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Teachers' Perceptions of the Effects of the Digital Divide and Educational Inclusion

Percepciones docentes hacia los efectos de la brecha digital y la inclusión educativa

Jorge Luis Aguilar-Martínez, José Carlos Sánchez-Prieto y Fernando Martínez-Abad

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Author's address:

Departamento de Didáctica, Organización y Métodos de Investigación. Facultad de Educación. Universidad de Salamanca. Paseo de Canalejas, 169, 37008, Salamanca (Spain)

E-mail / ORCID

jaguilarmz@usal.es

https://orcid.org/0009-0005-7218-2362

josecarlos.sp@usal.es

https://orcid.org/0000-0002-8917-9814

fma@usal.es

https://orcid.org/0000-0002-1783-8198

Abstract: This study seeks to analyse, through teachers' perceptions, the impact of the digital divide and the relationships of educational inclusion in the use of Information and Communication Technologies (ICT) in education. The study also aligns with Sustainable Development Goal 4 of the United Nations' 2030 Agenda, which promotes inclusive and quality education. A quantitative methodology was used, employing a specially designed and validated Likert scale to measure teachers' perceptions in three dimensions: perceptions of the digital divide's effects on teaching; perceptions of the inclusive use of technologies in the classroom and inclusive education practices in the classroom. Altogether, 790 primary-level teachers from western Honduras participated. The results indicate that perceptions are limited on the digital divide's effects among the participating teachers. Likewise, differences were found in how older teachers perceive the inclusive integration of technologies in the classroom. Furthermore, the participating teachers primarily demonstrated a theoretical understanding of inclusive education practices. These findings indicate the existence of an improved awareness and practical understanding of technological integration and inclusive strategies in the educational context.

Keywords: Digital Divide, ICT, Inclusive Education, Educational Technology, Inclusive Practices.

Resumen: Este estudio busca analizar a través de las percepciones de los docentes, el impacto de la brecha digital y las relaciones de la inclusión educativa en el aprovechamiento de las TIC en la educación. En línea con el Objetivo de Desarrollo Sostenible 4 de la Agenda 2030 de Naciones Unidas, que promueve una educación inclusiva y de calidad. La metodología utilizada fue cuantitativa empleando una escala tipo Likert diseñada ad hoc y validada, para medir la percepción del profesorado en tres dimensiones: percepción hacia los efectos de la brecha digital en la enseñanza, percepción hacia el uso inclusivo de las tecnologías en el aula y las prácticas de educación inclusiva en el aula. Participaron 790 docentes en servicio en el nivel primario en el occidente de Honduras. Los resultados indican que existe percepción limitada hacia los efectos de la brecha digital en el profesorado participante. Asimismo, se encuentran diferencias entre la forma en la que los docentes de mayor edad perciben la integración inclusiva de tecnologías en el aula. Además, en el profesorado participante se denota una comprensión principalmente teórica de las prácticas de educación inclusiva. Estos hallazgos indican la existencia de una mejorable conciencia y comprensión práctica de la integración tecnológica y las estrategias inclusivas en el contexto educativo.

Palabras clave: Brecha Digital, TIC, Educación Inclusiva, Tecnología Educativa, Prácticas Inclusivas.

1. Introduction

Currently, digital transformation in educational systems has emerged as an imperative need, particularly in Latin American countries. Governments and nongovernmental entities have expressed significant interest in modernising education by integrating digital technologies, implementing new strategies and directing national policies towards achieving the United Nations' Sustainable Development Goals (SDGs), namely seeking inclusive, equitable and quality education in line with SDG 4 (Navarrete et al., 2021): Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

However, the reality after the COVID-19 pandemic reveals a complex and challenging landscape. UNESCO's regional report on SDG 4 compliance in Latin America indicates that the prolonged closure of schools has exerted devastating effects on the region's education systems, thereby making realisation of SDG 4 by 2030 even more challenging (UNESCO et al., 2022).

