



# The pedagogy of inquiry and deliberation in higher education in the Arab region

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## ABSTRACT

This paper examines the extent to which the official discourse of 36 institutions of higher education in 15 Arab countries pronounces four meanings depicted in the extant literature on the pedagogy of inquiry and deliberation: cooperative/collaborative learning; problem-solving; critical thinking; and discussion/debate. Results derived from the discourse analysis showed a weak emphasis on cooperative learning and discussion/debate while problem solving comprised the highest number of sentences in the discourse followed by critical thinking. Information analysed from interviews and course syllabi provided a portrait of how teaching might be carried out in the universities surveyed. However, for a complete picture of pedagogy of inquiry and deliberation to be drawn, research emphasis should be shifted into action research and observational case studies that tend to yield an in-depth account of teaching and learning in higher education.

## KEYWORDS

cooperative learning; critical thinking; problem solving; debate; discourse analysis

## The issue

The traditionally demarcated tripartite role of higher education pivots on a mix of teaching, research and service with differing relative weights accorded to each depending on the mission of a higher educational institution. A recent surge in higher education has been marked by an increased emphasis on the service dimension partly in response to calls for greater accountability and increased formal assessment of educational outcomes, and partly for encouraging wider faculty participation in governance for accreditation purposes (Terpstra and Honoree 2009). While accreditation puts higher educational institutions on a track of continuous quality improvement, overemphasis on service seems to have tipped the balance at the expense of teaching and research. An important dimension in teaching that lacks emphasis is pedagogy that lends support to students' engagement in forms of civic practices like voluntarism, civic engagement and civic participation in society. Moreover, the civic role of higher education is increasingly brought into question in light of the overemphasis of degree programmes on pre-professional training, specialization and careerism (Gamson 2000) meshed with the dominance of non-civic values such as consumerism over notions of civic responsibility (Giroux 2003). Higher education is thus indicted for gradually abdicating its traditionally demarcated civic role in society often nourishing what is termed as 'citizen disengagement'

(Gottlieb and Robinson 2002). This indictment is ubiquitous in worldwide contexts in light of the structural transformations of post-modern societies enfeebling the civic responsibility mission of higher education and depleting the pedagogy of engagement through critical thinking, problem solving, discussion, and deliberation.

Evidence from the United States suggests that college students are increasingly becoming alienated from participation in public affairs, democracy and citizenship (Barber 2004). In response, several recent initiatives in the United States, Europe and elsewhere have called for reinventing the mission of higher education and to re-induct students in forms of learning that promote civic responsibility and democratic beliefs, attitudes, actions, and behaviours. For instance, Sullivan and Rosin (2008) reflected on recent initiatives in the United States that have called upon higher educational institutions to reconsider their civic mission often underscoring service learning as a means for fostering civic responsibility among students by engaging them directly in their communities while enhancing their coursework (Gottlieb and Robinson 2002). A recent edited book published by the Council of Europe entitled *Higher Education for Democratic Innovation* (Bergan, Gallager, and Harkavy 2016) warned against the declining civic role of higher education in Europe and called for re-socializing students into the framework of democracy.

Higher education in the Arab region had its share of disengagement from civic responsibility as insinuated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Conference on Higher Education (WCHE) in 2009 themed 'The New Dynamics of Higher Education and Scientific Research for Societal Change and Development'.<sup>1</sup> The conference placed aspects of civic responsibility (e.g., civic engagement and civic values) at the top of its priorities. However, the ensuing UNESCO recommendations have overlooked the role of the curriculum in fostering civic responsibility among students, a lacuna that agitates for systematic research on the topic. Save nine reports themed 'Societal Responsibility' published in the proceedings of the Arab Regional Conference on Higher Education in 2009,<sup>2</sup> studies on civic responsibility in higher education in the Arab world, particularly those concerned with a curriculum promoting civic responsibility, are scarce.

Since the existing body of literature on civic responsibility in the curriculum comes from the Western world, it would be interesting to bridge the gap in the literature by focusing on the Arab region, particularly the extent to which the official discourse of higher educational institutions pronounces what we term in this paper the 'pedagogy on inquiry and deliberation', an umbrella term that denotes the use of instructional methods and techniques for engaging students with learning. This paper, therefore, examines the extent to which the official discourse of 36 institutions of higher education in 15 Arab countries pronounces four meanings commonly depicted in the extant literature on the pedagogy of inquiry and deliberation: cooperative/collaborative learning; problem solving; critical thinking; and discussion/debate. The meanings indicate the range of emphasis of higher education on instructional methods and models that result in both cognitive and affective competencies for engaging learners in civic practices. In addition, the discourse analysis is supplemented and verified by analyses of interviews data conducted in 13 universities as well as analyses of a range of course syllabi. This triangulation seeks to provide a connected chain of evidence regarding teaching and learning in the universities surveyed during the period 2012–14.

## Literature review

There are myriad ways that examine how the curriculum is taught and the literature is replete with a variety of overlapping terminologies including ‘teaching strategies’, ‘teaching methodologies’, ‘instructional methods’, ‘teaching methods’, ‘inquiry-based learning’, ‘praxis’, ‘active learning’ and the sort. This assortment of terminologies has foundations in learning theories such as cognitive psychology, behaviourism, constructivism, social learning theory and their branches. In turn, there are different schools of thought informing styles of pedagogy such as progressivism and constructivism, to mention but a few.

While the literature on teaching and learning is extensive, a recent strand of studies cites experiential learning as a method for engaging students in higher-order thinking. From a cognitive viewpoint, experientially taught students may engage in higher-order thinking including analysis, synthesis and evaluation (Anderson and Krathwohl 2001; Hackathorn et al. 2010). Building on the thoughts of Lewin (1951) as well as Kolb and Fry (1975), experiential learning remains a focal point for consideration in fostering civic responsibility in the curriculum. It also encompasses a range of terminologies that correspond to the pedagogy of inquiry and deliberation, as defined below.

### *Pedagogy of inquiry and deliberation*

A typical traditional pedagogy in the classroom centres on the faculty member passing on information to students mainly through face-to-face instruction. Students encode and memorize content (Cater and Varela 2009; Stewart-Wingfield and Black 2005) and their performance is assessed through formative and summative evaluation. The dominant lecture-oriented teaching method has been the subject to criticism since learning by rote has been shown to reduce curiosity, self-learning, critical thinking and inquiry into a junior faculty. Burgeoning research advocates for teaching methods that encourage students to engage actively with content and learning processes because it has been found to promote higher-order thinking than the traditional lecturing method (Peck, Ali, Matchock, and Levine 2006). In turn, faculty members may employ a wide range of instructional methods such as cooperative learning, discussions and debates, and applications through fieldwork research, practica or internships as part of the activities required by a specific course (Peck et al. 2006). The ultimate aim of this is to expand students’ learning and engage them in critical thinking, problem solving and independent learning (Yoder and Hochevar, 2005). It is suggested that higher cognitive thinking promoted in learning and teaching lends significant support to the development of the affective domain in learning, including civic responsibility (Baeten, Kyndt, and Struyven 2010; Lea, Stephenson, and Troy 2003). The latter is at the heart of the classic academic mission of higher education being a public plaza for the generation of knowledge.

