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InterUniversity Learning in Higher education on Advanced Land Management- Egypt Country

Co-funded by the Erasmus+ Programme of the European Union

Needs Assessment Report

July 2016

The ILHAM-EC project has been funded with support from the European Union. This report reflects the view only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Acknowledgements

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The study has been carried out under the framework of the ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egypt Country) project financed by the European Union under the program Erasmus+ KA2 - Capacity Building in Higher Education.

The field data for this study was collected by the teams of University of Alexandria, under the guidance of Prof. Fawzy Kishk; University of Cairo under the guidance of Prof. Ahmed Gad; University of Damanhour under the guidance of Prof. Ahmed Abdel-Mawgood; University of Zagazig under the guidance of Prof. Bassem Ashour.

Prof. Lindsay Stringer from University of Leeds provided useful insights and staff members of the Universities of Alexandria, Cairo, Damanhour and Zagazig gave effective on the ground arrangements and support. We are thankful for their assistance.

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1. Executive Summary

The survey reports an analysis on the Needs Assessment of the Universities of Cairo, Alexandria, Zagazig and Damanhour. The study has been carried out under the framework of the ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egypt Country) project financed by the European Union under the program Erasmus+ KA2 - Capacity Building in Higher Education. The project aims at increasing the skills of Egyptian young students in the field of Sustainable Land Management (SLM) by developing a new inter-University Postgraduate Master.

For this purpose, we have carried out first an assessment of the curriculum of each university on SLM and, secondly, an analysis of the students and teachers' perception of the educational quality currently provided by the university system. In many cases, the same questions were asked to students and teachers to highlight the possible different reactions of these important target groups. Their perceptions have been then completed by those of the employers with the aim of analyzing whether the skills acquired by graduated students meet the minimum requirements to access the labor market.

A first draft report on the Needs Assessment was distributed among partners and a mission was organized to discuss the preliminary results at the Universities of Alexandria, Cairo, Damanhour and Zagazig. The information collected from a series of meetings with professors, students and enterprises in each university have been included in this report.

The survey provided relevant information to support the development of a new Master Course on SLM. It emerges the importance to implement a Master based on innovative learning methods aiming at improving the quality of teaching and learning while ensuring high quality educational curricula. This approach is considered the most appropriate to meet the professional, employer and socio-economic needs of Egypt. Furthermore, as follow up of the survey, significant new initiatives must be implemented, such as cross-disciplinary courses, students and teachers' mobility, seminars, courses and traineeships organized by international Institutions that work in SLM.

Four different questionnaires were distributed among the four Egyptian University partners, teachers, students and enterprises. Specifically, 88 questionnaires were collected to gain information about the curricula in the fields linked to SLM. 344 students were interviewed on the reasons behind their enrollment,

experience and level of satisfaction of facilities supplied by their university and the quality of the services received in terms of teaching methods and skills effectively acquired. 73 teachers were asked on formal and informal professional activities, teaching experience, quality of education and skills developed by students. Finally, 21 enterprises were interviewed to acquire information on the skills they require as employers and their perception on the level of knowledge of graduates.

Main results from the curricula analysis

- Universities provide mostly modules in the field of soil science and resource management.
- Students' attendance ranges between 3/5 and 400/600 for an average of 3 credit hours course per week for a total duration of 13/15 weeks.
- The courses are taught through lectures and laboratory.
- Very few courses are taught in English.
- Entry requirements are usually required, while traineeship period is usually not required.
- The most used assessment methods are midterm, final, practical, and oral examination. Multiple-choice questions (MCQ) tests and written assignments are also employed.

Main remarks from teachers, students and enterprises' surveys

1. **University mission**

- Teachers and students agree that the main university mission is the training of graduates that meet job requirements and building new skills.
- However only the 39% of students declare that the university mission is accomplished against 45% of teachers' opinion.

2. **Support services and facilities**

- Teachers and students complain of the poor availability of classrooms and lab facilities, computers and technologies.
- Teachers are also disappointed with library resources and mostly with the facilities connected with campus resources for visiting professors, career counseling and placement for students However, library facilities are much more available now than before. Recently some universities had access to international scientific databases.
- Opportunities to spend mobility period abroad are absent.
- Students also regret lack of financial supports, although university education is free.

3. Students' skills

- Students and employers' perceptions on theoretical skills are generally positive.
- On the opposite, teachers find them unsatisfactory.
- Both teachers and students agree on the fact that computer literacy, creativity, practical and critical skills are not well developed.
- Foreign languages are the most common complaint.
- 50% of students think that the skills they are acquiring will be useful to access the labor market.
- Enterprises consider technical knowledge and practical skills very important. Their absence is the most critical aspect when employing graduates.
- To possess a degree in a specific field is considered a priority by almost all the companies.
- A Masters' degree is not commonly considered an added value and a PhD degree seems to have no importance in the selection process within the companies analyzed.

4. Educational experience

- Teachers are satisfied with the teaching staff's quality and ability and the variety of courses.
- Students are satisfied with the quality of teaching staff and interest shown by teachers regarding their progresses.
- Teachers are not completely satisfied with the quality of education and the interest shown by them regarding students' progresses.
- Students are less satisfied with teaching ability and quality of education.

5. Enterprise-university cooperation

- There is an overall agreement amongst the points of view of students, teachers and employers related to the fact that the students' employability could be enhanced by running courses more relevant to the needs of enterprises.
- Practical classes in courses and compulsory internships should be an integral part of the Universities curriculum.
- Most of the companies declare that they have direct contact with Universities, especially during business forums and conferences.

Enhancement proposal

Diagnosis	Enhancement Proposal
Importance of developing analytical and critical thinking to be the basis of problem solving through innovation and creativity.	• Train students on spotting and analyzing the problems associated with land management. • Students should be trained on evaluating the solutions previously taken by the relevant authorities to overcome a relevant problem and suggest alternative innovative solutions. • Actively involve students in research and creative activities to promote their interest in research careers and enhance students' education. • Promote hands-on learning activities that foster students' analytical, logical and creative thinking, problem solving, curiosity, written and oral skills self-reliance. • Combine traditional learning methods with new educational ones with the use of new technologies
Acquiring technical knowledge and practical skills is a priority for the student in terms of employability.	• Need to implement Internships during the University career to acquire skills that employers consider necessary to access the labor market. • Include a strong practical component in the Master course such as a period of work placement in selected enterprises. • Reinforcing the practical parts of the scientific courses and providing ways of its implementation. • Providing appropriate resources for implementing the practical lessons. • Conducting site visits for spotting problems and evaluating status in some relevant enterprises.
Strengthen the collaboration between enterprises and universities	• Create new opportunities of collaboration with a larger number of enterprises also through seminars, workshops, *ad-hoc* projects. • Actively involve companies in the planning of new degree courses for a closer alignment of curricula with labor market needs. • Involving the enterprises in selecting the subjects of studies for the master degrees. • The application part of each subject can be carried out at pilot scale in the participating company through an agreement giving it the right of using or sharing the results.
Importance of foreign languages learning as an asset for accessing the labor market.	• Improve foreign language learning and include a double language approach for lectures. • If the only language used is English, a tutorial service should be included.

