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## Setting the foundation for democratization: Assessing the quality of a political science program in Egypt

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# Setting the foundation for democratization

Setting the  
foundation for  
democratization

## Assessing the quality of a political science program in Egypt

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### Abstract

**Purpose** – The purpose of this paper is to investigate the quality of a political science program in an Egyptian private university through assessing three particular dimensions: knowledge of political science core facts and theories; reading comprehension skills; and critical thinking (CT).

**Design/methodology/approach** – A case study research approach was used. The study relies also on a quantitative methodology. Quantitative data were collected from students in the second and fourth years of political science to assess their knowledge of core political science facts and theories, reading comprehension and CT through the online California Critical Thinking Skills Test.

**Findings** – Unlike the results of core knowledge and reading comprehension, positive results were found with regard to students' CT. The levels of students' CT increased from 0 percent in Year 2 to 18 percent in Year 4. Variables such as the school GPA, non-Egyptian high school degree and not meeting professors during office hours were found statistically significant to higher levels of CT.

**Research limitations/implications** – One limitation of the study was the relatively small samples' size. However, while the samples might look small on the surface, they represent, in reality, between 49 and 59 percent of the students enrolled in Years 2 and 4.

**Practical implications** – Despite its pilot nature, this study provides some insight into the quality of private political science education in Egypt through assessing the degree it contributes to political science students' knowledge, reading comprehension and CT and through investigating the most statistically significant variables.

**Originality/value** – Whilst several studies have investigated the quality of higher education programs, very limited literature attempted to assess the quality of political science education, in particular.

**Keywords** Knowledge, Assessment, Reading comprehension

**Paper type** Research paper

With 2.8m students enrolled in higher education institutions in Egypt in 2016/2017, representing 34.4 percent of the total population in the age group of higher education, the Egyptian higher education system is considered the largest in the Arab region (UNESCO, 2019). Public higher education institutions in Egypt absorb around 74 percent of tertiary students while the rest are enrolled in private higher education institutions, primarily technical and non-technical institutes (CAPMAS, 2019). The emerging and increasing role of private higher education in Egypt can only be explained in light of a combination of domestic and international factors. In the period from 1970 to 1980, the Egyptian economic system was transformed from socialism to capitalism leading to an increase in the demand for private universities and English-speaking graduates due to the openness to western countries and the transformation into *Infitah* or open-door policy for private and foreign investment. With time, pressures were also exerted by an emerging “new class,” whose children could not obtain the grades necessary for enrollment in public universities[1] or who aspired to secure “higher quality” education for their children and could afford such education. This eventually led to

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further increase in the demand for private higher education (Hammoud, 2014). These domestic factors were supported by a global atmosphere, which encouraged neo-liberal policies and aimed at minimizing the role of governments and reduce public expenditures through various mechanisms, including privatization. Influenced by the recommendations of international organizations, especially the World Bank and the International Monetary Fund, private higher education institutions in Egypt were encouraged not only for seeming to posit a solution to the high demand on higher education, which could not be absorbed by public institutions, but also for cost-sharing in the provision of the already heavily subsidized higher education services (Barsoum, 2014).

As a result of domestic and international pressures, the government issued Law No. 101 in 1992 regulating private universities followed by an amendment, Law No. 12 in 2009, regulating private and national universities. Subsequently, new providers appeared encouraging new types of institutions to emerge, including four private universities in 1996 and five other private universities in the early 2000s, located mostly in satellite towns around Cairo. By 2016, 24 private universities were operating in Egypt. These universities did not receive any funding from the Egyptian Government and relied mainly on tuition fees as their source of income (Ayoubi and Loutfi, 2018). However, according to Ammar (2005), there remains no scientific evidence on the level of quality of private higher education. The purpose of this study is to investigate the quality of a political science program in a private university in Egypt (hereinafter referred to as the designated university) and the degree it contributes to students' knowledge and understanding and their analytical thinking through assessing three particular dimensions: knowledge of political science core facts and theories; reading comprehension skills; and critical thinking (CT)[2]. Unlike the results of core knowledge and reading comprehension, positive results are found with regard to students' CT. The levels of students' CT increased from 0 percent in the second-year students (Degree Year 1 after Preparatory Year) to 18 percent in the fourth-year students. Variables such as the school GPA, non-Egyptian high school degree and not meeting with professors during office hours were found statistically significant to higher levels of CT. Despite its pilot nature, this study provides some insight into the quality of private political science higher education in Egypt through assessing the degree political science education contributes to students' knowledge of political science, reading comprehension and CT and investigating the most statistically significant variables in that regard.

Assessing the quality of political science higher education is important for several reasons. In their article "Learning democracy: education and the fall of authoritarian regimes," Sanborn and Thyne (2014) argue that with the increase in the levels of tertiary education, democratization is more likely to materialize for that "Higher education provides a means to prepare the future leaders and policy makers of the state by cultivating them into nuanced, analytical thinkers" (Sanborn and Thyne, 2014). Political science higher education, among other disciplines in higher education, increases the learners' capacity to assess the performance of their governments, realize the complexity of governance, weight the available political options and identify the means to hold government officials accountable. Sloam (2008) asserts that "teaching politics" and "teaching for politics" are mutually reinforcing as "political science education can play an important part in rejuvenating politics by adopting a constructivist approach, establishing synergies between pedagogical and participatory goals" (Sloam, 2008). According to Sloam, a more participatory, less top-down and more interactive approach to political science education can set the foundation for democratic engagement of young people. Similarly, but while following perhaps a more pragmatic approach about political science education inspired by the scholarly work of John Dewey and David Orr, Isacoff (2014) asserts that political science education can enhance civic engagement for the well-being of state and society and focus on what Dewey called "concrete human woes" through becoming more problem-solving oriented. In comparing the results of panel surveys

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of students of political science and other academic disciplines, a similar conclusion was reached by Esaiasson and Persson (2014) who find that political science education, more than any other discipline, increases civic outcomes such as trust and voting. Hence, assessing the quality of political science as a starting point to identifying the related weaknesses is expected to contribute to the process of democratization and civic engagement.

