



Department of Pacific Affairs

University of Papua New Guinea Students' Internet Access during the COVID-19 Pandemic in 2020–21

Rohan Fox and Amanda H.A. Watson

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Access to quality internet has become increasingly important since the spread of the novel coronavirus (COVID-19). During 2020 and 2021, people have needed to transition various services such as education and meetings to online platforms to comply with social distancing measures aimed at reducing the spread of the virus. However, not all people have access to affordable, fast and reliable internet, making their ability to access these alternatives limited. In the Pacific region, internet access 'is still considered unaffordable' (UN ESCAP 2018:26). In Papua New Guinea (PNG), there are fewer than one million mobile internet users (Highet et al. 2019:18); thus, many people have only very limited or no access to the internet (Highet et al. 2019; Sagrista and Matbob 2016).

This In Brief analyses a survey of device ownership levels and internet access strategies of undergraduate students enrolled at the University of Papua New Guinea (UPNG) in Port Moresby. The findings can inform policymakers and educators who are considering the possibilities and challenges of digital education and internet accessibility in the Pacific.

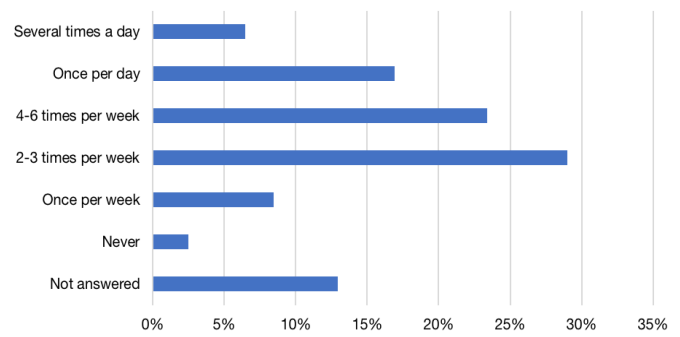
The survey was undertaken in June 2020 with students taking a first-year economics course compulsory for all undergraduates at the School of Business and Public Policy. Printed survey forms were handed out in class. Students were notified both in writing on the survey and orally that participation in the research was voluntary. Students had one week to complete and return the survey. The response rate was 84 per cent, or 220 respondents out of a total 262 students enrolled in the course. At the time of the survey, there were no COVID-19 restrictions in place on campus.

Most of the undergraduate students who participated in the survey said they owned a mobile telephone (87 per cent), while just two per cent said they did not own a mobile telephone and 11 per cent did not answer the question. When asked whether they own a laptop, 60 per cent of respondents said they did, while 29 per cent said they did not own one and 11 per cent did not respond to the question.

In order to be of use for lecturers and administrators, the survey tried to establish the mediums that might work best for

communicating with students. Figure 1 shows the frequency of student email usage.

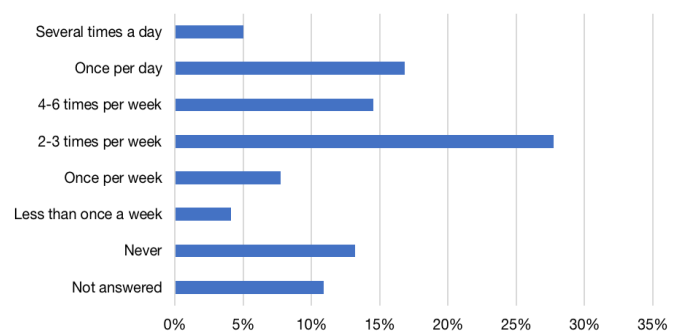
Figure 1: Frequency of student email usage



n=220. Source: survey findings compiled by the first author.

Figure 2 shows the frequency of usage of the social media platform Facebook. Online learning platforms such as Moodle and Google classroom were not commonly used prior to the pandemic and, therefore, questions about their usage were not included in the survey.

Figure 2: Frequency of student Facebook usage



n=220. Source: survey findings compiled by the first author.

