

Generational diversity in digital teaching among teachers of a private university in times of pandemic

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Abstract:

The article aims to study how generational diversity affects digital education among professors at a private university in Lima by conducting a survey. In the study, a quantitative approach was used together with a non-experimental-explanatory design; the population consisted of 292 teachers selected through a probability sampling process. For data collection, we used two instruments, each with 30 items on a Likert scale, to collect information. According to the results, the perception of generational diversity is at a high level among those surveyed, with 88.67% expressing this belief. 91.50% of teachers believe that digital education is of high quality, which is supported by data on the subject. Furthermore, the deviation is evident from the results of the goodness table, with $\text{sig} = 1.00 > 0.05$, which confirms that the data have been adequately fitted to the logistic regression. Wald 4.379 and $\text{sig} = 0.036 < 0.05$ are found in the parameter estimation table, which indicates that the influence is statistically significant with a mean value. The percentage dependence of generational diversity and digital teaching in teachers is presented in the hypothesis test, which is carried out using a pseudo-R quadratic. In addition, we have a Nagelkerke coefficient, which indicates that the variability of digital education is influenced by the generational diversity of 82.9%. The percentage dependence of generational diversity and digital teaching in teachers is presented in the hypothesis test, which is carried out using a pseudo-R quadratic. In addition, we have a Nagelkerke coefficient, which indicates that the variability of digital education is influenced by the generational diversity of 82.9%.

Keywords: *generational diversity; digital teaching; online learning; Educational informatics.*

1. Introduction

Nations around the globe are facing a new challenge as a result of the rapid and irreversible changes caused by COVID-19 and technological advances: managing human talent taking into account the important generational diversity. According to the American Psychological Association, a group of people who come from the same age cohort and have had similar life experiences during their formative years is called a "generational cohort." Also, we need to keep in mind the next generations of people, which are as follows: There are many generations that have struggled with the digital age, especially those born between 1997 and 2010. The Baby Boomers, the Generation X, the Millennials and Generation Z, all of them born between 1997 and 2010, are some of those who fall into this category. According to Sánchez-Dueas (2020), generational diversity is simply the presence of a diverse range of age groups in a company or organization. Technological advances, lifestyle and other aspects of modern life need to be taken into account when discussing generational differences; they are all aspects of the new modern world, and they all contribute to the discussion of generational differences. For example, when it comes to technology, what may seem simple to a Millennial may be extremely difficult to grasp for a Baby Boomer. As Mohammadi (2019) points out, when evaluating generational differences, we must consider not only age, but also goals, social and technological advances, and educational revolutions. All types of developments contribute to shaping future generations by providing a framework, a place to call home and a new way of life to follow. Generational diversity introduces new ways of thinking and new problem-solving approaches, which benefit any environment, be it professional or educational. Students' ability to learn digital skills, which are now central to success in school and on the job, according to Rodríguez et al. (2019), is negatively affected by generational differences. Consequently, teachers, who may have a harder time, need to spend more time learning and practicing effective ICT management strategies with their students, especially in the early grades. Generational diversity is common in today's companies. As we have already said, there are many generations in a company at the moment. In the midst of a pandemic, people of all generations can benefit from each other's unique perspectives and skills if these differences are properly managed. One of the smartest things about working with people from different generations in the same place is that we can learn from each other's experiences. (Zhang and Li, 2022) As a consequence of COVID-19, digital education has had a significant impact on educational outcomes. While it is important to take generational diversity into account, teachers must continue to be trained to acquire the essential skills, digital capabilities and