### Assessing the quality of higher education

During the past 30 years, more emphasis was placed, especially by policy makers in West Europe, on the quality of higher education (Liu *et al.*, 2015). As a result of increasing emphasis on higher education, more efforts were stimulated to study and assess the quality of higher education. McElwee and Redman (1993), for example, assess the quality of higher education in general, but with reference to particular factors, such as intangibility, heterogeneity and inseparability. On the other hand, Parasuraman *et al.* (1985, 1988, 1994) emphasize consistency of behavior or uniform quality across time in higher education institutions. In addition, based on the work of Harvey and Green (1993) and Harvey and Newton (2004), Newton (2007) asserts that the concept of quality should be assessed not on its own, but, rather, in relation to the type of stakeholders, context and assurance mechanisms, such as assessment, audit or accreditation. Stewart and Felicetti (1991) and Tomovick *et al.* (1996) also assess the quality of higher education, but with reference to students' satisfaction in business undergraduate and post-graduate education. Apparently, as emphasized by Stensaker (2007) and Vlasceanu *et al.* (2004), "higher education quality" is a broad concept that is both multi-dimensional and dynamic.

Not only is the concept of "higher education quality" debatable and broad, but different dimensions and, subsequently, tools are also emphasized by scholars when assessing the quality of higher education. Assessing students' knowledge through knowledge quizzes, which evaluate the students' actual knowledge and understanding rather than the perceived ones, is widely used in assessing higher education quality (Levin-Banchik, 2018). In knowledge quizzes, students respond to the same questions at the same time and, hence, they provide consistent, impersonal and more valid measures of cognitive learning and teaching efficiency (Pownner and Allendoerfer, 2008). As explained by Baranowski (2006) and Levy and Orr (2014), knowledge quizzes may involve comparisons of students' responses in control and experimental groups or pre- and post-quizzes assessing the students' learning of concepts and core knowledge. Experimental studies suggest that knowledge quizzes are more viable and rigorous assessment tools compared to other relatively subjective assessment tools (Cuhadar and Kampf, 2014; Krain and Shadle, 2006). However, knowledge quizzes are considered by many scholars as traditional assessment tools that are largely summative and assess a small part of the learning continuum (Wirth and Perkins, 2005). Hence, the Organization of Economic Cooperation and Development assesses, for example, the reading literacy, mathematical literacy and scientific literacy. Assessing CT is also one of the widely assessed aspects of higher education. In the Delphi Report, Facione (1990) defines CT as "the level a student is able to interpret, analyze, evaluate, explain, and infer concepts and ideas." Kurfiss (1988) defines CT as "an investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified."

When it comes to assessing higher education in Egypt, literature focuses primarily on issues of access and quantity while rarely providing sufficient scientific assessment of the quality of higher education institutions. The majority of literature on higher education in Egypt, such as the writings of Al-Araby (2010) and Fahim and Sami (2010), stops at studying how private higher education compromises equity in comparison to public higher education. However, this reality is changing in the recent years, where more scholarly work assessing the

quality of higher education institutions in Egypt, particularly private universities, is emerging. Barsoum's study, which compares public and private universities in Egypt, is considered one of the recent studies assessing private higher education institutions in Egypt. Barsoum (2014) chose, however, to focus on the perspective and the experience of business administration and information technology graduate students using qualitative interviews and quantitative analysis for data from a 2012 survey for university graduates (aged between 25 and 40 years). In doing so, Barsoum risked reaching outdated findings that reflected the perspectives of graduate who graduated years ago instead of reflecting the reality of the studied private universities and the progress or regress in their performance. Ayoubi and Loutfi (2018) also assessed the performance of the 24 private universities in Egypt, which are primarily profit oriented. The scholars based their assessment on two criteria, which are quality and price. They classified private universities in Egypt into four categories: higher quality-higher price; higher quality-lower price[3]; lower quality-lower price; and lower quality-higher price. In assessing the quality of private universities, Ayoubi and Loutfi chose not to measure the students' satisfaction or knowledge and skills, but looked instead at the academic staff reputation measured by quality international academic publications indexed in Scopus, the number of Google search for private universities in Egypt in addition to the total/partial teaching of courses in the English language, the total/partial accreditation by international universities outside Egypt and the international research production in the English language. The research findings did not, however, bring any details about the assessment results, and focused rather on overall classification of the Egyptian private universities along the four mentioned categories. Their conclusion that "the Egyptian government is striving to establish more private universities in segments 1 and 2 through partnerships with international providers, mainly UK universities" came also irrelevant to and somehow transcended their research findings.

Whilst some studies have investigated the quality of higher education programs, no literature attempted to assess the quality of political science education in Egypt, in particular. With the purpose of investigating the quality of a private political science program in Egypt, the study assesses three particular dimensions. The first dimension is knowledge of political science core facts and theories, which is assessed through knowledge quizzes distributed over second-year (first year after preparatory year) and fourth-year students. The second dimension is reading comprehension skills. The third dimension is CT, which is assessed using California Critical Thinking test. According to Olsen and Statham (2005), part of the mission of political science programs is usually the "cultivation of 'critical thinking' among their undergraduates." The three dimensions are emphasized by Indiana University-Purdue University Indianapolis, which assesses students' learning of core knowledge, quantitative skills and CT (ASBMB-RCN Workshop at Purdue University, 2012). In that sense, this study complements the knowledge quizzes with other tools that further assess reading comprehension and students' analytical and self-reflection skills.

