies of the well-known Brazilian composer, who was also a guitarist and dedicated his studies to Andrés Segovia in the early 20th century. The series consists of twelve advanced studies, which are undoubtedly among the most performed studies in concerts, recordings, and competitions nowadays.

Heitor Villa-Lobos was born in Rio de Janeiro on March 5, 1887. He was thought music by his father, a highly-cultured amateur of music and a librarian. By the turn of the century, Villa-Lobos became a professional musician. He earned his living as a café musician and his instrument was the cello. Despite of the fact that he never studied at a music institution Villa-Lobos became the best-known and most significant Latin American

¹ The first set using the term named *Studio per il pianoforte* was published by Cramer in London in 1804. Earlier examples had used other terms, such as *esercizio* (It.), *exercice*(Fr.), *lesson* (Eng.), or *Übung* (Ger.).

composer to date. He wrote numerous orchestral, chamber, instrumental and vocal works, and his music was influenced by both Brazilian folk music and by stylistic elements from the European classical tradition, as exemplified by his *Bachianas Brasileiras* (Brazilian Bachian-pieces in remembrance of Bach).

The composition year of the studies is generally held to be 1929², Andrés Segovia inspired nearly all of Villa-Lobos' music for the guitar, when they became close friends after having met in Spain in the early 1920's. Tamara Elena Livingston-Isenhour and Thomas George Caracas García compare his studies to those of Chopin:

“Until a certain point, his guitar works pay homage to Chopin, which were clearly the model studies for Villa-Lobos in his guitar works. These are concert studies, and like Chopin studies, are for recitals and concerts without limitate them to being consider mere pedagogical studies. Villa-Lobos studies, conscious or subconscious, represent an effort to legitimize the guitar as a concert instrument and the education of the guitar as piano level.”³

Study number one evokes associations to a Prelude, even though the manuscript of 1928 does not contain any technical subtitle. However, because of its similarity to *Prelude no.1 in C major* of the *Well-Tempered Clavier* the steady arpeggio pattern and Villa-Lobos admiration to Bach's music, reminds the listener of a Prelude. This study is a required work of a student's repertoire because of its right-hand demand by having a fixed arpeggio throughout the study (Figure 1) and Villa-Lobos provides left-hand fingerings for nearly all chords. Thus, enabling guitarists to focus on and develop their right-hand technique through a musical journey of rich harmonies.

² Several manuscripts and the Eschig publication of 1957 are marked Paris, 1929.

³ Tamara Elena Livingston-Isenhour, *Choro: A Social History of a Brazilian Popular Music*. (Bloomington: Indiana University Press, 2005), 189.

Figure 1: Heitor Villa-Lobos Study no.1 (excerpt)



At a very advanced level, Villa-Lobos composed study number two focusing not only on arpeggios, as study number one did, but it contains many challenges for both hands. Unlike the study number one, finding a good fingering for both hands is basic requirement for these guitarists who want to achieve agility and skill fullness with this work. If it were not for bar repetitions in lots of measures this would be consider a small study of only twenty-seven measures. Moreover, the study requires different techniques for the left-hand such as half-bars and complex slurs, all of which demand many skills from the student.

Knowing of slurs to be a fundamental guitar technique of slurs on the guitar, Villa-Lobos composed the study number three based on ascending and descending slurs. Equally important studies number nine and ten possess significant passages for practicing slurs (Figure 2), which are always challenging. Neither Carcassi, nor Giuliani, nor Regondi succeeded creating a study that focuses on slurs as Villa-Lobos did.

Figure 2: Heitor Villa-Lobos Study no.10 (excerpt)



During Villa-Lobos lifetime, it seems that many famous guitarists such as Segovia were not able to play study number three satisfactorily, since no recordings can be found of this study. Even nowadays, it remains a very difficult study for slurs including different

variations, finger combinations and fixed bars. Thus, study number three has rightly been listed among those studies of a higher level of difficulty.

Study number seven is among Villa-Lobos most important contributions to guitar literature. Scales, voice leading, chords, and trills demonstrates its diversity in less than three minutes. Its lyricism and its rhythmical patterns wakes the study transcend beyond its technical function demands. It is quite noteworthy that study number seven is commonly a required piece in auditions, contests and in concerts due to his high level of virtuosity.

Studies number eleven and twelve have to be listed among the concert studies. In his book *The guitar in the Latin-American Music* [La Guitarra en la Música Latinoamericana] Nestor Guerdin attributes to study number eleven “a taste of Macumba and Batuque. And says that this study is the more African of all of them”.

The study develops a melody in the bass with broken chords percussive-timbral and other effects idiomatic to the guitar. There is a big contrast between the Brazilian singing such as choros and the slightly impressionist ornamentation that imitates a harp. The last study is one of the most revolutionary works Villa-Lobos has ever written. It has intense movement for left-hand across the fingerboard. Featuring a simple structure of A - B - A, the indication *Un peu plus animé* requires the performer to end vividly and fast a beautiful section which conclude a musical journey of these important studies of the classical guitar.

In conclusion, Villa-Lobos’ harmonic approach in his studies is thought-through. The Brazilian composer does not use flat key signatures in order to provide easier fingerings on the hands, but also maximizes the employment of the whole fretboard on the other hand. (See Table 1)

Table 1: Key signatures of Heitor Villa-Lobos's studies

Study	Key
1	Em
2	A
3	D
4	G
5	C
6	Em
7	E
8	C#m
9	F#m
10	Bm
11	Em
12	Am

Because of his extensive list of works and their musical qualities, Villa-Lobos is considered the most important Latin American composer of the first half of the twentieth century. As a bridge from past to future guitar music, his twelve studies, Five Preludes, and his Guitar concerto are widely considered as a cornerstone for the classical guitar repertoire.

Guitar pedagogue Abel Carlevaro⁴ once noted that Villa-Lobos contributed greatly to the classical guitar world by giving birth to the modern guitar, through new and expanded musical and technical possibilities, enhancing the repertoire for the instrument. Over the time, other guitarists composed more repertoire for guitar such as Andrés Segovia, Angelo Gilardino, and Leo Brouwer.

⁴ Was a virtuoso performer, classical guitar composer and teacher born in Montevideo, Uruguay in 1916. He established a new school of instrumental technique, incorporating a fresh approach to seating and playing the guitar, based on anatomical principles.

Chapter 2: Leo Brouwer's legacy for guitarists

The guitar history in Cuba began with the Spanish Conquest and continued during the Colony, from the Sixteenth to the Nineteenth Century. However, since the Twentieth Century, the Cuban guitarist Severino López introduces the classical guitar into the island. He studied in Spain with guitarist Miguel Llobet, who was student of Tárrega's school. Another important guitarist was Clara Romero (1888-1951), founder of the modern Cuban School of Guitar. She studied in Spain with Nicolás Prats and in Cuba with Félix Guerrero. She inaugurated the guitar department at the Havana Municipal Conservatory in 1931. The most important disciple was her son Isaac Nicola (1916-1997). Nicola studied in Paris with Emilio Pujol, also disciple of Francisco Tárrega.

After the Cuban Revolution of 1959, Nicola, along with other important teachers and guitarists, established a basis for a comprehensive guitar didactical system. This Cuban school gave rise to important guitarists and composers. Many of Nicola's students became relevant guitarists in Cuban history, such as Jesús Ortega, Marta Cuervo, and Leo Brouwer. Probably the most important pupil is Leo Brouwer, being a revolutionary in the Cuban guitar school through his contributions to the technique and repertoire for guitar.⁵

2.1. Brouwer as an artist

Guitarist, conductor, and composer Leo Brouwer, was born on March 1st, 1939 in Havana Cuba. His first steps with the guitar started at a very young age. He was introduced to the guitar by his father, who was a medical doctor and an amateur guitarist interested in the music of Villa-Lobos, Tárrega, and others.⁶ From 1953 to 1955 he began his formal guitar

⁵ Giro, Radamés, *Leo Brouwer y la Guitarra en Cuba* (La Habana: Editorial Letras Cubana, 1986), 33.

⁶ Clive Kronenberg, "Cuban Artist, Leo Brouwer, And His Solo Guitar Works: *Pieza Sin Título* To *Elogio De La Danza*. A Contextual-Analytical Study" (Master thesis., University of Cape Town, 2000). 35.

studies with Isaac Nicola, who exposed Brouwer to Renaissance and Baroque music for the first time. Impacted by his experience of seeing Nicola playing major works, Brouwer obtained a better understanding of music.⁷ At the age of 17, he gave his first performances with selected repertoire. That his professor sorted chronologically.

As a soloist, he soon gained importance in the guitar scene, and thus participated at many festivals in Eastern Europe as a result of Cuba–Soviet Union relationship. He recorded for Deutsche Grammophon, RCA, and ERATO⁸. Unfortunately, some decades later Brouwer had to finish his career as a soloist, due to an injury in one of his right-hand fingers while he was touring:

“The late 70s. I left to New York to play at the famous room "Y "; concert series "Grandes Virtuosos" (Segovia, Yepes, Lagoya and I). I had an accident on a finger (right hand). I stayed at M. Barrueco’s house, who aided me without success, so I changed in one night a technique of twenty years, playing with three fingers.”⁹

As a conductor, Brouwer led many orchestras, such as the Berlin Philharmonic, Havana Symphony, and the Córdoba Symphony in Spain (he was director of this orchestra from 1992 to 2001). Nowadays, Brouwer is actively involved in symposiums, conferences and guitar festivals, often traveling to Latin-American countries and Europe.

Brouwer’s earliest compositions are works such as: *Suite no.2 en Re Mayor* (1955), *Pieza sin título*, and *Preludio*, both composed in 1956, mainly featuring Cuban-folk elements. Being self-taught in composition, in harmony, and counterpoint, Brouwer continued composing for solo guitar, other instruments, and chamber music. According to Kronenberg, among the most important works of this early time, the *Fuga No.1* (1957) is found, "...which is a multifaceted contrapuntal work for three voices, sustained likewise by rhythmic contours

⁷ Paul Century, “Leo Brouwer: A Portrait of the Artist in Socialist Cuba,” *Latin American Music Review* 8 (1987): 152.

⁸ Brouwer, Leo. *Douze Sonates*, STU 70876, 1974. CD.

⁹ Brouwer, Leo. “La música, el infinito y Leo Brouwer.” Interview by Argel Calcines, *Opus Habana* November, 1999.

of African origin." Also, *Tres Apuntes*, composed in 1959, was his most developed solo guitar work at that time.¹⁰ Few years later, a more-mature artist with few formal composition studies at Juilliard School of Music (1959–60). Composed *Elogio de la danza* (1964), the culmination of his 'mission of structuring a more rigorous work' according to Brouwer.

Musicologist Victoria Eli Rodríguez categorized Brouwer's compositions into three different phases: the first, nationalistic (1955–62); the second, avant-garde (1962–67); and the third, in which avant-garde elements diminish and, particularly after 1980, a creative process described by the composer as 'new simplicity' emerges.

During the 1960s Brouwer became involved in other Cuban institutions like cinemas and was appointed director of the ICAIC (*Instituto Cubano del Arte e Industria Cinematográficos*). As head of the *Grupo de Experimentación Sonora* at ICAIC, created in 1969, he led and thought Cuban musicians like Silvio Rodríguez and Pablo Milanés. They eventually founded the movement in Cuban music known as Nueva Trova¹¹, which brought about a revival of Cuban music that began from its own roots.¹²

Apart from teaching, Brouwer attended many festivals in European cities like Darmstadt, Venice, Zagreb, Berlin, Warsaw, and Köln. Participating at the Warsaw Autumn Music Festival in 1961 was a great stimulus for Brouwer's second compositional phase. The music premieres and performances of international avant-garde composers like Stockhausen, Penderecki, Nono, and Henze made a tremendous impact on Brouwer.¹³ After his return from the festival, he composed avant-garde works like *Sonograma I* for prepared piano (1963) as well as the guitar works *Canticum* (1968), *La espiral eterna* (1970), *Per Suonare a due*

¹⁰ Clive Kronenberg, "Guitar Composer Leo Brouwer: The Concept of a 'Universal Language'," *Cambridge University Press* 62 (2008): 40.

¹¹ Nueva trova is a movement in Cuban music that emerged around 1967/68 after the Cuban Revolution of 1959, and the consequent political and social changes.

¹² Vladimir Wistuba-Alvarez, "Lluvia, Rumba y Campanas en los Paisajes Cubanos de Leo Brouwer y Otros Temas (Una conversación con Leo Brouwer)," *Latin American Music Review* 10 (1989): 135.

¹³ John Bryan Huston, "The Afro-Cuban And the Avant-Garde: Unification of Style and Gesture in The Guitar Music of Leo Brouwer" (PhD diss., University of Georgia, 2006). 69.

(1972), *Parabola* (1973–74), and *Tarantos* (1973–74). In these compositions, Brouwer incorporated European and modelled compositional techniques, like imprecise note-durations, and was influenced by other fields (such as Paul Klee's or Kandinsky's art work.)

The third and current compositional stage of Brouwer came when he felt the necessity to return to his roots, as a way of relaxation after many years of avant-garde music.

