BARRIERS TO TECHNOLOGY ENABLED LEARNING AT A PUBLIC UNIVERSITY IN MALAYSIA

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Introduction

- Technology Enabled Learning (TEL) has evolved into a critical component of knowledge based delivery systems.
- Actively promoted by the Ministry of Education.
- Although TEL has been proven to have a significant impact on the process of teaching and learning, student and lecturer perceptions towards TEL remain a major challenge.
- Universiti Malaysia Sabah has a current enrollment of **17,445** who include undergraduates, post-graduates and part-time students.
- Academicians: **1,070** of which 40% possess a PhD.

(Data as of 31st March 2018)

Factors Governing the Implementation of TEL.

- Technological Capabilities.
- Instructional Strategy.
- Psychological Processes.
- Contextual Factors.

Research Methodology

- A SWOT Analysis was conducted prior to the survey.
- The sample size was determined by using the method described by Krejcie and Morgan (1970) [1]
- Survey was conducted via an online questionnaire based on the methods described by Kirkwood & Price (2016) [2]

[1]Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

[2]Kirkwood, A., & Price, L. (2016). Technology-enabled learning implementation handbook.

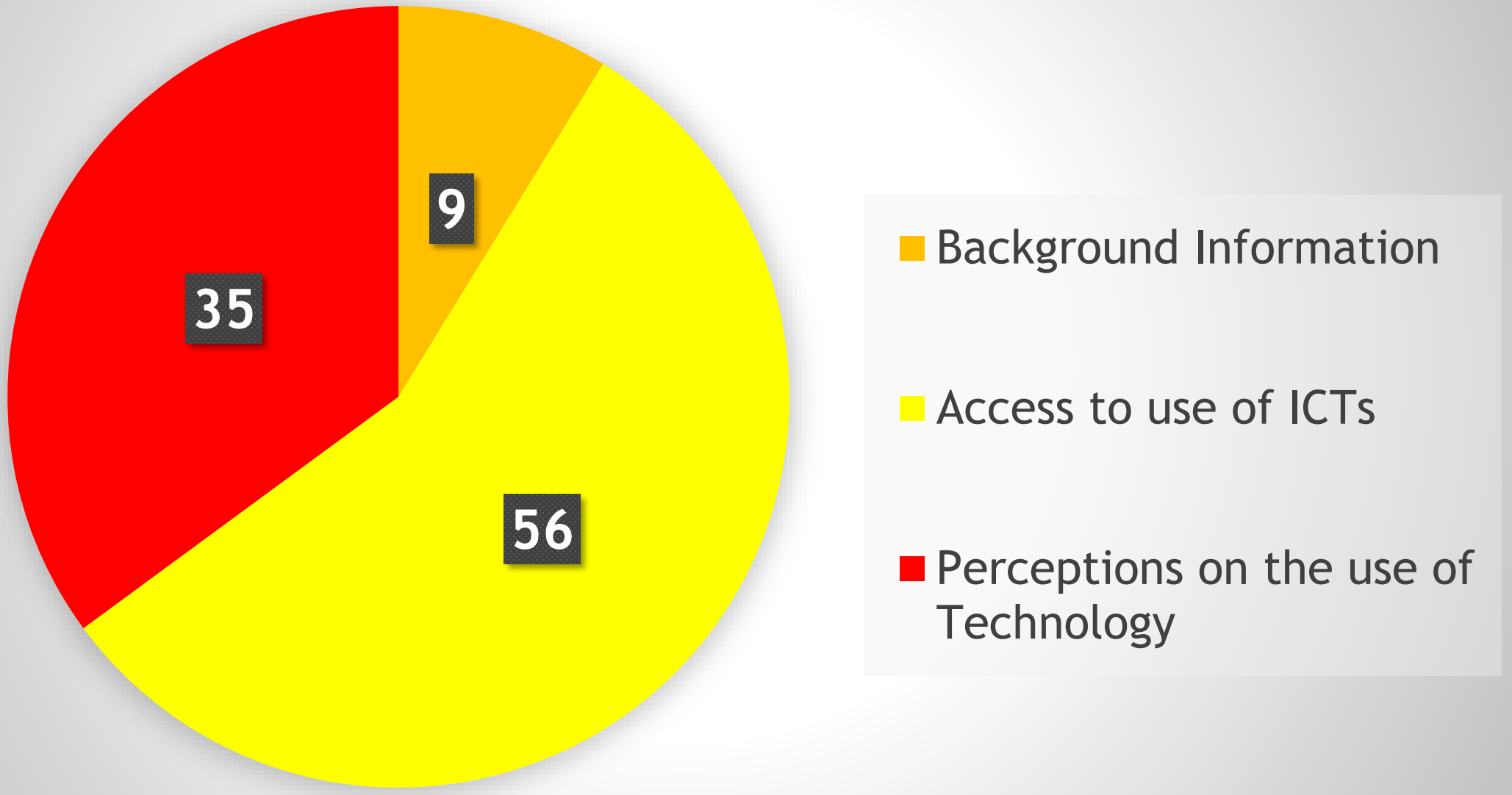
Research Methodology

(1) Questionnaire on **Student Use** of Technology,

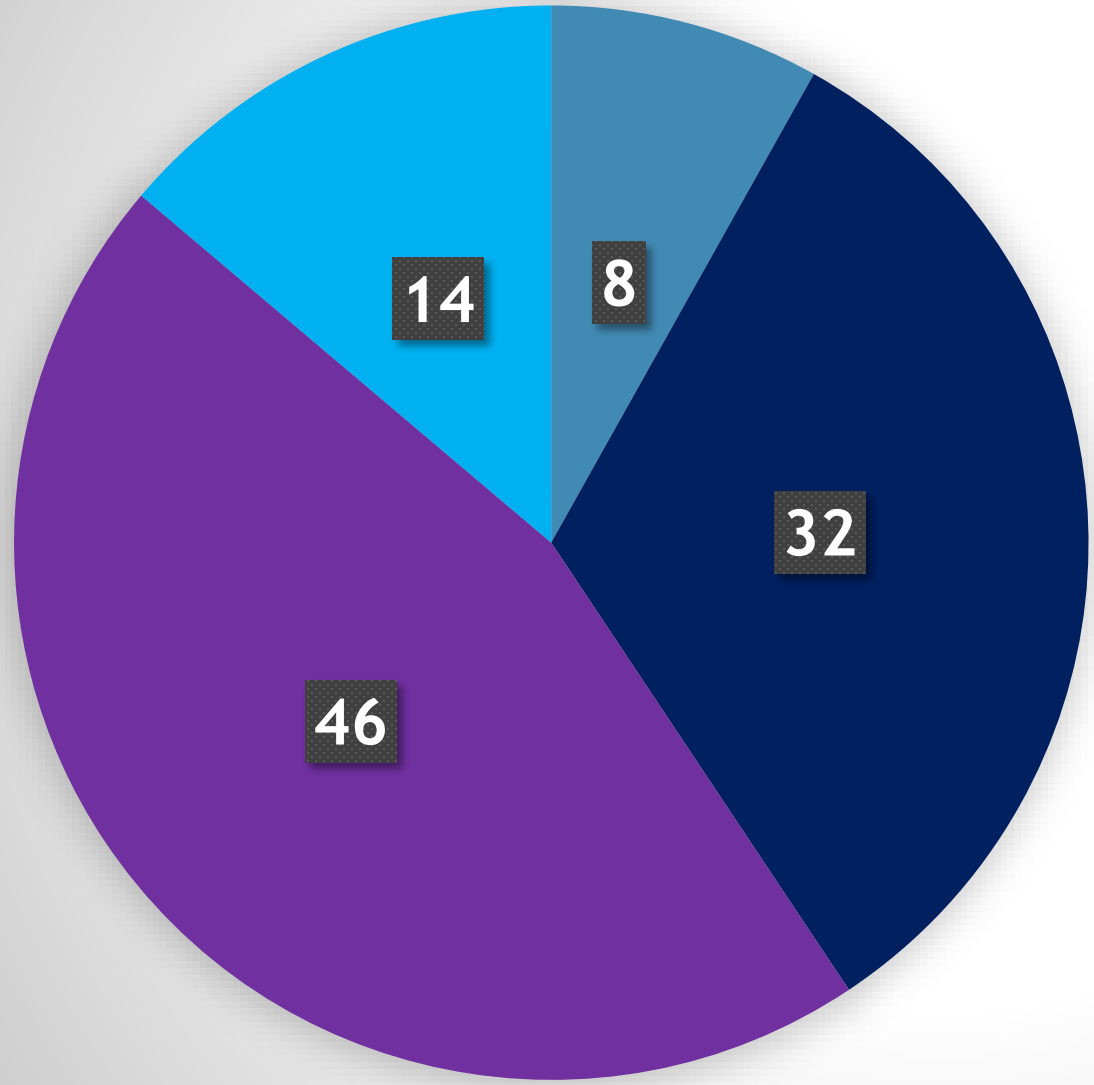
(2) Questionnaire on **Lecturer Use** of Technology for Teaching and Learning

(3) Questionnaire for Survey of Technology-Enabled Learning in Educational Institutions

