Performance Assessment of Teaching through Students Evaluations: A Case Study Applied at University of Anbar

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ABSTRACT

The methods of the assessment of faculty member in universities varied. Some of them depend on the assessment of the faculty member on the teaching and research burden. Others assessments focus on how much teaching is provided during the calendar year. There are some ways in which the faculty member's assessment depends on the qualitative aspect provided by the faculty member. In addition, some of them combine both quantitative and qualitative aspects of the necessities to reach an appropriate evaluation process. This research aimed to consider the student as an essential part in the educational science and it is clear that the role taken by the student is no less important than the other role. This research started, where a questionnaire was prepared which included several paragraphs to measure the extent to which the student can evaluate the professor. The fourth stage students were chosen as the study sample because the students at last stage in the university has a good level of thinking and preparation. That means these students have experience in understanding the level of teaching and the knowledge of teachers. The proposed approach tries to analyze the educational model for evaluation developed in the Computer Science Department of the University of Anbar for learning and teaching of computer science and related scientific disciplines. In general, it is clear that more than 50% of the tested sample are satisfied with the teaching process which indicated good results have been achieved.

Index Terms: Teaching Assessment, Teaching Evaluation, Evaluations via Students, Teaching Case Study

1. INTRODUCTION

It is important to introduce a brief overview of Al-Anbar University and the faculty of Computer Science and Information Technology, in which the sample has been implemented. Al-Anbar University was founded in 1987 and is located in the city of Ramadi and it is a public university. In addition to being the only university in the province, there

is another private college established at the same time. At its inception, the university consisted of four simple faculties. The university then grew to include 20 colleges and six campuses. Before 2003, the students came to the university from all governorates of Iraq, then after 2003, due to the abnormal conditions in Iraq, most university students are residents of the same governorate. Most university students are from middle- and low-income classes in society and this applies to university members.

The Faculty of Computers and Information Technology was established in 1998 and has two departments: Computer Science and Information Systems. The focus of these two departments is to provide the state and private sector with cadres with experience and knowledge in the fields of

computer science and information technology [1]. This faculty has been grown and expanded and has been able to open programs for the study of Master's, in addition to it has attracted professors with competence and experience in the field of specialization [2]. Students are admitted to this faculty according to the central admission system prepared by the Ministry of Higher Education and Scientific Research, noting that admission rates depend on that year, which is generally within the average of 80% [3]. The number of students admitted to the faculty annually up to 150 students and the total number of students in the faculty is about 500 students, in addition there are 40 faculty members (M.Sc. and Ph.D.) [4].

The progress of societies depends primarily on the progress of education, especially university education, which is the vital entity that feeds society with the human resources and expertise that society needs in the development and advancement [5]. This is primarily based on the efficiency and potential of the faculty members [6].

2. TEACHING AND EDUCATION

Study in most Arab countries (including Iraq) is divided into three main phases; primary study, undergraduate study and post graduate study and these studies complement each other [7]. The primary study is an important study that feeding the students with fundamental subjects and knowledge, this study including custody of children (age of 4 year), preschool (age of 5 year), primary school (age of 6–11 years), intermediate school (age of 12–14 years), and secondary school (age of 15–18 years) [8]. Bachelor's study focusing on teaching the students with specific knowledge according to their specialty [9]. This study usually takes 4 years, except for some disciplines that need 5 or 6 years [10]. Postgraduate study including Master of Science (2–3 years) and philosophy of doctor (3–4 years) [11].

This paper will be concentrated on the undergraduate study (university study). The university study is one of the most important stages of study because it provides students with skills and knowledge [12]. The number of universities in Iraq has steadily increased to be 30, in addition many of these universities complain of a lack of trained and experienced staff [13]. The reason is the migration of many experienced academic staff abroad due to the difficult circumstances in Iraq [14].

The educational process focuses on three basic tasks namely teaching, scientific research and community service [15], [16].

In the Arab world, the educational process focuses on the task of teaching only and neglecting the other tasks as most of the universities have forgotten the task of community service, in addition in the task of scientific research there is no mentioned support [17], [18]. Hence, it is clear that the universities in the Arab world have lost a lot of importance and have become a mere view to get the certificate only [19].

The number of universities in Iraq in the seventies was only six universities and was characterized by scientific compass and was accredited to all universities in the world [20], [21]. Where it exited thousands of scientists and geniuses whom had a distinctive role all over the world [22]. After this important role of the universities and after 50 years of that period of time, the development of education globally entered the world of modern technologies and global universities have a constructive role in the management of scientific research, but in Arab universities, including Iraq, still behind the development [23], [24].

Most officials of Iraqi universities talk about the quality of education, but the majority do not understand the meaning of quality [25]-[27]. Everyone understand the quality as the quantity of papers, data and forms that are mobilized to appear well before the highest official in the ministry [28]-[30]. To understand that quality, it is planning and vision of the future represented by acts and continuous work [31], [32]. This process begins with the highest official in the institution or the university and finish with a small employee [33], [34]. These activities must be in the service of the students, community, and the educational process [35], [36].

