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Using Discussion Forums in Blackboard to Facilitate Electronic Government Course Delivery

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Abstract: Recent pedagogical trends called for a transformation in the educational process where students are given more control and responsibility over their learning process. Instructors are expected to act as facilitators and mentors. This research shows the results of using the discussion forums feature in blackboard (BB) to effectively deliver an electronic government (eGov) course. The course emphasizes both the soft and the hard aspects of managing eGov projects. This is considered quite challenging to senior undergraduate students as it requires familiarity with the outside world and organizational dynamic. The use of the BB in this course is intended to achieve two main objectives. Firstly, by reading the assigned material prior to coming to class, students have already started to demonstrate an understanding of the specified topic/chapter. Secondly, students are requested to further push their understanding of the topic by posting a contribution in a BB discussion forums relating to an issue in their readings selected from the Internet and other resources. This research depicts the protocol of this technique and shows its usage in a classroom setting.

Keywords: blackboard, discussion forums, electronic government, UAE tertiary students.

1. Introduction
We as educators strive to provide best pedagogical tools and techniques to enrich student’s learning process. This entails two perspectives. Initially, this requires departing completely from the one-directional approach controlled by the instructor, which has proven to be ineffective. Secondly, the use of Information and Communication Technologies (ICT) is believed to facilitate the above first perspective and at the same time, add more value to the learning process of students. The majority of researchers agree on the fact that ICT can be used effectively as a cognitive tool as well as an instructional media (Baek et al., 2008). Therefore, ICT integration in teaching became a major focus for many educational institutions and resources for ICT comprise an increasing proportion of their budgets (Lowerison et al., 2006). Barak (2007) found that the literature pointing to other advantages concerning ICT use in the classroom such as designing new learning environments, integrating virtual models, and creating learning communities. In their review of the literature, Winer and Cooperstock (2002) found that the use of the different technologies is having a significant impact on the nature of the physical and pedagogical learning environment in tertiary teaching. For example:

1. use of the Web in higher education to devise innovative practices in distance education.
2. mixed-mode approach, with tele-learning components being integrated into traditional, face-to-face courses.
The later example (2) above, meant that technology is being used to support enriched presentation environment and review capabilities rather than playing a primary teaching role, either synchronously or asynchronously. Other uses of technologies in teaching were reported as well (Barak, 2007) such as developing a course website, electronic forum, computerized modeling instruction, and web-based projects. This includes the Blackboard (BB) and WebCT tools and features (i.e., forums, chat).

This research is interested in exploring the effective use of the BB technology in the delivery of an electronic government course (eGov) to undergraduate senior female-students in the College of IT (CIT) in UAE University. The delivery of this course covers both theory and practical components. The theoretical component introduces different eGov principles and applications including technological and managerial (strategy and implementation). The practical component is a developmental one where students develop eGov portal prototype (install, configure and customize portal development tools) including portlet development (Portlet Programming Model and API) and support for Web services.

The challenge here is that there was an increasing call for more controlled studies of ICT integration with accurate measures of achievement and ways to carefully describe the methods of technology integration in order to study its products/outcomes (Lowerison et al., 2006). This is seen as important to encourage faculty to develop confidence and be open to the use of technology – however, this is contingent upon proving the value of this technology first in improving classroom instructions and student’s learning (Salinas, 2006). Barak (2007) indicated that this could be achieved through

1. dissemination of good practice.
2. investment in infrastructure and equipment.
3. instructors must be involved from the start in any initiatives otherwise these initiatives risk failure. Instructors’ training in workshops is one way of addressing instructors’ confidence and competence with ICT.

Stemming from the above focus, this research will introduce a pedagogical tool and technique represented here by the use of BB as an example of using ICT tools in the classroom and integrating it in key concepts pertaining to the developed course. This research depicts the complete protocol in carrying out the BB technique in a classroom setting. This has been seen as important to disseminate such practices with technology to other educators in the same field. The outcomes of this technique are validated through: (1) quotes from student’s postings and discussions; and (2) the instructor’s reflections on the whole learning process. By publishing the research results, other educators will witness the results of using the BB technology in facilitating learner-centered approaches.