STUDENT: COMPOSITION OF QUESTIONNAIRE



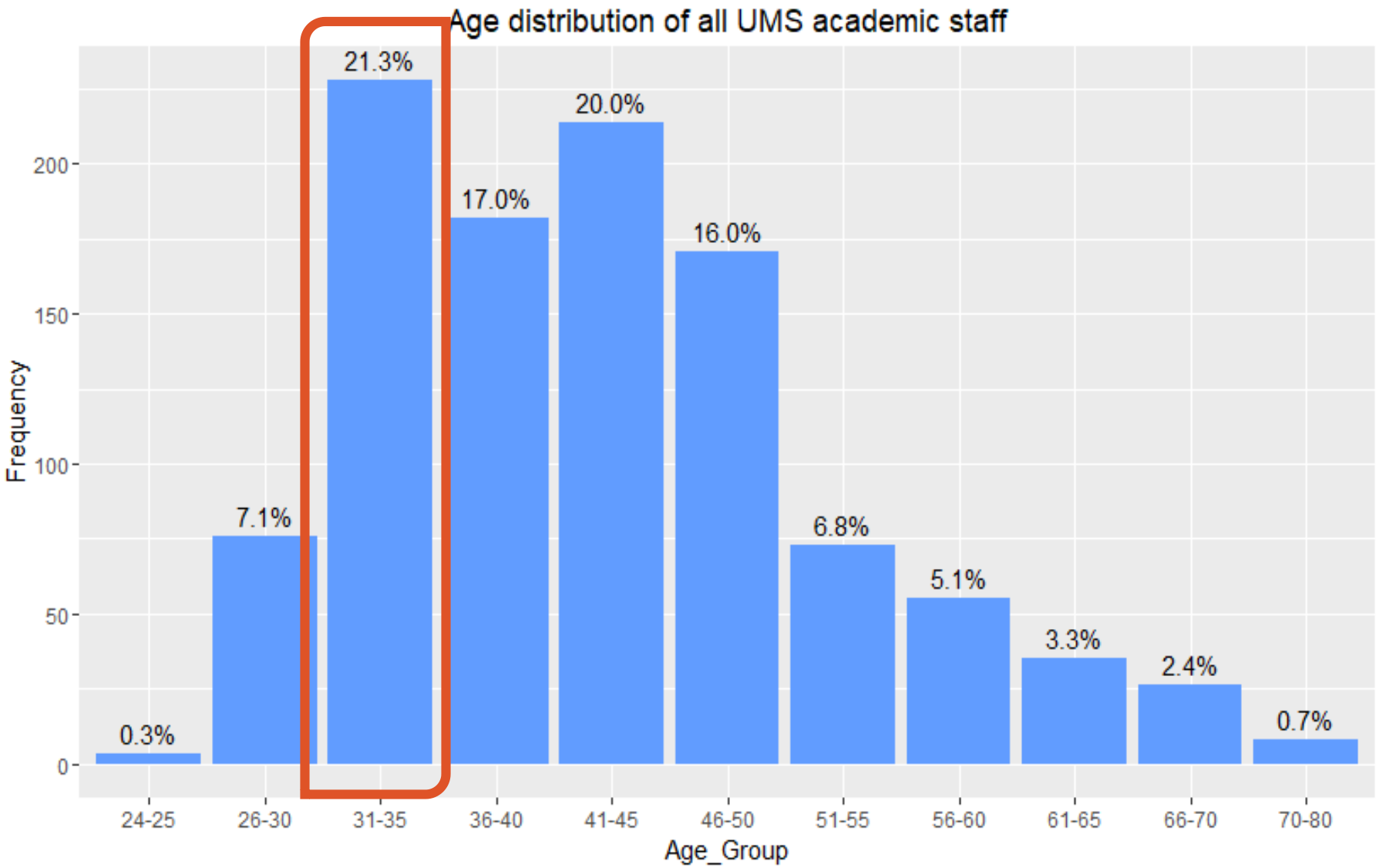
LECTURER: COMPOSITION OF QUESTIONAAIRE

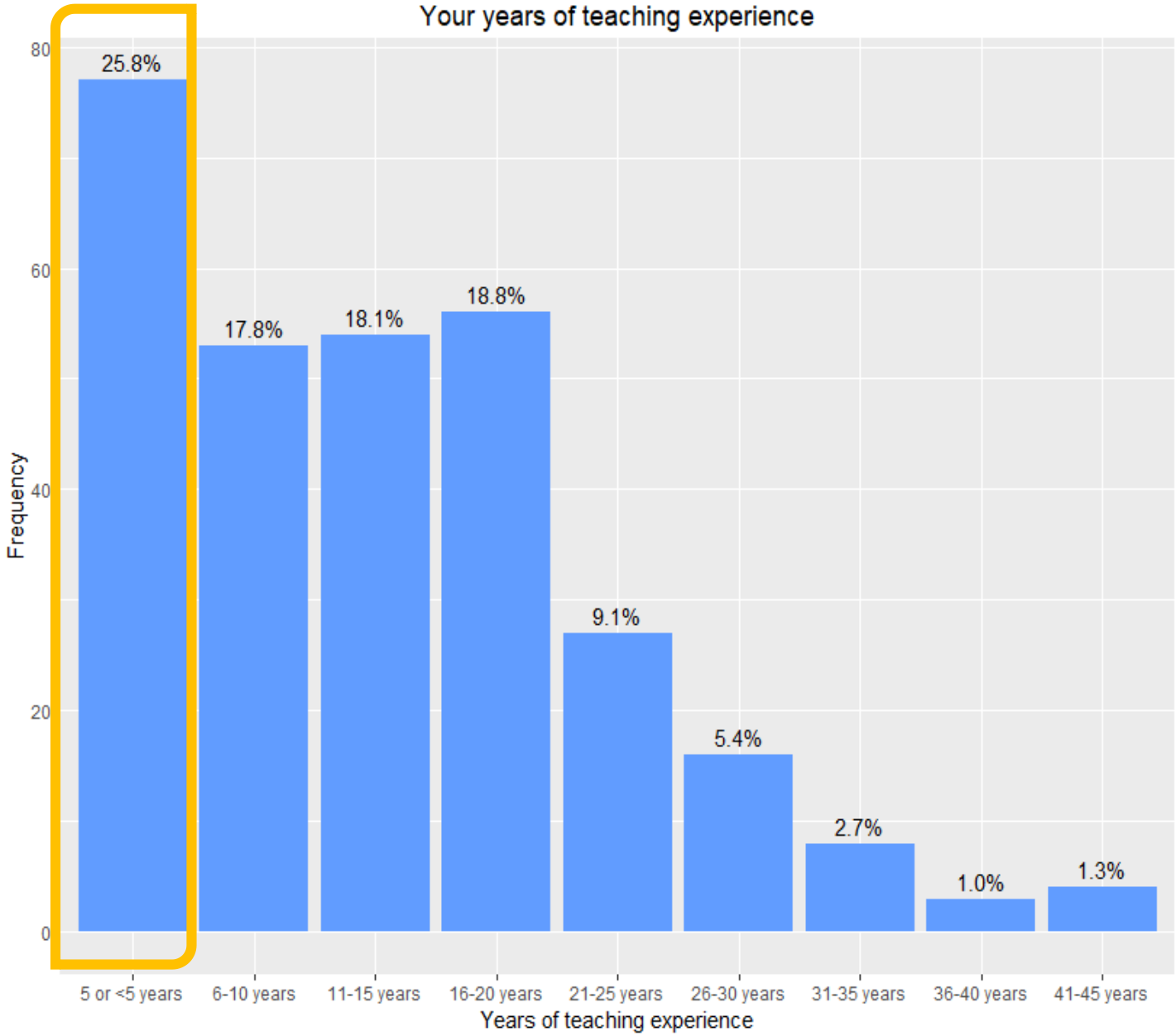