3. RELATED WORK

Many works are published related to teaching process assessment as mentioned below, and it is summarized in Table 1.

Kiersma *et al.* (2016) proposed and approach to identify and evaluate the evidence, processes and criteria used to select the recipients of the teaching awards. In addition, informed best practices to select the recipients of the teaching awards. A specific sample of AACP members and pharmacy students was invited to an online survey on the process for nominating and selecting winners of educational awards, as well as perceptions of best practices [37].

Barana and Marchisio (2016) analyzed the educational model for automated formative evaluation developed in

TABLE 1: Summarizing table of the related work

References #	year	Author	Sample	Method
[37]	2016	Kiersma *et al*.	On line survey AACP members and pharmacy students	process for nominating and selecting winners of educational awards
[38]	2016	Barana, *et al*.	Department of Mathematics of University of Turin	analyze an educational model for automated formative assessment
[39]	2017	Artés *et al*.	Spanish university system	relationship between research performance and teaching quality
[40]	2017	Alhija	Israeli students' through internet survey designed to measure students' conceptions	Examined the relationship between these conceptions and students' background characteristics.
[41]	2018	Wikander, *et al*.	medicine and nursing skills	student feedback and a cross-sectional, qualitative study exploring
[42]	2018	Nguyen, *et al*.	Teaching English to Speakers of Other Languages	semi-structured in-depth interviews, and classroom observations
[43]	2019	Cano-Moreno *et al*.	Project Management university subject, School of Engineering and Industrial Design of the Polytechnic University of Madrid	quantitative methodology for the assessment of a university subject
[44]	2020	Li *et al*.	Many nets are trained on the evaluation sets of students	Integrating way to synthesize the results of three sub-networks.
[45]	2021	Lohman	student evaluations of teaching (SET) from different sources.	full potential of human resources tools to support consistent evaluation of teaching remains unrealized
[46]	2022	Romero *et al*.	Higher education level, from different sources.	generate preventive actions to improve educational quality
	2022	My study	Computer science students at university of Anbar-Iraq	Face to face Teaching process evaluation via students feedback

the Mathematics Department of the University of Turin for the learning and teaching of mathematics and scientific disciplines. The model is provided by an automated scoring system that powered by the engine of an advanced computer environment, allows the creation of algorithmic variables and opens mathematical responses, recognized in all their equivalent forms. The results obtained are discussed by means of the application of the automated formative evaluation in several class experiments and the data on the satisfaction and criticisms issued also shown [38].

Artés *et al*. (2017) studied the relationship between the performance of research and the quality of teaching in the context of the Spanish university system. They examined whether there is a relationship between being an active researcher and the quality of teaching of university professors in Spain. They used a set of data from the University of Extremadura, which contains information on the evaluation of teaching and the conduct of research over a period of 10 years (2001-2002–2011-2012). The obtained results suggested that, on average, the teachers most involved in the research obtain better results in their educational evaluations [39].

Alhija (2017) explored student's conceptions of good teaching of and examined the relationship between these

conceptions and the basic characteristics of the students. Data were collected through an online survey designed to measure students' conceptions of five dimensions of instruction related to achievement goals, long-term student development, teaching methods, student relationships, and evaluation. The results indicated that students believe that assessment is the most important of the five dimensions of instruction and that long-term student development is the least important. Only gender and field of study have made a significant difference in students' perceptions of good teaching. In addition, implications for the evaluation of teaching are discussed [40].

Wikander and Bouchoucha (2018) provided an overview of the process leading to the successful adaptation of structured objective clinical assessment to meet the requirements of a pre-taught nursing course through blended learning. This is important because many universities move their study program online or in combination, while little attention has been paid to the adaptation of the evaluation of simulated clinical skills. The objective is to identify the advantages and disadvantages of objective structured and peer-reviewed clinical evaluation and share recommendations for successful implementation [41].

Nguyen and Walkinshaw (2018) examined the extent of teaching English to speakers of other languages that training