About this Brouwer stated:

"Every time it made me more abstract and airtight. I could not communicate, and as this, for me, is fundamental. It was like returning home. I softened my style a little, perhaps with some simplicity [...]. My new way is part of a general movement towards simplicity, based on music from our countries."¹⁴

According to Brouwer, his last compositional period features elements from popular music, classical music, and from the avant-garde itself, culminating in what he defines as "New Simplicity".¹⁵ Brouwer's intentions to enrich the repertoire for guitar through extensive works in traditional forms, such as Sonatas or Variations, becomes evident. All these works are generally dedicated to relevant guitarists around the world. Some distinguished works of this stage are *El Decamerón Negro*, composed in 1981 for solo guitar, and dedicated to the guitarist Sharon Isbin. His first guitar *Sonata* was dedicated to british guitarist Julian Bream in 1990, which is regularly performed by many guitarists. After the death of the japanese composer Toru Takemitsu, Brouwer paid tribute to him in his composition *Hika: In Memoriam Toru Takemitsu* (1996). About this piece Brouwer remarks:

"... beloved by me and one of the most mature, which has been played a lot lately and that seems to have motivated some great guitarists: [Hika] In Memoriam Takemitsu. Takemitsu, one of the geniuses of the 20th century, was a great friend whose talent I cannot stop to admire"¹⁶

¹⁴ Isabelle Hernández, *Gajes del oficio* (La Habana: Editorial Letras Cubanas, 2004), 86.

¹⁵ Brouwer, Leo. "A Close Encounter with Leo Brouwer." Interview by Rodolfo Betancourt, *Guitar Review*, 1998, 1.

¹⁶ Brouwer, Leo. "A Close Encounter with Leo Brouwer." Interview by Rodolfo Betancourt, *Guitar Review*, 1998, 5.

Brouwer's most important guitar concertos are *Concerto Elegiaco* (1986), *Concerto de Toronto* (1990) and *Concerto de Bolos* (1997). In addition, among recently works by Brouwer are three guitar sonatas: *Sonata del Caminante* (dedicated to Odair Assad) composed in 2007, *Sonata del Decamerón Negro* (dedicated to Costas Cotsiolis) composed in 2012, and *Sonata del Pensador* (dedicated to Ricardo Gallén) composed in 2013. In addition, his compositions have become pedagogically valuable.

2.2. Brouwer as a pedagogue

Brouwer has written more than one hundred works such as articles and essays for music conferences, or liner notes for CDs. Most of these remain unknown to many guitarists. His knowledge of works by authors such as Umberto Eco, Fernando Ortiz, and Alejo Carpentier demonstrates Brouwer's comprehensive education.

For this reason, some pedagogical writings have been published by Brouwer, a document based on baroque ornamentation called *Basic Ornamentation in Early Music – Renaissance e Esercizi per la double barocca*. And a study method entitled *Scales For Guitar, A Study Method* that he published in collaboration with important guitar's pedagogues in 1992.

The book *Gajes del Oficio* printed in 2006 is a compilation of Brouwer's articles. Written between 1964 and 2003, they have been published for symposiums, magazines, and musical conferences. The last section of this book *Sobre la técnica guitarrística* [About guitar technique], presents Brouwer's reflections on most common issues in the area of modern guitar technique. (See Apendix)

2.2.1. Pedagogical reflections

Brouwer's perception of the technical capabilities and limitations of the guitar is largely affected by his studies under Isaac Nicola and his experiences as a concert artist for more than three decades. In addition, he was inspired by other instruments and musical styles, such as lute and Flamenco, which widened the scope of possibilities in timbre on the guitar.¹⁷

Moreover, Brouwer pursues a more effective study by focusing on major issues during the learning process. A continuous awareness during the time of practice is the fundamental to solving technical problems. For instance, a common habit of guitarists is to repeat difficult passages many times while allowing mistakes to happen repeatedly. In such case, many hours of practice are wasted, not to mention that a lot of time must now be spent on fixing mistakes which have become part of the muscle memory. Brouwer states that passages can only be corrected if both the problem and solution are found. He says that *"mistakes are mostly at the same place and for the same reason. Therefore, it is important to detect them as early as possible and start to correct them."*¹⁸

Brouwer refuses routine practice like monotonous scales, because they can often be rushed through. Heavy dependence on the use of the metronome already limits the possibilities for musical components such as dynamics, shape, and musical time. More importantly, one can easily overlook the movement of hands and fingers which are essential for the economy of motion.¹⁹

Regarding the oftentimes careless practice of technique Brouwer remarks *"...slurs of left-hand are usually made without adequate pressure, the opposite of what is thought, generally exceeds it"*. One common misunderstanding of vibrato is:

¹⁷ Brouwer, Leo. "An interview with Leo Brouwer." Interview by Constantine McKenna. *Guitar Review*, 1988. 75.

¹⁸ Isabelle Hernández, *Gajes del oficio* (La Habana: Editorial Letras Cubanas, 2004), 105-106.

¹⁹ Leo Brouwer and Paolo Paolini, *Scales for guitar: a study method* (Milano: Ricordi, 1992). 7.

"The guitarist vibrates thinking beauty, which is a mistake (try to vibrate every note of the Prelude No.3 Villa-Lobos and one will make a fool out of oneself). The vibrato is not beauty, it is intensity. Slow vibrato is generally used in large notes or quiet passages."

The practice of musical elements has often been overlooked. Frequently, guitarists' main goal is the development of legato on the guitar, paying little attention in other articulations such as staccato, tenuto, and so on, which for Brouwer are the secrets of interpretation. Brouwer recommends to integrate musical intentions in one's practice by, for example, singing internally while playing, in order to shape the direction of the melody.

The Cuban composer also criticizes the lack of musical indications and references in the guitar repertoire, as having negative effects on the overall interpretation. Therefore, "*when performing Giuliani, one should listen to Rossini and his contemporaries, or when performing Scarlatti, one must listen to the original version on piano-forte.*"²⁰ According to Spanish guitarist Jose María Gallardo del Rey, the average guitarist devotes little time and effort to have a thorough musical education. Most of the time is dedicated to the guitar alone, perhaps due to its special place within the music world. There is generally little knowledge of orchestral works, for which many conductors criticize guitarists.²¹ Brouwer thus encourages guitar students to be creative and apply new techniques and new musical ideas in their interpretation. In his words, "*the artist is not an artist because he went to an arts college. Yes, he graduated and then what does he do?*".

Finally, Brouwer compares a guitarists' concert planning to an athletic event. If a work causes major problems, it should be excluded from the repertoire, and per circumstances picked up again at a later time. By all means, it is important to keep the old repertoire. Old pieces which have been studied throughout the years are usually overlooked

²⁰ Leo Brouwer, *Leo Brouwer: gajes del oficio* (Letras Cubanas, 2004), 105-106.

²¹ Gallardo del Rey, José María. "Entrevista a José María Gallardo del Rey", Interview by Pablo San Nicasio Ramos. *Revista Independiente* 2012. 16.

and underestimated; students continuously focus on new repertoire in order to fulfill their degree requirements or to prepare for competitions.

Brouwer recommends to always perform below one's limits. If a guitarist uses up to 80% of his abilities in speed or dynamics, there will still something be "left in stock", and the performance will be more accurate.²² One should only use 100% of his abilities at climatic points.

In the last decades, Leo Brouwer has played a key role in the generational change that took place within the classical guitar world. He began to compose mostly due to the lack of repertoire in his time, not knowing how pedagogically valuable his works will become in the future.

2.2.2. Pedagogical repertoire

Brouwer's contribution to guitar pedagogy began after he realized the existing gaps in the guitar repertoire compared to that of other instruments. In 1960 and 1961, Brouwer composed the first two series of his *Simple Studies*. These were followed by series III and IV (1981) after a long period of reflection and maturity.

"So I started learning the so-called great repertoire, the grand repertoire, and at a certain moment in the '50s I realized that there were a lot of gaps." (Mckenna 1988)

"While Brahms writes two concertos for piano, Chopin another two, Beethoven five, the guitar, with some exceptions, doesn't offer a solid ground before those colossal instruments like the piano, the violin or the cello." (Betancourt 1998)

The first ten studies are considerably shorter and are tailored to beginner students while featuring Afro-Cuban rhythms. They serve as an introduction to contemporary music. All of them are played in the first two positions on the guitar. None of these ten studies show

²² Isabelle Hernández, *Gajes del oficio* (La Habana: Editorial Letras Cubanas, 2004), 105-106.

any metronomic indication, allowing more freedom for students and less temptation to play fast, which is a common habit among beginners.

The last two series are for more advanced students. The length is larger in comparison with the first ten studies. Besides tempo indications, dynamics, and articulation, part of the great technical demands of these series are scales, fast passages, double slurs, etc.

Brouwer intended to provide accessible studies for beginners on the one hand, while challenging material on the other hand. Furthermore, Brouwer's studies focus on singular problems, isolating diverse issues of the guitar. According to guitarist David Tanenbaum, Brouwer's *Simple Studies* are suitable for concert programming and have come to enjoy an important position in the guitar repertoire.²³

The legacy of Leo Brouwer's old studies represents a significant advancement of the instrument. During the early 20th century, the guitar did not have a lot of repertoire resulting in the fact that the guitar technique was not sufficiently explored. Brouwer remarked:

“We didn't have a Brahms quintet for the guitar, we didn't have the L'Histoire du Soldat by Stravinsky, we didn't have the chamber music by Hindemith, we didn't have any sonatas by Bartók. So, as I was young and ambitious and crazy, I told myself that if Bartók didn't write any sonatas, maybe I could do it.”²⁴

In this way, Brouwer provided compositions that dealt with the basic technical challenges for guitarists, which has enriched the guitar repertoire to this day. After all of his musical output, the composer thought this was still not enough. Hence, a new series of ten studies were composed in 2001 entitled *Nuevos Estudios Sencillos*, which featured similar characteristics as the former series.

²³ David Tanenbaum and Jim Ferguson, *Leo Brouwer's 20 estudios sencillos* (San Francisco: Guitar Solo Publications, 1992).12.

²⁴ Brouwer, Leo. “An interview with Leo Brouwer.” Interview by Constantine McKenna. *Guitar Review*, 1988. 75.

Chapter 3: New repertoire for guitarists: *Nuevos Estudios Sencillos*

In 2001, Leo Brouwer composed his *Nuevos Estudios Sencillos*, twenty years after series III and IV of his previous studies. Brouwer's compositional and pedagogical work developed during this period and is reflected in the approach he used to create this new collection. This pedagogy is a result of his own creative processes. In consequence, by analyzing the *Nuevos Estudios Sencillos* one is introduced to Brouwer's matured musical language.

3.1. Differences to the *Simple Studies*

His former *Simple Studies* are a collection of twenty pieces composed to improve different technical skills of a student and written in two different stages: series I-II in 1960 and 1961, and series III-IV in 1981 (each of them containing five studies). All the studies were collected into a single collection, which are nowadays called *Simple Studies* [*Estudios Sencillos*]. They have not only been used in Cuba, but are recognized as a valuable pedagogical material worldwide. On the other hand, one can conceive of *Nuevos Estudios Sencillos* as a single collection of ten studies, organized differently in terms of difficulty, musicality, background, and as a pedagogical resource for students and teachers. Due to the relatively recent publication of the *Nuevos Estudios Sencillos* and the well-earned status of the former *Simple Studies*, the new collection is not yet established material for technical development in academic guitar curriculums.

Among the most significant differences between the *Simple Studies* and the *Nuevos Estudios Sencillos* is their organization. Brouwer did so by alluding each one of them to specific composers - thus the description *Omaggio*²⁵ - and gave performance suggestions as

²⁵ Italian Word for "Homage" or "Tribute".

an appendix to each exercise. In contrast the series I-II *Simple Studies* do not offer any explanatory guidance, and series III-IV only provide brief specifications in the subtitle of each study. However, *Nuevos Estudios Sencillos* represent Brouwer's idea of how to approach a new piece: getting an overview of the musical background of the work and the technical difficulties that the performer might possibly encounter during a performance.

Thiago Emanuel had a closer look on Brouwer's *Nuevos Estudios Sencillos* and commented about pedagogical contributions he found from the work:

The presence on the score of a clearer text about the goals and contents (technical and expressive) of each study, permitting to the students to know with more clarity the competences they must achieve.²⁶

Table 2 exemplifies the above-mentioned difference, regarding existing technical indications in three different studies, taken from the *Simple Studies* (series I and III) and from the *Nuevos Estudios Sencillos*. All of them are composed for the right-hand thumb.

Brouwer's *Simple Studies* develop many technical skills required for any intermediate an advanced guitarist. Students and teachers can both find in those studies arpeggios, chords, slurs (both single and double), ornaments, string crossing, tremolo, legato, as well as polyphonic studies, Afro-Caribbean and irregular rhythmic patterns. The *Nuevos Estudios Sencillos* follow the same path featuring almost all the previous elements (except for double slurs and ornament exercises). In addition, the new collection includes other techniques used on the guitar such as *rasgueado*²⁷ (study II and VII), single-repeated notes (study VII), harmonics (study VIII) and *scordatura*²⁸ (study IX, drop F of the 6th string as an alternative option). Scale studies are excluded from both collections. Nevertheless, Leo Brouwer and

²⁶ Thiago Emanuel Cassola Marques, *Projecto Educativo Leo Brouwer – Contributos Para A Pedagogia Guitarrística*, 2012, 45.

²⁷ Term used to describe the technique of strumming the strings of the guitar in a downward or upward direction with the thumb, or other fingers of the right hand.

²⁸ A term used most often in connection with bowed and plucked string instruments, especially lutes and violins, to denote a tuning in which one or more of the strings is at a different pitch from the normal

Paolo Paolini wrote a scale method in 1992, *Scale per chitarra, metodologia dello studio* (Ricordi editions), compensating the absence of scales in Brouwer's pedagogical works.