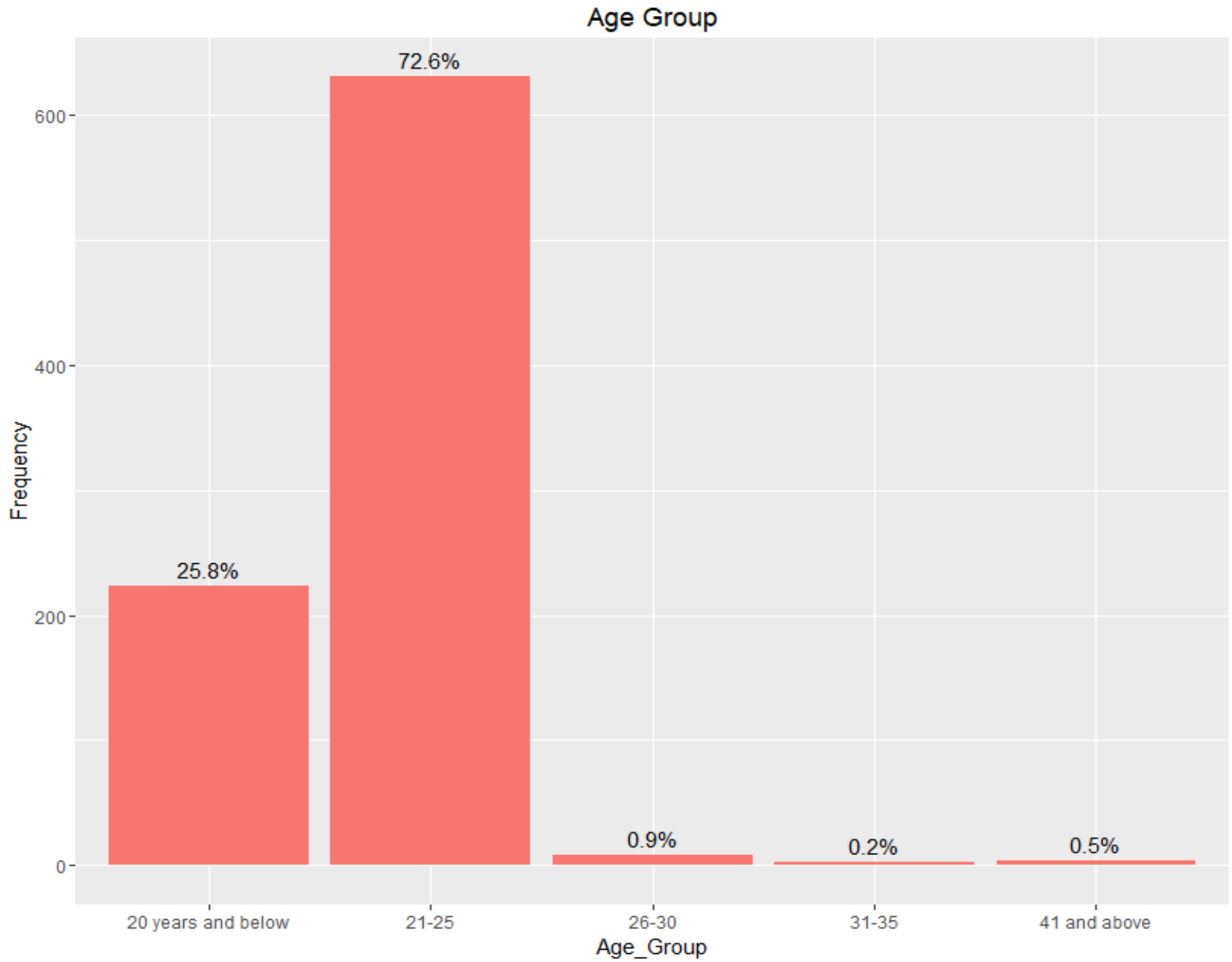
- Background Information
- Access to the use of ICTs
- Use of ICTs for T&L
- Perceptions of Use of Technology-Enabled Learning

