

## Sociodemographic factors associated with the self-planning of distance-teaching mode learning in master's students in a Peruvian university

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**Abstract.** The present investigative work acts as a purpose to determine the associate between demographic factors and the self-planning of learning in post-graduate students in a private Peruvian university. The methodology focused on a quantitative approach and a correlated descriptive design; the population consisted of 385 students and the sample was obtained under a random procedure from 176 students from two self-distance teaching mode masters programs at a Peruvian university, to whom a questionnaire was applied that had questions concerning the sociodemographic factors and a Likert scale with 20 items about the self-planning skills. For the inferential analysis, the Chi Square X2 statistic was applied; the results show that the skills for self-planning of learning are not related to gender, profession and type of work, but there is a strong association with age (Sig.0.01) and place of residence (Sig.0.02).

**Keywords:** Distance learning, virtual learning, self-planning, demographic factors.

### 1 Introduction

Distance teaching mode in higher education is the new learning phenomenon worldwide, many students prefer to carry out their studies in this way since the academic offer is varied and flexible (Covarrubias, 2021). The pupil that prevails in this type of study is centered on a student that self-directs, plans, regulates, and evaluates their learning (Gupta and Yadav 2023; Manrique, 2004). Planning is the first phase of the self-regulated learning model, where the objectives and goals to be achieved are stat-

ed, the type of academic task is understood, the time it will take to achieve it and the interest or expectation (Zimmerman 2020; Sáez et al., 2022), if the student has not developed these skills, they will have difficulties approaching tasks strategically (Pandero and Tapia, 2013). The student population that attends the postgraduate classrooms of a Peruvian university have heterogeneous demographic profiles; economic inequality, age difference, different cultures from which they come from, type of independent or dependent employment, among others. Considering the demographic factors would be determinants in learning development (Garcia et al., 2022). The principal objective is to determine the association between sociodemographic factors and self-planning of distance-teaching mode learning among postgraduate students at a private Peruvian university.

## **2 Theoretical Framework**

The self-regulated learning model is dynamic and cyclical (Zimmerman, 2000; Pintrich, 2000 cited by Li et al., 2023), structured in three stages: planning, execution and self-reflection, which involve a set of skills for the students to establish, learning objectives and goals, developing a study plan, recognizing your skills and the prior knowledge you have, in addition to evaluating your own learning process and making decisions. One of these stages is learning planning, a process that implies that the student has skills to identify proposed learning goals, as well as the selection of the most convenient strategies for his or her learning, compliance, and skills linked to predispositions and/or experience, therefore it is important to know the profile of the students in order to design and provide them with relevant learning strategies (Zimmerman, 2020; Sáez et al., 2022; Solorzano, 2017; Manrique, 2004). Sociodemographic factors include aspects in a personal and social nature, specific to the student, such as sex, age, place of origin, residence, level of education, among others (Gutierrez, et al., 2020, Flores and Gonzales, 2020).

Results of research applied to university students such as that of Palacios et al. (2021) found that academic goals; learning, social reinforcement, and achievement are associated with sex, age, school or origin and hours of study; Carstensen et al. (2018) and their team concluded that age is associated with deeper learning and that women obtained higher scores in superficial learning; Garbanzo (2014) found that sex, age, place of residence, among other variables, can predict academic results; Slater et al. (2017) concluded that age, academic degree, and the passage of time can influence the level of self-regulated learning, opposing these findings, Garcia et al. (2022) found that the level of self-directed learning is not related to sex, age and academic grade.

## **3 Methods**

A questionnaire with 20 items was applied to measure the learning of self-planning skills, structured in four dimensions: learning goals (3 items), personal and environmental conditions and resources (6 items), conditions of the task and strategies for its

fulfillment (8 items); plan control (3 items), on a Likert scale with 5 response options with a reliability of 0.92; in addition to items on sociodemographic information such as age, gender, place of residence, type of work, and profession were included. It was applied online to students from two distance-teaching mode masters programs at a Peruvian university whose population was 385 students, with a total of 176 randomized students participating. Working under a descriptive correlational design, the data was analyzed through descriptive statistics, while for the inferential analysis the Chi Square X2 statistic was applied.