Both collections composed by Leo Brouwer represent a technical and musical challenge for any guitarist. None of them are organized by way of progressing difficulty nor any other pedagogical criteria. Some exceptions appear in *Simple Studies* (serie III and IV), in which he groups double slur studies *XIII* and *XIV* and ornaments studies *XVI*, *XVII* and *XVIII* together. In general, *Simple Studies* series I – II and *Nuevos Estudios Sencillos* have an intermediate difficulty, and *Simple Studies* series III – IV explore more difficult and unusual techniques (double slur in studies *XIII* and *XVI*, complex ornament in studies *XVI*, *XVII* and *XVIII*, and random notation patterns with intricated slur sections in study *XX*).

The *Nuevos Estudios Sencillos* present the same kind of order. Brouwer only specifies in study *I*'s appendix that it designed for beginner students. The three different compositional stages of collection, represent a different artistic phase in Brouwer's life. In 1961 he is a young composer and Isaac Nicola's student; in 1981, Brouwer finds himself at the end of his solo career as a virtuoso; and 2001 outlines the period of the mature composer and pedagogue.

Table 2: Technique guide comparison between Leo Brouwer former Simple Studies and Nuevos Estudios Sencillos (right-hand thumb exercise)

	Study (Number and Collection)		
	<i>I (Serie I, Simple Studies)</i>	<i>XIV (Serie III, Simple Studies)</i>	<i>IV (Nuevos Estudios Sencillos)</i>
Technique guide	Cantando el bajo	Pour les liés et le pounce (Para los ligados y el pulgar)	Estudio sobre el pulgar Mano izquierda en II posición. Contrastes dinámicos (<i>f marc.</i> y <i>p</i>) Importante guardar las articulaciones de <i>staccato</i> , <i>legato</i> , y notas más largas y cortas
Translation	Singing the bass	For slurs and thumb	This is a study for the right-hand thumb The left hand is in second position. Dynamic contrasts (<i>f marc.</i> and <i>p</i>) It is important to observe the articulation marks for <i>staccato</i> , <i>legato</i> , and the longer and shorter notes. ²⁹
Place written on Score	Expressive text (m. 1)	Subtitle	Appendix

²⁹ Proposed translation in the edited score.

3.2. Pedagogical Value

As previously mentioned, *Nuevos Estudios Sencillos* is a relatively unexplored pedagogical work, created by the mature composer Leo Brouwer. Compared to the musical characteristics of the *Simple Studies* its language is contrasting in the way each study presents material from different composers that he pays tribute. The technical and musical challenges of the studies shall prepare the student for future performances of Leo Brouwer's major works. The following analysis of *Nuevos Estudios Sencillos* demonstrates its pedagogical value for guitar students and teachers. From a musicological perspective, the studies have already been explored in preceding and on-going researches.³⁰

3.2.1. Technical Challenges

All the ten studies found in *Nuevos Estudios Sencillos* contain diverse challenges that guitar students and teachers must consider when reading each score. In this way, Leo Brouwer insists that guitarists have a sufficient preparation for handling essential musical elements, apart from the period, style, or composer.

30 For example, Mario Alberto Londoño Calle proposed a musical analysis on Brouwer's *Nuevos Estudios Sencillos*:

Mario Alberto Londoño Calle, *Proceso de análisis musical de los "Nuevos Estudios Sencillos" para guitarra del maestro Leo Brouwer*, 2014.

In addition, Carlos Fernando Fiorini and Claryssa de Páuda Morais are researching about some Technical and Interpretative topics on Brouwer's *Nuevos Estudios Sencillos*, since 2014 until now. Research status can be tracked in the official website of FAPESP :: Fundação de Amparo à Pesquisa do Estado de São Paulo:

<http://www.bv.fapesp.br/en/bolsas/165474/technical-and-interpretative-topics-in-leo-brouwers-nuevos-estudios-sencillos/>

Articulation

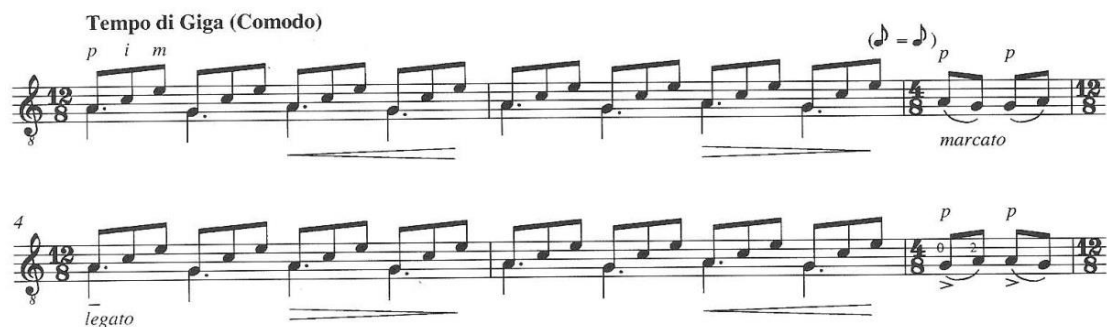
Brouwer clearly specifies the type of articulation he wants to be executed in each study. All studies present at least one type of articulation, that can be categorized into *legato*, *marcato*, *staccato*, and *tenuto*. The student can find those indications in written form (below the music staff), in its standard graphic notation, or as a technical description in each study's appendix. Sometimes different articulation types are used simultaneously in combination. For example, study V's rhythmical section combines *legato*, *marcato*, and *staccato*, as shown in Figure 3.

Figure 3: Articulations combined in a single measure, study V (m. 25, rítmico)



In some cases, a study features a dominant articulation type with minor appearances of another type in order to create emphasis and contrast. As specified in its appendix, study I has a *legato* style and Brouwer inserts a *marcato* articulation on isolated 4/8 measures, creating an unbalance in the middle of 12/8 measures. In this way, the composer generates a long-term character with some metric juxtaposition.

Figure 4: Long term articulation example, study I (mm. 1 – 6).



Dynamic control

Moreover, Brouwer explores various dynamic possibilities on the guitar. This approach is characteristic in his major works and his pedagogical material. Regarding Brouwer's *Elogio de la Danza*'s first movement. For example, Bogdan Vasile Focsaneau remarks:

Primary motives or constituent parts, harmonic elements, dynamics, tempo markings, and instrumental techniques function as markers to analyse surface-level units, which are then interpreted in the context of the phrase.³¹

Dynamic indications can be found in *Nuevos Estudios Sencillos* as expressive text or graphic musical notation. They range from *ppp* as the lowest dynamic indication (study *I*) to *f molto* and *ff* used for accents (studies *X* and *II*, respectively). In addition, Brouwer uses dynamics for short and long term effects. Those are indicated as *subitos*, wave-like dynamics, long sections with *crescendos* and *diminuendos*, and dynamic expressive texts as *perderosi*.³² Those dynamic contrasts help students to control their energy and pacing along the execution of each study, especially in the right hand. A representative example of these challenges can be found in study *IV* (see Figure 5).

Figure 5: Short and long term dynamic contrast, Study IV (mm. 1 – 12)

The image shows a musical score for Study IV, measures 1 through 12. The score is written in treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It consists of three staves. The first staff (measures 1-4) is marked 'Vivace' and features dynamic markings 'm', 'p', and 'i'. The second staff (measures 5-8) is marked 'f marcato il basso' and 'a tempo', with dynamic markings 'f' and 'p'. The third staff (measures 9-12) features dynamic markings 'ff', 'pp sub.', and 'f'. The score includes various musical notations such as accents, slurs, and dynamic hairpins.

³¹ Bogdan Vasile Focsaneau, An analysis of phrase structures in the first movement of Leo Brouwer's *Elogio de la Danza* (1964), 2012, 51.

³² Italian word for "losing"

Specific technical challenges

Additionally, Brouwer demands many specific technical challenges in each of the *Nuevos Estudios Sencillos*. Some of those skills were not addressed in the *Simple Studies*, such as Upper voice melody's *legato*, right hand repeated notes, natural harmonics, and *rasgueados*. Self-explanatory appendixes for each study and the notational clarity on the score are two features that help students to have a better guidance while they are learning the studies. Compared to the preceding study collection the *Nuevos Estudios Sencillos* add to the complexities of some of the previously explored techniques. For example, study *VIII* prepares the student to perform left hand partial bars, just as in the *Simple Studies*'s study *IV*. However, the *Omaggio a Villa-Lobos* study *VIII* uses three notes bar chords and bar shifting from second to fourth and fifth positions, whereas the former study *IV* features only two note bars on first and second position. This difference in difficulty is clearly represented in Figure 6:

Figure 6: Simple Studies study IV and Nuevos Estudios Sencillos study VIII.



Students and teachers can find an important number of coordination technical challenges in *Nuevos Estudios Sencillos*, whether for a specific hand or for the both hands:

- Left-hand techniques: slurs and left-hand bars.
- Right-hand techniques: tone color and timber change, *rasgueado*, finger combinations with specific alternations, finger exercises, arpeggios, repeated notes, and tremolo.
- Both-hands techniques: *legato* in upper voice melody and harmonics.

An important feature of these studies is that most of them combine at least two different technical skills. Some of the studies require a previous technical improvement in order to handle them more easily. In Table 3, are ranked from a single skill (1) being the lowest (study *VI*), to five (5) being the highest of demanded technique skills (study *II*). Since this information is not sufficient for determining the difficulty of each piece, a thorough analysis must also consider other aspects, such as the amount of diverse technical challenges, tempo marks (even the amount of tempo indications, speed, and character they specify), length of the piece, and other musical characteristics related to the study's specific composition.

Table 3: Specific technical challenges present in Nuevos Estudios Sencillos (by study number).

3.2.2. Musical significance

Apart from featuring basic guitar techniques, the *Nuevos Estudios Sencillos* have a musical significance as well. Leo Brouwer's pedagogical philosophy is represented as simple studies, by focusing on a singular issue along the study. In addition, it contains musical references about other composers. Brouwer includes their names on each study title, and uses specific idiomatic material from their works.

Each collection reflects creative ideas that Brouwer was using in his compositions at that moment. As Ariza mentioned:

Some elements of *Simple Studies* are very similar to other works of that time (1959 – 1981), fundamentally *El Decamerón Negro* (1981) and *Preludios Epigramáticos* (1981). (...) However, *Nuevos Estudios Sencillos* are a reinterpretation or re-elaboration of some of his concert works.³³

Study V (*Omaggio a Tárrega*) for example has striking similarity with the thematic material from *El Decameron Negro*.³⁴ The slur passages of study X (*Omaggio a Stravinsky*) reminds of previous works. Such as study XX from his *Simple Studies* (serie IV). In both works Brouwer used two compositional techniques: first, minimalist and progressive slur formulas, and second, the repetition of slurs *ad libitum*. The notation used in each study is different. (See Figure 7) *Paisaje Cubano con Lluvia* (1985), for guitar quartet, each guitarist plays slurs to recreate a metaphor of the oncoming storm. (See Figure 8)

³³ Gloria Ariza Adame, El Método “Brouweriano”: los estudios como preparación de sus obras, Revista Sexto Orden, January 2012, 22.

³⁴ Ibid., 22.

Figure 7: 1) Simple Studies study XX, 2) Study X, Appendix, Nuevos Estudios Sencillos.

1)

2)

Study no. 10

This study concentrates on the lower strings, slurs and the alternation of *p* with *i, m (a)*.

The 9 bars of [A] and the 6 of [B] can be repeated; either each one consecutively, or the entire period *ad lib*.

Figure 8: Slurs used in Paisaje Cubano con Lluvia (excerpt, section F)

Più presto possibile

Many of Brouwer's pieces combine serious compositional styles with folk rhythms. Especially Cuban rhythms are an important characteristic of his works. Isabel Hernandez remarks:

"Who dares to say there is a popular music and serious music, one is for the masses and the other for minorities, or that concert music is an elitist music [...]?" -said Brouwer.³⁵

In his analysis of the *Nuevos Estudios Sencillos*, Londoño demonstrates the importance of Cuban *clave* as a rhythmical element presented in study III³⁶. Study V, in its *rítmico* section, has two fundamental elements of Cuban music, *clave* and *cascara*. These rhythms are contrasting, but complementary in this study's section. Figure 9 shows an example of a 2-3 *clave* and *cascara* basic pattern, used in the excerpt of Brouwer's *Omaggio a Tárrega*, where those rhythmic elements synthesize³⁷.

Figure 9: Synthesis in *Nuevos Estudios Sencillos* study V (m. 25).

Cascara basic pattern

Cuban *Son* Clave (2 - 3)

³⁵ Isabel Hernández, liner notes to Leo Brouwer: *Homo Ludens*, Chucho Valdés, Roldan, CD, 2004.

³⁶ Mario Alberto Londoño Calle, *Proceso de análisis musical de los "Nuevos Estudios Sencillos" para guitarra del maestro Leo Brouwer*, 2014, 47.