An important recommendation in the literature (e.g., Yoder and Hochevar 2005; Umpleby and Anbari 2014) calls upon education policy-makers to focus on learner-centred methods by involving students in discussions, problem solving, deliberation and cooperative learning. This report examines four overarching meanings subsumed under the pedagogy of inquiry and deliberation, as now defined.

- Cooperative/collaborative: conceptually, cooperative learning is rooted within social interdependence theory. According to this theory, cooperation becomes effective

when students perceive that they share similar objectives that are dependent on the actions of the group. Positive interdependence is assumed to enhance interaction in which students encourage and help each other to reach their goals besides exchanging comments and challenging each other's conclusions (Johnson and Johnson 1989). Cooperative learning may result in civic competencies needed for the formation of civically minded individuals. Besides, collaborative teaching involves assignments, research projects, job-shadowing opportunities as in the medical field, and attending conferences by students in order to enhance their collaborative skills (Kandiah and Saiki 2012) by engaging in interactions with peers hailing from different backgrounds and experiences.

- Problem solving: defined as the process of canvassing through details of a problem to examine it and reach a solution. Problem solving may include or systematic operations and can be a measure of an individual's critical thinking skills (Rudd 2007).
- Critical thinking in the literature looms large. Bishop (2013) concludes that the topic of critical thinking is too broad and there are too many such definitions stymieing the emergence of a consensually agreed-upon definition. Critical thinking has been defined as a reasoned, purposive reflective approach (Rudd 2007) and/or as a sceptical approach (Mason 2007) used to make decisions, solve problems and master concepts. In this report, critical thinking is viewed as a process that starts with questioning in order to reason solutions to problems relevant to the subject matter and its implications in society.
- Discussion/debate: the use of debate in the classroom helps to develop the ability to evaluate critically information and arguments, obtain and evaluate research evidence, appreciate multiple perspectives and maintain an awareness of one's assumptions and the possibility of bias (Gervey, O'Connor, and Chia-Ching 2009). Through debate, students are inducted into a culture of understanding differing views to which they seek to understand in order to rebut, reflect upon or deliberate. Prior studies have demonstrated a positive relationship between student participation in classroom discussion and learning, motivation and problem-solving ability (McKeachie 1970, cited in Nunn 1996). Discussion and debate involve listening being a crucial skill to be acquired (Bolitho et al. 2003).

## **Analysis of meanings in the discourse of the universities surveyed**

### ***Cooperative/collaborative learning***

As mentioned above, cooperative learning is a style of pedagogy that develops forms of mutual learning involving interaction, cooperation and discussion in groups involving group assignments and joint research projects (Kandiah and Saiki 2012).

Qatar University made reference to collaborative learning: 'The diverse and ambitious student body, with students from a variety of nationalities, academic and professional backgrounds, fosters a collaborative and open learning environment' (chair, Department Gulf Studies). Ain Shams University referred to its endorsement of cooperative education in new programmes: 'The programmes feature dynamic and strong interdisciplinary cooperative education that is different from the traditional mainstream' (chair, Department of New Programs). A clear focus on cooperative learning was accented in the Faculty of Nursing at Suez Canal University in Egypt:

The College of Nursing in Ismailia - Suez Canal University follows the active learning strategy, which is the educational philosophy that depends on the positive learner in the educational situation and aims to activate the role of the learner in terms of learning through work and experimental research and the learner's reliance on himself to obtain information and acquire skills and composition of values and trends. It does not focus on conservation and indoctrination but on the development of thinking and the ability to solve problems, teamwork and collaborative learning. (Strategic Plan Faculty of Nursing, translated from original Arabic by the author).

In Lebanon, the American University of Beirut (AUB) emphasized collaborative learning-centred education: 'Advocating and supporting collaborative, learning-centred education' (mission, Center for Teaching & Learning).

It is worth noting that the majority of sentences on cooperative/collaborative learning appeared mostly in the discourse of Egyptian universities. Cooperative/collaborative learning occupied a narrow space in the discourse of the universities surveyed ranging from a minimum of zero to a maximum of three sentences as was the case of Qatar University which had three sentences followed by AUB, Suez Canal and King Saud University (two sentences each), and Ain Shams and Bahrain University (one sentence each).

### ***Problem solving***

Problem solving appeared mainly in hard sciences or scientific disciplines: 'Basic concepts and techniques of problem solving, data evaluation and assessment' (objectives, Department Health Information Administration), and scarcely in soft sciences such as administrative sciences: 'All the degree programmes at the CBA [College of Business Administration] provide students with problem solving through the use of diverse concepts, tools and techniques taught in various functional fields' (objectives, Faculty, Administrative Sciences). In Jordan, a balance between soft and hard sciences was found in the discourse of problem-solving meaning. To exemplify, the mission of the Department of social work at the University of Jordan pronounced: 'Training the students on how to diagnose problems and how to take to solve them' (mission, Department Foundations of Religion).

A distinctive feature was found in Egyptian universities that accented problem solving in scientific departments more than in other departments or disciplines such as literature or education. The chair of the Department of Analytical Chemistry at Ain Shams University stated that: 'Analytical chemistry students gain the intellectual skills and confidence to confront and solve difficult problems.' It was also linked to solving problems preceded by reference to preparing engineers for the market:

The department aims at graduating an architect who is theoretically and practically qualified and has acquired many of the core skills and abilities that qualify him for the labor market ... cognizant of the importance of architectural critique and how to solve problems, capable of thinking analytically and creatively." (Objective, Dept. of Architecture), and to solve problems faced by society "Conduct projects that serve the various branches of agricultural production and contribute to solving problems and problems of food security. (Objective, Center of Agricultural Service and Research in Arid Areas, translated from original Arabic by the author).

Problem solving was also evident in the discourse of private universities in Egypt. For instance, the mission of the Department of Computer Science at the American University

in Cairo (AUC) stated 'The department provides an environment in which students develop ... problem solving skills.' Two private universities in Lebanon provided shared emphases on problem solving similar to Egyptian universities. For instance, at the AUB, 'With the structure of our courses which include laboratory components, field components, term papers, oral presentations, and problem-solving assignments, we train our students to observe, analyze, critically evaluate, think independently, and derive their own conclusions' (mission, Department Geology). Notre Dame University-Louaize (NDU) pronounced problem-solving skills stating: 'Develop and demonstrate high-level cognitive thinking skills including critical thinking, problem-solving skills, and integrative thinking' (objectives, Department Science).