The pandemic accelerated adoption of digital tools in education while simultaneously exposing gaps in access to technology and the ability to use it effectively (García et al., 2020). This situation makes improving educational services' quality and inclusion indicators even more complex, so it is crucial to review technology integration initiatives to improve quality and inclusion within the 2030 Education Agenda framework (Lugo & Ithurburu, 2019).

In this context, teachers are at the epicentre of transformation, facing challenges that go beyond mere technological adaptation (Sosa & Valverde, 2020). Financial resources' availability and digital skills are two crucial barriers hindering the path to digital transformation and improved education quality. Economic investment in technological infrastructure and teacher training are vital aspects that require attention to ensure effective integration of digital tools in the classroom. Furthermore, disparities in access to technology between urban and rural areas, as well as socioeconomic differences, help deepen the digital divide.

The Honduran educational system is structured as levels based on students' ages and cycles: pre-basic; basic and secondary. The Honduran Ministry of Education (SEDUC, 2020) manages these levels. As noted earlier, like other systems in the region, the need to promote digital transformation processes in educational systems has increased due to the pandemic's impact in the past few years. Amid the rapid spread of the virus, the government issued Executive Decree PCM-005-2020 on March 10, 2020, initiating a state of health emergency nationwide that established a long period of school closures and an accelerated shift to virtual modalities to facilitate home schooling.

Mejía-Elvir (2021) examined the new teaching modality adopted in most Honduran schools, in which the rural context and limited access to resources resulted in a total or partial decline in educational quality due to a marked digital divide that continues to affect schools nationwide.

Although the modality taken was distance education, it had some nuances that, due to context and characteristics, did not correspond to conventional distance

education. As Delgado (2020) noted, 'Distance education during this pandemic has been complemented by emergency education (EE) analysed as emergency remote teaching, responding to a sudden change in instructional models to alternatives due to a crisis situation' (p. 2). This situation undermined the progress made to date within the 2030 Education Agenda framework (UNESCO et al., 2022).

The Honduran Ministry of Education currently lacks a measurement system that allows for obtaining valid information about students' status nationally; however, estimates and context analyses indicate significant educational setbacks in the region (UNICEF, 2020). This also makes it difficult for decision-makers to establish clear educational policies to overcome access and inclusion barriers. Regarding this, Mejía-Elvir (2021) pointed out that 'a dichotomous educational policy without clear guidelines and not systemic in the context of the crisis caused the fundamental right to education not to be fully developed and a quality process directed at Honduran society' (p. 296).

Considering these elements, this study aimed to identify teachers' perceptions of the digital divide's effects on their work, as well as perceptions of inclusive integration of technologies into the classroom and actions that favour inclusive education from an analysis of their pedagogical practices. Understanding these elements is fundamental to building an inclusive and quality educational system within the framework of achieving the SDGs by 2030.

1.1. Background

Digital Divide

In recent years, the digital divide has gained prominence in educational discourses and initiatives, particularly in countries of the Global South, where government entities face barriers to initiating, executing and sustaining digital transformations. Defining the digital divide and the criteria for conceptualising it varies depending on the community and context in which it is used, so no universal definition exists that works everywhere (Gallardo, 2006).

According to the Economic Commission for Latin America, 'the digital divide is the dividing line between the group of the population that already has the possibility of benefiting from Information and Communication Technologies (ICT) and the group that is still unable to do so' (ECLAC, 2003, p. 17). Another perspective also must be considered, in which the digital divide refers to the difference in the availability of resources to participate in the information age (Wenhong & Wellman, 2005).

These definitions suggest that conceptualising the digital divide could be interpreted as merely an issue of access to devices and information, and the availability of economic means understood as essential inputs to access technologies. However, other authors, such as Bezerra (2020), have posited that the digital divide refers to a socioeconomic disparity between communities with Internet access and those without, although these inequalities also can apply to all recent ICT. This view emphasises Internet access as the main component of the divide, although it must be considered that access to both components is necessary to benefit from ICT.

