



The Utilization of System Usability Scale in Learning Management Systems: A Case Study of Jeddah Community College

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Introduction

In the last decades, the development of Information and Communication Technologies (ICT) has introduced many important benefits in various areas. In higher educational institutions, ICT has transformed the manner in which university courses are delivered. The integration between ICT and education has produced various advantages. The reason for the adoption of advanced ICT is usually a wish to improve teaching and learning effectiveness. The evolution of ICT in the field of education has produced new concepts such as e-learning, blended learning, virtual classes, web-based classes, online learning, and LMS.

Learning Management Systems (LMS)



Research Motivation

- JCC just adopted a LMS, and no usability evaluation has been done on the system.
- LMS experience a lot of usability issues.
- Evaluating the usability of e-learning systems is considered as an important task.
- It was reported that in spite of its advantages, SUS has rarely been used in evaluating LMS.

Jeddah Community College (JCC)

- Computer Networks
- Accounting
- Sterilization
- Graphics
- Insurance

3 year higher education institute

932 Students

45 Faculty

25 Staff

Saudi Arabia

System Usability Scale (SUS)

1996

Introduced by John Brooke



10-statement Survey

- Participants agree or disagree with the statements based on 5-point Likert scale.

1 Strongly Disagree 2 3 4 5 Strongly Agree

- SUS score can be within the range of 0 and 100 for each participant.



Methodology



Demographic Information

10 SUS Statements



Google Forms
Online survey for data collection



Pilot: The survey was sent by email to 5 students.



Participants: All participants of this study were enrolled in IT courses.



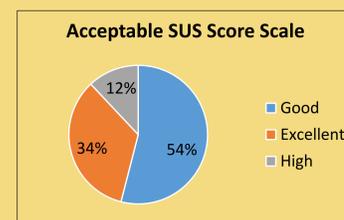
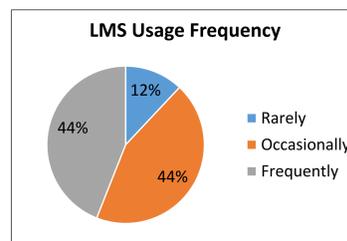
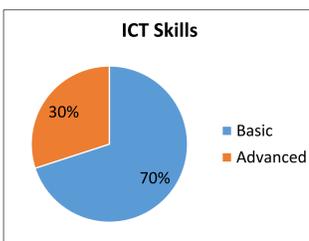
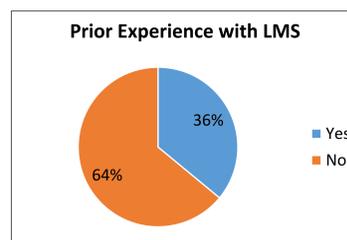
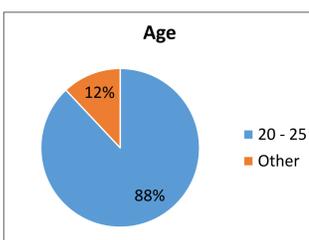
Data was analysed using Excel 2016 and SPSS 20



50 responses were received



Findings



Overall mean of SUS score = 69.3

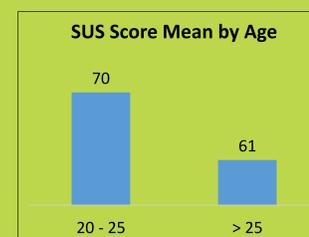


10 items, $\alpha = 0.707$



Demographic Information

SUS Score by Age

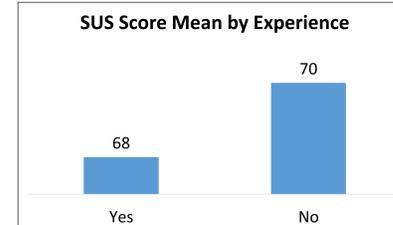


- Data is normally distributed.
- There was no statistical significant difference in SUS score between age groups ($t(48) = 1.59, p = .119$).

Age	SUS Score	
	Coefficient	.223
	p-value	.119
N		50

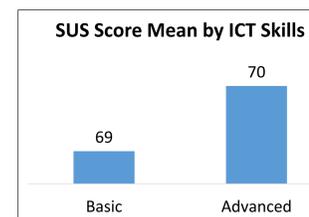
- There is no correlation between age and SUS score.

SUS Score by Experience with LMS



- Data is statistically different from a normal distribution.
- There was no statistical significance difference in SUS score between experienced and non-experienced students ($U = 279, p = .855$).

SUS Score by ICT Skills

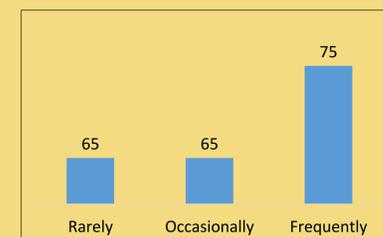


- Data is normally distributed.
- There was no statistical significance difference in SUS score between ICT skills groups ($t(48) = -.305, p = .762$).

ICT Skills	SUS Score	
	Coefficient	.044
	p-value	.762
N		50

- There is no correlation between ICT skills and SUS score.

SUS Score by ICT Skills



- There is a statistical significance difference in SUS score between LMS usage frequency groups ($\chi^2(2) = 7.376, p = .025$).
- LMS usage frequency is positively associated with SUS score, $r = .376, n = 50, p = .007$.

SUS Score by LMS Usage Frequency

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