## 4 Results

**Table 1.** Demographic characteristics of distance-teaching mode students from a Peruvian university

Variables	N (176)
<b>Age range</b>	<b>f (%)</b>
20-30	84 (47,7%)
31-40	49 (27,8%)
41-50	31 (17,6%)
51-59	10 (5,7%)
60	2 (1,1%)
<b>Gender</b>	<b>f (%)</b>
Masculine	64 (36,4%)
Feminine	112 (63,6%)
<b>Place of residence</b>	<b>f (%)</b>
North Coast	19 (10,8%)
South Coast	62 (35,2%)
Lima (Capital city)	27 (15,3%)
Lima (Provinces)	3 (1,7%)
Jungle	14 (8,0%)
Central Sierra	9 (5,1%)
Northern Sierra	10 (5,7%)
Southern Sierra	32 (18,2%)
<b>Type of work</b>	<b>f (%)</b>
Dependent	100 (56,8%)
Unemployed	6 (3,4%)
Independent	70 (39,8%)
<b>Profession</b>	<b>f (%)</b>
Lawyer	8 (4,5%)
Administrator	63 (35,8%)
Anthropologist	1 (0,6%)
Architect	1 (0,6%)
Educator	68 (38,6%)
Biologist	1 (0,6%)
Accountant	5 (2,8%)
Nurse	3 (1,7%)
Psychologist	7 (4,0%)
Medical Technologist	2 (1,1%)
Economist	2 (1,1%)

Occupational Therapist	2 (1,1%)
Engineer	13 (7,4%)

Regarding the age range, students from 20 to 30 years old represented 47.7% and those who were 60 years old or older represented 1.1%. Likewise, regarding gender, a dominance of women was prevalent with 63.6%. In terms of place of residence, it was observed that 35.2% came from the South Coast, 18.2% from the Southern Sierra, 15.3% came from Lima (capital city), and 1.7% came from Lima (provinces). Regarding the type of work, it was evident that 56.8% are dependent. Finally, in regard to profession, 38.6% are educators, 35,8% are administrators, and 25.6% from other professions, as observed in Table 1.

**Table 2.** Scores per item for learning self-planning.

Self-planning skills	Average
<b>Learning goals</b>	
1. I identify the study goals of the scheduled subjects.	3,6 ±0,8
2. I establish my learning objectives.	3,8±0,9
3. I establish indicators to monitor the progress of my learning.	3,5±0,9
<b>Personal, environmental conditions and resources</b>	
4. I identify personal situations (emotional, family, among others) that could affect my learning.	3,6±0,9
5. I identify situations in the environment (bustle, connectivity, luminosity, comfort, among others) that affect my learning.	3,6±1,0
6. I try to have all the resources that facilitate my learning.	3,8±0,9
7. I look for alternative solutions to face adverse situations that affect my learning.	3,7±0,9
8. I use digital tools to help me plan my learnings.	3,7±0,9
9. I use some physical resource (planner, agenda, among others) to help me plan my learning.	3,7±0,8
<b>Conditions of the task and strategies for its fulfillment</b>	
10. I clearly identify the type of activity: homework, exam, exhibitions, among others.	3,7±0,9
11. I am aware of the conditions (indications, demands) that imply the development of said activity.	3,6±0,9
12. I analyze the complexity of the task to plan its execution.	3,6±0,9
13. I establish a sequence of actions to follow to complete the learning activities.	3,6±0,0
14. I establish times for carrying out my academic activities.	3,5±0,9
15. I analyze the most convenient learning strategies that help me learn better.	3,4±0,9
16. I put planned strategies into practice.	3,5±0,8
17. I formulate my study plan.	3,6±0,9
<b>Plan control</b>	

18. I monitor the progress of my study plan.	3,4±0,9
19. I evaluate the achievement of my learning objectives.	3,6±0,9
20. I make readjustments to my study plan if required.	3,4±0,9

Table 2 shows that the mean of the items varied from 3.4+0.9, as is the case of items 15, 18, and 20, to 3.8+0.9, as in items 2 and 6.

**Table 3.** Association between variables.

Effect	Model fitting criteria of the Logarithm of the verisimilitude	Likelihood ratio tests		
		Chi-square	gl	Sig.
Age range	130,042	12,423	4	,014
Gender	118,401	,782	1	,377
Place of residence	133,248	15,629	7	,029
Type of job	119,713	2,093	2	,351
Profession	132,333	14,714	12	,257

Table 3 displays the association between sociodemographic factors and learning self-planning; an association was evident with the age variable (Sig.0.01) and with the place of residence variable (Sig.0.02).

## 5 Discussion

As association was found between the variables of age and place of residence with self-planning, coinciding with the findings of Garbanzo (2014), Palacios et al. (2021), and Carstensen et al. (2018), who concluded age is associated with variables referred to learning, while Slater et al. (2017), more closely thematically, found an association with self-directed learning, results opposite to those of Garcia et al. (2022). Regarding the place of residence, it coincided with the study of Garbanzo (2011) who found a link with academic performance.

## 6 Conclusions

It was concluded that skills for self-planning of learning are associated with gender, profession, or type of work, but it is with age range (Sig.0.01) and place of residence (Sig.0.02).

## 7 Limitations and Future Research

In response to self-planning learning, there is a little previous research, and only one type of self-regulated learning factor was considered. It is recommended to make ties

to other factors. Analyze self-planning through quantitative studies and make experimental proposals for the purpose of improving distance-teaching mode learning.

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