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Digital Inequalities in the University Environment: A Sociological Analysis of Malanje Context

Desigualdades digitais no ambiente universitário: Uma análise sociológica sobre o contexto malanjino

Desigualdades digitales en el entorno universitario: Un análisis sociológico del contexto malanjino

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ABSTRACT

The present study analyses digital inequalities in the university environment of Malanje Province, based on the premise that access to and use of digital resources are distributed asymmetrically among students. The research is situated within the field of the Sociology of Social Inequalities and is grounded in theoretical approaches concerning digital exclusion and sociocultural capital. Methodologically, it is a quantitative study, based on the application of a questionnaire survey to a sample of 96 students from a local higher education institution, referred to as "Universidade Castanha." The sampling followed a probabilistic procedure, with respondents distributed across thirteen courses grouped into the areas of Health Sciences, Education Sciences, and Social and Human Sciences. The data collection instrument was structured based on indicators of access, usage, and socioeconomic conditions. Additionally, the data were analysed using Goodman and Kruskal's lambda coefficient, as proposed by Levin and Fox (2004), allowing for the assessment of associations between categorical variables. The results indicate that, although 95% of students own electronic devices, qualitative access to technologies is unequal, with smartphones being the primary study tool for 64% of respondents. It was also found that students in Health Sciences courses exhibit higher levels of digital inclusion compared to other areas. Furthermore, the sociofamilial background emerges as the main explanatory factor for digital inequalities, significantly influencing both access to and use of digital technologies.

Keywords: Digital inequalities, economic inequalities, digital inclusion, higher education.

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Resumo

O presente estudo analisa as desigualdades digitais no ambiente universitário malanjino, partindo do pressuposto de que o acesso e a utilização dos recursos digitais se distribuem de forma assimétrica entre os estudantes. A pesquisa insere-se no campo da Sociologia das Desigualdades Sociais e ancora-se em abordagens teóricas sobre exclusão digital e capital sociocultural. Do ponto de vista metodológico, trata-se de uma pesquisa de natureza quantitativa, baseada na aplicação de inquéritos por questionário a uma amostra de 96 estudantes de uma instituição de ensino superior local, designada por "Universidade Castanha". A amostragem seguiu um procedimento probabilístico, com distribuição dos inquiridos por treze cursos agrupados nas áreas de Ciências da Saúde, Ciências da Educação e Ciências Sociais e Humanas. Estruturou-se o instrumento de recolha de dados com base em indicadores de acesso, utilização e condições socioeconómicas. Paralelamente, os dados foram analisados com recurso ao coeficiente lambda de Goodman e Kruskal, conforme proposto por Levin e Fox (2004), permitindo avaliar associações entre as variáveis categóricas. Os resultados dão conta que, embora 95% dos estudantes possuam dispositivos electrónicos, o acesso qualitativo às tecnologias é desigual, sendo o smartphone o principal meio de estudo para 64% dos inquiridos. Verificou-se ainda que estudantes dos cursos das Ciências da Saúde apresentam níveis mais elevados de inclusão digital, comparativamente às outras áreas. Ademais, o meio sociofamiliar configura-se como o principal factor explicativo das desigualdades digitais, influenciando significativamente as condições de acesso e utilização das tecnologias digitais.

Palavras-chave: Desigualdades digitais; Desigualdades económicas; Inclusão digital; Ensino Superior.

