

SUS applied to TUCN's LMS Evaluation

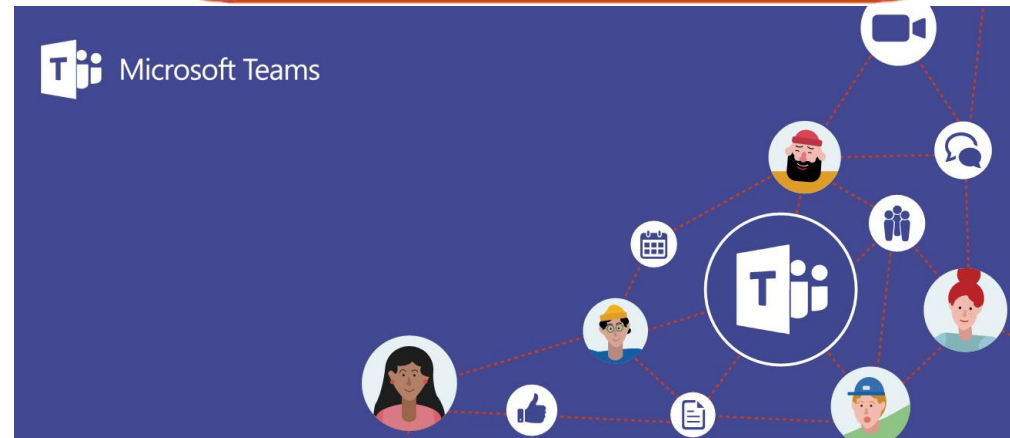
Phase 1: Pilot Case Study

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TUCN's LMS Technology



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Adapted SUS applied for TUCN LMS Evaluation

Case study – SUS + Nielsen's Usability Factors

- I would like to use the Office 365 features frequently
- I found the Office 365 features unnecessarily complex
- I thought Office 365 features were easy to use
- I think that I would need the support of a person with technical knowledge to be able to use the Office 365 features.
- I found various functions in Office 365 features well integrated
- I thought there was too much inconsistency in this system
- I think that most people would learn to use Office 365 features very quickly
- I found the Office 365 features very cumbersome to use
- I felt very confident using the Office 365 features
- I needed to learn a lot of things before I could start browsing Office 365 features

Learnability

Efficiency

Memorability

Errors

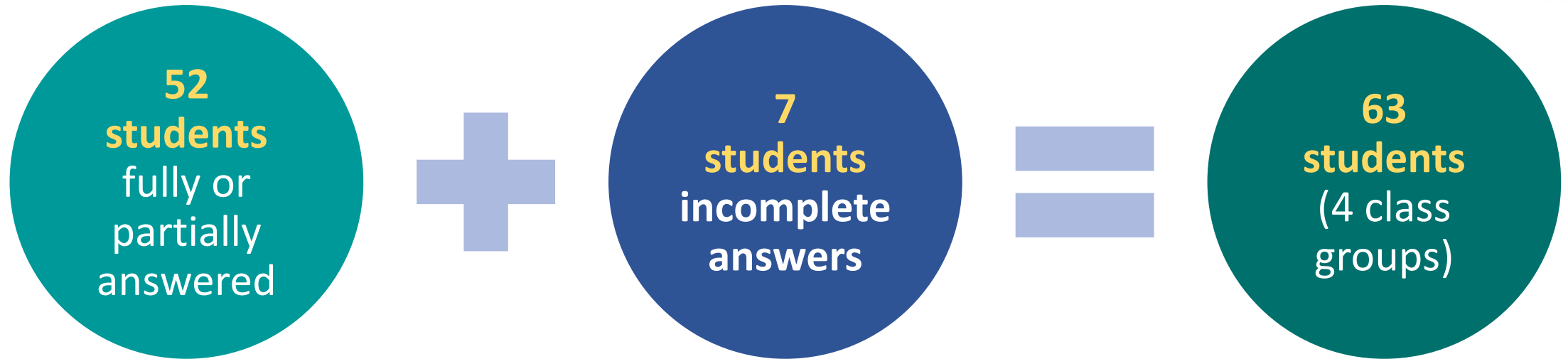
Satisfaction

System-specific



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Case study- TUCN LMS: Focus Group