Problem solving was pronounced by Sultan Qaboos University with an emphasis on the productive private sector: 'A major goal of the department is to assist students to meet that demand by preparing them with the economic knowledge and problem-solving skills that will be required for productive private sector employment' (chair, Department Natural Resource) and 'To provide students with a number of teaching strategies for various arts that develop critical thinking and problem solving skills' (objectives, Department Art Education).

It was worth noting that the University of Jordan had the highest number of sentences on problem solving among the universities surveyed followed by Alexandria University, Suez Canal, and October 6 University in Egypt.

### ***Critical thinking***

Critical thinking appeared under the mission of the Department of Biochemistry at the University of Kuwait: 'The aim of the Department is to instil among medical students a proper learning attitude to existing and new findings of biochemistry and molecular biology, through open-minded but critical thinking' (mission, Department Biochemistry). A similar emphasis was found at the University of Jordan (seven sentences) of which the mission of the Department of social work mentioned: 'Motivating the mentality of students towards the skills of creativity, invention and critical thinking in the future' (mission, Department Social Work) and 'Promote basic research skills and critical thinking' (objectives, Department of Linguistics).

The Department of Electrical and Computer Engineering at AUB pronounced critical thinking along social responsibility in its mission: 'Prepare students to be professionals capable of being leaders in their chosen careers, committed to life-long learning, innovation, critical thinking, integrity, and civic responsibility.' In fact, 33.3% of AUB's sentences on critical thinking were in strategic plans of various schools such as Rafiq Hariri School of Nursing, which accented in its strategic plan: 'Demonstrate competency in clinical skills and critical thinking' and in the strategic plan of the Faculty of Engineering & Architecture which stated: 'Students develop an intellectual background, critical thinking and contribute to the continuum of aesthetic and technological innovations by generating ideas and solutions to a wide range of design problems.' A similar strategizing aspect of critical thinking in the curriculum was found in the discourse of the AUC 'As a liberal arts institution, we not only provide knowledge and skills in particular fields but preparation for a life that reflects critical thinking, ethical principles, and self-directed, lifelong learning' (strategic plan).

A remarkable difference in sentences on critical thinking was found in Lebanon, Egypt, Qatar and Sultanate Oman. The AUB linked critical thinking to research, free inquiry, diversity and academic integrity. For instance, the Faculty of Arts and Sciences at AUB pronounced in its mission that ‘The faculty, through its teaching and research, promotes free Inquiry, critical thinking, academic integrity, and respect for diversity and equality.’ Civic responsibility was also linked with critical thinking at the AUB: ‘Advance in their IE [industrial engineering] careers through leadership, innovation, analytical & critical thinking, entrepreneurship, life-long learning, and civic responsibility’ (objectives, Department Industrial Engineering and Engineering Management). Its Egyptian counterpart, the AUC, shared the same leitmotif aspiring to achieve in the strategic plan: ‘As a liberal arts institution, we not only provide knowledge and skills in particular fields but preparation for a life that reflects critical thinking, ethical principles, and self-directed, lifelong learning’ (strategic plan). Critical thinking at Qatar University was also connected with internships and simulations designed to encourage engagement with critical thinking:

Our students contribute to the curriculum that includes classroom lectures, laboratory and simulation, internships and practicum experiences designed to encourage critical thinking, enhance clinical skills, and to be on track with the latest developments in the field of health sciences. (chair, Department Health Science)

Additionally, critical thinking was mentioned by the majority of Egyptian universities though with variations ranging from zero sentences such as El-Azhar University to a maximum of nine sentences pronounced by the University of Ain Shams and the America University in Cairo. It is worth noting that the AUB had the largest number of sentences on critical thinking (18) followed by Qatar University (13), Ain Shams (nine), the AUC (nine) and King Saud University (seven).

Despite the emphases on critical thinking by the majority of universities surveyed, no single discourse addressed students directly through advice, models and resources on how to develop their critical thinking skills through study skills websites,<sup>3</sup> rendering the discourse to an inventory of sentences whose actual implementation in the classroom remains opaque in the absence of evidence.

### ***Discussion/debate***

Discussion and/or debate appeared in 17 sentences, constituting 6.18% of the total number of sentences concerned with the four meanings conceptualized for the discourse analysis, indicating limited importance accorded to discussion and/or debates as a vital component of pedagogy in the classroom. Discussion appeared at United Arab Emirates University (UAEU) ‘Expand students capability to formulate their own opinions on contemporary professional issues and their ability to debate their opinions constructively in public and an ability to debate constructively’ (objectives, Department architectural Engineering), and Qatar University, which concentrated on debates ‘a collaborative and open learning environment that provides them the space to discuss and debate perspectives and topics’ (chair, Department Gulf Studies). A student-led discussion approach was found at Kuwait University: ‘Discussions are fully student-led with full interaction among the whole group’ (objectives, Department of Pediatrics). Also, involvement in discussions of

contemporary issues was articulated in the student-learning outcomes of the Department of Civil Engineering: ‘An awareness of emerging technologies in local and global context, and involvement in Discussions of contemporary issues related to society.’ Sultan Qaboos University accented discussion sessions as part of a series of active teaching methods: ‘Thus, in addition to lectures, research assignments and discussion sessions, emphasis is placed on practical training and fields trips to information and learning centers’ (chair, Department of Library & Information Science).

### **Distribution of meanings**

Composite scores for four meanings were counted and percentages obtained, as shown in Table 1.

#### ***Cooperative/collaborative learning***

Of the total sentences comprising the four meanings, only 11 sentences (4%) on cooperative/collaborative learning appeared in only six universities, accounting for 16.6% of the total number of universities surveyed: Qatar University, the AUB, Suez Canal University, King Saud University, Ain Shams University and the University of Bahrain. This shows limited emphasis of universities on cooperative/collaborative learning as an important aspect of the weakness of active and mutual learning classroom.

#### ***Problem solving***

A total of 129 sentences accenting problem solving appeared in the discourse of universities, constituting 46.9% of the total number of sentences in the four meanings. This meaning comprised the highest number of sentences in the discourse and was pronounced by 25 universities comprising two-thirds of the total number of universities surveyed. Figure 1 shows the number of sentences across the universities surveyed.

#### ***Critical thinking***

Critical thinking had the second largest distribution of sentences in the discourse of the universities surveyed after problem solving. It had 118 sentences, constituting 42.9% of the total number of sentences in the four meanings. Also, critical thinking appeared in

**Table 1.** Frequencies and percentages for the four meanings.

| Meanings                           | Number of sentences | Percentage          |
|------------------------------------|---------------------|---------------------|
| Collaborative/cooperative learning | 11                  | 4.0%                |
| Problem solving                    | 129                 | 46.9%               |
| Critical thinking                  | 118                 | 42.9%               |
| Debate/discussion                  | 17                  | 6.18%               |
| Total                              | 275                 | 99.98% <sup>a</sup> |

Note: <sup>a</sup>Due to rounding.