In the following, the research depicts the BB assessment technique. Then, the research shows the design of this technique following latest pedagogical trends and guidelines. This is followed by the research discussion and conclusion section.
2. BB assessment technique instructions

The following instructions are depicted in order to guide students in completing the following two activities on Discussion Boards in BlackBoard (http://elearning.uaeu.ac.ae/). All themes and threads are created for students in the specified discussion forum.

2.1 Activity I: Postings relating to given readings

The objective of this task is to create a discussion environment in the classroom and depart from the rigid one way delivery dictated by the instructor. Thus, students are expected to effectively engage in this marked assessment across the whole semester. Students will need to read the prescribed reading material (slides, book, web site, online resources and other provided resources) prior to coming to the classroom. Therefore, it is imperative to complete this task individually.

Upon completing the reading/preparation, students may face some issues which needs/worth posting within this thread to share it with others. This issue could be a vague topic or even an interesting one. Thus, students may ask or contribute in the specified discussion thread. Indeed, if students accumulate enough understanding/knowledge students may contribute by adding an insight or an illustration of a nice idea, or an explanation of a complex issue, etc. I am always impressed by students attempting to push the bar up and up and up. There is an “attachment” feature if students needed to upload a file in the forum.

Students have the complete freedom to plan and post their own contribution provided that it reflects a sufficient depth. This is judged by the instructor, by the student’s discussions in BB with other students and the instructor, and by the student’s discussions in the class and how it attracts discussions from others in the classroom. Therefore, a student will need to select a posting that is stimulating and exciting. Other students should not repeat and post the same issue. However, they could comment and respond to a student posting by providing answers, further insights (illustrations, analysis, resources, etc.) and hence, paving the way for more interesting discussions in the class. There should be a progression path in the posted messages where the different postings covers all or main themes covered in the prescribed readings.

2.2 Activity II: A resource contribution to the given readings

A web site is created for the eGov course where it holds all course teaching material and resources from prior courses including slides, readings, assignments, and student work and projects, etc. Students in the current course are expected to read and benefit from the web site and avoid repeating any of the contents. This accumulation of knowledge should benefit future batches taking the same course.

This activity involve allocating any suitable resource (white paper, clip/video, URL, etc.) from i.e., the Internet and Databases, that falls inline with one of the themes covered in the prescribed readings. The emphasis here is to add more knowledge to issues covered in the readings. Thus, activity I will focus on understanding the prescribed chapter, activity II, on the other hand, focuses on adding more richness and insights to what we understood in the prescribed chapter.
A thread called “Weekly contributions to our website” is created for students to easily post their individual contributions (as attachments) where the administrator of the course’s website could easily incorporate those into the website later in course. Students will also provide a small explanation:

1. to which issue in the prescribed readings the student is attempting to contribute here
2. how does the contribution extends our knowledge in relation to this issue……i.e., by explaining the contribution. The following template is depicted to post the different contributions:
   a. Resource title:
   b. Reference URL (if applicable):
   c. Issues in prescribed readings students are trying to contribute to:
   d. A summary discussion of issues emanating from the contribution (in relation to students readings):

It is imperative for this BB technique to be grounded in key pedagogical trends and guidelines before implementing it. This is explained next.

3. **Critical success factors for BB success in education**

In review of the literature, the following issues were identified as impending factors in the educational model of today’s learning strategies. Those are classified into faculty functional principles (Table 1) and students’ functional principles (Table 2) to endorse learner-centered approaches.

