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TECHNICAL AND PEDAGOGICAL SERVICE QUALITY OF E-LEARNING:

a research framework for the development of a systematic means of identification and adaptation testing

CALIDAD TÉCNICA Y PEDAGÓGICA EN EL SERVICIO DE E-LEARNING

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Abstract
This paper discusses a research framework that can be applied to develop and measure technical and pedagogical service quality of e-leaning in Sri Lankan phenomenon. This study is an in-depth empirical investigation which seeks to build up an instrument to predict technical and pedagogical service quality of e-learning in Sri Lanka. The specific objectives are to investigate what comprises technical and pedagogical service quality of e-learning: to establish a deeper understanding of the phenomenon to identify effective technical and pedagogical dimensions of: e-learning on user perspectives and finally to develop a scale: to fill the gap detected in the area of assessing/measuring Technical and pedagogical service quality of e-Leaning which can be used by designers and practitioners in the field of e-learning. A comprehensive methodology will be used to design the instrument.
Keywords: Technical service quality, Pedagogical service quality, Sri Lanka, E-learning

Resúmen:
El artículo presenta una propuesta para desarrollar y medir la calidad técnica y pedagógica del servicio de e-learning en Sri Lanka. Es una investigación empírica que busca desarrollar un instrumento para predecir la calidad del servicio de e-learning. Busca establecer los términos y las dimensiones de la calidad para proponer una escala y metodología.
Palabras clave: Calidad del Servicio técnico, Calidad del servicio pedagógico, Sri Lanka, E-learning

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INTRODUCTION

The drive to integrate online learning into higher education courses continues unabated. The Internet provides significantly different and interesting possibilities for computer medicated communication and learning from other forms of educational technologies (McCormack and Johns, 1998; Weller, 2002).

Technical and pedagogical service quality is a new area of service quality is a new area. This has strategic importance for business striving and pedagogical enhancement to address users in the market place in the higher education sector. It is suggested that consumers behaviour in an online environment is differ from the one displayed in the physical world. Therefore it is important to designers, practitioners and providers of e-learning systems to understand the user needs amenable to fulfillment in an online environment and strive to meet them. Essentially this project will investigate the quality of technical and pedagogical dimensions in relation to the service quality of e-learning from the user's point of view and facilitates the process of enhancing pedagogical quality of the service.

STATEMENT OF THE PROBLEM

Based on the prevailing situation, it can be said that the online learning is having and will have, a huge impact on the marketing of educational offerings. E-learning offerings are essentially services, and it is well known that because of service heterogeneity, service quality is a critical issue. A thorough review of the literature revealed a total in adequacy within the current body of knowledge relating to predicting service quality by examining expectations and perceptions of customers. However, further it reveals that no research has been carried out in relation to this denominated theory in the field of higher education in Sri Lanka. Considering the state of literature in predicting technical and

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pedagogical service quality in e-learning environment even in the globe, it becomes obvious this is an area that has not been thoroughly researched. And also, a need to look into technical and pedagogical quality dimensions for each country is called for, as each country is believed to have its own unique set of dimensions with different level of importance. University students' attitudes towards the services of e-learning are associated with Sri Lankan culture and therefore, any findings from previous studies carried out in other countries may be irrelevant to the Sri Lankan context. Currently there is lack of research on this kind of quality especially the users' quality perceptions of different e-learning environments in the country. So there is a gap in the literature on the measure of technical and pedagogical service quality among competing different e-learning environments. Hence, this research will identify the critical technical and pedagogical service quality measurement of different e-learning environments from the prospective of the users in Sri Lanka. In order to allocate limited resources effectively, it would be essential for the e-learning designers, practitioners and other direct and indirect stakeholders to identify users' priorities among various technical and pedagogical service quality dimensions and to improve these dimensions for pedagogical enhancement, quality of teaching and learning and ultimate user satisfaction. On the other hand, although the provision of facilities and advanced instructional designs appear to be adequate on e-learning environment, there seems to be less emphasis on quality service delivery. This is evidenced by the complicated user interfaces, less value added features, information overload, lack of innovativeness, etc. So far it would appear that no effort has been made to assess service quality as perceived by the clients.

