Thesis

Attitudes towards the use of online Rosetta Stone Platform and Academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018

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Attitudes towards the use of online Rosetta Stone Platform and Academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018
This work is dedicated to the most important people of my life
To my grandmothers who left the most beautiful footprints in
my life
To my father who sowed in my heart the seed of this
wonderful vocation
To my mother, for being the strength I need every day
To my brother, for motivating me to be the best example to
follow
To Marco, for his love and for walking my side for more than
fifteen years.
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Abstract

By means of this research we wanted to study about the attitudes towards the use of online Rosetta Stone Platform and Academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University that took place in the city of Lima in the year 2018. The main objective was to establish the relationship between the variables attitudes and academic performance. This research was of descriptive type and quantitative approach with a correlational design. The method used for this work was the descriptive method. The population and simple were the same 60 Fifth Cycle Students of Environmental Engineering at Alas Peruanas University due to the fact that the population was small. After the corresponding hypothesis testing, we arrived at the conclusion that attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman's Rho correlation coefficient = 0.665 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the bilateral 0.01 level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.

Keywords: online platform, attitudes, academic performance
Introduction

This research work is about the variables attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University. Anyone may ask himself Why attitudes? What is new with it? The answers to these questions can make us think that the transmission of rules of behavior and attitudes that lead people to understand concepts such as tolerance, peace, mutual respect, human rights, inclusion, honesty, sincerity, assertive communication, perseverance, friendship, patience, among others. People who study languages using online systems of language learning have also to practice some positive behaviors like the ones afore mentioned. In this direction an attitude can be defined as the disposition or mood with which we face a situation. Therefore, it follows that a positive attitude is one we adopt to face what comes in the most beneficial way for us. In other words, that is the way people react when doing something that may or not benefit them, being this the object of study of this thesis.

This work has being divided into five chapters. Chapter one has to do with the determination of the problem to then continue with the formulation of the general and specific problems as well as the formulation of the general and specific objectives. Also in this chapter we consider the relevance and scope of the problem and the limitations of the research. Chapter two contains the theoretical framework of attitudes and academic performance starting by the presentation of national and international backgrounds. Then the theoretical bases where we study the variables to then finish this part with the definition of key terms.

Chapter three has to do with the formulation of the corresponding hypothesis and the analysis of variables by decomposing them in small units called dimensions and indicator in a chart of operationalization. Chapter four presents and precises the methodological
aspects of the thesis starting from the research approach, research type and research design to continue with the method and the population and simple. Here also we talk about the research techniques and instruments as well as the statistical treatment. In chapter five we present the results of the field work by using tables and figures.

Finally, after the corresponding hypothesis testing we have arrived at the conclusion that attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman’s Rho correlation coefficient = 0.665 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the bilateral 0.01 level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.
Chapter I.

Research Problem

1.1 Determination of problem

Years have passed and globalization has completely trapped us, however, I do not want to mention the negative side of this, but all the advantages that this has brought with it. The best thing we can do is to demonstrate that we are at the vanguard in today's world is to show the competitiveness and commitment that characterizes a good professional.

Little by little, English language ceased to be a course or subject in higher education institutions, to take an important role in the professional field. English is a very useful tool that allows people to access an unlimited amount of information of interest and current, which will help them in the field of study and research and place people who use it correctly, a step forward.

Nowadays, learning English language is very important since it is a requirement to obtain a bachelor's degree at the end of a university career. For this reason, Peruvian universities have shown greater interest in teaching courses in which English language is taught as a foreign language, in this way, it helps students not only meet the requirements required by law, but also to insert them successfully into a demanding work world and their performance is much more competent.

In 2016, Alas Peruanas University decided to improve the students’ English language level and replaced the face-to-face course of English, which consisted of three pedagogical hours per week for ten academic terms, for the implementation of the use of the Rosetta stone platform.

Rosetta Stone is a virtual platform for English language learning, which is prepared to be studied during five academic terms, on average of three hours a week through a
computer via internet and one hour of face-to-face class, in which the teacher monitors the student's progress.

The academic performance of the students has declined in comparison to when they attended face-to-face classes. The evidence of it was the results of their written tests and the performance of the four skills. Consequently, students developed negative attitudes regarding the course, and also it generated problems in the English language learning. In addition, it implies a change in the methodological approach and the development of computer skills which is required to access English language teaching.

Attitudes toward English language learning have undergone a significant change, as a result of it, students have developed frustration by not getting the expected results, in addition, they develop negative attitudes towards English.

These are the reasons for which I have decided to deepen the topic through the investigation to be able to describe in a descriptive way my variables and to solve the proposed hypotheses.

1.2 Formulation of problem

1.2.1 General problem

To what extent are attitudes towards the use of online Rosetta Stone Platform related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018?

1.2.2 Specific problems

SP1. To what extent is the cognitive component of attitudes towards the use of online Rosetta Stone Platform related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018?
SP2. To what extent is the affective component of attitudes towards the use of online Rosetta Stone Platform related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018?

SP3. To what extent is the behavioral component of attitudes towards the use of online Rosetta Stone Platform related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018?

1.3 Objectives: general and specific objectives

1.3.1 General objective

To establish the relationship between attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

1.3.2 Specific objectives

SO1. To establish the relationship between the cognitive component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

SO2. To establish the relationship between the affective component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

SO3. To establish the relationship between the behavioral component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.
1.4 Scope and relevance of problem

1.4.1 Theoretical relevance

The information gathered for this research is very important because it will be taken as a reference to establish the relationship between the variables.

1.4.2 Practical relevance

The results obtained in this research will benefit people involved as well as other professionals who wish to address and deepen the topic.

1.4.3 Methodological relevance

This research allows us to establish the relationship between attitude and academic performance. The measurement data will be taken by using surveys and the students' academic grades.

1.5 Limitations of the research

1.5.1 Geographical limitations

The field work was done at Alas Peruanas University, Pachacamac, Province and Department of Lima, Peru.

1.5.2 Time limitations

This work was done between 2018 and 2019.

1.5.3 Resources limitations

The research was financed by the author of the thesis.
Chapter II.

Theoretical framework

2.1 Research background

2.1.1 National background

Felipa, García, Pérez and Torres (2014) in their thesis entitled *Application of the E-learning Platform ED MODO improving communication skills of Pre-Intermediate Level English students at IPNM Language Center*, arrived at the following conclusions:

1. The 44% of the students of Pre-Intermediate Level at IPNM Language Center studied English as a requirement to obtain a professional degree in education. It is a conclusion, that the results of the survey made to the students can be reached.

2. It is based on the survey applied to students and practicing teachers, we can conclude that they do not have the necessary material for the development of the classes at the Language Center of IPNM.

3. The use of the Ed Modo E-learning Platform generated a better disposition of the students to learn the language because the activities responding to the contents previously studied in the classroom, which allows students to be more familiar with the different types of exercises given according to the communicative ability to work.

4. We can conclude that the Ed Modo e-learning platform helped to improve the four communicative skills of English at the expected level, being twelve of the students of Pre-intermediate level at the Language Center of IPNM who managed to pass the international PET examination.
5. The application E-learning platform Ed Mode to students of Pre-intermediate level at the Language Center of IPNM, managed to improve to a greater extent the communicative skills of text comprehension. Likewise, from the results of the application of the Post test, it can be concluded that the skill with the greatest difficulty for the students of Pre-Intermediate Level at the Language Center of IPNM, was the communicative ability of Text Production.

Arias, Chiri, Ligan and Untiveros (2014), in their thesis entitled *Relationship between motivation for academic achievement and attitudes towards learning in the Foreign Language Area of English for students from 1st to 5th Year of Secondary Education at Sagrado Corazón High School, branch IPNM of the district of Santiago de Surco belonging to the UGEL 07*, arrived at the following conclusions:

1. The majority of students from 1st to 5th Year of Secondary School at Sagrado Corazón High School, branch IPNM did not approve the minimum required in the Social Desirability category of the Academic Achievement Test Instrument, which makes it conclude that the tests large-scale applied in that institute can be of total reliability.

2. Students from 1st to 5th Year of Secondary Education at Sagrado Corazón High School, branch IPNM are at a high level of academic motivation.

3. Students from 1st to 5th Year of Secondary School at Sagrado Corazón High School, branch IPNM have bad attitudes towards learning English as a Foreign Language.

4. According to the results obtained in this research, there is no direct relationship between academic achievement motivation and attitudes towards learning English as a foreign language.
Aguirre, Lopez, Mejia, Ramirez and Yaranga (2016) in their thesis *Attitudes towards the use of the Internet as a didactic resource in the teaching - learning process of English teachers as a foreign language area in the State Educational Institutions of the UGEL N ° 07 Metropolitan Lima*, arrived at the following conclusions:

1. We verify that the attitude towards the use of the internet presents an unfavorable level because the teachers of the area of English as a foreign language have not been continuously and significantly trained.