**Table 1. Faculty functional principles.**

<table>
<thead>
<tr>
<th>Faculty functional principles</th>
<th>In the eGov course</th>
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<tbody>
<tr>
<td>1. instructors are expected to be proficient in pedagogical and scientific (technology) delivery and that they need to be open to new ideas, adopt changes and be flexible (Barak, 2007)</td>
<td>The course’s instructor is a technologist and has a vested interest in learning about new pedagogical techniques and in applying them in his teaching and to enrich student’s learning process. With this interest in student’s education, the instructor is welling to be as flexible as possible to introduce new techniques and technologies.</td>
</tr>
<tr>
<td>2. shift from a lecturing model to a mastery model (learner-centered instruction): learner-centered principles, instructional objectives of the class need to be directly linked to the needs of the student and the role of the instructor in the classroom. Such prior-conditions are essential to the selection of an appropriate instructional ICT type and use to fulfill such needs (Salinas, 2006).</td>
<td>The depicted BB protocol attempted to fulfill such a request: i. shift from a lecturing model to learner-centered model; ii. the instructor acting as a facilitator; ii. group discussion in the class. The selection of the BB technology seemed to fulfill such objectives.</td>
</tr>
</tbody>
</table>
3. facilitating professors’ use of a variety of presentation modes in class by creating a transparent interface for managing the environment (Winer & Cooperstock, 2002).

4. enabling students to review lecture content and materials critically and to interact asynchronously with their professor (Winer & Cooperstock, 2002).

5. enabling alternative means of student evaluation (namely presentations) to be implemented (Winer & Cooperstock, 2002).

Students are given one week time to individually review given resources and interact asynchronously with other students and the instructor in BB discussion forums.

In the class students are expected to discuss and present emergent issues from above in groups in the class.

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<tr>
<th>Students’ functional principles</th>
<th>In the eGov course</th>
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<tr>
<td>1. Choice regarding their own projects and graded assignments, and are able to select areas that are personally relevant.</td>
<td>Students are expected to complete a group project in the course where they have the choice to choose 3-4 eGov portals to assess. This is achieved by allowing students to choose their own contribution in BB activity II.</td>
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<tr>
<td>2. Work at an individual pace and have flexibility of time.</td>
<td>Between consecutive classes, students usually have one week to individually prepare for the following class and complete both activities.</td>
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<tr>
<td>3. Demonstrate their knowledge in unique ways.</td>
<td>In activity one, students have the freedom to raise an inquiry or an understanding of a complex issue (i.e., in the chapter) or answer other’s questions. In activity two, students are requested to push the boundaries and contribute a topic to an issue in their assigned readings (i.e., chapter) from the Internet and other resources and post a description of their contribution and how it links to their readings.</td>
</tr>
<tr>
<td>4. Are engaged and participating in active individual and group learning activities.</td>
<td>Students are expected to complete a group project in the course. However, the above two activities more specifically are completed individually but discussed in the class within groups where each group collates and synthesizes their issues and contributions first before discussing them.</td>
</tr>
<tr>
<td>5. Have increasing responsibility for the learning process.</td>
<td>This summative (assessed) approach in committing students to read on their own pace and time and...</td>
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</tbody>
</table>
control their own postings of issues and contributions week after week is evident for their devotion to the learning process.

6. Refine their understanding by using critical thinking skills, not memorization. (writing, analyzing, justifying, linking, answering other’s, discussing in the class) either individually or within groups push the students thinking beyond the mere reading or memorizing.

4. Positioning the BB technique

Salinas (2007) linked instructional objectives to the role of the instructor in the classroom and the function technology can play as shown in Figure 1.