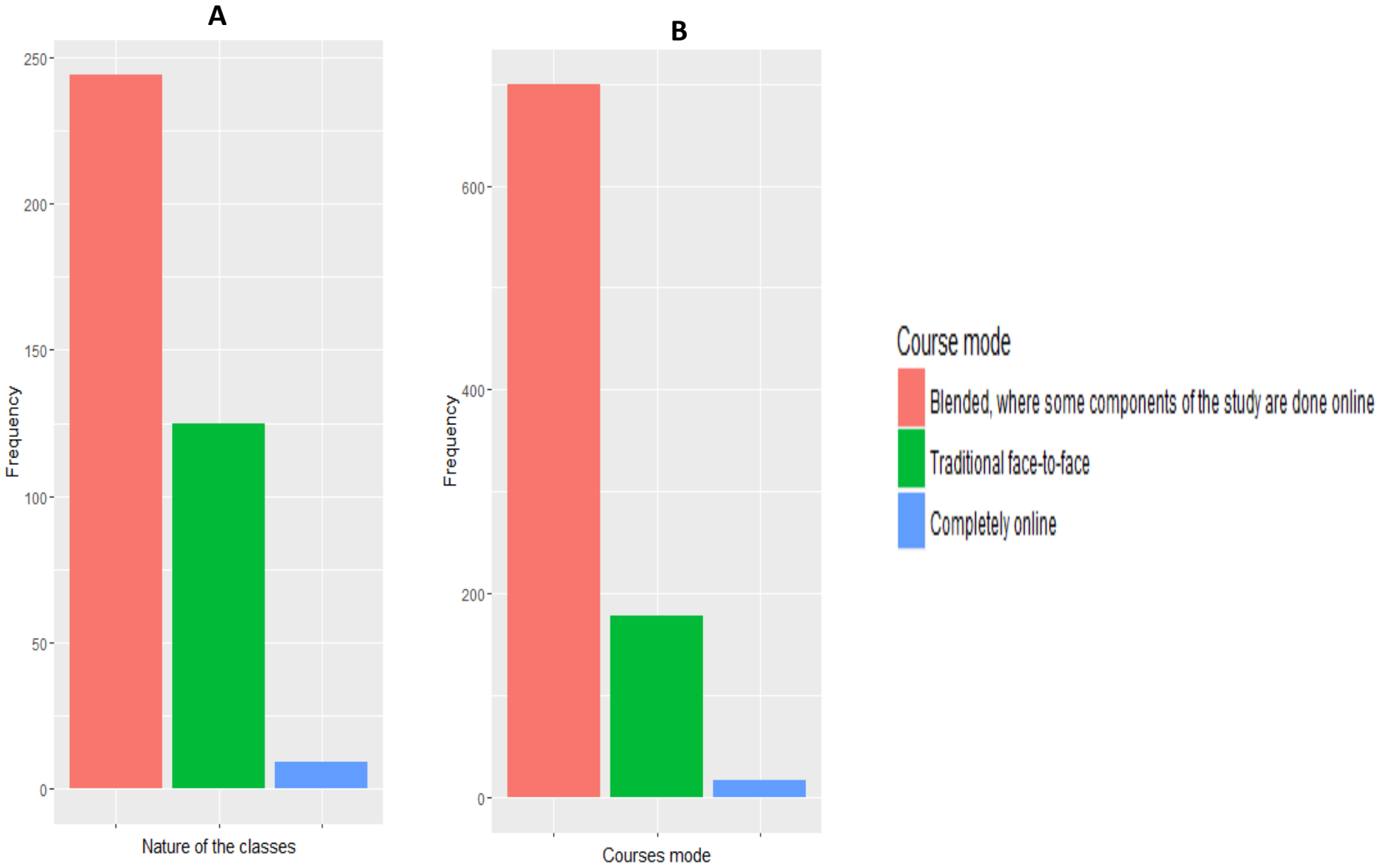
Key Findings

- Lecturers: **299 /** 1,070
- Students: **979 /** 17,445


Age distribution of all UMS academic staff
Frequency
200
150
100
50
0
0.3%
7.1%
21.3%
17.0%
20.0%
16.0%
6.8%
5.1%
3.3%
2.4%
0.7%
24-25
26-30
31-35
36-40
41-45
46-50
51-55
56-60
61-65
66-70
70-80
Age_Group


Your years of teaching experience
Frequency
80
60
40
20
0
25.8%
17.8%
18.1%
18.8%
9.1%
5.4%
2.7%
1.0%
1.3%
5 or <5 years
6-10 years
11-15 years
16-20 years
21-25 years
26-30 years
31-35 years
36-40 years
41-45 years
Years of teaching experience


Age Group
72.6%
25.8%
0.9%
0.2%
0.5%
600
400
200
0
Frequency
20 years and below
21-25
26-30
31-35
41 and above
Age_Group



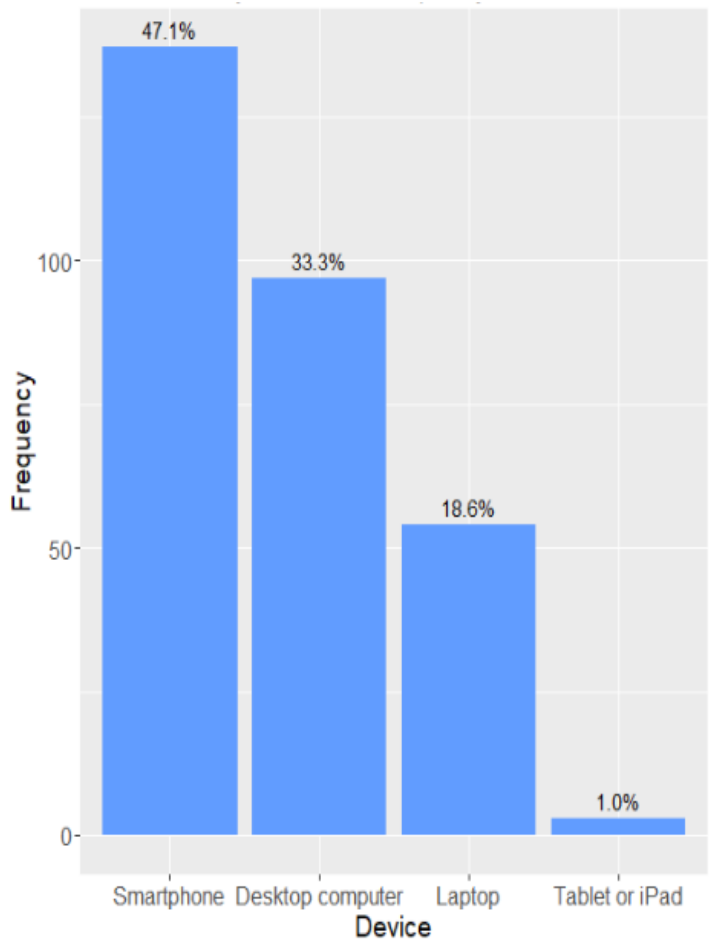
Transition to BL mode from conventional F2F mode of T&L