Resumen

El presente estudio analiza las desigualdades digitales en el entorno universitario de Malanje, partiendo del supuesto de que el acceso y la utilización de los recursos digitales se distribuyen de manera asimétrica entre los estudiantes. La investigación se enmarca en el campo de la Sociología de las Desigualdades Sociales y se fundamenta en enfoques teóricos sobre la exclusión digital y el capital sociocultural. Desde el punto de vista metodológico, se trata de un estudio cuantitativo, basado en la aplicación de encuestas mediante cuestionario a una muestra de 96 estudiantes de una institución de educación superior local, denominada "Universidade Castanha". La selección de la muestra siguió un procedimiento probabilístico, con distribución de los encuestados en trece carreras agrupadas en las áreas de Ciencias de la Salud, Ciencias de la Educación y Ciencias Sociales y Humanas. El instrumento de recolección de datos se estructuró en función de indicadores de acceso, uso y condiciones socioeconómicas. Paralelamente, los datos se analizaron utilizando el coeficiente lambda de Goodman y Kruskal, según lo propuesto por Levin y Fox (2004), permitiendo evaluar las asociaciones entre variables categóricas. Los resultados muestran que, aunque el 95% de los estudiantes poseen dispositivos electrónicos, el acceso cualitativo a las tecnologías es desigual, siendo el teléfono inteligente el principal medio de estudio para el 64% de los encuestados. Asimismo, se observó que los estudiantes de las carreras de Ciencias de la Salud presentan niveles más elevados de inclusión digital en comparación con las otras áreas. Además, el entorno sociofamiliar se configura como el principal factor explicativo de las desigualdades digitales, influyendo significativamente en las condiciones de acceso y uso de las tecnologías digitales.

Palabras clave: Desigualdades digitales; Desigualdades económicas; Inclusión digital; Educación Superior

Introduction

Digital inequalities have been recognised as a contemporary expression of social inequalities, manifesting themselves both in access to technologies and in the different forms of utilisation, appropriation, and conversion of these tools into educational resources and social opportunities (Ramírez-Correa, Mariano & Santos, 2025). Although the advancement of digitalisation has expanded the availability of electronic devices, the literature has demonstrated that this expansion does not automatically translate into effective digital inclusion, given that there exists a continuous tension between formal access and meaningful use of technologies (Lumadi, 2024; Sit, 2024).

In the context of higher education, this problem acquires particular contours, given that digital technologies have become central to teaching-learning processes, knowledge production, and student preparation for the labour market. However, various studies indicate that students from different social origins experience the benefits of digitalisation unequally (Wang et al., 2025).

In developing countries, such as Angola, these dynamics are even more complex due to infrastructure limitations, constraints on internet access, and socioeconomic asymmetries that condition students' academic trajectories. Despite growing recognition of the importance of digital inclusion in higher education, there remains a significant gap in empirical studies that systematically analyse how these inequalities are configured in specific local contexts, such as that of Malanje Province.

It is within this framework that the present study is situated, seeking, in this manner, to analyse digital inequalities in the Malanje university environment, with particular emphasis on the relationships between access, usage, and students' sociofamilial conditions. Anchored in contributions from the Sociology of Social Inequalities, as well as in theoretical approaches concerning digital exclusion and sociocultural capital, the study proceeds from the hypothesis that digital inclusion in higher education depends not exclusively on the availability of technological resources, but is profoundly influenced by structural social factors.

From a methodological perspective, the choice of a quantitative approach is justified by the need to identify patterns of association between social variables and differentiated levels of digital inclusion, permitting a systematic analysis of the relationships between course, academic year, and students' sociofamilial background.

Digital Inequalities

Discussions surrounding digital inequalities emerged in the academic context during the 1990s of the last century, initially centred on the problem of access to information and communication technologies (Lapa, Vieira, Azevedo, & Cardoso, 2018). However, as Hargittai (2021) observes, material access to technologies constitutes only one dimension of inequality; it is necessary to consider also digital competences and modes of use.

In this sense, the literature has evolved towards a multidimensional conception of digital inequalities, incorporating not only the availability of devices and connectivity, but also individuals' capacity to use these tools in a critical and productive manner. As França and Furlin (2023) emphasise, limitations in mastering digital competences can significantly compromise individuals' integration into educational and professional contexts, shifting the focus of exclusion from "having access" to "knowing how to use".