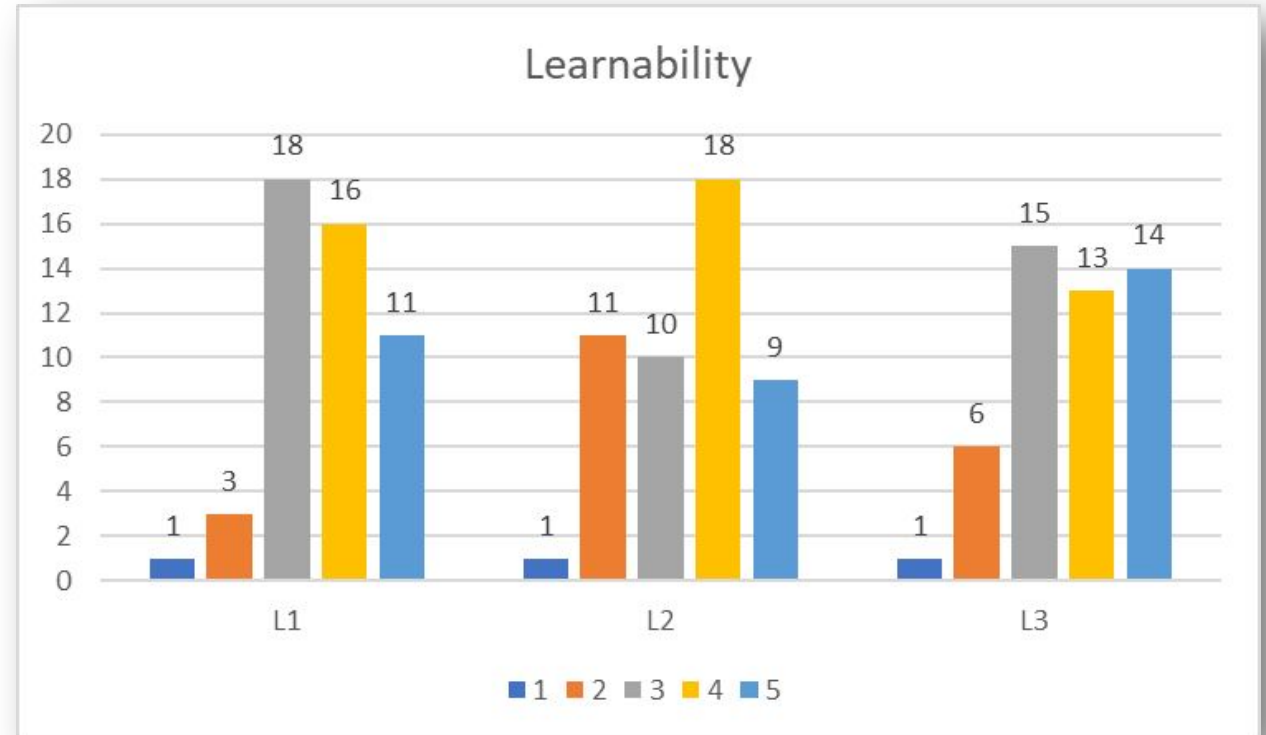


5	Strongly agree
4	Agree
3	Neutral
2	Disagree
1	Strongly disagree

Extracted SULMS (Usability Scale applied to LMS)

Learnability

- L1.I think that various functions are well-integrated in Office 365 educational features.
- L2.I think that I received enough training on how to use Office 365 educational features.
- L3.I think that most people can learn very fast how to use Office 365 educational features.



Extracted SULMS (Usability Scale applied to LMS)

Efficiency

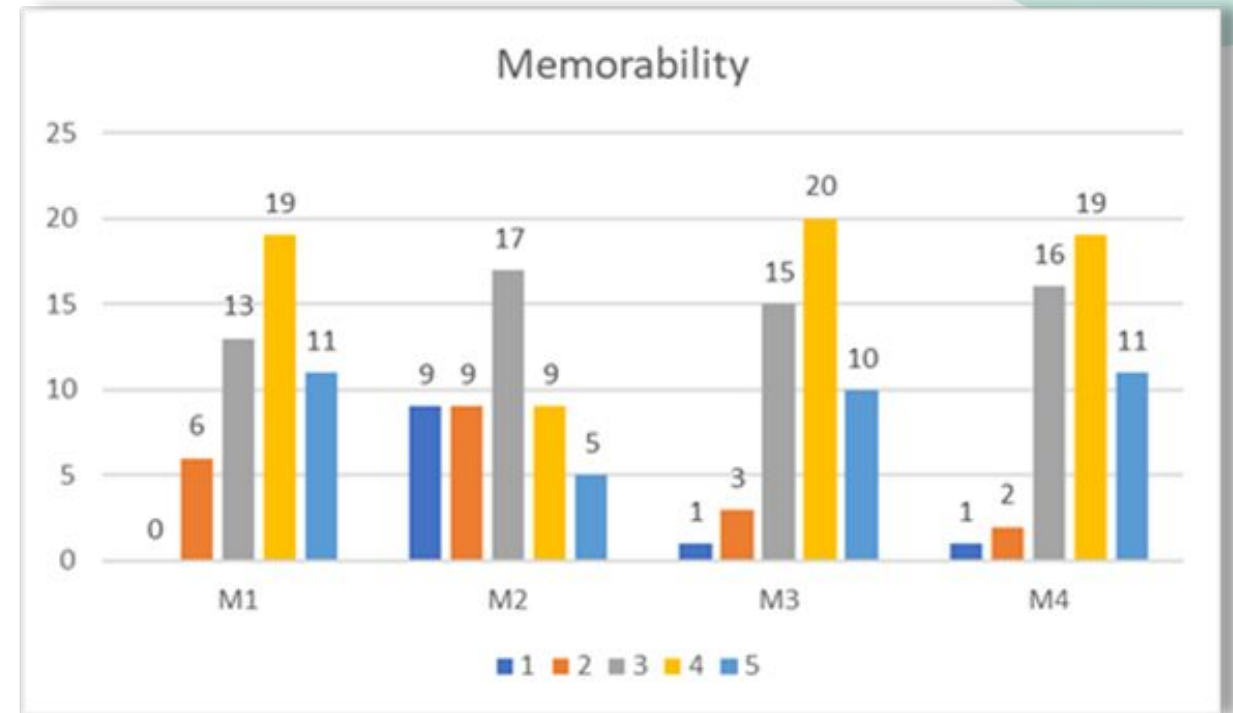
- E1.Office 365 educational features help me to do the necessary activities of the class faster.
- E2.I can easily find the necessary information in Office 365 educational features.
- E3.Office 365 educational feature are very slow (Reverse coded)
- E4.I can broadcast the announcements of the class very fast using Office 365 educational features.
- E5.I can make class plans very effectively using Office 365 educational features



Extracted SULMS (Usability Scale applied to LMS)