Regarding this phenomenon in the Latin American context, it must be considered that the digital divide is not a simple issue that can be solved through access to devices and connectivity. For several years, it has been recognised that what some authors call a second divide, or cognitive divide, exists (Larraz, 2021), 'specifically related to the "digital skills" necessary to live and work in societies characterised by the growing importance of information and knowledge, which is called digital literacy' (Castaño, 2009, p. 220). As for the use of technologies in education, the knowledge divide represents one of the most complex barriers faced by digital transformation processes and has become a subject of scientific interest in research conducted in educational technology.

Montenegro et al. (2020) argued that the digital divide reflects an important barrier to achieving true student participation and creating needed conditions of equity and equal opportunities. Similarly, other studies have highlighted that how teachers perceive the digital divide is related closely to digital literacy levels (Quezada Castro et al., 2020; Pérez-Escoda et al., 2020).

The digital divide is another reflection of social inequities (González-Motos & Bonal, 2023), so its emergence in the educational context has been exacerbated by the abandonment of face-to-face education, generating greater segregation among disadvantaged students and families (UNICEF, 2020). Considering these elements, it also has become necessary to understand teachers' perceptions of educational inclusion and practices that could favour integration of students in contexts as complex and varied as those faced by the Honduran educational system and other countries in the region with similar situations.

Inclusive Education

The term inclusive education is not new in our context. For several years now, the educational field has been discussing the need for inclusive schools that adapt to today's society. Ainscow (2002) noted that historically, since the 19th century, many special education teachers have advocated for and helped design measures to support young people excluded from educational plans.

To better understand the term, what Parrilla (2002) described as the beginning of a new social consciousness about education should be examined. Some authors have agreed that no specific date exists for the emergence of inclusive education and that there is no single universal way to approach this topic in each country (Ainscow, 2005; Casanova, 2011) because countries have specific difficulties and needs in educational inclusion. For example, countries with fewer economic resources need to focus more effort on the millions of children who do not attend school. Meanwhile, in wealthier countries, the concern revolves mainly around school dropout and young people leaving the education system because they view it as irrelevant (Ainscow, 2005). Consequently, it is understood that barriers to effective inclusion in schools are different in each geographic region, as determined by economic availability and cultural factors (Cabero & Córdoba, 2009).

Thus, the relationships between the digital divide and educational inclusion notably arise in the convergence of ICT, with the potential to promote educational inclusion (Cabero & Ruiz, 2017). In the integration of technologies in the classroom, the digital divide is a barrier that educational systems face as they seek to promote digital

transformations. Teachers may have negative attitudes or perceptions on integrating technologies in the classroom (Chisango & Marongwe, 2021), which could become a barrier to digitalisation projects.

The relationships between ICT and inclusive education can be understood from two perspectives. First, use of these technologies can improve education and eliminate barriers that hinder access to culture and education for all people (Pérez, 2024). However, how these technologies are designed and structured can create accessible environments or environments that hinder access, which can promote inclusion or enhance exclusion (Cabero & Valencia, 2019).

Inclusive education and ICT converge in this research on the digital divide through the possibility of accessing or not accessing educational resources and their impact on students' learning. In this sense, from the inclusive education perspective, analysing inclusion from teachers' perceptions of strategies and adaptations in the classroom is relevant.

Thus, this study's general objective was to analyse teachers' perceptions of the digital divide and educational inclusion, as well as their impact on teaching and learning.

To address this general objective, the following specific objectives were proposed:

- Analyse teachers' perceptions of the digital divide's effects on teaching and learning activities.
- Analyse teachers' perceptions of the relationship between ICT and educational inclusion.
- Analyse teachers' perceptions of educational inclusion and the adaptations necessary to achieve it.

2. Methodology

The development of this study was based on an ex post facto quantitative, exploratory and nonexperimental design, following the corresponding methodological classification guidelines. This approach was characterised by examining phenomena after their occurrence without the researcher's deliberate manipulation of independent variables (Hernández-Sampieri & Mendoza, 2010).

2.1. Participants

The study included the participation of teachers from the Departments of Copán and Ocotepeque in western Honduras, all actively serving in the national public system at various primary education levels.

