

Project-based learning in higher education in the UAE: a case study of Arab students in Emirati Studies

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Abstract

Educational institutions in the Middle East are often criticized for using outdated teaching strategies such as lecturing that promote rote learning and memorization skills rather than life skills such as critical thinking, creativity and innovation which are important for students' education and their future careers. This applied research paper presents an example of using Project-Based Learning (PBL) in Higher Education as a supplement to traditional lecturing and the benefits of using this approach for teaching and learning. A group of 62 female Arab students studying Emirati Studies at a federal higher institution in the UAE were involved in this classroom-based inquiry which took place over a 14-week semester. Data were collected using quantitative and qualitative methods to examine how effective the PBL approach was in engaging learners, in improving their skills and in helping them achieve the course learning outcomes. The results of the study showed that PBL was useful in helping students develop essential 21st century skills such as critical thinking, team work, problem solving, research skills, presentation skills, interpersonal communication skills, negotiation skills, creativity, and innovation. This research project helps to illustrate and provide evidence of how using PBL as a supplement to traditional lecturing can be a catalyst for an effective and efficient process-oriented quality education where students are active individuals managing their own learning and having fun in the process.

Introduction

Teaching and learning in higher education has significant impact in students' future employment and work performance. The instructional methods that higher education faculty employ in the classroom are pivotal in helping students acquire knowledge and develop skills. Learning is a multifaceted process and according to Kayes (2002):

Learning (a) is a process, not an outcome; (b) derives from experience; (c) requires an individual to resolve dialectically opposed demands; (d) is holistic and integrative; (e) requires interplay between a person and the environment; and (f) results in knowledge creation. (pp. 139-140).

This definition of learning promotes the use of experiential and active learning approaches in the classroom. Such approaches are also in line with government agendas that envision an innovative and creative workforce. For example, in the United Arab Emirates (UAE), *Vision 2021* and other recent educational project reports (see KHDA, 2017) describe the government's belief that "education is a fundamental element for the development of a nation" and its aspirations for a knowledge-based economy that will be "driven by knowledgeable and innovative Emiratis" (UAE Government), while emphasising the need for students to be "problem-finders and problem-solvers, with high levels of 'flexpertise'" (KHDA, 2017, p. 7). In order to develop innovation and creativity in youth, it is important for educators to promote active learning strategies in the classroom and experiment with new and innovative practices that engage learners and allow them to be active in the classroom and to learn through their experiences.

In an effort to respond to the UAE government strategic objectives and to benefit Emirati students by better preparing them for the workforce, an exploratory study was conducted in a UAE federal higher education institution. The study aimed to investigate the impact of the use of project-based learning (PBL) on the learning outcomes and the development of employability skills in a group of Emirati female students in a liberal studies program. The following sections provide an overview of PBL research in higher education, a description of higher education in the UAE, the research questions that guided the methodology of the study, a discussion of the results and their implications for teaching and learning.

Project-based learning in higher education

By definition, PBL organises learning around student-led projects (Thomas, 2000). The projects comprise complex tasks that engage students in “design, problem solving, decision making, or investigative activities” (Thomas, 2000, p. 1). In PBL students work with a certain degree of independence and autonomy, individually or in groups, over a period of time; and the project outcome is a realistic product and/or a presentation. PBL is a form of participative learning (see Michel et al., 2009) because it engages students in the learning process by allowing them to choose their projects and project-related activities (Mills-Jones, 1999). By “engaging learners in producing and generating their own contents (artefacts)” teachers can nurture students’ “creative imagination, innovation attitude and authentic learning” (Bocconi et al., 2012, p. 19) and help them develop 21st century skills such as problem-solving, collaboration, negotiation, communication, and inquiry skills.

The use of experiential education and active learning is not new in higher education. A number of studies conducted in higher education contexts have revealed that student-centered approaches, such as PBL and learning-by-doing are more effective for student learning and long-term outcomes because they address the third level of Bloom’s Taxonomy, i.e., application of knowledge (see Anderson & Krathwohl, 2001; Bonwell & Eison, 1991). This means that students are able to use the knowledge they learned and demonstrate that they understood it by applying what they learned in new contexts. Studies further found that active learning promotes higher order thinking skills and deeper learning than traditional lecturing (Michel et al., 2009; McGlynn, 2005; Peck et al., 2006; Serva & Fuller, 2004; Van Eynde & Spencer, 1988). Furthermore, research found that by working in groups, students learn better from each other and from their experiences (Welskop, 2014). Studies also concluded that students perceive “active course designs more useful for their future” (Stewart-Wingfield & Black, 2005, p. 119) and they have a positive attitude towards the interactive PBL environment (Pazur Anicic & Mekovec, 2016), while PBL develops students’ employability skills (Wood, 2016) and even has an effect on students’ health and well being (Allison et al., 2015). Based on the results of these studies,

traditional ideas of lecture have developed a bad reputation, and some may be ready to banish them from their teaching repertoire. (Hackathorn, et al., 2011, p. 40)