Memorability

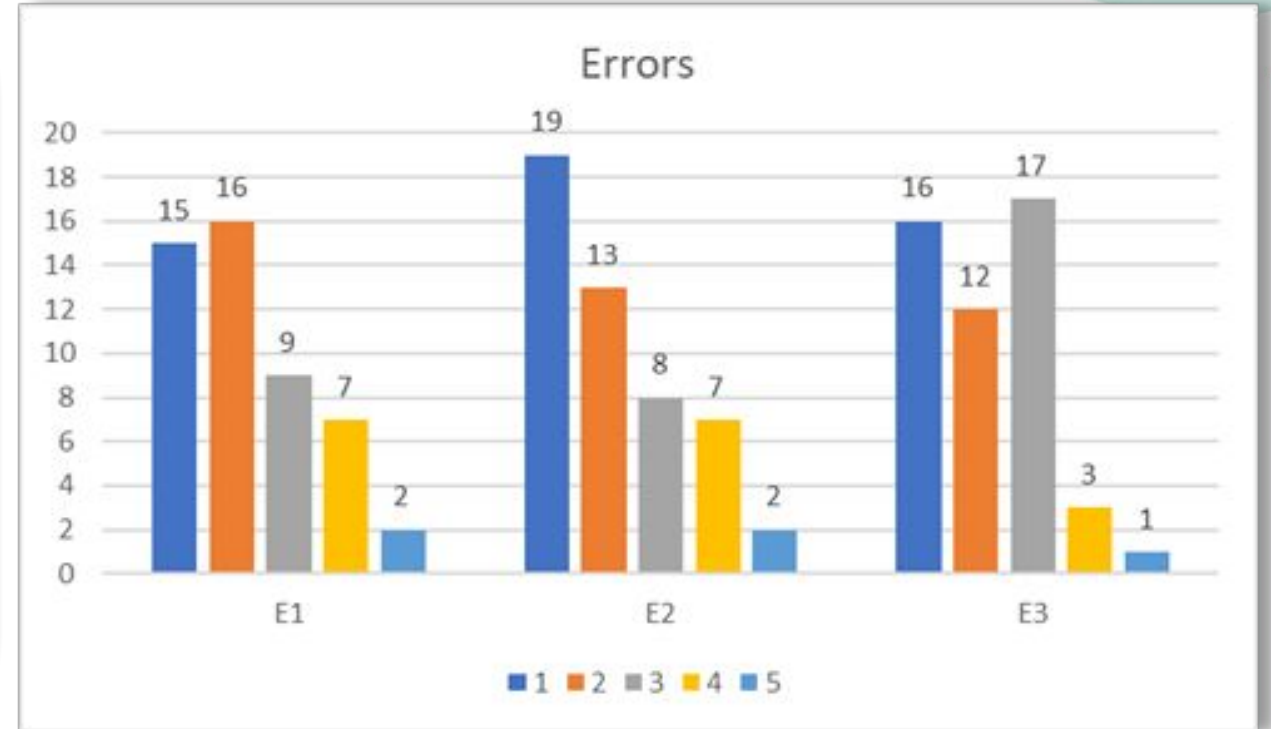
- M1.I think that usage of Office 365 educational features is very easy.
- M2.I find Office 365 educational features unnecessarily complex (Reverse coded).
- M3.User interface of Office 365 educational features is very suitable for a Learning Management System.
- M4.I easily understand where I am in Office 365 educational features while I am learning and can easily understand how to manage.



Extracted SULMS (Usability Scale applied to LMS)

Errors

- E1.I think that I need help of a technician to be able to use Office 365 educational features (Reverse coded).
- E2.I get several different system/network errors very often when using the Office 365 educational features (Reverse coded).
- E3.I think that there are several inconsistencies in the Office 365 educational features (Reverse coded).

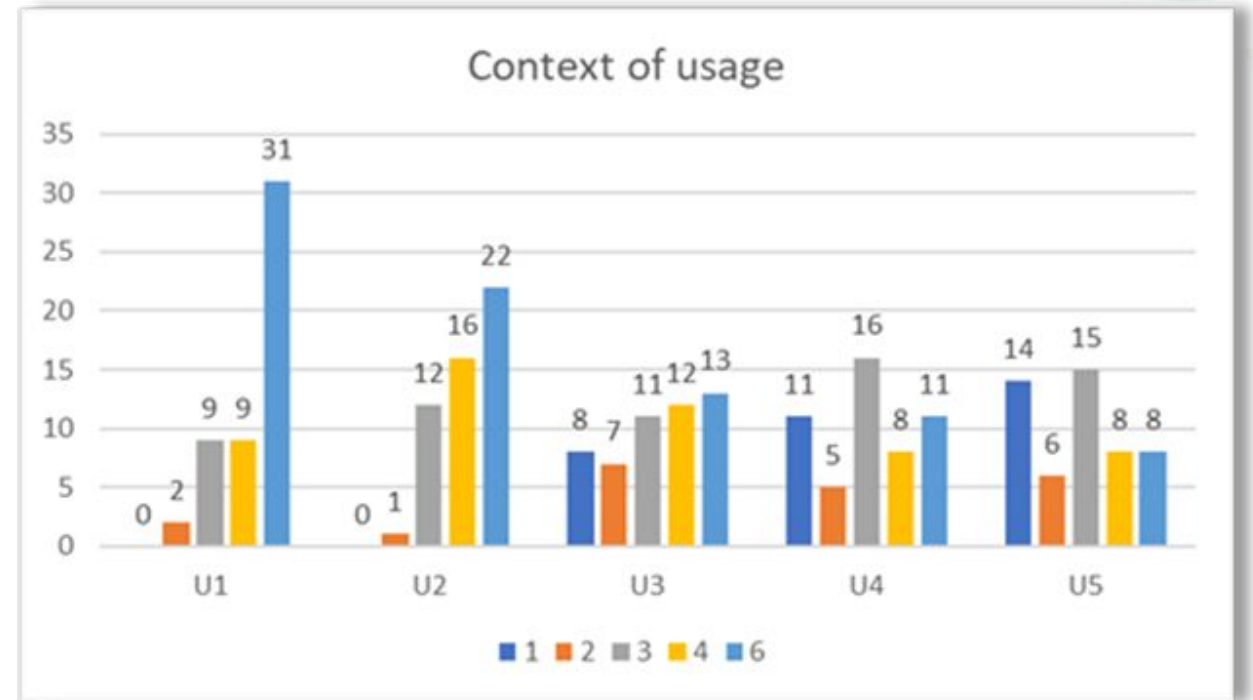


Extracted SULMS (Usability Scale applied to LMS)