The BB technique is positioned to fulfill the first and the third levels of the above taxonomy. BB’s first activity focuses on students’ knowledge and comprehension of the specified eGov topics. However, this is not implemented in the unidirectional way suggested in Figure 1, where students are expected on their own pace and time (one week) to analyze and understand the different assigned topics and come ready for discussion in the classroom. This is done individually. The instructor then facilitates the process through group-work where the different groups discuss their issues amongst the group members first and then discuss them with the instructor and other groups and hence, creating a general discussion environment leading to concluding remarks and themes.
Salinas’ (2006) third level focuses on students’ pushing this understanding by providing a contribution to issues covered in the first activity. They are expected to search online resources and databases to allocate an appropriate contribution. This requires further analysis of different resources; synthesis of emerging issues; and evaluating the relevance of the resource to issues in the first activity. The same process (individual and group work) is repeated here as well. The efficacy of both activities are further confirmed by using discussion forums in BB in both activities which matched the technologies suggested by Salina (2006) in the third level.

It is clear that the sophistication and the importance of technology becomes more important (i.e., learner-centered) as the role of the instructor becomes less intervening (i.e., teacher-centered) in the delivery process. Thus, technology is seen as providing important surrogates to the facilitation process and as bridging the vacuum created by instructor less-intervening role. Salinas (2006) highlighted that:

1. the optimal motivation for learning in a learner-centered approach is intrinsic (driven by the curiosity of the students) in nature and it is better directed to mastery learning rather than to a competitive learning structure.
2. Other researchers have looked at the use of learner centered models to support the use of instructional technology in the classroom but only few attempted to propose an integrative model that can help faculty select appropriate technologies for the specific cognitive objectives they can achieve.
3. The most difficult challenge in order to implement this model is to develop a change in the teaching culture from teacher-centered to learner-centered.

However, this does not entail that the instructor’s role is eased or reduced. On the contrary, the instructor’s role is further expanded and challenged to control the whole environment. This is better explained using Figure 2 and Table 3.

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**Figure 1.** A framework to link instructional objectives to the role of the instructor and the technology (Source: Salinas, 2006: p. 3)

**Figure 2.** Dictation versus facilitation in education
In dictation (Figure 2), it is obvious that the instructor uses the technology to deliver (pushed) content to students. In Facilitation, the instructor should spend more effort in integrating content and technology together in a form that is acceptable and interesting (pull) to students to obtain the needed results. It is clear that instructor role in facilitation is extended to the understanding of the student needs and wants:

1. apprehend latest technological trends and their use in education. However, inline with the literature, this could be achieved through collaboration with technologists.
2. intertwined course content with technology delivery. Again, help could be obtained from experts in the field.
3. involve students in the process by understanding their needs first before course delivery. This is important to increase their acceptance of the process. Therefore, the introduction of the new approach needs to be carefully introduced to students in order to avoid their resistance at the same time, the success of the process is fully dependent on their willingness and interest to “pull” content.

5. Discussion and conclusion
This research introduced the BB technology in general and the discussion forum tool more specifically intertwined with key eGov course content as an example here for using technology in integrating content and facilitating the education delivery process. This is demonstrated by showing a protocol alongside two techniques where the discussion forums feature in blackboard (BB) is used to facilitate the delivery of an electronic government (eGov) course.

In setting the stage, students are expected to spend an effort first and read different resources including the course slides, textbook, and supplementary readings (posted in BB) and be ready to discuss emergent issues from their readings in the classroom. The use of the BB in this course is intended to achieve two main objectives. Firstly, by reading the assigned material prior to coming to class, students have already started to demonstrate an understanding of the specified
This is demonstrated by posting an inquiry or an understanding of a complex issue or answering other students’ inquiries in BB discussion forums. Secondly, students are requested to further push their understanding of the topic by posting a contribution in a BB discussion forums relating to an issue in their readings selected from the Internet and other resources, i.e., electronic databases. This has given each student more freedom to select their own contribution and hence, the class time is maximized to enrich the learning environment and leave more chance for students to discuss and the instructor to listen and facilitate.

The efficacy of this approach is further supported by recent pedagogical research. What remains to be seen is to validate the effectiveness of using this technique in the classroom. This is achieved in the following phase of this project. The approach depicted in this research could be of interest to many stakeholders involved in tertiary teaching including educators, researchers and policy makers.

References