This analytical shift finds echo in the contributions of Castells (2004), who proposes a structural reading of digital inequalities, articulating them with the broader dynamics of the network society. According to Castells (2025), digital exclusion manifests itself at different levels: from the absence of access, passing through technical limitations, to the inability to transform information into useful knowledge.

Parallelly, more recent authors problematise the tendency to treat digital inequalities as an autonomous phenomenon, defending their insertion within the broader framework of social inequalities. From this perspective, digital inequalities do not constitute an isolated form of exclusion, but rather a mechanism for reproducing pre-existing structural inequalities, namely of an economic, educational, and cultural nature (Souza, 2022).

Thus, the contemporary debate on digital inequalities converges towards an integrated approach, in which the phenomenon is analysed as a constitutive part of broader social inequalities, insofar as they affect individuals in situations of vulnerability, essentially limiting access to information, education, and opportunities in the labour market.

Socioeconomic Factors and Digital Inequalities

Digital inequalities are operationalised, above all, through concrete elements such as social status, economic level, access to electronic devices, amongst other differentiating elements between individuals who are "connected" and "disconnected", "digitally literate" and "technically excluded". These differentiations demarcate those who use the internet for educational and professional opportunities from those who remain on the margins of the digital world.

Neto (2023) emphasises that the relationship between technology and social inequalities constitutes a concern that finds echo since the classics of Sociology. Marx considered that technologies altered modes of production and, consequently, fostered class inequalities, guaranteeing political and cultural hegemony to elitist classes over proletarian classes.

Traditional forms of inequality — income, geography, status, cultural capital, etc.— intervene directly in the emerging forms of inequalities in capitalist societies (Carmo, 2021; Piketty, 2022), perpetuating disparities in access to and use of digital technologies (Lapa, Vieira, Azevedo, & Cardoso, 2018).

Various studies (Ribeiro, Salata, Costa & Ribeiro, 2013; Maceviciute & Wilson, 2018; Macedo, 2021) indicate that economic deprivation reinforces digital exclusion, as those who face economic barriers have fewer chances of accessing and using technologies effectively.

On the other hand, the lack of infrastructure, the high cost of internet and devices, as well as the absence of digital training, become factors that widen the gap between those who benefit from new technological opportunities and those who remain marginalised (Hargittai, 2021).

Thus, digital inequalities do not emerge in isolation, but are intrinsically linked to pre-existing structural disparities, reproducing and, therefore, deepening social inequalities in various social contexts (Hargittai & Hinnant, 2008; Heeks, 2022).

Angolan University Context — A Panoramic Overview

The Angolan context is characterised by the weak digitalisation of social services and limited use of digital technologies by individuals. A study developed by Tsandzana (2021) indicates that, in general, "(...) Angola has more than 15 million mobile telephony subscribers, seven million internet users, and more than two million television subscribers, a number that increased during the year of 2020" (p. 4).

Although from 2020 to the present date digitalisation in the country has seen some improvement, it is worth highlighting that this development did not occur homogeneously across all sectors, insofar as there exist regional and socioeconomic disparities in access to and appropriation of technologies, especially in the university context, where many higher education institutions (HEIs), as well as a significant number of students, still face various challenges related to connectivity, digital literacy, and the high cost of technological services.

Many Angolan students have their first direct contact with a computer only at higher education level, given that previous levels of education, especially secondary education, face great precariousness in this aspect (Tchivangulula & Lencastre, 2023). However, it is worth emphasising that this late contact does not guarantee effective use of technologies, as the low digital literacy of students, as well as the limited integration of digital systems in universities, broadly compromises the utilisation of technological tools in the academic environment (Jacinto, Campos, Pedro, & Campos, 2021).

In this sense, the problem of digital inequalities in Angolan higher education cannot be understood merely as a technological issue, but above all as a social, economic, and institutional issue. Differences in students' socioeconomic conditions, in the technological infrastructures of institutions, and in opportunities for developing digital competences tend to produce different levels of digital inclusion in the university environment, consequently influencing access to information, academic performance, and training opportunities.