TABLE 2: Questionnaire design

Basic paragraphs to measure the performance of the faculty member					
	1	2	3	4	5
1st	Possibilities of the faculty member in teaching, ranking and preparing the material				
1	The course study plan is distributed in the 1st week.				
2	The scientific course is presented in a clear, coherent, and systematic manner.				
3	Utilizes lecture time effectively.				
4	The extent to which the teacher is able to use and present the scientific material.				
5	The compatibility of the plan's vocabulary with what has already been taught.				
6	Commits to the dates of his lectures accurately.				
2nd	Contribution of scientific material in the educational achievement of students				
7	Students are encouraged to participate and express their views on the scientific subject.				
8	Shows interest in students' academic achievement in general.				
9	Deals with students with respect within the standards of the profession and ethics.				
10	Uses teaching methods that stimulate thinking and curiosity.				
11	In the presentation of the scientific material, illustrations and applied methods are used.				
12	Different methods of teaching used to suit the subject matter of science and the needs of students.				
13	Uses a clear and understandable language in the teaching of the scientific subject.				
3rd	Evaluation of the content of the scientific material				
14	The content of the examinations is consistent with the explanation of the vocabulary of the teaching plan of the course.				
15	Discusses with the students the correct answers to the questions included in the exam.				
16	Uses different methods for measuring student achievement and assessing their scores.				
17	Students are asked for more than one exam to determine the degrees and scores.				
18	Students are frequently assigned to tasks and assignments.				
19	Quizzes are used frequently for students.				
4th	Relationship between faculty member and students				
20	The teacher is committed to office hours and encourages students to use them.				
21	Responds to students in answering their questions.				
22	Accuracy and fairness in student assessment.				
23	Students are encouraged to use different references to scientific material.				
24	Encourage students to respectful attitudes, customs and ethics.				
25	Deals with students on the basis of the principle of equality.				

in English speaking countries of the inner circle has had an impact on the autonomy in the teaching of Vietnamese English teachers. Through an online survey, in-depth semi-structured interviews and observations in the classroom, the research explored the tensions felt by these teachers when they tried to exercise their autonomy after returning to their institution. This document has significant implications for a variety of stakeholders involved in the professional development of non-inner circle teachers trained in inner circle contexts [42].

Cano-Moreno *et al.* (2019) provided a quantitative method for evaluation the university teaching. Companies, students and professors are involved in this assessment. This method is realized via four matrices concatenation applied on project management course at school of engineering in Polytechnic University of Madrid. One of the big advantages of this study focusing on improving skills and knowledge of the selected subject [43].

Li *et al.* (2020) improved the quality of teaching process in academic institutions. This research introduced an efficient neural network approach in order to evaluate the quality of teaching process. Leaders, peers, and students are trained and evaluated leading to improve their performance. In addition, on line system approach was designed and implemented for teaching evaluation to provide suitable environment [44].

Lohman (2021) studied the teaching process evaluation through student's feedback. Evaluation of policies and procedures is applied on certain colleges to identify weaknesses and challenges of many methods and procedures of teaching. Educated approached can provide effective qualitative feedback to generate quantitative ratings of performance [45].

Romero *et al.* (2022) offered evaluation for educational process for different resources in the higher education. This research realizes that students are the main player in this evaluation process. The obtained results are analyzed in the period of 1 year. One of the big absorbed issues that applied different activities leading an effective impact for both students and teachers [46].

4. STATEMENT OF THE PROBLEM

The mission of the university is not only to teach and prepare learners but also to include research and community service, and to strive for its optimal development in the framework towards comprehensive development in various fields. Teaching is one of the most important functions of a faculty member. The evaluation of the performance of the faculty member is one of the issues that did not receive sufficient attention to researchers in the Arab countries compared to foreign studies. This is due to a fundamental reason in Arab societies, the faculty member considers it as a derogation.

The importance of the faculty member's role lies in the effective role of the faculty member in guiding students and enhancing their personal and cognitive development. Thus, the students must be given an important part in giving their opinion without restriction to stand on the reality of education and how to promote it. Therefore, the questionnaire is designed to reflect the opinions and concepts of students about the process of education and the faculty members.

5. METHODOLOGY

5.1. Questionnaire Design
A questionnaire was designed using typical format of five-level Likert test to obtain the views of the students in both the educational process and the faculty members. The questionnaire consists of four fields (Table 2):
- 1st field: Possibilities of the faculty member in teaching, ranking and preparing the material. This field including of six questions.
- 2nd field: Contribution of scientific material in the educational achievement of students. This field including of seven questions.
- 3rd field: Evaluation of the content of the scientific material. This field including of six questions.
- 4th field: Relationship between faculty member and students. This field including of six questions.

5.2. The Study Sample
Intentional sample was selected, that represented by the students of fourth stage of the Computer Science department and Information System department. These two departments belong to the Faculty of Computer and Information Technology at Anbar University. The fourth stage of both departments is selected as intentional sample because students at this stage reached the final stage and they are able to evaluate well in addition, only few days have passed since they received the university degrees.

This sample including two parts:
- Students at fourth sage of Computer Science department are 60 students divided into 24 (40%) males and 36 (60%) females
- Students at fourth sage of Information System department are 36 students divided into 15 (42%) males and 21 (58%) females.

6. RESULTS ANALYSIS AND DISCUSSION

The questionnaire is divided into four sets of questions as below:

- 1st set including questions (1–6) demonstrate the ability of faculty member in teaching
- 2nd set including questions (7–13) demonstrate the ability of the material in the achievement of students
- 3rd set including questions (14–19) evaluate the content of the scientific material
- 4th set including questions (20–25) demonstrate the relationship between faculty members and students.