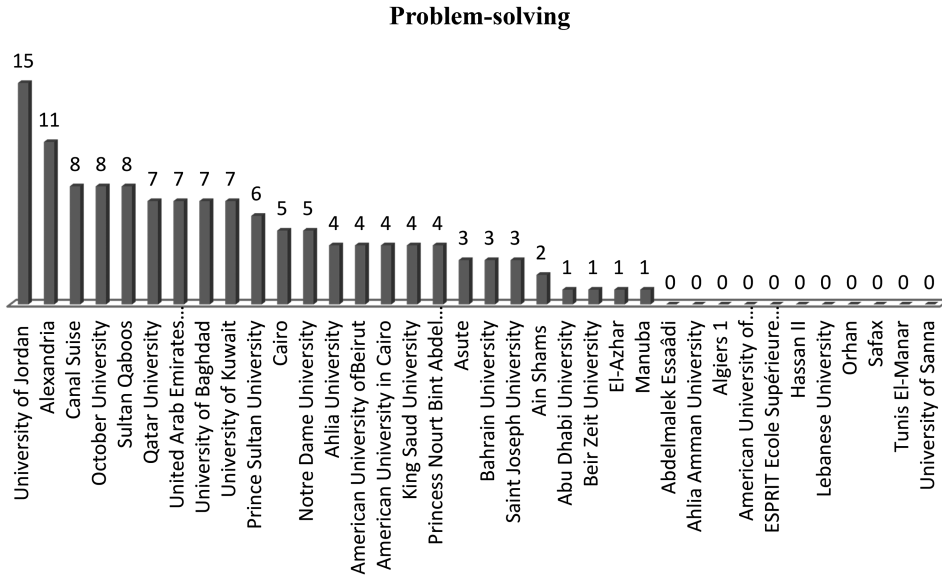


Figure 1. Distribution of sentences on problem solving.

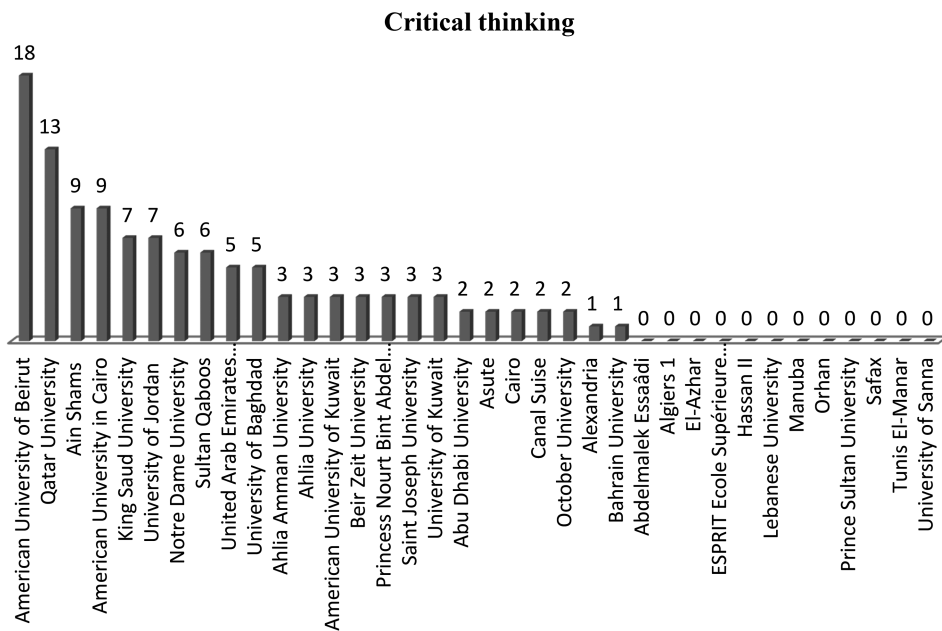
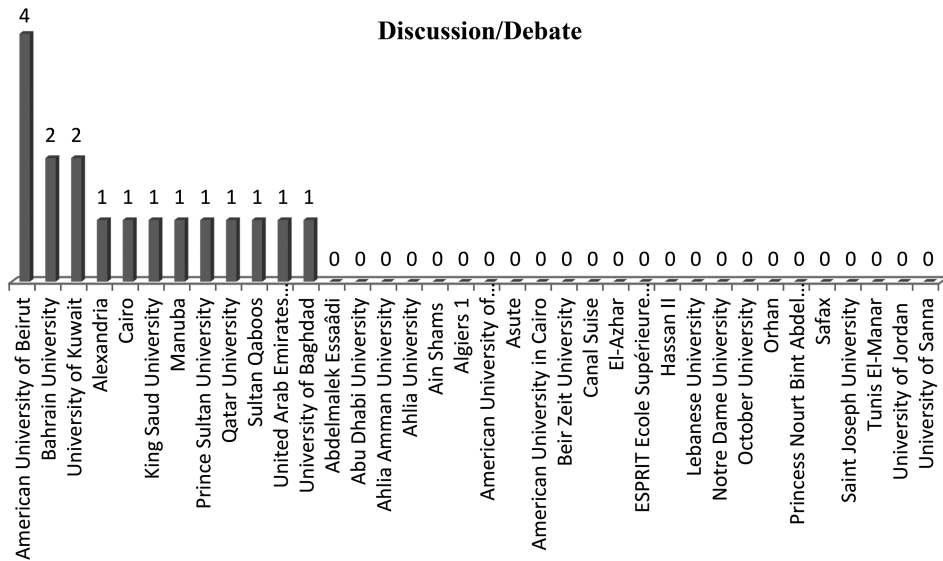


Figure 2. Distribution of sentences on critical thinking.

the discourse of 24 (66.6%) universities as opposed to 12 (33.4%) which did not made any reference to this meaning such as Senaa University and universities in Algiers, Tunisia and Morocco (Figure 2).



**Figure 3.** Distribution of sentences on discussion/debate.

### ***Debate/discussion***

As for debate/discussion, it occupied 6.18% of the total number of sentences in the discourse; higher than cooperative/collaborative learning by 2.18% and was only pronounced by 12 universities with highest number of sentences among them being four at the AUB in Lebanon, followed by Bahrain University and Kuwait University (two sentences each), while universities loading one sentence were Alexandria University and Cairo University in Egypt, King Saud University and Prince Sultan University in Saudi Arabia, Manuba in Tunisia, Sultan Qaboos in Sultanate Oman, United Arab Emirates University in the UAE, and the University of Baghdad in Iraq (Figure 3).