Methodology / Materials and methods

For the realisation of the present research, a quantitative approach was chosen, as it permits an objective and measurable analysis of digital inequalities in the university context. According to Bryman (2012), quantitative research is characterised "(...) as entailing the collection of numerical data, as exhibiting a view of the relationship between theory and research as deductive (...) and as having an objectivist conception of social reality" (p. 160).

The study universe consists of students enrolled at the HEI designated by the codename "Universidade Castanha." From this universe, a sample of 96 students was selected, using a random sampling procedure, ensuring equal probability of participation. As inclusion criteria, regularly enrolled students effectively attending classes during the data collection period were considered; students with interrupted studies and incomplete or inconsistent questionnaires were excluded.

The surveyed students are distributed across thirteen courses, subsequently grouped into three clusters — Health Sciences, Education Sciences, and Social and Human Sciences — with the objective of permitting comparison of digital inclusion levels between scientific areas. Data collection was carried out through a structured questionnaire containing questions about access to digital devices, internet access, use of technologies for academic purposes, and students' sociofamilial background.

For data analysis, Goodman and Kruskal's lambda coefficient was used, as per Levin and Fox (2004), as it is an adequate measure of association for nominal variables. This coefficient permits measuring the proportional reduction of error in predicting the dependent variable when the independent variable is known, making it possible to identify the factors with greatest explanatory power for digital inequalities in the studied university context.

Table 1.
Sociodemographic Characteristics of Participants

AGE		GENDER		COURSE		ACADEMIC YEAR	
20-24 Years	41,2%	Male	88,7%	CS	29,9%	I	29,9%
25-29 Years	36,1%			CSH	40,2%	II	18,6%
30-34 Years	15,5%	Female	11,3%	CE	29%9	II	11,3%
Above 34 Years	7,2%						40,2%

Source: Authors' elaboration

Note: HS = Health Sciences; SHS = Social and Human Sciences; ES = Education Sciences

Results

The analysis of Chart 1 reveals a significant predominance of students who possess at least one electronic device for their studies, representing 95% of respondents. The chart permits us to ascertain that the vast majority of students at Universidade Castanha have some level of access to digital technologies. However, 5% of students do not possess any device, representing a vulnerable segment that faces difficulties in following academic activities, especially in contexts requiring the use of digital platforms.

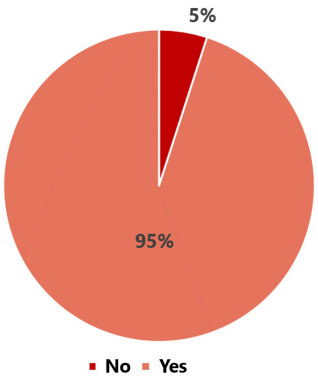

Chart 1.
Ownership of Electronic Devices
Source: Authors' elaboration

The data from Chart 2 show that 85% of students access the internet to carry out their academic activities at home. 6% use cybercafés, 5% resort to the university, 2% frequent libraries and/or media centres external to the university, and the same number of respondents use other locations. According to the above data, one can understand that the majority of students depend on and/or resort to domestic infrastructure to study. This situation tends to intensify digital inequalities, given that there may exist limitations of access to internet or adequate equipment for studies in students' home environments.