The questionnaire is applied for all five subjects (each subject taught by separate teacher) of the fourth stage students in the department of computer science at university of Anbar.

6.1. Student responses analysis of Teaching Evaluation 1 (Image Processing Subject)
The histogram in Fig. 1a measures the ability of faculty member in teaching. This figure indicates that the overall weights are concentrated on the right side of the figure. That means most of the students answer in the agreement parts. In female section, it is clear that (36% agree and 46% strongly agree). In male section, it is clear that (41% agree and 52% strongly agree). The overall evaluation of this section gives (38% agree and 48% strongly agree). As a contribution, there is a slightly difference between the response of males and females.

The histogram in Fig. 1b measures the ability of the material in the achievement of students. This figure indicates that the overall weights are slightly shifted to the right side of the figure. That means a large number of the students answered in the agreement parts. In female section, it is clear that (46% agree and 21% strongly agree). In male section, it is clear that (55% agree and 32% strongly agree). The overall evaluation of this section gives (50% agree and 25% strongly agree). As a contribution there is a noticed difference between the response of males and females, in addition the response of males gives better agreement.

The histogram in Fig. 1c evaluates the content of the scientific material. This figure indicates that the overall weights are shifted to the right side of the figure. That means most of the students answered in the agreement parts. In female section it is clear that (47% agree and 39% strongly agree). In male section it is clear that (45% agree and 43% strongly agree). The overall evaluation of this section gives (47% agree and 40% strongly agree). As a contribution, there is a slightly difference between the response of males and females.

The histogram in Fig. 1d evaluates the relationship between faculty member and students. This figure indicates that the
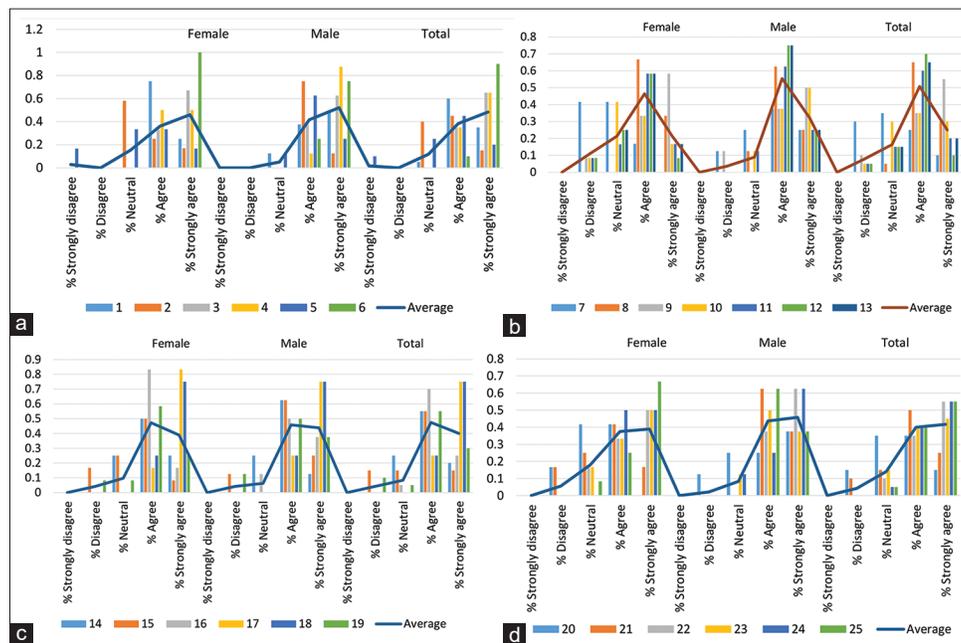
Fig. 1. Teaching Evaluation 1 computer science department. (a) Teaching Evaluation 1 (1st set), (b) Teaching Evaluation 1 (2nd set), (c) Teaching Evaluation 1 (3rd set), (d) Teaching Evaluation 1 (4th set).

overall weights are slightly shifted to the right side of the figure. That means big amount of the students answered in the agreement parts. In female section, it is clear that (38% agree and 39% strongly agree). In male section, it is clear that (44% agree and 46% strongly agree). The overall evaluation of this section gives (40% agree and 42% strongly agree). As a contribution, there is a slightly difference between the response of males and females. The response of males gives better result of agreement.

6.2. Student Responses Analysis of Teaching Evaluation 2 (Information Security Subject)

The histogram in Fig. 2a measures the ability of faculty member in teaching. This figure indicates that the overall weights are concentrated on the right side of the figure. That means most of the students answer in the agreement parts. In female section it is clear that (49% agree and 43% strongly agree). In male section, it is clear that (38% agree and 58% strongly agree). The overall evaluation of this section gives (41% agree and 48% strongly agree). As a contribution, there is a slightly difference between the response of males and females. In female, there is almost a normal distribution of answers between agree and strongly agree but in male there is a small orientation to strongly agree.