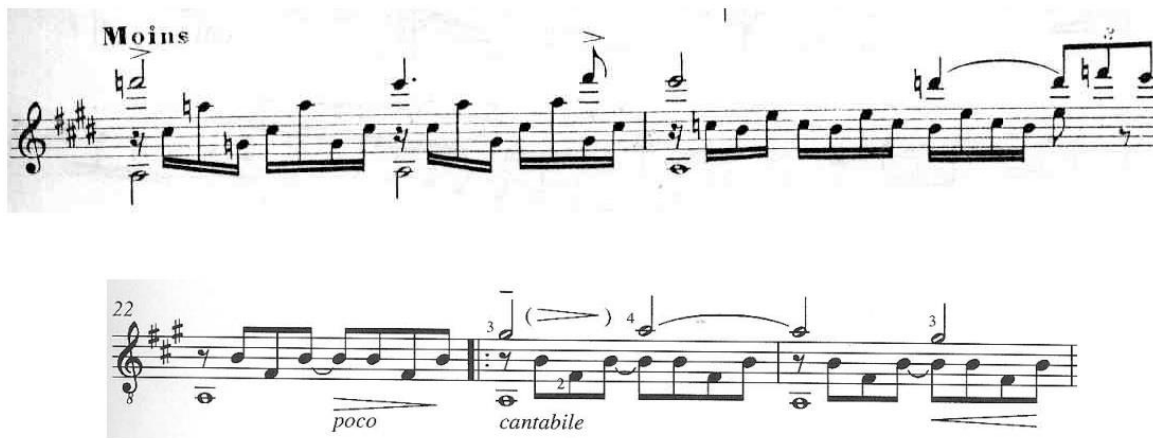
³⁷ For this example, a demonstration of basic *cascara* and *clave* pattern was used, based on Jose Luis Quintana's *Timbales practice book*. As those rhythmical patterns are commonly played at high tempo, the example works for a 4/4 with sixteen Eight Notes measure. Jose Luis Quintana and Chuck Silverman, *Changuito – A Master's Approach to Timbales*, 1998, 96.

Other Latin American rhythms (*Danza Paraguaya* and *Tango*) are represented in studies *II* and *VII*. As demonstrated by Londoño, Brouwer uses some of those rhythmical motives, as a tribute to the two Latin American composers Agustín Barrios Mangoré³⁸ and Astor Piazzolla³⁹. Here, as throughout his career Brouwer gives credit to other musicians of Latin America’s musical heritage.

Besides Barrios and Piazzolla, other important composers are referred to in the *Nuevos Estudios Sencillos*. Their names appear in the subtitle of the respective study and idiomatic compositional characteristics can be recognized throughout.

If one, for example, compares the *Poco meno* section of study *VIII* (*Omaggio a Villa-Lobos*) with Study *VII*, (*Moins* section) by Heitor Villa-Lobos, one can see the similar textural treatment. Both excerpts show a very clear three-part texture (upper voice melody, arpeggio accompaniment, and bass on strong beats).

Figure 10: Villa-Lobos’s Study VII and Brouwer’s study VIII.



³⁸ Mario Alberto Londoño Calle, *Proceso de análisis musical de los “Nuevos Estudios Sencillos” para guitarra del maestro Leo Brouwer*, 2014, 42.

³⁹ *Ibid.*, 69.

A similar parallel can be seen in study X. With its reference to Igor Stravinsky's *The Rite of Spring*, second movement (*Dances of the Young Girls*). Here, Brouwer uses the aggressive *obstinato* chords and fast slurs from the ballet. Figures 11 and 12 illustrate the correlation of the two works in sections A, B, and C.

Figure 11: Igor Stravinsky's *Rite of Spring* -Dance of the Young Girls.(excerpts)

A)

B)

C)

Figure 12: Nuevos Estudios Sencillos (Study X, mm. 13 – 18, 30 – 32).(excerpts)

A) Musical notation for measures 13-18. The top staff is in treble clef with a 3/8 time signature. The bottom staff is in bass clef. Dynamics include *f*, *m i p*, *p p i*, and *m i p*. There are also markings for *3* and *1*.

B) Musical notation for measures 16-18. The top staff is in treble clef with a 3/8 time signature. The bottom staff is in bass clef. Dynamics include *p* and *m i p*. There are also markings for *3* and *1*.

C) Musical notation for measures 30-32. The top staff is in treble clef with a 3/8 time signature. The bottom staff is in bass clef. Dynamics include *f molto*. There are also markings for *G.P.* and *6*.

3.3. Practical suggestions

Overall, it is important for students to follow technical and musical indications written on the score. Although, tempo indications are considered important for the composer, the tempo depends on specific goals and expressive needs of students. Brouwer remarks:

Tempo should be relative to the needs and development of the student. Not that slow that could not be sung, not that fast that cannot be clearly articulated. (...) Only one recommendation: follow the intuition of your senses and pulsation. Fingers are very wise.⁴⁰

Considering technical and musical requirements of Brouwer's new study collection some practical suggestions are described below. They follow Brouwer's philosophy about identifying and solving issues while studying a new piece.

⁴⁰ Isabel Hernandez, liner notes to: Homo Ludens, Leo Brouwer, Roldan B000GD83MI, CD, 2004.

Study I – Ommagio a Debussy

Tempo: *Tempo di Giga (Comodo)* – A comfortable tempo (see suggested tempo in the study's appendix).

Suggestions:

1. *Slurs*: Practice ascending and descending slurs with open strings and finger 2 or 3 placed on the (third string). Right-hand thumb must pluck strong to achieve the *marcato*.
2. *Arpeggio*: Before reading the study, practice right-hand arpeggio *p, i, m* with open strings. Make sure that the rhythmically pattern is uniform. In addition, the right-hand thumb should pluck the string slightly stronger than the rest of the fingers. So, the melody in the bass is louder than the accompaniment. Practice the arpeggio dynamics.

Study II – Ommagio a Mangoré

Tempo: *Vivace* – as referring to Paraguayan dances (approximately 170 BPM for quarter notes).

Suggestions:

1. *Slurs*: Practice ascending slurs, fingers 1 and 4, and descending slurs, finger 3 and open string (fourth string). Slurs must be played with right-hand thumb. Although slurs only appear in measures 2, 4, 29 and 31, they are important for the polyphonic structure of the phrase in which they occur.
2. *Tone color*: The study has two contrasting sections, with form A (mm. 1 – 11) – B (mm. 12- 27) – A (mm. 28 – 40). Sections A should be played with a right-hand tone color between *natural* and *metallic* (close to the bridge) of the guitar. In contrast, Section B should be played *dolce* (above the guitar's sound hole and near the frets).
3. *Right-hand finger alternation*: Brouwer specifies in the study's appendix that right-hand finger alternation must be practiced isolated from the study. Thus, complementary studies can be considered, such as Mauro Giuliani's study 17 from his 120 studies for the right-hand. (Figure 13)

Figure 13: Study no.17 (Mauro Giuliani 120 Right Hand Studies)



4. *Legato and right-hand alternation*: *Legato* in section B should be achieved by precise shifts on the left-hand in each measure. Right hand must accent the melody (played with *a* or *m*). The index must be the weakest note. The

proportion of intensity among the fingers of the right hand must remain even when the overall dynamics are changed.

Study III – Ommagio a Caturla

Tempo: *Moderato assai* – see score's tempo suggestion.

Suggestions:

1. *Dynamics and tone color*: Students must follow the dynamic wave-like regulator (even if starting from *pianissimo*). The indication *come eco* should be played as a *pianissimo poco metálico* (near the bridge).
2. *Thumb rhythmical pattern*: This study focus on the right-hand thumb. The bass line carries the melody, in an Afrocuban rhythm (derived from the cuban *clave* and *tumbao*). Therefore, the thumb must produce a *cantabile* tone, however with a precise rhythmic notion. This study is an introduction to other complex works with Afrocuban influences.

Study IV – Ommagio a Prokofiev

Tempo: *Vivace* – quarter note c. 170 – 190 BPM. *Poco meno* – eighth note c. 220 – 240 BPM.

Suggestions:

1. *Dynamics and tone color:* The study is divided into three sections, *Vivace* – *Poco meno* – *Vivace*. For both *Vivace* sections, a normal tone color with the right hand is suggested. The *Poco meno* part must be played at the sound hole, close to the frets.
2. *Thumb articulation:* The right-hand thumb must move independent of the accompaniment. A suggestion in order to achieve the *staccato* is to prepare the thumb for the next note (on the fourth string) immediately after playing the previous note.

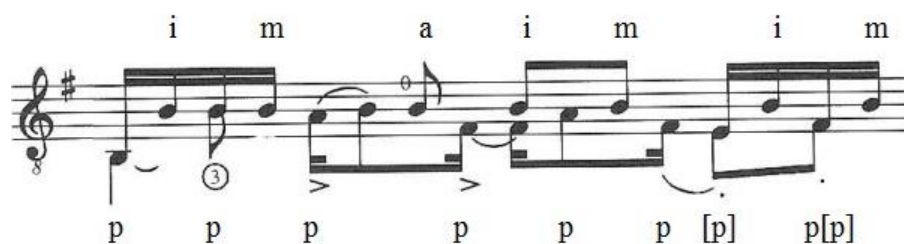
Study V – Ommagio a Tárrega

Tempo: *Comodo* – quarter note c. 70 – 85 BPM.

Suggestions:

1. *Tremolo*: Compared to Brouwer's study III (*Simples Studies*, serie I), *Ommagio a Tárrega* is an easier introduction to tremolo. It is recommended to practice study V first in order to improve the right-hand tremolo technique. In addition, the tremolo of study V tremolo could also be performed by *p*, *m*, *i*.
2. *Ritmico section*: The right hand must give emphasis to the notes played by the thumb (as it carries the Afro-Cuban rhythmical pattern described in 3.2.2). Therefore, all the articulations written by Brouwer should be followed in order to achieve the desired effect. The fingering for the right-hand is illustrated in Figure 14 (the symbol [p] indicates the preparation of the thumb as mentioned in study IV).

Figure 14: Right hand fingering in study V, Ritmico section, m. 25. (excerpt)



Study VI – Ommagio a Sor

Tempo: *Tempo libero* – see score’s tempo suggestion.

Suggestions:

1. *Arpeggio*: This study can be extended to four different right-hand formulas, following the suggestions of the appendix. In this way, students can practice basic arpeggios with three and four fingers, while managing tempo and dynamics at the same time. The formulas are outlined in Figure 15 (arpeggio pattern 4 is not specified in the score). The right-hand thumb must pluck stronger than the other fingers

Figure 15: Right-hand formulas for study VI, m. 1. (excerpt)

1) p i m p i m p i m

2) p m i p m i p m i

3) p i m a p i m a p i m a

4) p m i a p m i a p m i a

Study VII – Ommagio a Piazzolla

Tempo: *Allegro* – see score’s tempo suggestion.

Suggestions:

1. *Right-hand repeating notes and articulation*: Repeated notes played with *i* and *m* should be practiced both free and rest strokes. In this way, students will develop strength, speed, and precision as a preparation for scales. In addition, *staccato* must be carefully played, muting the string with right-hand when it is necessary. For example, fingers *i* and *m* in measures 5 – 6, 32, and 40.
2. *Slur*: Section B and measures 36 to 39 focus on descending slurs. It is recommended to study this section at slow tempo to improve the sound of the slurred notes.

Study VIII – Ommagio a Villa-Lobos

Tempo: *Tranquilo* and *Mosso* – see score's tempo suggestion. *Poco meno*: quarter note c. 90 – 100 BPM.

Suggestions:

1. *Harmonics*: Students should pluck the string with their right-hand between sound hole and bridge, in order to produce a clear tone while playing natural harmonics on frets VII and XII.
2. *Half bar*: Students must relax their index on half bars between shifts. The other fingers need to guide the movement of the left hand. To reduce the tension, finger number one has to move as less as possible to efficiently reach the next half bar.
3. *Legato*: On *Poco meno* section, students should coordinate movements between hands to avoid any interruption of the upper melodic line. The accompaniment must always be played quieter in comparison with the melody.

Study IX – Ommagio a Szymanowski

Tempo: *Lento assai* – quarter note between 50 – 55 BPM.

Suggestions:

1. *Melody legato*: Students must be aware of the need of legato when using a half bar within a musical phrase. The exercise for left-hand finger number 1 is to make a precise change between its half bar position on the 1st fret and C note position (second string, first fret). In addition, it helps to study slow movements of the left hand in order to keep the melody *legato*. In section B, *canta il basso* is an Italian expression that means “sings the bass”. In other words, the bass line must sound as a soloist. Again, the right-hand thumb must be played louder than the accompaniment, while following the direction of each phrase (specified with the wave-like dynamics).
2. *Scordatura*: Dropping the sixth string to *F* is optional. It may serve as a simple introduction to *scordatura* on the guitar. This feature is only needed in measures 9 – 10, but it helps to keep the *legato* with an easy left-hand fingering (as suggested in Figure 16).

Figure 16: Suggested left-hand fingering on study IX (m. 8 – 10)

The image shows a musical score for Study IX, measures 8 through 10. The score is written on a single staff in G major (one sharp) and 4/4 time. Measure 8 starts with a treble clef and a key signature of one sharp (F#). The melody begins with a half note G4 (finger 1), followed by quarter notes A4 (finger 2), B4 (finger 4), and C5 (finger 4). Measure 9 continues with a half note C5 (finger 1), followed by quarter notes B4 (finger 3), A4 (finger 2), and G4 (finger 0). Measure 10 consists of a half note G4 (finger 0), followed by quarter notes F#4 (finger 3), E4 (finger 2), and D4 (finger 2). The score includes dynamic markings: *p* *accompagnando* *l.v.* in measure 8, and *pp* (*eco*) in measure 10. The word *legato* is written above the first measure, and *FINE* is written at the end of the piece. Fingerings are indicated by numbers 0, 1, 2, 3, 4 above the notes.