Active learning approaches such as PBL are increasingly promoted among educators in an effort to cultivate creativity and innovation in the classroom and to promote learning. In the UAE, there is a dearth of applied research on the use of PBL in higher education. When PBL is the subject of research, it has been addressed from the perspective of learning styles and preferences, rather than the impact it has on learning. For example, Chowdhury (2015) surveyed engineering students and faculty as to their learning and teaching styles respectively that are relevant to PBL, without addressing the actual use of PBL in the classroom and its impact on learning. The current project aimed to address this gap in the literature. The following section focuses on higher education in the UAE and the teaching of Emirati and Islamic studies, which is the subject of this study.

Higher education in the UAE

There are three government higher education institutions in the UAE, which offer a range of undergraduate and postgraduate degrees to Emirati students free of charge. Most Emirati students study in Arabic in K-12 and take English as a second language (ESL) (for a review of the UAE education system, see Al-Shaiba, 2014; for a review of the ESL policies in the UAE see Al Hussein & Gitsaki, 2017). When Emirati students enter higher education, they study their bachelor program in English and take Arabic, Islamic and Emirati Studies courses as part of their General Education. The Emirati Studies courses are taught usually in Arabic by Arab-background university faculty and they aim to enrich students' knowledge about the Emirates (culture, population, geography, history, government internal and foreign policies, social relations, the vision of the UAE for the future, youth, etc.); the courses are also intended to strengthen students' national identity, and help them develop their citizenship, their tolerance of other cultures, their interpersonal communication skills, and their respect for others' views and opinions. Emirati students who are not able to study these courses in Arabic because they were educated in English from a young age can study them in English. The courses are compulsory not only in government institutions but also in private universities around the UAE where the student population is ethnically more diverse.

These Arabic and Islamic courses were created in the post-Arab Spring period as a response to popular demand to enhance the citizenship and national identity of Emirati students and promote dialogue and tolerance between Emiratis and the people of other nations who have made the UAE their home (Al Hussein & Gitsaki, 2017, p. 109). Along with the need for strengthening national identity among Emirati youth, there is also a need to

move from a traditional system based on rote learning to one based on the skills of creative thinking, innovation, scientific research and constructive criticism. (Arab Knowledge Report, 2014, p. 114)

An adherence to "traditional teaching methods based on memorization" (p. 31) and the "lack of active student participation" (p. 31) is often evident in higher education institutions in the UAE. It has been reported that University students in the UAE "do not read books, but memorise parts from the summaries and the presentations of the professors" (Mohammed bin Rashid Al Maktoum Foundation (MBRF) & The United Nations Development Programme/ Regional Bureau for Arab States (UNDP/RBAS), 2014, p. 92). While lecturing has been found to be a less effective way of communicating and developing knowledge and skills when compared with other teaching methods (see Hackathorn, et. al., 2011; Van Eynde & Spencer, 1988), it still remains the main mode of classroom teaching in local higher education institutions, especially by Arab-background faculty who have been trained to use this teaching approach. Furthermore, students are typically expected to passively rote learn the information in these courses and reproduce that information during course examinations. The Arabic and Islamic Studies courses are often regarded as being boring and lacking the ability to develop students' skills. In a recent study conducted at a federal higher education institution in the UAE, students reported their preference for learning in English rather than in Arabic because learning in Arabic is a "boring style for the study" (Hopkyns, 2017, p. 226). Consequently, students tend to memorise the course materials for exams, and fail to apply what they learn in these courses.

The Emirati and Islamic Studies courses were introduced in higher education curricula in order to allow students to develop not only knowledge but also skills that will be useful in the workplace. Recent education policies in the UAE emphasize

the need to focus more heavily on social and emotional health, working together, and being a part of something bigger as essential components of future workplaces. (KHDA, 2017, p. 7)

Without an active practical component, these courses are failing their purpose and will have little effect on student learning outcomes (see Michel et al., 2009; Stewart-Wingfield & Black, 2005). In order to address these shortcomings, the current study was designed to introduce the use of PBL as a more effective teaching and learning strategy in the context of Emirati and Islamic Studies in higher education.