knowledge required in today's digital society. (Perea and Abello, 2022) According to Mateus et al. (2022), the pandemic in Latin America has caused more than 95% of schools, universities and other institutions in the country, which has caused significant changes in educational results. Students had to adapt to constant change and take classes using various online platforms such as Zoom, Blackboard, and Google Meet, among other things. It is necessary to add value to virtual education by providing tools and connectivity to ensure that it is as effective as possible and that all students have access to a high-quality educational experience. The Internet of Things (IoT) and the explosion of knowledge have had a profound impact on contemporary society, challenging many aspects of our way of life in the process. It is essential to remember this. Likewise, Cruz et al. (2021) state that, as a result of the rapid transition from physical presence to virtuality, an even more worrying reality emerged: many teachers expressed concern and opposition to the new approach to teaching courses, that of digital education (using new methods focused on in the technological support and the correct use of the virtual platform). In addition, the instructors were well aware of the fact that they would have to make financial commitments to continue their own education. As Burgos-Videla et al. (2021) point out, the use of these virtual-technological media is a common activity that instructors must get used to in order to comply with the teaching-learning process and, as a result, master the virtual tools that will do their job. simpler jobs. These technologies, which include all methods of information creation, storage, exchange, instruction and processing, among others, are relevant to digital education at this time because they allow the creation of educational material through the use of virtual learning environments, the which are becoming more and more popular. The learning process facilitated by technology, such as video conferencing or audio conferencing, is called digital education. In this sense, digital education refers to the teaching-learning process through the use of technology that is linked to the Internet. (Ramírez and colleagues, 2021). Avendano et. al (2021), make use of the phrase "digital or virtual education", which refers to a collection of programs in which learning and teaching take place wholly or partially via the Internet. Using this mode of instruction, teachers and students can communicate with each other in a variety of ways, enhancing interaction and allowing the teaching process to be more adaptable in response to student needs and interests. Another advantage it offers students is the ability to quickly access a vast amount of information. ICT training is a fantastic incentive for teachers as it will allow them to provide a wide range of tools that will help in the growth of classrooms as well as improve the overall quality of instruction through virtual space. Using all these tools and resources, the pandemic has transformed the structure and culture of education and culture, as well as the implications of online or digital education and the difficulties teachers have had in adapting to the new environment.

2. Method

This article is a basic research type; it is distinguished by the fact that it starts with a theoretical framework and seeks to augment our theoretical sources to improve science, while also testing hypotheses, among other features. According to the importance of the hypotheses, the research is quantitative and correlational causal - not experimental, which aims to evaluate the influence of two or more conceptions, categories or variables on the result of the research (in a particular context). Consequently, why an event-phenomenon occurs and how it is demonstrated, or how two or more variables are related, are important considerations. The design is of an explanatory type, in which the effects of the variables are investigated through the use of hypothesis tests.

The research carried out consists of a population of 292 professors from a Private University of Lima in the country of Peru. The exclusion criteria are as follows: Visiting or exchange professors, professors who are not in their generational range, and professors who do not meet the requirements to be professors are not considered part of the population.

To carry out the study, a sample of 212 university professors was selected using a sample formula that provided a confidence level of 95% and a margin of error of 5%. Statistical sampling is a probabilistic process in which all the elements of a population are taken into account when selecting the constituents of a sample.

The technique used in the present research work was through the use of the survey and the instrument used was the questionnaires on a Likert ordinal scale, which was validated and its reliability was estimated. According to Sánchez and Reyes (2017), it defines that the reliability of an instrument can be evaluated by examining the consistency of its responses when used in a diverse group of people, regardless of the person administering the test. Like this, instrument validation is defined as the degree to which the ability of an instrument to measure what is to be measured and its validity are verified through procedures that determine the reliability of the instrument.

Experts with doctoral degrees went through the validation process and gave their thoughts on the usefulness, accuracy, and validity of the document. Generational diversity and digital education were tested with factor analysis. The KMO for both was 0.791, and the variance explained by each instrument was also 0.902. Both are reliable, according to Cronbach's alpha coefficient. Generational diversity had a value of 0.918 and digital education had a value of 1.890. 212 professors from a private university in Lima, Peru, took the exams to see how they did. Each study variable was represented by a single question that was closed in the questionnaire. This allowed for the collection of data that could be used to look at the data.