	• Student should be enabled to practice the foreign language whenever possible, e.g. through visits to foreign countries or through communication with foreign companies or universities. • Students should be trained on giving presentations in foreign languages.
Enhancement of the quality of teaching and inclusion of interactive and practical sessions in parallel with theoretical lectures	• Promote the use of new technologies and interactive games which will also improve students' problem solving • Improve the access to other learning material through, for example, video, audio and distance lectures (remote connection)
Strengthen the collaboration between teachers	• Promote teaching networks by introducing peer coaching or support collaboration and joint projects. • *Lessons learnt* questionnaires filled by teachers could become an asset and used for educational purpose. • Encouraging multi-disciplinary supervision committees regrouping teachers from the different participating universities or inside the same university.

2. Introduction

2.1 The ILHAM-EC Project

The ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egypt Country) Project is leading by Sassari University in partnership with European Universities and Institutions (Leeds, Thessalonik, the Mediterranean University Union, the Advanced Computer Systems) and Egyptian Universities (Cairo, Alexandria, Damanhour and Zagazig).

The Overall objective of the project is to contribute at the enhancement of capacity building and modernization of the Higher Education of Egypt ensuring high quality educational curricula. In particular, the project focuses on the update of Master curricula taking into account new approaches to tackle land degradation and desertification processes.

The new Master will be designed to be student-oriented while building a multi-stakeholder collaborative and international educational network on Sustainable Land Management, thus creating new cooperative opportunities and relationships. One of the challenges facing modernization of higher education in Egypt is currently to explore how higher education can increase its relevance to labour market needs, ensuring that learners are equipped not just with vocational knowledge and skills, but with the 'tools' which will enable them to compete in the new marketplace. Furthermore, it is necessary to understand more about the expectations of students and teachers as users of the educational system and how these expectations are met so far.

In light of the above, in order to plan a new master course, the initial stage is to assess, through the survey, the curricula already provided by the Universities, together with the perception on the skills and educational level provided by each involved Universities in terms of level of satisfactions. The purpose is to enhance the strengths and the weaknesses of such a system and take action accordingly. The second stage consists of discussion among project partners that will follow up and discuss in greater depth the general findings of the survey to assembly and plan the new interuniversity master course on Sustainable Land Management.

The survey consists of different questionnaires, here in annexes, to be distributed among universities, teachers, students and enterprises.

2.2 Objectives of the Survey

The survey has been chosen as the most appropriate tool to gain accurate and impartial insights into the issues being faced by Universities and enterprises in relation to students and enterprises' expectations and students' acquired competences. The aim is to establish the ways in which the population involved assesses the level of education provided by the four Egyptian universities and the way it matches with users and labor market's needs in order to overcome mistakes that could have been done so far and improving teaching performances.

Analysis of the results of this survey provides universities with information to bring degree courses in line with the expectations of students and needs of the labor market. The purposes are various and can be summarized as follows:

1- provide information and evidences that can serve as a basis for a discussion that might improve the system of higher education in Egypt;
2- develop significant new initiatives, including cross-disciplinary courses;
3- provide European project partners with an instrument allowing them to better interact with Egyptian education system.

The improvement will be tested by the master course that the project intends to create which will be closer to the requirements of student and of better quality in terms of teaching methods approaches.

As results, this survey could also generate discussion within the competent university bodies that may be involved in further reflections on how to improve the already existing degree programs.

2.3 The importance of views and perceptions of employers, teachers and students

We live in a "knowledge society", a term that has taken on an increasing importance in these last decades. The universities are invested nowadays with a fundamental new objective along with the traditional ones of higher education and scientific research: the dialogue with the society. A goal that allows them to be in line with the development of a knowledge-based economy, "capable of sustainable growth with more and better jobs and greater social cohesion" (European Council, 2000). The role of knowledge assumes, economically, socially and politically, a key central role in the life processes, and bases its growth and competitiveness in knowledge, research and innovation.

In order to understand if Universities are meeting their missions to provide people with knowledge and skills, including soft skills which can be potentially applied in most occupations and theoretical and practical skills, it is evident that the survey needs to get specific information on the views and needs of the current users of its services: students, teachers and employers. The perception of employers complements then those of higher education students and teachers giving a complete overview of the framework in which the ILHAM-EC project is starting to work.

Within the ILHAM-EC Project staff, we were interviewed about how, as Europeans, we could transfer knowledge and as Europeans and Egyptians, learn from this experience. The idea is that any improvement that an European Project could provide in terms of new courses and new teaching methods, has to be strictly connected to the social and cultural fabric of the country where has to be implemented and not imposed from the outside. It should be the results of a process of analysis made by beneficiaries and users of that educational service. Therefore, through the questionnaires, important points were touched and precise answers obtained capable of guiding future choices.

Questionnaires were drawn up to keep respondent's anonymity, except those addressed to enterprises. The anonymity has certainly allowed to collect interesting points of view and suggestions that could have been difficult to obtain using other investigating tools. Only in some cases, students and enterprises questionnaires were completed by interactive face-to–face sessions due to lack of English language proficiencies. In this case, members of the team organized a number of sessions for the stakeholders and explained every part of the questionnaire allowing the stakeholders to fill in by themselves the questionnaire. Students were randomly selected representing the 4 levels of the study in the universities. Some postgraduate students participate filling in the questionnaires. At the end of each session the completed questionnaires were collected. Teachers have enough skills to read and write English language, therefore, the questionnaires were given to them. The questionnaires were collected from teachers after one or two days.

No sensitive data was asked. All data refers to the current year, 2016. The content of the data can in no way be taken to reflect the views of students, teachers and enterprises on Egyptian Universities in general but it just reports the view of the questioned ones on study courses and students' achieved skills provided by the Universities of Cairo, Alexandria, Zagazig and Damanhour within the field of SLM. Data will be stored

within the server of the University of Sassari, which guarantees that only the users that need to access the data for the above-mentioned purposes will be allowed to do so, including other partners within the project. Data will not be provided to any third party and will be kept confidential during the lifetime of the project.

3. Population, sample and data statistics

In this section, a short description of the sample of teachers, students and enterprises is provided. As far as possible, universities respected gender equality in contacting potential students and teachers. However, only a very low percentage of women among teachers could be contacted considering the current inequality of gender within the class of teachers in the field of SLM.

3.1 Characteristics of students

The 80% of interviewed students have an average age of 21-24 years old and the 50% of them are women. About 42% are in half of their studies in the faculty of Agriculture. Before enrolling, their knowledge of the studies provided by the university is poor and mainly come from friends rather than the Institution itself. The need to gain valuable skill for their career and the possibility of solving problems in their community are the reasons behind their enrollment. The majority of them would like to attend a Master course after graduation.

3.2 Characteristics of teachers

The 85% of professors interviewed are males and 90% have a PhD degree. 60% have more than 15 years of teaching. The average age ranges from 35 to 50 years. Their main teaching activity is in the field of soil and water science, plant nutrition, microbiology, farm machinery, agricultural engineering, animal science, horticulture and biochemistry. Most of them declare that among the push factors for their career improvement are the participation in scientific courses, research networks and reading literature. Less importance is given to educational courses and teaching networks.