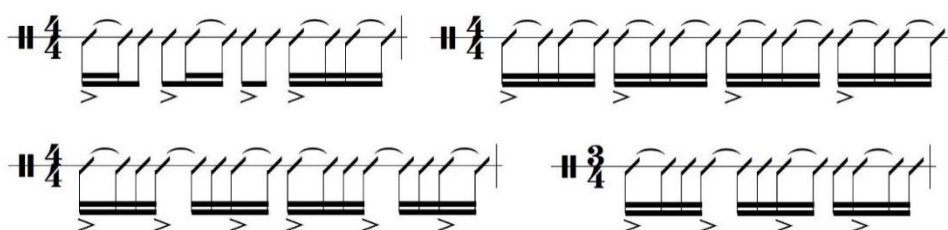
Study X – Ommagio a Stravinsky

Tempo: *Toccata* – quarter note between 115 – 130 BPM.

Suggestions:

1. *Slurs*: Study X focuses on the slurs, and is regarded somewhat complementary to Brouwer's study XX (*Simple Studies*, serie IV). It must be studied at slow tempo with a progressive increase in speed. The piece can be rhythmically organized into four different patterns, as illustrated in Figure 17. It is recommended to identify and sing them (with the accents) before playing the patterns on the guitar.

Figure 17: Rhythmical patterns in study X (mm. 4 – 12, 16 – 23, 27 – 29, and finale)



2. *Thumb articulations*: The preparation of the thumb must be practiced in measures 1 – 3, 13 – 15, and 24 – 26. Students should thereby follow the same suggestions as described under *Study IV – Ommagio a Prokofiev*.
3. *Rasgueado*: The accented chords in measures 1 – 3, 13 – 15, and 24 – 26, can be performed by plucking the strings with right-hand fingers *p, i, m, a*. This exercise will develop strength in all the fingers. In order to produce a bigger *marcato* on the chords, students should practice them *rasgueado* as well

Conclusion

As true for any instrument, studies for guitar are important for the development of technical and musical skills. Besides, Carcassi, Aguado, Sor, and Villa-Lobos's guitar studies, those by Brouwer belong to the most important studies for the instrument.

It has been demonstrated throughout this research that Brouwer's *Nuevos Estudios Sencillos* are of significant pedagogical value for the guitar repertoire. Their technical and musical challenges help to solve basic issues on the guitar while referring to other composers. Further research can be conducted on the categorization and arrangement of the studies regarding their difficulty and composer or style which they are referring to.

Since little has been published on the subject so far, this research is an important contribution for guitar pedagogy. Apart from providing better understating for the *Nuevos Estudios Sencillos* in particular, this paper gives insight into Brouwer's pedagogy and sheds some light on his other works as well. Time will tell if there are more studies to follow in the near future.

Appendix

Leo Brouwer *Gajes del Oficio*.

About guitar technique

- Issues (mistakes) are always at the same place and by the same reason. Let's name the problem and it will disappear (It is better to do this rather than exhaustively repeating the passage with any critical view)
- No one great professional plays at a 100 % of its technical capacity. If it plays up to an 80%, some is still left in stock and it won't fail.
- Articulation and breathing are the secrets of interpretation.
- Let's talk about the sound production located on the right hand. Often, we play near the sound hole, because it sounds good. Why we do this? The three harmonics-zones where the quality sounds come from are on this part. The central zone of the sound hole produce resonant and round sounds. The tangent area (the edge of the sound hole to the bridge) generates clear and resonant sounds. The third zone of harmonics (slightly separated from the edge of the sound hole to the bridge) produces clear sound "without" resonance. These are the three best qualities of sounds. To play more to the bridge is color, which does not mean more sound.
- Not all notes have the same value and therefore do not have the same intensity.
- Advanced students focus on the repertoire of their courses, forgetting everything valuable they have played so far, despising a potential repertoire.
- A single failure begets the next ones, because it triggers the nerves. It avoids concentrating note-by-note liking what is being interpreted and playing 75% or 80% of capacity.

- A concert program should not be composed of “athletic” works, plagued by difficult technique (remember not to play at a 100%). If a piece that cause us problems, it should not be in repertoire. It means that we are not prepared for it.

The most common issues about universal guitar technique

1. The guitarist does not listen to “references”: if he plays Giuliani, he must listen to Rossini, if plays Tárrega must listen to Chopin, if plays Scarlatti must listen the original version of pianoforte.
2. Need to match strokes (free stroke and rest stroke) to find the same sound quality and color.
3. The mechanical study of the technique is ineffective. For instance, it is habituate to do routinely scales, which does not add development. At most, rush the practice to look for speed with the metronome, and put aside the dynamics possibilities (diminuendo - crescendo), the change of speed that forces the left hand to be careful, among others.
4. Slurs of left-hand are usually made without the adequate pressure, the opposite of what is thought, generally << exceeds >> it. In the same way, pull-off slurs become excessively “pulling” string. Let’s remember that, in such case, we don’t take advantage of the string vibration <<on behalf>> (it is enough by lifting the finger without pulling)
5. To study with metronome is possible, but not to perform.
6. Themes and harmonies are important, the “effects” no. These are like makeup or clothes; they do not determine the personality of the wearer.
7. The sound beauty must not be abandoned. Let’s build our fortissimo or pianissimo in a range of sound quality. Hard, rough or inaudible sounds must be used by exception

as closer effects to percussion than the important sound components. It is regrettable to hear rough-forte and unhearable-piano.

8. Guitarist should sing internally, and will realize the melodic directionality (there is nothing more boring than a flat melody and a work without colors).
9. What is the vibrato? The guitarist vibrates thinking beauty, which is a mistake (try to vibrate every note of the Prelude No.3 Villa-Lobos and one will make a fool). The vibrato is not beauty, is intensity. Slow vibrato is generally used in large notes or quiet passages. Their task is to extend the resonance.
10. The balance of the sound blocks: chords, strums, among others, suffers from the inequality of the strings. The complaints about third string (dim sound) and second string (weak sound, metallic). By paying attention and highlight these intermediate strings, integral chord sound swings. (Remember that powerful bass strings do not help these weak strings). The strum of classical guitarist does not reach the beauty of “toque” flamenco for one simple reason; classical guitarist hand drops and make sounds with their indiscriminate touch the bass and half strings, producing more percussive sound rather than a clear one. Flamenco strum conducts towards the highest strings reaching clarity, which is what the instrument needs.

These reflections on guitar technique are part of a larger work on the subject.

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**UNIVERSIDAD DE COSTA RICA
FACULTAD DE EDUCACIÓN
ESCUELA DE ORIENTACIÓN Y EDUCACIÓN ESPECIAL
PSICOPEDAGOGÍA DEL ADOLESCENTE**

**TRABAJO DE INVESTIGACIÓN
APRENDIZAJE SIGNIFICATIVO IMPLEMENTADO EN LAS
ASIGNATURAS DE CIENCIAS NATURALES Y ESTUDIOS
SOCIALES**

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CAPÍTULO I. ASPECTOS GENERALES

Introducción

Este trabajo contiene la consulta bibliográfica sobre la Teoría del Aprendizaje Significativo y su aplicación para el diseño de técnicas didácticas en diferentes asignaturas de educación secundaria; esto porque los nuevos conocimientos se incorporan en forma sustantiva en la estructura cognitiva del estudiante, relacionando los nuevos conocimientos con los anteriormente adquiridos, pero también es necesario que el discente se interese por aprender lo que se está suministrando (Ausubel, Novak y Hanesian, 1983). Por tal motivo, surge la obligación de aprender a trabajar con elementos mejor diseñados hacia las necesidades del estudiante, tomando en cuenta, que la evaluación debe ser aplicada con suficiente validez.

Se espera obtener la información teórica suficiente en relación con los tipos de aprendizaje significativo, los factores sociales y cognoscitivos que influyen en este, la importancia de la evaluación en el proceso y la elaboración de técnicas didácticas aplicando los principios consultados, para lograr cumplir los objetivos en el proceso enseñanza-aprendizaje.

Hay que tener en cuenta que estos temas son de nunca agotarse, debido a que surgen cada vez nuevos retos e interrogantes en el labor docente como: en el campo tecnológico, los roles que se deben desempeñar tanto en el ámbito familiar como social, diversidad escolar, cambios generacionales, entre otros. Por ello, el maestro está en la obligación de presentarse en el aula con nuevos materiales atractivos para obtener la atención e interés del individuo, hacer uso de la motivación, seguir investigando y buscando nuevos retos para los estudiantes.

Para la elaboración de técnicas didácticas, se abordarán temas de ciencias y estudios sociales, en secundaria. Ya que son las áreas de estudio de los participantes de esta investigación, permitiendo así, la opción de aplicar lo recolectado en la práctica docente.

Problema

¿Cómo diseñar técnicas didácticas para contribuir en la obtención de un aprendizaje significativo propuesto por David Ausubel en las asignaturas de Ciencias Naturales y Estudios Sociales, para estudiantes de secundaria?

Objetivo general

Mostrar técnicas didácticas para abordar temas de Ciencias Naturales y Estudios Sociales en educación secundaria, basándose en los principios propuestos por David Ausubel sobre aprendizaje significativo.

Objetivos específicos

- Realizar una revisión bibliográfica sobre la teoría de aprendizaje significativo propuesta por David Ausubel.
- Elaborar técnicas didácticas para lograr un aprendizaje significativo en las asignaturas de Ciencias Naturales y Estudios Sociales.

CAPÍTULO II. MARCO TERÓRICO

Psicología Educativa

El papel de la psicología en educación se remonta desde tiempos antiguos, en épocas de Platón y Aristóteles, quienes estudiaron temas como: relación entre profesores y estudiantes, la labor docente, métodos de enseñanza, secuencia del aprendizaje, entre otros. Sin embargo, se empezó a consolidar en 1890 cuando se creó el campo de la psicología en la universidad de Harvard por William James, quien se dedicó a la formación de profesores bajo las conferencias tituladas *Pláticas de psicología para profesores*. Para los años 1940 y 1950 la psicología educativa prioriza en el estudio de diferencias individuales, conductas de aprendizaje y evaluación, entre las décadas de 1960 y 1970 se enfoca en el estudio del aprendizaje y desarrollo cognoscitivo, y es durante en esta época que surge la teoría del aprendizaje significativo liderada por David Ausubel. (Woolfolk, 2010).

En la actualidad, esta disciplina posee sus propias teorías, métodos de investigación, problemas y técnicas; se realizan investigaciones para comprender

mejor el proceso enseñanza-aprendizaje, y así mejorar la práctica educativa. (Woolfolk, 2010). Los estudios realizados tratan de analizar problemas en el aprendizaje como: formas de mejorar las capacidades para aprender; averiguar cuáles son las formas idóneas para lograr objetivos, mediante la motivación y maximizando la organización de presentación de materiales de aprendizaje; descubrir características cognoscitivas, la personalidad del estudiante y los factores sociales e interpersonales que influyen en el proceso de aprendizaje; además, aspectos que interfieran en la adquisición y conservación del conocimiento a largo plazo, entre otros. (Ausubel, Novak y Hanesian, 1983).

Una de las aportaciones de la psicología educativa para mejorar la labor docente es la Teoría del Aprendizaje Educativo de Ausubel, la cual pretende dar una visión completa del desempeño del profesor y técnicas educacionales para favorecer el aprendizaje en los estudiantes.

Tipos de aprendizaje propuestos por David Ausubel

El aprendizaje que se logra en los centros educativos se puede clasificar en dos categorías, la primera incluye el aprendizaje por recepción y por descubrimiento, y la segunda, abarca el aprendizaje mecánico o por repetición y significativo.

Se considera el aprendizaje por recepción cuando, la información que el estudiante aprende o se espera que lo haga, es dado totalmente por el docente, es decir, el estudiante no es quien la descubre, se basan en resultados finales ya conocidos; y el papel del estudiante es poder reproducirlo en el futuro. Mientras que el aprendizaje por descubrimiento es cuando el contenido que se desea aprender no es dado, este es hallado por el estudiante; en este tipo de aprendizaje el discente debe “reordenar la información, integrarla con la estructura cognoscitiva existente, y reorganizar o transformar la combinación integrada de manera que se produzca el producto final deseado o se descubra la relación entre medios y fines que hacía falta” (Ausubel, Novak y Hanesian, 1983, p. 35).

Por otro lado, el aprendizaje significativo se presenta cuando existe una relación entre los conocimientos previos con los nuevos, efectuándose una

integración e interacción cognoscitiva entre, lo aprendido y lo que ya se sabía (Aznar, Giménez, Fanlo y Escanero, s.f.). Mientras que el aprendizaje por repetición sucede cuando la información adquirida se almacena de forma arbitraria sin poder relacionarla con información previa (Ausubel, Novak y Hanesian, 1983). Hay que tener en cuenta que tanto el aprendizaje por recepción y por descubrimiento pueden considerarse repetitivos o significativos.