3. Results

Descriptive results of Generational Diversity and its dimensions

Table 1: Distribution of frequencies and percentages of the levels of perception of Generational Diversity according to its dimensions

| Level | Generational Diversity | | Baby Boomer Generation | | Generation Y | | Generation X | |
|--------|------------------------|--------|------------------------|--------|--------------|--------|--------------|--------|
| | F | % | F | % | F | % | F | % |
| Under | 14 | 6.60% | 14 | 6.60% | 4 | 1.88% | 6 | 2.83% |
| Medium | 10 | 4.71% | 66 | 31.13% | 42 | 19.81% | 28 | 13.20% |
| High | 188 | 88.67% | 132 | 62.26% | 166 | 78.30% | 178 | 83.96% |
| Total | 212 | 100.0 | 212 | 100% | 212 | 100.0% | 212 | 100% |

Based on the results of the perception of the professors of a university in Lima of the Generational Diversity variable, it shows that 88.67% have a high level, 6.60% have a low level and only 4.71% have a medium level. Likewise, we can see that there are 62.26% high, 31.13% medium and only 6.60% low levels in the Baby Boomer Generation dimension, according to the results. It is observed that 78.30% have a high level of maturity, 19.81% have a medium level and only 1.88% have a low level with respect to Generation Y, regarding the private university of Lima, 2021, 83.96% have a high level, 13.20% have a medium level and only 2.83% have a low level in Generation X, according to the perception of teachers.

Table 2: Distribution of frequencies and percentages of the levels of perception of Digital Education according to its dimensions

| Level | digital education | | Use of various digital platforms | | Willingness to learn from different technologies and platforms | | Motivate the use of face-to-face techniques to reinforce learning in the virtual mode | | Learn more and more about the digital world | | virtual tools | | Accept that the virtual immaterial world is there | |
|--------|-------------------|--------|----------------------------------|--------|----------------------------------------------------------------|--------|---------------------------------------------------------------------------------------|--------|---------------------------------------------|-------|---------------|--------|---------------------------------------------------|-------|
| | F | % | F | % | F | % | F | % | F | % | F | % | F | % |
| Under | 14 | 6.60% | 14 | 6.60% | 14 | 6.60% | 14 | 6.60% | 10 | 4.71% | 14 | 6.60% | 12 | 5.66% |
| Medium | 4 | 1.88% | 10 | 4.71% | 12 | 5.66% | 4 | 1.88% | 16 | 7.54% | 4 | 1.88% | 12 | 5.66% |
| High | 188 | 91.50% | 188 | 88.67% | 186 | 87.73% | 194 | 91.50% | 18 | 8.73% | 19 | 9.150% | 18 | 8.67% |
| Total | 212 | 100% | 212 | 100% | 212 | 100% | 212 | 100% | 21 | 100% | 21 | 100% | 21 | 100% |

According to the results of the Digital Education variable, 91.50% have a high level, 6.60% a low level and only 1.88% have a medium level, as perceived by professors at a private university in Lima, 2021. In relation to the results of the dimension According to the use of various digital platforms, 88.67% have a high level of competence, 6.60% have a low level of competence and only 4.71% have an average level of competition. The results of the predisposition to learn the dimension indicate that 87.73% have a high level, 6.60% have a low level and only 5.66% have a medium level. The results of the dimension Motivated to use face-to-face techniques to reinforce virtual learning, it is discovered that 91% have a high level of competence, 6, 6% have a medium level of competence and only 1.8% have a low level of competence. According to the learning results of the digital world of more and more dimensions, 87.73% have a high level, 7.54% have a medium level, and only 1.71% have a low level. The results of the virtual tools dimension indicate that 91.50% have a high level of competence, 6.60% have a medium level of competence and only 1.88% have a low level of competence. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. According to the learning results of the digital world of more and more dimensions, 87.73% have a high level, 7.54% have a medium level, and only 1.71% have a low level. The results