Action specific

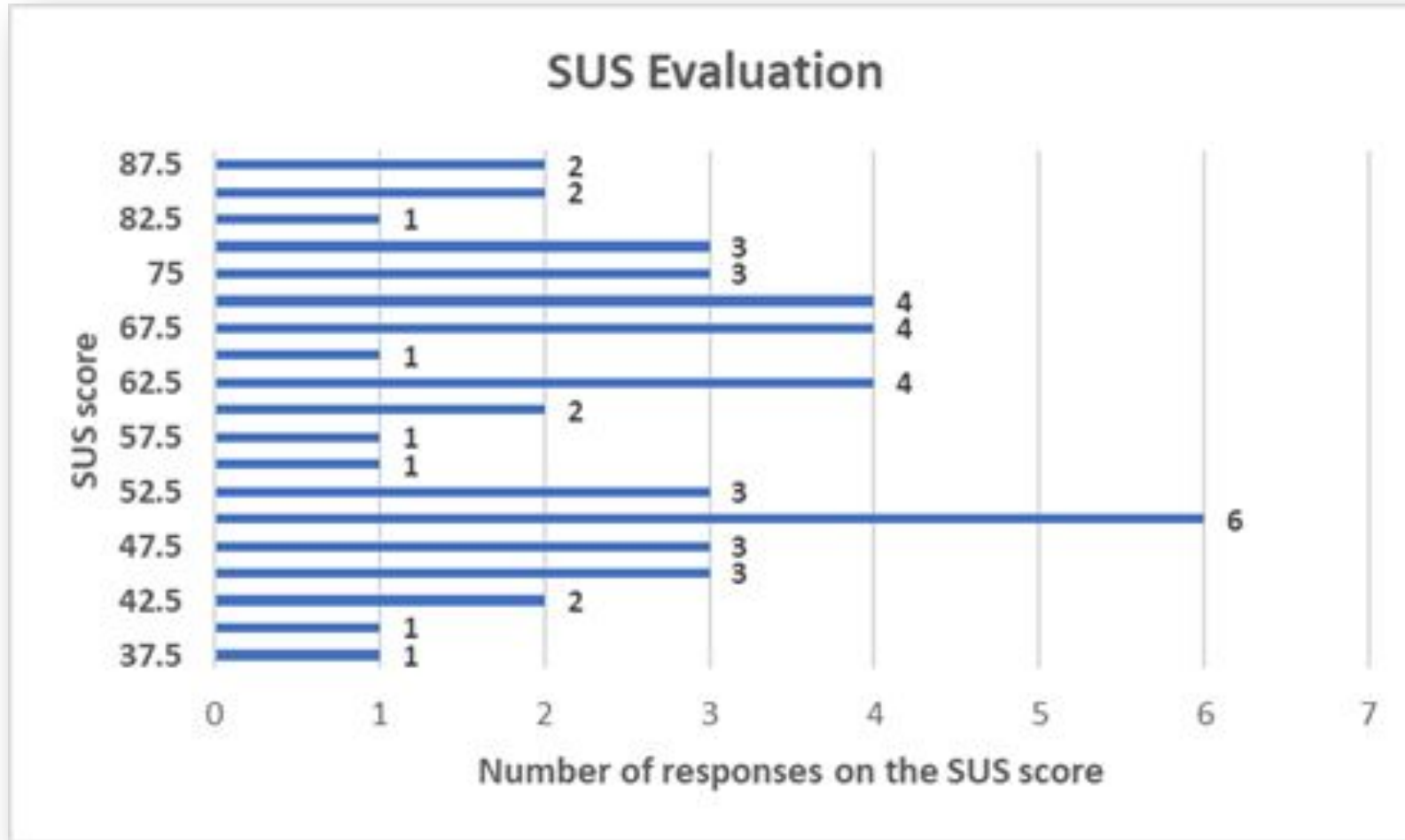
To what extent do you use Office 365 features?

- U1.I use Office 365 for downloading files for my courses.
- U2.I use Office 365 for uploading files required by teachers.
- U3.I use Office 365 for posting ad-hoc notes on classroom activities
- U4.I use Office 365 for posting ad-hoc notes on course activities
- U5.I use Office 365 to communicate/interact with other group mates.