#### *Methodology and data collection*

Quantitative data were collected from students in the second and fourth years of political science to assess their knowledge of core facts and theories in political science, reading comprehension and CT. The assessment of knowledge involved answering a standardized questionnaire in the form of a multiple choice questions' quiz of five questions for the second-year students and ten questions for the fourth-year students. The fourth-year ten-question's quiz included the same five questions posed to second-year students in addition to five more-advanced questions. The shared five multiple choice questions among second- and fourth-year students were used to assess the change in the performance from one group to the other. These questions inquired about the definition of political parties, the forms of political participation, the type of government where the executive and legislative branches

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are separated, the modes of political socialization and the definition of a citizen. On other hand, the additional five questions posed to the fourth-year students were used to assess the students' knowledge of more-advanced concepts and theories that are only part of the learning outcomes of third and fourth years. These more-advanced questions inquired about the philosopher whose political thought is closely used to justify authoritarianism, organs that do not belong to the United Nations, the comparative political approach which sees that the outcomes of the electoral process are affected by electoral laws and the political system, the school of international relations which believes in using military power to solve international disputes and the main functions of interest groups.

On the other hand, assessing students' reading comprehension required that the students read a 600-word text written by an American blogger. The essay argued that Egypt is putting free education, especially free higher education, ahead of other development priorities and that the uprising was a result of too many highly educated young people with too few prospects for getting a decent job. Students were asked two questions. The first question aimed to assess the students' numerical skills and their ability to spot inconsistency. It gave the students some statistics or numerical data from the 2009 Egypt Labor Market Panel Survey and asked the students "Which number(s) in the text is/are wrong? What should it/they be according to the results in the tables?" One of the numbers in the text was grossly inconsistent with the number in tables. The second question, on the other hand, aimed to assess the students' ability to read carefully and spot inconsistency in the text. In that regard, the students were asked about the causal direction between education and economic development according to the author of the text, whose research question was: "Does education result in strong economic growth?" but eventually answered that "History demonstrates that it is strong economic growth that results in more education."

On the other hand, quantitative data were collected about students' CT. In that particular regard, students had to answer an online CT test, which is California Critical Thinking Skills Test. The sample was asked to answer a standard online quantitative CT assessment (the 2015 Insight Assessment). This is a widely used tool chosen from among an array of similar assessments, because it had an existing Arabic version. As with all the instruments used in this work, students could choose whether to be assessed in English or in Arabic.

Overall, the methods developed and their correlated data collection tools aimed at assessing the extent to which the political science students in the designated university, during their study years: learn core facts and theories in the field of political science; enhance their reading skills; and improve their CT ability. After taking the formal consents of the interviewees, quantitative data were collected from a sample of 75 students who were asked about their knowledge of political science core concepts: 39 students from the second year and 36 students from the fourth year were interviewed. Part of this sample answered the other two tests assessing their reading comprehension skills or their ability to read a basic academic article sample and their CT skills. Table I provides an overview of the sample including the social and educational background of sampled students in terms of gender, secondary school language of instructions and the type of secondary school.

While the samples might look small on the surface, they represent, in reality, a considerable percentage of the students enrolled in Years 2 and 4. Students who answered the student questionnaire, for example, represent 49 and 59 percent of the students enrolled in Years 2 and 4, respectively. The percent of students who took the online CT test was lower, however, than the percent of the students who took the student questionnaire and the student reading comprehension questions.

Some difficulties were met, however, during data collection. One of the problems was accessibility to labs, which were often reserved to economics and business students from the same faculty. Hence, the research team had to resort sometimes to labs outside the faculty. In addition, while many students showed enthusiasm in participating in the study

**Table I.**  
An overview of  
the designated  
university sample

The sample of students			
Type of Interview	Second year (total 66 students)	Fourth year (total 73 students)	Total
Student questionnaire	39 (59%)	36 (49%)	75
Student reading comprehension	37 (63%)	28 (38%)	65
Student – online critical thinking	27 (40%)	17 (23%)	44
<i>Gender</i>			
Male	Female	Total	
29.3%	70.7%	75	
<i>Main language of instruction in secondary school</i>			
Arabic	English	Total	
13.3%	86.7%	75	
<i>Type of secondary school</i>			
Public	Private	Total	
12.0%	88.0%	75	

and in knowing the results of their online CT assessment, others were less cooperative. They also did not sound to appreciate the certificate they were offered in acknowledgment of their participation in the study. For the fourth-year students, this attitude has to be understood in light of their study-load as a result of dissertations and research papers, which they have to submit in pre-designated deadlines. Fourth-year students are also aware of the British assessment criteria for their papers, which is relatively advanced in the fourth year, requiring more readings, analysis and CT. Eventually, this made them feel pressured and less willing to participate in the study, especially that they are offered multiple opportunities to attend workshops, trainings and internships and hence did not value an additional certificate, unlike students in other universities who may not have access to such opportunities.

Three regression analyses were carried out in order to examine how far four sets of independent variable are statistically significant or can explain students' performance in the core knowledge test, the reading comprehension of the two articles' questions and the CT test. The independent variables in the regression are: pre-university education, students' eagerness to study, number of courses studied and extracurricular activities and social status[4]. The dependent variables, which differ from one model to another, refer to the results of students' core knowledge test, the reading comprehension of two articles' questions and the CT test.