3.3 Characteristics of enterprises

Most of the interviewed enterprises are located in the northern part of Egypt and are mostly involved in agricultural commodities production or in manufacturing sector related to fertilizer and pesticide production. A small number of enterprises has a research department. They all declare to have a very high percentage of employees with a university degree. Almost half of the enterprises are a branch of a foreign company and less than half of them are 100% Egyptian owned. However, in both cases, they supply goods and/or services for the domestic market showing a low propensity to export. During the last ten years, all the companies have recruited graduates; mostly of them had an agriculture science background.

3.4 Data analysis tools

Data analysis is provided through simple histograms and pies in order to provide a "first look" at data. Histograms are quite useful for depicting large differences in shape or symmetry, such as whether a data set appears symmetric or skewed. Then they have been used to provide guidance for the selection of main results of the questionnaires. The height of bars are usually the number of *n* cases falling in the specific category.

4. Curriculum Evaluation-Universities

4.1 Summary

The survey includes questions about the curricula provided by the four Egyptian Universities (Alexandria; Cairo, Damanhour, Zagazig) including single courses, Master and PhD courses relevant to Sustainable Land Management. All the questionnaires have been filled in by Local Contact Point or by teachers. There was not a minimum number of questionnaires required. A total number of 88 questionnaires were finally collected. All the questionnaires have been considered valid but it was not possible to analyze all the information gathered because they were not compatible to each other and some answers were not provided

For instance, many questionnaires did not provide information about the level of the courses: it is not clear whether they refer to undergraduate or postgraduate courses. However, when this information is provided the graduate courses represent the majority. The names of the courses and the departments in charge of them are specified in each University report.

Course details

Regarding the average number of students attending the courses, the data are very different from one course to another showing courses attended by the lowest number of students, that is between 3 and 5, and courses with a highest number of students equal to 400/600.

Most of the courses analyzed require the attendance of 3-hour classes per week. However, there are also courses requiring the attendance of 2 and 4-hour classes per week. This information is not always provided by the respondents.

All the courses include both lectures and practical classes.

Most of the courses are taught in Arabic. Some courses are taught in both Arabic and English, and very few courses are taught only in English.

One of the most interesting aspect is that only two courses out of 88 require a traineeship period.

Regarding the entry requirements, most of the courses do not have any entry requirements, in case, they are related to the successful attendance of a previous course.

Course categories and objectives

With regard to the objectives and the topics of the courses, the information provided in the questionnaires were very detailed. However, all the courses, both graduate and undergraduate, for the sake of simplicity

have been clustered in the report into different categories according to their objectives and main topics or in function of the departments they are taught in.

The courses described by the University of Alexandria and Damanhour are clustered in function of the objectives and the main topics (Table 1a). Obviously, objectives and main topics of the courses are strictly connected to the correspondent department. For these two Universities most of the courses analyzed are related to soil science and resource management. A relevant number of courses are also addressed to climatic and environmental issue and spatial analysis.

On the other hand, the courses described by the University of Cairo and Zagazig are better clustered in function of the departments they are taught in (Table 1b). The departments that are more involved are the agronomy departments but also soil and water science departments.

Table.1a - Courses categories and objectives

Main Categories	Number of courses	Objectives
Climatic and environmental issues	4	-Study of climate change and the impact of global warming - Principles of meteorology - Meteorological instruments - Environmental pollution problems and natural resources protection - Environmental management strategies
Land Resource management	4	-Land degradation and its management- Agricultural lands management and its economic and productive evaluation- Integrated Water Resources Management as a trans-Disciplinary framework involving technical, environmental, economic, legal and social issues,
Statistics	2	- Methodologies of statistical analysis, interpretation of results - Modelling and methods of simulation,
Agronomy	2	-Organic agriculture - Organic farming, bio-fertilizers and agricultural waste recycling - - Land evaluation of capability and suitability for different crops in irrigated and rain-fed agriculture
Spatial analysis	4	-Spatial analysis and methods of coupling/linking models to GIS, and performing cartographic modelling, as well as the integration of GIS and remote sensing;
Irrigation	2	Plants relationships to soil and water, plant water requirements, types of irrigation water
Soil Science	5	-Fundamentals of Soil Sciences, Soil Reclamation and Conservation, Soil Mineralogy, Soil Fertility -The geology and geomorphology of the Egyptian Soils - Egyptian land resources, types, properties, and classification of Egyptian soils -

Table.1b - Courses categories

Main Departments Categories	Number of courses
Agricultural Engineering	7
Agronomy	28
Biochemistry	1
Agricultural Science	2
Inter - departmental	1
Zoology and Agricultural Nematology	2
Animal Production	3
Soil and Water	7
Soil Science	9
Plant Protection	1

Concerning the course organization, unfortunately, not all the questionnaires have clearly specified the duration of the courses in terms of total number of hours and number of weeks. However, focusing on the information provided, most of the courses seem to be scheduled on a weekly basis with a duration ranging from 13 to 15-week duration. Some questionnaires express the total duration not in number of weeks but in hours class.

Teaching methods and course assignments

Firstly, in this section the teaching methods are investigated through a set of multiple-choice questions. The given categories are lectures, practical exercises, laboratory activities and other activities. Among these teaching methods all the courses mainly provide lectures and practical exercises. In some cases, there is an equal distribution of the hours between them. It is important to note that 1 hour lecture = 2 hours practical.

Quite common is also the laboratory activity. Almost all the courses include a combination of other activities such as field visits, seminars, experimental data collection, report activities, with a percentage of hours ranging from 10% to 20%. Courses based entirely on a single teaching method are not common at all (e.g. lectures).

Concerning the course material, all the courses mostly use bibliographic and reference material (books, journals) and other reference material such as official reports, studies and notes.

Other materials such as internet resources and specific software and data show, in addition to the bibliographic and reference materials, are less commonly used.

Assessment methods and criteria

In this section, the assessment methods and criteria were investigated. The number of the assessment methods used is not the same for all the Universities analyzed. Some courses have at least two assessment methods (University of Cairo) and no more than four different methods (University of Damanhour). Apparently, three different assessment methods are the most common solution (University of Alexandria and Zagazig).

According to the questionnaires, oral exam seems to be the assessment methods mainly used in all the Universities analyzed. Multiple-choice tests (except Zagazig University) and written assignment are also largely employed. In only three courses, open-book tests are used. Less common but still important are the *Other kind of assessment* which include practical exams, presentations and reports. The least used method is the open-book test.

With regard to the grading criteria, this section of the questionnaire investigates how all the different assessment methods influence the final grade. In essence, the different types of assessment required during the course and their relevance when calculating the final grade are showed. Unfortunately, some questionnaires did not provide any answer for this set of questions. Moreover, the information provided in other questionnaires cannot be used in the quantitative analysis, since they showed how the percentage of marks is converted into a grade and grade points. Basically, they provide a methodological information without clearly defining which assessment methods are used in the grading criteria. However, focusing on the remaining questionnaires, the final grade is the result of at least 3 different assessments carried out during the courses. In other words, the final grade is not just the result of the final term exam.

In more details, in addition to the final term exam, most of the courses also include midterm exams and oral exams. Evaluations of other activities are frequently carried out. The category "other activities" includes for example quizzes, reports and presentations. Evaluations based on final practical exams and practical activities carried out during the course are much less common.

The final grade is mostly affected by the final term exam. It counts for an average of 60% of the final grade. All the other forms of examination are much less relevant in calculating the final grade.

