



SEM-SEM



Smart Control Systems for Energy Management

Erasmus + #: 561703-EPP-1-2015-1-UK-EPPKA2-CBHE-JP

Evaluation Report for the workshop held on 1st December 2016 in Amman, Jordan

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Introduction – Purpose of this document

As foreseen in the project proposal and, consequently, in the SEM-SEM QA Plan, the QA of the SEM-SEM project will be continuous; thus, will be implemented throughout the project lifetime. Evaluation is necessary to improve the quality of the project and its products. According the proposal and the Work Package 12 (Quality Plan), EUROTraining is responsible for monitoring the progress of the activities and gathering the results and going on to compose the relevant reports. For this reason, after each and every session (training/workshop/project meeting), a questionnaire should be filled by the participants.

In the aforementioned framework, this evaluation report aims at outlining the outcomes of the first workshop that was held in Jordan on 1st December 2016. The trainees who attended this session and answered the questionnaire were seventy-seven. In this point, it is remarkable that EUROTraining used Google Forms in order to create the questionnaire. Google Forms is part of Google's online apps suite of tools to help whoever needs it to get more done in their browser easy and for free. In short, one can summarize survey results at a glance with charts and graphs.

Results' Analysis

This part of the document contains a summary and statistical analysis of the answers given by the workshop's participants. Graphs are included so that the analysis can be made more informative.

It's important to mention some information about the procedure:

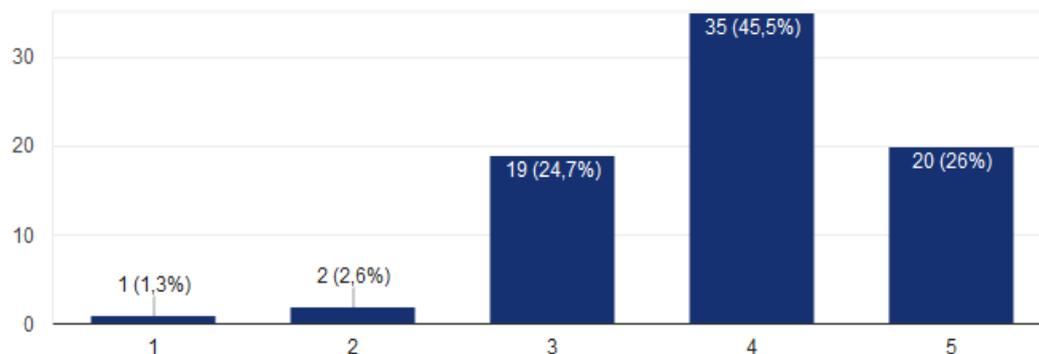
Date: 1st of December 2016

Respondents: 77

❖ **Question 1: Name & Surname (optional) / Question 2: Profession or Status (optional)**

The two questions at the beginning of the questionnaire are about personal information such as name, surname and profession. It is notable that only forty-five out of seventy-seven participants (58,4%) chose to answer the first question. As for the second question, just twenty-five persons (32,4%) gave an answer. That's the reason why the creator of the questionnaire does not consider these questions mandatory to get answered.

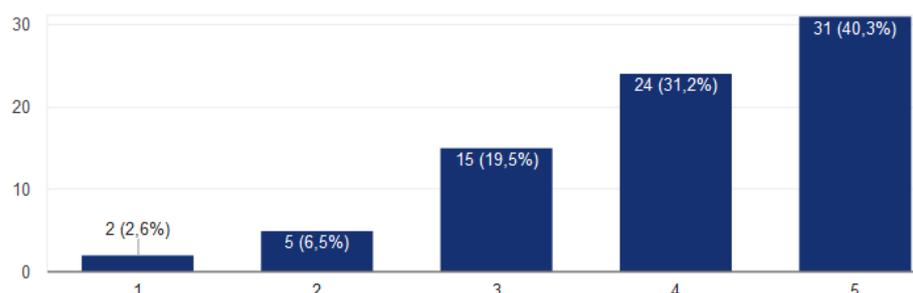
❖ **Question 3: Overall, how would you rate the Master's program?**



This is a Likert scale question. The participants should answer it by selecting a single option from a 1 to 5 scale (from 1 - "Poor" to 5 - "Excellent"). This question was used in order for the coordinators-partners to figure out how the participants see the whole effort. The majority of people that attended the workshop (**45,5% - 35 respondents**) chose "4" as their answer, twenty out of seventy-seven participants (**26% - 20 respondents**) chose "5", nineteen out of seventy-seven participants (24,7%) chose "3", just two persons (2,6%) chose "2" and a single one chose "1" (1,3%). The results are definitely very encouraging and highly rating, which making this Master' program an example of quality effort.