In the first model of regression, a multiple linear regression was conducted for the results of the core knowledge test, whose answers took the form of a scale, across the four sets of independent variables in order to examine how far they could explain students' performance in that test. The regression model was given the following equation:

$$CK_i = \beta_0 + \beta_1 \text{pre univ}_i + \beta_2 \text{eager}_i + \beta_3 \text{no. of crs}_i + \beta_4 \text{activ. \& soc.sta}_i + U_i,$$

where CK refers to the students' performance in core knowledge;  $i = 1, 2, \dots, n$  where  $n$  is the sample size; pre univ refers to pre-university education, eager refers to students' eagerness to study; no. of crs refers to the number of courses studied; activ. & soc.sta refers to extracurricular activities and social status;  $\beta$ 's refers to the parameters to be estimated; and  $U$  represents the classical error term.

In the second model, a logistic regression was conducted for the results of the reading comprehension two questions, which were answered not on a scale basis but rather as either right or wrong across the four sets of independent variables in order to examine how far

they could explain students' performance in that test. The regression model was given the following equation:

$$P[R = 1]_i = \beta_0 + \beta_1 \text{pre univ}_i + \beta_2 \text{eager}_i + \beta_3 \text{no. of crs}_i + \beta_4 \text{activ. \& soc.sta}_i + U_i,$$

where  $R$  refers to the students' performance in reading comprehension;  $i = 1, 2, \dots, n$  where  $n$  is the sample size; pre univ refers to pre-university education, eager refers to students' eagerness to study; no. of crs refers to the number of courses studied; activ. & soc.sta refers to extracurricular activities and social status;  $\beta$ 's refers to the parameters to be estimated; and  $U$  represents the classical error term.

In the third model, like the first one, a multiple linear regression was conducted for the results of the CT test, whose answers took the form of a scale, across the four sets of independent variables in order to examine how far they could explain students' performance in that test. The regression model was given the following equation:

$$CT_i = \beta_0 + \beta_1 \text{pre univ}_i + \beta_2 \text{eager}_i + \beta_3 \text{no. of crs}_i + \beta_4 \text{activ. \& soc.sta}_i + U_i,$$

where CT refers to the students' performance in CT;  $i = 1, 2, \dots, n$  where  $n$  is the sample size; pre univ refers to pre-university education, eager refers to students' eagerness to study; no. of crs refers to the number of courses studied; activ. & soc.sta refers to extracurricular activities and social status;  $\beta$ s refers to the parameters to be estimated; and  $U$  represents the classical error term.

The three regression models aimed to find out the most statistically significant variables at the significance level where  $\alpha$  is equal to 1, 5 and 10 percent. Finding out the variables most statistically significant can guide researchers, practitioners, education entrepreneurs and education policy makers toward the factors they should prioritize for better political science knowledge, comprehension and CT of students. In the same way, variables that are less statistically significant can occupy a lower place on the agenda of such groups.

### *Research results and findings*

As mentioned earlier, the research methods and their correlated data collection tools aimed at assessing the designated university political science students' level of knowledge of core facts and theories in political science, their reading skills and, finally, their CT ability. Hence, this part of the study aims to explain the main findings related to these three dimensions: knowledge of core political science facts and theories, reading comprehension and CT. In addition to qualitative analysis, which the study attempts to offer along the findings, the final section of this part explores the possible causations and presents some factors that might have affected the designated university results related particularly to CT.

*Knowledge of political science core facts and theories.* As mentioned earlier, throughout the student questionnaire, around ten questions were used to assess students' knowledge of core concepts and theories in political science including political parties, political systems and international relations. While only five basic questions were posed to both second- and fourth-year students, five more-advanced questions were posed only to the fourth-year students. As appears in Table II, the averages of the correct answers of both second- and fourth-year students for the first five political science knowledge questions are almost the same (19.5 percent). Both second- and fourth-year students did not do well in that particular group of questions, which though were basic required memorization of definitions instead of analysis or understanding. In comparison to their results in the first group of questions, the average of the correct answers of the fourth-year students for the second and more-advanced group of questions is 65 percent, which is much better than their answers to the first group of questions. The correct answers for the question on the theories of international



**Table II.**

Results of students' answers to the basic political science knowledge questions

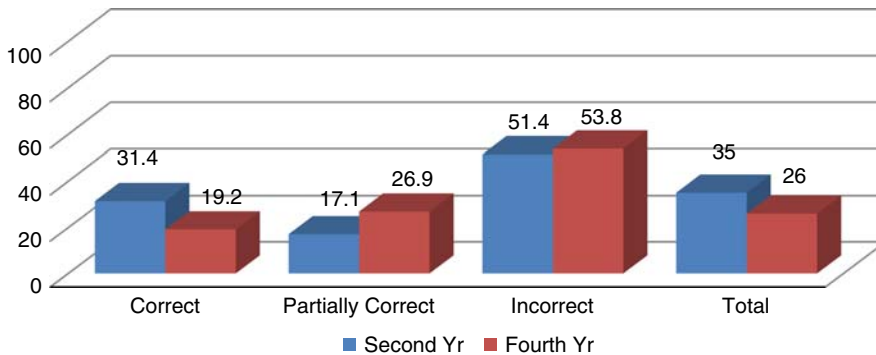
Question	Second year		Fourth year		Statistically significant differences between the two years ( $\chi^2$ test)
	Correct answer (%)	Wrong answer (%)	Correct answer (%)	Wrong answer (%)	
Definition of political parties	34.3	65.7	16.7	83.3	0.075
Definition of political participation	8.6	91.4	13.9	86.1	0.371
Differentiating types of political systems	19.4	80.6	2.9	97.1	0.030
Modes of political socialization	17.1	82.9	27.8	72.2	0.216
Definition of a citizen	18.2	81.8	36.1	63.9	0.081
The average answers of the first five questions	19.52	80.48	19.48	80.52	
Functions of interest groups	–	–	76.7	33.3	–
Approaches in international relations	–	–	83.3	16.7	–
Approach in comparative politics	–	–	52.8	47.2	–
Political thought of Plato	–	–	36.1	63.9	–
Identification of UN bodies	–	–	77.1	22.9	–
The average answers of the additional five questions	–	–	65.2	36.8	–
Total average answers	19.52	80.48	42.34	58.66	–

relations, which is one of the questions in the second and more-advanced questions, reached more than 83 percent.