Adapted SUS applied for TUCN LMS Evaluation

Case study –SUS score



61.6%
weighted
average
value



Adapted SUS applied for TUCN LMS Evaluation

Case study – Conclusions

As a result of the ICE LMS assessment:

- Positive assessment associated with general satisfaction in using LMS features (particularly Office 365) for educational activities
- Further points of intervention: communication, collaboration and planning features should be better integrated into the O365 classroom workspac, to effectively support educational activities.
- Overall validation of the extended SUS model



SUS applied for TUCN LMS Evaluation

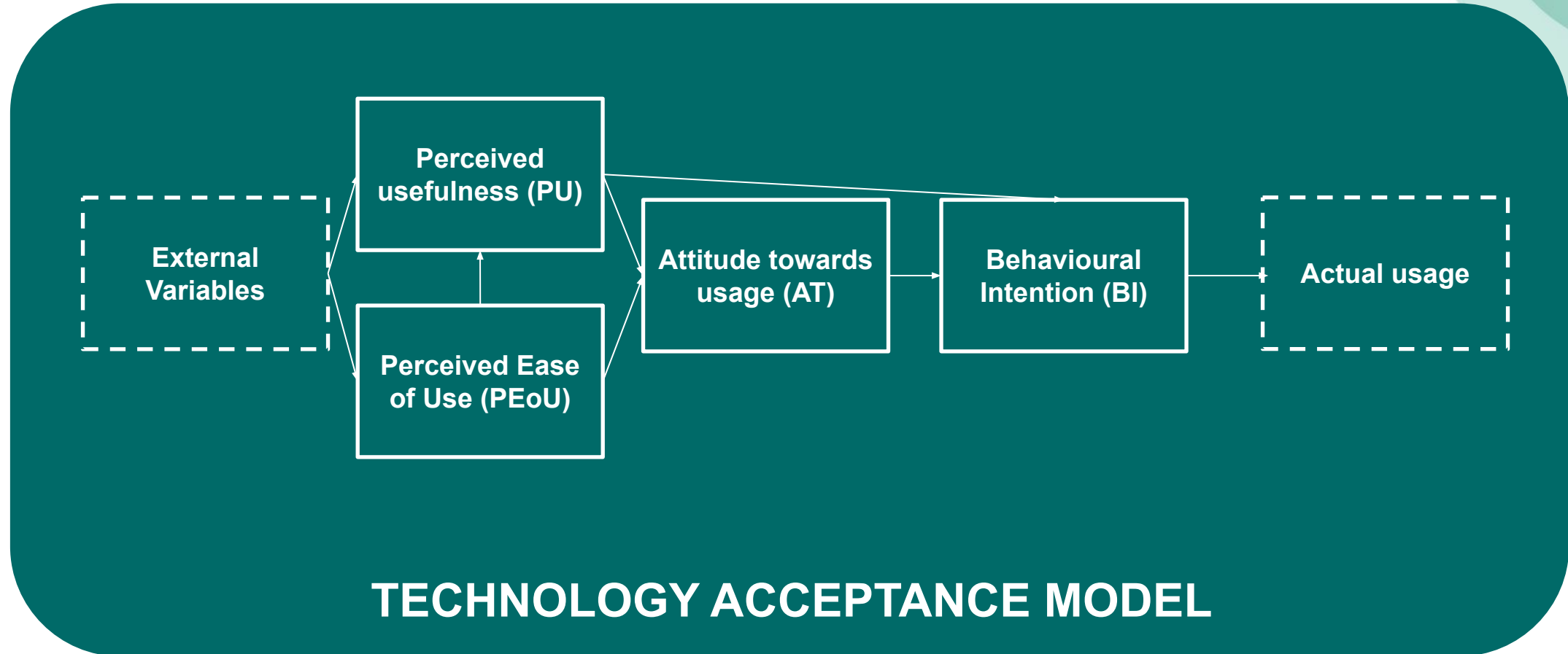
Phase 2: Extended Case Study

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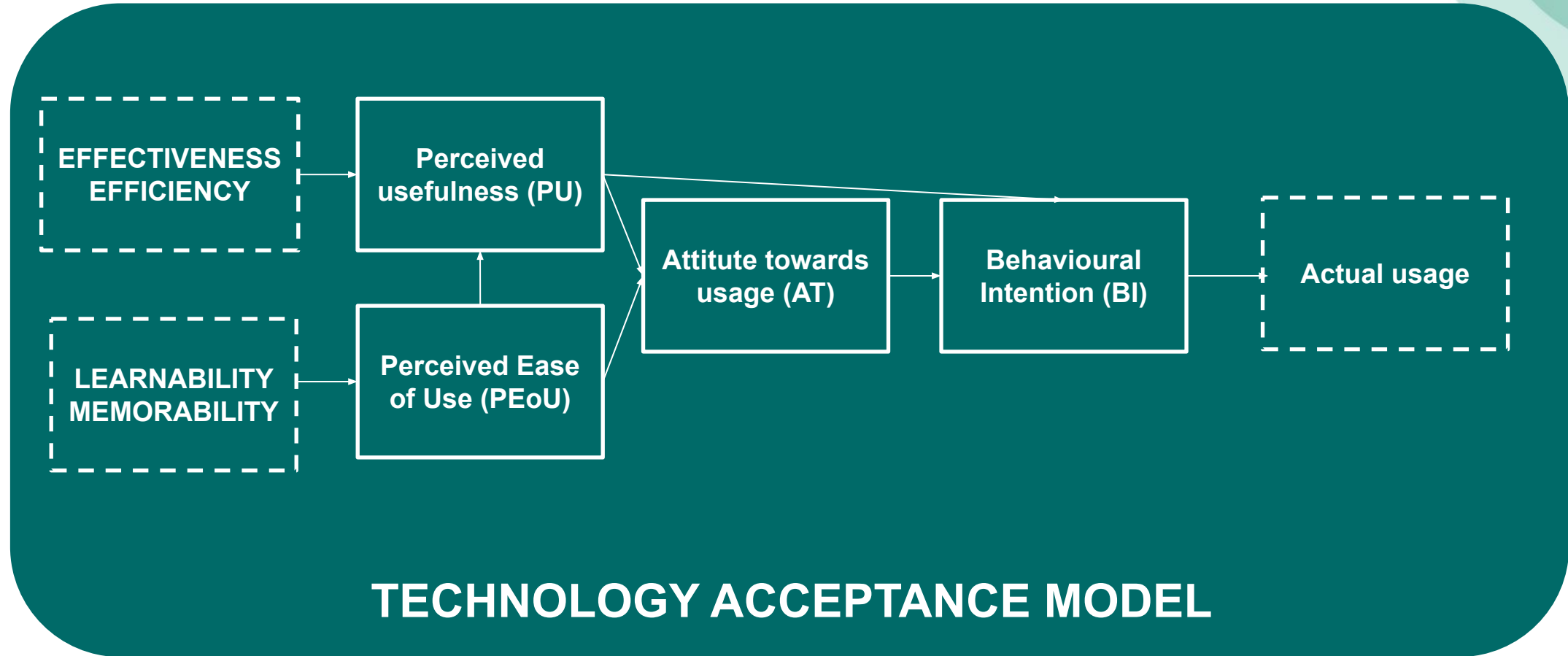