❖ **Question 4: The objectives of the Master's program are clear?**

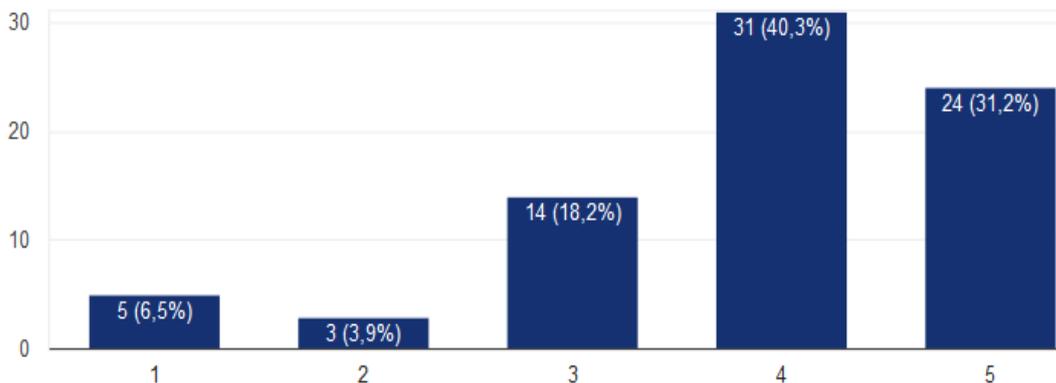
This is also a Likert scale question. The participants should answer it by selecting a single option from a 1-to-5 scale. In particular, these options range from 1- "Not at all" to 5 – "Very clear". This question was used by the





creator of the questionnaire so that the organizers-partner would be able to find out the extent of participants' comprehension in the main targets of the Master's degree. **Thirty-one out of seventy-seven participants (40,3%) chose "5" as their answer**, twenty-four participants (31,2%) chose "4", fifteen participants (19,5%) chose "3", five participants (6,5%) chose "2" and just a single person (2,6%) chose "1". So, the results show clearly that the vast majority of people who attended the workshop were able to understand the goals of the establishment of the Master's programme.

❖ **Question 5: Are you generally satisfied with the content of the Master's Program?**

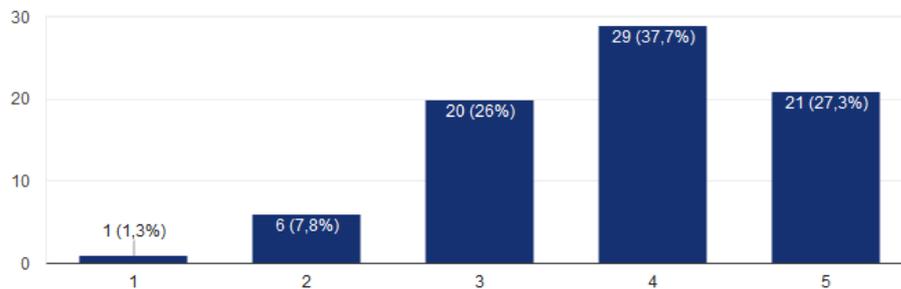


This is also a Likert scale question in which the participants should give a single answer by selecting a single option from a 1 to 5 scale. In particular, these options range from "Not at all satisfied" (1) to "Very satisfied" (5). This question was used in order for the partners to figure out to what extent the participants' expectations were about to be met. **Thirty-one out of seventy-seven participants (40,3%) chose "4" as their answer, twenty-four participants (31,2%) chose "5"**, fourteen participants (18,2%) chose "3", three participants

(3,9%) chose “2” and finally five persons (6,5%) chose “1”. There is no doubt that the results are positive, but the coordinators should not underestimate the fact that some of the participants gave the most negative answer (“Not at all satisfied”).