2. We affirm that teachers of English as a foreign language area do not demonstrate a security attitude because they find it difficult to access web pages immediately and effectively.

3. We verified that the teachers of the area of English as a foreign language show an unfavorable level in the attitude of interest since they do not use this resource constantly to obtain information of the strategies for the teaching of the English language.

4. We corroborated that the teachers of the area of English as a foreign language show the attitude of resistance against the use of the Internet as a didactic resource since they do not consider the information provided by the Internet, avoiding using it during their learning sessions to promote the development of the four communication skills.

Oyola (2017) in the thesis entitled *Use of the Educaplay platform in the capacities of the English area in the students of the 2nd year of high school at "San Antonio de Jicamarca" School, Vitarte, Lima, 2015*, arrived at the following conclusions:

First: The results obtained from the research through the student's parametric t test, was obtained in the post test the value of $t = 7.50$ and $p = 0.00 < 0.05$, so it is concluded
that the use of Educaplay platform has a significant influence on the development of English-language skills in the second year high school students at "San Antonio de Jicamarca" School, Vitarte; Lima, 2015

Second: The results obtained from the research through the student's parametric t test, was obtained in the post test the value of $t = 3.57$ and $p = 0.001 < 0.05$, which is why it is concluded that the use of the platform Educaplay has a significant influence on the development of Oral expression and comprehension skills in the second year high school students at "San Antonio de Jicamarca" School, Vitarte - Lima, 2015.

Third: The results obtained from the investigation through the student's parametric t test, was obtained in the post test the value of $t = 5.53$ and $p = 0.000 < 0.05$, which concludes that the use of the Educaplay platform significantly influences the development of text comprehension skills in second year high school students at "San Antonio de Jicamarca" School, Vitarte, Lima, 2015.

Fourth: The results obtained from the research through the student's parametric t test, was obtained in the post test the value of $t = 5.49$ and $p = 0.000 < 0.05$, so it is concluded that the use of the Educaplay platform significantly influences the development of Text Production capabilities in the second year high school students at "San Antonio de Jicamarca" School, Vitarte, Lima, 2015.

García and Abanto (2017) in the thesis *Influence of the use of the ENGLISH-ID virtual platform in the learning of the four basic skills of the English language, pre-intermediate level in the CIUPAGU, 2017 (Cajamarca)*, reached the following conclusions:

The use of ENGLISH-ID virtual platform influences significantly on the learning of listening skills in the English language, a pre-intermediate level in CIUPAGU.
The use of ENGLISH-ID virtual platform has a significant influence on the learning of the speaking ability of the English language, a pre-intermediate level in CIUPAGU.

The use of ENGLISH-ID virtual platform influences significantly on the learning of the writing ability of the English language, pre-intermediate level in the CIUPAGU.

The use of ENGLISH-ID virtual platform influences significantly on the learning of the ability to read the English language, pre-intermediate level in the CIUPAGU.

2.1.2 International Background

Hernández (2016) in the thesis Use of the online duolingo platform to increase the level of receptive skills in English in students of Technical University of Higher Technical School in the city of Guatemala, reaching the following conclusions:

1. The online platform Duolingo increased the level of receptive skills in English in students of the Higher Technical College Technician.

2. There is a statistically significant difference at the 0,05 level in the receptive skills in English of the experimental group, between the application of the pretest and the posttest when applying the Duolingo Experimental Program.

3. There is a statistically significant difference at the 0,05 level in the receptive skills in English of the control group between the application of the pretest and the posttest.

4. There is no statistically significant difference at the 0,05 level in the receptive skills in English between the experimental group and the control group, before and after applying the Duolingo experimental program.

6. There has been an increase in the level of receptive skills in English both in the experimental group and in the control group.
Orgaz, Moral, and Domínguez (2018) in the thesis *Student Attitude and Perception with the Use of Technology at Santiago University Technology, Santiago de los Caballeros*, (Dominican Republic.) The main finding of this study is that the study model proposed in this research supports that the students’ attitude towards technology influences their perception of technology, and it can be concluded that students' attitude towards social networks has a positive influence on the use of technology, which confirms a model where they are explained the relationships between attitudes and the use of technology, something that had not previously been confirmed (...) These results also indicate the existence of a relationship between attitude and the use of technology, a hypothesis supported in other studies (... On the other hand, it has not been possible to verify that the attitudes towards technology has a positive influence on technological perception, logic of students or technological perception that influence the use of technology by students. As implications for management, these results can serve the university to formulate strategies that encourage positive attitudes towards the use of Web 2.0 in the teaching-learning process among its community of students and teachers, since it has been proved that there is a positive relationship between both elements. It can also serve to develop good practice policies for the use of web platforms and, above all, for the academic community to know the benefits of the use of technology and social networks in the teaching-learning process.

Ramos (2013) in the thesis *Moodle platform and its influence on the teaching of the English language to students of second baccalaureate A, B and D of Unidad Educativa Juan León Mera 'La Salle' in the city of Ambato, Tungurahua province*, reaching the following conclusions:

At Unidad Educativa León Mera "La Salle" there is not any educational platform for teaching. The teacher does not use any kind of multimedia resources to reinforce the topics that are being developed within the class. The teacher always uses the same material to
teach, so the students do not feel motivated and do not find attraction for the subject. Students memorize much of the content taught, without giving way to the relationship and analysis of the topics so that students can remember what they are learning. Students enjoy the class when using multimedia tools and the Internet.

Calderón (2015) in the research *Online business model for learning English for Young adults from Latin America*, reached the following conclusions:

The language to handle the world of business is English, so in the countries where the study was done, you see the need for each professional must have a level of English that allows you to be up to what society asks for any career.

The e-learning business model is taking strength every month which allows it to have greater entry into the business world, these platforms that are created have a better level of personalization with the students, which makes them feel that they have a greater facility to study. However, the above depends on the ability of each student to carry a self-learning.

The income of the business can be so significant as long as you have a good platform that integrates most of the skills of learning the English language, and that the quality is relevant to learn or improve the learning of a second language.

Hernan (2016) in the thesis *Use of the Rosetta Stone program to improve the pronunciation of English in eighth grade students of basic education at San Gabriel School - Educational Unit of Quito during six weeks of the year 2015*, reaching the following conclusions:

The level of pronunciation of the eighth grade students at the beginning of the school year, prior to the use of the Rosetta Stone software was lower than that obtained once the students used the Rosetta Stone program, where after having done the pre-test, post-test
and having analyzed the results it was possible to verify that the level of pronunciation improved significantly.

After having carried out this research project, the results obtained indicate that the use of the Rosetta Stone educational program has a positive impact on the improvement of pronunciation in the eighth grade students of basic education at San Gabriel School - Educational Unit of Quito.

Once the research is completed, it can be determined that the application of the innovative product proposal together with the work that the students do with the Rosetta Stone program in their homes complements and enriches the learning process and improves pronunciation in the eighth grade students of basic education at San Gabriel School - Educational Unit of Quito.

2.2 Theoretical bases

2.2.1 Attitudes towards the use of online Rosetta Stone Platform

Allport (1935) argued “A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related” (p. 810).

McGuire (1968) mentioned “stifling and yet, since we have to use words when we talk, it probably helps to sketch out occasionally what we mean by our terms” (p. 142).

Eagly and Shelly (1993, 1998) stated “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (1993, p. 1).

Crano and Prislin (2006) said “Attitudes are the evaluative judgments that integrate and summarize . . . cognitive/affective reactions” (p. 347).
Williams (1974) argued “an internal state aroused by stimulation of some type and which may mediate the organism's subsequent response” (p. 21)

Attitudes are not defined as behaviors but as forms of behavior that can be given through verbal or non-verbal language, in response (positive or negative) to internal stimuli, cognitive and affective, towards something that is known. It should be noted that values are the basis of the manifestation of attitudes, positive or negative responses to something or someone.

2.2.1.1 Characteristics of Attitudes

Raffino (2019) said that attitudes are subject to several completely recognizable characteristics:

- Attitudes are predisposed to spontaneous change and innate flexibility.
- Attitudes are the main driver of influence in relation to responses to stimuli and adopted behaviors.
- Attitudes can respond to multiple situations, therefore they are said to be transferable.
- Attitudes are acquired with experience and the acquisition of knowledge in each event that makes up the life of an individual. In this way, attitudes influence the different behaviors that the subject adopts.

2.2.1.2 Functions of Attitudes

Attitudes fulfill certain functions in the individual. Katz (1960) outlined four functional areas:
• **Knowledge**

  Attitudes provide meaning (knowledge) for life. The knowledge function refers to our need for a world, which is consistent and relatively stable.

  This allows us to predict what is likely to happen, and so gives us a sense of control. Attitudes can help us organize and structure our experience.

