

Digital Divide within Higher Education During Pandemic in Oman

Muhammad R. Ahmed , Thirein Myo and Badar Al Baroomi
Military Technological College, Muscat, Oman

Abstract

There are concerns that the move to remote education has led to inequalities in access to learning in higher education (HE) sector. Specifically, there are concerns that there is a digital divide, resulting in digital inequality, with already disadvantaged students of HE being most affected. The digital divide has various dimensions: as well as access to devices and internet, digital skills are important, as are external factors such as, facilities at home, teacher skills and learning environment. In our research, we have considered the digital divide in Oman in the higher education sector and the case study was conducted in Military Technological College, Oman

Background on the digital divide

During pandemic there was an unprecedented effect on education worldwide including Oman. In order to face the COVID 19 Oman had to have to go into lockdown like other countries in the world, this lead Oman to closures of educational institutions. As a result educational institution had to change their delivery face to face to virtual platform utilizing digital technology including higher educational institutions. This requires to have digital devices, infrastructure, skills, home learning environment for the students. This lead the digital inequalities to the access to the learning and created a digital divide.

The term Digital divide refers to the gap between demographics and regions of the people who have access to the digital devices as well as the communication technology and people who do not have the access. [Jan van Dijk (2017)] A vital indicator of the digital divide is the prolonged to the individuals from different income, racial/ ethnic, and geographical areas which has lack of internet access at home. Current broadband internet connection has higher speed, especially fiber to the home has provided an efficient connection and this cannot be compared with the connection by mobile networks and a dial-up connection. in higher education for E-learning platform requires higher bandwidth and good connection. [D. L. Msongaleli (2016)]