❖ **Question 6: Are you generally satisfied with the core courses of the Master’s program?**

This is a Likert scale question. The participants should answer it by selecting a single option from a 1 to 5 scale. In particular, these options range from “Not at all satisfied” (1) to “Very satisfied” (5). The questionnaire’s creator used this question in order to find out to what extent the participants were about to be satisfied with the main academic subjects of the Master’s



degree after the end of the workshop. **Twenty-nine out of seventy-seven participants (37,7%) chose “4” as their answer, twenty-one participants (27,3%) chose “5”,** twenty participants (26%) chose “3”, six participants (7,8%) chose “2” and just a single person (1,3%) chose “1”. In general, the results are encouraging but the organizers should take into account the opinion of that minority that gave a mild or a negative answer.

❖ **Question 6a: If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?**

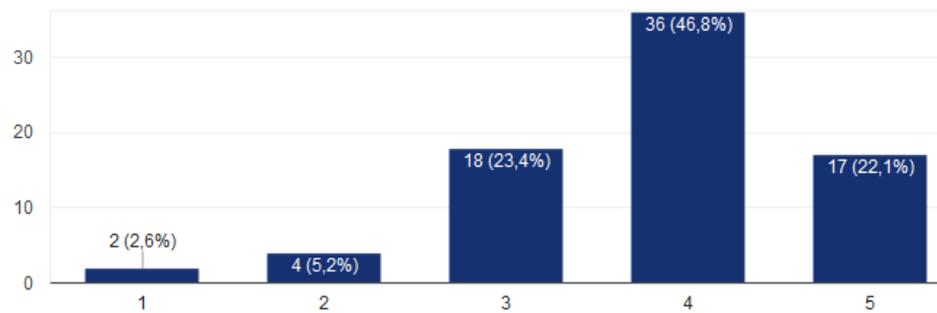
This is an open-ended question in which the participants were able to express their opinion and propose an improvement without word limit. In particular, it was used so that the respondents who gave a negative answer in the previous question would be able to say why and suggest an improvement. It is notable that most written answers are positive. Nevertheless, there were some respondents who mentioned that they didn't receive enough information

All modules are relevant. (2)
In my opinion, it is important to highlight the fact that this experiment was defining about improvement in control systems for energy management.
I suggest adding this course within causes in electric engineering.
In fact, I will apply this programme in my graduation project in this University and I will study this programme in the future. I ask you to suggest this course in this college.
Actually we didn't get enough description about the program so we couldn't evaluate it and identify its weak points. Therefore we are not able to suggest ways in order for the programme to be improved.
Very nice idea. I would like to see it in real life.
why not to link between civil and mechanical engineering with the renewable energy in construction site.
All the modules are useful but maybe because I am a civil engineering student. I was a little bit not interested because it was more about electrical engineering.
I think that you have to improve civil engineering department especially on master programme.

about the Master's programme so as to be able to suggest a possible adjustment. These comments and opinions are definitely a valuable source of information in order for the organizers to adjust a few things related to presentation.

❖ **Question 7: Are you generally satisfied with the Elective Package I-for the Management and Control systems subject area?**