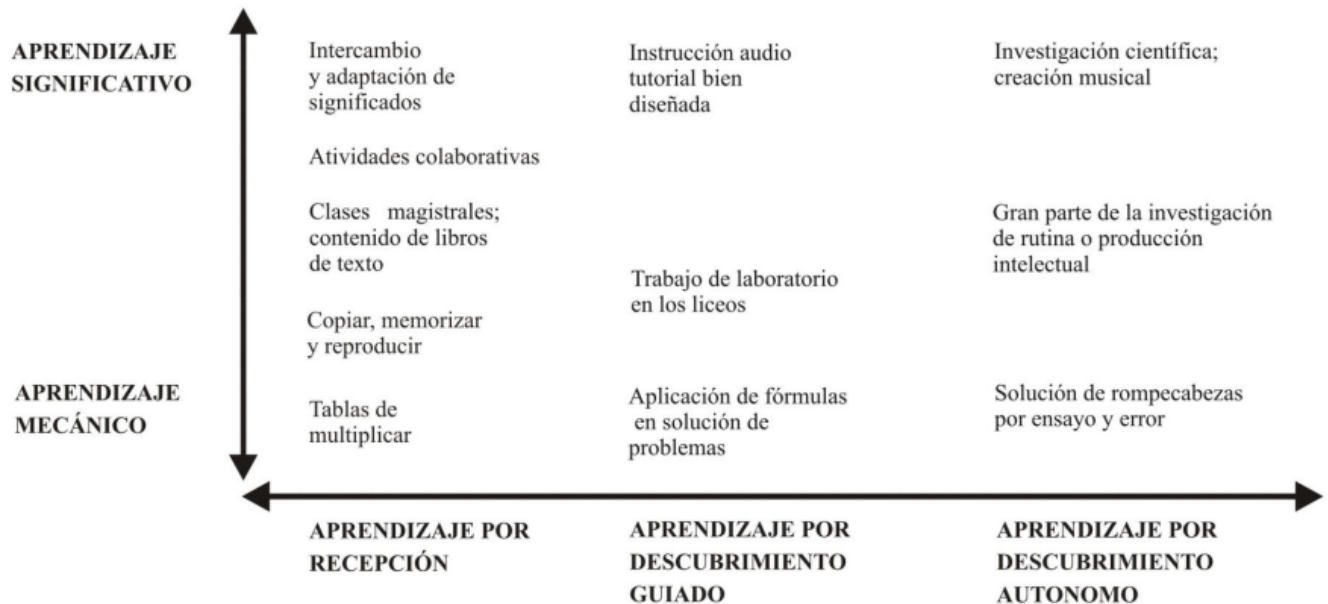
El aprendizaje significativo por recepción es esencial dentro del proceso educativo porque “es el mecanismo humano por excelencia que se utiliza para adquirir y almacenar la vasta cantidad de ideas e información representada por cualquier campo del conocimiento” (Ausubel, Novak y Hanesian, 1983, p. 47). Este se clasifica en tres tipos: el aprendizaje de representaciones, el aprendizaje de conceptos y el aprendizaje de proposiciones.

El aprendizaje de representaciones es considerado el más importante, y consiste en poder darle significado a símbolos, ya sea objetos, eventos o conceptos; se efectúa cuando se da una asociación sustancial y representativa de los contenidos con la estructura cognoscitiva, es decir, cuando se logra una relación entre la palabra y el objeto real, pero no se logra categorizarla. El aprendizaje de conceptos está relacionado con el anterior, consiste en representar con símbolos los conceptos de igual forma que otros referentes unitarios también lo son. Este tipo de aprendizaje puede adquirirse mediante dos procesos: por formación, la cual consiste en aprender a partir de experiencias concretas, por etapas y a prueba de hipótesis; y por asimilación, esta hace referencia al aprendizaje de significados abstractos y cuando a partir de ciertas características se relacionan con ideas ya establecidas en la estructura cognoscitiva y se aprende el nuevo significado conceptual. Es decir, poder categorizar conceptos (Ausubel, s.f.).

El aprendizaje de proposiciones se logra cuando se combina o se relaciona conceptos individuales para poder expresar ideas con significado más sustancioso y diferente al significado de cada concepto individual. En resumen, se puede decir que los dos primeros tipos de aprendizaje significativos son unitarios, mientras que el tercero es compuesto. (Ausubel, s.f.). En la figura 1, se puede observar la relación

entre los tipos de aprendizajes, ya descritos hasta el momento, y cuándo se consideran significativos.

Figura 1. El aprendizaje por recepción y el aprendizaje por descubrimiento se hallan en un continuo separado del aprendizaje por repetición y el aprendizaje significativo. (Adaptado de Novak, 1977).



Fuente: M. Moreira, Instituto de Física da UFRGS, s.f.

Cuando se da el aprendizaje de conceptos y el de proposiciones se reestructura la información existente del individuo. “A este proceso de la información nueva con los segmentos preexistentes de la estructura cognoscitiva se le llama inclusión” (Ausubel, Novak y Hanesian, 1983, p. 62). Puede llevarse a cabo de dos maneras: inclusión derivativa, se da cuando se lleva a cabo el aprendizaje de un ejemplo específico de un concepto; mientras que la inclusión correlativa, hace referencia al aprendizaje que es una extensión, reestructuración o el cambio de una proposición ya aprendida (Ausubel, Novak y Hanesian, 1983).

Dependiendo del proceso de asimilación el aprendizaje significativo puede dividirse en aprendizaje: subordinado, supra ordenado y combinatorio. Se define asimilación al proceso donde surge una relación recíproca entre la nueva

información o material y el ya existente, para dar origen a una nueva estructura cognoscitiva diferenciada. (Ausubel, s.f.).

El aprendizaje subordinado se da cuando la información nueva es incluida junto con los conocimientos previos del aprendiz, es decir, cuando el contenido nuevo depende de la información ya existente, ejemplo de esto es el aprendizaje de conceptos y proposiciones. El aprendizaje supraordinado surge cuando el contenido por aprender se relaciona con ideas subordinadas concretas y ya establecidas, es decir, se aprende un concepto a partir de ideas que son dependientes de este nuevo concepto. Y por último, el aprendizaje combinatorio se caracteriza por no existir relación supraordinada o subordinada de la nueva información con la ya existente, sino que se relacionan de manera paralela y general para dar origen a la diferenciación, en síntesis, generalización a partir del análisis. (Ausubel, s.f.).

Factores que influyen en el aprendizaje significativo

Para que el aprendizaje significativo se efectúe en enseñanza “el significado del material que el alumno capta es el significado que el profesor de ese material tenga para el alumno” (Gowin, 1981. citado por Rodríguez, 2010, p. 22), para lograr lo anterior existen una serie de variables que se deben tomar en cuenta como: la motivación, clima en el aula, el profesor, la personalidad de cada estudiante, entre otros.

Dentro de la motivación, es importante para el aprendizaje a largo plazo, sin embargo, no se considera tan significativo para el que es a corto plazo. Esta variable influye de manera catalítica pero no en la retención del conocimiento. Se puede hablar de tres aspectos motivacionales (intrínsecos): el impulso cognoscitivo, impulso afiliativo y la mejoría del yo. El primero es considerado el más importante, hace referencia al deseo por saber, y percibe el conocimiento como su propia recompensa; el impulso afiliativo constituye el deseo del individuo por la aprobación del curso o del año, sin embargo decrece conforme avanza la adolescencia. Y por último, la motivación de mejoría del yo, corresponde al impulso por elevar el estatus, estableciéndose metas por alcanzar. (Ausubel, Novak y Hanesian, 1983).

La recompensa y el castigo intervienen en el proceso motivacional del aprendizaje; la primera sirve de incentivo, ya que al obtener dicha recompensa es sinónimo de lograr el objetivo, sin embargo, está asociado a los aprendizajes repetitivos y mecánicos, por ende, no es característico del aprendizaje significativo. Por su lado, el castigo, conduce al individuo a evitar aquellas acciones que lo llevaron a este y promueve la desmotivación a la acción castigada. Esta última, es considerada menos apta para el aprendizaje, porque le indica al estudiante que lo que hizo es erróneo, y debe cambiarlo, pero no le da indicios de cómo hacerlo; mientras que la recompensa indica que lo realizado debe ser repetido, es decir, que estuvo bien lo que hizo. (Ausubel, Novak y Hanesian, 1983). Tanto la recompensa como el castigo pueden considerarse motivación extrínseca e intrínseca.

El proceso de enseñanza-aprendizaje se realiza dentro de un ambiente muy heterogéneo, en ocasiones se deben convivir con diferentes géneros, edades, cultura, intereses, categorías de aprendizaje, entre otras. No obstante, el adolescente se encuentra dentro de una etapa, donde la socialización es fundamental para su satisfacción personal. Por tales motivos, para un docente siempre surge la incertidumbre sobre cuál sería la forma idónea de trabajar en clase. Ausubel, Novak y Hanesian (1983), comentan que la interacción entre estudiantes dentro de la clase, es decir, en la realización de tareas grupales favorece el aprendizaje dependiendo de la naturaleza de la misma; entonces, van a existir asignaciones que son más efectivas si se efectúan de manera individual.

Si la tarea es sencilla y se trabaja en grupos, su resolución sirve de estímulo y provoca un espíritu de competencia entre pares. Si la asignación es más elaborada (como resolución de problemas), es más probable que se logre realizar si se hace en grupos que individual, pero no precisamente porque todo el grupo logre lo establecido, sino porque es más probable que haya por lo menos un estudiante en el grupo que logre solucionar correctamente el problema. Sin embargo, el trabajo en equipo también estimula a que los estudiantes inviertan gran parte del tiempo en conversar sobre temas ajenos al estudio. (Ausubel, Novak y Hanesian, 1983)

El tamaño del grupo también interviene en el desempeño de la labor asignado, los grupos pequeños son más recomendados que los grandes, porque se tiende a tomar en cuenta más las opiniones individuales para llegar a un producto, mientras que los grupos grandes, los estudiantes más activos o líderes tienden a individualizar la solución. Por otro lado, el éxito logrado en conjunto sirve de estímulo para aquellos estudiantes que por sí solos no hubiesen sido capaces de obtener el resultado correcto, generando una ganancia neta. Pero, cuando se trata de un trabajo crítico (no confundir con los trabajos que fomentan la discusión) donde el estudiante ocupe palpar sus ideas y posición, o donde se necesite mucha concentración es más recomendable el trabajo individualizado. (Ausubel, Novak y Hanesian, 1983).

Rodríguez (2010) propone dos condiciones para que el aprendizaje significativo se realice: la primera es la actitud por parte del alumno, si la predisposición para aprender de este es positiva se logra, de lo contrario no. Segundo, el docente debe enseñar mediante un material significativo, para que haya una relación entre el conocimiento por aprender con el que ya se poseen. Este debe estar elaborado siguiendo un orden lógico; es decir, el contenido no es lo único importante, ya que la forma en que se presenta también es sustancial.

El profesor en el proceso de enseñanza-aprendizaje

El docente sin duda es una de las variables fundamentales para que el proceso de enseñanza-aprendizaje sea provechoso. Existen tres aspectos que se espera que el profesor cumpla: primero, desde la visión cognoscitiva su grado de conocimiento debe ser amplio y persuasivo; segundo, tener la habilidad de presentar de forma ordenada y clara la información que desea transmitir, con ayuda del material idóneo. Y en tercer lugar, que el lenguaje utilizado para comunicarse con sus estudiantes sea adecuado para la madurez cognoscitiva del discente. Sin embargo, lo más importante es que posea capacidad para incitar y guiar la actividad de aprendizaje (Ausubel, Novak y Hanesian, 1983).

Con respecto a la personalidad, se afirma que un docente cordial mejora los resultados de aprendizaje en los estudiantes, ya que estos lo identifican como un

profesor comprensivo, benévolo y atento, además, les brinda apoyo emocional y entiende la etapa adolescente, siendo esto una motivación para el aprendiz. También suele ser más valorados por los supervisores, directores y compañeros de trabajo. Un docente entusiasta suele tener productos positivos en su labor, por su capacidad de motivación intelectual e intrínseca por aprender y enseñar en conjunto (Kounin, Gump y Ryan, 1961; citados por Ausubel, Novak y Hanesian, 1983).

Por otro lado, un docente que no pueda manejar la disciplina en el salón de clases, se considera un obstáculo para el aprendizaje, pero se percibe que el castigo es visto por los estudiantes como una acción excesiva, que puede generar actitudes agresivas y mala conducta por parte de estos, disminuyendo así su interés por aprender. Contrario a lo anterior, la buena disciplina es vista como una consecuencia de las clases interesantes y una agradable relación entre docentes y estudiantes. (Ausubel, Novak y Hanesian, 1983).

Elementos cognoscitivos que interfieren en el aprendizaje significativo

Al analizar el proceso mediante el cual se llega a la comprensión de los contenidos del currículum por parte de los estudiantes, como resultado de la distintiva metodología de mediación particular de cada docente, se plantea el concepto de aprendizaje significativo como una idealización, donde se busca cumplir el objetivo primordial del labor educativo del profesor en relación a sus discentes: la comprensión y el entendimiento de la materia; para esto se establece como base para el docente, el seguimiento de los principios ya planteados antes, que fundamentan este concepto y la aplicación de una metodología específica apoyada en ellos. Para lograr esto, hay que considerar aspectos que pueden influenciar de cierta manera el desarrollo del mismo, entre ellos están los factores cognoscitivos que interfieren en este tipo de aprendizaje. Como principal factor de influencia se encuentra la denominada estructura cognoscitiva existente, la cual comprende tanto el conocimiento ya implícito en la estructura cognitiva del individuo como su capacidad para desenvolverse en un campo determinado, de tal manera que para definirla se considera la premisa de

“que en la mente del individuo existe una estructura en la cual se procesan la organización y la integración: es la estructura cognitiva, entendida como el contenido total de ideas de un individuo y su organización, o el contenido y organización de sus ideas, en una determinada área de conocimiento.” (Moreira, s.f.)