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Adapted SUS towards TAM



Adapted SUS towards TAM



Adapted SUS applied for TUCN LMS Evaluation

Case study – Perceived Usefulness

- PU1 Using O365 EF enables me to access the documents more quickly
- PU2 Using O365 EF improves my academic performance
- PU3 O365 increases academic productivity
- PU4 O365 improves my learning performance
- PU5 Using O365 enhances effectiveness in searching relevant documents
- PU6 O365 makes it easier to study course content
- PU7 Using O365 enables me to accomplish my tasks more quickly
- PU8 I find O365 very useful
- PU9 Overall, I find O365 to be advantageous
- PU10 O365 helps to understand the lesson more quickly
- PU11 After using O365, I get better results at tests
- PU12 After using O365, I know more on the educational curricula
- PU13 Overall, I find O365 useful for learning
- PU14 Using the O365 enhances and improves my effectiveness, productivity and effectiveness on actions and tasks
- PU15 Using the O365 EF expands my digital proficiency
- PU16 Using the O365 EF supports finishing the tasks rapidly
- PU17 Using the O365 EF provides a great user experience
- PU18 Using the O365 EF makes it easier for me to engage in educational activities



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Case study – Perceived Ease of Use

- PEoU1** Learning to use O365 is easy for me.
- PEoU2** Using O365 is easy for me
- PEoU3** I find it easy to get O365 to do what I want to do.
- PEoU4** My interaction with O365 is clear and understandable and familiar to use
- PEoU5** I would find O365 to be flexible to interact with.
- PEoU6** It is easy to become skilful at using O365.
- PEoU7** Understanding how to operate with O365 is easy
- PEoU8** Learning how to operate with O365 is easy
- PEoU9** Remembering how to operate with O365 is easy
- PEoU10** Understanding the O365 features is easy
- PEoU11** Collaborating with colleagues is easy
- PEoU12** Figuring out how to use the O365 EF was easy for me
- PEoU13** I would like to use the O365 EF again
- PEoU14** When I again use the O365 EF I can easily recognize them



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Case study – Attitude towards Usage

- AT1 Using O365 is a good idea (...)
- AT2 I feel that using O365 in my learning is pleasant
- AT3 I feel helpful when I use O365 in my learning
- AT4 It is desirable to use O365
- AT5 Studying through O365 is a good idea
- AT6 I am positive towards using O365
- AT7 I like to use O365 in my learning
- AT8 O365 is fun
- AT9 O365 provides an attractive learning environment
- AT10 Using O365 EF makes learning more interesting



Adapted SUS applied for TUCN LMS Evaluation

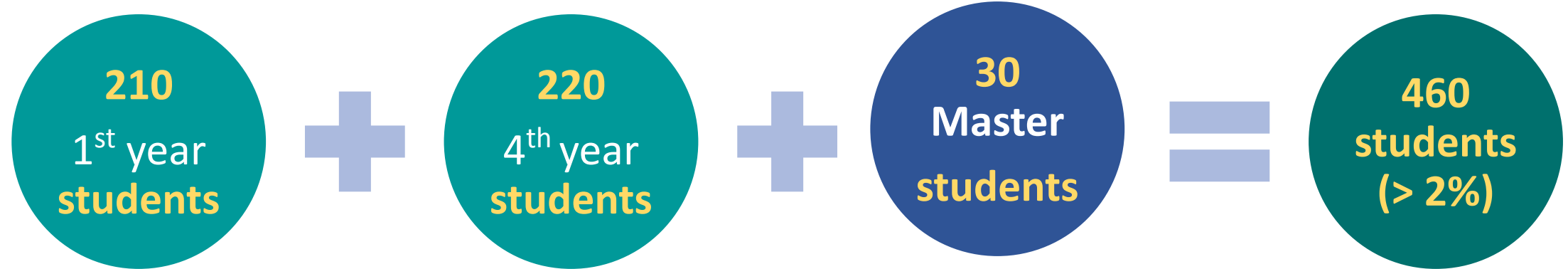
Case study – Behavioural Intention

- BI1** I intend to continue using O365 during my studies' period due to its more interesting EF.
- BI2** I intend to continue using O365 during my studies' period.
- BI3** I will always try to use O365 in my educational life.
- BI4** I plan to continue using O365 frequently.
- BI5** I use O365 for my daily learning transactions
- BI6** Using O365 for handling my university related transactions is something I do
- BI7** I see myself using O365 for handling university related transactions.
- BI8** I intend to check updates in O365 learning features (...) frequently
- BI9** I intend to use the learning features of O365 heavily
- BI10** I intend to use this system for learning
- BI11** I would recommend the use of O365 to other colleagues
- BI12** I would reuse the O365 for relevant learning activities
- BI13** I intend to increase my use of O365 in the future
- BI14** Assuming I have access to O365 EF, I intend to use them
- BI15** Given that I have access to O365 EF, I predict that I would use them