  Knowing a person’s attitude helps us predict their behavior. For example, knowing that a person is religious we can predict they will go to Church.

• **Self / ego – expressive**

  The attitudes we express (1) help communicate who we are and (2) may make us feel good because we have asserted our identity. Self-expression of attitudes can be non-verbal too: think bumper sticker, cap, or T-shirt slogan. Therefore, our attitudes are part of our identity, and help us to be aware through the expression of our feelings, beliefs and values.

• **Adaptive**

  If a person holds and/or expresses socially acceptable attitudes, other people will reward them with approval and social acceptance.

  For example, when people flatter their bosses or instructors (and believe it) or keep silent if they think an attitude is unpopular. Again, expression can be nonverbal [think politician kissing baby].

  Attitudes then are to do with being a part of a social group and the adaptive functions helps us fit in with a social group. People seek out others who share their attitudes, and develop similar attitudes to those they like.
• Ego Defensive

The ego-defensive function refers to holding attitudes that protect our self-esteem or that justify actions that make us feel guilty. For example, one way children might defend themselves against the feelings of humiliation they have experienced in P.E. lessons is to adopt a strongly negative attitude to all sports.

People whose pride have suffered following a defeat in sport might similarly adopt a defensive attitude: “I’m not bothered, I’m sick of rugby anyway…” This function has psychiatric overtones. Positive attitudes towards ourselves, for example, have a protective function (i.e. an ego-defensive role) in helping us reserve our self-image.

The functions of attitudes include from providing knowledge, which is from the experience, to obtain a sense of control. In addition, it helps us to communicate who we are and to affirm our identity and it adapts to the social environment we belong. However, attitudes also help protect self-esteem in order not to feel guilty.

2.2.1.3 Components of Attitudes

According to Wenden (1991), the term “attitude” can be classified into three interrelated components: affective, behavioral, and cognitive. These three attitudinal components are based on the three theoretical approaches of humanism, behaviorism, and cognitivism respectively (Abidin et al., 2012).

C.1 Affective Component

The affective component involves the individual’s feelings and emotions toward an object. According to Choy and Salah (2006), Harn (2015) and Liu (2016), the learning process is an emotional one and is affected by different emotional factors. Attitude can also help learners express if they like or dislike the objects or the surrounding environment.
Feng and Chen (2009) stated that “Learning process is an emotional process. It is affected by different emotional factors. The teacher and his students engage in various emotional activities in it and varied fruits of emotions are yield.” It is generated from a specific feeling that arises from an impression that precedes the person, is the emotional part of an attitude and is usually learned from parents, teachers and classmates, for example: "I do not like my work".

C.2 Behavioral Component

The behavioral component of attitude deals with the way in which one behaves and reacts in particular situations. In other words, it refers to the tendency to adopt particular learning behaviors (Abidin et al., 2012).

For Kara (2009) posited that “Positive attitudes lead to the exhibition of positive behaviors toward courses of study, with participants absorbing themselves in courses and striving to learn more. Such students are also observed to be more eager to solve problems, to acquire the information and skills useful for daily life and to engage themselves emotionally”.

It is the intention to behave in such a way based on specific feelings or attitudes. This intentional behavior is the result of an attitude and it is a predisposition to act in a specific way, such as "I'm going to quit my job".

C.3 Cognitive Component

This attitude is formed when beliefs, information, culture, knowledge and values are related to one's own criteria. That is, it requires the flexibility of thinking to acquire or modify the attitude of according to the situation in which you are. You can come to think that in a more positive way of expressing attitudes, you can take more advantage of learning skills and the favorable evolution towards maturity.
To sum up, these three attitudinal components are called the ABC model of attitudes (McLeod, 2009), which consists of what we feel, what we do, and what we think about someone or something. For example, “I’m scared of my English teacher,” “I’ll avoid speaking English to him,” and “I think he is too strict.” Johnston (2014) states that feelings, behaviors, and thoughts are all related, but the last two are easier to change than the first one. This is because we have more control over what we think and what we do.

The concept of attitude has three components that are interrelated: behavioral, cognitive and affective, which are based on three theoretical approaches: behaviorism, cognitivism and humanism.

Learning is considered an emotional process, in which feelings and emotions influence attitudes toward new knowledge.

Behavior is the direct result of the attitude. It will depend on this, if it is positive or negative towards particular matters. Finally, beliefs and thoughts about a certain object are part of the cognitive component and these will depend on the attitude that the person takes.

2.2.1.4 Attitudes and online Language Learning

The attitude that the student takes with respect to the learning of a language is directly related to the objectives that motivate him and they are not usually stable, but can vary from being ideal to real. In addition, attitudes may vary according to experiences, positive or negative and cultural background. Based on this, it is possible to understand why some students have no desire to study a language, usually because they had bad experiences, bad teachers, inadequate use of methodology, school failure, among others.

In our cultural context, the attitude towards online education and in particular online language learning is a question of honesty and personal motivation, because many people are trying to study languages by means of an online system, but the results have not been
motivating yet. Some students prefer to cheat instead of doing their homework. Others, ask
someone to do the work for them which is another of cheating. These attitudes have to do
with honesty and responsibility.

2.2.1.5 Online Rosetta Stone Platform System

Targeted Activities allow you to practice specific language skills. They may include
some specialized screen types designed to emphasize those skills. The Course contains a
selection of the following activities:

- Main lesson (Core Lesson) • Listening and Reading (Listening & Reading) •
  Speaking. • Pronunciation (Pronunciation) • Reading (Reading) • Review (Review) •
  Vocabulary (Vocabulary) • Writing (Writing) • Milestone (Milestone) • Grammar
  (Grammar) • Listen (Listening)

In Exploration View, the course includes activities in the color of the lesson. In the
course you chose, activities in gray are not included. From the Navigation View you can
select any activity.

The Main Lesson is the basic activity taught by the language. The main lesson
includes a variety of exercises designed to introduce you to the new content.

Pronunciation activity focuses on polishing the pronunciation by separating words
and gives you detailed visual responses to compare your speech with that of the native
speaker.

Vocabulary is reinforced through a combination of exercises to read, listen and see
images that help you practice the new words.

The Grammar activity helps you focus on the grammatical structures of the language
what the student learned. Rosetta Stone develops listening skills and reinforces the
connection between written and spoken text.
The activity of Reading presents sounds and letters of the new language and develops its ability to read while learning.

The Writing activity guides you to recognize the alphabet and learn to write words in the language you are learning.

The Listening activity provides more training in oral comprehension.

The activity of Talking gives you enough oral practice to make you feel safe for speak immediately.

The Review reviews content that dominated previous activities to reinforce. Hito activity allows you to participate in conversations with the computer using pattern speech recognition. Questions and answers are formulated derived from the context to maintain a continuous conversation.

**Rosetta Stone Strategies**

- Connect the meaning of the language with images
- Reinforce the words you know
- Introduce new words in the context of words you already know
- Create correct grammatical structures
- Offer solutions

**2.2.2 Academic performance**

**2.2.2.1 Definition of academic performance**

Kaczynska (1986) stated that the academic performance is the end of all the efforts and all the school initiatives of the teacher, of the parents of the same students; the value of the school and the teacher is judged by the knowledge acquired by the students.
Nováez (1986) argued that academic performance is the quantum obtained by the individual in a given academic activity. The concept of performance is linked to the ability, and would be the result of this, of volitional, affective and emotional factors, in addition to the exercise.

Chadwick (1979) defines academic performance as the expression of skills and psychological characteristics of the student developed and updated through the teaching-learning process that allows you to obtain a level of performance and academic achievement over a period or semester, which is synthesized in a final qualifier (quantitative in most cases) evaluator of the level reached.

Academic performance is the qualification to the product of the learning obtained by a student during a period of time. This is linked to the individual capacity of each student in which various factors, such as volitional, affective and emotional, intervene. However, it is believed that this is affected mainly by motivation and emotion.

The evaluation of academic performance includes from the judgment of the teacher, oral and written evaluations to the observation of the behavior and abilities. This can be expressed in numbers, percentages and also in letters.

In our country, the academic performance is measured through the different assessment instruments such as objective tests, interviews, observation cards, which are expressed numerically from 1 - 20, in which 1-10 (approved) 11 - 20 (disapproved).

2.2.2.2 Characteristics

After making a comparative analysis of various definitions of academic performance, it was concluded that there is a double point of view, static and dynamic, in which education is considered as a social being. Finally, it is concluded that academic performance is characterized by the following facts.
a) Academic Performance, in its dynamic aspect, responds to the learning process, so it is linked to the ability and effort of the student.

b) Academic Performance, in its static aspect, includes the product of the learning generated by the student and expresses an exploitation behavior.

c) Performance is linked to quality measures and valuation judgments.

d) Performance is a means and not a purpose in itself.

e) The performance is related to ethical purposes that include economic expectations, which makes a type of performance necessary according to the current social model. (Garcia and Palacios, 1991 quoted in Reyes, 2003).