BARRIER 1

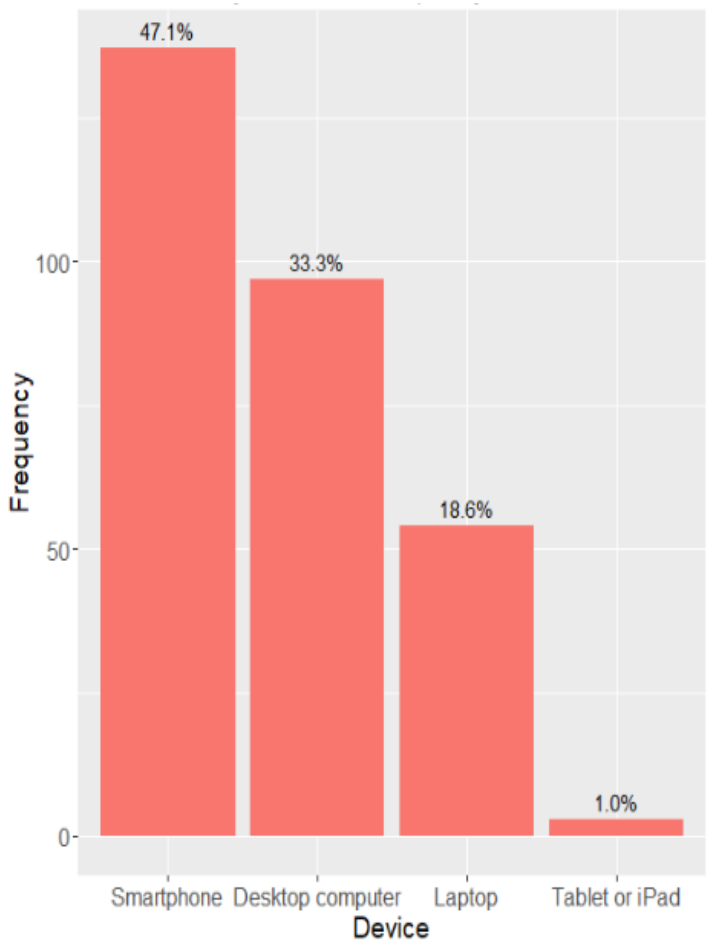
Technological Capabilities

Are these factors barriers to TEL?

- Accessibility to Hardware.
- Accessibility to the Network.
- Adaptability to Technology

