E-learning Framework for Saudi Universities

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Outline

Why this Topic?

Literature Review
  • Background of Saudi Higher Education
  • E-learning in Saudi higher education
  • Challenges of Saudi higher education

Research Objectives

Research methods
  • Data analysis

Research outcomes

Conclusion
### Why this topic:
**“E-learning Framework for Saudi Universities”**

<table>
<thead>
<tr>
<th>The emergence of ICT in teaching and learning</th>
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<td>• has brought <strong>significant changes</strong> in the educational settings of students and teachers.</td>
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<table>
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<tr>
<th>Universities in many countries have started</th>
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<td>• to offer E-learning in their curricula and implemented it in their practices.</td>
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<th>Saudi Arabia has made</th>
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<td>• considerable improvements in order to integrate E-learning in its educational system.</td>
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<tr>
<th>Being a former lecturer in one of the Saudi Universities</th>
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<td>• has motivated me to improve the process of incorporating E-learning in higher education.</td>
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<th>There is a need to improve the understanding of</th>
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<td>• how to deal with the new technology (i.e. Web 2.0).</td>
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<th>How to meet the staff and student requirements</th>
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<td>• for teaching and learning.</td>
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</table>
Background of Saudi Higher Education

Establishment in 1975 /Ministry of Education.

The education system in the KSA has developed to ensure that education becomes more efficient, meets the country’s religious, economic and social needs, and eliminates illiteracy among the Saudi youth.

The KSA is one of the countries in the world spending the largest amount on education according to the 2014 National Budget.

The education sector accounts for 25% of the total expenditure in the national budget and is considered the highest in the world (Unnisa 2014).
Background of Saudi Higher Education

Saudi’s government has established a new vision and strategy to develop education systems.

The plan is for the public universities in this country to be among the most advanced in the world by 2030.

The government aims to have at least five Saudi universities among the top 200 universities in the international rankings (Alharbi, 2016).

The Saudi government strives to overcome the challenges the universities encounter such as improving education quality, and develop modern curriculum using different technologies to increase the interaction between teachers and students.
Dublin (2003) states that, “everybody knows what you mean when you talk about E-learning; nevertheless, the term E-learning means different things to different people” (2003,2).

E-learning has been used in various ways in education. For instance, there is blended learning, online distance learning, and distributed learning.

The E-learning environments offer a really interactive and engaging learning approach using various technological tools that are available such as whiteboard, video conferencing, audio chatting, online discussion, and Blackboard.
E-learning in Saudi higher education

- The number of Saudi public universities
  - has now increased to twenty-six.

- A National Centre of E-learning & Distance Learning
  - was established in 2008 in Saudi Arabia (SA) to improve and support the growth of E-learning in Saudi universities.

- More than 60,000 students are still
  - unable to study in the Saudi public universities because they are already filled to capacity (Alharbi 2016).

- E-learning success is affected by various factors:
  - a- student’s attitude toward E-learning.
  - b- students’ behavioural intention about using E-learning.
Challenges of Saudi higher education

- Poor understanding of dealing with the new operation.
- Increase the number of students and the limited number of places available.
- Lectures and lesson times are short in certain subjects.
- KSA has a different culture.

ICT infrastructure
Research objectives

• To develop a detailed, structured E-learning roadmap by stakeholders in Saudi universities as well as those in developing countries, especially the GCC countries.
• To determine the factors that will ensure the effectiveness of E-learning usage in the Saudi higher education framework.
• To investigate the attitudes and opinions of academics which will encourage to use E-learning for higher education in the KSA.
Research Methods:

Research approach: Mixed method approach will be employed in this research.

Research design: Explanatory Sequential Design

Interpretation based on QUAN → QUAL results

Qualitative (semi-structured interview) result

Quantitative (online Survey) result

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Quantitative (online survey)

To identify the factors for the proposed framework.

To assess the effects of Technological Pedagogical Content Knowledge (TPACK), ICT factors, teaching principles, learning attributes, and personal factors on students’ and academics’ learning outcomes when E-learning technology is used for teaching and learning compared with the traditional method.

An online survey via Qualtrics. (students, academics).

