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Digital Library and Academic Database Use Among Students at Two Universities in Hanoi, Vietnam

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ABSTRACT: Universities can make digital academic resources available without ensuring that students use them regularly. This study examines this distinction using data from an online survey of 239 students enrolled in two university programmes in Hanoi, Vietnam, conducted in June 2026. Access was defined as reported access to the university digital library or university-provided electronic academic resources. Regular use was defined as using digital libraries or online academic databases for academic purposes frequently or very frequently. Although 227 students (95.0%) reported institutional access, 111 of them (48.9%) did not report regular use. Among students with access, regular use was reported by 73.5% of those who rated their digital-library skills as fairly or very proficient and 32.8% of those with lower ratings. In modified Poisson regression adjusting for programme, study year, gender, household living standard and lecturer-provided digital materials, the adjusted prevalence ratio was 2.19 (95% CI 1.67–2.88). The observed difference between the proficiency groups was smaller when occasional use was included in the definition of use. These findings suggest that universities should monitor how routinely students use academic resources alongside whether students can access them.

KEYWORDS: digital inequality, digital libraries, higher education, academic resource use, Vietnam

1.0 INTRODUCTION

The provision of digital library services enables universities to expand students' access to academic resources.. An institutional subscription, however, tells administrators little about whether students know how to locate relevant resources and use them routinely in their courses. A university may therefore record broad access even when a substantial share of students turns to academic databases only occasionally. This distinction matters for decisions about how to allocate resources between expanding collections, improving access and providing help with searches.

In Vietnam, the national library digital transformation programme and the education digital transformation initiative provide the policy context for investment in digital collections and learning materials (Prime Minister of Vietnam, 2021, 2022). This article examines how often students who report access to university resources regularly use digital libraries or academic databases, and how regular use varies by self-rated proficiency. The analysis pairs the access and use responses for each student and estimates associations within the group reporting access.

2.0 LITERATURE REVIEW AND ANALYTICAL FRAMEWORK

Research on digital inequality distinguishes material access from differences in how people use the resources available to them. Van Deursen and van Dijk (2014) show that patterns of Internet use vary with social and educational characteristics. Ragnedda et al. (2020) treat digital technologies and competencies as related dimensions of digital capital. This distinction is particularly relevant to the present study because access to institutional resources and the ability to navigate them may vary independently. A student may know that an electronic collection is accessible but be unsure which database covers a topic or how to retrieve full text.

Joo and Choi (2015) identify perceived usefulness, ease of use and resource quality as relevant to undergraduates' selection of online library resources. DeLone and McLean (2003) also distinguish system and service characteristics from use. In a university setting, coursework can give students a reason to consult a collection, but a reading supplied directly by a lecturer can also meet an immediate need without requiring students to search independently. We therefore examine lecturer-provided materials as a secondary correlate without assuming the direction of the association.

The analysis expects that students who report greater proficiency in using digital libraries will report more regular use, even among those who say they have access. This association may arise because proficiency in navigating digital libraries facilitates regular use, repeated use enhances students' confidence, or coursework provides both opportunities for practice and motivation to use academic resources. A cross-sectional survey cannot adjudicate among these explanations.

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3.0 MATERIALS AND METHODS

3.1 Study design and sample

This study draws on an online survey of 239 students at two universities in Hanoi in June 2026. The survey was conducted as part of a research project led by Le Thị Hoa (principal investigator) and administered by the Institute of Sociology and Psychology (Le, 2026). The sample comprised 114 students in the Tourism Culture programme at Hanoi University of Culture and 125 students in the Faculty of Sociology and Sustainable Development at Trade Union University. It included 173 women and 66 men. Because each university contributed one programme or faculty, the programme indicator also reflects the institutional setting. The findings are limited to the surveyed sample.

3.2 Measures

Institutional access combines two multiple-response items. Students were classified as reporting access if they selected the digital library at their university or electronic books, textbooks and journals provided by the university. This measure reflects students' perceived availability of institutional digital resources. It does not verify credentials, off-campus authentication or access to a particular title.

Regular use was operationalised by combining the response categories “frequently” and “very frequently” for the survey item measuring the frequency of digital library or online academic database use for academic purposes. The use question covers academic resources more broadly than the institutional access items. For that reason, the paired responses describe the relationship between reported access and use. They do not trace the use of specific university subscriptions. A separate indicator records whether the student identifies the university learning-resource portal or digital library as a usual channel for digital materials.

Digital-library proficiency is based on the self-rated ability to use a digital or electronic library. “Fairly proficient” and “very proficient” form the higher-proficiency group. The remaining categories range from unable to use the service to average proficiency. The measure is a self-assessment and does not test performance. The adjustment variables were lecturer-provided digital materials as a usual source, gender, university programme, year of study (fourth year versus the second-year group), and self-rated household living standard (poor or near-poor, average, or fairly well-off or affluent). Students formally in their third year who were retaking coursework alongside second-year students were classified in the second-year group.

3.3 Statistical analysis

We tabulated access and use jointly for all 239 students, then restricted the regression to the 227 students reporting access to either institutional resource. No cases were missing on the selected variables. Modified Poisson regression with HC1 robust standard errors estimated adjusted prevalence ratios (aPRs) and 95% confidence intervals (Zou, 2004). Prevalence ratios were chosen because regular use was common. We report model estimates as exploratory associations conditional on the sampled settings. Two supplementary analyses were conducted. The first examined whether the observed pattern persisted when occasional use was included in the descriptive analysis. The second replaced the broad frequency measure with the use of the university portal or digital library as a usual source in the adjusted model.