Adapted SUS applied for TUCN LMS Evaluation

Case study- TUCN LMS: Office 365 -Sharepoint

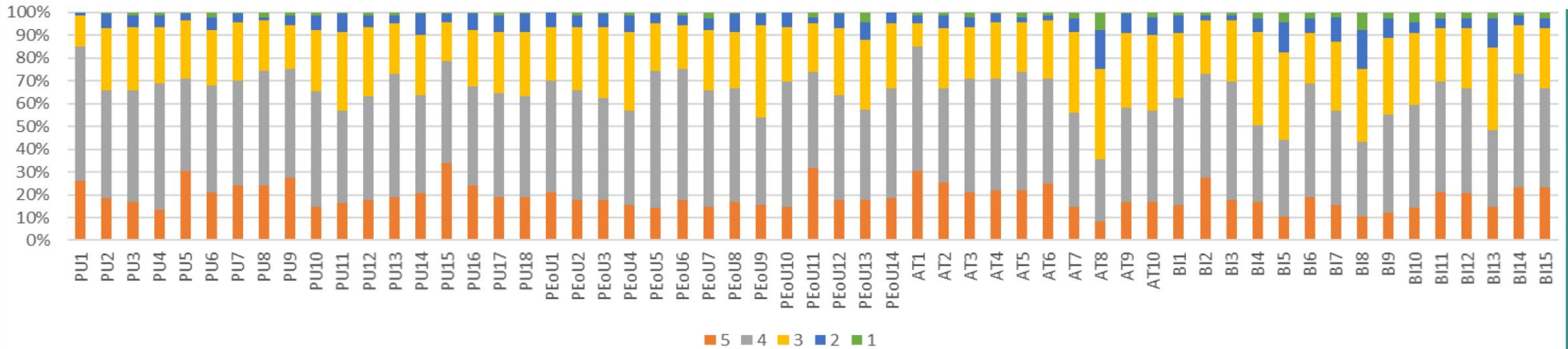


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Adapted SUS applied for TUCN LMS Evaluation

Case study- TUCN LMS: Results

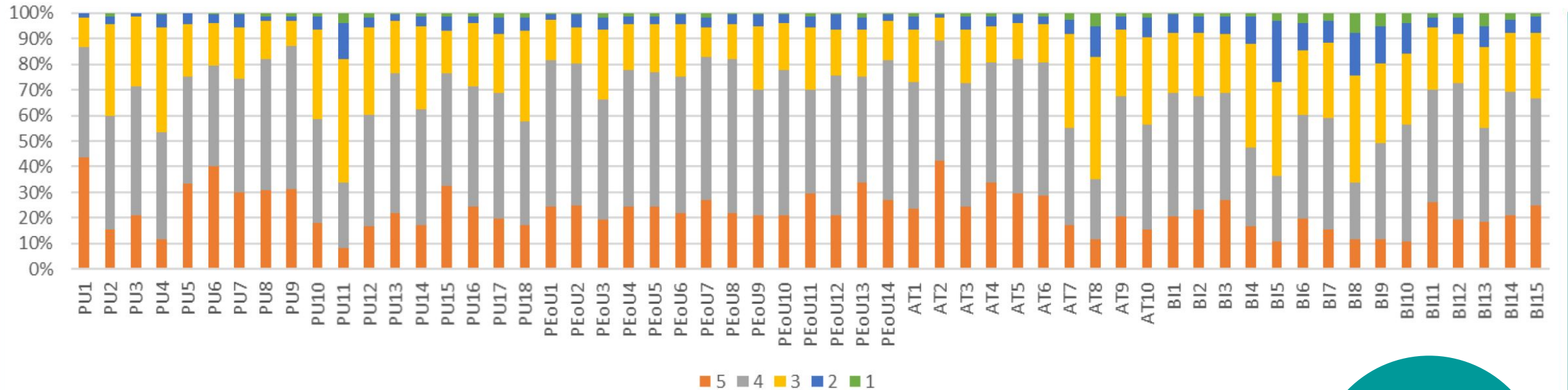


210
1st year
students



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Case study- TUCN LMS: Results

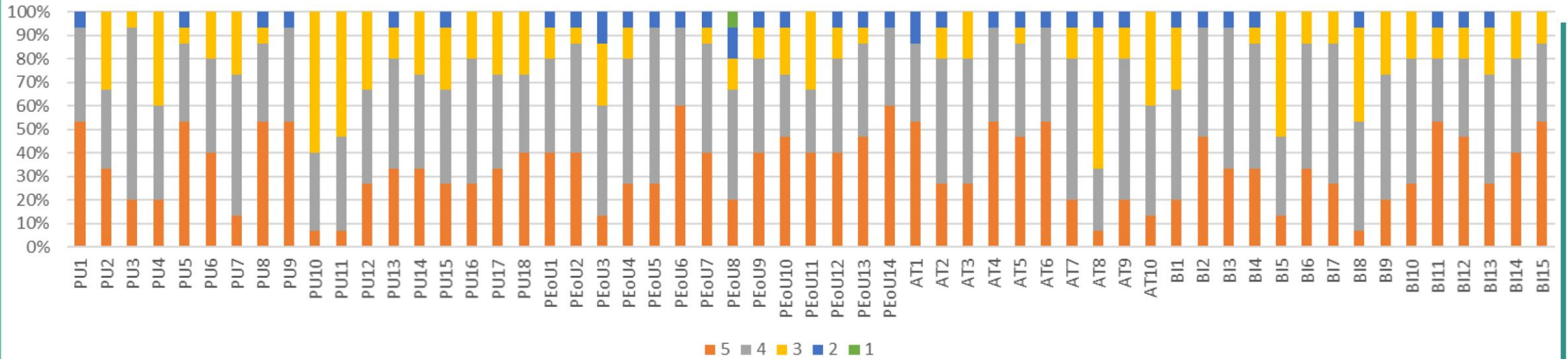


220
4th year
students



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Case study- TUCN LMS: Results