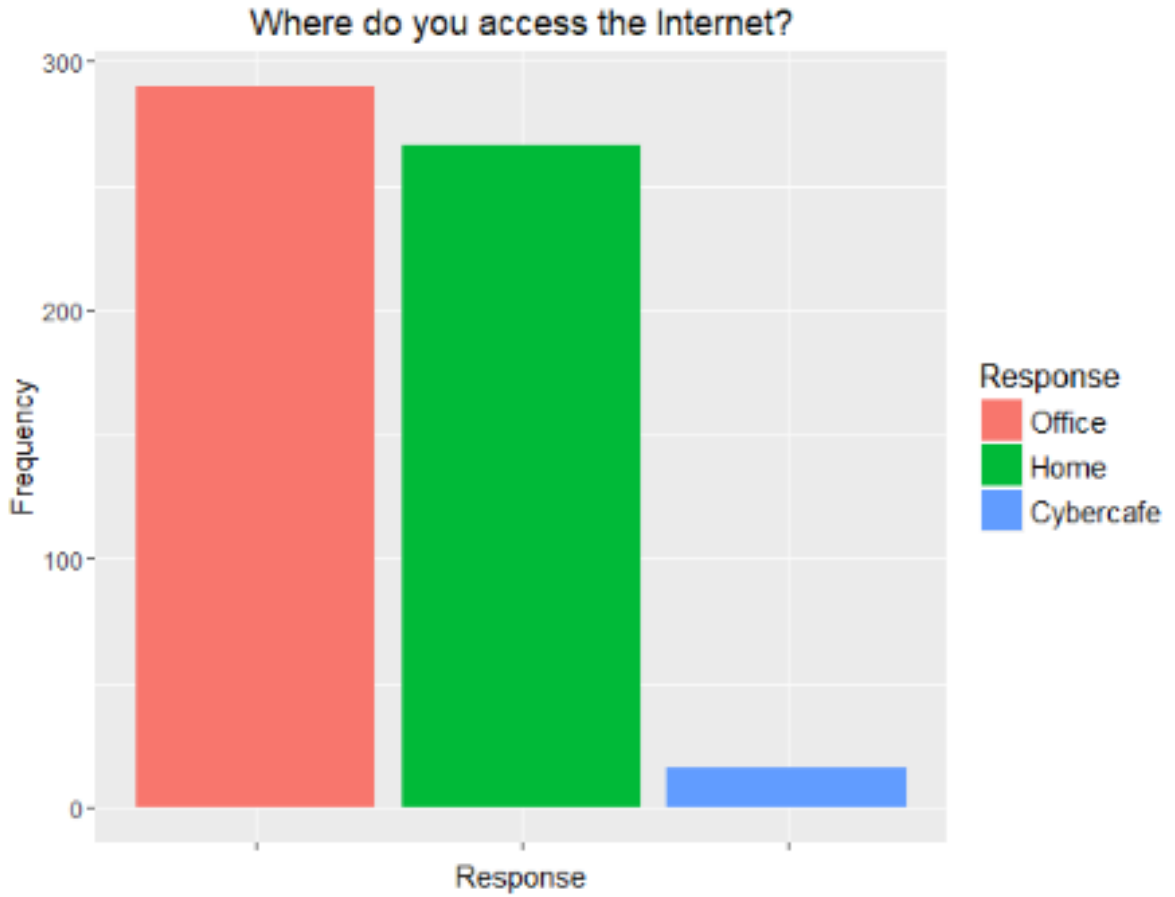


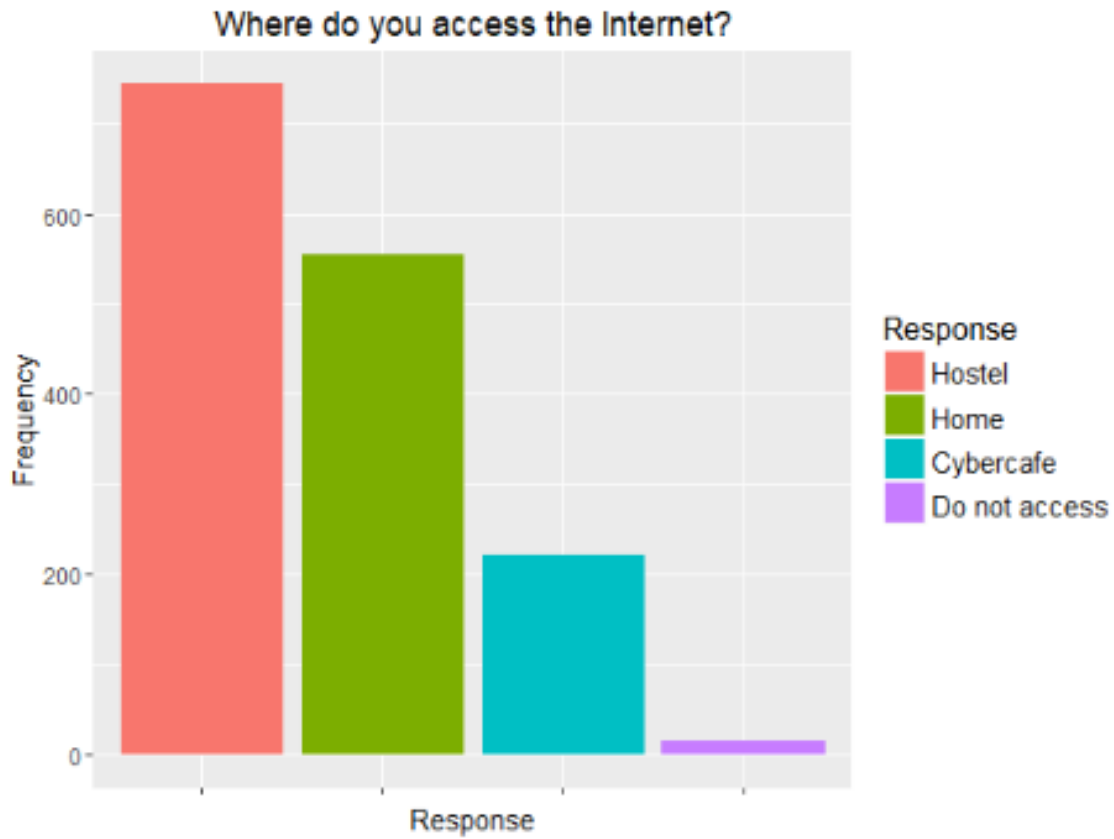
LECTURERS



STUDENTS

Both, lecturers and students accessed the network using multiple devices.





Lecturers access the TEL network at the office and students access the network at the hostels or at home.

Two-thirds of the 232 comments collected from student's survey were related to **Wi-Fi connection** for internet.

Most student access the internet at the hostel, especially at the campus hostel which currently accommodates more than **5,500** students

These issues have been addressed by providing better internet connectivity at hostels.

BARRIER 2

Instructional Strategies

Content Creation

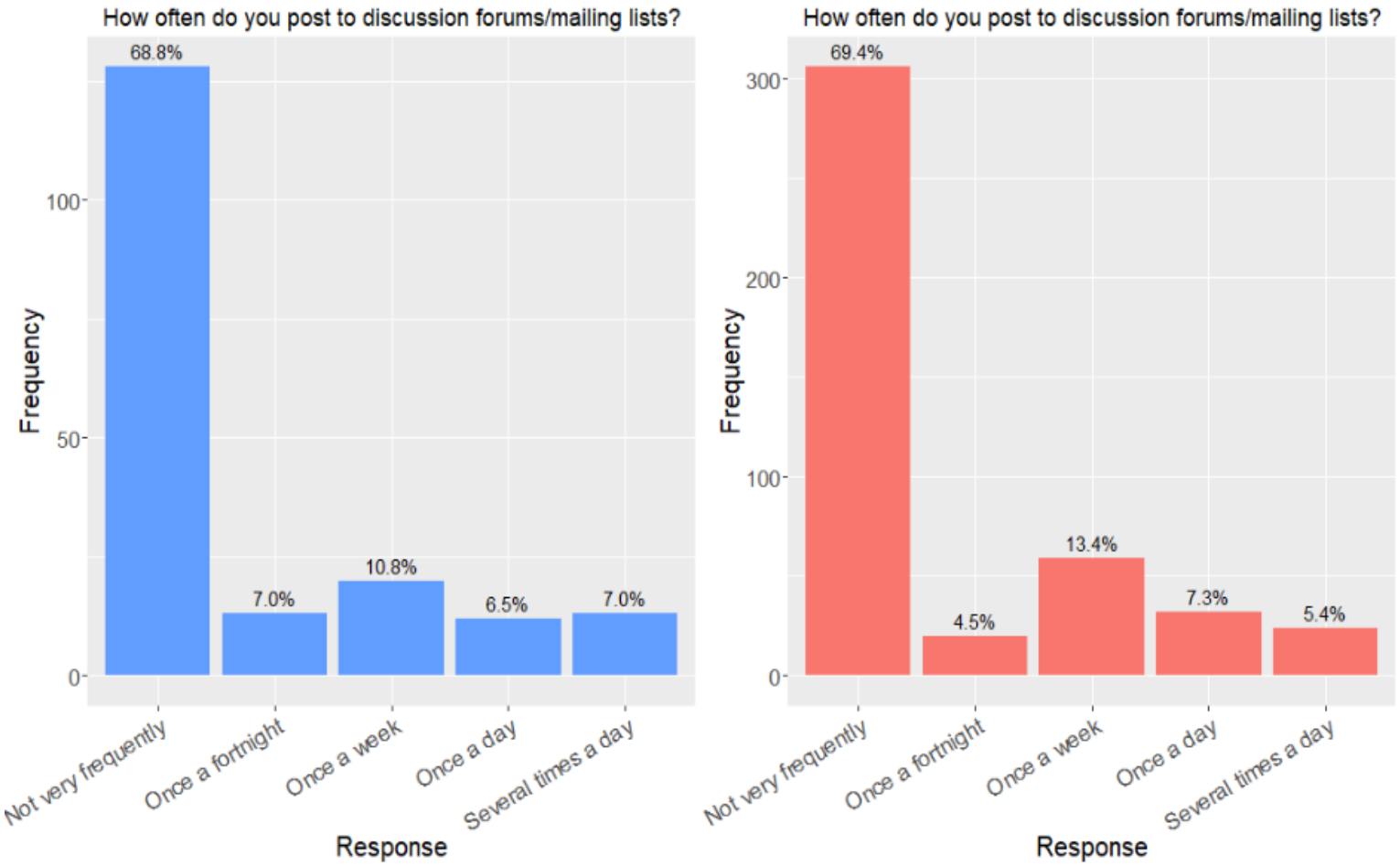


Figure 5.4. How frequently post in discussion forum/mailing lists. Left – lecturer; Right – student.