Según lo anterior, esta estructura cognitiva existente en el individuo, para lograr el aprendizaje buscado, viene a cumplir la función de “sustrato”, ya que es ahí donde se van a plantar las nuevas ideas, conocimientos y conceptos que se le propongan en el proceso educativo, solidificando así el aprendizaje significativo.

Por otra parte se establece que la estructura cognoscitiva de un individuo, se ve afectada por factores de índole sustancial, en los cuales cabe el planteamiento de los mismo planes de estudio que se formulan para organizar la materia que se debe abarcar, estos deben tener al menos objetivos claros a cumplir, que vuelvan interesante el desarrollo de cada uno de los temas, de tal manera que llamen la atención de los estudiantes y a su vez les motive a aprender y valorar la importancia de lo que se les está enseñando. Estos objetivos deben ser integradores, de manera que contemplen una actualización respecto a los avances que se están generando actualmente en la realidad, relacionado a la asignatura con la que se está trabajando; además se debe mostrar la utilidad que realmente representa los contenidos que se están viendo, o cómo estos están incluidos en las actividades que día a día se realizan. Para ello es necesaria la utilización de materiales que sirvan como representaciones más claras de lo que se está explicando, y de esta manera se logre que los estudiantes por medio de la visualización concreta de ejemplos, establezcan relaciones con lo visto y la realidad.

Como parte del mejoramiento del proceso de mediación educativa para alcanzar la significatividad del aprendizaje, es necesario tomar en cuenta la diferenciación progresiva, que se debe aplicar en el desarrollo de los temas que se estén trabajando, la cual según Ausubel y compañía se aplica “cuando las ideas más generales e inclusivas de la disciplina se presentan primero, y luego se diferencian progresivamente en función de los detalles y la especificidad” (1989, p. 173) de tal manera que esta forma de trabajar los contenidos consiste en abarcar,

primeramente las generalidades de los mismos, para luego ir paulatinamente adentrándose en los detalles y subtemas específicos, con el fin de que para comprender los últimos, el estudiante cuente con bases y herramientas fuertes para dominarlos. Este concepto como propuesta metodológica, se encuentra sustentado en la secuencia natural en la que el desarrollo cognitivo del ser humano se construye, de manera que se facilita el ensamblaje de la estructura que compone todo el contenido almacenado en la memoria, cimentada en la comprensión de los conocimientos más simples, como constituyentes de la base sólida necesaria para lograr un aprendizaje realmente significativo de las ideas más especializadas, básicamente reside en la idea de impartir la explicación de los temas organizada bajo un orden jerárquico ascendente según su nivel de profundidad.

Otro factor, ligado a su vez con la diferenciación progresiva planteada anteriormente, es la denominada organización en secuencia, cuya concepción se basa en alinear los temas a modo de una secuencia, donde cada uno constituye un pilar para el entendimiento del que sigue, siendo así como una cadena, en donde cada anillo se mantiene entrelazado al anterior y al posterior, convirtiéndose en un puente entre lo ya visto y lo nuevo por ver. Este afianzamiento entre los temas fomenta en los estudiantes una percepción donde la unión de una serie de cosas constituyen algo de mayor relevancia, pero también a su vez cada uno de esos componentes son parte importante para la formación de ese producto final.

Como complemento de los principios que sostienen el modelo de Ausubel referente al alcance de un aprendizaje completo y con buenas bases, se plantea la idea de la reconciliación integradora de la estructura cognoscitiva, cuya complejidad, Moreira la simplifica definiéndola como

“lo contrario de la práctica usual de los libros de texto de compartimentalizar conocimientos en capítulos y subcapítulos. De acuerdo con ese principio, la enseñanza debe explícitamente explorar relaciones entre conocimientos, indicando diferencias y semejanzas significativas, reconciliar inconsistencias reales o aparentes, integrar o cambiar ideas similares.” (2012, p.7)

Según lo anterior, se establece una crítica al uso estandarizado de los libros de texto en las instituciones de primaria y secundaria como principal herramienta de apoyo educativo para los estudiantes, esto debido a la forma en que estructuran los contenidos, ya que la redacción en prosa y comprimida de la información que estos contienen, impide la interrelación de los conceptos y temas, esto a su vez debido también a la saturación de texto. Por su parte la reconciliación integradora busca que en el material que se exponga a los estudiantes, se encuentre un espacio y una señalización que indique las conexiones que existen entre términos clave de cada uno de los temas, de manera que le brinden la posibilidad al estudiante junto con la mediación del docente, para establecer una red donde se definan las relaciones y la importancia de cada concepto visto; además que por medio de diagramas, imágenes u otro tipo de forma ilustrativa se muestre la unión de los conocimientos comprendiendo así la formación de un complemento total.

Finalmente se encuentra el principio de la consolidación como producto final del proceso de enseñanza-aprendizaje el cual establece que

“antes de que se introduzcan los nuevos materiales, se asegura la comprensión de la nueva materia y el éxito en el aprendizaje secuencialmente organizado. Este tipo de aprendizaje presupone que las unidades precedentes se han aprendido de manera estable, clara y organizada. Las nuevas materias en la secuencia, no se deben introducir sin que los precedentes sean dominados por los alumnos” (Actis Di Pasquale, E. 2007)

Este principio es uno de los aspectos más importantes bajo una modalidad de enseñanza regida en el aprendizaje significativo, ya que es la regla primordial para alcanzar la mayor comprensión posible de los contenidos, esto porque al no avanzar hasta comprender, exige un esfuerzo mental en ocasiones mayor que en otras, pero le asegura al estudiante la constitución de una base sólida donde pueden crecer tranquilamente los próximos contenido que se pretende.

Materiales didácticos que favorecen el aprendizaje significativo

En el proceso de mediación educativa se sabe que el docente evidentemente es el principal actor influyente en el acto de enseñar a los estudiantes, aun así hay que reconocer que este se apoya en materiales didácticos, los cuales se definen por el Programa Regional de Educación en Población de la UNESCO como

“aquellos instrumentos tangibles que utilizan medios impresos, orales o visuales para servir de apoyo al logro de los objetivos educativos y al desarrollo de los contenidos curriculares. Además de exponer y demostrar un contenido, interactúan con quien los utiliza para apoyar el aprendizaje de nuevos conceptos, el ejercicio y desarrollo de habilidades y la comprobación de elementos” (1989, p.9)

Estos instrumentos según lo anterior, son complementos de gran relevancia para que el docente afine su metodología de enseñanza y cause mayor impacto en sus estudiantes en la interacción durante las lecciones, ya que ayudan y estimulan los sentidos, alcanzado muchas veces, mayor atención que una común clase magistral impartida por el mismo docente. Entre estos materiales se proponen ideas como la realización de esquemas, mapas conceptuales, la aplicación de un laboratorio donde se simulen o demuestren determinados procesos, o la proyección de material audio visual que represente de manera más explícita y clara alguno de los temas.

Aprendizaje por descubrimiento

Según Barrón 1993, se entiende el aprendizaje por descubrimiento como “actividad autoreguladora de resolución de problemas, que requiere la comprobación de hipótesis como centro lógico del acto de descubrimiento”. Esto coincide con lo que menciona Ausubel, Novak y Hanesian, 1983, que el aprendizaje por conocimiento es especialmente apropiado para el aprendizaje del método científico.

Es de hacer notar que existen entonces varios principios que deben ser considerados cuando se habla de aprendizaje por descubrimiento, los cuales son mencionados por Barrón 1993:

- El ser humano por naturaleza está constantemente descubriendo nuevo conocimiento.
- Presupone una reformulación de conceptos previos que se instalan en el sistema cognositivo.
- Encuentra su punto de partida desde la identificación de problemas y se desarrolla en la resolución de los problemas.
- La resolución de los problemas debe ser autoregulada.
- Está asociado a la producción de errores.
- Está siempre influenciado por las experiencias socio-culturales del sujeto.
- Puede ser pedagógicamente promovido.

Sin embargo, en contraposición a esto, existen varios mitos creados alrededor de este tipo de aprendizaje en los cuales Ausubel, Novak y Hanesian, 1983 hacen énfasis para no errar intentando tomarlos como ciertos; como que todo el conocimiento es descubierto por uno mismo o que la capacidad de resolver problemas constituye la meta más importante de la educación. Por otra parte, Ausubel también desmiente que el descubrimiento sea una fuente por sí sola de motivación y afirma que no todos los niños deben ser pensadores críticos y creativos. Todo esto pues según Ausubel “El aprendizaje por descubrimiento simplemente no constituye un método factible primario de transmitir grandes cuerpos de conocimientos relativos al contenido de las materias de estudio.” (Ausubel, Novak y Hanesian, 1983) como lo podrían creer muchos educadores.

Al estar el aprendizaje por descubrimiento relacionado con la habilidad innata del ser humano por descubrir cosas, es posible utilizarlo en todas las materias del sistema educativo. Como lo remarcan Ausubel, Novak y Hanesian, 1983, es un aprendizaje especialmente adecuado para la infancia ya que el método de descubrimiento, fue la técnica de enseñanza centrada en el niño que se originó en las filosofías educativas de Rousseau y Foebel. Por lo tanto, en los primeros años de educación institucionalizada, es posible hacer descubrir a los estudiantes los conocimientos que se quiere que adquieran ya que, se parte del presupuesto que aprenderán desde un nivel básico.

Ausubel menciona en su libro los usos y las ventajas del uso del aprendizaje por descubrimiento lo siguiente: “es indispensable para comprobar la significatividad del conocimiento y para enseñar el método científico y las destrezas efectivas para resolver problemas. Como técnica pedagógica adjunta puede ser muy útil para aumentar la significatividad del material presentado principalmente por métodos expositivos. Finalmente, hay varios factores cognoscitivos y motivacionales que mejoran indudablemente el aprendizaje, la retención y la transferibilidad de las ideas potencialmente significativas que se han aprendido por descubrimiento.” (Ausubel, Novak y Hanesian, 1983). Además, comenta lo que son los usos en la evaluación de los resultados del aprendizaje y la resolución de problemas.

Por otra parte, en el área de los idiomas, si estos se relacionan con la lengua materna del estudiante, se pueden dar apenas referencias y utilizar sus conocimientos previos para que el estudiante descubra el funcionamiento de la lengua blanco. En algunas materias prácticas como las artes plásticas, los deportes, es fácil dejar que los estudiantes experimenten y hagan uso del error y de la autoregulación cumpliendo aún con los programas impuestos por el ente regulador; en el caso de Costa Rica, el Ministerio de Educación Pública.

En el caso de otras materias como estudios sociales o las ciencias, el método por descubrimiento implica que los estudiantes posean conocimientos previos para hacer conjeturas y verificar hipótesis. Es por ello que se debe establecer muy bien los alcances y las limitaciones de un método como este. Ya lo mencionan Ausubel y compañía:

“Pero desde un punto de vista práctico, es imposible considerar la factibilidad pedagógica de aprender por descubrimiento como medio principal de enseñar el contenido de la materia, sin tener en cuenta la exagerada duración de estos procedimientos” (Ausubel, Novak y Hanesian, 1983)

La duración, es la limitación principal, ya que al deberse cumplir con un curriculum en un cierto tiempo que está determinado por el ente regulador, no es posible utilizar el aprendizaje por descubrimiento en todo momento del proceso de enseñanza aprendizaje del sistema educativo. Por otra parte, otra de las limitaciones, como la menciona Ausubel, Novak y Hanesian, 1983 desde su punto

de vista personal, es el hecho de que existe el conocimiento como parte de la cultura popular, que no se aprende por descubrimiento propio sino por transferencia directa de conocimientos:

“Muy aparte de su falta de validez literal, la afirmación de que cada hombre debe descubrir por sí mismo cada fracción del conocimiento que *realmente* desee poseer es, en esencia, un repudio al concepto mismo de cultura; pues quizá el atributo más singular de la cultura humana, que la distingue de cualquier otra clase de organización social presente en el reino animal, es precisamente el hecho de que los descubrimientos acumulados durante milenios pueden transmitirse a cada generación sucesiva en el curso de la infancia y la juventud, y no necesita descubrirlos de nuevo cada generación” (Ausubel, Novak y Hanesian, 1983)

Resolución de problemas y creatividad: Ausubel y compañía define tanto la resolución de problemas como la creatividad parte del aprendizaje por descubrimiento, y de igual forma, formas de aprendizaje significativo. Dentro de la resolución de problemas, uno de los factores más influyentes es el lenguaje gracias a la adquisición de conceptos. Mientras que para la creatividad se da un debate respecto a la definición de la misma, ya que popularmente se tiene mucha confusión a la hora de definirlo. “La creatividad es la expresión suprema de la resolución de problemas, que involucra transformaciones nuevas u originales de las ideas y la generación de nuevos principios integradores (supraordinados) y explicatorios.” (Ausubel, Novak y Hanesian, 1983)

Los mapas conceptuales como alternativa viable para lograr un aprendizaje significativo

“Parece claro que las teorías psicológicas del aprendizaje se orientan cada vez más al análisis de la interacción entre los materiales de aprendizaje y los procesos psicológicos mediante los que son procesados por parte del sujeto. Paralelamente los profesores han ido descubriendo que su labor no debe ir dirigida sólo a proporcionar conocimientos y a asegurar ciertos productos o resultados del aprendizaje (...), sino que deben fomentar también los procesos mediante los que

esos productos pueden alcanzarse (o sea, las estrategias de aprendizaje)”. (Pozo, 1990, p. 201).