### ***Total number of sentences by university***

The total number of sentences combining the four meanings shows that the AUB had the highest number of sentences followed by Qatar University and then the University of Jordan. These ranged from a maximum of 28 sentences at the AUB in Lebanon to one sentence at El-Azhar in Egypt and zero sentences such as at the University of Sana'a in Yemen (Figure 4).

In total, Table 2 shows inquiry sentences by the four meanings devised for the study. The average number of sentences was 7.63, with 15 universities scoring above the mean. The standard deviation (SD) was 7.1. The composite scores were transformed into standard scores using  $z$ -score transformation. Variations were found in the total number of sentences for the four meanings in the 15 countries surveyed, as shown in Table 2.

The AUB scored as high as 2.86 SDs above the mean, followed by Qatar University which scored 2.30 and the University of Jordan 2 SDs above the mean. Sultan Qaboos University scored 1 SD above the mean, while 30.5% of the ranked universities scored between 0.05 above the mean as a minimum and 0.89 as maximum SDs (Table 3).

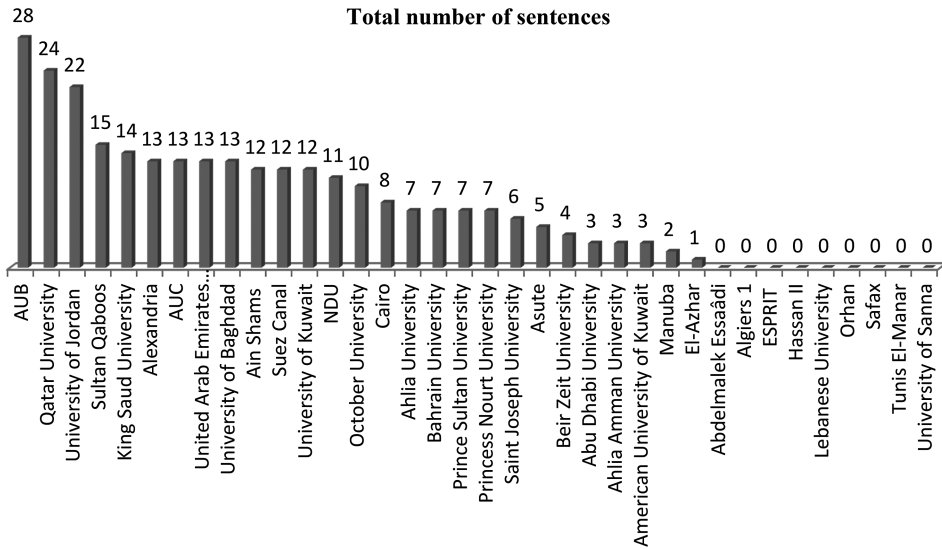


Figure 4. Total number of sentences by university.

### Inquiry and deliberation by state, sector and speaker

#### State differences

Evident as it is, state differences denote the average distribution of the mean of words in each university drawn from each country involved in the study. The total number of words in the discourse<sup>4</sup> of the 36 universities was 542,157, of which 8447 or 1.5% of words in sentences emphasized the four meanings. Given the differences in the sample of the 36 universities surveyed in each country with a maximum of eight universities in Egypt and a minimum of one university each in Qatar, Iraq, Palestine, Yemen and Oman, it was necessary to opt for an unbiased arithmetic procedure. The mean of words for universities in each country was obtained by adding the number of words for each university in a given country and dividing them by the total number of universities in that country as applicable. Then, the total average of words in each country was summed and divided by the total number of countries, resulting in average of 230. Table 4 shows the average of wordage in the countries surveyed and their ranking.

Given the arithmetic used in calculating ranks, Qatar was ranked first followed by Oman and then Iraq as the first three countries. The average of sentences for the 15 countries was 8.7. Qatar had the largest number of sentences followed by Oman and then Iraq, while 53.3% of the countries were below the average; these ranged between an average of eight like the UAE to zero in Morocco and Yemen (Table 5). As a cautionary note, had Lebanon been represented by the AUB only, it would have been ranked first since the AUB had the largest number of sentences connoting the four meanings of inquiry.<sup>5</sup>

#### Sectors differences

Between-sector differences were found. The public sector was characterized by lengthy wordage (446,255 with a mean of 18,593 as opposed to 95,902 in the private sector,

**Table 2.** Inquiry sentences by meaning and university.

| University                                  | Cooperative/collaborative learning | Problem solving | Critical thinking | Discussion/debate | Total |
|---|------------------------------------|-----------------|-------------------|-------------------|-------|
| Manuba                                      | 0                                  | 1               | 0                 | 1                 | 2     |
| Tunis El-Manar                              | 0                                  | 0               | 0                 | 0                 | 0     |
| Safax                                       | 0                                  | 0               | 0                 | 0                 | 0     |
| ESPRIT                                      | 0                                  | 0               | 0                 | 0                 | 0     |
| Algiers 1                                   | 0                                  | 0               | 0                 | 0                 | 0     |
| Orhan                                       | 0                                  | 0               | 0                 | 0                 | 0     |
| University of Kuwait                        | 0                                  | 7               | 3                 | 2                 | 12    |
| American University of Kuwait               | 0                                  | 0               | 3                 | 0                 | 3     |
| Hassan II                                   | 0                                  | 0               | 0                 | 0                 | 0     |
| Abdelmalek Essaâdi                          | 0                                  | 0               | 0                 | 0                 | 0     |
| University of Jordan                        | 0                                  | 15              | 7                 | 0                 | 22    |
| Ahlia Amman University                      | 0                                  | 0               | 3                 | 0                 | 3     |
| Ain Shams                                   | 1                                  | 2               | 9                 | 0                 | 12    |
| Cairo                                       | 0                                  | 5               | 2                 | 1                 | 8     |
| Suez Canal                                  | 2                                  | 8               | 2                 | 0                 | 12    |
| Alexandria                                  | 0                                  | 11              | 1                 | 1                 | 13    |
| American University in Cairo (AUC)          | 0                                  | 4               | 9                 | 0                 | 13    |
| El-Azhar                                    | 0                                  | 1               | 0                 | 0                 | 1     |
| October 6 University                        | 0                                  | 8               | 2                 | 0                 | 10    |
| Asute                                       | 0                                  | 3               | 2                 | 0                 | 5     |
| American University of Beirut (AUB)         | 2                                  | 4               | 18                | 4                 | 28    |
| Notre Dame University-Louaize (NDU)         | 0                                  | 5               | 6                 | 0                 | 11    |
| Lebanese University                         | 0                                  | 0               | 0                 | 0                 | 0     |
| Saint Joseph University (USJ)               | 0                                  | 3               | 3                 | 0                 | 6     |
| University of Baghdad                       | 0                                  | 7               | 5                 | 1                 | 13    |
| King Saud University                        | 2                                  | 4               | 7                 | 1                 | 14    |
| Princess Nourt Bint Abdel Rahman University | 0                                  | 4               | 3                 | 0                 | 7     |
| Prince Sultan University                    | 0                                  | 6               | 0                 | 1                 | 7     |
| Sultan Qaboos                               | 0                                  | 8               | 6                 | 1                 | 15    |
| United Arab Emirates University (UAEU)      | 0                                  | 7               | 5                 | 1                 | 13    |
| Abu Dhabi University                        | 0                                  | 1               | 2                 | 0                 | 3     |
| Qatar University                            | 3                                  | 7               | 13                | 1                 | 24    |
| Beir Zeit University                        | 0                                  | 1               | 3                 | 0                 | 4     |
| University of Sana'a                        | 0                                  | 0               | 0                 | 0                 | 0     |
| Bahrain University                          | 1                                  | 3               | 1                 | 2                 | 7     |
| Ahlia University                            | 0                                  | 4               | 3                 | 0                 | 7     |
| Total                                       | 11                                 | 129             | 118               | 17                | 275   |