Research questions

The author of this paper is an Emirati academic specialising in Islamic Studies. After teaching the Emirati Studies course for a semester, the researcher came to realise the discrepancy between the aims of the course and the students' skills and knowledge at the end of the course. In order to improve students' engagement, motivation and participation in the course, a research project was designed to study the impact of PBL on students enrolled in the Emirati Studies course. The overarching research questions for this project were:

- How can project-based learning be successfully integrated in the Emirati Studies course?
- To what extent can the inclusion of a PBL component in the course affect students' motivation and engagement in the course?
- What effect will PBL have on students' development of 21st century skills in a multidisciplinary context?

The following sections outline the methodology of the study and its results along with preliminary conclusions and a discussion of the implications of the findings.

The study

The present study took place in a gender segregated federal higher education institution in the UAE. A total of 62 female Arab students aged 19-24 years of age participated in this project. All students were Emiratis enrolled in a General Education compulsory course, Emirati Studies, as part of their Bachelor program. While the Bachelor Program at this institution is taught in English, the Emirati Studies course was taught in Arabic. The students were divided in three sections of 19-24 students each and they were taught the course 3 hours a week, for 14 weeks.

The Emirati Studies course is designed to help students consolidate their national belonging and identity and help them learn and appreciate the national achievements of the United Arab Emirates. Students are introduced to the main social features of the Emirati community and its core values and heritage, the history and geography of the country, as well as its internal and foreign policies, social developments and services provided by the State, including the empowerment of women and their role in society. The course also focuses on the efforts of the country in building an Emirati knowledge society, encouraging multiculturalism and tolerance, and developing solid economic and technological infrastructure. The course also discusses strategic documents such as the *Federal Government Vision 2021* and the *Abu Dhabi Vision 2030*, and issues and challenges related to the future development plans of the country.

According to the course handbook, the Emirati Studies course aims to achieve the following student learning outcomes:

1. Analyze key social aspects of the UAE including historical highlights, geographic features, social characteristics, culture qualities, political institutions and policies, and economic structures.

2. Appreciate the role of the political leadership of the UAE in founding the state and leading the country's social cultural, economic and political development, and express attachment to the UAE and pride in its national achievements.
3. Describe demographic characteristics and attributes of social stability, interpret their effects on the Emirati Society, and explain aspects of advancement in the country through the facilitative role of its various institutions.
4. Identify the functions of the legislative, executive, and judicial institutions of the UAE and the country's main achievements in the field of public administration.
5. Illustrate the international prominence of the UAE through indicators of the country's excellence in global competitiveness.

The course has a compulsory textbook written in Arabic by Emirati academics and approved by the Ministry of Higher Education and Scientific Research (MoHESR) for use in all higher education institutions in the UAE. The textbook is divided into 11 units, each dealing with a specific aspect of Emirati life and culture. Each unit contains informational text, with hardly any illustrations other than the occasional statistical graph and geographical map. There are no questions targeted towards the students to help them engage with the text, there are no visuals to aid the students' comprehension of the information; the general impression of the students taking the course is that the information in the textbook is not up-to-date, it is boring to read and difficult to follow. As a result, students are not motivated in the course, they do not engage with the material, and they consider the memorisation of the material as their only task to help them pass the course.

The prescribed course assessment plan required students to: write a report (10%) after watching a film about Sheikh Zayed, the Father of the Nation; take a midterm (25%) and a final (35%) exam; write a summary of a book of their choice that is related to Emirati Studies (10%); and prepare a presentation on a given topic (10%). A further 10% was awarded for class participation. After teaching this course for a semester and seeing the difficulties that students had engaging with the material, the researcher decided to make changes to the delivery of the course and its assessment. The following section describes how the course was changed to include a PBL component.

The intervention

While the Emirati Studies course is expected to be taught through traditional lectures and students are expected to memorise the information in order to pass their exams, the decision was made to redesign the course and incorporate learning activities that would engage and motivate the students, in with the aim of helping the students achieve learning outcomes more effectively.

Although the researcher still had to use the textbook and stick to the prescribed assessment plan, it was possible to use a PBL approach in the classroom and incorporate activities and projects to help students better understand the course materials and demonstrate their understanding. In the third week of the semester, it was explained to the students that they were expected to undertake projects as part of the course and the rubric for the evaluation of their projects were shared with them (see Appendix A).