This study is an in-depth empirical investigation which seeks to build up an instrument to predict technical and pedagogical service quality of e-learning in Sri Lanka. The motivation underlining the study is provided by a lack of useful methodology to predict and evaluate the technical and pedagogical service quality of e-learning informing the policy makers to provide more sophisticated service to their users. The ability of e-learning to address the users in pedagogical, satisfaction and

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marketing aspects is an essential strategy for enhancing the educational quality and marketing of educational services in the electronic environment. Yet, little is known about what constitutes technical and pedagogical service quality of e-learning. This leads us to the formation of research problem within the context of pedagogy and marketing.

OBJECTIVES

The present research project explores the field of service quality of e-learning. By reviewing the main theories and findings of previous studies in the area of technical and pedagogical service quality of e-learning, it will strive towards the better understanding of this phenomenon.

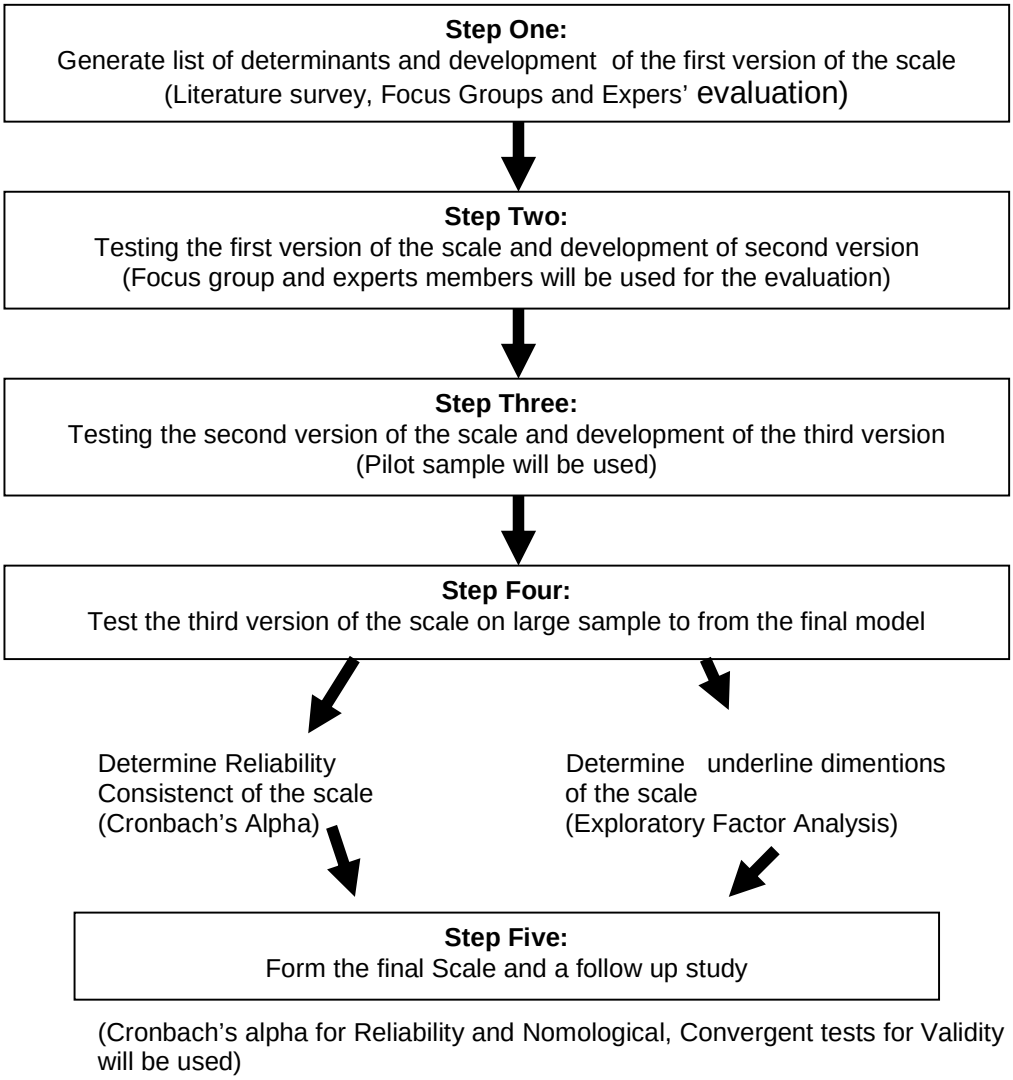
1. Insight into what comprises technical and pedagogical service quality of e-learning: to establish a deeper understanding of the phenomenon
2. Identification of effective technical and pedagogical dimensions of e-learning on user perspectives
3. Development of a scale: to fill the gap detected in the area of assessing/measuring Technical and pedagogical service quality of e-Leaning which can be used by designers and practitioners in the field of e-learning
4. Suggestions how to asses and improve exiting e-learning designs in terms of better addressing the online needs of the users