of the virtual tools dimension indicate that 91.50% have a high level of competence, 6.60% have a medium level of competence and only 1.88% have a low level of competence. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. According to the learning results of the digital world of more and more dimensions, 87.73% have a high level, 7.54% have a medium level, and only 1.71% have a low level. The results of the virtual tools dimension indicate that 91.50% have a high level of competence, 6.60% have a medium level of competence and only 1.88% have a low level of competence. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. 54% have a medium level and only 1.71% have a low level. The results of the virtual tools dimension indicate that 91.50% have a high level of competence, 6.60% have a medium level of competence and only 1.88% have a low level of competence. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. 54% have a medium level and only 1.71% have a low level. The results of the virtual tools dimension indicate that 91.50% have a high level of competence, 6.60% have a medium level of competence and only 1.88% have a low level of competence. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima. The results of the virtual tools dimension indicate that 88.67% have a high level of competence, 5.66% have a medium level of competence and only 5.66% have a low level of competence. In 2021, in relation to the perceptions of teachers at a private university in Lima.

Table 3: Kolgomorov - Smirnov Normality Test

| | Kolmogorov–Smirnov | | | Criterion |
|-----------------------------------------------------------------------------------|--------------------|-----|--------|------------|
| | Statistical | gl | S.I.G. | Sig<0.05 |
| Generational Diversity | 0.197 | 212 | 0.000 | Not normal |
| digital education | 0.240 | 212 | 0.000 | Not normal |
| Use of various digital platforms | 0.238 | 212 | 0.000 | Not normal |
| | 0.234 | 212 | 0.000 | Not normal |
| Willingness to learn from different technologies and platforms | 0.205 | 212 | 0.000 | Not normal |
| Motivate the use of face-to-face techniques to reinforce learning in virtual mode | | | | |
| Learn more and more about the digital world | 0.282 | 212 | 0.000 | Not normal |
| virtual tools | 0.230 | 212 | 0.000 | Not normal |
| Accept that the virtual immaterial world is there | 0.241 | 212 | 0.000 | Not normal |

Considering that the Sig. =0,000<0.05, the H0 is rejected, that is, based on the variables and the dimensions, it can be concluded that the data do not follow a normal distribution. Consequently, non-parametric statistical methods will be used because the distributions are not normal.

Table 4: Pseudo R squared test, percentage dependency of generational diversity and digital education

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|-------|
| Cox and Snell | 0.403 |
| Nagelkerke | 0.829 |
| McFadden | 0.774 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95.00% | |
|----------------------|----------|------------|--------|-----|--------|-------------------------------|-------------|
| | | | | | | Lower limit | Upper limit |
| Threshold [Y = 1.00] | -16,127 | 219,123 | 0.005 | one | 0.940 | -445,599 | 413,341 |
| [Y = 2.00] | -4,534 | 1,006 | 20,325 | one | 0.000 | -6,504 | -2,561 |
| Location [X=1.00] | -37,484 | ,000 | . | one | . | -37,482 | -37,482 |
| [X=2.00] | -3,147 | 1,503 | 4,378 | one | 0.035 | -6,092 | -0.198 |
| [X=3.00] | 0a | . | . | 0 | . | . | . |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance can be checked, with a sig=1.00>0.05, which checks the optimal fit of the data to the logistic regression. In addition to this, in the parameter estimation table, a Wald 4.378 and a sig=0.035<0.05 are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table, Wald=20.235 is checked. Ya sig=0.000 is significant for the predictor (Digital education at the secondary level, Y=2), likewise, it is verified that the predictor (generational diversity (X=2), has a Wald 4,378 and a sig=0.035<0.05, which makes the predictor generational diversity significant for the average level).

Table 5: Test of the pseudo R square percentage dependence of generational diversity in the use of various digital platforms