4.2 University of Alexandria

Introduction

The survey includes questions about the curricula provided by the University of Alexandria including single courses, Master and PhD courses relevant to Sustainable Land Management. All the questionnaires have been filled in by Local Contact Point or by teachers. There was not a minimum number of questionnaires required; 14 were finally collected. All the questionnaires have been considered valid but not all the information gathered can be usefully analyzed, as we will see later on in detail. Among the 14 questionnaires, 9 refer to graduate courses: Soils of Egypt, Advanced GIS, Advanced RS, Advanced Soil Survey and Land Evaluation, Modeling and Simulation in Soil Science, Soil and Water Pollution, Organic Farming, Statistical Analysis of Biological Experiments, and Integrated Water Resources Management.

The remaining 5 questionnaires are related to undergraduate courses also relevant to SLM. Two of them are taught in the Agricultural Economics Department (Economics of Agricultural Land, and Economics of Land and Water Resources Utilization) and the other 3 courses are taught in the Soil and Water Science Department (Applications of Agro-meteorology, Land Resource Management, and Environmental Impact of Climate Change).

Course details

Regarding the average number of students attending the courses, only 2 graduate courses are attended by a number of students between 10 and 20.

9 courses (including all the 5 undergraduate courses) are attended by a number of students ranging from 5 to 10. Finally, 3 graduate courses have the lowest number of students that is between 3 and 5.

Most of the courses analyzed require the attendance of 3-hour class per week, only 3 courses require the attendance of 2-hour class per week. All of them include both lectures and practical classes.

All the undergraduate courses are taught in Arabic and English. The graduate courses are taught in Arabic, and most of the courses materials are handed-out in English. The graduate courses are taught in English when foreign graduates are taking the courses.

One of the most interesting aspect is that none of the course requires a traineeship period.

Regarding the entry requirements, only one graduate course has an entry requirement related to the successful attendance of a previous course. Among the graduate courses, only 4 of them have an entry requirement.

Course categories and objectives

With regard to the objectives and the topics of the courses, the information provided in the questionnaires were very detailed. However, all the courses, both graduate and undergraduate, for the sake of simplicity can be clustered in 6 different categories according to their objectives and main topics, as you can see in details in the following tables:

Table. 2- Courses categories and objectives – University of Alexandria

Main Categories	Number of courses	Objectives
Climatic and environmental issues	3	-Study of climate change and the impact of global warming - Principles of meteorology - Meteorological instruments - Environmental pollution problems and natural resources protection - Environmental management strategies
Land Resource management	4	-Land degradation and its management- Agricultural lands management and its economic and productive evaluation- Integrated Water Resources Management as a trans-Disciplinary framework involving technical, environmental, economic, legal and social issues,
Statistics	1	- Methodologies of statistical analysis, interpretation of results
Soil Science	3	-Organic agriculture - Organic farming, bio-fertilizers and agricultural waste recycling - - Land evaluation of capability and suitability for different crops in irrigated and rain-fed agriculture -The geology and geomorphology of the Egyptian Soils - Egyptian land resources, types, properties, and classification of Egyptian soils
Spatial analysis and modelling	2	-Spatial analysis and methods of coupling/linking models to GIS, and performing cartographic modelling, as well as the integration of GIS and remote sensing; - Modelling and methods of simulation

Concerning the course organization, all the activities proposed seem to be scheduled on a weekly basis. Not all the questionnaires have specified the duration of the courses. Only half of them has indicated a 14 weeks duration.

Teaching methods and course assignments

Firstly, in this section the teaching methods are investigated through a set of multiple-choice questions. The given categories are lectures, practical exercises, laboratory activities and other activities. Among these teaching methods, all the courses provide mainly lectures, with an average amount of hours equal to 67% of the total. Most of the courses also include practical exercises with an average number of hours equal to 29% of the total. Only two courses provide laboratory activities (20% of total hours). Almost half of the courses include a combination of other activities such as field visits, seminars, experimental data collection, reports activities, with a percentage of hours ranging from 11 to 20 of the total number of hours. Only one course is based entirely on lectures.

Secondly, practical activities have been examined in more details. Despite the large amount of information provided, some categories of practical activities can be identified. The majority of practical activities consist in what might be called "office activities". This kind of activities include class or research practical exercises such as case studies, training on software, writing reports, and class discussion.

Only few courses include both office and field activities. The latter refers to field visits to places such as Egyptian authorities, weather stations or factories.

Concerning the course material, all the courses mostly use bibliographic material (books, journals) and other reference material such as official reports and studies.

Only few courses (4) also use, in addition to the bibliographic and reference materials, internet resources and specific software.

Assessment methods and criteria

In this section the assessment methods and criteria were investigated. As showed in the histogram below (Figure 1), all the courses have at least three assessment methods.

All the courses make use of oral and multiple-choice tests as main methods. Written assignments are also largely employed. In only three courses open-book tests are used. Other kind of assessment are used in 9 courses. Within the other assignments, practical exams, presentations and reports are included.

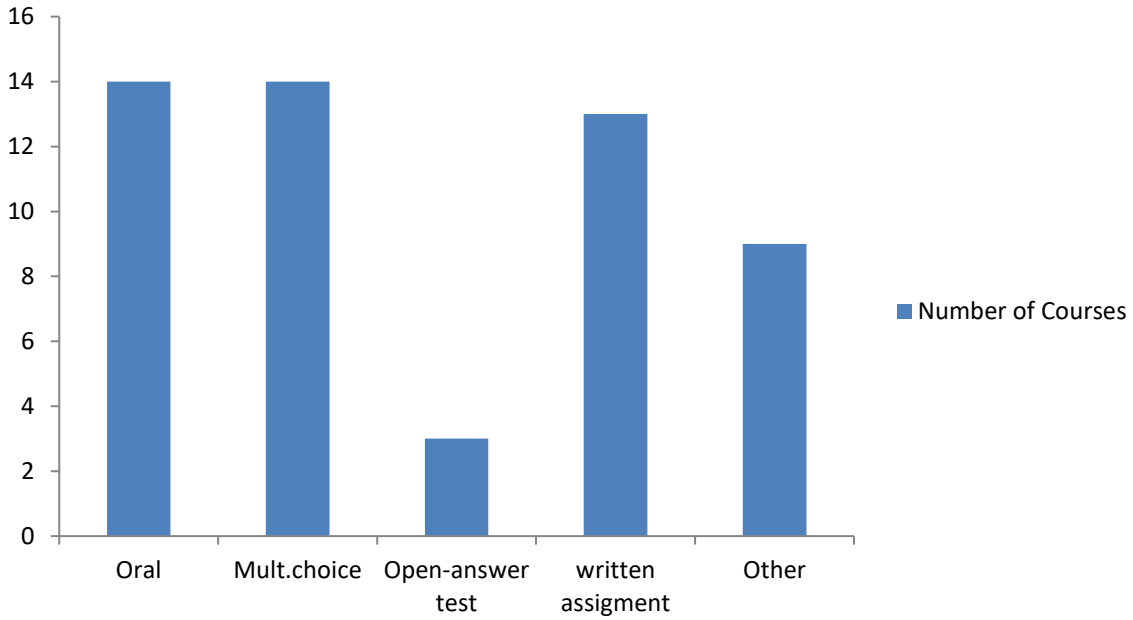


Fig. 1: Assessment methods frequency - University of Alexandria

With regard to the grading criteria, this section of the questionnaires investigates how all the different assessment methods influence the final grade. In essence, the different types of assessment required during the course and their relevance when calculating the final grade are showed.