Data collection was conducted through a nonprobabilistic convenience sampling process that focussed on available cases in which access was possible (Hernández-Sampieri & Mendoza, 2010). Participants were selected in a way that

facilitated their access and availability, allowing for an exponential increase in the number of participants.

Altogether, the sample comprised 790 participants, all of whom were active teachers in Honduras' public educational system, specifically at the primary education level. Regarding gender distribution, 30% of the participants were men and 70% women. The participants' ages ranged from 21–65 (Mean = 38.24; SD = 10.76). Regarding their workplaces' geographical locations, 59% worked in the Department of Ocotepeque and 41% in the Department of Copán. Furthermore, 75% worked in rural communities and 25% in urban areas.

All participants gave informed consent under guarantees of their responses' anonymity and the voluntary nature of their participation in the research. The participants responded to their questionnaires through the Microsoft Forms platform, and dissemination was conducted with the support of technical officers from the HRA team and the Honduran Ministry of Education.

2.2. Instrument and Variables

In addition to the sociodemographic variables mentioned above, the applied questionnaire included a self-designed Likert scale with 30 items that considered the dimensions of the study object on which the validation process subsequently was conducted. The scale of teachers' perceptions of the effects of the digital divide and educational inclusion was designed with five response options: (1) totally disagree; (2) disagree; (3) neutral; (4) agree and (5) totally agree.

This scale addressed teachers' perceptions based on three established dimensions grounded on a literature review and analysis of related studies, such as those by Gómez (2019), Kardelis et al. (2021), Montenegro et al. (2020), Pérez-Escoda et al. (2020) and Rodicio-García et al. (2020).

From this review, the following dimensions (study criterion variables) were identified: a) digital divide (effects on learning, curricular development, motivation and educational exclusion); b) relationships between ICT and educational inclusion (methodological adaptations, students' expectations, communication tools and response capacity to lack of access) and c) educational inclusion (general perceptions, students' expectations, students' participation in evaluation and group segregation in the classroom). The elements included in the third dimension were based on the Inclusion Manual developed by the University of Valladolid's Teaching Innovation Group (GID) (Torrego, 2022)[1]

2.3. Instrument Validity and Reliability

To ensure the instrument's validity, expert judgement validation was conducted based on Hernández-Sampieri and Mendoza's (2010) definition of validity: 'the degree to which an instrument truly measures what it seeks to measure' (p. 201). Thus, experienced university professors' participation in various educational research areas was sought, as their experience provided valuable theoretical and procedural contributions.

[1] The instrument and the informed consent used can be reviewed at: https://doi.org/10.5281/zenodo.10326614

Two university professors with research experience in topics related to the scale's dimensions were recruited to evaluate the study's validity and reliability. They were sent an Excel template via email, in which they evaluated the scale items, rating them from 1 to 4 based on the following criteria: relevance (whether the item is essential or important for the study and should be included); clarity (whether the item is easily understood, i.e., its syntax and semantics are adequate) and coherence (i.e., whether the item has a logical relationship with the dimension or indicator being measured). Once the evaluators' feedback was received, the information analysis was conducted.

To analyse these data, Kendall's W coefficient of concordance was selected to calculate agreement in the evaluations of the two participating judges. The coefficient calculation was conducted generally with the evaluations of all items made by the experts. The calculation was conducted using SPSS v. 26.

According to Escobar and Cuervo (2008), considering that the value 1 indicates perfect agreement among the evaluators, a good concordance was observed in the experts' evaluations (W = .663), indicating a high degree of agreement among the judges (Siegel & Castellán, 1995).

Seven of the 30 items were reviewed and reformulated based on the experts' observations and suggestions. Once this process was completed, the first version of the form was created to apply the consistency test to the first group of participating teachers.

To measure the reliability of the instrument used, a test-retest or temporal stability test was conducted, understanding reliability as 'the degree to which the instrument produces consistent and coherent results' (Hernández-Sampieri, 2017, p. 200).

For the test-retest, a group of 31 teachers from the Department of Ocotepeque who were willing to participate, answering the test on two occasions 10 days apart, was selected. In line with the final study sample distribution, this group comprised 20 women and 11 men who were presented with the expert-validated version of the 30-item questionnaire.