which had a mean of 7991). There were 186 sentences signifying pedagogy of inquiry and deliberation in the public sector as opposed to 89 sentences in the private one. The mean of sentences signifying the four meanings was slightly higher in the public sector ( $\bar{X} = 7.75$ ) than it was in the private one ( $\bar{X} = 7.41$ ). Table 6 summarizes differences between public and private universities in the sample.

### **Speakers differences**

Two main of sources for the sentences were identified: institutional directives including university mission, vision, values and strategic plan, and other sources represented by speeches of president, deans, chairpersons and directors. The highest percentage of sentences was pronounced by departmental objectives, followed by mission sentences and then vision of the institution. The discourse of the 36 universities demonstrated a

**Table 3.** Inquiry sentences by meaning and university.

| Universities                                | z-scores |
|---|----------|
| American University of Beirut (AUB)         | 2.86     |
| Qatar University                            | 2.30     |
| University of Jordan                        | 2.02     |
| Sultan Qaboos                               | 1.03     |
| King Saud University                        | 0.89     |
| Alexandria                                  | 0.75     |
| American University in Cairo (AUC)          | 0.75     |
| United Arab Emirates University (UAEU)      | 0.75     |
| University of Baghdad                       | 0.75     |
| Ain Shams                                   | 0.61     |
| Canal Suise                                 | 0.61     |
| University of Kuwait                        | 0.61     |
| Notre Dame University-Louaize (NDU)         | 0.47     |
| October 6 University                        | 0.33     |
| Cairo                                       | 0.05     |
| Ahlia University                            | -0.08    |
| Bahrain University                          | -0.08    |
| Prince Sultan University                    | -0.08    |
| Princess Nourt Bint Abdel Rahman University | -0.08    |
| Saint Joseph University (USJ)               | -0.22    |
| Asute                                       | -0.37    |
| Beir Zeit University                        | -0.51    |
| Abu Dhabi University                        | -0.65    |
| Ahlia Amman University                      | -0.65    |
| American University of Kuwait               | -0.65    |
| Manuba                                      | -0.79    |
| El-Azhar                                    | -0.93    |
| Abdelmalek Essaâdi                          | -1.07    |
| Algiers 1                                   | -1.07    |
| ESPRIT                                      | -1.07    |
| Hassan II                                   | -1.07    |
| Lebanese University                         | -1.07    |
| Orhan                                       | -1.07    |
| Safax                                       | -1.07    |
| Tunis El-Manar                              | -1.07    |
| University of Sanna                         | -1.07    |

**Table 4.** Average of wordage by country and their ranking.

| Country              | Universities | Average | Rank |
|----------------------|--------------|---------|------|
| <i>230 and above</i> |              |         |      |
| Qatar                | 1            | 700     | 1    |
| Oman                 | 1            | 436     | 2    |
| Iraq                 | 1            | 372     | 3    |
| Jordan               | 2            | 351     | 4    |
| Lebanon              | 4            | 337.7   | 5    |
| Egypt                | 8            | 256     | 6    |
| UAE                  | 2            | 254.5   | 7    |
| <i>Below 230</i>     |              |         |      |
| Saudi Arabia         | 3            | 228.6   | 8    |
| Bahrain              | 2            | 209.5   | 9    |
| Kuwait               | 2            | 173.5   | 10   |
| Palestine            | 1            | 108     | 11   |
| Tunisia              | 4            | 18.2    | 12   |
| Morocco              | 2            | 0       | 13   |
| Algiers              | 2            | 0       | 13   |
| Yemen                | 1            | 0       | 13   |

**Table 5.** Average of sentences by country and their ranking.

| Country              | Average | Rank |
|----------------------|---------|------|
| <i>8.7 and above</i> |         |      |
| Qatar                | 24.0    | 1    |
| Oman                 | 15.0    | 2    |
| Iraq                 | 13.0    | 3    |
| Jordan               | 12.5    | 4    |
| Lebanon              | 11.2    | 5    |
| Saudi Arabia         | 9.33    | 6    |
| Egypt                | 9.25    | 7    |
| <i>Below 8.7</i>     |         |      |
| UAE                  | 8.0     | 8    |
| Kuwait               | 7.5     | 9    |
| Bahrain              | 7.0     | 10   |
| Palestine            | 4.0     | 11   |
| Tunis                | 2.0     | 12   |
| Algeria              | 2.0     | 12   |
| Morocco              | 0       | 13   |
| Yemen                | 0       | 13   |

**Table 6.** Differences between the public and private sectors.

| Sector  | Universities | Wordage | Mean of wordage per university | Number (%) of sentences  | Mean of sentences per university |
|---------|--------------|---------|--------------------------------|--------------------------|----------------------------------|
| Public  | 24           | 446,255 | 18,593                         | 186 (67.6%)              | 7.75                             |
| Private | 12           | 95,902  | 7991                           | 89 (32.3%)               | 7.41                             |
| Total   | 36           | 542,157 | 15,059.92                      | 275 (99.9%) <sup>a</sup> | 7.63                             |

Note: <sup>a</sup>Due to rounding.