The final grade is the result of at least 3 different assessments carried out during the courses. In other words, the final grade is not just the result of the final term exam.

The histogram below (Figure 2) shows how largely other forms of exam (in addition to the final term exam) are used.

In more detail, most of the courses include also midterm exams. Also oral exams and evaluations of other activities are frequently carried out. The category "other activities" includes for example quizzes, reports and presentations.

Evaluations based only on final practical exams and practical activities carried out during the course are much less common.

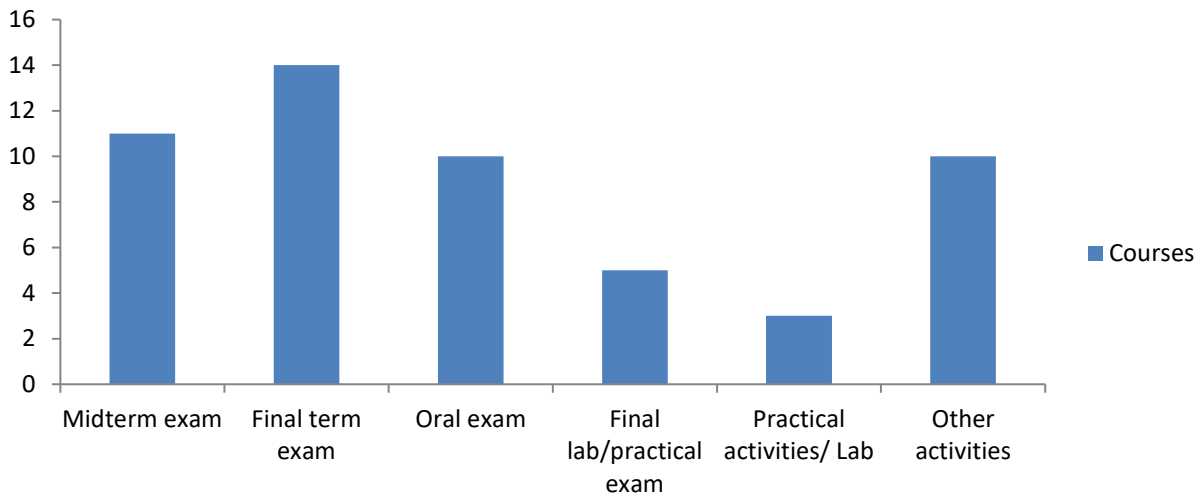


Fig. 2: Grading Criteria Frequency - University of Alexandria

The final grade is mostly affected by the final term exam. It counts for an average of 60-70% of the final grade. All the other form of examinations are used in calculating the final grade. The figure below summarizes the average importance of each form of examination in calculating the final grade.

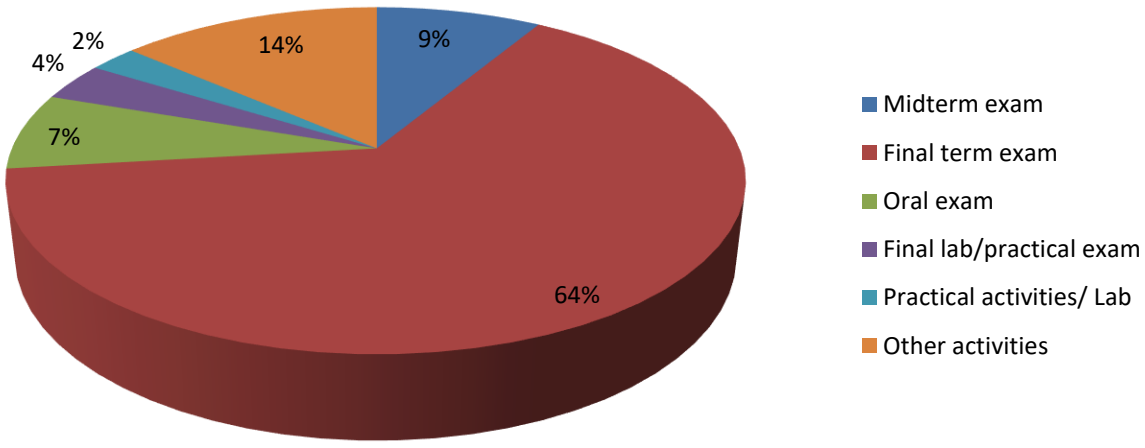


Fig. 3: Grading criteria relevance (average) - University of Alexandria

Final comments

Finally, only four questionnaires reported final comments. They all agree on the necessity to upgrade the computer lab and to renew the software licenses.

4.3 University of Cairo

Introduction

The survey includes questions about the curricula provided by the University of Cairo and, more specifically, about courses relevant to Sustainable Land Management. All the questionnaires have been filled in by Local Contact Point or by teachers. There was not a minimum number of questionnaires required; 55 were finally collected. All the questionnaires have been considered valid, but not all the information gathered can be usefully analyzed, as we will see later on in detail.

Course details

Regarding the average number of students attending the courses, the data are very different form one course to another, with thirteen courses attended by a maximum of 5 students and one course with a declared number of students ranging from 400 to 600. A number of students, between 50 and 80, attends twelve courses. Only two courses have a number of students equal to 100, and all the other courses have a number of students below 50.

Most of the courses analyzed require the attendance of 3-hour class per week, only 7 courses require the attendance of 4.5-hour class per week. All of them include both lectures and practical classes.

More than half of the courses are taught in Arabic. Only 6 courses are taught in both Arabic and English, and 18 courses are taught only in English. Three of them did not answer this question.

One of the most interesting aspects is that only 2 courses require a traineeship period.

Regarding the entry requirements, only 9 courses have an entry requirement related to the successful attendance of a previous course.

Course categories and objectives

With regard to the objectives and the topics of the courses, the information provided in the questionnaires is very detailed. However, all the 55 courses for the sake of simplicity can be clustered into 9 different categories, according to the departments they are taught in. Obviously, objectives and main topics of the courses are strictly connected to the correspondent department.

Most of the courses are taught in the Agronomic Department (28). One course is a joint course among 4 departments (Agricultural Botany, Plant Physiology, Microbiology, Soil Sciences).

The Departments are listed in table 3.

Table. 3 Courses categories – University of Cairo

Main Departments Categories	Number of courses
Agricultural Engineering	7
Agronomy	28
Biochemistry	1
Agricultural Science	2
Inter – departmental	1
Zoology and Agricultural Nematology	2
Animal Production	3
Soil and Water	7
Soil Science	4

Concerning the course organization, all the activities proposed seem to be scheduled on a weekly basis. Not all the questionnaires have clearly specified the duration of the courses. Only 12 of them have indicated a 14 week duration, 3 of them have indicated a 13 week duration, and only 1 course has a duration of 15 weeks.

Teaching methods and course assignments

Firstly, in this section, the teaching methods are investigated through a set of multiple-choice questions. The given categories are lectures, practical exercises, laboratory activities and other activities. Among these teaching methods, almost all the courses provide both lectures and practical exercises. It is difficult to identify an average number of hours for lectures and practical lessons, but we can note that more than half of the courses mainly provide lectures (60%), while the others focus on practical exercises. Only 3 courses have a perfect distribution of hours between lectures and practical lessons.