*Reading comprehension skills.* The students' ability to read and understand basic political science texts and numerical data was also assessed through a text including tables and figures, which were followed by a set multiple choice questions. This part of the assessment is considered more sophisticated than the previous one for that, as summarized by Rupp *et al.* (2006):

All of the theories and models of reading comprehension and responding to MC reading comprehension questions [...] suggest that the key to successful comprehension is a reader's ability to efficiently, accurately, and automatically extract and organize information from texts and to integrate it with existing knowledge to form a coherent mental representation of the text.

Students were given a text of around 600 words about the 2011 Egyptian uprising. In order to assess the students' ability to read and understand numerical tables, the students were asked to spot the inconsistency between the numbers in the text given to them and some tables that included data from the 2009 Egypt Labor Market Panel Survey. In that regard, the percentage of Year 2 students who succeeded to spot the inconsistency between the numbers in the text and the numerical tables (31.4 percent) was higher than Year 4 students (19.2 percent) as appears in Figure 1. This can be explained by looking at the amount and the placement of the courses that involve quantitative or statistical data analysis in the political science program of the designated university. Only two courses include quantitative or statistical data analysis, which are "Statistics for Political Science" and "Research Methods." Both courses involve only preliminary understanding of the foundations of quantitative analysis and are placed in the preparatory year (Year 1). Hence, Year 2 students who have just taken these two courses in Year 1 were more able than Year 4 in gearing the correct answers. Introducing more courses that involve quantitative or statistical data analysis across the different years could have played a role in improving the students' performance in reading and understanding numerical tables.

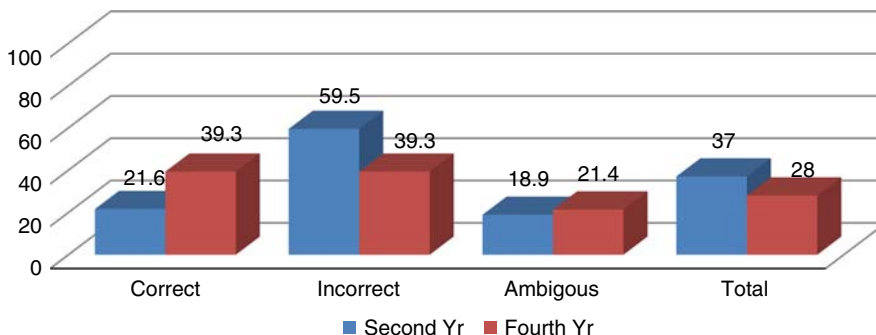


**Figure 1.** Students' performance in reading tables (%)

On the other hand, unlike their performance in reading and understanding numerical tables, the performance of Year 4 students in understanding texts was far better than Year 2. Students were asked questions, such as “Does education result in strong economic growth?” “According to the author, what is the causal direction of this relationship?” “Does education result in economic development?” “Does economic growth result in a more educated population?” etc. The performance of Year 4 students surpassed the performance of Year 2 students. As appears in Figure 2, around 39.3 percent of Year 4 students succeeded to answer these questions correctly while only 21.6 percent of Year 2 students answered them correctly. Since the questions posed to the students were primarily qualitative rather than numerical or quantitative, the performance of Year 4 students was better than Year 2 students. It reflected the upgrade in their level of understanding with each additional course they take over the years[5].

Furthermore, in the interviews with the students, the students indicated that the teaching faculty in the designated university depends primarily on peer-reviewed texts as their main reading materials instead of a “professor” or a “university” book, which may summarize the content of the course, but are less likely to be peer reviewed. As appears in Table III, 82.2 percent of fourth-year students reported that the academic staff uses peer-reviewed materials only compared to 58.7 percent in Year 2. The designated university surpassed the four assessed universities in using peer-reviewed sources. Using various types of readings teaches the students to spot authors’ opinions and points of views, acknowledge differences among authors and attempt to understand and analyze texts on their own.

*Critical thinking.* Assessing the students’ level of CT was carried out through the California Critical Thinking Skills Test, which was purchased for that purpose. Despite the



**Figure 2.** Students' performance understanding texts (%)

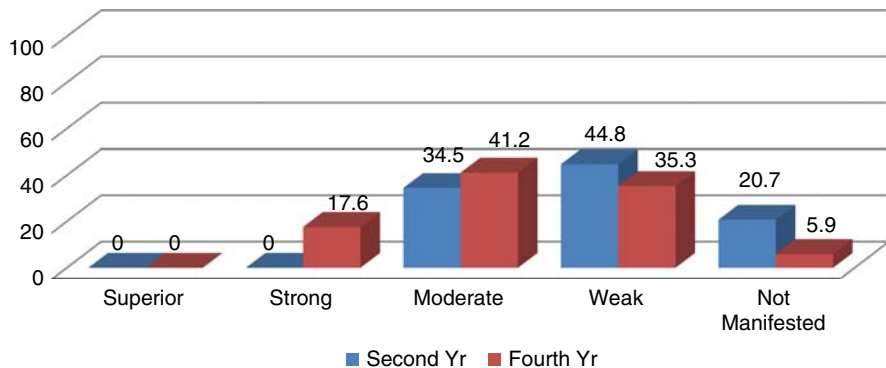
unavailability of any “superior” answers according to the test, the results of the CT test show clear improvement in the students’ levels of CT. Among the four tested universities, the designated university is the only university that experienced a clear improvement in the students’ levels of CT. While the levels of CT in the studied universities deteriorated or witnessed no more than 2.5 percent improvement, the percent of students who have strong CT in the designated university increased from 0 percent in Year 2 to 18 percent in Year 4, as appears in Figure 3. The percent of students who have moderate CT in the designated university also increased from 35 percent in Year 2 to 41 percent in Year 4. Prioritizing CT and analysis in the designated university comes in line with the strategic vision of the department and its goal not only to compete with other Political Science Departments in Egypt, but also to compete regionally and internationally.