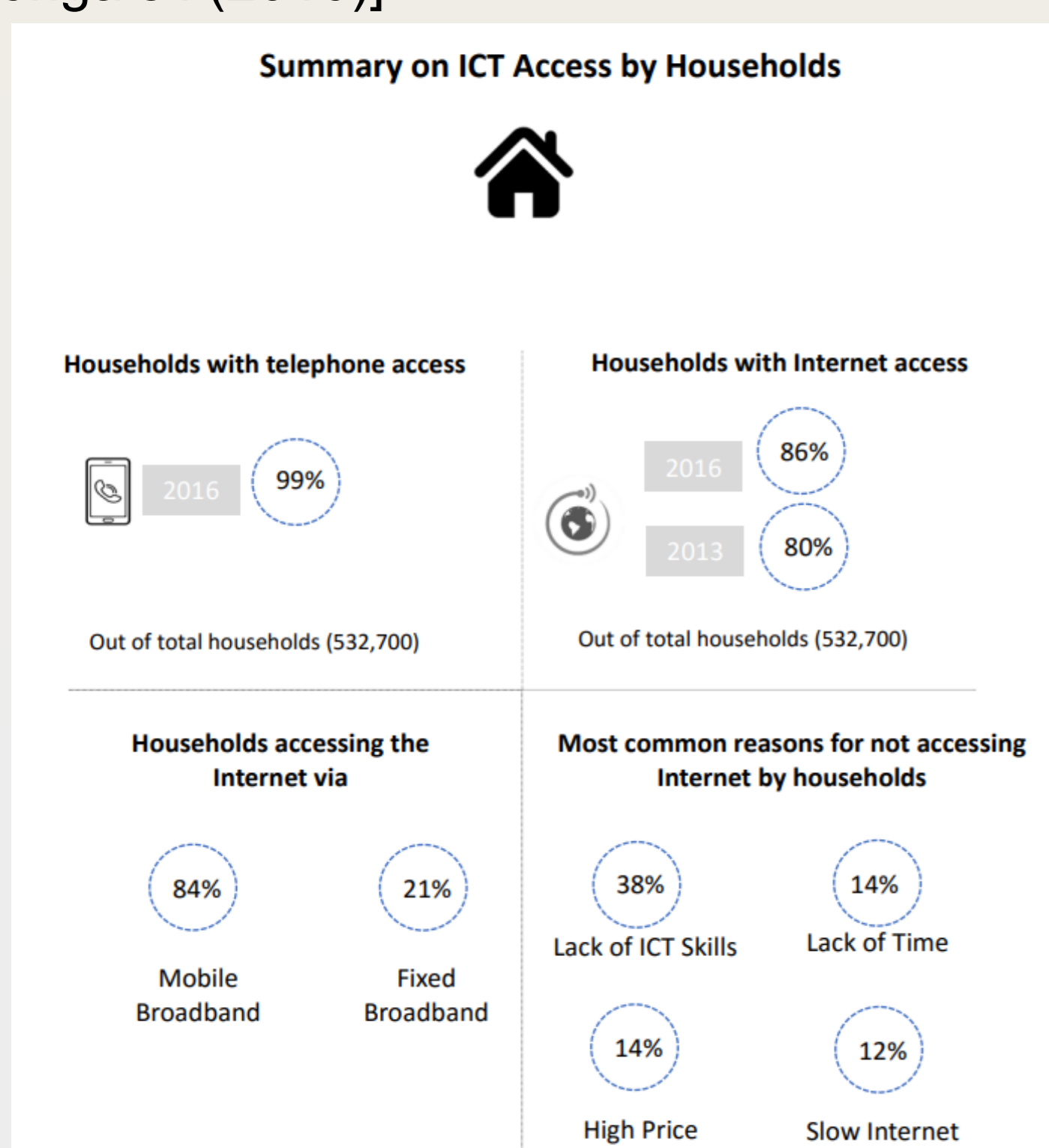


Fig 1: Summary on ICT access

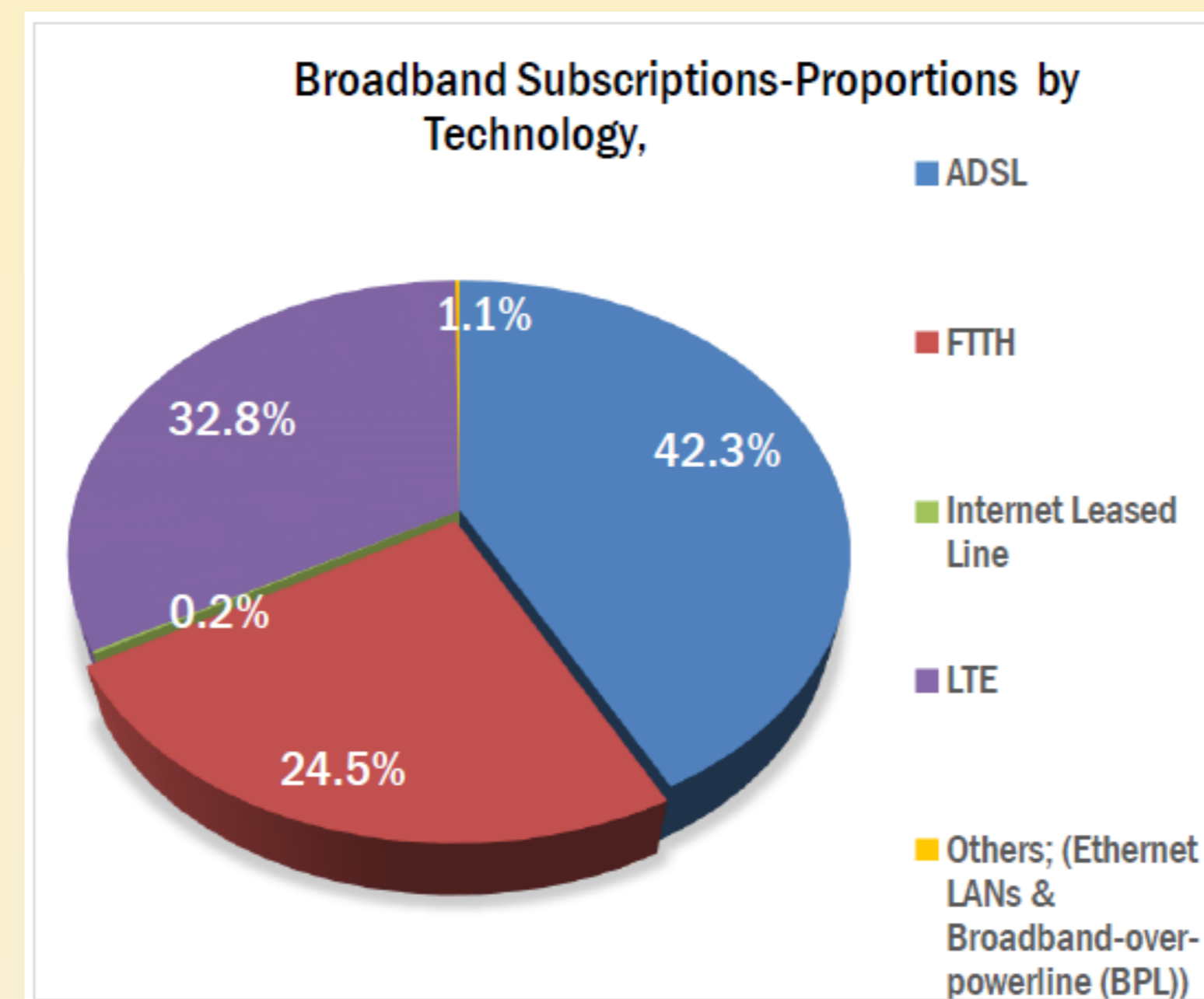


Fig 2: Broadband subscription

Among the higher education students in Oman, a good percentage is from the rural and mountain areas, where the high speed internet is not available certain cases no internet access. This create a digital divide for the students in Oman.

Methods

This research is based on surveys; because it is used for studying the digital divide among the higher educational institution. The survey was conducted in the military technological college (MTC) in Oman as a case study. In the survey we have considered. The factors was considered to do the survey was device access and infrastructure. Students digital skis and engagement and the home learning environment of the students.