Laboratory activities are provided by 31 courses with a number of hours varying from 10% to 20% of the total hours. However, two of them declare a number of laboratory hours equal to the 50% of the total amount of hours. Almost all the courses include a combination of other activities such as field visits, seminars, experimental data collection, report activities, with a percentage of hours varying from 10% to

20% of the total number of hours. There is no course based entirely on a single teaching method (such as lectures, for instance).

Secondly, practical activities have been examined in more details. All the courses include practical activities or laboratory exercises. Due to the large amount of information provided, it is impossible to identify a small number of categories of practical activities. However, the majority of practical activities consist both in desk and in field activities. Desk activities refer to class or research practical exercises such as case studies, training on software and computer lab, writing reports, and class discussion. Field visits are field experiments, trips for experimental demonstration, and field practical exercises related to the theoretical classes.

Concerning the course material, more than half (35) of the courses mostly use bibliographic and reference material such books and journals in addition to notes, internet resources, and lab materials. Only notes are used in 8 courses; other material in 7 courses and, finally, data show in 5 courses.

Assessment methods and criteria

In this section, the assessment methods and criteria were investigated. As showed in the histogram below (Figure 4), all the courses have at least two assessment methods.

All the courses make use of oral exams and written assignments. In addition to these main methods, most of the courses largely use multiple-choice tests. In only 10 courses open-book tests are used. Other kinds of assessments are largely used in the courses (39). Within the other assignments, practical exams, presentations, and most of all reports are included. Three questionnaires did not provide any answers.

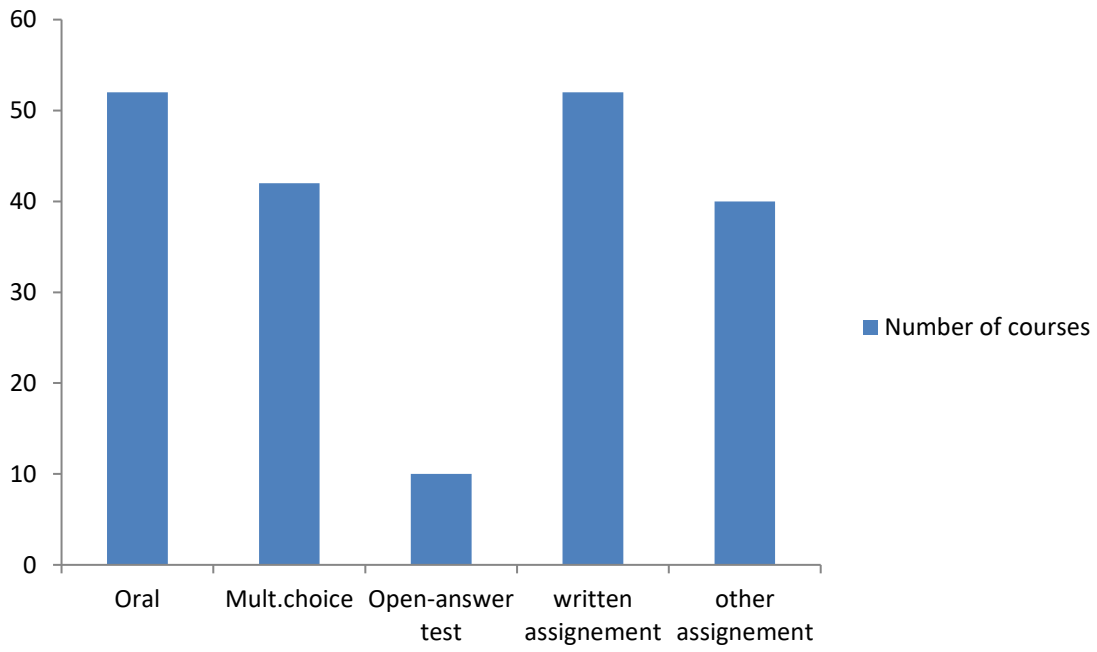


Fig. 4 Assessment methods frequency - University of Cairo

With regard to the grading criteria, this section of the questionnaires investigates how all the different assessment methods influence the final grade. In essence, the different types of assessment required during the course and their relevance when calculating the final grade are showed.

Unfortunately, 8 questionnaires did not provide any answer. Moreover, the information provided in 12 questionnaires cannot be used in the quantitative analysis, since they showed how the percentage of marks is converted into a grade and grade points. Basically, they provide a methodological information without clearly defining which assessment methods are used in the grading criteria.

However, focusing on the remaining 35 questionnaires, the final grade is the result of at least 3 different assessments carried out during the courses. In other words, the final grade is not just the result of the final term exam.

The histogram below (Figure 5) shows how largely other forms of examination (in addition to the final term exam) are used. In more detail, all the courses include also oral exams and evaluations of other activities.

The category "other activities" includes, for example, class activities, reports, and presentations. Evaluations based on final practical exams are declared in 31 course out of 35. In addition, midterm exams are frequently carried out. Practical activities implemented during the course are not taken into account as grading criteria.

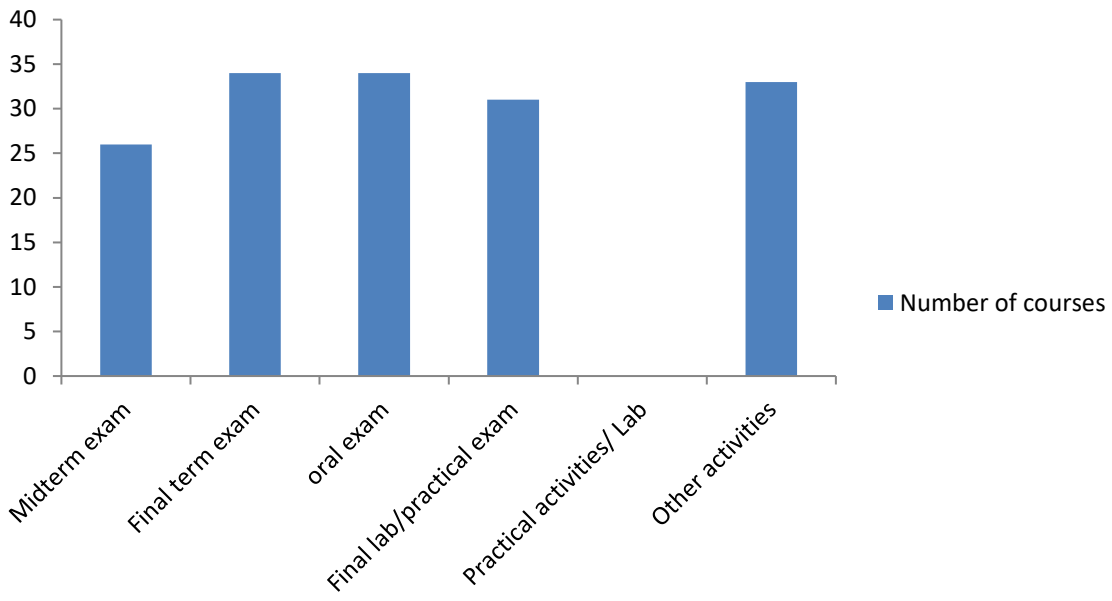


Fig. 5 Grading Criteria Frequency - University of Cairo

The final grade is mostly affected by the final term exam. It counts for an average of 60% of the final grade. All the other forms of examination are much less relevant in calculating the final grade. The figure below summarizes the average importance of each form of examination in calculating the final grade.