In addition, as a part of the students’ assessment criteria for written assignments and research papers, students have to demonstrate CT in their writings and research papers. In the fourth year, some critical evaluation is expected for the students to receive a grade of “C.” Receiving grades of “B” and “A” requires more extensive CT and even original contribution. The students’ assessment criteria are designed to grow stronger from one year to the other, reaching its utmost level in Year 4. Hence, it is expected that students grow intellectually and critically stronger in their final year. In the interviews with the students in the designated university, they reported that they have obligatory written assignments and research papers in almost all courses. As appears in Table IV, the percentage of students who reported that they have written assignments was always above 94 percent, which

**Table III.**  
Results on materials  
used in classes/taught

Type of reading materials used in classes/taught	Second	Fourth
Mostly non-peer reviewed	6.3	1.2
Mostly peer reviewed	34.9	16.6
All peer reviewed	58.7	82.2
Total	126	163

**Figure 3.**  
Students’ performance  
in the critical thinking  
test (%)



**Table IV.**  
Results on written  
assignments

Having written assignments	Second	Fourth
No course	0.0	0.0
Some courses	2.6	5.6
All courses	97.4	94.4

explains the students' devotion to CT. The only course that fourth-year students do not have a written assignment for is the final project course, which though does not involve a particular assignment, it helps out the students in writing their final-year dissertation. In all these written assignments, the students have to abide by the assessment criteria.

Another factor that contributed to the positive shift in the students' levels of CT can be attributed to the level of research and publishing in international peer-reviewed journals, which require originality and CT in the designated university. In the period from 2011 to 2016, the designated university acquired the highest number of citation per publication. In the top 10 percent most cited worldwide for the period 2011–2016, the designated university publications came the first among the publications of the various universities in Egypt. In the top 1 percent most cited worldwide for the period 2011–2016, the designated university publications came the first among the publications of the various universities in Egypt[6]. Finally, around 40–60 percent of the academic staff in the Political Science Department in the designated university received their doctoral degrees from foreign countries, which encourage an environment of multi-culturalism, diversity and critical discussion.

*Testing causations – factors affecting knowledge and critical thinking in designated university.* Since the sample size does not allow for complex multivariate regressions, a series of simple OLS and ordinary logistic regressions were conducted. Four different sets of variables were tested to establish their effect and how far they can explain students' levels of knowledge of core facts and theories, reading comprehension and CT. The four sets of variables are:

- (1) pre-university education measured by the secondary school sector, secondary school language, secondary school type and high school GPA;
- (2) students' eagerness to study measured by frequency of borrowing books from library, frequency of use of computer lab, meeting professors during office hours and number of study hours outside classes;
- (3) the number of courses taken by the students since joining university and the number of political science courses taken since joining university; and
- (4) the socio-economic status and extracurricular activities measured by students' participation in activities inside or outside the university, the spending over clothing during academic year, ownership of a personal car or family ownership of villa/apartment on the beach.

The results of the regression analysis shown in Tables AI and AII indicate that many of the variables were statistically insignificant to students' levels of knowledge of core facts and theories, reading comprehension or CT skills. Still, few variables were found statistically significant to students' levels of knowledge, reading comprehension or CT. Variables such as students' use of computer labs and owning a personal car were found statistically significant to students' knowledge results. Students who used the computer labs less than once a month and did not have a personal car were more able than others to solve the knowledge of core facts and theories questions correctly. Students who do not frequently visit the lab are mostly students who own a laptop or have access to computer and internet at their homes. Hence, these students have higher access to computers at all times. Also, students who do not have a personal car mostly use the university buses to arrive to the campus, which is located outside Cairo. Thus, they come to university in precise times in the morning, attend lectures more regularly and comply with the lectures' time regulation. As a result, it is expected that their knowledge, which is mostly driven from lectures and readings, to be much better than others who visit computer labs during university open hours or own a personal car.

Two variables were hardly statistically significant to the students' reading comprehension results, which are the number of studying hours outside the class and the

students' participation in activities outside university. The number of studying hours outside the class was found statistically significant to students' reading comprehension as students who studied frequently (between 15 and 20 h) were more likely to receive higher grades in their reading comprehension tests. Similarly, students who did not participate in activities outside the university were more likely to get higher marks in their reading comprehension. Students who participate in activities outside the university tend to invest some time in commuting from the campus outside Cairo to the location of the activities, which is expected to affect the number of studying hours they devote to reading and studying negatively.

Some variables were also found statistically significant particularly to students' levels of CT. One variable that was found statistically significant is the school GPA. Surprisingly, those with the highest secondary school GPA (> 95 percent) have significantly lower CT scores. This negative correlation between high GPA and students' levels of CT can be explained in light of the current education system, which still emphasizes memorization instead of critical analysis as the basis for reaching high GPA (> 95 percent).

Another variable that was found statistically significant to CT results significantly is having a non-Egyptian high school degree. Students who acquire non-Egyptian high school degrees (e.g. IGCSE, American Diploma, etc.) are more likely to be trained to think critically and question information instead of taking it for granted. According to Table AI, students do better on the CT assessment, even after controlling for the pre-university education variables. With time, Year 4 students tend to build on and enhance their CT skills, which they initially acquired during schooling.