The histogram in Fig. 2b measures the ability of the material in the achievement of students. This figure indicates that the

overall weights are concentrated on the center of the figure. That means a large number of the students answered in the neutral part. In female section, it is clear that (32% neutral, 36% agree, and 18% strongly agree). In male section, it is clear that (32% neutral, 28% agree, and 38% strongly agree). The overall evaluation of this section gives (32% neutral, 35% agree, and 26% strongly agree). As a contribution, there is a similarity between the response of males and females, except the strongly agree region have more voting with male students.

The histogram in Fig. 2c evaluates the content of the scientific material. This figure indicates that the overall weights are concentrated on the center of the figure. That means most of the students answered in the neutral region and both sides of agreement parts. In female section, it is clear that (18% disagree, 30% neutral, 18% agree, and 26% strongly agree). In male section, it is clear that (13% disagree, 40% neutral, 23% agree, and 25% strongly agree). The overall evaluation of this section gives (16% disagree, 34% neutral, 20% agree, and 26% strongly agree). As a contribution, there is almost a similarity between the response of males and females. In addition, there is a dissatisfaction of the content of the scientific material.

The histogram in Fig. 3d evaluates the relationship between faculty member and students. This figure indicates that the overall weights are slightly shifted to the right side of the
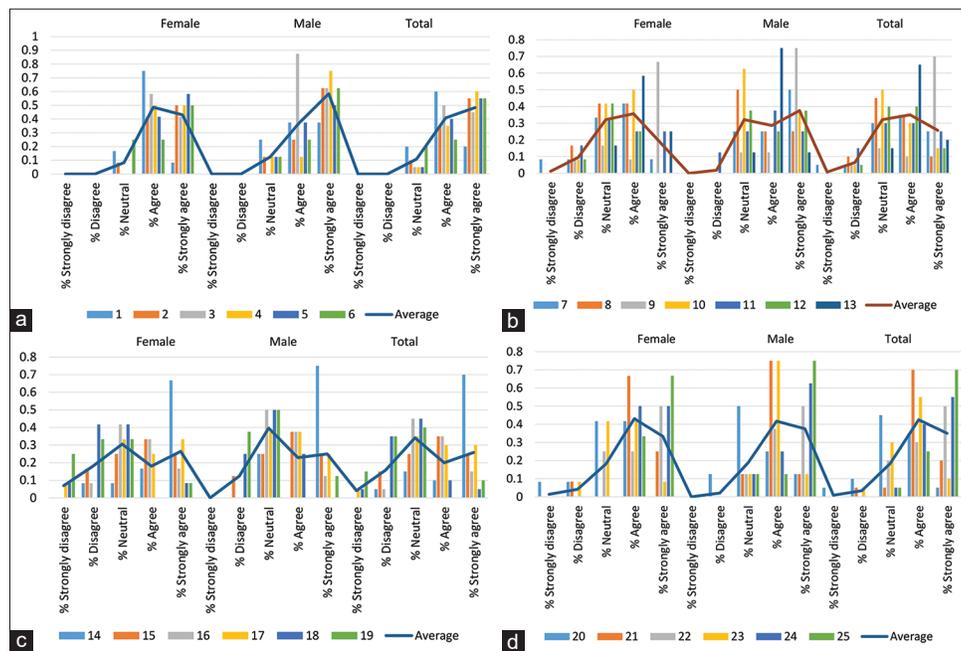
Fig. 2. Teaching Evaluation 2 computer science department, (a) Teaching Evaluation 2 (1st set), (b) Teaching Evaluation 2 (2nd set), (c) Teaching Evaluation 2 (3rd set), (d) Teaching Evaluation 2 (4th set).

figure. That means big amount of the students answered in the agreement parts. In female section, it is clear that (18% neutral, 43% agree, and 33% strongly agree). In male section, it is clear that (18% neutral, 42% agree, and 38% strongly agree). The overall evaluation of this section gives (18% neutral, 43% agree, and 35% strongly agree). As a contribution, there is a similarity in student response between males and females.

6.3. Student Responses Analysis of Teaching Evaluation 3 (ASP.net Subject)

The histogram in Fig. 3a measures the ability of faculty member in teaching. This figure indicates that the overall weights are slightly shifted on the right side of the figure. That means big amount of the students answer in the agreement parts. In female section, it is clear that (51% agree and 31% strongly agree). In male section, it is clear that (52% agree and 23% strongly agree). The overall evaluation of this section gives (53% agree and 27% strongly agree). As a contribution there is a slightly difference between the response of males and females, and the overall average curve is symmetry. In both female and male response values, there is almost a normal distribution of answers and most of the weights are oriented to agree part.