This is a Likert scale question in which the participants should give a

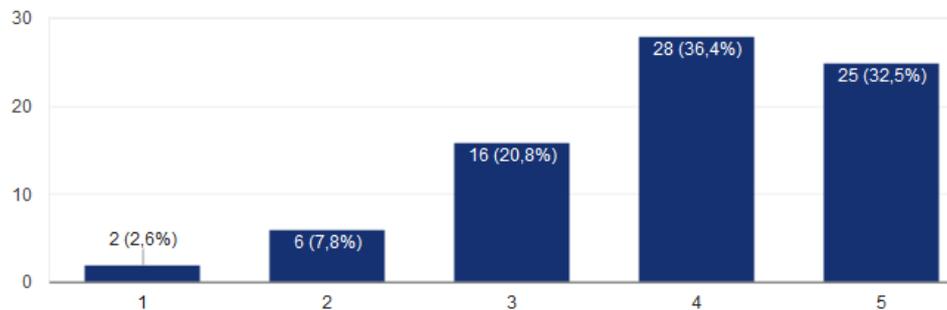


single answer, choosing from an 1 to 5 scale. In particular, the options available to respondents range from “Not at all satisfied” (1) to “Very satisfied” (5). This question was used so that the organizers could receive detailed feedback after the presentation of specific subjects. **Thirty-six out of seventy-seven participants (46,8%) chose “4”** as their answer, eighteen participants (23,4%) chose “3”, seventeen participants (22,1%) chose “5”, four participants (5,2%) chose “2” and finally two participants (2,6%) chose “1”. Although the results can be considered as positive, one cannot deny that there is scope for improving.

❖ **Question 7a: If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?**

This is an open-ended question in which the participants are able to express their opinion and propose an improvement without word limit. To be more specific, it was used so that the respondents who would give a negative answer in the previous question would be able to say why and suggest an improvement. It is remarkable that just a single person (out of seventy-seven participants) decided to give an answer. In particular, it is about suggesting an increase in project’s size.

❖ **Question 8: Are you generally satisfied with the Elective Package II- for the Automated Industrial Systems subject area?**



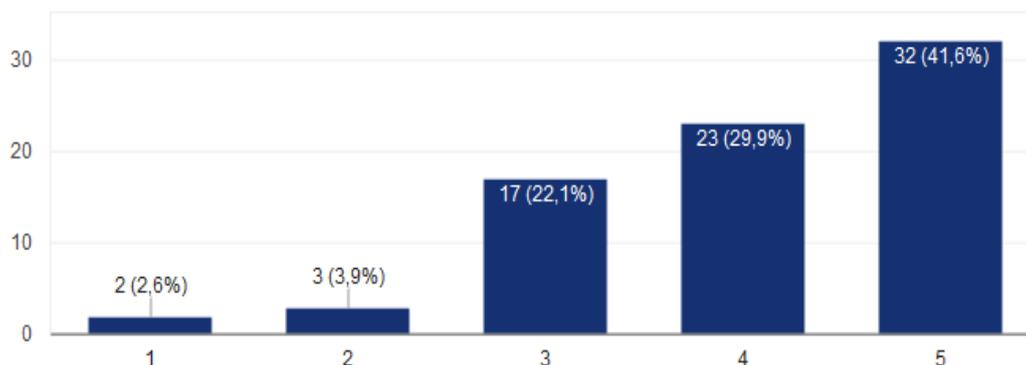
This

is a Likert scale question. The participants should answer it by selecting a single option from a 1 to 5 scale. In particular, these options range from “Not at all satisfied” (1) to “Very satisfied” (5). This question was used so that the organizers could receive detailed feedback after the presentation of specific subjects. **Twenty-eight out of seventy-seven participants (36,4%) chose “4”** as their answer, twenty-five participants (32,5%) chose “5”, sixteen participants (20,8%) chose “3”, six participants (7,8%) chose “2” and finally two persons (2,6%) chose “1”. This means that this specific subject was presented very well during the workshop and the participants found it interesting.

❖ **Question 8a: If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?**

This is an open-ended question in which the participants are able to express their opinion and propose an improvement without word limit. To be more specific, it was used so that the respondents who would give a negative answer in the previous question would be able to say why and suggest an improvement. *Remarkably, no participant decided to answer this question.*

❖ **Question 9: Do you think that the structure of the Master's program responds to the needs of the students?**



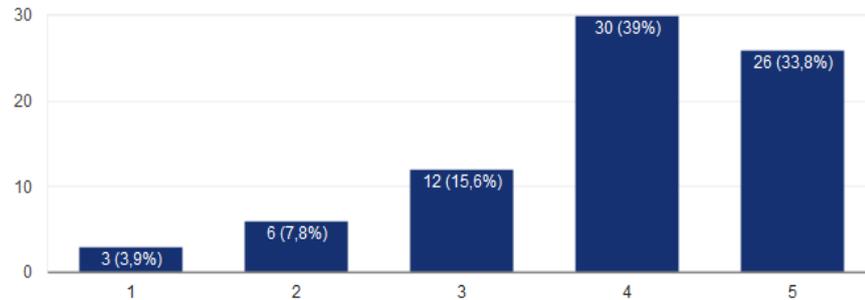
This is a Likert scale question in which the participants should give a single answer by selecting a single option from a 1 to 5 scale. In particular, these options range from “Not at all” (1) to “Very satisfied” (5). **Thirty-two out of seventy-seven participants (41,6%) chose “5”** as their answer, twenty-three participants (29,9%) chose “4”, seventeen participants (22,1%) chose “3”, three participants (3,9%) chose “2” and finally two persons (2,6%) chose “1”. The results are very positive and show clearly that most of the participants strongly believe in this effort.