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|-------|
| Cox and Snell | 0.389 |
| Nagelkerke | 0.674 |
| McFadden | 0.570 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | | |
|---------------------------|--------------|------------|----------|--------|--------|----------------------------|-------------|----------|
| | | | | | | Lower limit | Upper limit | |
| Threshold [Yd1 = 1.00] | -17,288 | 584,458 | 0.002 | one | 0.975 | -1162,807 | 1128,231 | |
| | [Yd1 = 2.00] | -2,878 | .461 | 39,243 | one | 0.000 | -3,781 | -1,979 |
| Location [X=1.00] | -37,911 | .000 | . | one | . | -37,911 | -37,911 | |
| | [X=2.00] | 14,343 | 2457,776 | 0.000 | one | 0.996 | -4802,810 | 4831,498 |
| | [X=3.00] | 0a | . | . | 0 | . | . | |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a sig=1.00>0.05, which verifies the good fit of the data to the logistic regression. Meanwhile, in the parameter estimation table, a Wald 39.243 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table, a Wald 39,243 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant for the dimension (the use of various digital platforms and d1=2), however, according to the data, the generational diversity results with a Wald =0.000 and a sig =0.996, which makes it insignificant, and should be eliminated from the model).

Table 6: Pseudo R squared test percentage dependence of generational diversity on predisposition to learn from different technologies and platforms

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|-------|
| Cox and Snell | 0.388 |
| Nagelkerke | 0.648 |
| McFadden | 0.538 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | | |
|---------------------------|--------------|------------|----------|--------|--------|----------------------------|-------------|----------|
| | | | | | | Lower limit | Upper limit | |
| Threshold [Yd2 = 1.00] | -18,242 | 941,721 | 0.000 | one | 0.984 | -1863,981 | 1827,492 | |
| | [Yd2 = 2.00] | -2,685 | 0.421 | 40,511 | one | 0.000 | -3,512 | -1,858 |
| Location [X=1.00] | -39,241 | 0.000 | . | one | . | -39,241 | -39,241 | |
| | [X=2.00] | 15,462 | 3902,998 | 0.000 | one | 0.996 | -7634,272 | 7665,202 |
| | [X=3.00] | 0a | . | . | 0 | . | . | |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a sig=1.00>0.05, which verifies the good fit of the data to the logistic regression. Additionally, in the parameter estimation table, a Wald 40.511 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table, a Wald 40.511 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant. for the dimension (the predisposition to learn from the different technologies and platforms, Yd2), however, according to the data, generational diversity results with an “ald =0.000 and a sig =0.996, which makes it insignificant, and should be removed from the model).

Table 7: Test of the pseudo R square percentage dependence of generational diversity in motivating the use of face-to-face techniques to reinforce learning in virtual mode

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|-------|
| Cox and Snell | 0.404 |
| Nagelkerke | 0.828 |
| McFadden | 0.773 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | |
|------------------------|--------------------|------------|--------|-----|--------|----------------------------|-------------|
| | | | | | | Lower limit | Upper limit |
| Threshold [Yd3 = 1.00] | -16,127 | 219,120 | 0.006 | one | 0.940 | -445,599 | 413,341 |
| | [Yd3 = 2.00]-4,532 | 1,004 | 20,325 | one | 0.000 | -6,504 | -2,561 |
| Location [X=1.00] | -37,482 | 0.000 | . | one | . | -37,484 | -37,482 |
| | [X=2.00] -3,145 | 1,503 | 4,378 | one | 0.035 | -6,094 | -.198 |
| | [X=3.00] 0a | . | . | 0 | . | . | . |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a sig=1.00>0.05, which verifies the good fit of the data to the logistic regression. Additionally, in the parameter estimation table, a Wald 4.378 and a sig=0.035<0.05 are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table, a Wald 20,325 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant, for the dimension (motivate to use face-to-face techniques to reinforce learning in virtual mode yd3 =2), also, according to the data, the generational diversity results with a Wald =4.372 and a sig =0.035<0.05, which makes it significant for the mean value).