A five-point Likert scale will be applied to measure the extent to which subjects agree or disagree with statements.
Qualitative (semi-structured interview)

Techniques:
• Semi-structured, face-to-face interview sessions or use other technological applications such as Skype.

To explore the quantitative results
• from the survey in more depth to gain more insights, reasons, deeper understanding, and explanation of these constructed factors.
Research Methods: Sample

<table>
<thead>
<tr>
<th>University</th>
<th>Classification</th>
<th>Number of academics and students</th>
</tr>
</thead>
<tbody>
<tr>
<td>King Abdulaziz University</td>
<td>Government</td>
<td>165081</td>
</tr>
<tr>
<td>Umma Al-Qura University</td>
<td>Government</td>
<td>101011</td>
</tr>
<tr>
<td>Taif University</td>
<td>Government</td>
<td>64909</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>331001</td>
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</table>

3 universities will form the sample of this study.

Factors of selecting these universities:

- They are located in the same geographical region.
- They cater to a large number of students.
- They offer multiple faculty options including medicine, engineering, and science, among others.
- Among Saudi universities, their medicine, science, and engineering programs are highly regarded for both male and female students.
- They have introduced a learning management system (LMS), using either Blackboard or Moodle as platforms.
Sample Size:

- Based on the numbers that were provided, the valid study sample number is **384 respondents** for the pilot and main surveys.

Qualitative Interviewing:

- determined sample size of semi-structured interviews in this study between **6 to 10 participants** (Marshall et al. 2013; Creswell and Poth 2017; Yin 2013).
Data analysis

Quantitative online survey

IBM SPSS Statistics (version 24)

Exploratory factor analysis (EFA) for statistical testing.

Qualitative Interviewing

Nvivo software (version 11)

A thematic analysis technique will be employed in order to develop themes based on analysing and detecting data and also grouping the information according to identified patterns.
Research outcomes

The research reviews the

• current literature relating to E-learning in general and in the KSA in particular.
• Examined the following topics which are related to my study
  • Technological Pedagogical Content Knowledge (TPACK)
  • ICT factors
  • Teaching Principles
  • Learning Attributes
  • Personal Factors

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Research outcomes

- To the best of this researcher’s knowledge, none of the studies reviewed thus far has addressed all of these dimensions comprehensively.

<table>
<thead>
<tr>
<th>Authors &amp; Year</th>
<th>TPACK</th>
<th>ICT Factors</th>
<th>Teaching Principles</th>
<th>Learning Attributes</th>
<th>Personal factors</th>
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<tbody>
<tr>
<td>Mishra and Koehler (2006), Nuss (2005), Hofler and Harris (2011)</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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<tr>
<td>Habovski and Mouza (2014)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Atebakan and Troudi (2010)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Chai, Koh and Tsai (2010)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Tondeur et al. (2017)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Al-Adwan and Smedley (2012), Kabilan and Rajib (2010)</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>ALTAMEEM (2013)</td>
<td>✓</td>
<td>✓</td>
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E-learning framework for Saudi Universities

E-learning framework in Saudi Universities

TPACK
- TK
  - Technology Infrastructure
- TCK
  - Internet connectivity
- TPK
  - Technical Support
  - Hardware and software

ICT factors
- Design
  - Usability
  - HCI
- Curriculum
  - Course content
  - Course design
  - Assessments

Teaching Principles
- Pedagogy
  - Digital technology
  - Skills and Knowledge (Context)
  - Learning Theories
  - Teaching Strategies
- Tacit Knowledge
  - Training programs
  - Reflection (learning process)
- Learning Attributes
  - Interaction
  - Peer learning
  - Personal management
- Personal factors
  - Culture
  - Motivation
  - Personal management
Conclusion

• The main purpose of this research is to develop the awareness of academics and students regarding the use of E-learning technology in Saudi higher education.

• This research is expected to have a practical implication. To the best of the researcher’s knowledge, none of the previous literature yet has examined all provided factors in the proposed framework inclusively.

• Centred on the university level, it is anticipated that the findings will enlighten stakeholders about the different uses of E-learning, and how these can be encouraged to develop learning and teaching at the university itself, and in the KSA higher education sector in general.
Thank you for listening

Feel free to email any of your feedback or question