❖ **Question 9a: Please further explain.**

This is an open-ended question in which the participants are asked to express their thoughts on the previous question's content. It's important to mention the fact that there were sixty-six out of seventy-seven participants (85,7%) that decided not to answer this question. As for those who answered (14,3%), all of their responses were positive. It goes without saying that the results are very encouraging.

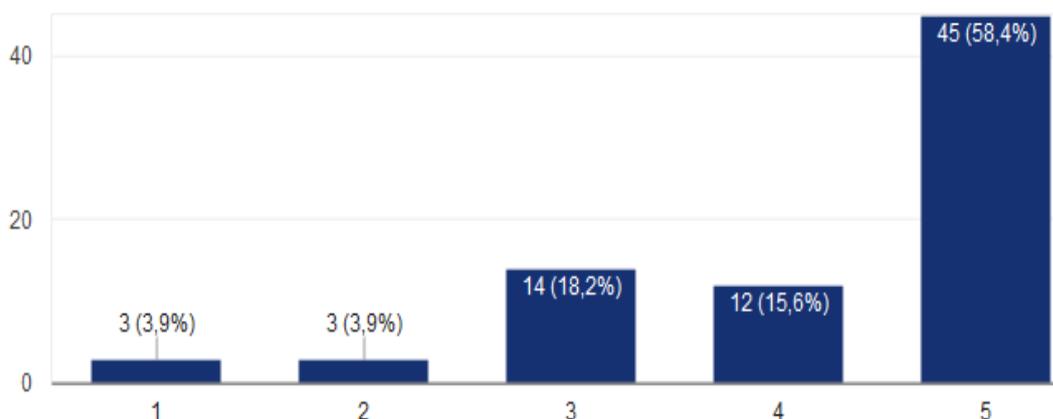
❖ Question 10: How do you find the quality of the courses?

This is a Likert scale question in which the participants should give a single answer by selecting



a single option from a 1 to 5 scale. In particular, these options range from “Poor” (1) to “Excellent” (5). This question was used in order for the organizers to receive feedback concerning the quality of the courses. **Thirty out of seventy-seven participants (39%) chose “4”** as their answer, **twenty-six participants (33,8%) chose “5”**, twelve participants (15,6%) chose “3”, six participants (7,8%) chose “2” and finally three persons (3,9%) chose “1”. The answers of people who attended the workshop show that the courses were considered to be of high quality which means that the coordinators and the partners have accomplished a significant goal.

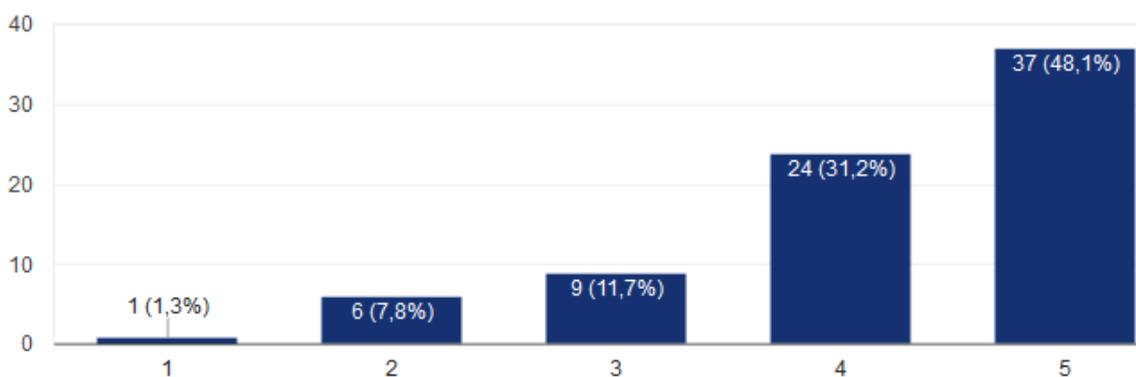
❖ Question 11: The Master’s program can respond to the academic needs in Jordan.