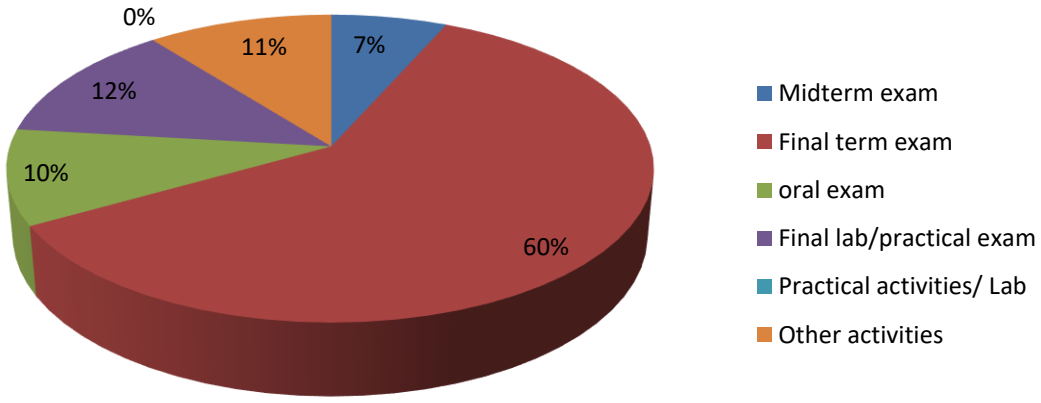


Fig. 6 Grading criteria relevance (average) - University of Cairo

4.4 University of Damanhour

Introduction

The survey includes questions about the curricula provided by the University of Damanhour and more specifically about courses relevant to Sustainable Land Management. All the questionnaires have been filled in by the Local Contact Point or by teachers. There was not a minimum number of questionnaires required; 9 were finally collected. All the questionnaires have been considered valid, but not all the information gathered can be usefully analyzed, as we will see later on in detail.

None of the questionnaires provides information about the level of the courses: it is not clear whether they refer to undergraduate or postgraduate courses. All the 9 courses are offered by the Department of Agriculture Natural Resources and Agriculture Engineering.

Course details

Regarding the average number of students attending the courses, the data collected shows that 8 courses were attended by a rather low number of students, ranging from 4 to 10. 133 students currently attend only one course (Fundamentals of Soil Sciences).

All the courses require the attendance of 4-hour class per week, and all of them include both lectures and practical classes (2+2).

All the courses are taught in both English and Arabic. None is taught only in English or in any other foreign language.

One of the most interesting aspects is that none of the courses requires a traineeship period.

The courses have no entry requirements.

Course categories and objectives

With regard to the objectives and the topics of the courses, the information provided in the questionnaires is very detailed. However, all the 9 courses, for the sake of simplicity, can be clustered into 4 different categories according to their objectives and main topics, as you can see in details in table 4.

Obviously, objectives and main topics of the courses are strictly connected to the correspondent department.

Table.4 Course categories and objectives – University of Damanhour

Main Categories	Number of courses	Objectives
Climatic and environmental issues	1	Types of environmental pollution, concept and definition of pollution, health hazards of pollution, controlling of pollution, dangers of environmental pollution
Irrigation	2	Plants relationships to soil and water, plant water requirements, types of irrigation water
Spatial analysis	2	remote sensing; Study GIS and its application
Soil Science	4	Fundamentals of Soil Sciences, Soil Reclamation and Conservation, Soil Mineralogy, Soil Fertility

Concerning the course organization, the questionnaires do not provide any information about the duration of the courses in terms of total number of hours and number of weeks.

Teaching methods and course assignments

Firstly, in this section, the teaching methods are investigated through a set of multiple-choice questions. The given categories are lectures, practical exercises, laboratory activities and other activities.

Among these teaching methods, all the courses provide both lectures and practical exercises and laboratory activities. Moreover, all the courses have the same number of hours for lectures, practical and laboratory lessons.

More in detail, lectures are provided by all the courses with a number of hours equal to 70% of the total hours; practical exercises with a number of hours equal to 10%, and laboratory activities equal to 20%.

There are no other activities mentioned in the questionnaires. No course is based entirely on a single teaching method (only lectures, for example).

Concerning the course material, three questionnaires do not provide any information. The other courses only use bibliographic and reference material such books and journals.

Assessment methods and criteria

In this section, the assessment methods and criteria were investigated. According to the information provided, all the courses have at least four assessment methods: oral exams, multiple choices test, open answer test, and written assignments. No “other kinds of assessment” are used.

Questionnaires also show percentages related to each kind of assessment method (even though it was not asked), probably referring to the frequency of use. The percentage of each method is the same for all the questionnaires, as reported in the graph below:

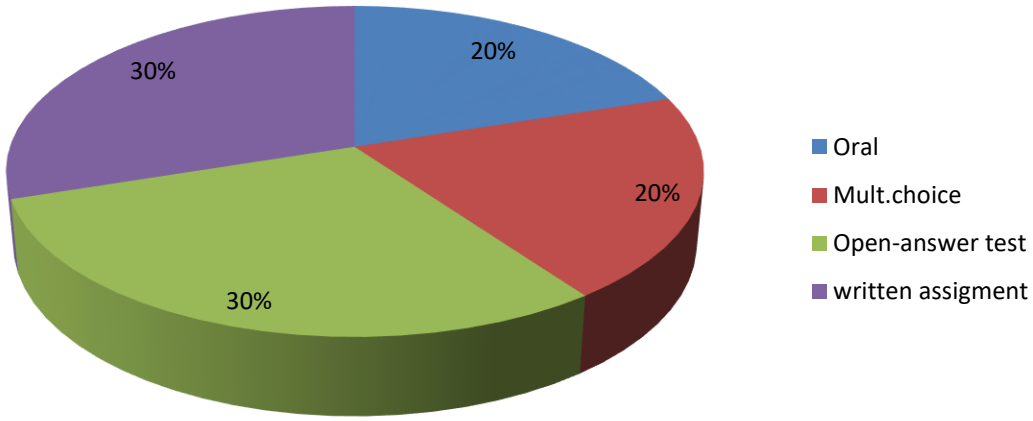


Fig. 7: Assessment methods and criteria frequency– University of Damanhour

With regard to the grading criteria, this section of the questionnaires should investigate how all the different assessment methods influence the final grade. In essence, the different types of assessment required during the courses and their relevance when calculating the final grade should have been showed. Unfortunately, none of the 9 questionnaires answered this question.

4.5 University of Zagazig

Introduction

The survey includes questions about the curricula provided by the University of Zagazig including single courses, graduate and postgraduate courses relevant to Sustainable Land Management. All the questionnaires have been filled in by Local Contact Point or by teachers. There was not a minimum number of questionnaires required; 5 were finally collected. All the questionnaires have been considered valid but not all the information gathered can be usefully analyzed, as we will see later on in detail.