The data analysis was conducted using SPSS version 26. To assess the test-retest correlation, the intraclass correlation coefficient (ICC) was used, which 'has been accepted as the concordance index for continuous data' (Mandeville, 2005, p. 414).

Considering the ICC interpretation (Table 1), most items presented satisfactory indicators in the ICC calculation (Substantial). However, adjustments were made to the items whose results fell within the regular range (Items 2, 9, 11, 12, 13, 21 and 23). In these cases, their wording was revised to facilitate participants' understanding. Once the process was completed, the instrument's final version was prepared for application[2].

[2] The results are presented in the annexed table and show the substantial relationships in most cases: https://doi.org/10.5281/zenodo.10260254

Table 1. Interpretation of the Intraclass Correlation Coefficient.

Value	Interpretation
0.0 - 0.20	Slight
0.21 - 0.40	Regular
0.41 – 0.60	Moderate
0.61 – 0.80	Substantial
0.81 – 1.00	Almost Perfect

Fuente: Mendeville, 2005, p. 414

2.4. Procedure and Data Analysis

After designing and validating the scale, the information was obtained and analysed. Once the instrument was adjusted and in its final version, it was sent via email and WhatsApp to be filled out through the Microsoft Forms tool. With the support of pedagogical leaders in the area, wide participation was obtained relative to the total teacher population in the region (N = 2,608).

For the descriptive analysis of the collected data, SPSS v. 26 software was used, while bivariate inferential analyses were conducted using JASP 0.18. After analysing the distribution of responses per item, comparative analyses by dimensions were conducted considering three key sociodemographic variables: gender; age and work area (rural or urban). After verifying noncompliance of the normality assumption of the distributions in the three dimensions of the applied scale, nonparametric contrasts were applied, specifically Mann-Whitney U and Kruskal-Wallis H tests. A significance level of 5% was used when interpreting these hypothesis contrasts.

3. Results

The results derived from the responses provided by the participating teachers regarding all the scale items are presented below. As evidenced in Table 2, the distribution of responses to the items indicates significant variability. The items associated with the first dimension (digital divide), Items 1 to 10, exhibited the lowest means.

Table 2. Results from the applied instrument.

	ITEMS	M.	D.T.
1.	Limited availability of technological resources and connectivity affected students' learning continuity during 2020 and 2021.	1.63	.813
2.	Limited availability of technological resources and connectivity affected communication with students.	1.91	.997
3.	Lack of technological resources and connectivity limited the relationship between the school and families.	2.08	1.059
4.	Currently, teaching without access to technological resources and the Internet limits my tasks as a teacher.	2.64	1.245
5.	I expect less learning from students when teaching remotely.	2.03	.939
6.	The availability of access to technologies and connectivity conditions educational evaluation processes.	2.35	1.006
7.	Teaching remotely without access to ICT reduces my motivation towards my work.	3.36	1.164
8.	Teaching remotely without access to ICT affects students' motivation in activities.	2.00	.893
9.	I need specific training to make effective use of technologies in the classroom.	3.95	.887
10.	Students need prior training to use ICT.	4.28	.727
11.	ICT continues to be necessary in face-to-face modality at school.	4.20	.752
12.	It is necessary to adapt learning strategies if one of the students does not have access to ICT.	4.19	.694
13.	The teacher must find strategies to use with students who do not have access to devices and the Internet.	4.35	.714
14.	Students without access to ICT must adapt themselves to the learning pace of the rest of the group.	3.02	1.140
15.	ICT facilitates communication with students' families.	4.03	.813
16.	ICT allows me to provide quality education to more students.	3.72	.904
17.	I have lower expectations of students with little or no access to ICT.	2.79	1.01
18.	Using ICT allows for offering content adapted to students' individual needs.	3.79	.872
19.	Using ICT requires modifications to traditional classroom methodologies.	4.01	.715
20.	Students without access to ICT have fewer learning opportunities.	2.83	1.114
21.	Inclusive education is only for students with disabilities.	3.62	1.048
22.	Separating groups of 'fast' and 'slow' children is a good way to organise the classroom.	3.66	1.062
23.	Having inclusive practices in the educational centre implies more work and effort for teachers.	2.59	1.069
24.	In the classroom, I always have high expectations of all students.	4.33	.664
25.	Educational inclusion implies transforming classroom methodologies and the educational centre's functioning.	4.05	.793
26	It is necessary to adapt the curriculum to students' interests and needs.	4.33	.644
27.	Educational inclusion requires involving all members of the educational community.	4.28	.693

