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Title: Correlational study between learning styles and study habits in Computer Systems Engineering students

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Introduction

In the context of higher education, especially in careers such as Computer Systems Engineering, it is essential to understand how students acquire and process information to improve their academic performance.

This study analyzes the correlation between learning styles and study habits in Computer Systems Engineering students at the Zacatecas Norte Higher Technological Institute.

This study is pertinent because, by identifying the correlation between learning styles and study habits, more effective and personalized pedagogical strategies can be designed that respond to the individual needs of students.

Reference framework



The learning style according to (Negrón & Esterfilia, 2017) focuses on the person's strengths instead of their weaknesses. There is no right or wrong learning style, nor one that is superior to another.



The authors (Pérez Pino et al., 2023) mention that "the theory of learning styles is based on the characteristics of people to process information, where each individual has a preferred way or style of assimilating new knowledge".



(Negrón & Esterfilia, 2017) argues that study habits facilitate the learning process because they generate repetitive acts in the student that lead to the completion of the learning process.

Methodology



Research Focus:
Quantitative



Research design:
Cross-sectional



Research Scope:
Correlational

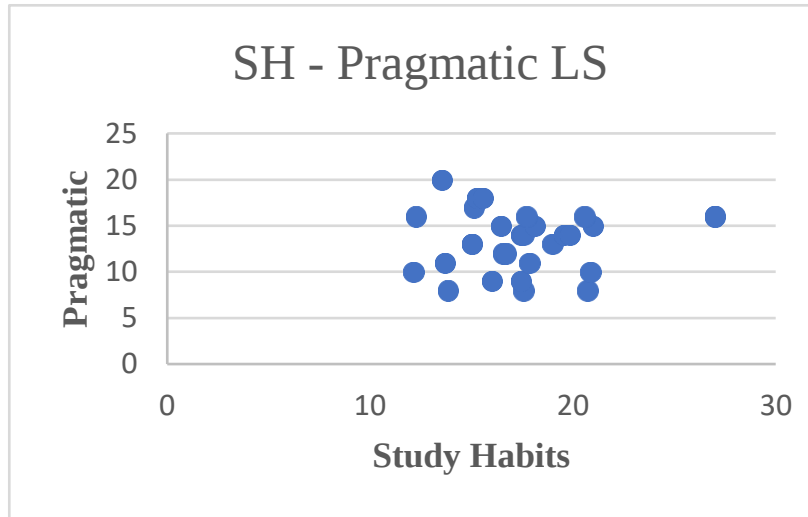


Variables:
Learning styles
Study habits

Student population

Total Students	Men	Women
30	26	4

Results

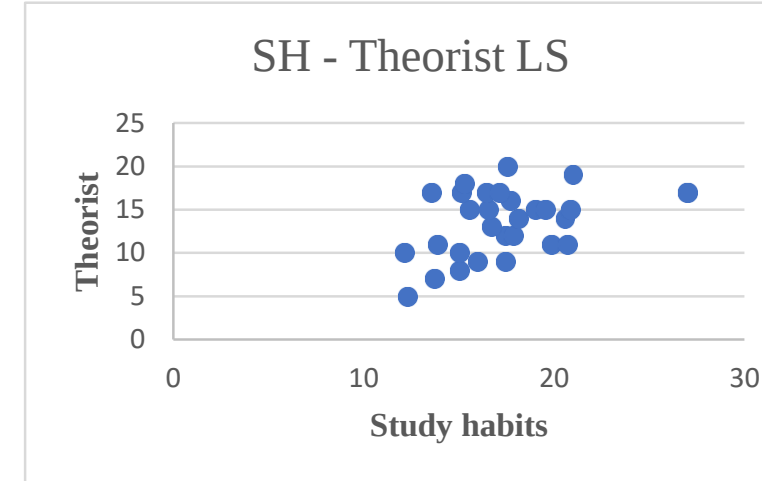


Graph 1

Correlation SH and Pragmatic LS

Source: own elaboration

In the Graph 1, when compared with the Pragmatic learning style, a regular general affinity with this style (of 15 or higher) is observed.