Going through the rubric, students were told that their projects would be evaluated on creativity and innovation. Students were encouraged to have a clear vision for their project and to ensure their project resulted in deliverables that could be used by others in similar contexts and similar courses. Students also received a template to help them plan their projects. The plan asked students to decide on the

project title, the deliverables of the project (e.g., a brochure, an artefact, a poster, a booklet, a video, etc.), the names of the students involved in the project and their roles within the project team, and a section where students had to reflect at the end of the project on the impact of their project, i.e., what they had learned and how they had benefitted from doing the project. Students were also evaluated on their use of the project planner and they were asked to consider the planner as an example for planning future activities in their personal and professional lives. Finally, students were expected to present their projects and they were evaluated on their ability to deliver their ideas effectively, to provide and explain information about their project and to encourage discussions among their classmates about their project. Students were then asked to choose their teams (2-4 students per team) and start working on their project template. Table 1 below shows the weekly activities of the project and how PBL strategies were incorporated into the existing course syllabus.

Table 1: Weekly project activities.

Week	Activity
1 & 2	Students were informed of the research project and they were asked to participate in the pre-course survey.
3 & 4	Distribution and explanation of project expectations and evaluation rubrics. The students also formed a class WhatsApp group to enable communication with the teacher at all times. This was essential as students had not been involved in such a project before and naturally they had a lot of questions about the project and the course.
5	Students formed groups of 2-4. Students in each group selected the title of their project and formed a WhatsApp group for group discussions and project communication.
6 & 7	Students prepared their action plans where they had to outline the aims of their project, how they were going to research the topic, what kind of resources they would need, and what the outcome of the project would be (e.g., a brochure, a poster, a book, a video, a 3D project, etc.). Students were then asked to make short presentations in class to inform their classmates of their project, and get some ideas and suggestions from the other groups. Since there were multiple sections of students involved in this project, to ensure that each project was original and unique, lists of the projects and their creators were posted in the classroom so that each student could see what the other groups were doing even if they were not in their own section.
7	The course mid-term exam was administered at the end of week 7.
8 & 9	Students presented the first draft of their artefacts (e.g., posters, brochures, videos, books, etc.) along with their plans. This was done to ensure that students were progressing well with their project, they were on time for the National and Innovation Week Exhibition, and to find out if the students were facing any problems or issues so that to give them advice and support to ensure the successful completion of their project. At this stage, students also received feedback on their artefacts and how to improve them and finish them to a high standard.
10, 11, & 12	During these three weeks, students got to bring in their projects, receive further feedback, exchange information, plan for the final draft. Students continued to use the

	class WhatsApp group to discuss issues with the teacher and to learn from others' mistakes and experiences.
13 & 14	<p>Students presented their projects in a campus exhibition for UAE National Day and Innovation Week. Other students and faculty as well as the senior management of the university were able to view the artefacts that students created, ask questions about them, and provide their feedback. Students were encouraged to present information about their project and respond to questions from the audience.</p> <p>At the end of Week 14 students were asked to respond to the post-course survey.</p>

Data collection: instruments and procedures

At the start of the semester, after institutional ethical clearance for the project was obtained, students were informed that there would be changes to the course delivery and assessment as part of an applied research project. The purpose of the project was explained and students were asked to sign their participation consent. Before the start of the project, students were asked to answer a survey. The pre-course survey comprised 14 closed questions and students were asked to indicate their response. The questions sought to examine whether students liked the traditional lecture style of their classes and whether this style helped them develop their skills (i.e., communication skills, creativity skills, problem-solving skills, teamwork skills, time-management skills, taking initiative, planning skills, generating ideas, etc.). Students were then asked to consider how they would benefit from working on a project.

At the end of the course, students were asked to participate in a post-course survey. The survey comprised 14 closed questions asking students to indicate whether participating in the projects helped them develop their skills, expand their understanding of Emirati culture, become self-directed in their learning, contribute to the development of the State, understand their own strengths and weaknesses, conduct research and take risks, and develop their confidence. Students were asked to indicate whether each question was true for them or not (see Appendix B for a list of the questions used in the pre- and post-course survey).

To further examine the effectiveness of the PBL approach on student learning, the student project plans were collected and their reflective notes were examined. Finally, in the analysis of the data, the students' project and course grades were also considered to help ascertain the extent to which students had achieved the course learning outcomes.

Results and discussion

A total of 62 students participated in the course. With regards to their GPA, a third of the students (32.8%) had a strong GPA (3.1-3.7), about half (49.2%) had a medium GPA (2.1-3.0) and the remaining 18% had a weak GPA (1-2.0). Their final project grade was scored out of 15 points. About a fifth of the students (21.3%) got 11 out of 15 points; a total of 42.6% got 12 points; while a quarter of the students (24.6%) got 13 points. The top grades (14 and 15 points) were achieved by 4.9% and 6.6% of the students respectively.