	ITEMS	M.	D.T.
28.	Students should participate in their evaluation and grading processes.	4.10	.694
29.	Students can experience significant learning outside of the educational centre.	4.09	.797
30.	The 'extra' attention required by some students affects development of autonomy and socialisation skills.	3.27	1.061

Figure 1 presents the results derived from the participating teachers' responses, classified based on the instrument's three dimensions: perceptions of the digital divide's impacts on teaching (Items 1–10); perceptions of the inclusive integration of technologies in classrooms (Items 11–20) and perceptions of educational inclusion practices (Items 21–30).

The results revealed notable disparities in the means obtained between the first dimension and the following two. This suggests that the participating teachers perceived limited incidence of the digital divide's effects in their pedagogical practices. However, the differences are significantly less pronounced in Dimensions 2 and 3, in which the means obtained were comparatively similar.

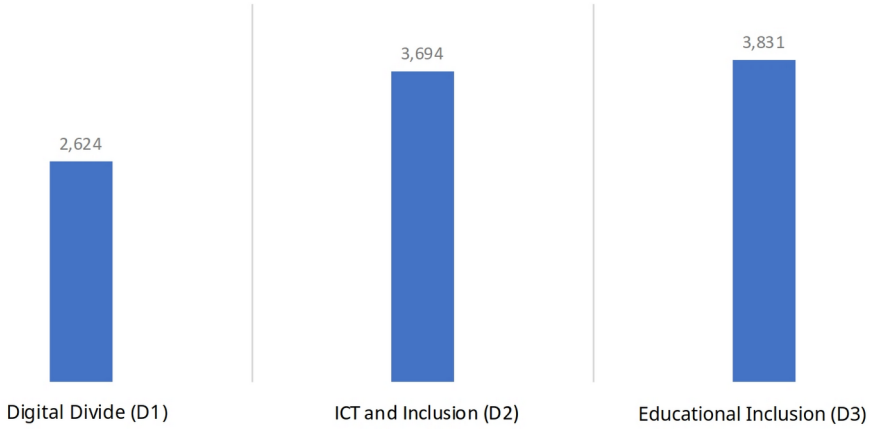

Figure 1. Results by instrument dimensions.

Table 3 presents the results obtained from the instrument's three dimensions, revealing a significantly lower mean in the first dimension than the second and third. Furthermore, similarities were observed in the obtained means' standard deviations, indicating consistency in data dispersion across the three dimensions.

Table 3. Descriptive statistics by dimension.

Dimension	Media	D.T.	Minimum	Maximum
Digital Divide (D1)	2.624	.388	1.30	4.100
ICT and Inclusion (D2)	3.694	.361	2.200	5.000
Educational Inclusion (D3)	3.831	.399	2.400	5.000

A comparative analysis of the results by participants' gender (Table 4) found that the male sample's means tended to be slightly lower than those of females in the three dimensions, with significant differences between both groups in perception of the digital divide's impact on teaching and the inclusive integration of technologies in the classroom.

Table 4. Comparison of study dimensions by gender and Mann-Whitney U test results

Dimension	Gender	Media	D.T.	W	p.
Digital Divide	Men	2.543	0.353	55140.500	<.001
	Women	2.658	0.398		
ICT and Inclusion	Men	3.658	0.369	59743.000	.054
	Women	3.709	0.357		
Educational Inclusion	Men	3.803	0.402	62033.500	.254
	Women	3.842	0.398		

To analyse the perception in the three dimensions by the participants' age groups, they were categorised into four age groups (Figure 2). The first group included teachers under age 28, the second group included those ages 29 to 40, the third group included individuals ages 41–50 and the fourth group comprised participants over 51 years old.