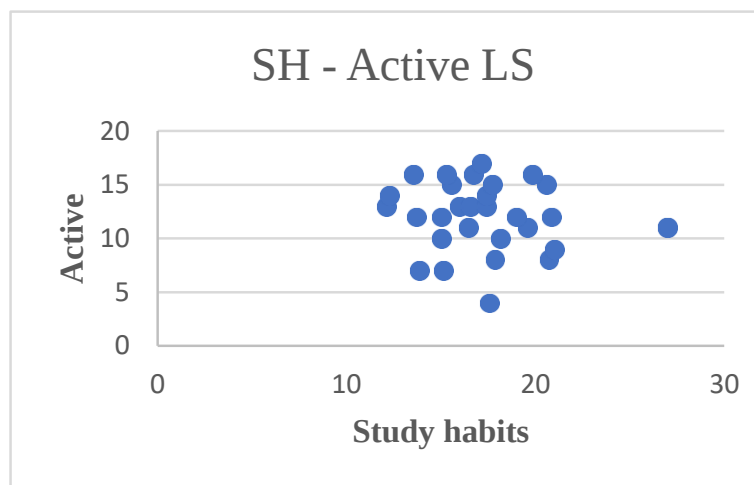
Graph 2

Correlation SH and Theorist LS

Source: own elaboration

In Graph 2 with respect to the Theoretical learning style, it denotes an upward trend, which suggests an increase in the values of study habits as learning styles increase.

Results

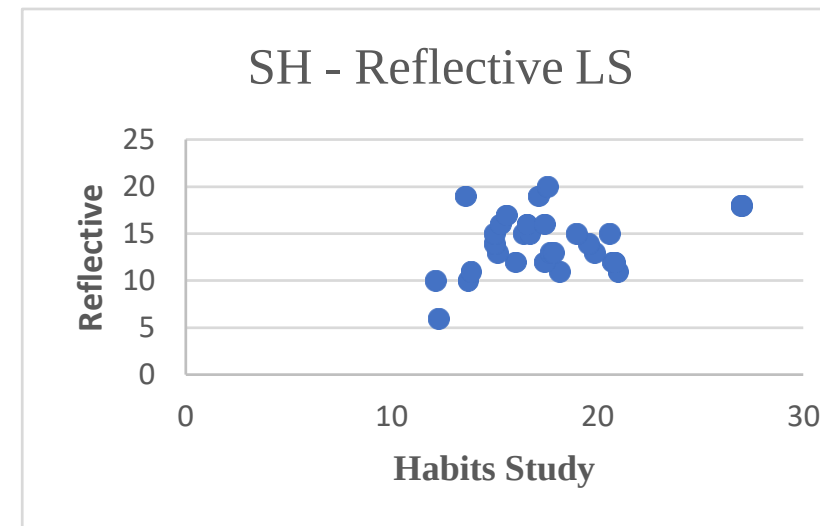


Graph 3

Correlation SH and Active LS

Source: own elaboration

In Graph 3 referring to the Active learning style it is visualized a greater affinity in a group is indicated towards this learning style (of 12 or higher).



Graph 4

Correlation SH and Reflective LS

Source: own elaboration

In Graph 4, the Reflective learning style is compared, a lower affinity of all (15 or higher) is observed.

Results

Table 6
Hypothesis testing statistic t at the 5% significance level

Hypothesis	t
H0: There is no relationship between study habits and Pragmatic Learning Style H1: There is a relationship between study habits and Pragmatic Learning Style	$t = 0.11$ Critical Valor -2.04 a 2.04 The null hypothesis is accepted
H0: There is no relationship between study habits and Theoretical learning style H1: There is a relationship between study habits and Theoretical learning style	$t = 2.08$ Critical Valor -2.04 a 2.04 The null hypothesis is rejected
H0: There is no relationship between study habits and Active Learning Style H1: There is a relationship between study habits and Active Learning Style	$t = -0.16$ Critical Value - 2.04 to 2.04 The null hypothesis is accepted
H0: There is no relationship between study habits and Reflective Learning Style H1: There is a relationship between study habits and Reflective Learning Style	$t = 1.09$ Critical Value - 2.04 to 2.04 The null hypothesis is accepted

A statistical analysis of hypothesis testing was carried out, obtaining the results indicated in Table 6, which indicates that there is a relationship between study habits and theoretical learning style.

Conclusions



The analysis of the data allows us to conclude that the correlation between learning styles and study habits in of 30 students in the second semester of Computer Systems Engineering in the period January-June 2024 is positive but low, which suggests that the variables are not strongly linked.



The theoretical learning style is more closely related to the degree of study habits, showing that the characteristics of this style such as logic, organization, analysis and rational objectivity can contribute favorably to improving performance in study habits.



This result is consistent with the general objective of the research, which was to carry out a correlational study between learning styles and study habits in Computer Systems Engineering students.



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