One of the variables under the "students' eagerness to study" category was found highly significant, which is not meeting professors during office hours. Not meeting professors during office hours despite the professors' continuous presence and accessibility as per the staff attendance policy in the designated university may reflect two issues. First, it may reflect the professor's ability to explain topics clearly and provide sufficient guidance during the lectures' times. Hence, students need not to meet with the professors during office hours, especially that they can send e-mails and receive response within 24 h according to the university policy. It may also reflect a tendency toward independent learning, researching and analyzing, which justifies why the students who do not approach professors during office hours have higher levels of CT. One of Cropley's (1997) nine behaviors, which can foster creativity, is encouraging students to learn independently. According to Watkins and Welikala (2008), "independent learning involves problem-solving, inter-personal skills, industrious activity, self-motivation, creativity, and being reflective." As appears in Table AI, like the previous variable, not meeting professors was found statistically significant for the CT of fourth-year students, who become familiar with independent learning by time, more than second-year students.

Finally and unexpectedly, variables that might have been anticipated to be statistically significant, such as the frequency of borrowing books from library or the number of political science courses taken since joining university, were not found statistically significant to students' levels of knowledge, CT or reading comprehension. However, this can be traced back to the possible impact of other factors, such as technology (negative or positive impact), accessibility to internet, online sources and wide range of reputable journals member journals in the designated university online library, independent learning, etc.

#### *Final remarks and conclusion*

In the 2017-2018 Global Competitiveness Report, Egypt ranked 100 of 137 countries in higher education system and training, which should best prepare students to meet the needs of economy (Schwab, 2017). Despite its pilot nature, this study provides some insight into

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the quality of private political science higher education in Egypt through assessing the degree it contributes to students' knowledge of political science, reading comprehension and CT and investigating the most or least statistically significant variables. The conclusions of the study can be broken down into the following points:

- (1) Scholarly work and empirical studies find that political science education increases learners' capacity to assess the performance of their governments, realize the complexity of governance, weight the available political options and identify the means to hold government officials accountable. In addition, political science education can play a role in rejuvenating politics and enhancing civic engagement for the well-being of state and society. Hence, assessing the quality of political science higher education is of a particular importance and has to be undertaken on a regular basis in order to ensure solid students' knowledge and understanding of core facts and theories in addition to reading and CT.
- (2) The low performance of Year 4 students in understanding numerical data can be traced back to the way the political science program is designed, which places courses with quantitative or numerical data analysis in the preparatory year (Year 1). Hence, in designing political science programs, it is essential to include courses with learning outcomes related to quantitative or statistical data analysis across the various years in political science education.
- (3) On the other hand, the increase in students' understanding of texts can be traced back to the staff reliance on peer-reviewed texts as their main reading materials. Hence, it is important to continue encouraging academic staff to use peer-reviewed texts, particularly texts that incorporate not only qualitative methodologies but also quantitative ones.
- (4) In the field of humanities and the social sciences, advancing students' CT and finding ways to help them think more critically is of a paramount importance as increasing students' ability to think, analyze and investigate critically is expected to reduce extremism, boost original ideas and unleash creativity. The study suggests that encouraging a multi-cultural environment for students and staff and familiarizing the students to write and submit essays and research papers in accordance with an assessment criteria (which both academic staff and students are aware of) that set grades for analytical and CT contribute to increasing the levels of students' CT.
- (5) Finding out the variables most statistically significant guides researchers, practitioners, education entrepreneurs and education policy makers toward the factors which they can prioritize for better political science knowledge, comprehension and CT of students. In the same way, variables that are less statistically significant can occupy a lower place on the agenda of such groups. Although the regression analyses did not reveal many factors to be statistically significant to students' levels of knowledge of core facts and theories, reading comprehension or CT, some very interesting results can still be drawn. In private universities where students usually own their laptops and have off-campus access to the library, visiting computer labs less than once a month can be found statistically significant to students' knowledge. In addition, the number of studying hours outside the class was found statistically significant to students' reading comprehension. Students who study frequently (between 15 and 20 h) are more likely to have higher reading comprehension skills. Finally, variables such as the secondary school GPA, non-Egyptian high school degree and not meeting professors during office hours despite their presence were found significant to

students' levels of CT. There seems to be a negative correlation between high GPA and students' levels of CT. In addition, according to this study, with time, degree Year 4 students who have non-Egyptian high school degrees tend to build on and enhance their CT skills, which they initially developed during schooling. This rings a bell about the reform that needs to be implemented in the current Egyptian basic education system, which remains to emphasize memorization as the basis for grading instead of understanding and critical analysis. Finally, encouraging the students to depend on themselves in studying, researching, finding information and analyzing is expected to deepen their CT abilities.

### Notes

1. In general, private institutions require lower grades in secondary school or *Thanaweya Aamma*.
2. This research is funded through a generous grant from Ford Foundation. The grant supported data collection in four universities, which were selected purposefully. Two private universities and two public universities were selected. One private university was selected because it was the principle investigator's home institution. The other private university was selected after researching the available private Political Science Departments and their reputation. The designated university was then selected because of satisfying these conditions in addition to the administration's willingness to cooperate. As for the two selected public universities, one was selected because it is the most highly regarded institution of political science in Egypt. The second public university was chosen for having one of the long established Political Science Departments and for its location outside Cairo, which ensures some representation. This research presents the findings of only one the two private universities under this project.
3. It might be worth noting here that according to Ayoubi and Loutfi's classification, the designated university in this study falls within this segment of "higher quality-lower price."
4. Since the majority higher education quality was repeatedly defined in terms of students' satisfaction or the instructor's effectiveness, the literature was majorly occupied with finding out the determinants and variable that affect students' satisfaction with a particular higher education program. As a result, there is no literature to support what variable to add or remove in the regression model given the dimensions chosen in this research for the quality of political science higher education. Hence, it was decided to include in the regression model all the variables which were estimated to have any statistical significant effect (i.e. pre-university education, students' eagerness to study, number of courses studied and extra-curricular activities and social status) on students' core knowledge, reading comprehension and critical thinking. In itself, having the remaining variable as not statistically significant is an important finding on its own. Removing any of the independent variables would change the results of the model.
5. It is worth noting that only one national university along with the designated university witnessed an improvement in the levels of students understanding to texts.
6. Data were retrieved from SciVal and Scopus. Statistic from SciVal and Scopus were prepared for only five years back.