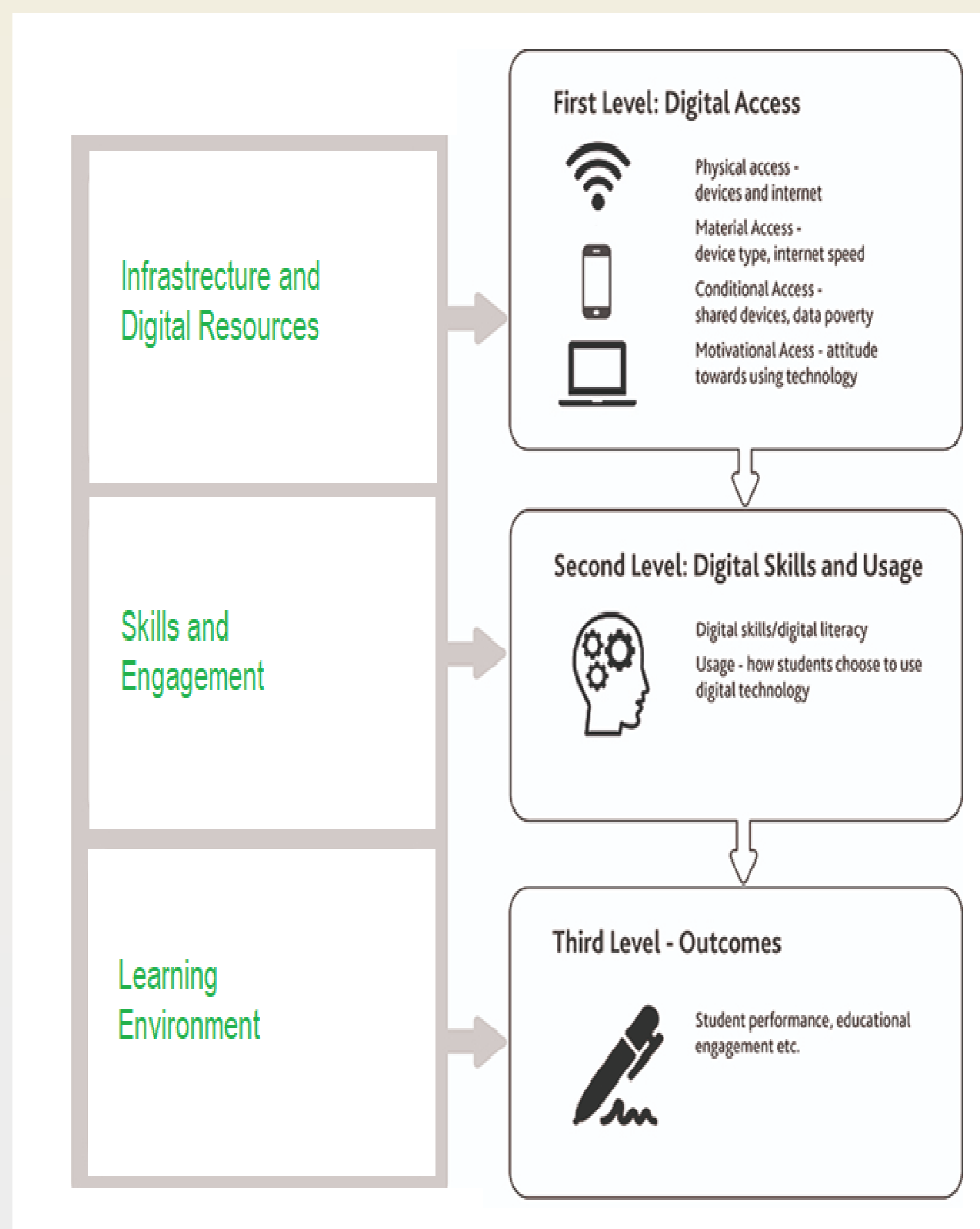


Fig 3: Factor Matrix

Findings

In the military technological college all the students get the device from the college so the device asses was with all the students. Among the students 57.41% are living the sub-urban and 1.85% is in the mountain. As an engineering students most of them had a fairly good digital skills still about 20% of the students was facing the problem during the online exams to scanning and uploading they had the seek help from others. 12.96 % of the students does not have the individual room at the home.

In terms of internet access at home 4.63 % does not have the internet access at home and 24.07% using the mobile data for the internet access. Around 12% students was facing difficulties during the online learning environment out of that about 4.63% had to seek help from others. Besides approximately 16% students was having financial difficulties to get the internet access. 11% students found the online education is not interesting and they were not motivated to do the online study. Even though a good number of students preform well but still 1.85% students did not perform well and about 24% had average performance.