METHODOLOGY

As the aim of this research is to develop a valid and reliable instrument for use of measuring technical and pedagogical service quality of e-learning, the research design used in this study may be termed methodological research (Pilot and Hungler, 1999). A quantitative approach will be used in which data will be gathered by means of a focus group interviews and structured questionnaire based on the instrument under development. The design of the scale involved several stages, from reviewing relevant research publications related to service quality in general, followed by open interviews with

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users/customers and professionals concerned in internal and external organisations, leading to more formal focus groups with users, and to the eventual design and piloting of an assessment tool. The methodolodical design of the instrument development is depicted below.



(Cronbach's alpha for Reliability and Nomological, Convergent tests for Validity will be used)

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Step One:
Generate the list of determinants and development the first version of the scale

Selecting determinants for the scale will be based on the following methods. The focus groups will be the key methodology for selecting the determinants.

1. **Literature survey**
   The initial determinnants will be complied using the extensive literature survey, which is a common form for determinaing the variables for testing (Chruchil, 1979; Zaichkowsky, 1985).
2. **Expert openions**
   The study will use experts openions to find out the determinants.
3. **Focus Groups**
   Because the existing literature is not yet rich enough to provide a sound conceptual foundation of e-learning technical and pedagogical service quality and their impact on users. Focus groups will be used to provide input for developing a conceptual model of technical and pedagogical service quality of e-learning. Flick (1998) and Neuman (1997) have suggested that focus groups are useful in exploratory research or in generating new ideas for hypotheses. The approach will be used here is consistent with procedures recommended for marketing theory development by several researchers (Zeithmal et al., 1993; Deshpande, 1983).

   The first set of focus group will be composed of senior undergraduates, lecturers, and other beneficiaries and they will be instructed to develop technical and pedagogical service quality blueprint for a customer seeking various technical and pedagogical service quality dimensions in the e-learning context. This step will be taken in order to give the users and those who involving directly with e-learning an opportunity to better understand the sequential stages of the technical and pedagogical service encounter. Also it hopes to assist these stakeholders to visualize and develop a walk-through-audit (WTA) which traces the experience of a users and his/her

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impression of the technical and pedagogical service quality from the first to last stage of a service encounter. At this stage focus group participants will be instructed to formulate questions developed through the WTA. A total of 03 focus groups from different e-learning environments will be held with each group consisting of six members and those who have good user experience on e-learning.

Step two:
Testing the first version of the scale and development of second version

The first version of the questionnare will be tested on the subejctes recruited for the focus grops and expert evaluation to determine whether the variable used for the scale is correct and order. Further it will investigate the clarity and comprehensibility of the instrument.

Step three:
Testing the second version of the scale and development of the third version

The second version of the scale will be tested on separate e-learning users in selected universities . The aim of this pilot survey is to asertain the more clarity, brevity, comprehensibility of the scale and specially to select a rating scale and to determine the best point in time for the survey.

Step four:
Test the third version of the scale on large sample to from the final model

The third version of the scale will be tested on larger sample.

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Step five:
Form the final scale and follow-up study

Adaptation of the instrument

The adaptation of the instrument will be undertaken by following steps:

1. Relevancy: check the relevant items
2. Content validity: the content validity of the instrument will be established to asses the completeness of the proposed instrument. To asses the content validity of the interview schedule, a panel of experts comprising two e-learning designers, three lecturers who directly involving e-learning, one lecturer in marketing field, and three advanced e-learning users will be utilized.
3. Pilot study: a pilot study will be carried out involving users with good experience. Through the pilot study, it will be possible to asses characteristics such as how long it will take the respondents to complete the interview, clarity and brevity of the questions and whether subjects will be comfortable with the data collection method.
4. Construct validity: factor analysis will be exercised in this study to identify the most important determinants.
5. Reliability: Reliability will be estimated by calculation of the internal consistency of this instrument resulting in a Cronbach's ά coefficient

Follow up study

To address the quality scale and determine the quality characteristics of the emerged scale, the follow-up study will also be performed in order to test the scale's validity and reliability further. The follow-up study will be used a small sample.

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