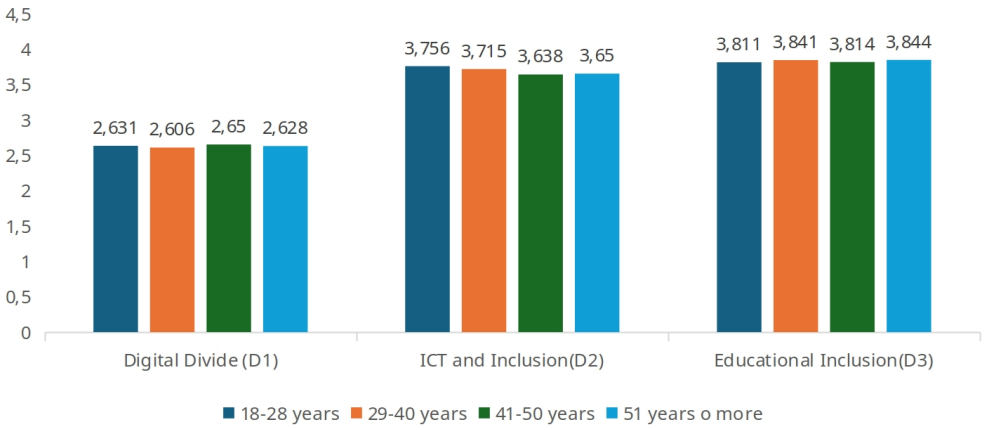

Figure 2. Results by participants' age.

The mean scores obtained among the various groups were similar, mainly in the digital divide and educational inclusion dimensions (Figure 2). In the ICT and inclusion dimension, a slight downward trend was observed in the means as age increased. Furthermore, the Pearson correlation coefficient between this second dimension and age indicated an inverse relationship (r_{xy}=-.101; p.=.004).

Table 5 presents the Kruskal-Wallis test results from comparing these scores from the three dimensions across the four age groups. In line with previous evidence, the results revealed statistically significant discrepancies in the second dimension. This result suggests significant variability in the perception of inclusive integration of technologies in the classroom by teachers, depending on their age, with younger teachers having stronger perceptions.

Table 5. Scores in the three dimensions by age group in the Kruskal-Wallis test.

Dimension	H	p.
Digital Divide	2.005	.571
ICT and Inclusion	11.58	.009
Educational Inclusion	1.738	.629

Finally, an analysis of the results was conducted in relation to the educational centres' geographical location, classifying them into rural and urban environments. The results (Table 6), broken down by dimension, revealed very similar average scores in the three dimensions, with slightly stronger perceptions in all three cases by urban schoolteachers. The Mann-Whitney U hypothesis contrast found no statistically significant differences in any of the three dimensions based on the geographical locations of the participating teachers' work centres.

Table 6. Comparison of study dimensions by participants' geographical area and Mann-Whitney U test results.

Dimension	Zone	Media	D.T.	W	p.
Digital Divide	Rural	2.621	.383	56991.000	.879
	Urbana	2.634	.405		
ICT and Inclusion	Rural	3.691	.359	55066.500	.393
	Urbana	3.704	.369		
Educational Inclusion	Rural	3.818	.389	54829.000	.347
	Urbana	3.868	.427		

4. Conclusions

Concerns over addressing the digital divide and educational inclusion are a matter of considerable importance in contemporary educational systems. Evaluating educators' perceptions of the digital divide and educational inclusion has been established as a fundamental step in promoting actions leading to educational digital transformation in any geographical area.

Conducting this research has enabled execution of an initial exploratory study aimed at discerning teachers' perceptions of the impacts of the digital divide and educational inclusion, specifically in the Departments of Copán and Ocotepeque in the western region of Honduras.