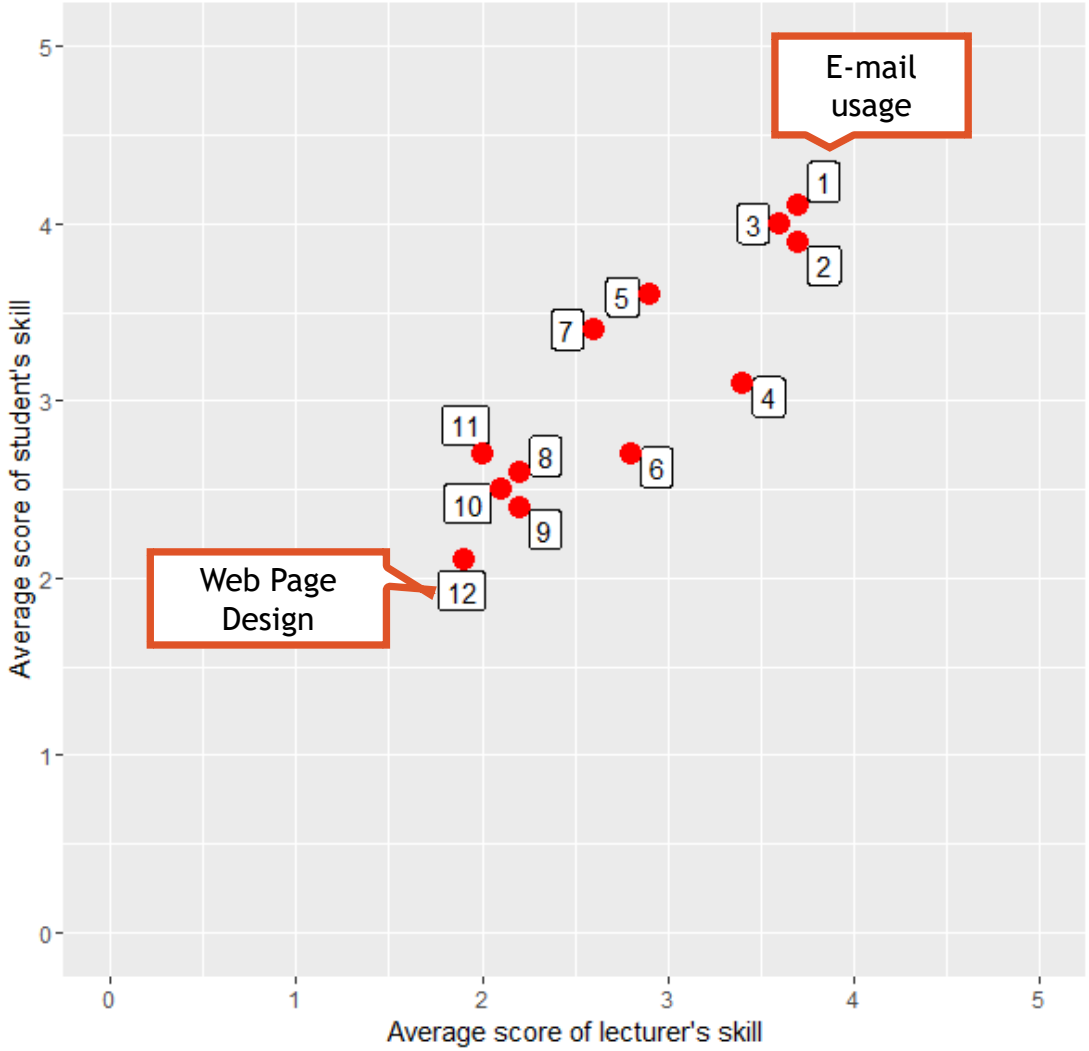
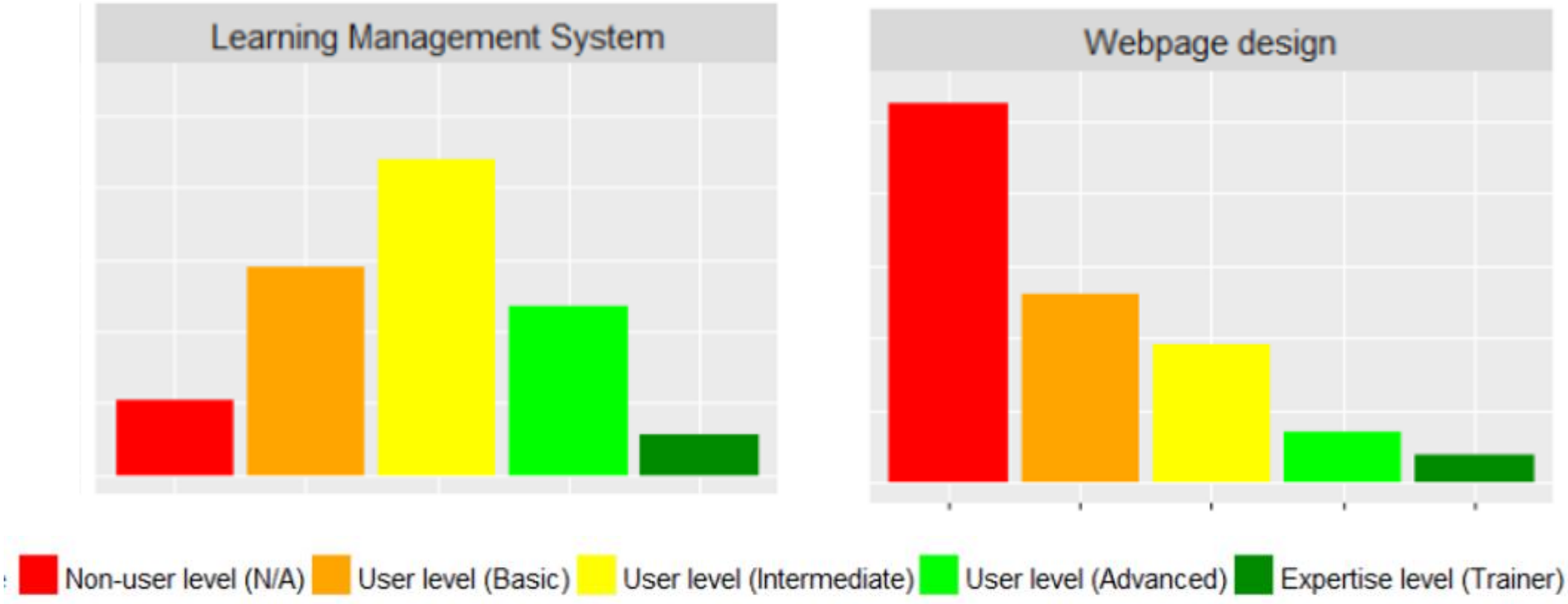


Figure 5.5. Correlation between average score of lecturer's skill and average score of student's skills. Labels are corresponding with numbering for computer-related skills in Table 5.1.



Lecturers were assessed on the basis of 12 computer skills and major training needs were identified and addressed via workshops.

Lecturers have to adapt to new T&L methods.