Table 8: Test of the pseudo R squared percentage dependency of generational diversity in learning more and more of the digital world

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|-------|
| Cox and Snell | 0.401 |
| Nagelkerke | 0.673 |
| McFadden | 0.569 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | |
|-------------------------|----------|------------|---------|-----|--------|----------------------------|-------------|
| | | | | | | Lower limit | Upper limit |
| Threshold [Yd4 1.00] | =-24,662 | 0.836 | 868,921 | one | 0.000 | -26,301 | -23,022 |
| [Yd4 2.00] | =-3,413 | 0.586 | 33,814 | one | 0.000 | -4,561 | -2,261 |
| Location [X=1.00] | -25,578 | 0.000 | . | one | . | -25,578 | -25,578 |
| [X=2.00] | -3,817 | 1,084 | 12,377 | one | 0.000 | -5,944 | -1,692 |
| [X=3.00] | 0a | . | . | 0 | . | . | . |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a sig=1.00>0.05, which verifies the good fit of the data to the logistic regression. Additionally, in the parameter estimation table, a Wald 12.377 and a sig=0.000<0.05 are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table it is verified (digital education in its dimension of learning more and more about the digital world has a low level, Yd4=1) has a Wald 868,921 and a sig=0.000<0.05, which makes significant the predictor, for the dimension (digital education in its dimension learning more and more from the digital world has a medium level, Yd4=2), has a Wald 33,814 and a sig=0.000<0.05, which makes the predictor significant. Also, according to the data, (generational diversity at its mean level X=2) results in a Wald =12,377 and a sig=0.000<0.05, which makes the predictor significant for the mean value).

Table 9: Test of the pseudo R squared percentage dependency of generational diversity in identification of the contents of the use of virtual tools

goodness of fit

| | Chi squared | gl | S.I.G. |
|-----------|-------------|-----|--------|
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

Pseudo R squared

| | |
|---------------|-------|
| Cox and Snell | 0.405 |
| Nagelkerke | 0.829 |
| McFadden | 0.774 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | |
|------------------------|----------|------------|--------|-----|--------|----------------------------|-------------|
| | | | | | | Lower limit | Upper limit |
| Threshold[Yd5 1.00] | =-16,127 | 219,122 | .006 | one | 0.942 | -445,599 | 413,341 |
| [Yd5 2.00] | =-4,532 | 1,004 | 20,325 | one | 0.000 | -6,502 | -2,561 |
| Location [X=1.00] | -37,482 | 0.000 | . | one | . | -37,482 | -37,482 |
| [X=2.00] | -3,145 | 1,503 | 4,378 | one | 0.035 | -6,092 | -.198 |
| [X=3.00] | 0a | . | . | 0 | . | . | . |

Link function: Logit.

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a $\text{sig}=1.00>0.05$, which verifies the good fit of the data to the logistic regression. Additionally, in the parameter estimation table, a Wald 4.378 and a $\text{sig}=0.035<0.05$ are verified, which makes the relationship with a mean value significant.

It is verified (the identification of the contents of the use of virtual tools in the curricula has a low level, $Yd5=1$) has a Wald 0.006 and a $\text{sig}=0.942>0.05$, which makes the predictor insignificant, so it should be removed from the model. For the dimension (the identification of the contents of the use of virtual tools in the curricula has a medium level, $Yd5=2$), it has a Wald 20,325 and a $\text{sig}=0.000<0.05$, which makes the predictor significant. According to the data, (generational diversity at its mean level $X=2$) results in a Wald =4.378 and a $\text{sig} =0.035<0.05$, which makes the predictor significant for the mean value).

Table 10: Pseudo R squared percentage dependence of generational diversity on accepting that the virtual immaterial world

| goodness of fit | | | |
|-----------------|-------------|-----|--------|
| | Chi squared | gl | S.I.G. |
| pearson | 0.000 | two | 1,000 |
| deviation | 0.000 | two | 1,000 |

| Pseudo R squared | |
|------------------|------|
| Cox and Snell | .361 |
| Nagelkerke | .625 |
| McFadden | .522 |

Parameter estimates

| | Estimate | Dev. Error | Wald | gl | S.I.G. | Confidence interval at 95% | |
|----------------------|----------|------------|---------|-----|--------|----------------------------|-------------|
| | | | | | | Lower limit | Upper limit |
| Thresho [Yd6 = 1.00] | -23,673 | 1,081 | 480,408 | one | 0.000 | -25,790 | -21,558 |
| ld [Yd6 = 2.00] | -3,113 | 0.510 | 37,125 | one | 0.000 | -4,114 | -2,111 |
| Locatio [X=1.00] | -25,465 | 0.000 | . | one | . | -25,465 | -25,465 |
| n [X=2.00] | -1,725 | 1,228 | 1,973 | one | 0.161 | -4,136 | ,681 |
| [X=3.00] | 0a | . | . | 0 | . | . | . |

to. This parameter is set to zero because it is redundant.