All of the students responded to the pre-course survey (see Appendix B) which was administered at the start of the course. The results of the survey showed that students had a poor perception of the traditional lecturing style of teaching which was similar to the findings of the Arab Knowledge Report

(2014). A total of 57 out of 62 students (92%) indicated that they do not like the lecture-style of their courses and that lecturing does not help them develop their communication, creativity, problem-solving, and teamwork skills or manage their time effectively. Furthermore, students indicated that traditional lecturing does not help them develop their understanding of their weaknesses and strengths, their planning skills or their ability to take initiative and generate good ideas. Despite the fact that only 7 out of the 62 students (11%) had worked previously on projects, a total of 59 students (95.2%) indicated the view that working on a project would help them learn more, get to know their classmates better and collaborate with them more. These results confirm what the literature review has shown: students are not satisfied with lecturing as a teaching approach in the classroom and they do not think that it helps them develop crucial 21st century skills. The results of the pre-course survey also showed that students were enthusiastic about doing projects and that they held positive perceptions about PBL even though the majority of them had not been exposed to this learning approach.

At the end of the course, students were asked to evaluate their PBL experience by completing a post-course survey. A total of 60 students responded. Results showed that engaging students in a project helped them expand their understanding of the UAE and the Emirati culture which was the aim of the course. All but one of the students reported that working on their project helped them manage their time better and project work promoted the flow of good ideas. All of the students indicated that their project helped them take innovative steps to achieve the desired results, they became more creative and they developed their sense of inquiry as a result of their project work. A total of 56 students out of 60 (93%) reported that working on their project helped them take initiatives in solving problems, while 58 students (96%) indicated that the project helped them become more self-directed and it enhanced their communication skills. 57 out of 60 students (95%) indicated that the project helped them to gather information from different sources and demonstrate a high level of expertise. With regards to the development of citizenship, 58 out of 60 (97%) students reported that their project contributed to the development of the State.

With regards to group work, all but three of the students reported that the project helped them understand their personal strengths and weaknesses. A total of 59 students out of 60 reported that they had a positive experience working with their group and a further 58 (97%) of them indicated that working with classmates helped them build strong working relationships. All but three of the students (95%) reported that working on their project with their group helped them share their ideas and techniques. This PBL project clearly promoted Emirati students' group work skills, which were previously found to be lacking (see Chowdhury (2015) who found that only 22% of his Emirati students were using small group work as a learning resource). Perhaps the least positive perception was with regards to risk-taking as a result of project work; nevertheless, all but 8 of the students (87%) reported that their team took risks while working on their project. Finally, 57 of the students (95%) indicated that having completed their project they would be eager to take on a new project; and all but one of them reported that because of working on the course project they felt they could handle challenging situations with confidence.

Students were also asked to submit a reflection at the end of their project. These reflections were then collated and analysed using thematic coding. By and large, students held positive perceptions about their project-based learning experience. They mentioned how working on their project with their classmates strengthened their capacity for teamwork, taught them how to help each other and "give up selfishness". With regards to the development of skills, students reported that through their project work they had "learned more ways to search for information"; they learned how to plan projects; they practiced creative skills such as "graphic design, photography and filmmaking"; they had the chance to

develop their “communication and presentation skills in front of others”, and their “leadership skills”. Students also indicated that because of working on their project they had the chance to think about different topics for their projects and how to use “creativity, innovation and modernity” in their projects, and that these were skills that they had not learned in advance prior to attending this course. Students also mentioned in their reflections how they had been exposed to new ways of learning such as using WhatsApp to discuss their projects with their groups. With regards to the course content, students reported that they found out more about “the heritage, geography and the UAE vision for the future” and they became aware of “the level of prosperity and development in which we live”. One of the students reported that working on her project helped her see how “Dubai is an emirate with an ambition and a long-term perspective. It is our duty to develop ourselves to achieve this ambition and launch new projects”. Student comments like these are a clear indication that the course objectives had been successfully met.

Personal reflection

Having taught this course, I can assert that my decision to change the Emirati Studies course by reducing the students’ reliance on the knowledge of the information in the book to 40% of their final grade and instead involving them in projects that required them to apply that knowledge and conduct research, constituting 60% of their final assessment, was the right decision to make as I saw my students become creative and active in and out of my classroom as they applied their knowledge and skills in their projects. The inclusion of the PBL component also changed the students’ perceptions of the course. Previously students had shown boredom with the course and felt it was hard for them as they had to memorise all the information in the book in order to ‘regurgitate’ it during the final exams. In contrast, students in the new version of the course were active rather than passive learners, they enjoyed the process, and they found out that it is possible to learn and have fun at the same time.