2.2.2.3 Academic Performance and Self-esteem

Higher education is a process that tries to lead the student to the maximum development of their intellectual, evaluative and affective potentialities. Self-esteem is a factor that must be developed, a position that influences the academic formation of university students, as well as "the level of self-esteem is responsible for many academic successes and failures". Therefore, if it is possible to build on the student the self-confidence, the individual will be more willing to face obstacles, will devote more effort to achieve educational goals and will look for alternative ways to master the academic works. As a consequence, a positive level of self-esteem leads to self-realization and academic satisfaction that contribute to the human development. Academic self-concept, self-motivation, self-knowledge, self-evaluation and self-appreciation are elements of self-esteem that are more directly related to academic performance. Thus the academic self-concept is evaluated through observable behaviors such as:

- Relations with others (level of trust and appreciation that the student achieves with other people)
• Assertiveness (personal actions coherent with our own interests and feelings)

• Commitment (confidence in one's own potential and confrontation with academic situations).

As for self-motivation, this element of self-esteem allows the student to have an inner strength which makes it possible to overcome any obstacle that prevents good academic development, we must remember that in the university level the student has the freedom to organize their studies, therefore it is necessary that the student has self-motivation and will to strictly comply with the schedule of studies and the organization of academic plans and activities.

It should be noted that if self-motivation is strong we are able to overcome the limitations that are presented in our learning, as well as overcome laziness, disorganization, lack of a place and a suitable environment for the study and we can even have our skills to learn a trade and a career. Thanks to motivation the student has to learn and persevere every day. Therefore, intervention programs in cognitive strategies should not be isolated from the self-esteem component, since it is essential for the achievement of academic objectives.

Respect for the other elements of self-esteem we have self-knowledge which allows the individual to recognize their skills, while self-assessment helps the student to understand better what he doesn’t know, with the aim of improving their academic results.

2.2.2.4 Factors associated to academic performance

The Academic Performance, because it is multi-causal, involves an enormous explanatory capacity of the different factors and temporary spaces that intervene in the learning process. There are different aspects that are associated with academic performance, between which both internal and external components intervene to the
individual. They can be of social, cognitive and emotional order, which are classified into three categories: personal determinants, social determinants and institutional determinants, which present subcategories or indicators. In order for the Academic Performance studies to be useful, it is important to identify the type of influence of the factors associated with the success or failure of the student body; that is, of the levels of influence between the variables to be considered in order to determine causal factors and mediations that determine the relationships between the different categories of personal, social and institutional variables. These variables, in addition to offering information of a structural and objective nature, take into account the student's perception of the factors associated with the Academic Performance and its possible impact on academic results. The majority of studies on Academic Performance are based on a methodological approach of a predictive type, where multiple regression models are used, rarely complemented with explanatory models that favor a more comprehensive analysis. (Castejón, Pérez, 1998, p.47).

2.2.2.5 Measurement of academic performance

According to institutional regulations of Alas Peruanas University, academic performance is measured taking into account the following scores:

- **Excellent**: Grades from 17 to 20
- **Average**: Grades from 13 to 16
- **Bad**: Grades from 0 to 12

2.3 Definition of key terms

**Aptitude**

A natural ability or skill to do something.
Attitude

A feeling or opinion about something or someone or a way of behaving that is caused by something.

Component

A part that combines with other parts to form something bigger.

Performance

How well a person, machine, etc. does a piece of work or an activity. Performance also refers to how well an activity or job is done.

Behavior

A particular way of behaving.

Cognitive

A particular way of acting in order to get to know something.

Competence

The ability to do something well.

Motivation

The need or reason for doing something.

Self-efficacy

A person's belief that they can be successful when carrying out a particular task condition.
Chapter III.

Hypothesis and variables

3.1 Hypothesis

3.1.1 General hypothesis

Attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

3.1.2 Specific hypothesis

$H_1$. The cognitive component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

$H_2$. The affective component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

$H_3$. The behavioral component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.
3.2 Variables and their operationalization

Table 1.

*Operationalization of variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dimensions</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable 1:</strong></td>
<td></td>
<td><strong>Attitudes towards online English Language Learning</strong></td>
</tr>
<tr>
<td></td>
<td>Cognitive</td>
<td>Beliefs and thoughts about the knowledge one receives.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Understanding of the facts in the learning process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Creation and checking of new knowledge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application of new knowledge in new situations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Importance of the language learning system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opinions on the usefulness of what has been learned in the labor field</td>
</tr>
<tr>
<td></td>
<td>Affective</td>
<td>Likes or dislikes of objects or the surrounding environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Participation in various emotional activities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internal feelings of the students</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emotions of students that influence their perspectives.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pleasant perception of the course.</td>
</tr>
<tr>
<td></td>
<td>Behavioral</td>
<td>Tendency to adopt particular learning behaviors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive behaviors about the course of study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acquisition of useful information and skills for one’s daily life</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The way one behaves and reacts in particular situations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Way to acquire or adopt various aspects of behaviors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fulfillment of assigned tasks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active participation in the class.</td>
</tr>
<tr>
<td><strong>Variable 2:</strong></td>
<td>Excellent</td>
<td>Grades from 17 to 20</td>
</tr>
<tr>
<td><strong>Academic performance</strong></td>
<td>Average</td>
<td>Grades from 13 to 16</td>
</tr>
<tr>
<td></td>
<td>Bad</td>
<td>Grades from 0 to 12</td>
</tr>
</tbody>
</table>

Source: oneself.
Chapter IV.

Methodology

4.1 Research approach

This research was of quantitative approach. The quantitative approach is based on a deductive and logical scheme, seeks to formulate research questions and hypotheses to later test them, relies on standardized and numerical mediation, uses statistical analysis, is reductionist and aims to generalize the results of their studies through representative samples (Hernández, Fernández and Baptista, 2002). An idea is chosen, which will be transformed into one or several relevant research questions; from these hypothesis and variable is derived; a plan is developed to test them; we measure the variables in a certain context; The obtained measurements are analyzed and a series of conclusions are established regarding the hypothesis.

4.2 Type of research

This research was descriptive. The objective of this type of research is to only establish a description as complete as possible of a phenomenon, situation or specific element, without looking for causes or consequences of it. It measures the characteristics and observes the configuration and the processes that compose the phenomena, without stopping to value them. So, in many cases this type of research is not even asked about the causality of the phenomena (ie, why "what happens is observed"). Simply, it is about obtaining an enlightening image of the state of the situation. (Hernández, Fernández and Baptista, 2010)

4.3 Research design

The design that was used was the correlational one. Correlational design is that type of study that seeks to measure the degree of relationship between two or more concepts or
variables (Hernández, Fernández and Baptista, 2010). They are those in which the causes and effects already occurred in reality (they were given and manifested) and the researcher observes and reports them.

4.4 Population and sample

4.4.1 Population

It is the total set of individuals, objects or measures that have some common characteristics observable in a place and at a particular time. They will be 60 Fifth Cycle Students of Environmental Engineering at Alas Peruanas University.

4.4.2 Sample

It is the sample is a subset that is faithfully representative of the population of 60 Fifth Cycle Students of Environmental Engineering at Alas Peruanas University. The sample was the same as the population because it is very small, so we had to apply a census.

4.5 Techniques and instruments for data collection

4.5.1 Data collection Techniques

In order to measure the variable attitudes towards the use of the Rosetta Stone online platform, the survey was used. Mejía (2005) states that this type of technique is given through the construction of questions that the researcher formulates with respect to their variables and dimensions. This collects, attitudes, interests, perceptions, interests among other personal behaviors.
4.5.2 Data collection instruments

Instrument data sheet for the variable attitudes towards the use of the online Rosetta Stone platform

Name: Questionnaire of attitudes towards the use of the online Rosetta Stone platform

Author: Gloria Lazo Montero

Administration: Individual / collective

Duration: 10 to 15 minutes

Significance: Assess the attitudes towards the use of the online Rosetta Stone platform of students.

Typification: Scales for the individual or group form

Age: 18 years old

Level Upper

Structure: It is formed by three fundamental aspects

1) Cognitive Dimension

2) Affective dimension

3) Behavioral Dimension

Table 2.