- ***Connectivism*** *is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks (Downes, 2007).*

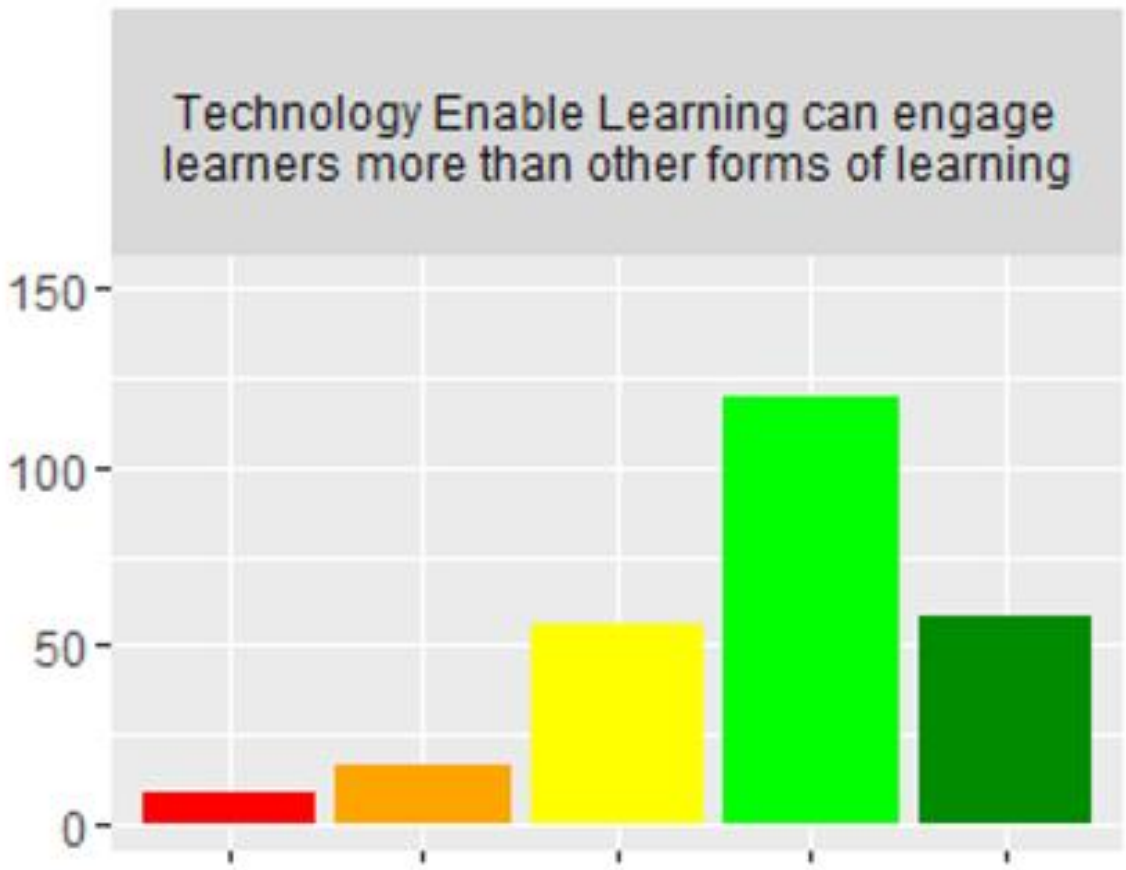
BARRIER 3

Contextual factors

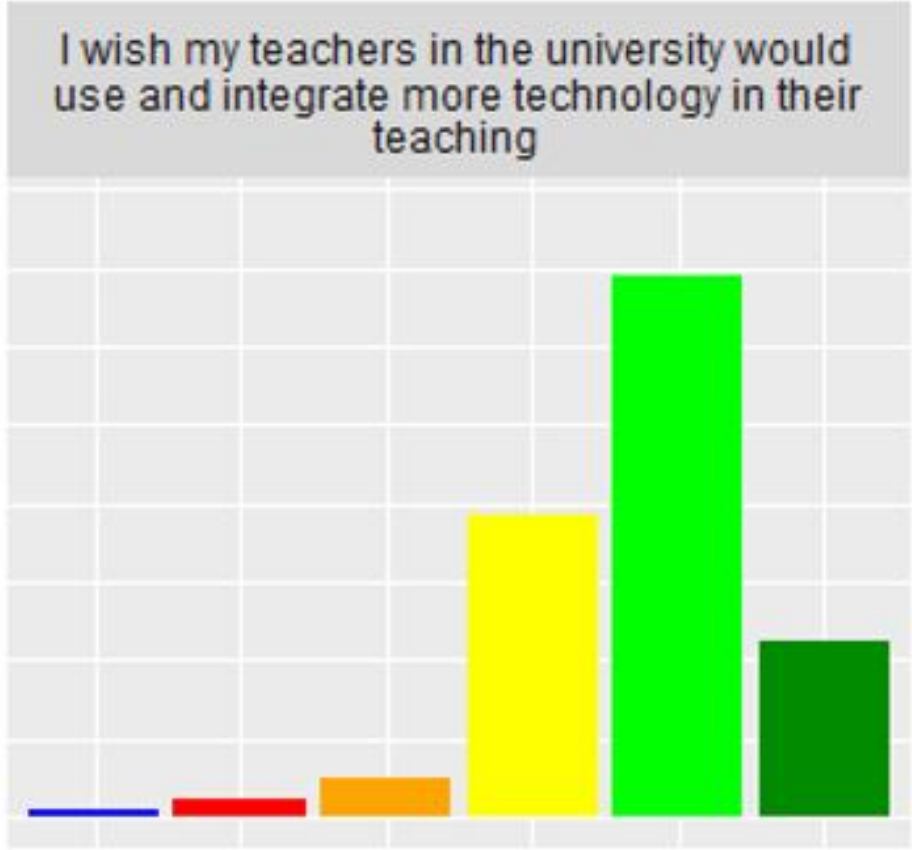
"…students can easily access to lectures notes, more online classes rather than a lecture in class, because to be truth (sic), 2 hours is like a waste of time, **we only focus on the first 30-45 mins and after that our mind is somewhere else**…" [student's Feedback No. 191]

“Learning is still **most effective the old ways** via rigorous reading and writing, not via some fanciful animation and videos...” [Lecturer’s Feedback No. 326]

“**Traditional classroom interactions are still the best** - We may promote students not to come to class in we're not careful.” [Lecturer’s Feedback No. 95]



LECTURER



STUDENT

The Student perceives TEL as a vital tool for his/her intellectual development however **cost** and **resource** limitations constitute a barrier.

- Concur with the findings by Muilenberg and Berge (2005)

The lecturers demonstrate a resistance to the adoption of TEL due to their perception of TEL as a **attenuation of the pedagogical process**, however they admit that TEL is essential to address student needs.

- Concur with the findings by Lloyd et al. (2012)

Conclusions

The TEL readiness survey provided an insight into the institutional capacity with reference to the implementation of TEL.

This has enabled the Center for E-learning to make specific interventions in order to address our limitations.

This model can form the basis for other public universities which plan to implement TEL platforms.

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- The complete report is available online at: http://oasis.col.org/handle/11599/2974

THANK YOU