Redesigning and teaching the new course was not without its challenges. At the start of the course, students were reluctant to work on projects as most of them had never worked on projects before, especially projects that were closely monitored by the teacher. Those who had worked on projects before, had done so outside of the classroom context and without teacher support. So students having to be accountable to me throughout the duration of their projects, from the conception of the project plans to the delivery of the project artefacts, was a new experience for them and naturally quite daunting at the start of the course. In order to help my students overcome their initial scepticism, I took the time to explain to them how the project-based approach was better than the traditional method of teaching and its usefulness for helping students develop skills that would be useful to them not only for successfully reaching the course learning outcomes but also for their future careers.

Another challenge I had to overcome in implementing PBL in my teaching context was to ensure that there were no ‘freeloaders’ in these group projects, benefiting from others’ work without making their own contribution (see Lejk et al., 1996). In order to overcome this, I made sure that each team comprised two to four students as a maximum and that the project plan specified the role and tasks to be undertaken by each member of the team. Finally, by having access to the WhatsApp group account, I could monitor students’ contribution to the project discussions and at times address inactivity or lack of productivity from specific members of the group. In the future, when I teach this course again, I will make sure that the number of students in each group is commensurate with the complexity of the project. In other words, if a project is sophisticated and requires a large number of tasks to be completed, then having 3-4 students working on is justified. However, projects that are simpler in

nature should be assigned to no more than 2-3 students in order to ensure equal engagement in the project by all students in the team and to avoid freeloading.

Another thing I would change in the future offering of the Emirati Studies course is the selection of the project topics. During the last semester, a number of students selected projects that promoted UAE cultural traditions and provided information about institutions in the UAE such as the Masdar Institute of Technology, the Reading Project of the UAE, the role of women in the UAE society, and food traditions. While these topics were well-researched and provided useful information about the UAE and its culture, it would be useful if, in the future, students focused on current issues in the UAE and worked to provide innovative and creative solutions to overcome these issues. Such projects would contribute to their development as active and involved UAE citizens and productive members of the society, which is in the core of the Emirati Studies course and aligns with the UAE Vision of the future which urges educational institutions to create “innovators, entrepreneurs, and intra-preneurs” (KHDA, 2017, p. 7).

Finally, another change I would make in a future offering of the course is to channel the students’ efforts towards a more analytic inquiry rather than the accumulation of information for their projects. In their projects students should be able to identify a current problem or issue, then use research tools and critical thinking to design a project that contributes to the solution of this problem, and then share their project and their learning outcomes with their classmates and their local community. In this way, their contributions will be not only for their benefit (i.e., achieving a good grade in their course), but also for the benefit of the wider UAE society. This is in line with the UAE Rulers’ expectations for engaged, innovative and creative youth, “endowed with leadership, creativity, responsibility and ambition”, who can shape the future of the UAE (KHDA, 2017, p. 7).

PBL is a distinctive learning model that relies on modern learning theories and is a successful alternative to traditional lecturing. In my experience, PBL reinforces the view that the focus of education should be on the student rather than the curriculum, and it should inspire among students passion, creativity and innovation. Furthermore, it develops a greater depth of understanding of concepts, broader knowledge base, improved communication, personal and social skills, enhanced leadership skills and teamwork, increased independent learning abilities and problem solving skills. Last but not least, blending PBL with the prescribed course was a catalyst in infusing positivity and happiness in students’ engagement with the course, two very important components in student learning which also align with the UAE National Program for Happiness and Positivity (KHDA, 2017). Finally, as my small-scale research project has shown, PBL is preferred by students, who rated this teaching and learning approach higher than lecturing and other traditional ways of teaching in higher education classrooms.

Conclusion

This paper has described a small-scale classroom-based inquiry on the use of PBL in a higher education liberal studies program in the UAE. The study involved a total of 62 female Emirati students in three groups registered in a compulsory Emirati Studies course. The aim of the study was to document the implementation of PBL as a component of the course and as a supplement to the traditional lectures, and to measure the impact of PBL on students’ perceptions and the development of their skills. The study was carried out over a 14-week semester and the results showed that students held positive perceptions of the use of PBL and they recognized the significance of this approach to the development of their skills.

While the study was carried out with a relatively small group of students and in one higher education institution in the UAE, it still holds significance for academics who teach in a similar context and who are

looking to apply similar strategies to enhance their teaching and their students' learning. Future studies could involve more students, preferably both male and female, and try to not only measure students' perceptions of how they benefited from PBL but also provide more robust measures of the development of their skills.