Using the Goodness of Fit table, the deviance is checked, with a $\text{sig}=1.00>0.05$, which verifies the good fit of the data to the logistic regression. Additionally, in the parameter estimation table, a Wald 37.125 and a $\text{sig}=0.000<0.05$ are verified, which makes the relationship with a mean value significant.

Additionally, in the parameter estimation table it is verified that accepting that the virtual immaterial world is there in the curricula has a low level, $Yd6=1$) has a Wald 480,408 and a $\text{sig}=0.000<0.05$, which makes the predictor non-significant, so it should be removed from the model. For the dimension (accept that the virtual immaterial world is there in the curricula, $Yd6=2$), it has a Wald 37.125 and a $\text{sig}=0.000<0.05$, which makes the predictor significant. Also, according to the data, (generational diversity at its mean level $X=2$) results in a Wald =1.973 and a $\text{sig} =0.161>0.05$, which makes the predictor insignificant for the mean value).

4. Discussion

In the research article 'Generational diversity in digital teaching in teachers of a private university', the following results were achieved in accordance with the general hypothesis, by using the pseudo R square test, it is concluded that generational diversity influences a significant way in digital teaching in teachers of a private university in Lima, 2021, a percentage dependency of generational diversity and digital teaching in teachers of the various careers is being presented, there is a Nagelkerke coefficient, implying that the variability of the 82.9% of digital education depends on generational diversity, in university teachers.

For his part, Sengupta (2022) in his research has led him to the conclusion that the application of digital education during the COVID-19 pandemic generates a wide range of opportunities and difficulties. Learning how to use these tools has been difficult for both students and teachers; however, to ensure that the information and communication technology (ICT) revolution does not stop in the education sector, it has become necessary to learn about ICT.

According to Castagnola et. to the. (2021) in the research carried out in educational institutions in times of pandemic, states that students and teachers must be helped to overcome their innate tendency to see the future with a sense of pessimism and nightmare and progressively engage them in this new virtual reality.

Likewise, Carbonell et. to the. (2021) argue that, as a result of the pandemic, teachers and students have had to adapt to the digital world and adapt to the atypical conditions in which they must grow and learn. As a result of this, they see the virtual classroom as a positive development.

On the other hand, Khasawneh (2021) argues that there are many disadvantages for students and teachers, the latter most affected by the clear gap in terms of ICT management, that the current situation has allowed innovation in virtual environments where Classes can run as if they were face-to-face or get a little closer than it was before.

According to Cotrina et. to the. (2021) conclude that when it comes to ensuring that students and faculty are equipped with the digital skills necessary to succeed in today's world, the new university director must fully fulfill this responsibility.

Finally, Cárdenas et. to the. (2021) conclude that, in response to the COVID-19 health situation, the application of digital education has been aggressive due to the speed with which it has needed to be used, and that generational diversity has a significant impact. in the development and integration of pedagogical practices. However, they emphasize that the virtual experience is largely positive because it improves the effectiveness of teachers' actions; digital education combined with digital skills can lead to exceptional performance.

5. Conclusions

According to the established results, it has been possible to demonstrate that generational diversity has a statistically significant influence (p -value < 0.05), with a (Nagelkerke = 0.829) with digital teaching in teachers of a private university in Lima, 2021 ; as a result, the general hypothesis has been proved.

It is recommended to invest in the elements of digital teaching, support teachers in their digital literacy and promote digital spaces in universities due to the high impact of generational diversity in digital teaching. With this diversity in mind, it is recommended to train employees on how to use the platforms used by the institution, as well as provide other digital tools and avoid discrimination against the elderly. The use of digital materials is essential for both students and faculty, and ongoing training is recommended if students are to keep pace with university expectations.

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