Scale for the group evaluation of the dimensions of attitudes towards the use of the Rosetta Stone online platform

<table>
<thead>
<tr>
<th>Levels</th>
<th>Very bad</th>
<th>Bad</th>
<th>Regular</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>[8 - 14]</td>
<td>[15 - 21]</td>
<td>[22 - 27]</td>
<td>[28 - 34]</td>
<td>[35 - 40]</td>
</tr>
<tr>
<td>Affective</td>
<td>[6 - 11]</td>
<td>[12 - 16]</td>
<td>[17 - 20]</td>
<td>[21 - 25]</td>
<td>[26 - 30]</td>
</tr>
<tr>
<td>Behavioral</td>
<td>[8 - 14]</td>
<td>[15 - 21]</td>
<td>[22 - 27]</td>
<td>[28 - 34]</td>
<td>[35 - 40]</td>
</tr>
<tr>
<td>Attitudes towards the use of the Rosetta Stone online platform</td>
<td>[22 - 40]</td>
<td>[41 - 57]</td>
<td>[58 - 75]</td>
<td>[76 - 92]</td>
<td>[93 - 110]</td>
</tr>
</tbody>
</table>
Technical datasheet of the instrument for the variable academic performance

Name: Academic performance questionnaire

Author:

Administration: Individual / collective

Duration: 10 to 15 minutes

Significance: Evaluates the characteristics of students' academic performance.

Typification: Scales for the individual or group form

Age: 18 years old

Level Upper

Table 3.

Scale for the academic performance grade report

<table>
<thead>
<tr>
<th>Niveles</th>
<th>Low Performance</th>
<th>Medium Performance</th>
<th>High Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Perfomance</td>
<td>[0 - 12]</td>
<td>[13 - 16]</td>
<td>[17 - 20]</td>
</tr>
</tbody>
</table>

4.6 Statistical treatment of data

The data obtained were analyzed with the technical support of SPSS version 21, through which we proceeded to the statistical presentation of measures of central tendency and variability, as well as the inferential statistics for the respective hypothesis test. Once the database has been elaborated, the processing will proceed, for which a PC and the SPSS software version 25.0 for Windows will be used. The analysis will be carried out with a level of statistical significance of p <.05 and will be the following: Grouping by levels or categories of the data of the two general variables, for their corresponding
descriptive analysis. Likewise, the normality test was carried out to know the distribution of the data, and in this way use parametric and non-parametric tests. Finally, the Spearman correlation test was used to test the hypotheses and analyze the relationship between variables.

Spearman's Rho statistician:

According to Carrasco (2009) the Spearman correlation coefficient (Rho) is a non-parametric test that measures the association or interdependence between two measured discrete variables, at least one of them, on an ordinal scale (p.104).

It is advisable to use the Spearman correlation coefficient when the data present extreme values, since these values greatly affect the Pearson correlation coefficient or non-normal distributions. The interpretation of Spearman's Rho coefficient is the same as that of Pearson's correlation coefficient, with values that oscillate between -1 and +1. Values close to 1 indicate a strong and positive correlation. Values close to -1 indicate a strong and negative correlation. Values close to 0 indicate that there is no linear correlation.

**Spearman's Rho Formula**

\[
\rho = 1 - \frac{6 \sum D^2}{N(N^2 - 1)}
\]

Where:
- \( \rho \) = Spearman’s Rho
- \( N \) = Sample
- \( D \) = Differences between variables

**Table 4.**

**Correlation Indexes**

<table>
<thead>
<tr>
<th>( r )</th>
<th>Perfect Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perfect Correlation</td>
</tr>
<tr>
<td>0.8 &lt; ( r ) &lt; 0.9</td>
<td>Very high Correlation</td>
</tr>
<tr>
<td>0.6 &lt; ( r ) &lt; 0.79</td>
<td>High Correlation</td>
</tr>
<tr>
<td>0.4 &lt; ( r ) &lt; 0.59</td>
<td>Moderate Correlation</td>
</tr>
<tr>
<td>0.2 &lt; ( r ) &lt; 0.39</td>
<td>Low Correlation</td>
</tr>
<tr>
<td>0 &lt; ( r ) &lt; 0.2</td>
<td>Very Low Correlation</td>
</tr>
<tr>
<td>( r = 0 )</td>
<td>Null Correlation</td>
</tr>
</tbody>
</table>

Note: Bizquerra (2008)
Chapter V.

Results

5.1 Validity and reliability of the instruments

5.1.1 Validity of instruments

According to Hernández, Fernández and Baptista (2010), validity is the level of a data collection instrument, in which a variable can really be measured. The validity of the data collection instrument of the present investigation was carried out through the content validity, that is, it was determined up to where the items contained in the instrument were representative of the domain or universe contained in what one wishes to measure.

Table 5.

Validity of instruments

<table>
<thead>
<tr>
<th>Expert</th>
<th>Opinion of the applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.Ed. Miguel ORÉ DE LOS SANTOS</td>
<td>90</td>
</tr>
<tr>
<td>Mg. Jean Pierre MENDOZA TOMAYLLA</td>
<td>90</td>
</tr>
<tr>
<td>Dr. Edith Consuelo ZARATE ALIAGA</td>
<td>90</td>
</tr>
<tr>
<td>Average</td>
<td>90</td>
</tr>
</tbody>
</table>

As can be seen in table 9, the instrument is pertinent, relevant, and has the sufficiency to be applied to students in the fifth cycle of environmental engineering at Alas Peruanas University due to the fact that it has obtained 90%, known as one of a very good validity.

5.1.2 Reliability of instruments

According to Hernández, Fernández and Baptista (2010), the reliability of a measurement instrument is determined by various techniques, and refers to the degree to which it is applied, repeated to the same subject, produces the same results. Therefore,
Hernández, Fernández and Baptista (2010), reliability consists of "the degree to which an instrument produces a consistent and coherent result" (p.324).

To apply the reliability statistics, a pilot test was first conducted on a sample of 10 students, whose results will help us determine if the instruments are reliable. In this case, the Cronbach's Alpha statistics was used to calculate reliability, based on the premise that, if the questionnaire has questions with several response alternatives.

**Table 6.**

<table>
<thead>
<tr>
<th>Reliability</th>
<th>N° Cases</th>
<th>N° items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes towards the use of the Rosetta Stone platform online</td>
<td>10</td>
<td>22</td>
<td>0.967</td>
</tr>
</tbody>
</table>

According to the Cronbach's Alpha reliability index = 0.967, it is inferred that the instrument has strong reliability. In conclusion, it can be seen that the instrument has validity and reliability, being suitable for its application by students.

In conclusion, it can be seen that the instrument has validity and reliability, being suitable for application in students of the fifth cycle of environmental engineering at Alas Peruanas University, Lima, 2018.
5.2 Presentation and analysis of the results

5.2.1 Descriptive level

Table 7.

*Level of attitudes towards the use of the online Rosetta Stone platform*

<table>
<thead>
<tr>
<th>Ranges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>93 – 110</td>
<td>6</td>
</tr>
<tr>
<td>Good</td>
<td>76 – 92</td>
<td>26</td>
</tr>
<tr>
<td>Regular</td>
<td>58 – 75</td>
<td>11</td>
</tr>
<tr>
<td>Bad</td>
<td>41 – 57</td>
<td>14</td>
</tr>
<tr>
<td>Too Bad</td>
<td>22 – 40</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

*Figure 1. Attitudes towards using the Rosetta Stone online platform*

It is observed that 43.3% (26) of the students have good attitudes towards the use of the online Rosetta Stone platform, followed by 23.3% (14) that show bad attitudes, another 18.3% (11) show a regular attitude, 10.0% (6) show very good attitudes, and finally only 5.0% (3) have very bad attitudes. The average is 71.80 which indicates that for the students the attitudes towards the use of the Rosetta Stone platform online are regular.
Table 8.

**Level of cognitive dimension**

<table>
<thead>
<tr>
<th>Ranges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>35 – 40</td>
<td>4</td>
</tr>
<tr>
<td>Good</td>
<td>28 – 34</td>
<td>28</td>
</tr>
<tr>
<td>Regular</td>
<td>22 – 27</td>
<td>12</td>
</tr>
<tr>
<td>Bad</td>
<td>15 – 21</td>
<td>14</td>
</tr>
<tr>
<td>Very Bad</td>
<td>8 – 14</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

*Figure 2. Cognitive level*

It is observed that 46.7% (28) of the students have good cognitive attitudes towards the use of the online Rosetta Stone platform, followed by 23.3% (14) that show bad attitudes, another 20.0% (11) show a regular attitude, 6.7% (4) show very good attitudes, and finally only 3.3% (2) have too bad attitudes. The average is 26.74 which indicates that for the students the cognitive attitudes towards the use of the Rosetta Stone platform online is regular.
Table 9.