Having done this study, it is my conviction that active learning approaches help raise the bar in higher education as they allow students to be involved in ambitious and inspiring projects, solve problems, come up with creative and innovative solutions, develop their 21st century skills, and become confident and career-ready. Even in educational contexts which are fairly traditional and teacher-centered, such as the UAE and other middle-eastern countries, there is an opportunity to blend traditional lecturing with active approaches to education such as PBL, provided that educators are open to new approaches that put the focus on the students and their learning rather than on the teacher as a fountain of knowledge. It is my hope that more educators in contexts similar to mine will give their students the chance to blossom and enjoy the learning process.

References

Al Hussein, M. & Gitsaki, C. (2017). The agents, processes and causes of policy transfers: ELT in the UAE. In S. K. C. Chua (Ed.), *Un(intended) language planning in a globalising world: multiple levels of players at work* (pp. 97-112). Berlin, Germany: De Gruyter.

Allison, P., Gray, S., Sproule, J., Nash, C., Martindale, R. & Wong, J. (2015). Exploring contributions of project-based learning to health and wellbeing in secondary education. *Improving Schools*, 18(3), 207-220.

Al-Shaiba, A. (2014). Key perspectives on preparing UAE nationals for employment. In *The future of education in the UAE: Innovation and knowledge production* (pp. 67-95). Abu Dhabi, UAE: The Emirates Center for Strategic Studies and Research.

Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001). *A taxonomy for learning, teaching, and assisting: A revision of Bloom's taxonomy of education objectives*. New York: Longman.

Bocconi, S., Kampylis, P. & Punie, Y. (2012). *Innovating learning: Key elements for developing creative classrooms in Europe*. JRC Scientific and Policy Reports. Seville, Spain: European Commission, Joint Research Center, Institute for Prospective Technological Studies.

Bonwell, C.C. & Eison, J.A. (1991). *Active learning: creating excitement in the classroom*. (ASHE-ERIC Higher Education Rep. No. 1). Washington, D.C.: The George Washington University, School of Education and Human Development.

Chowdhury, R.K. (2015). Learning and teaching style assessment for improving project-based learning of engineering students: a case of United Arab Emirates University. *Australasian Journal of Engineering Education*, 20(1), 81-94.

Hackathorn, J., Solomon, E.D., Blankmeyer, K.L., Tennial, R.E. & Garczynski, A.M. (2011). Learning by doing: An empirical study of active teaching techniques. *The Journal of Effective Teaching*, 11(2), 40-54.

Hopkins, S. (2017). *A conflict of desires: global English and its effects on cultural identity in the United Arab Emirates*. Unpublished Doctoral Thesis, University of Leicester, U.K.

Kayes, D.C. (2002). Experiential learning and its critics: preserving the role of experience in management learning and education. *Academy of Management Learning and Education*, 1, 137-149.

Mohammed, N. (2017). Project-based learning in higher education in the UAE: a case study of Arab students in Emirati Studies. *Learning and Teaching in Higher Education: Gulf Perspectives*, 14(2).

<http://doi.org/10.18538/lthe.v14.n2.294>

- KHDA (2017). *The future of education: A focus on schools in Dubai*. Dubai, UAE: Knowledge and Human Development Authority.
- Lejk, M., Wyvill, M. & Farrow, S. (1996). *A survey of methods for deriving individual grades from group assessments*. *Assessment and Evaluation in Higher Education*, 21(3), 267-280.
- Mc Glynn, A.P. (2005). Teaching millennials, our newest cultural cohort. *Educational Digest*, 71(4), 12-16.
- Michel, N., Cater, J.J. & Varela, O. (2009). Active versus passive teaching styles: An empirical study of student outcomes. *Human Resource Development Quarterly*, 20(4), 397-418.
- Mills-Jones, A. (1999). Active learning in IS education: choosing effective strategies for teaching large classes in higher education. *Proceedings of the 10th Australasian Conference on information Systems*, Wellington, New Zealand.
- Mohammed bin Rashid Al Maktoum Foundation (MBRF) & The United Nations Development Programme/ Regional Bureau for Arab States (UNDP/RBAS). (2014). *Arab Knowledge Report 2014: Youth and localisation of knowledge United Arab Emirates*. Dubai, UAE: Al Ghurair Printing and Publishing.
- Pazur Anicic, K. & Mekovec, R. (2016). Introducing problem-based learning to undergraduate IT service management course: student satisfaction and work performance. *Journal of Problem-Based Learning in Higher Education*, 4(1), 16-37.
- Peck, A.C., Ali, R.S., Matchock, R.L. & Levine, M.E. (2006). Introductory psychology topics and student performance: where is the challenge? *Teaching of Psychology*, 33(3), 167-170.
- Serva, M.A. & Fuller, M.A. (2004). Aligning what we do and what we measure in business schools: incorporating active learning and effective media use in assessment of instruction. *Journal of Management Education*, 28(1), 509-519.s
- Stewart-Wingfield, S. & Black, G.S. (2005). Active versus passive course designs: The impact on student outcomes. *Journal of Education for Business*, 81, 119-125.
- Thomas, J.W. (2000). A review of research on project-based learning. http://www.bie.org/index.php/site/RE/pbl_research/29
- UAE Government (n.d.). *Vision 2021*. <http://vision2021.ae/>
- Van Eynde, D.F. & Spencer, R.W. (1988). Lecture versus experiential learning: their different effects on long-term memory. *Organisational Behavior Teaching Review*, 12, 52-58.
- Welskop, W. (2014). Action learning in education. Accessed from: <https://www.researchgate.net/publication/259971216>
- Wood, G. (2016). Voices from the field: developing employability skills for archaeological students through the experimentation and the pedagogy of problem-based learning. *Journal of Problem-Based Learning in Higher Education*, 4(1), 100-108. <https://journals.aau.dk/index.php/pbl/article/view/1425>