**Table 7.** Distribution of sentences by speaker.

|                | Cooperative learning | Problem solving | Critical thinking | Discussion–debate | Total | %      |
|----------------|----------------------|-----------------|-------------------|-------------------|-------|--------|
| Objectives     | 2                    | 54              | 43                | 9                 | 108   | 39.27% |
| Mission        | 1                    | 36              | 34                | 2                 | 73    | 26.55% |
| Vision         | 0                    | 5               | 7                 | 1                 | 13    | 4.73%  |
| Values         | 0                    | 1               | 0                 | 0                 | 1     | 0.36%  |
| Strategic plan | 3                    | 5               | 7                 | 3                 | 18    | 6.55%  |
| Others         | 0                    | 12              | 7                 | 1                 | 20    | 7.27%  |
| President      | 0                    | 1               | 4                 | 0                 | 5     | 1.82%  |
| Chair          | 3                    | 9               | 8                 | 1                 | 21    | 7.64%  |
| Dean           | 2                    | 5               | 8                 | 0                 | 15    | 5.45%  |
| Director       | 0                    | 1               | 0                 | 0                 | 1     | 0.36%  |
| Total          | 11                   | 129             | 118               | 17                | 275   | 100%   |

department/faculty-oriented discourse where individual speeches were relatively low as shown in Table 7. This is quite reasonable since the majority of the constituencies covered across the 36 universities were either departments, faculties or other academic units.<sup>6</sup>

### Contribution of faculties of education

The contribution of faculties of education was relatively low compared with other faculties and departments such as engineering, medicine, pharmacy and sciences. Within faculties

of education, sentences on pedagogy of inquiry and deliberation were pronounced by either departments of physical education or departments of educational administration or foundations of education, or hybrid colleges such colleges of arts, science and education, or in centres such as centres for teaching and learning and centres for psychology. An example is the University of October 6 in Egypt where the total number of words in 10 sentences signifying the four meanings of inquiry and deliberation was 165. The share of words in the Faculty of Education was 14.5%, while the highest per cent of words was in the Faculty of Political Sciences (21%) followed by the Faculty of Applied Arts (17.5%). In terms of ranking, a z-score of the Faculty of Political Sciences was 1.98 above the mean, followed by the Faculty of Applied Arts (1.42 above the mean), while the Faculty of Education registered a lower SD of 0.85 above the mean.

### **Conclusions on the discourse**

The discourse analysis covered an array of institutional cases comprising 36 universities in 15 countries. The wordage of discourse accenting the four meanings devised for the study was 8447, constituting only 1.5% of the total discourse. Of the total sentences comprising the four meanings, only 4% on cooperative/collaborative learning appeared in only six universities: Qatar University, the AUB, Suez Canal University, King Saud University, Ain Shams University and the University of Bahrain. Cooperative leaning in the classroom did indeed occupy a narrow space in the discourse. One of the reasons could be related to the protocol classroom size where large classrooms particularly in public universities are less conducive to conducting cooperative learning activities as in smaller classes, and this might have been reflected in the discourse. For instance, during spring 2013, the class size of undergraduate students at Qatar University was 19 in the College of Pharmacy and 42 in the College of Education.<sup>7</sup> However, this assumption should be taken cautiously in light of the absence of data about classroom size and physical setup as well as faculty preparedness for engaging students in modes of cooperative learning. On the other hand, large-classroom-size universities that pronounced cooperative learning such as Suez Canal University and Ain Shams University did not make reference to outcomes of cooperative learning or the way it was being conducted and planned for, running the risk of reflecting pseudo-learning groups of students assigned to work together without concrete learning outcomes being identified.

Unlike cooperative learning, problem solving and critical thinking meanings in the discourse were fairly accented in the discourse by universities despite the presence of 31% of which scored zero sentences on problem solving and another 33.4% that scored zero sentences on critical thinking such as Senaa University as well as universities in Algiers, Tunisia and Morocco. Both problem solving and critical thinking benefit not only the individual but also society in general and represent tools for cohesive social function (Beyer 1995). The discourse, however, does not provide tools for judging whether these institutions do promote critical thinking and problem-solving skills among students; rather it blurs the boundaries between actual teaching and rhetoric in the discourse, raising doubts about advocating critical thinking in cultures dominated by uncritical submission to authority. Overall, the discourse on the meaning of critical thinking does not allow one to discern whether it follows the Socratic method or sophist one which connotes winning an argument or taking advantage of others (Paul 2011).

As alluded to above, debate/discussion in the classroom was limited (6.18% of the total number of sentences) and was only pronounced by 12 universities only with the highest number of sentences among them being four, which appeared at the AUB in Lebanon, followed by the University of Bahrain. The universities surveyed are surrounded by adversarial contexts characterized by an intense lack of democracy which limits the prospects of discussion and debate in the classroom.

As for cross-country comparison, Qatar followed by Iraq scored above the average of words on the discourse of the four meanings. However, given the top-down governance system of the public sector in these two countries, one must wonder whether critical thinking and discussion/debate are actually practised in class given the predominant cultural contexts that accede to authority.

Regarding the sources of sentences or speakers (see the methodology section), these were directive in nature as represented by the objectives of departments followed by the mission sentences of departments and faculties, while the speeches of deans and chairpersons were relegated to a junior position, reflecting a common practice of governance in higher education.

The picture that emerged from the discourse analysis suggests that the pedagogy of inquiry and deliberation is still incipient and additional fieldwork on the curriculum would create a connected chain of evidence related to the teaching and learning processes.

## Interviews

Learning about classroom teaching in 13 universities inside the sample frame of the 36 universities surveyed entailed conducting interviews with department chairpersons and faculty deans. Interviews data were used to augment analytical information about pedagogy of inquiry and deliberation and to supplement results yielded from the discourse analysis with additional verifying data.

Interviews data obtained from chairpersons and deans showed that 20 (25.3%) of the courses offered adopted a textbook. In addition, interviewees reported that 96% of the coursework required the completion of assignments. Judging by the responses received, discussion in the classroom was as high as 96.2% and practical work reached 98.7%. Cooperative learning was also reported (87.3%) in the courses offered by departments in the universities surveyed.

In total, 76% of student attendance in class was required as a course requirement, though with variations among university and within departments and courses. These ranged between a minimum of 30% attendance in medicine at Safax (Tunisia) and 50% in economics, while the highest attendance rate was in sociology at the AUB. In addition, 91% reported using innovative teaching methodologies as opposed to 9% which did not. Memorization for final examinations was as low as 10% at ESPIRIT in Tunisia and was as high as 100% in the sciences at the Lebanese University. The estimated average of memorization across all universities surveyed was estimated to reach 60%.

Within- and between-university variations were found in their emphasis on inquiry. We selected the following areas for analysis: cooperative learning, discussion and innovative teaching.



### ***Cooperative learning***

The Faculty of Humanities, business department, accounting, Faculty of Engineering and civil engineering department at Ain Shams University indicated the use of cooperative learning in class. An exception was in the sociology department. Curiously, all interviewees at Ain Shams University have collectively rated lecturing in their departments and faculties as high except in the civil engineering department and Faculty of Engineering where lecturing was ranked medium.

Cooperative learning was indicated high at the Lebanese University except in the Faculty of Science. Lecturing was high in all faculties and departments except in the Faculty of Sociology which was medium. The majority of universities surveyed indicated the use of cooperative learning while at the same time mentioned that they said they relied heavily on lecturing as a main method for instruction. It should be noted that problem solving and critical thinking were not directly asked in the interview schedule, but these were replaced by proxy questions such as innovative teaching and discussion in class.