Según Ausubel 1976 para poder aprender significativamente el estudiante debe relacionar conocimientos nuevos a partir de los conceptos previos que ya se poseían, esto con el fin de ir mejorandolos y construyendo nuevos esquemas cognitivos que le permitan la fácil asimilación de nuevos conocimientos.

En este caso los mapas conceptuales se vuelven una herramienta idónea para que los estudiantes mejoren sus procesos de aprendizaje significativo, esto se debe a que estas herramientas ligan o parten de un concepto o idea principal y lo desglosan a conceptos e ideas secundarias que están relacionadas de manera directa con el primer concepto, su fácil utilización permite que los docentes puedan desarrollar temas extensos en poco tiempo con alto grado de eficacia en cuanto al conocimiento dado a los estudiantes ya que se parte del conocimiento previo de los mismos.

Esta herramienta permite el intercambio de ideas por parte del estudiantado con el docente mejorando la relación de estos y permitiendo que el enfoque constructivista de Lev Vigotsky pueda ser aplicado, donde el conocimiento no es solo lineal y dado por la figura de un docente autoritario, sino más bien permite que este sea una guía en el aprendizaje de los estudiantes. Por otro lado, se define como mapa conceptual: “una técnica que representa, simultáneamente, una estrategia de aprendizaje, un método para captar lo más significativo de un tema y un recurso esquemático para representar un conjunto de significados conceptuales, incluidos en una estructura de proposiciones” (Novak, J.D. y Gowin, D.B. 1999), este autor habla de una estructura de proposiciones dado que los mapas conceptuales responde a una construcción organizada de términos.

Según lo describe Novak (1999), la utilización de los mapas conceptuales en el proceso de aprendizaje es útil porque según sus características los mapas conceptuales son inclusivos; tiene que ver con la jerarquización de los conceptos y el nivel de comprensión de los mismos y la integración de nuevas relaciones entre conceptos previos y nuevos.

“Debido a que se alcanza más fácilmente un aprendizaje significativo cuando los nuevos conceptos o significados conceptuales se engloban bajo otros conceptos más amplios, los conceptos más generales e inclusivos se sitúan en la parte superior del mapa, y los conceptos progresivamente más específicos y menos inclusivos, en la inferior”. (Simón Cuevas, A.J. 2005 p.7)

Elementos que constituyen un mapa conceptual: Según Rodríguez (2007), los mapas conceptuales constan de los siguientes cuatro componentes:

- *Los conceptos o nodos:* son las palabras para denominar objetos, acontecimientos, hechos, cualidades, entre otras.
- *Las palabras de enlace:* se utilizan para unir ideas y que estas tengan orden lógico.
- *Las proposiciones:* son los conceptos unidos por las palabras de enlace, para al final obtener un significado.
- *Líneas:* Se utilizan para unir conceptos, las flechas se usan en caso que no haya subordinación.

Ventajas de la utilización de los mapas conceptuales: Para Rodríguez (2007), esta técnica tiene una serie de ventajas, dentro de estas se puede mencionar:

- Representan una herramienta ordenada para la proyección de conceptos en cuanto a su jerarquización y complejidad.
- Permiten una diferenciación progresiva de conceptos y permiten enlazar conocimientos previos con ideas nuevas para mejorar las estructuras cognitivas en los estudiantes.
- Su utilización le permite a los estudiantes mejorar la comprensión de los conceptos al recordar lo aprendido y que a partir de ello puedan construir estructuras de conocimiento lógico que permitan el aprendizaje significativo.

Cómo construir un mapa conceptual

- Tener una idea focalizada, estructurar una pregunta de enfoque que centre el mapa conceptual en el contexto de la información deseada.

- Selección de conceptos, se deben buscar conceptos claves que ayuden a formular el mapa conceptual, se sugiere crear una lista de entre 15 a 25 conceptos.
- Jerarquización de los conceptos, hay que ordenar los conceptos según su nivel de inclusión y relevancia, esta jerarquización se realiza de superior a inferior según los niveles anteriores.
- Construir un mapa preliminar, relacionar los términos seleccionados ir agrupándolos para formar una organización jerárquica de los conceptos, observar cuales tienen valor para el mapa conceptual y cuales por repetición o que resultan irrelevantes se pueden eliminar.
- Revisión, este proceso es importante porque permite observar errores en los mapas preliminares, como está la jerarquización y orden los conceptos. Permite buscar enlaces cruzados que ayudan a ligar los conceptos para poder relacionar y explicar mejor la idea principal con las secundarias de un mapa conceptual.
- Un mapa conceptual se puede definir como terminado cuando este permite altos niveles de desempeño cognitivo y la síntesis de conocimiento, a su vez el mensaje o la información en el mapa es fácilmente comprensible, debe poder comunicar con claridad el mensaje deseado.

Evaluación para el aprendizaje significativo

El proceso de enseñanza-aprendizaje en cada uno de los momentos de aula no está exento de ser evaluado sumativamente, ya que el propósito que cumple es la de facilitador del aprendizaje y la enseñanza, la emisión de juicios de valor y de orientador, siendo lo contrario en la mayoría de los estudiantes porque ven a la evaluación como un reto con miedo. “Se debe de averiguar lo que el estudiante ya sabe antes de tratar de proporcionar otros conocimientos” (Ausubel, Novak y Hanesian, 1989, p.514), el evaluar al estudiante es de suma importancia debido a que mediante este instrumento se va medir la información que ha adquirido y a partir de aquí el docente va a darse cuenta cómo está realizando el trabajo si sus ideas son comprendidas o si tiene que hacer uso de otra u otras herramientas que pueda mostrar con mayor claridad lo que pretende enseñar al discente, también podrá comprobar si el alumno es auditivo, o visual, o si presenta alguna situación especial.

El docente tiene que tener claro qué es lo que desea saber del estudiante porque así puede elegir con mayor precisión la técnica a evaluar, y para que su medición a través de la prueba sea de provecho educativo debe de poseer los siguientes elementos: validez, confiabilidad, representatividad, poder discriminativo y factibilidad. “Se pueden aplicar exámenes de dos o más ítems, también pueden utilizarse ensayos o tests, sin dejar de lado la prueba estandarizada que no es bien vista por todos los docentes, elimina la subjetividad y la variabilidad he incurre en críticas. Si la prueba careciera de alguno de estos proporcionadores de la información carecería de confiabilidad”. (Ausubel, Novak y Hanesian, 1989, p.526).

Con respecto a los principios de mediación y evaluación “la mediación y la evaluación son partes integrales del aprendizaje en el salón de clase; por tanto, de la psicología educativa. Si nuestra actitud hacia la educación es realmente seria, tenemos que precisar las maneras de medir los resultados del aprendizaje de los estudiantes como individuos y de averiguar si aquellos concuerdan con nuestros propósitos educativos. Además, estas medidas habrán de hacer algo más que informarnos de si nuestros estudiantes están siendo educados en realidad o no.” (Ausubel, Novak y Hanesian, 1989, p.514). El estudiante en su proceso de aprendizaje constantemente se le debe de realizar mediciones para confirmar que está recibiendo la información correcta porque si fuera lo contrario habría que buscar los medios para que se le facilite.

“La evaluación es importante al principio, durante y al concluir cualquier secuencia de la enseñanza. Debe decirse en primer término los resultados de aprendizaje deseados para inducir y estructurar armónicamente el proceso de enseñanza. En segundo término, es necesario determinar el grado de progreso hacia la meta durante el curso del aprendizaje - lo mismo como retroalimentación y motivación para el estudiante como medio de vigilar la eficacia de la enseñanza. Por último, es importante evaluar los resultados finales de aprendizaje en relación con los objetivos, tanto desde el punto de vista del aprovechamiento del estudiante como desde el punto de vista de los métodos y los materiales de enseñanza.” (Ausubel, Novak y Hanesian, 1989, p.514).

Si el docente realiza un orden secuencial evaluativo, el cual es de suma importancia realizarlo, se tendría certeza que su información está siendo procesada, así fuese positiva o negativamente.

Sin duda alguna la medición es sumamente importante porque a través de ella el docente se va a dar cuenta de sus errores o de las lagunas de información requerida por el individuo, por lo que podrá hacerle frente a estos, a través de los distintos métodos de trabajo como los diferentes mapas conceptuales que en resumen, visualizan y enfocan la información que se requiere para que el estudiante almacene, un profesor debe utilizar todos los medios que estén a su alcance para llegar a medir a un estudiante mediante una prueba, ser objetivo a la hora de plantear un examen, y tener claro lo que realmente enseña y que busca saber, de lo que sabe el estudiante.

En síntesis hay tres formas distintas de interpretar las puntuaciones de pruebas de ejecución:

- “En el primer método se juzga la ejecución mostrada por el estudiante con respecto a la norma de su propio nivel de capacidad, determinado por sus puntuaciones en una prueba de aptitud, en una preprueba, en una prueba de ejecución anterior, o en una prueba de ejecución inicial durante el curso.
- En el segundo método se evalúa lo correcto de la ejecución del estudiante en relación con la de sus compañeros; es necesario agrupar, acompañar e individualizar la enseñanza, así como tomar importantes decisiones acerca del futuro educativo y vocacional del estudiante.
- Son esenciales ambas clases de evaluación y ninguna de ellas excluye a la otra. Cada una de esas técnicas atañe a una norma relativa de ejecución, pero en un caso el individuo constituye su propia norma y en el otro su ejecución se relaciona con normas de grupo.” (Ausubel, Novak y Hanesian, 1989, p. 532).

Los autores son muy claros en cuanto a la aplicación de una prueba, la cual se ejecutaría según lo que se busca saber en cuanto a dominio o no del estudiante en ciertos lapsos de tiempo que se le prepararía para la valoración de su conocimiento. Estas deben de ser específicas seguir sus lineamientos para que la misma emita si la enseñanza - aprendizaje fue dada de forma consciente y con

métodos atractivos donde los discentes salieron satisfechos con la información almacenada y valorada como fuente de conocimiento requerido.

La clave para que una evaluación sea exitosa, es que la información que se suministra previa a la misma es la que se debe de tomar en cuenta para la elaboración de la prueba, en la cual los ítems deben de prepararse objetivamente, así mismo la coherencia de la temática, donde el estudiante siga el hilo de la misma y no divague sin saber por dónde partir.

Además nos brindan una gama variada de técnicas en cuanto a mapa conceptuales para sacar provecho de las mismas en el salón de clase. Que el docente no tenga miedo de innovar que le saque provecho a todas la herramientas que estén a su alrededor, y a su disposición, esto para que el discente valore el medio donde se está desarrollando y pueda interpretar el pasado, el presente y el futuro, aprendiendo así a utilizar su raciocinio para que sean individuos pensante y actúan según su necesidades y desarrollo intelectual.

CAPÍTULO IV. CONCLUSIONES

Según la investigación y el trabajo realizado, se puede llegar a las siguientes conclusiones:

- Para lograr un aprendizaje significativo se tiene que seguir toda una logística en cuanto a la preparación de los temas y el material didáctico, esto para que el estudiante psicológicamente logre el procesamiento esperado estableciendo las conexiones entre su conocimiento previo y el nuevo material que se le enseña.
- Se debe tomar en cuenta, la disposición y la actitud con la que cuenta los estudiantes, si esta es negativa se puede hacer uso de la motivación extrínseca para que el estudiante cambie su actitud.
- Para que se dé el aprendizaje significativo el estudiante debe relacionar el nuevo conocimiento con el ya aprendido, para ello el docente debe hacer uso de materiales didácticos adecuados y bien elaborados.
- El aprendizaje por recepción también se considera aprendizaje significativo, y no solo el aprendizaje por descubrimiento, aunque este último es más representativo.
- Los mapas conceptuales o modelos mentales, son una estrategia adecuada para lograr aprendizaje significativo ya que el estudiante esquematiza lo que aprendió y el docente puede evaluar si logra transmitir adecuadamente la información.
- La evaluación es una forma para que el docente pueda comprobar si el estudiante logró captar lo que él quiso enseñar. Es decir, la evaluación también sirve para que el profesor se dé cuenta de su desempeño como guía y modelo de enseñanza.
- En la búsqueda de lograr el aprendizaje significativo, se requiere un docente investigador e indagador activo, que contemple realmente los factores que influyen en la forma de aprender de sus estudiantes, y adecue su metodología de enseñanza bajo las condiciones en que trabaja, siguiendo además los principios que caracterizan este tipo de aprendizaje como tal.

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Estimados señores,

Por este medio se notifica que Sharom Daniela Mendoza Monge, cédula 115590610 entregó los documentos traducidos *Trabajo de Investigación Aprendizaje Significativo Implementado en las Asignaturas de Ciencias Naturales y Estudios Sociales* traducidos de Español a Inglés y *The Value of the Pedagogical Repertoire for Guitar: Leo Brouwer's Nuevos Estudios Sencillos* de Inglés a Español para el Liceo Santa Bárbara de Heredia el día 25 de abril de 2020 según lo acordado.

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RESPONSABILIDAD: cumplir con los deberes, tanto en calidad como en oportunidad.

DISCRECIÓN: guardar respeto sobre los hechos o informaciones de los que tenga conocimiento con motivo del ejercicio profesional, sin que esto perjudique las funciones y responsabilidades.

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DIGNIDAD Y DECORO: actuar con sobriedad y moderación.

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ACTUALIZACIÓN: comprometer parte del tiempo en actualizar los conocimientos y adaptarlos en el desarrollo de la actividad profesional.

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BUENA FE: toda conducta o comportamiento, criterio emitido y labor desempeñada debe basarse en los más altos principios éticos y tendrá como fundamento la buena fe.

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