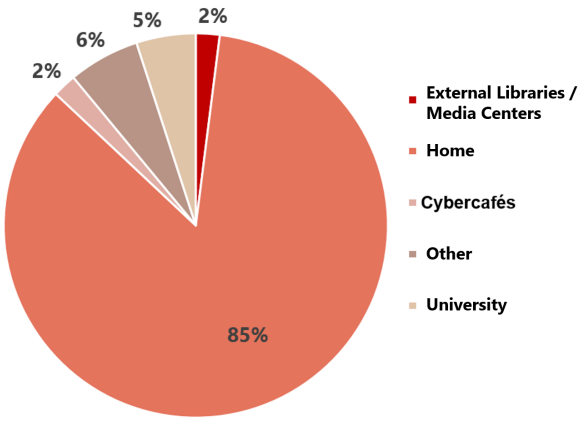

Chart 2.
Location of Internet Access
Source: Authors' elaboration

Chart 3 permits us to note that respondents' perception regarding the existence of a university digital platform is disparate. The results show that 37% of respondents affirm that the platform exists, 29% believe it does not exist, and 34% do not know how to respond. The heterogeneous distribution in responses leads us to ascertain that there is a lack of clarity and/or effective dissemination about the institutional platform among students.

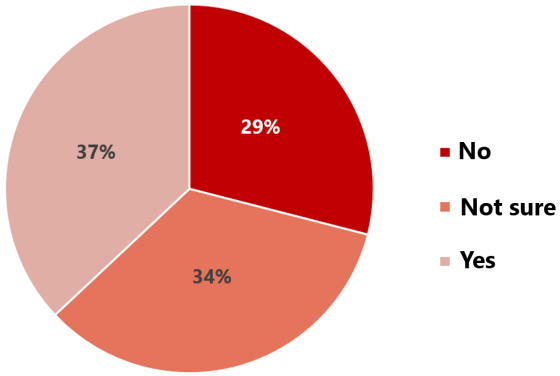

Chart 3.
Existence of Technological Platform at the University
Source: Authors' elaboration

One can see that the distribution of respondents' income for technology usage presents itself unevenly. It is observed that a relative majority of 49% affirm having partial income for this purpose, 39% do not have sufficient income, and only 12% can fully cover the economic costs inherent to the use of technological resources.

Based on these percentages, one can perceive that economic inequalities considerably affect digital inequalities. This prediction, consequently, impacts students' academic performance, especially in those activities that depend on effective connection to the internet, namely the use of digital equipment and specific software

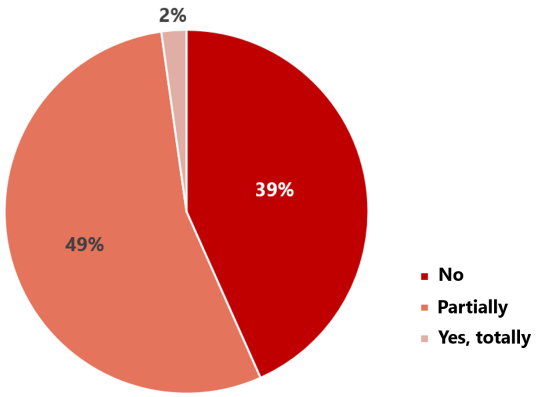

Chart 4.
Income for Technology Usage
Source: Authors' elaboration

Ownership of a Technological Device

The research sought to ascertain whether the fact of students attending different courses explains or not the digital inequalities at Universidade Castanha. In this respect, Table 2 is elucidative.

Table 2.
Ownership of Electronic Devices and Course

VI – COURSE					LAMBDA COEFFICIENT
DV - Ownership of Electronic Device	ES	SHS	HS	Total	$\lambda = 0$ $= -54$ $\lambda = 0.05$ $= -54$
Yes	23	33	37	93	
No	0	0	3	3	
Total	**23**	**33**	**40**	**96**	

Source: Authors' elaboration

At a descriptive-comparative level, Table 2 indicates that there are more students from the Health Sciences (HS) course with an electronic device for study (38%) than students from the Social and Human Sciences (SHS – 34%) and Education Sciences (ES – 24%) courses. The difference between students from the HS course and students from the SHS course is small (4 percentage points), but the disparity between students from the HS course and students from the ES course is significant (14 points).