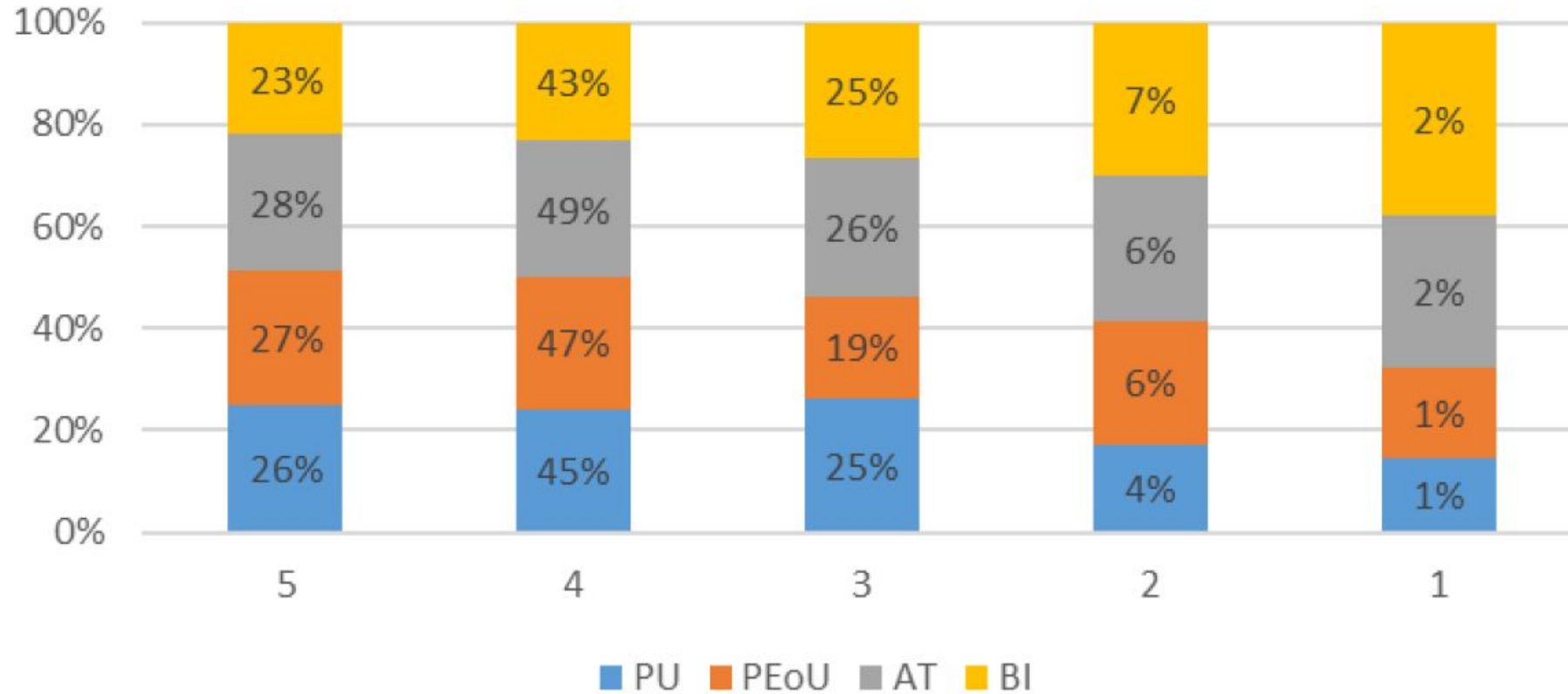


30
Master
students



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Case study- TUCN LMS: Global results



460
students

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Adapted SUS applied for TUCN LMS Evaluation

Case study – Conclusions

- Acceptance rate correlated to the maturity of digital skills;
- Proved Technology Adoption;
- Accurate decomposition of the Behavioural Intention and Actual Usage (compared to SUS);
- No score computation for a quantifiable comparison;

Further assessment:

- Transfer of TAM towards use-cases for E-Learning analysis and design;
- Extension towards the 9 TUCN profiles (both students and teachers)



Adapted SUS applied for TUCN LMS Evaluation

Case study – Conclusions

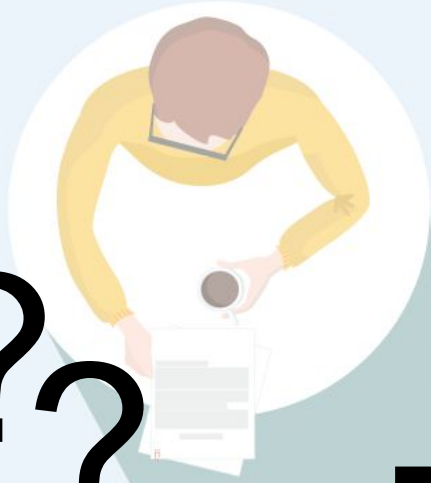
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???



THANK YOU!

The System Usability Scale (SUS) and its applicability to e-Learning environments

Laura Grindei, Aurelia Ciupe

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