Level of affective dimension

<table>
<thead>
<tr>
<th></th>
<th>Ranges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>26 – 30</td>
<td>8</td>
<td>13.3%</td>
</tr>
<tr>
<td>Good</td>
<td>21 – 25</td>
<td>18</td>
<td>30.0%</td>
</tr>
<tr>
<td>Regular</td>
<td>17 – 20</td>
<td>9</td>
<td>15.0%</td>
</tr>
<tr>
<td>Bad</td>
<td>12 – 16</td>
<td>18</td>
<td>30.0%</td>
</tr>
<tr>
<td>Too bad</td>
<td>6 – 11</td>
<td>7</td>
<td>11.7%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

It is observed that 30.0% (18) of the students have good affective attitudes towards the use of the Rosetta Stone platform online, followed by 30.3% (18) that show bad attitudes, another 15.0% (9) show a regular attitude, 13.3% (8) show very good attitudes, and finally only 11.7% (7) have very bad attitudes. The average is 18.72 which indicates that for the students the affective attitudes towards the use of the Rosetta Stone platform online is regular.
Table 10.

Level of behavioral dimension

<table>
<thead>
<tr>
<th>Level of behavioral dimension</th>
<th>Ranges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>35 – 40</td>
<td>4</td>
<td>6.7%</td>
</tr>
<tr>
<td>Good</td>
<td>28 – 34</td>
<td>30</td>
<td>50.0%</td>
</tr>
<tr>
<td>Regular</td>
<td>22 – 27</td>
<td>10</td>
<td>16.7%</td>
</tr>
<tr>
<td>Bad</td>
<td>15 – 21</td>
<td>15</td>
<td>25.0%</td>
</tr>
<tr>
<td>Too Bad</td>
<td>8 – 14</td>
<td>1</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Figure 4. Behavioral level

It is observed that 50.0% (30) of the students have good behavioral attitudes towards the use of the online Rosetta Stone platform, followed by 25.0% (15) that show bad attitudes, another 16.7% (10) show a regular attitude, 6.7% (4) show very good attitudes, and finally only 1.7% (1) have very bad attitudes. The average is 26.62 which indicates that for students the behavioral attitudes towards the use of the Rosetta Stone platform online is regular.
Table 11.

Level of academic performance

<table>
<thead>
<tr>
<th></th>
<th>Ranges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performance</td>
<td>17 – 20</td>
<td>9</td>
<td>15,0%</td>
</tr>
<tr>
<td>Medium Performance</td>
<td>13 – 16</td>
<td>35</td>
<td>58,3%</td>
</tr>
<tr>
<td>Low Performance</td>
<td>0 – 12</td>
<td>16</td>
<td>26,7%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

*Figure 5. Academic performance level.*

It is observed that 58.3% (35) of the students have an average academic performance followed by 26.7% (16) that have a low academic performance, and finally only 15.0% (9) have a high academic performance. The average is 13.93, which indicates that students have an average academic performance.
Result of the general objective

Table 12.

Distribution of the comparative levels between attitudes towards the use of the online Rosetta Stone platform and academic performance

<table>
<thead>
<tr>
<th>Attitudes towards the use of the Rosetta Stone online platform</th>
<th>Academic Performance</th>
<th>Low Performance</th>
<th>Medium Performance</th>
<th>High Performance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>Re-count</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>% of the total</td>
<td>0,0%</td>
<td>5,0%</td>
<td>5,0%</td>
<td>10,0%</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>Re-count</td>
<td>0</td>
<td>20</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>% of the total</td>
<td>0,0%</td>
<td>33,3%</td>
<td>10,0%</td>
<td>43,3%</td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>Re-count</td>
<td>1</td>
<td>10</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>% of the total</td>
<td>1,7%</td>
<td>16,7%</td>
<td>0,0%</td>
<td>18,3%</td>
<td></td>
</tr>
<tr>
<td>Bad</td>
<td>Re-count</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>% of the total</td>
<td>20,0%</td>
<td>3,3%</td>
<td>0,0%</td>
<td>23,3%</td>
<td></td>
</tr>
<tr>
<td>Very Bad</td>
<td>Re-count</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>% of the total</td>
<td>5,0%</td>
<td>0,0%</td>
<td>0,0%</td>
<td>5,0%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Re-count</td>
<td>16</td>
<td>35</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>% of the total</td>
<td>26,7%</td>
<td>58,3%</td>
<td>15,0%</td>
<td>100,0%</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6.** Distribution of the comparative levels between attitudes towards the use of the online Rosetta Stone platform and academic performance
When students have very good attitudes toward using the Rosetta Stone online platform, 5.0% have high academic performance, and 5.0% average performance; likewise, when students have good attitudes towards the use of the Rosetta Stone platform online, 10.0% have a high academic performance, and 33.3% have an average performance; So also when students have regular attitudes towards the use of the Rosetta Stone platform online, 16.7% have an average academic performance, and 1.7% have a low performance; On the other hand, when students have bad attitudes towards the use of the Rosetta Stone platform online, 3.3% have an average academic performance, and 20.0% have low performance; and finally when students have very bad attitudes towards the use of the Rosetta Stone platform online, 5.0% have low academic performance.

Result of specific objective 1

Table 13.

Distribution of the comparative levels between the cognitive component of attitudes towards the use of the online Rosetta Stone platform and academic performance

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Re-count</th>
<th>Low Performance</th>
<th>Medium Performance</th>
<th>High Performance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>0.0%</td>
<td>1.7%</td>
<td>5.0%</td>
<td>6.7%</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>0</td>
<td>22</td>
<td>6</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>0.0%</td>
<td>36.7%</td>
<td>10.0%</td>
<td>46.7%</td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>4</td>
<td>8</td>
<td>0</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>6.7%</td>
<td>13.3%</td>
<td>0.0%</td>
<td>20.0%</td>
<td></td>
</tr>
<tr>
<td>Bad</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>16.7%</td>
<td>6.7%</td>
<td>0.0%</td>
<td>23.3%</td>
<td></td>
</tr>
<tr>
<td>Very Bad</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>3.3%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>3.3%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>35</td>
<td>9</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>26.7%</td>
<td>58.3%</td>
<td>15.0%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>
Figure 7. Distribution of the comparative levels between the cognitive component of attitudes towards the use of the online Rosetta Stone platform and academic performance.

When students have very good cognitive attitudes towards the use of the online Rosetta Stone platform, 5.0% have a high academic performance, and 1.7% have an average performance; Likewise, when students have good cognitive attitudes, 10.0% have a high academic performance, and 36.7% have an average performance; also when students have regular cognitive attitudes 13.3% have an average academic performance, and 6.7% a low performance; On the other hand, when students have bad cognitive attitudes, 6.7% have an average academic performance, and 16.7% have poor performance; and finally, when students have very bad cognitive attitudes, 3.3% have low academic performance.
Result of specific objective 2

Table 14.

Distribution of the comparative levels between the affective component of attitudes towards the use of the online Rosetta Stone platform and academic performance

<table>
<thead>
<tr>
<th>Afecive</th>
<th>Academic Performance</th>
<th>Low Performance</th>
<th>Medium Performance</th>
<th>High Performance</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Very Good</td>
<td>Re- count</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>0,0%</td>
<td>5,0%</td>
<td>8,3%</td>
<td>13,3%</td>
</tr>
<tr>
<td>Good</td>
<td>Re- count</td>
<td>0</td>
<td>16</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>0,0%</td>
<td>26,7%</td>
<td>3,3%</td>
<td>30,0%</td>
</tr>
<tr>
<td>Regular</td>
<td>Re- count</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>0,0%</td>
<td>11,7%</td>
<td>3,3%</td>
<td>15,0%</td>
</tr>
<tr>
<td>Bad</td>
<td>Re-count</td>
<td>12</td>
<td>6</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>20,0%</td>
<td>10,0%</td>
<td>0,0%</td>
<td>30,0%</td>
</tr>
<tr>
<td>Very Bad</td>
<td>Recuento</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>6,7%</td>
<td>5,0%</td>
<td>0,0%</td>
<td>11,7%</td>
</tr>
<tr>
<td>Total</td>
<td>Recuento</td>
<td>16</td>
<td>35</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>% of the total</td>
<td>26,7%</td>
<td>58,3%</td>
<td>15,0%</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

Figure 8. Distribution of the comparative levels between the affective component of attitudes towards the use of the online Rosetta Stone platform and academic performance.
When students have very good affective attitudes towards the use of the online Rosetta Stone platform, 8.3% have a high academic performance, and 5.0% an average performance; likewise, when students have good affective attitudes, 3.3% have a high academic performance, and 26.7% have an average performance; likewise, when students have regular affective attitudes, 3.3% have an average academic performance, and 11.7% have an average performance; On the other hand, when students have bad affective attitudes, 10.0% have an average academic performance, and 20.0% have low performance; and finally, when students have very bad affective attitudes, 5.0% have low academic performance and 6.7% have poor performance.

Result of specific objective 3

Table 15.