However, the Goodman-Kruskal lambda coefficient test reveals that there is no asymmetric relationship between the course and the ownership of an electronic device (.But when we consider the ownership of an electronic device for study as the independent variable, the lambda coefficient obtained, of indicates that the prediction error of course based on device ownership can be reduced. This implies noting that there is 5% accuracy when stating that owning an electronic device differentiates students according to their course. However, the association between the two variables is very weak. But it exists.

Regarding the relationship between academic year and device ownership, with a lambda coefficient of zero ($\lambda = 0$), Table 3 suggests that the academic year does not influence the ownership of electronic devices for studies. However, considering ownership as the independent variable, the lambda coefficient of 0,05 indicates that the prediction error of the academic year is reduced by only 5%. This suggests that other factors better explain the ownership of electronic devices among students, insofar as the association between the two variables is likewise very weak

Table 3.
Ownership of Electronic Devices and Academic Year

VI- ACADEMIC YEAR						LAMBDA COEFFICIENT
DV - Ownership of Electronic Device	1st Year	2cd Year	3rd Year	4th Year	Total	$\lambda = 0$ $\lambda = 0.05$
Yes	25	14	12	41	92	
No	3	1	0	0	4	
Total	**28**	**15**	**12**	**41**	**96**	

Source: Authors' elaboration

The obtained coefficient result (Table 4) suggests a weak positive asymmetrical relationship, which with 5% precision permits us to consider that device ownership predicts the course attended. In this sense, comparative analysis permits us to affirm, descriptively and with 5% certainty, that within the subset of research subjects there are more students with a device for study in the 4th academic year than in the other three years. This lambda coefficient also indicates the existence of other predictors of the asymmetrical relationship between academic year and ownership of an electronic device, such as the sociofamilial background.

Considering the relationship between sociofamilial background and ownership of a technological device for studies, the negative result ($\lambda = 0$) is explained by the same reason for the non-existence of association between sociofamilial background and device ownership. Inversely, with a reduction of error of 10%, one can affirm that device ownership predicts sociofamilial background as a dependent variable.

The possession of an electronic device for studies can indicate the student's sociofamilial background at Universidade Castanha. With 10% precision, it is possible to associate students with devices with the lower-middle class, whilst those without technological devices tend to belong to the working class. This factor proves to be a more effective predictor of sociofamilial background than course or academic year, whose influence is smaller (5% and 0%, respectively)

Table 4.
Relationship Between Sociofamilial Background and Ownership of a Technological Device

VI- ACADEMIC YEAR						LAMBDA COEFFICIENT
DV - Ownership of Electronic Device	1st Year	2cd Year	3rd Year	4th Year	Total	
Yes	25	14	12	41	92	λ=0
No	3	1	0	0	4	λ=0.05
Total	**28**	**15**	**12**	**41**	**96**	

Source: Authors' elaboration

Frequency of Internet Access

Regarding the asymmetrical association between course and frequency of internet access, Table 5 permits us to verify the influence of course on the frequency of internet access by the surveyed students.

Table 5.
Relationship Between Course and Frequency of Internet Access

VI- COURSE					LAMBDA COEFFICIENT
DV - Frequency of Internet Access	ES	SHS	HS	Total	
Rarely	1	5	18	24	λ=3.57
Occasionally	0	10	23	33	λ=0
Always	0	14	25	39	
Total	1	29	66	96	

Source: Authors' elaboration

The obtained lambda coefficient result, of 3.57, reveals that we reduce by 3.57% the error of predicting frequency of internet access based on the values of the independent variable (course). This is, effectively, a weak positive correlation coefficient, which indicates the existence of other more precise predictors, or the need for other random samples.

However, this same weak positive asymmetrical correlation indicates that we can affirm, hypothetically, that students from the Health Sciences course have more access to the internet than students from the other two compared courses. Thus, although the course permits, to a certain extent, predicting the frequency of internet access, internet access does not permit predicting the course, when taken as the independent variable or explanatory factor of the verified inequalities.