Based on the results from the instrument's first dimension, regarding the digital divide's effects in education, it can be concluded that teachers consider whether there has been continuity in students' learning, thereby perceiving few effects of the digital divide on their pedagogical practices. This issue is related closely to what Durak (2021) and Pérez-Escoda et al. (2020) have proposed, suggesting that perceptions of the digital divide are determined by the usefulness teachers find in technological resources and their digital literacy levels.

Furthermore, Cespón (2021) found that these perceptions are determined by how teachers interact with technological resources throughout their lives and the usefulness they attribute to digital tools in the teaching process, as Durak (2021) stated. Aligning with Fernández-Batanero and Colmenero-Ruiz (2016), significant differences were identified between male and female teachers' perceptions of the digital divide and the integration of technological tools in the classroom. The study results indicated that men tended to present lower averages in these aspects than women.

Regarding the instrument's second dimension, although the perception of the digital divide's effects is similar among groups, it was found that like other studies, such as Vega-Gea et al. (2021) or Suriá-Martínez (2011), teachers' age influences how they perceive integration of technologies into the classroom. This demonstrates a resistance to technology implementation among older age groups, and in this dimension, the trend of better results among female teachers than with males continues.

From this perspective, teachers notably did not perceive impacts on students' motivation due to the digital divide, as indicated by the results on Item 8. Regarding the participants' ages, although younger teachers are more affected in their work motivation by the digital divide, they perceive less need to train in technology use compared with older age groups.

Concerning the instrument's third dimension, regarding perceptions of educational inclusion, the results by gender differed from what Llorent García et al. (2020) presented, as no significant differences were observed in men and women's perceptions of educational inclusion practices. The results obtained regarding perceptions were positive and aligned with others, such as those presented by Sanhueza et al. (2012).

However, from a general perspective, the participating teachers notably have a theoretical understanding of the concept of inclusive education and its breadth, in the sense that they discarded the belief that it is only related to students with disabilities. Similarly, regarding this dimension of the instrument, it has been concluded that a belief exists among the participating group that perceives segregation of student groups based on the speed at which they learn as positive. This confirms that although a theoretical understanding of the concepts exists, this understanding does not necessarily imply practical implementation in classrooms.

The findings from this research provide valuable insights for decision-making in the Honduran educational system and other Central American countries, outlining a complex interplay between teachers' perceptions, the digital divide and educational inclusion. The reduced perceptibility of the digital divide's effects on pedagogical practices underscores the pressing need for training strategies that address the effective integration of technologies in the educational environment. The significant influence of demographic variables, such as age and gender, on these perceptions highlights the relevance of designing training programmes tailored to each demographic group's specific characteristics. Furthermore, identifying resistance attitudes in older cohorts suggests a need to address not only technical competencies, but also psychological and cultural barriers that may hinder full adoption of technology in teaching.

In this context, in general terms, teachers must manifest a positive theoretical understanding of the concept of inclusive education. Despite this conceptual advancement, the conclusion is that a favourable perception remains towards non-inclusive practices in the classroom. This finding highlights the gap between the theoretical understanding of inclusive principles and their practical application in classrooms, underscoring the need for pedagogical and awareness interventions that promote a more effective implementation of inclusive approaches in everyday educational practice.

Considering this study's conclusions, some of the study's limitations should be noted. First, the sample of participating teachers corresponded to a specific sector of the Honduran population. Despite obtaining a large sample relative to similar studies, its regional and nonprobabilistic nature makes it difficult to generalise to the country's entire population of teachers. Furthermore, in the instrument's validation, only two expert judges participated. While some authors suggest a minimum of three, no consensus has been reached on the number of judges that should participate. However, this process notably has been strengthened by applying a temporal stability test-retest.

Considering these limitations, future studies need to expand the sample of participating teachers to other regions of the country to confirm the trends observed here. Similarly, the scale's psychometric analysis needs to be deepened through specific validation and statistical confirmation studies. Finally, several lines of research can be pursued from the obtained results, primarily related to generational differences among teachers and their relationship with technology use. In this regard, delving into training needs in digital competencies is crucial, while considering cultural and generational differences between older and younger teachers.

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