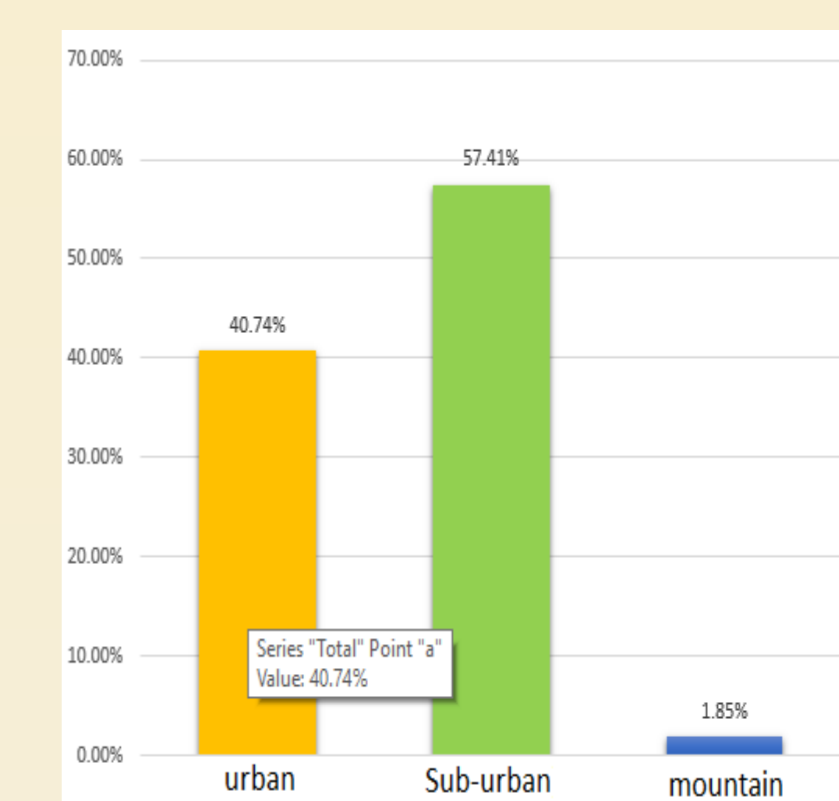


Fig 4: Students dwellings

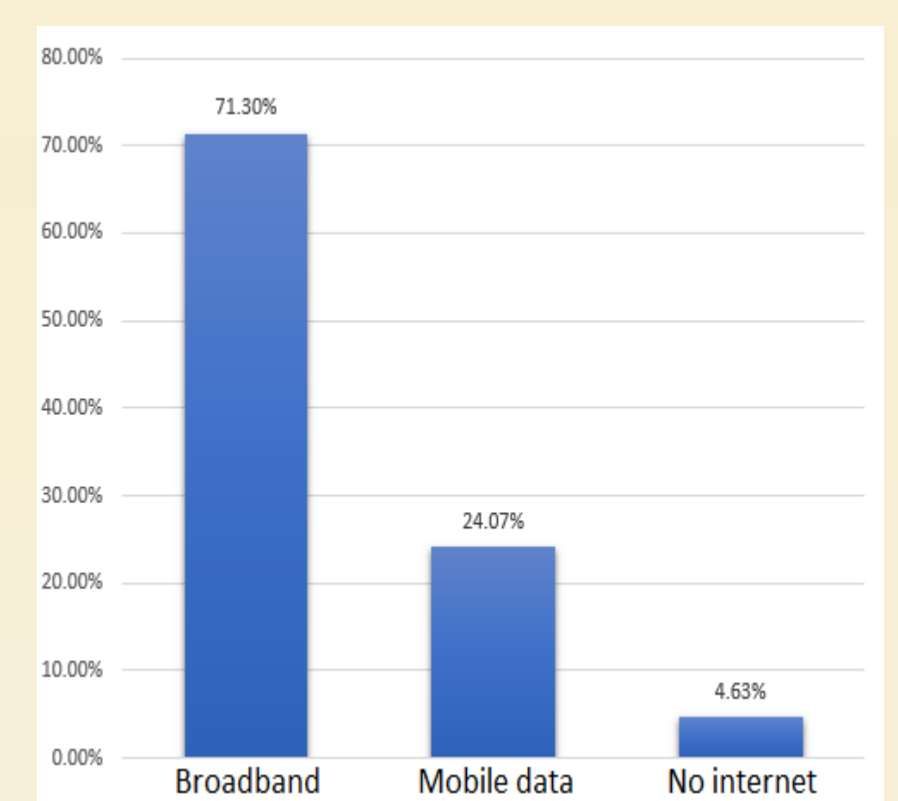


Fig 5: Connection used

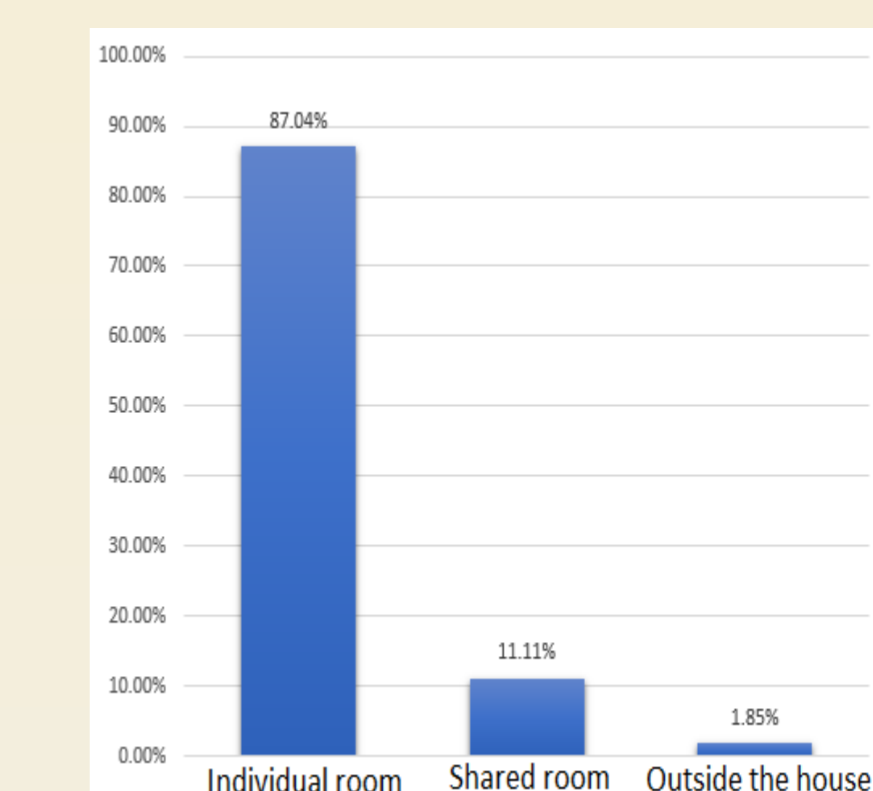


Fig 6: Type of room access

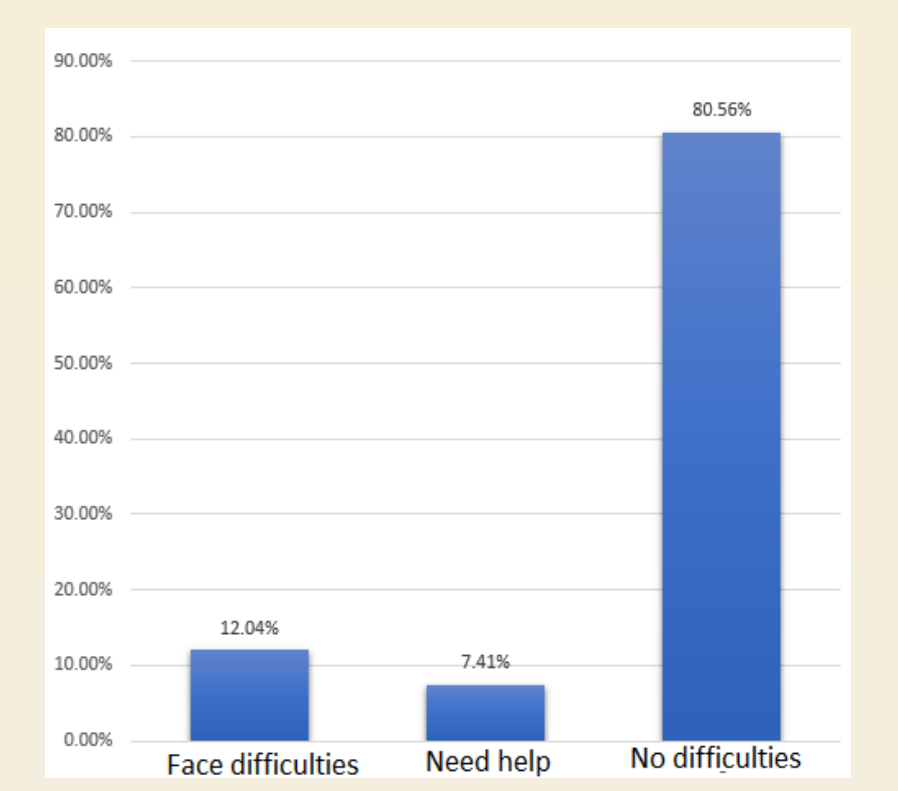


Fig 7: Technology dependency

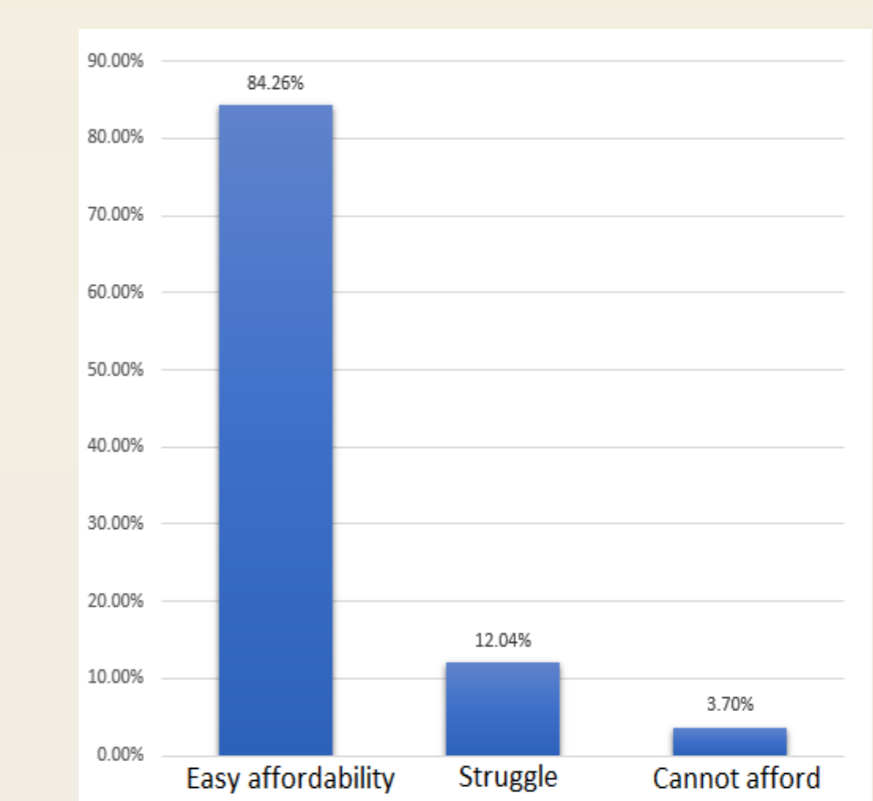


Fig 8: Technology affordability

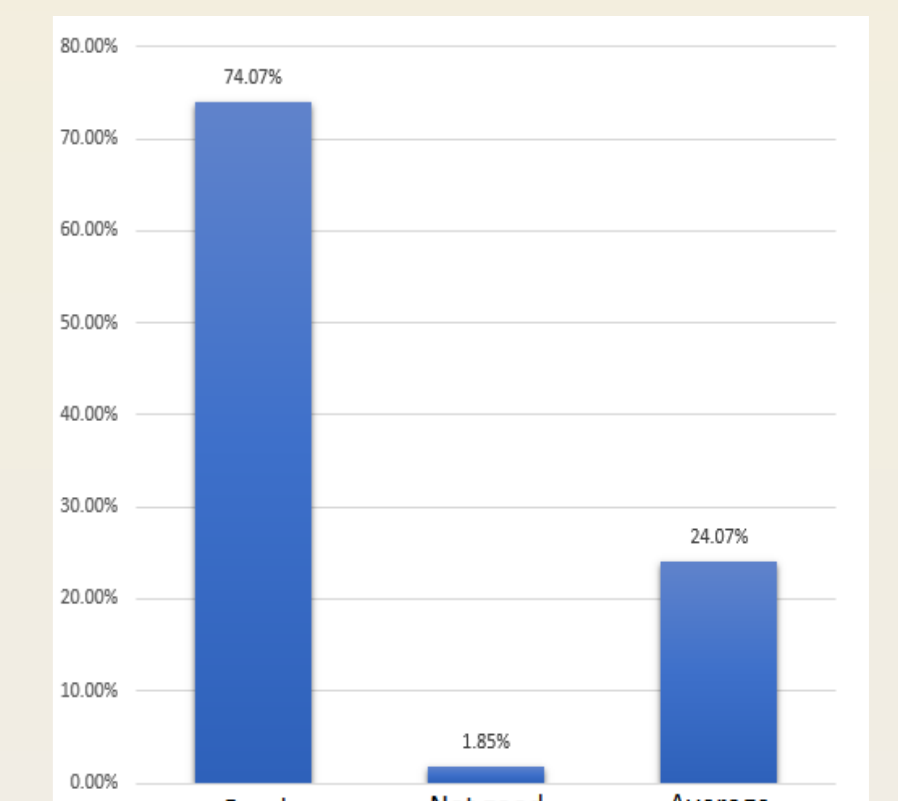


Fig 9: Overall Performance

Conclusion

Whether it's a pandemic or any other catastrophic event or government emergency the digital study practices are anticipated to go far in future. Consequently, despite the fact that maximum college students in Oman have now back to Face to Face class, the digital divide will continue as a big challenge in e-learning which need to be investigated further.

Acknowledgement

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References

- Jan van Dijk (2017), The Digital Divide, Wiley, 2020, ISBN 1509534458, 9781509534456
- D. L. Msongaleli, F. Dikbiyik, M. Zukerman and B. Mukherjee, (2016)"Disaster-Aware Submarine Fiber-Optic Cable Deployment for Mesh Networks," in *Journal of Lightwave Technology*, vol. 34, no. 18, pp. 4293-4303, 15 Sept.15, 2016, doi: 10.1109/JLT.2016.2587719.
- Survey on Information and Communication Technology (ICT) Access and Usage by Households and Individuals, Department of International Relations & Information, information Technology Authority, Sultanate of Oman, <https://www.ita.gov.om/itaportal/Data/English/DocLibrary/2019226141614694/ICT%20Access%20and%20Usage%20Survey%20in%20Households%20and%20Individuals%202016%20Publication.pdf> [Accessed March 1, 2022]