*Distribution of the comparative levels between the behavioral component of attitudes towards the use of the online Rosetta Stone platform and academic performance*

<table>
<thead>
<tr>
<th>Behavioral</th>
<th>Very Good</th>
<th>Good</th>
<th>Regular</th>
<th>Bad</th>
<th>Very Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-count</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>% of the total</td>
<td>0.0%</td>
<td>3.3%</td>
<td>11.7%</td>
<td>25.0%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Academic Performance</td>
<td>Low</td>
<td>Medium</td>
<td>High</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>% of the total</td>
<td>0,0%</td>
<td>3,3%</td>
<td>3,3%</td>
<td>6,7%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>30</td>
<td>50,0%</td>
<td>16,7%</td>
<td>1,7%</td>
</tr>
</tbody>
</table>
Figure 9. Distribution of the comparative levels between the behavioral component of attitudes towards the use of the online Rosetta Stone platform and academic performance

When students have very good behavioral attitudes towards using the online Rosetta Stone platform, 3.3% have high academic performance, and 3.3% have an average performance; Likewise, when students have good behavioral attitudes, 11.7% have a high academic performance, and 38.3% have an average performance; likewise, when students have regular behavioral attitudes, 16.7% have an average academic performance; On the other hand, when students have bad behavioral attitudes, 25.0% have a low academic performance; and finally when the students have very bad behavioral attitudes, 1.7% have low academic performance.

5.2.2 Inferential level

5.2.2.1 Statistical test for the determination of normality

H0: The sample data come from a normal distribution

H1: The sample data does not come from a normal distribution

Significance level: 0.05
Test statistic:  
Sig <0.05, reject H0  
Sig> 0.05, accept H0

**Table 16.**

*Normality tests*

<table>
<thead>
<tr>
<th>Attitudes towards the use of Rosetta Stone online platform</th>
<th>Kolmogorov-Smirnov</th>
<th>Statistical</th>
<th>gl</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Performance</td>
<td></td>
<td>.158</td>
<td>60</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.188</td>
<td>60</td>
<td>.000</td>
</tr>
</tbody>
</table>

The table shows that the values of sig <0.05, therefore H0 is rejected, it is accepted that the data of the sample do not come from a normal distribution, therefore to test the hypotheses proposed the Spearman Rho will be used.

**5.2.2.2 Hypothesis testing**

**General hypothesis test**

**Hypothesis formulation**

Ho: Attitudes towards the use of Online Rosetta Stone Platform are not significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

Ha: Attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

**Choice of level of significance: \( \alpha = 0.05 \)**

**Decision rule:** If \( p <0.05 \) then the null hypothesis is rejected
Table 17.

Correlation and significance between attitudes towards the use of the online Rosetta Stone platform and academic performance

<table>
<thead>
<tr>
<th>Rho of Spearman</th>
<th>Attitudes towards the use of the Rosetta Stone online platform</th>
<th>Academic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>.665&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Academic Performance</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
</tr>
</tbody>
</table>

**. The correlation is significant at the 0.01 level (2 lines).

In Table 17, the results are presented to test the general hypothesis: a Spearman's Rho correlation coefficient = 0.665<sup>**</sup> was obtained, which is interpreted at 99.99%<sup>**</sup> the correlation is significant at the bilateral 0.01 level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.

Specific hypothesis test 1

Hypothesis formulation

**Ho:** The cognitive component of attitudes towards the use of Online Rosetta Stone Platform is not significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

**Ha:** The cognitive component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.
Choice of level of significance: $\alpha = 0.05$

**Decision rule:** If $p < 0.05$ then the null hypothesis is rejected

**Table 18.**

*Correlation and significance between the cognitive component of attitudes towards the use of the online Rosetta stone platform and academic performance*

<table>
<thead>
<tr>
<th>Rho of Spearman</th>
<th>Cognitive</th>
<th>Academic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>.629***</td>
</tr>
<tr>
<td></td>
<td>Academic</td>
<td>Sig. (bilateral)</td>
</tr>
<tr>
<td></td>
<td>Performance</td>
<td>N</td>
</tr>
</tbody>
</table>

***. The correlation is significant at the 0.01 level (2 lines).

In Table 18, the results are presented to test the general hypothesis: a Spearman’s Rho correlation coefficient $= 0.629$ ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the 0.01 bilateral levels, interpreted as a high positive relationship between the variables, with a $p = 0.00$ ($p < 0.01$), rejecting the null hypothesis.

**Specific hypothesis test 2**

**Hypothesis formulation**

**Ho:** The affective component of attitudes towards the use of Online Rosetta Stone Platform is not significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

**Ha:** The affective component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of
Environmental Engineering at Alas Peruanas University, Lima, 2018.

**Choice of level of significance: \( \alpha = 0.05 \)**

**Decision rule: If \( p < 0.05 \) then the null hypothesis is rejected**

**Table 19.**

*Correlation and significance between the affective component of attitudes towards the use of the online Rosetta Stone platform and academic performance*

<table>
<thead>
<tr>
<th></th>
<th>Afectivo</th>
<th>Academic Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rho of Spearman</td>
<td>Correlation coefficient</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>.575**</td>
</tr>
<tr>
<td>Academic</td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td>Performance</td>
<td>N</td>
<td>60</td>
</tr>
</tbody>
</table>

**The correlation is significant at the 0.01 level (2 lines)**

In Table 19, the results are presented to test the general hypothesis: a Rho correlation coefficient of Spearman = 0.575 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a moderate positive relationship between the variables, with \( p = 0.00 \) (\( p < 0.01 \)), rejecting the null hypothesis.

**Specific hypothesis test 3**

**Hypothesis formulation**

**Ho: The behavioral component of attitudes towards the use of Online Rosetta Stone Platform is not significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.**
**Ha:** The behavioral component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018.

**Choice of level of significance:** $\alpha = 0.05$

**Decision rule:** If $p < 0.05$ then the null hypothesis is rejected

**Table 20.**

*Correlation and significance between the behavioral component of attitudes towards the use of the online Rosetta Stone platform and academic performance*

<table>
<thead>
<tr>
<th></th>
<th>Behavioral</th>
<th>Academic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rho of Spearman</td>
<td></td>
<td>Correlation coefficient</td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Academic Performance</td>
<td>Correlation coefficient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

**.** The correlation is significant at the 0.01 level (2 lines).

In table 20, the results are presented to test the general hypothesis: a Rho correlation coefficient of Spearman = 0.692 ** was obtained, which is interpreted as 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a high positive relationship between the variables, with a $p = 0.00$ ($p < 0.01$), rejecting the null hypothesis.

**5.3 Discussion of results**

1. We formulated as the general objective to establish the relationship between attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. After the corresponding hypothesis testing, we
arrived at the conclusion that attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman's Rho correlation coefficient = 0.665 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the bilateral 0.01 level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis. This result is related to the results obtained by Orgaz, Moral, and Domínguez (2018) in the thesis *Student Attitude and Perception with the Use of Technology at Technological University of Santiago, Santiago de los Caballeros, (Dominican Republic.)* The main finding of this study is that the study model proposed in this research supports that the students’ attitude towards technology influences their perception of technology, and it can be concluded that students' attitude towards social networks has a positive influence on the use of technology, which confirms a model where they are explained the relationships between attitudes and the use of technology, something that had not previously been confirmed (...).

2. We formulated as the specific objective 1 to establish the relationship between the cognitive component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. After the corresponding hypothesis testing 1 we arrived at the conclusion that the cognitive component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman's Rho correlation coefficient = 0.629 ** was obtained, which is interpreted at 99.99% **
the correlation is significant at the 0.01 bilateral level, interpreted as a high positive relationship between the variables, with a $p = 0.00$ ($p < 0.01$), rejecting the null hypothesis. This result has to some extend relationship to Hernan (2016) in the thesis *Use of the Rosetta Stone program to improve the pronunciation of English in eighth grade students of basic education at San Gabriel School - Educational Unit of Quito during six weeks of the year 2015*, reaching the following conclusions:

The level of pronunciation of the eighth grade students at the beginning of the school year, prior to the use of the Rosetta Stone software was lower than that obtained once the students used the Rosetta Stone program, where after having done the pre-test, post-test and having analyzed the results it was possible to verify that the level of pronunciation improved significantly. After having carried out this research project, the results obtained indicate that the use of the Rosetta Stone educational program has a positive impact on the improvement of pronunciation in the eighth grade students of the Educational Unit.

3. We formulated as the specific objective 2 to establish the relationship between the affective component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. After the corresponding hypothesis testing, we arrived at the conclusion that the affective component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Rho correlation coefficient of Spearman $= 0.575$ ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a moderate positive relationship between the variables, with a $p = 0.00$ ($p < 0.01$), rejecting the
null hypothesis. This result is based on the fact that the affective component involves the individual’s feelings and emotions toward an object. According to Choy and Salah (2006), Harn (2015) and Liu (2016), the learning process is an emotional one and is affected by different emotional factors. Attitude can also help learners express if they like or dislike the objects or the surrounding environment. Also it consolidates what Feng and Chen (2009) stated that “Learning process is an emotional process. It is affected by different emotional factors. The teacher and his students engage in various emotional activities in it and varied fruits of emotions are yield.”