The histogram in Fig. 3b measures the ability of the material in the achievement of students. This figure indicates that

the big amount of weights is concentrated on the center of the figure. That means there is significant number of the students answered in the neutral part. In female section, it is clear that (22% neutral, 41% agree and 32% strongly agree). In male section, it is clear that (25% neutral, 36% agree and 23% strongly agree). The overall evaluation of this section gives (23% neutral, 39% agree, and 23% strongly agree). As a contribution, there is a similarity between the response of males and females, except the strongly agree region have more voting with female students.

The histogram in Fig. 3c evaluates the content of the scientific material. This figure indicates that most of weights are concentrated on the center of the figure. That means big amount of students answered in the neutral region and both sides of agreement parts. In female section, it is clear that (10% disagree, 31% neutral, 32% agree, and 26% strongly agree). In male section, it is clear that (23% disagree, 21% neutral, 35% agree, and 10% strongly agree). The overall evaluation of this section gives (15% disagree, 27% neutral, 33% agree, and 20% strongly agree). As a contribution, there is no similarity between the response of males and females. In addition, there is a dissatisfaction of the content of the scientific material.

The histogram in Fig. 2d evaluates the relationship between faculty member and students. This figure indicates that the
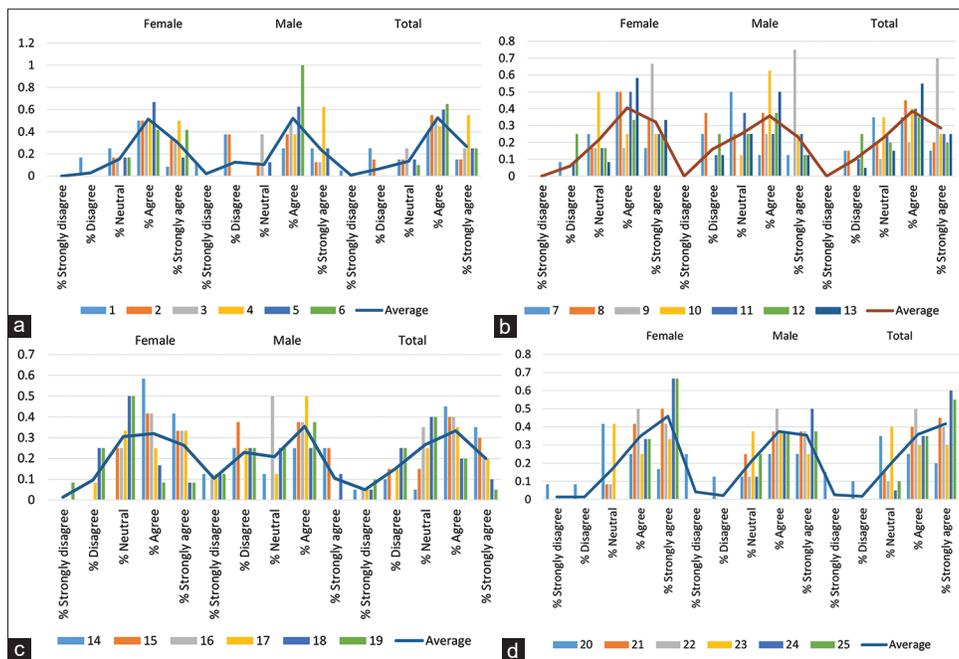
Fig. 3. Teaching Evaluation 3 computer science department, (a) Teaching Evaluation 3 (1st set), (b) Teaching Evaluation 3 (2nd set), (c) Teaching Evaluation 3 (3rd set), (d) Teaching Evaluation 3 (4th set).

overall weights are slightly shifted to the right side of the figure. That means big amount of the students answered in the agreement parts. In female section it is clear that (17% neutral, 36% agree, and 46% strongly agree). In male section it is clear that (21% neutral, 38% agree, and 36% strongly agree). The overall evaluation of this section gives (19% neutral, 36% agree, and 42% strongly agree). As a contribution, there is a similarity in student response between males and females with significant increases in female response.

6.4. Student Responses Analysis of Teaching Evaluation 4 (Operating Systems Subject)

The histogram in Fig. 4a measures the ability of faculty member in teaching. This figure indicates that the overall weights are concentrated on the center of the figure. That means big amount of the students answer in the agreement parts with a significant part of neutral. In female section it is clear that (20% neutral, 42% agree, and 22% strongly agree). In male section, it is clear that (29% neutral, 38% agree, and 31% strongly agree). The overall evaluation of this section gives (23% neutral, 40% agree, and 27% strongly agree). As a contribution, there is a slightly difference between the response of males and females, and the overall average curve is not very symmetry. In both female and male response values, there is almost a normal distribution of answers and most of the weights are oriented to agree part, in addition there is significant weight related to neutral part.