This is also a Likert scale question. The participants should answer it by selecting a single option from a 1 to 5 scale. In particular, these options range from “Not at all satisfied” (1) to “Very satisfied” (5). **Forty-five out of seventy-seven participants (58,4%) chose “5”** as their answer, fourteen participants (18,2%) chose “3”, twelve participants (15,6%) chose “4”, three participants (3,9%) chose “2” and finally three persons (3,9%) chose “1”. The results show that the respondents are very optimistic about the effect this very Master’s program is going to have on Jordan’s academic environment.

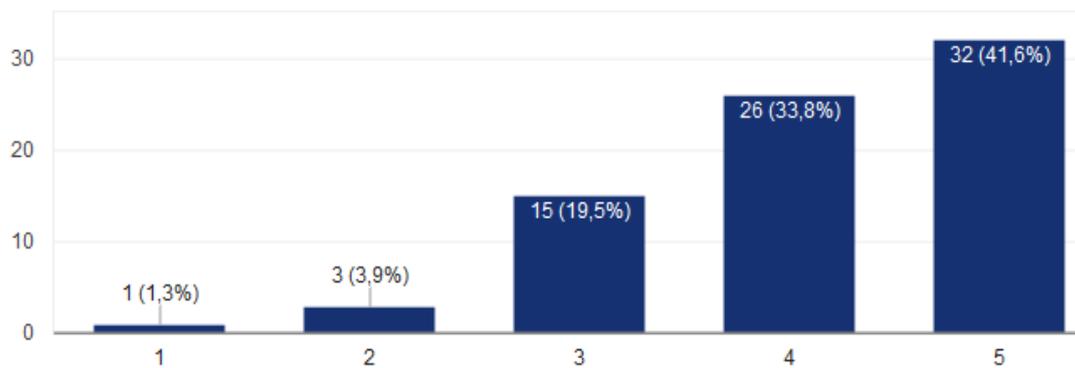
❖ **Question 12: The Master’s program can cover industrial needs in Jordan.**

This is also a Likert scale question in which the participants should select a single option from a 1 to 5 scale. These options range from “Not at all” (1) to “Very much” (5). Thirty-seven out of seventy-seven participants (48,1%) chose “5” as their answer, twenty-four participants (31,2%) chose “4”, nine participants (11,7%) chose “3”, six participants (7,8%) chose “2” and finally just a single person (1,3%) chose “1”.



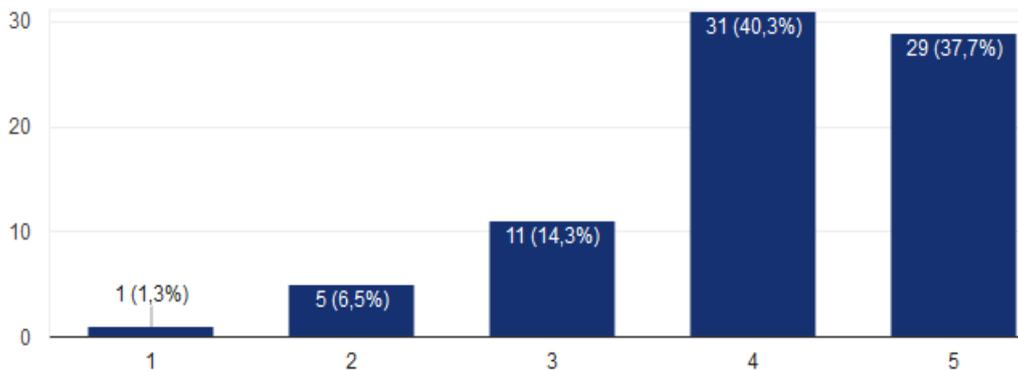
To analyze the results, the respondents strongly believe that the effect of this Master's programme will be huge in terms of covering Jordan's industrial needs.