4. We formulated as the specific objective 3 to establish the relationship between the behavioral component of attitudes towards the use of online Rosetta Stone Platform and academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. After the corresponding hypothesis testing we arrived at the conclusion that the behavioral component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Rho correlation coefficient of Spearman = 0.692 ** was obtained, which is interpreted as 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis. This result is based on the fact that the behavioral component of attitude deals with the way in which one behaves and reacts in particular situations. In other words, it refers to the tendency to adopt particular learning behaviors.
Conclusions

1. Attitudes towards the use of Online Rosetta Stone Platform are significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman's Rho correlation coefficient = 0.665 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the bilateral 0.01 level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.

2. The cognitive component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Spearman's Rho correlation coefficient = 0.629 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a high positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.

3. The affective component of attitudes towards the use of Online Rosetta Stone Platform is significantly related to academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018. Due to the fact that a Rho correlation coefficient of Spearman = 0.575 ** was obtained, which is interpreted at 99.99% ** the correlation is significant at the 0.01 bilateral level, interpreted as a moderate positive relationship between the variables, with a p = 0.00 (p <0.01), rejecting the null hypothesis.

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**Recommendations**

1. Considering that attitudes influence significantly on the students’ academic performance, the appropriate development of these must be taken into account by the teachers during the support of face-to-face classes as well as in online classes. Attitudes are seen as the starting point towards the goal which is meaningful learning. It is necessary for teachers to understand and adapt the attitudes that the students bring to class in favor of the learning process.

2. Considering the innumerable advantages that the learning of the English language brings, of which it is important to be an indispensable requirement to be able to graduate, to be able to obtain more work opportunities and also to access international scholarships and in this way assure the professional development, it is important to personal commitment of each student to the use of the virtual platform and in turn take advantage of the teacher's support in the classroom to clear up the doubts and gaps left by the system. The use of an online platform is a teaching-learning system, which is a new experience for students. They must understand and internalize what we are constantly changing, and that they must use all the tools that are provided to them and that they have to reach to be successful in their learning.

3. Considering the affective aspect influence significantly on the students’ academic performance, the preferences of the students according to their ages and their topics of interest should be taken into account, as well as the degree of difficulty in the exercises, these should not be very easy because they will create in the students the feelings of not doing something not even difficult because they generate frustration in them. In addition, the platform should reward the favorable progress of students
with games, activities or recognitions so that they may feel motivated to achieve the goal set.

4. Students must commit themselves to self-learning and be honest in the development of online classes. To do this, they are given a calendar and the goals that must get during the whole cycle what must be developed in the established time to meet a successful percentage. They should also complement their learning by making use of the information on the Internet about the topics, workbooks and other resources, in order to complete their written evaluations successfully.
References


Cabanillas (2004, p. 76) Influencia de la enseñanza directa en el mejoramiento de la comprensión lectora de los estudiantes de la Facultad de Ciencias de la Educación de la UNSCH (Tesis doctoral)


Chadwick, C. (1979) *Teorías del aprendizaje y su implicancia en el trabajo en el aula.*
Revista de Educación, Nº 70 C.P.E.I.P., Santiago de Chile.


Hernández, J. (2016) *Uso de la plataforma en línea duolingo para el incremento del nivel de habilidades receptivas en inglés en los alumnos de técnico superior universitario de una escuela técnica superior en la ciudad de Guatemala*.


http://dx.doi.org/10.14221/ajte.2009v34n3.5


Vitarte; Lima, 2015.

http://dx.doi.org/10.2307/329249


Juan León Mera ‘La Salle’ de la ciudad de Ambato, provincia de Tungurahua. (Ecuador).  


Appendices
Appendix A. Consistency Matrix

Attitudes towards the use of online Rosetta Stone Platform and Academic performance in Fifth Cycle Students of Environmental Engineering at Alas Peruanas University, Lima, 2018

<table>
<thead>
<tr>
<th>Formulation of the problem</th>
<th>Study objectives</th>
<th>Research hypothesis</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>3) Research design: Correlational design</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4) Research method: Descriptive research method</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5) Techniques and instruments of data collection: Documentary analysis, Survey Questionnaire Score registers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6) Population and sample: 60 Fifth Cycle Students of Environmental Engineering at Alas Peruanas University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7) Variables: Variable 1: Attitudes Variable 2: Academic performance</td>
</tr>
</tbody>
</table>

| 1) Research approach: Quantitative |
| 2) Research type: Descriptive research |
| 3) Research design: Correlational design |
| 4) Research method: Descriptive research method |
| 5) Techniques and instruments of data collection: Documentary analysis, Survey Questionnaire Score registers |
| 6) Population and sample: 60 Fifth Cycle Students of Environmental Engineering at Alas Peruanas University |
| 7) Variables: Variable 1: Attitudes Variable 2: Academic performance |
Cuestionario sobre las actitudes de los estudiantes

Instrucciones:

Estimado estudiante;

El propósito de este cuestionario es conocer las actitudes que tienen los estudiantes del Quinto Ciclo de Ingeniería Ambiental sobre el uso de la Plataforma Rosetta Stone con el fin de mejorar el servicio pedagógico. Por favor, lee con atención cada enunciado y marca (X) una de las alternativas que creas conveniente.

<table>
<thead>
<tr>
<th>Muy en desacuerdo</th>
<th>En desacuerdo</th>
<th>Indeciso</th>
<th>De acuerdo</th>
<th>Muy de acuerdo</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Nº | ITEMS |
---|-------|
1  | Creo que el conocimiento que recibo del sistema Rosetta Stone facilita mi aprendizaje del inglés. |
2  | Pienso que el conocimiento que recibo me ayuda a mejorar mi aprendizaje del inglés. |
3  | Entiendo los hechos que se dan cuando uno aprende un idioma extranjero como el inglés a través del sistema Rosetta Stone. |
4  | Puedo crear nuevo conocimiento al aprender el idioma inglés con el sistema Rosetta Stone. |
5  | Me gusta comprobar por mi cuenta los nuevos conocimientos que aprendo con el sistema Rosetta Stone. |
6  | Aplico los nuevos conocimientos que aprendo del sistema Rosetta Stone a varias situaciones nuevas. |
7  | El sistema Rosetta Stone es importante para mi aprendizaje del idioma Inglés. |
8  | Opino que lo que aprendo con el sistema Rosetta Stone me será útil en el campo laboral. |

Dimensión 2: Componente afectivo

9 | Me gusta utilizar el sistema Rosetta Stone para aprender el idioma Inglés. |
<table>
<thead>
<tr>
<th></th>
<th>Me gusta interactuar en el entorno de aprendizaje del sistema Rosetta Stone.</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Participo en diversas actividades que involucren mis emociones al aprender el idioma inglés con el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>12</td>
<td>Me siento bien al aprender el inglés con el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>13</td>
<td>Mis emociones influyen en mi modo de ver el sistema Rosetta Stone para aprender el idioma Inglés.</td>
</tr>
<tr>
<td>14</td>
<td>Percibo agradable del curso de inglés a través del sistema Rosetta Stone.</td>
</tr>
<tr>
<td>15</td>
<td>Adopto diferentes tipos de comportamientos al aprender el idioma inglés.</td>
</tr>
<tr>
<td>16</td>
<td>Tengo una actitud positiva sobre el estudio del curso de inglés a través del sistema Rosetta Stone.</td>
</tr>
<tr>
<td>17</td>
<td>Adquiero nueva información al aprender el idioma inglés a través del sistema Rosetta Stone.</td>
</tr>
<tr>
<td>18</td>
<td>Aprendo nuevas habilidades útiles para mi vida diaria con el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>19</td>
<td>Me comporto de manera adecuada al aprender el inglés con el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>20</td>
<td>Reacciono con tolerancia ante situaciones diversas y particulares al aprender el idioma inglés con el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>21</td>
<td>Cumplio puntualmente con las tareas asignadas en el sistema Rosetta Stone.</td>
</tr>
<tr>
<td>22</td>
<td>Participo de manera activa en la clase de inglés a través del sistema Rosetta Stone.</td>
</tr>
</tbody>
</table>

**Dimension 3: Componente conductual**

**Muchas gracias**

**Instrument data sheet for the variable attitudes towards the use of the online Rosetta Stone platform**

Name: Questionnaire of attitudes towards the use of the online Rosetta Stone platform  
Author: Gloria Lazo Montero  
Administration: Individual / collective  
Duration: 10 to 15 minutes  
Significance: Assess the attitudes towards the use of the online Rosetta Stone platform of students.  
Typification: Scales for the individual or group form  
Age: 18 years old  
Level: Upper  
Structure: It is formed by three fundamental aspects

1) Cognitive Dimension  
2) Affective dimension  
3) Behavioral Dimension