The histogram in Fig. 4b measures the ability of the material in the achievement of students. This figure indicates that the big amount of weights is concentrated on the center of the figure. That means there are significant number of the students answered in the neutral part, in addition there is a small weight related to disagree. In female section it is clear that (27% disagree, 14% neutral, 37% agree, and 12% strongly agree). In male section it is clear that (29% neutral, 45% agree, and 25% strongly agree). The overall evaluation of this section gives (17% disagree, 20% neutral, 40% agree, and 17% strongly agree). As a contribution, there is a dissimilarity between the response of males and females, and the average curve distributed almost over the figure.

The histogram in Fig. 4c evaluates the content of the scientific material. This figure indicates that most of weights are distributed on the span of the figure. That means big amount of students answered in all parts of the figure. In female section, it is clear that (15% disagree, 21% neutral, 28% agree, and 15% strongly agree). In male section, it is clear that (13% disagree, 38% neutral, 13% agree, and 31% strongly agree). The overall evaluation of this section gives (14% disagree, 28% neutral, 22% agree, and 22% strongly agree). As a contribution, there is no similarity between the response of males and females. In addition, there is a dissatisfaction of the content of the scientific material and there is a significant weight related to neutral, disagree, and strongly disagree parts.
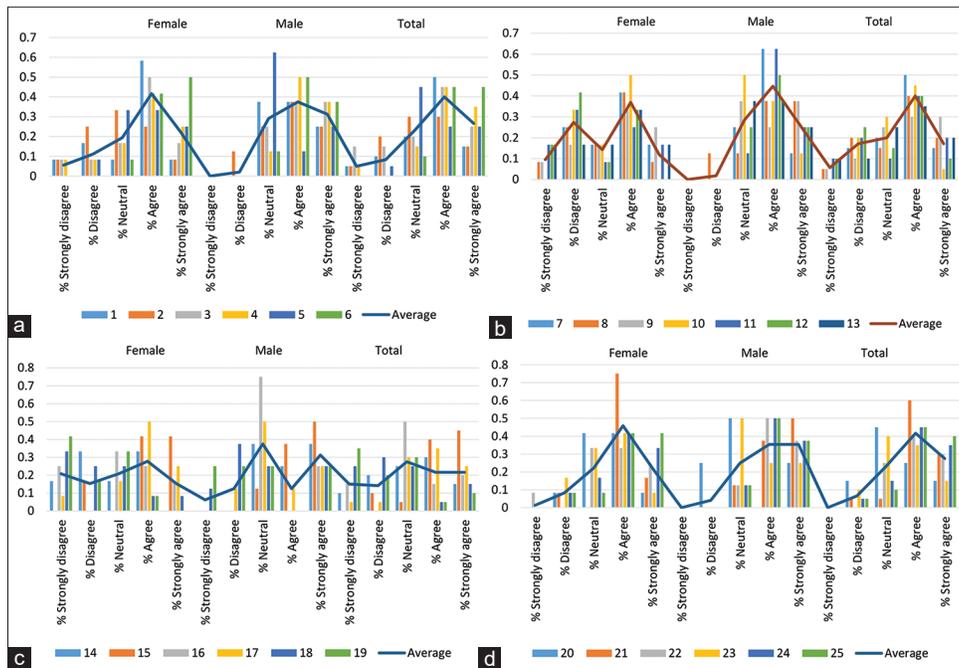
Fig. 4. Teaching Evaluation 4 computer science department, (a) Teaching Evaluation 4 (1st set), (b) Teaching Evaluation 4 (2nd set), (c) Teaching Evaluation 4 (3rd set), (d) Teaching Evaluation 4 (4th set).

The histogram in Fig. 4d evaluates the relationship between faculty member and students. This figure indicates that the overall weights are slightly shifted to the right side of the figure. That means big amount of the students answered in the agreement parts. In female section, it is clear that (22% neutral, 46% agree, and 22% strongly agree). In male section, it is clear that (25% neutral, 35% agree, and 35% strongly agree). The overall evaluation of this section gives (23% neutral, 42% agree, and 28% strongly agree). As a contribution, there is a similarity in student response between males and females with significant increases in male response. In addition, there is significant weight in the neutral part.

6.5. Student Responses Analysis of Teaching Evaluation 5 (Artificial Intelligence Subject)

The histogram in Fig. 5a measures the ability of faculty member in teaching. This figure indicates that the overall weights are slightly shifted on the right side of the figure. That means big amount of the students answer in the agreement parts. In female section, it is clear that (10% neutral, 35% agree, and 51% strongly agree). In male section, it is clear that (27% neutral, 50% agree, and 19% strongly agree). The overall evaluation of this section gives (17% neutral, 40% agree, and 39% strongly agree). As a contribution, there is a slightly difference between the response of males and females, and the overall average curve is symmetry. In both

female and male response values, there is almost a normal distribution of answers and most of the weights are oriented to agree part, in addition there is significant weight related to the neutral part exactly in male response.