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### Further reading

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	Number of correct multiple choice answers – first five questions	Overall grade of critical thinking test
<i>Effect of pre-university education</i>		
Secondary school sector		
Private	0.2823717	-5.37502
Secondary school language		
English	0.5356039	-3.531569
Secondary school type		
Non-Egyptian high school degree	0.1063415	8.904922*
High school GPA		
70–79.9	0.2584555	-5.464317
80–89.9	0.2234934	1.751893
90–94.9	0.4716779	4.737371
95+	0.2534126	-9.242113*
Student year		
Fourth	-0.1645035	9.432763**
R <sup>2</sup>	0.0940	0.3252
n	68	46
<i>Effect of students' eagerness to study</i>		
Frequency of borrowing books from library		
Once a month	-0.4124389	-1.158695
Less than once a month	-0.3634216	-5.983857
Frequency of use of computer lab		
1–3 times a month	0.3322312	4.14573
Less than once a month	0.6893767**	-4.075506
Meeting professors during office hours		
No	-0.2659294	18.3983**
Number of studying hours outside classes		
5- < 10 h	-0.3936029	9.005869
10- < 15 h	-0.4163947	1.424514
15- < 20 h	-0.0439956	0.3459994
20+ h	-0.6140241	4.624242
Student year		
Fourth	-0.2140762	7.835249*
R <sup>2</sup>	0.1722	0.3293
n	63	41
<i>Effect of the number of courses studied</i>		
Number of courses taken since joining university	0.0976998	0.1909557
Number of political science courses taken since joining university	-0.1270834	0.2658998
Student year		
Fourth	0.4854773	-1.842343
R <sup>2</sup>	0.0423	0.1293
n	68	46
<i>Effect of socio-economic status and extracurricular activities</i>		
Gender		
Female	-0.0903563	-10.07782***

(continued)

**Table AI.**  
Regression effects on  
students' performance  
in the core knowledge,  
and critical thinking  
tests

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	Number of correct multiple choice answers – first five questions	Overall grade of critical thinking test
Students participation in activities inside university		
No	0.2090641	-4.776557
Students participation in activities outside university		
No	-0.3061814	2.441106
Amount of money spent on clothing during academic year	0.00003	-0.0003475
Have personal car		
No	0.5587057**	4.200897
Family has villa/apartment on beach		
No	0.0951051	-3.967206
Student year		
Fourth	0.0418528	8.932342**
$R^2$	0.1202	0.3274
$n$	65	43

**Table AI.**

**Notes:** Robust standard errors in parentheses. \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.001$

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	First article question	Second article question
<i>Effect of pre-university education</i>		
Secondary school sector		
Private	0.6974666	0.53174
Secondary school language		
English	2.207724	1.135598
Secondary school type		
Non-Egyptian high school degree	0.5524286	0.9188783
High school GPA		
70–79.9	0.2426677	Empty
80–89.9	0.2207347	1.724408
90–94.9	1.935705	2.068764
95+	0.7455761	1.069671
Student year		
Fourth	0.5448902	1.996731
$R^2$	0.1065	0.0408
$n$	56	55
<i>Effect of students' eagerness to study</i>		
Frequency of borrowing books from library		
Once a month	0.1834994	0.639457
Less than once a month	0.635731	0.4862813
Frequency of use of computer lab		
1–3 times a month	Empty	3.825274
Less than once a month	3.649051	2.758028
Meeting professors during office hours		
No	Empty	Empty
Number of studying hours outside classes		
5– < 10 h	3.612166	0.4875363
10– < 15 h	6.182921	0.8191011
15– < 20 h	30.9525*	0.5092967
20+ h	4.289147	Base
Student year		
Fourth	0.3895543	1.138126
$R^2$	0.2043	0.0714
$n$	37	44
<i>Effect of the number of courses studied</i>		
Number of courses taken since joining university	0.8548054	1.510446
Number of political science courses taken since joining university	0.9850971	0.6621718
Student year		
Fourth	24.89481	1.4536
$R^2$	0.0393	0.0722
$n$	56	60
<i>Effect of socio-economic status and extracurricular activities</i>		
Gender		
Female	0.8186764	3.10048
Students participation in activities inside university (no)		
No	1.333289	1.030407

(continued)

**Table AII.**  
Regression effects on  
students' performance  
in the reading  
comprehension two  
articles' questions

	First article question	Second article question
Students participation in activities outside university		
No	0.6060115	0.2024323*
Amount of money spent on clothing during academic year	1.000155	0.9999452
Have personal car		
Yes	Base	
No	34.69307	0.8861881
Family has villa/apartment on beach		
No	0.4239955	0.4241936
Student year		
Fourth	0.5658118	1.777691
R <sup>2</sup>	0.2547	0.1257
n	56	60

**Notes:** Robust standard errors in parentheses. Odds ratios of the students' ability to critically read political science text controlling for other variables (reference group = wrong answer). \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.001$

Table AII.

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