Regarding the asymmetrical association between academic year as the independent variable and frequency of internet access, we can verify in Table 6 that the obtained lambda value ($\lambda = 0$), indicates that the academic year does not predict the frequency of internet access, whilst the frequency of internet access predicts the academic year of respondents with a reduction of 2% in the prediction error.

Table 6.
Relationship Between Academic Year and Frequency of Internet Access

VI- ACADEMIC YEAR						LAMBDA COEFFICIENT
DV - Frequency of Internet Access	1st Year	2cd Year	3rd Year	4th Year	Total	
Rarely	0	0	1	0	1	λ=0
Occasionally	6	5	5	12	28	λ=0.02
Always	23	11	6	27	67	
Total	**29**	**16**	**12**	**39**	**96**	

Source: Authors' elaboration

Chart 6 deals, effectively, with a situation that also refers to a weak positive correlation between the two variables. In any case, it is possible to predict with 2% precision that the academic year in which a student is enrolled has some influence over the frequency with which they access the internet. This requires, finally, inferring that 4th year students have more access to the internet than students from other years.

Besides course and academic year, another variable controlled for explanation of frequency of internet access is the sociofamilial background. In this respect, Table 7 evidences greater precision.

Table 7.
Relationship Between Frequency of Internet Access and Sociofamilial Background

VI- SOCIOFAMILIAL BACKGROUND					LAMBDA COEFFICIENT
VI - Frequency of Internet Access	**Middle Class**	**Lower-Middle Class**	**Working Class**	**Total**	
Rarely	1	0	0	1	$\lambda = 0.22$
Occasionally	6	0	24	30	$\lambda = 0.02$
Always	0	42	23	65	
Total	**7**	**42**	**47**	**96**	

Source: Authors' elaboration

The obtained lambda correlation coefficient of 0.22, when sociofamilial background is considered as the explanatory variable of frequency of internet access, also shows the existence of a weak positive correlation, but somewhat higher than in other cases. It is noted, then, that we can reduce by 22% the error of our prediction of the impact of sociofamilial background on the frequency of internet access among students who formed part of the present study's sample.

One can, effectively, hypothetically deduce that sociofamilial background predicts the frequency of internet access, with students from the lower-middle class being more privileged than students from the other two classes, regarding the categories that were controlled.

It is worth finally verifying that when we consider the frequency of internet access as the explanatory variable, we reduce by only 2% the error of our prediction. Thus, sociofamilial background explains the frequency with greater precision than the frequency predicts the sociofamilial background when it acquires the status of dependent variable.

Location of Internet Access

Table 8 shows that when we consider the course as the independent variable, no relationship is verified with the location of internet access. However, when the location of internet access is taken as the independent variable, the obtained lambda coefficient of 0.01 permits us to note that the error is reduced by 10% when predicting its effect on the course.

Table 8.
Relationship Between Location of Internet Access and Course

VI- COURSE					LAMBDA COEFFICIENT
DV - Location of Internet Access	**ES**	**SHS**	**HS**	**Total**	
University	0	0	5	5	$\lambda = 0$
Library/external media centre	1	0	1	2	$\lambda = 0.01$
Home	20	30	32	82	
Other location	2	3	2	7	
Total	**23**	**33**	**40**	**96**	

Source: Authors' elaboration

According to the above data, one can affirm, with 10% precision, that the location of internet access predicts the course. Stated in plain terms, within the framework of the present study's sample, although the majority of students access the internet from home, the truth is that, even at home, students from the Health Sciences and Social and Human Sciences courses access the internet more than students from the Education Sciences course.

Similarly, it is also observed that the academic year has no effect on the location of internet access, whilst internet access permits, to a certain extent, predicting the academic year, as can be observed in Table 9.