Appendix A

Rubric for evaluating the course projects

Standards	Indicators	Mark
Creativity and Innovation	There is no vision for the project.	1
	There is nothing innovative about the project.	
	Practical application of the project output is limited.	
	There is a clear vision for this project.	3
	There is something innovative about the project.	
	Practical application of the project output is possible.	
The project planner	There is a long-term vision for the project.	5
	There is creativity and innovation in the project.	
	There are clear practical applications of the project output.	
	There is no planner for the project.	1
	Didn't finish the project on time.	
	The project doesn't serve the community.	
Project presentation	There is an integrated planner for the project, which contains the university logo, project title, description of the project, and the names of the students.	3
	The project serves the community.	
	Planner was completed a week from the time that was assigned.	
	There is an integrated planner for the project, which contains the university logo, project title, description of the project, the project timeline, the expected project output, the names of the students, the type of participation, the impact of the project, and the name of the supervisor.	5
	The project serves the community and solves a problem.	
	Finished on time.	
Project presentation	Average ability to deliver the project idea.	1
	Average discussion and argumentation.	
	The project shows poor cooperation between students.	
	Roles and responsibilities among students are distributed unfairly.	
	Moderate ability to deliver the project idea.	3
	Weak discussion and argumentation.	
	The project shows average cooperation among students.	
	Roles and responsibilities among students are distributed mostly fairly.	
	High degree of ability to deliver the project idea.	5
	Skillful discussion and argumentation.	
	The project shows strong cooperation among students.	
	Equitable distribution of roles and responsibilities among students.	
	Provided informational brochures about the project.	

Appendix B

Questions included in the pre- and post-course surveys

Pre-Course Survey Questions

1. Do you like the lecture-style of your courses?
2. Does the traditional course help you develop your Communication skills?
3. Does the traditional course help you develop your Creativity skills?
4. Does the traditional course help you develop your Problem-solving skills?
5. Does the traditional course help you develop your Teamwork skills?
6. Does the traditional course help you develop your Time management skills?
7. Does the traditional course help you develop your Understanding of your strengths and weaknesses?
8. Does the traditional course help you develop your Ability to take initiative?
9. Does the traditional course help you develop your Ability to generate good ideas?
10. Does the traditional course help you develop your Planning skills?
11. Do you think working on a project would help you learn more?
12. Have you ever worked on projects before?
13. Do you work collaboratively with your classmates during class?
14. Do you think working on a project would help you to get to know your classmates better?

Post-Course Survey Questions

1. Did the project help you expand your understanding of the UAE and Emirati culture?
2. Did the project help you to manage your time better?
3. Did the project help you take innovative steps to achieve the desired results?
4. Did the project help you take initiatives in solving problems?
5. Did the project help you become more self-directed?
6. Did the project help you become more creative?
7. Did the project develop your sense of inquiry?
8. Did the project promote the flow of good ideas?
9. Did the project enhance your communication skills?
10. Did the project helped you to gather information from different sources?
11. Did the project serve the community or contribute to the development of the state?
12. Did you learn how to develop a plan for the project?
13. Did the project help you demonstrate a high level of expertise?
14. Did your work in the project help you understand your personal strengths and weaknesses?