❖ **Question 13: The Master's program can have an impact on energy performance in the region.**



This is also a Likert scale question in which the participants should select a single option from a 1 to 5 scale. These options range from "Not at all" (1) to "Very much" (5). **Thirty-two out of seventy-seven participants (41,6%) chose "5"** as their answer, twenty-six participants (33,8%) chose "4", fifteen participants (19,5%) chose "3", three participants (3,9%) chose "2" and finally just a single one (1,3%) chose "1". In order to elaborate the results, the vast majority of the respondents are convinced that the whole region is going to be benefited by the establishment of such Master's programme.

❖ **Question 14: The Master's program can qualify students to respond to the market needs in energy sector in the region.**



This is a Likert scale question in which the participants should select a single option from a 1 to 5 scale. In particular, these options range from “Not at all” (1) to “Very much” (5). **Thirty-one out of seventy-seven participants (40,3%) chose “4”** as their answer, twenty-nine participants (37,7%) chose “5”, eleven participants (14,3%) chose “3”, five participants (6,5%) chose “2” and finally just a single one (1,3%) chose “1”. As for the results, the participants seem to be very optimistic about program’s covering the energy sector’s needs of the region.

❖ **Question 15: What should be improved? Please elaborate.**

This is an open-ended question in which the participants are able to express their opinion and propose an improvement without word limit. It is remarkable that sixty-four out of seventy-seven participants (83,1%) decided not to give an answer. The main idea of the questionnaire’s creator was to give an opportunity for the participants to share their thoughts on the project. Receiving such a feedback is always useful and there is a possibility it leads to project’s improvement in the future.

In particular, some respondents (two out of thirteen) pointed out that the courses were shown too fast. Moreover, a respondent mentioned that the existence of a Bachelor degree of this level would be helpful in terms of boosting the outcome of the Master's program. Another one wrote that his country needs more state-of-the-art infrastructure (laboratories and instruments) in order to start operating such a Master's program.

❖ **Question 16: Any additional comments? (optional)**

This is also an open-ended question in which the participants are able to write a comment concerning the workshop without word limit. There are only twelve answers (15,5%). All the respondents express their gratitude for the whole effort because, as they said, this program is going to be groundbreaking and change the energy sector of their country.



Annex - Questionnaire

Evaluation Questionnaire

Workshop, 1st of December 2016, Amman, Jordan

1. Name & Surname (optional)

.....

2. Profession/Status (optional)

.....

(1=worst, 3= fair, 5=best)

3. Overall, how would you rate the Master's programme?

Good 1 2 3 4 5 Excellent

4. The objectives of the Master's programme are clear?

Not at all 1 2 3 4 5 Very clear

5. Are you generally satisfied with the content of the Master's programme?

Not at all satisfied 1 2 3 4 5 Very satisfied

6. Are you generally satisfied with the core courses of the Master's programme?

Not at all satisfied 1 2 3 4 5 Very satisfied

6a. If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?



7. Are you generally satisfied with the Elective Package I-for the Management and Control systems subject area?

Not at all satisfied 1 2 3 4 5 Very satisfied

7a. If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?

8. Are you generally satisfied with the Elective Package II- for the Automated Industrial Systems subject area?

Not at all satisfied 1 2 3 4 5 Very satisfied

8a. If not, can you propose areas of improvement? Which module do you find that is not relevant or useful?

9. Do you think that the structure of the Master's programme responds to the needs of the students?

Not at all 1 2 3 4 5 Very much

9a. Please further explain:

10. How do you find the quality of the courses?

Poor 1 2 3 4 5 Excellent

11. The Master's programme can respond to the academic needs in Jordan. *

Not at all 1 2 3 4 5 Very much

12. The Master's programme can cover industrial needs in Jordan. *

Not at all 1 2 3 4 5 Very much

13. The Master's programme can have an impact on energy performance in the region.

Not at all 1 2 3 4 5 Very much

14. The Master's programme can qualify students to respond to the market needs in energy sector in the region.

Not at all 1 2 3 4 5 Very much

15. What should be improved? Please elaborate:

16. Any additional comments?