At the time of the survey, only six students (three per cent of survey respondents) said they primarily used UPNG's free wireless internet (Wi-Fi).¹ Reasons were not explored in the survey. When asked about their preferred methods of contact for learning-related communications from their teachers, just over two thirds indicated a preference for email (68 per cent), almost half preferred the smartphone application WhatsApp (44 per cent) and about a quarter preferred Facebook (22 per cent).²

Students were asked how much money they spend on internet access. Table 1 shows their responses. Although larger data bundles [represent better value](#), it can be seen that students frequently purchase small bundles, presumably because they do not have the available cash to make a large initial outlay, or because they only need access sporadically. A bundle with a five-hour duration is a popular option because it represents good value for money, even though it is only valid between midnight and early morning.

Table 1: The amount of money (in PNG kina) UPNG students spend on internet access

Amount of data	Provider	Duration of data bundle	Cost	Students (%)	Average # of times purchased per week
65MB	Digicel	1 day	3 kina	51	3.4
500MB	Digicel	5 hours, 12am–5am	3 kina	15	3
1GB	Telikom	3 days	6 kina	11	2.3
2GB	Telikom	7 days	12 kina	4	1
5GB	Not stated	1 month	Unknown	1	N/A
10GB	Not stated	1 month	Unknown	1	N/A
No response				17	

n=220. Source: survey findings compiled by the first author.

In 2020, most classes at UPNG were conducted face-to-face. In 2021, during periods with movement restrictions due to COVID-19, some teaching shifted to online platforms. As such, students were required to attend classes remotely using either data they had paid for themselves or Wi-Fi supplied by UPNG, which is available on campus. Approximately 58 per cent of the respondents said they lived on campus. At the time of the survey in 2020, students were given 500 megabytes (MB) of UPNG's Wi-Fi data weekly. As of 2021, this figure had increased significantly to 500 MB per day, which could be refreshed by logging out and logging in again.³

A high-quality connection (the minimum required) for an undergraduate UPNG lecture via the online meeting platform Zoom uses at least 270 MB of data per hour.⁴ Thus, the information in Table 1 suggests that in 2020 the bulk of students would have had insufficient available data to participate in such a class. The cost of internet data is a key issue for students. COVID-19 restrictions have likely led to [loss of income](#) for some students and their families. A separate survey of 55 economics graduates undertaken in 2020 found that one in every two respondents had either left or considered leaving their degree program (Fox 2021:14). This was most commonly due to difficulty paying tuition fees (*ibid.*); it is unclear whether internet costs were a contributing factor.

This In Brief documents the device ownership levels and internet access strategies of 220 first-year students at UPNG in Port Moresby. A key finding was that in 2021 UPNG

markedly raised its Wi-Fi allowance for students in response to increased demand brought on by a change in teaching modality due to the pandemic. Further research would be required to determine the level of impact the increased quota had, including any change in student learning outcomes. While universities in countries such as Australia were able to pivot to online learning more easily at the outset of the COVID-19 pandemic, the finding highlighted here is that generous Wi-Fi allowances are crucial for remote learning. Without them, most university students in PNG and similar settings would struggle to attend all of their classes online.

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Author notes

Rohan Fox is a research officer with the Development Policy Centre and Amanda H.A. Watson is a research fellow with the Department of Pacific Affairs at The Australian National University.

Endnotes

1. Only one student mentioned computer labs in a free-response answer. Use of computer labs was not specifically addressed in the survey.
2. These figures do not add up to 100 per cent because students were allowed to select more than one option.
3. Personal communication with the dean of the School of Business and Public Policy Professor Pillai in 2021.
4. Undergraduate Zoom lectures are run using just the lecturer's audio and video. Using audio and video for students as well approximately doubles the data requirement.

References

- Fox, R. 2021. [University of Papua New Guinea Economics Graduates Tracer Survey](#). Canberra: ANU.
- Hight, C., M. Nique, A. H.A. Watson and A. Wilson 2019. [Digital Transformation: The Role of Mobile Technology in Papua New Guinea](#). London: GSMA.
- Sagrista, M. and P. Matbob 2016. [The Digital Divide in Papua New Guinea: Implications for Journalism Education](#). *Pacific Journalism Review* 22(2):20–34.
- UN ESCAP (United Nations Economic and Social Commission for Asia and the Pacific) 2018. [Broadband Connectivity in Pacific Island Countries](#). *Asia-Pacific Information Superhighway (AP-IS) Working Paper Series*. Bangkok: UN ESCAP.