The histogram in Fig. 5b measures the ability of the material in the achievement of students. This figure indicates that the big amount of weights is concentrated on the right side of the figure. That means most of the student answered on the agreement part in addition there are significant number of the students answered in the neutral part. In female section, it is clear that (14% neutral, 50% agree, and 35% strongly agree). In male section, it is clear that (30% neutral, 43% agree, and 16% strongly agree). The overall evaluation of this section gives (21% neutral, 47% agree, and 27% strongly agree). As a contribution, there is a dissimilarity between the response of males and females, in addition there is a significant weight related to neutral part exactly related to male response.

The histogram in Fig. 5c evaluates the content of the scientific material. This figure indicates that most of weights are concentrated on the center of the figure. That means big amount of students answered in the neutral region and both sides of agreement parts. In female section, it is clear that (11% disagree, 25% neutral, 44% agree, and 17% strongly agree). In male section, it is clear that (31% disagree, 38%
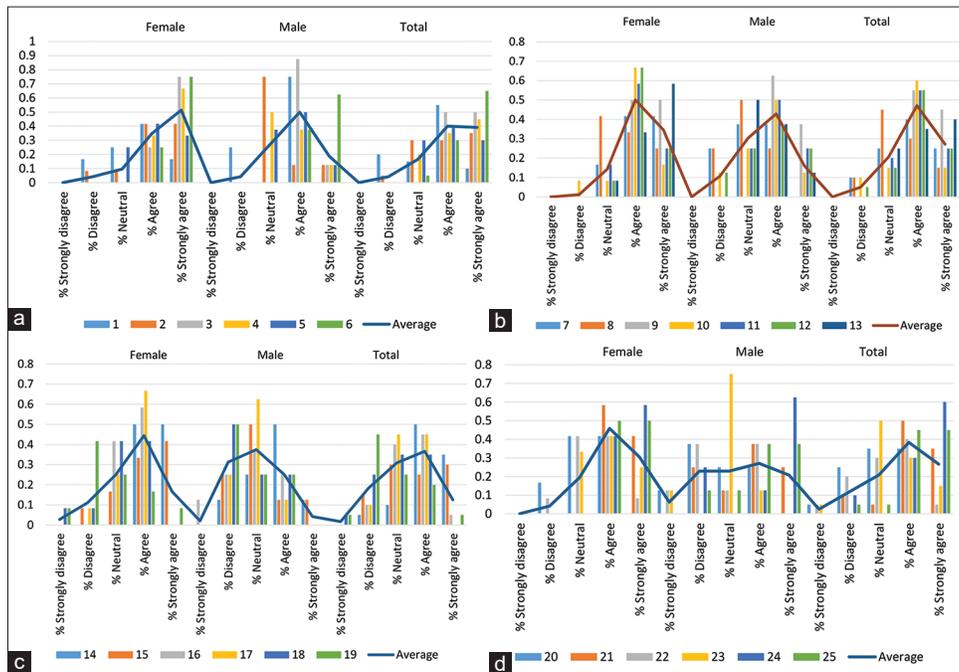
Fig. 5. Teaching Evaluation 5 computer science department, (a) Teaching Evaluation 5 (1st set), (b) Teaching Evaluation 5 (2nd set), (c) Teaching Evaluation 5 (3rd set), (d) Teaching Evaluation 5 (4th set).

neutral, 25% agree, and 42% strongly agree). The overall evaluation of this section gives (18% disagree, 31% neutral, 37% agree, and 13% strongly agree). As a contribution, there is no similarity between the response of males and females. In addition, there is a dissatisfaction of the content of the scientific material.

The histogram in Fig. 5d evaluates the relationship between faculty member and students. This figure indicates that the overall weights are concentrated on the center of the figure. That means the students answered are distributed on all parts of the figure. In female section, it is clear that (4% disagree, 19% neutral, 46% agree, and 31% strongly agree). In male section, it is clear that (23% disagree, 23% neutral, 27% agree, and 21% strongly agree). The overall evaluation of this section gives (2% disagree, 21% neutral, 38% agree, and 27% strongly agree). As a contribution, there is no similarity in student response between males and females with significant increases of disagree in male response that explains a weak relationship between faculty member and students.

7. CONCLUSIONS

Assessing the learning process is an important topic that always occupies the educational administration. This process depends on a comprehensive re-evaluation of the courses,

teachers, and department management. This evaluation applied on the fourth stage (final stage) students of computer science department. All subjects of fourth stage are taught by high skilled Ph.D. teachers, in addition these subjects are well organized and updated.

The obtained results realized that the fourth stage students have the ability to take their decisions in a right way. In addition, that the most received responses (about 80%) are concentrated on agree and strongly agree, but with some reservation of the teaching evaluation 5 that their answers were distributed almost equally between neutral, agree and strongly agree with small weight to disagree. By revealing the reason for this response to teaching evaluation 5, we can conclude that this result was obtained due to inexperience of teachers. However, this is the 1st time at this department implemented an evaluation guided by students to reflect their opinion about the teaching process. This process can be circulated to include all departments and colleges at the university.

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