### ***Discussion***

Virtually all interviewees indicated reliance on discussion. Exceptions were found in the Faculty of Medicine at the Lebanese University, education at Tunis El-Manar and the Department of Science at Asute University in Egypt.

### ***Innovative teaching***

As mentioned above, 91% of the 13 universities surveyed reported that they used innovative teaching methodologies as opposed to 9% which did not. Innovation was reported in terms of using PowerPoint presentations and making use of technology in teaching and learning.

### ***Syllabus***

Syllabi analysis involved evaluating teaching methodologies that correspond to inquiry and deliberation. At Ain Shams, the environmental journalism course methodology centred on lecturing and brain storming with 100% of evaluation given to the final examination. The same methodology applied to media legislation and publishing crimes. However, political sociology concentrated on reading and discussion besides lecturing; the relative weight of each was not mentioned. The evaluation of students was 100% in the final examination. The tourism guidance course accented dialogue and discussion with a final examination constituting 100% of the total course grade.

At Asute University, the community medicine course focused on lectures, role play, discussion and field visits. In addition, the human rights course focused on lecturing, discussion and dialogue.

Leadership and organizational behaviour at the AUB focused on critical reflection and speech by students. Advanced organizational research methods and design mentioned

group work in the policy. Business ethics focused on case studies, group projects, critical reflection and presentations in class delivered by students.

The introduction to social service and training at Cairo University focused on lecturing, discussion and dialogue, data collection, fieldwork, and case studies. The civil society and training course also focused on lecturing, discussion and dialogue, data collection, fieldwork, and case studies. The Quality Assurance Unit of the Faculty of Humanities offered a syllabus template including lecturing, open discussion and self-learning.

At October 6 University, a standardized template is laid out. It makes reference to practical work and no section for teaching methodology is provided. The strategies of teaching methodology course at the Faculty of Arts included problem solving, applications, discussions, cooperative learning, self-learning and electronic learning.

At the Lebanese University, structural biochemistry focused on applications. In geography, training and research occupied 10% of students' evaluation. At NDU, building rules and regulations (Faculty of Architecture, Art, and Design) focused on lecturing and practical applications and the program design and data abstraction course focused on self-learning and assignments completed by students.

Tests, measurement, and evaluation at NDU focused on assignments and research-based projects undertaken by students. Sophomore rhetoric focused on learning centred, discussion, debates and modes of cooperative learning.

At Saint Joseph University (USJ), *responsabilité sociale des entreprises* offered by the Faculté des Sciences Economiques focused on empirical application and utilization of theory. In addition, in *actualités économiques et initiation à la recherche* research and presentations were done by students. *Introduction à l'économie numérique* offered at the Faculté des Sciences Economiques course focused on students' exposition, group work, interactive lectures and analysis of articles. *Culture économique et méthode I* centred on interactive lectures and group work.

In addition, *sociologie économique* offered by the Faculté des Sciences Economiques focused on interactive lectures, while *économie du développement* stressed problem solving, interactive lectures and group work.

## Conclusions on the interviews and syllabi analysis

Interview results generated evidence that teaching in the 13 universities surveyed showed that cooperative learning, discussion and innovation in teaching are being employed in class. However, this manifestation purported by deans and chairpersons should be taken with caution since a striking majority of universities reported dominance of lecturing over other methods of instruction involving discussion and forms of cooperative learning. The contradictory nature of some interview results pertaining to overemphasis on lecturing versus discussion and cooperative learning raises questions as to the validity of the responses. One such example comes from dichotomous answers at Cairo University and Al-Azhar University where discussion is used in class while, contradictorily, lecturing subdues the teaching process to a large extent. At October 6 University lecturing is dominant, but students can discuss outside the lecturing hour as part of joint projects. Cooperative learning takes place when students work on applications, but not as part of the pedagogy in class per se. At ESPIRIT teaching is less

dependent on lecturing and there is overemphasis on free discussion and cooperative learning in class.

The use of discussion and cooperative learning in class seems to be determined by the nature of the course. For instance, biology courses at the AUB and Lebanese University concentrate on lecturing. Two-thirds of teaching relies on lecturing and teamwork-based projects in the Department of Electronic Engineering at the AUB.

Turning to syllabi analysis, interactive lectures, cooperative learning and discussion were evident. A common feature in the syllabi of the universities surveyed is the setting out of learning outcomes and learning objectives starting with active and higher-order thinking verbs derived from Bloom's (1956) taxonomy. However, there remains missing evidence about to what extent these outcomes as demonstrable acquisition of specific knowledge and skills have been met by students following the fulfilment of the course requirements. However, taking the syllabi at their face value, it is observed that interactive lectures have appeared consistently in the course syllabi of different faculties at USJ, suggesting a key component of experiential learning that turns experience into learning (Boud, Keogh, and Walker 1985). Critical reflection appeared consistently in the course syllabi at the AUB, suggesting an approach that elicits students' engagement in learning.

Information analyzed from interviews and course syllabi provided a portrait showing how teaching might be carried out in the universities surveyed. However, for a complete picture of pedagogy of inquiry and deliberation to be drawn, research emphasis should be shifted into action research and observational case studies that tend to yield an in-depth account of teaching and learning in higher education. As it stands now, discourse analysis, interviews and analyses of syllabi provided a narrative of teaching and learning in higher educational institutions with more room for further fieldwork left for making wider generalizations.

## Notes

1. See <http://unesdoc.unesco.org/images/0018/001892/189242e.pdf> (accessed on April 20, 2015).
2. See <http://unesdoc.unesco.org/images/0018/001892/189272m.pdf> (accessed on April 13, 2015).
3. For example, [http://www.humanities.manchester.ac.uk/studyskills/essentials/reading/critical\\_thinking.html](http://www.humanities.manchester.ac.uk/studyskills/essentials/reading/critical_thinking.html) or <https://www.openpolytechnic.ac.nz/assets/Learning-Central/Critical-thinking-Open-University.pdf/>.
4. See the methodology chapter in the special issue of *IDAFAT* (The Journal of Arab Sociology), 36–37 (Autumn-Winter) 2017, "Civil Responsibility in Arab Universities" ([http://www.caus.org.lb/Home/electronic\\_magazine.php?emagID=355&screen=0](http://www.caus.org.lb/Home/electronic_magazine.php?emagID=355&screen=0)).
5. For criteria of selecting universities, see the methodology section in the special issue of *IDAFAT*, 36–37 (see note 4 above).
6. See the methodology for the different sources consulted for each university in the special issue of *IDAFAT*, 36–37 (see note 4 above).
7. See [file:///C:/Users/Kamal/Downloads/fact\\_book\\_2012-13.pdf](file:///C:/Users/Kamal/Downloads/fact_book_2012-13.pdf) (accessed on April 8, 2016).

## Disclosure statement

No potential conflict of interest was reported by the author.

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