Table 9.
Relationship Between Location of Internet Access and Academic Year

VI- ACADEMIC YEAR						LAMBDA COEFFICIENT
DV - Location of Internet Access	**1st Year**	**2cd Year**	**3rd Year**	**4th Year**	**Total**	
University	3	2	0	0	5	$\lambda = 0$
Library/external media centre	0	1	1	2	4	$\lambda = 0.6$
Home	25	10	10	36	81	
Other location	0	2	0	4	6	
Total	**28**	**15**	**11**	**42**	**96**	

Source: Authors' elaboration

O coeficiente lambda obtido, de 0,6, permite salientar que se reduz em 6% o erro que pode ser cometido ao se predizer o efeito do local de acesso à internet sobre o ano académico. Nessa acepção, com 6% de precisão, pode-se afirmar que o local de acesso à internet prediz o ano académico frequentado pelo estudante.

Isso requer então notar que os estudantes que mais acessam à internet em casa são do 4º Ano académico. Essa correlação assimétrica positiva fraca reenvia para o facto de existirem outros preditores que possam informar melhor sobre o comportamento da variável local de acesso à internet sobre a variável ano académico, bem como revela a necessidade de outras amostras aleatórias em estudos posteriores.

Além do curso e do ano académico, procurou-se igualmente verificar a relação entre o meio sociofamiliar e o local de acesso à internet. A esse respeito, os resultados dispostos na tabela 10 revelam a mesma tendência. O meio sociofamiliar não tem relação assimétrica com o local de acesso à internet, mas o local tem.

Table 10.
Relationship Between Location of Internet Access and Sociofamilial Background

VI- SOCIOFAMILIAL BACKGROUND					COEFICIENTE LAMBDA
DV - Location of Internet Access	**Middle Class**	**Lower-Middle Class**	**Working Class**	**Total**	
University	0	0	4	4	$\lambda = 0$
Library/external media center/cybercafé	0	3	1	4	$\lambda = 0.11$
Home	3	42	37	82	
Other location	0	4	2	6	
Total	**3**	**49**	**44**	**96**	

Source: Authors' elaboration

The lambda coefficient of 0.11 permits us to underline that the error of prediction of the effect of the location of internet access on sociofamilial background is reduced by 11%. Thus, with 11% precision, one can affirm that the location of internet access predicts the sociofamilial background of students. At a descriptive comparative level, Table 10 permits us to deduce that students from the lower-middle class access the internet more at home than students from the working class. Thus, these data corroborate the literature on digital inequalities (Sit, 2024; Ramírez-Correa, Mariano & Santos, 2025; Wang et al., 2026), which indicates that access to and use of technologies are conditioned by individuals' economic and social conditions.

Thus, although the statistical association is weak, from a sociological point of view the result is relevant, as it evidences that digital inequalities in the university context accompany social inequalities, manifesting themselves in the different forms of internet access among students from distinct sociofamilial backgrounds.

Conclusions

- The present study analysed digital inequalities in the university context of Malanje Province, taking as a case study a higher education institution designated by the codename "Universidade Castanha." The results indicate that, although there exists a high index of ownership of electronic devices among students (95%), digital inclusion does not manifest itself homogeneously, with disparities verified in the forms of access, usage, and connectivity conditions.
- The data indicate that the majority of students use digital devices mainly at home. In this manner, one perceives that device ownership, by itself, does not guarantee effective digital inclusion, as this also depends on the quality of internet, institutional infrastructures, and students' socioeconomic conditions.
- The existence of differences in the level of digital inclusion according to the area of study was also verified, with students from the Health Sciences presenting higher levels of access to and use of digital technologies in comparison with students from the Education Sciences and Social and Human Sciences. These differences may be related to the specific technological demands of each training area and with students' socioeconomic conditions.
- Among the variables analysed, the sociofamilial background revealed greater association with the indicators of digital inclusion than the course attended and the academic year, suggesting that digital inequalities are strongly related to the social conditions of students' origins.
- It is worth highlighting that the results of this investigation refer specifically to the studied context, and cannot be generalised to the entire Angolan higher education subsystem, although they may serve as an indicator of tendencies and as a point of departure for more comprehensive future studies.

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