4.0 RESULTS

4.1 Institutional access and regular use

A total of 192 students (80.3%) reported access to the university digital library and 210 (87.9%) selected university-provided electronic academic resources. Overall, 227 (95.0%) reported at least one of these routes. Regarding frequency of use, 4 students reported never using these resources, 18 reported rarely using them, 98 reported occasional use, 88 reported frequent use, and 31 reported very frequent use. Thus, 119 of 239 students (49.8%) reported regular use.

Table 1: Reported institutional access and regular use

Reported access	Regular n	Regular %	Below threshold n	Below threshold %	Total n
At least one route	116	51.1	111	48.9	227
Neither route	3	25.0	9	75.0	12
Total	119	49.8	120	50.2	239

Note. Percentages are calculated within rows. Regular use means frequently or very frequently.
Source: Survey of 239 students at two universities in Hanoi, Vietnam.

Among those reporting access, 116 of 227 (51.1%) were regular users and 111 (48.9%) were below the regular-use threshold. Three of the 12 students who did not report institutional access nevertheless used a digital library or database regularly. Their responses may reflect access through other providers, as the frequency-of-use item was not restricted to university-provided resources. At the broader threshold, 207 of the 227 students reporting access (91.2%) used these resources at least occasionally. The gap therefore concerns regular engagement much more than whether students use academic resources at all.

4.2 Correlates of regular use among students reporting access

Regular use was reported by 75 of 102 students (73.5%) in the higher-proficiency group and 41 of 125 (32.8%) in the comparison group, a crude difference of 40.7 percentage points. The adjusted prevalence ratio was 2.19 (95% CI 1.67–2.88, $p < 0.001$). Lecturer-provided digital materials had an aPR of 1.24 (95% CI 0.94–1.62). The Trade Union University programme had a higher adjusted prevalence (aPR 1.35, 95% CI 1.05–1.73). This estimate reflects the combined effects of the institutional and programme settings and cannot distinguish the contribution of each.

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Table 2: Adjusted prevalence ratios for regular use among students reporting access

Variable (reference)	aPR	95% CI	p
Higher library proficiency (average or lower)	2.19	1.67-2.88	<0.001
Lecturer materials (not selected)	1.24	0.94-1.62	0.126
Women (men)	0.83	0.65-1.07	0.145
Trade Union University programme (Hanoi University of Culture programme)	1.35	1.05-1.73	0.019
Fourth year (second-year group)	0.95	0.76-1.20	0.694
Fairly well-off or affluent household (average)	1.16	0.90-1.49	0.248
Poor or near-poor household (average)	0.85	0.45-1.63	0.627

Note. N = 227. Modified Poisson regression with robust standard errors. All listed variables were entered together. CI = confidence interval.

Source: Survey of 239 students at two universities in Hanoi, Vietnam.

When occasional use was included, prevalence rose to 97.1% in the higher-proficiency group and 86.4% in the comparison group, a gap of 10.7 percentage points compared with 40.7 points at the regular-use threshold. In the alternative model using the university portal or library as a usual source, higher proficiency remained associated with use (aPR 1.41, 95% CI 1.09-1.83). Lecturer-provided materials were associated with this narrower source measure (aPR 1.83, 95% CI 1.27–2.62). The two outcomes capture different aspects of engagement, and the estimates do not establish that the associations differ statistically between them.

5.0 DISCUSSION

The main finding is that reported access was nearly universal in this sample, while regular use was reported by about half of the students with access. Including occasional users in the definition of use substantially reduces the observed difference between the proficiency groups. University monitoring can therefore distinguish whether students have an access route, whether they have tried using it and whether it has become part of their regular academic practice. A single indicator for digital provision cannot answer all three questions.

The proficiency association is consistent with a use-based digital divide within a group that already reports access (van Deursen & van Dijk, 2014). It also adds specificity to the digital-capital perspective used in the project report: proficiency in a particular service corresponds to use of a related resource. The analysis does not establish that a general skill deficit accounts for differences in use. Self-rated proficiency and frequency of use were reported by the same respondents and measured at the same point in time. Students who have repeated opportunities to search are likely to be better placed to rate their proficiency. Practical support can be tested through course-based tasks in which students search a database, retrieve a full text and report where they encounter barriers.

The association between lecturer-provided materials and digital resource use depends on how the outcome variable is defined. Receiving materials from lecturers was associated with identifying the university library or portal as a usual channel, while the confidence interval for the broader regular-use measure included one. Coursework may link the two sources in some classes. The survey records neither the route by which lecturers distribute materials nor whether assignments require library use. Follow-up work could match student responses with course requirements, training participation or anonymised library usage records to examine these explanations.

The study is limited by purposive programme selection, a modest sample, self-report and the cross-sectional design. Access and use items refer to overlapping but different sets of resources, and the frequency categories provide no usage counts. Standard errors account for the working variance model at the student level but do not provide inference across institutions. Library logs and practical search tasks would allow a stronger assessment of actual access, navigation skills and frequency of use.

6.0 CONCLUSION

In the two Hanoi programmes surveyed, reported access to institutional digital resources was common, yet about half of students with access did not report frequent or very frequent use of digital libraries or academic databases. Self-rated library proficiency showed the clearest association with regular use. Future evaluations of university digital services should consider monitoring regular use alongside reported access and assessing whether course-integrated information-search activities can promote more consistent use of academic resources.

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