Among the 5 questionnaires, 1 refers to a graduate course: Soil Improvement and Conservation Technology. Two questionnaires are related to postgraduate courses also relevant to SLM: Soil Improvement, Soil Reclamation (Advanced).

The questionnaires referring to the remaining 2 courses (Survey and Classification of Soils, Integrated Control of Agricultural Pests) do not give details about the level of the course.

Course details

Regarding the average number of students attending the courses, the data is very different from one course to another with one course attended by a maximum of 4/5 students and one course with a declared number of students equal to 20. The rest of the courses are attended by a number of students ranging from 5 to 7.

We have no information about the required hour class per week. All of the courses include both lectures and practical classes.

All the courses, both graduate and postgraduate, are taught in Arabic. None is taught in English or in any other foreign language.

One of the most interesting aspects is that none of the courses requires a traineeship period.

The courses have no entry requirements.

Course categories and objectives

With regard to the objectives and the topics of the courses, the information provided in the questionnaires is very detailed. However, all the 5 courses for the sake of simplicity can be clustered into 2 different categories according to the departments they are taught in. Obviously, objectives and main topics of the courses are strictly connected to the correspondent department.

Most of the courses are taught in the Department of Soil Science (4). One course is taught in the Department of Plant Protection.

The departments are listed in table 5.

Table.5 Course categories– University of Zagazig

Main Departments Categories	Number of courses
Department of Soil Science	4
Department of Plant Protection	1

Concerning the course organization, the questionnaires do not provide any information about how the activities are scheduled. On the other hand, all the questionnaires specified the duration of the courses in terms of total number of hours (without specifying the number of weeks). Three courses have a total number of hours of approximately 70. One course includes more than 80-hour class, and the last one less than 50.

Teaching methods and course assignments

Firstly, in this section, the teaching methods are investigated through a set of multiple-choice questions. The given categories are: lectures, practical exercises, laboratory activities and other activities.

Among these teaching methods, all the courses provide both lectures and practical exercises or laboratory activities. It is difficult to identify an average number of hours for lectures and practical or laboratory lessons, but we can notice that 3 course out of 5 mainly provide practical or laboratory classes. One course focuses more on lectures. Only 1 course has a perfect distribution of hours between lectures and practical/laboratory lessons.

More in detail, laboratory activities are provided by all the courses with a number of hours varying from 25% to 70% of the total hours. There are no other activities mentioned in the questionnaires. There is not any course based entirely on a single teaching method (only lectures, for example).

Only the postgraduate courses include practical exercises with a number of hours varying from 25% to 33%.

Only 3 questionnaires out of 5 define in more details the contents of the practical exercises and laboratory activities.

Concerning the course material, two questionnaires do not provide any information. The other courses only use bibliographic and reference material such books and journals.

Assessment methods and criteria

In this section the assessment methods and criteria were investigated. As showed in the histogram below (Figure 8), all the courses have at least three assessment methods.

All the courses use oral exams and written assignments as main methods. In only two courses open-book tests are used. Other kinds of assessment are used in 3 courses. Among the other assignments, practical exams, presentations and reports are included.

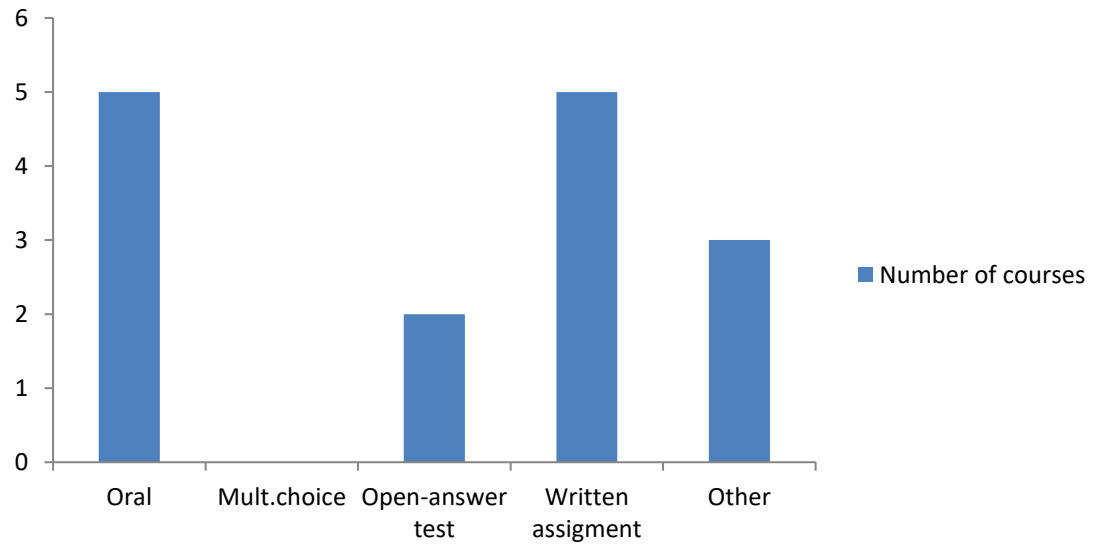


Fig. 8: Assessment Method Frequency– University of Zagazig

With regard to the grading criteria, this section of the questionnaires should investigate how all the different assessment methods influence the final grade. In essence, the different types of assessment required during the courses and their relevance when calculating the final grade should have been showed.

Unfortunately, the information provided in 2 of the questionnaires cannot be used in the quantitative analysis since they only show how the percentage of marks is converted into a grade and grade points. In essence, they provide a methodological information without clearly defining which assessment methods are taken into consideration in the grading criteria.

However, focusing on the remaining 3 questionnaires, we can see that the final grade is the result of 3 different assessments carried out during the courses: mid-term, final term and oral exams. In other words, the final grade is not just the result of the final term exam.

Unfortunately, the questionnaires do not provide any information about the average importance of each form of examination in calculating the final grade.

5. Needs Assessment - Students

5.1 Summary

The students' questionnaires aim to investigate two main aspects. The first is given by the motivations behind enrollment of students. The second one is basically connected with their experience and level of satisfaction relatively the support and facilities supplied by the four Egyptian universities. In particular with the survey we will:

- provide a research-informed picture designed both to promote a better master for students' personal development and to enhance the development of the skills needed for a rewarding career.
- Use survey results to develop significant new initiatives, including cross-disciplinary courses.
- Provide European partners with an instrument which we allow them a better interaction with the Egyptian education system.

A total amount of 344 students' questionnaires has been collected. More than 80% of the sample have an average age of 21-24 years and 50% of them are women. Approximately 42% of students are in the middle of their Bachelor of Science degree course in the faculty of Agriculture.

Before they enrollment at University they declare a scarce level of information about the study provided by the university and where information was supplied, these have been furnished by friends rather than institutions.

The motivations behind the enrollment at universities are related to the need to gain valuable skill for their career, solve problems in their community and they think that the university is a great place where to develop friendships. Interestingly after the graduation the majority of students declare that they would like to enroll in a master study.

Students were asked for the main mission of university among training specialist, training graduate to meet job requirements and forming new competencies. Students reports training specialists and professionals in different fields of study as the main university's mission. However only 39% of them declare that this mission was accomplished.

Regarding the support and facilities provided by the university system, they report not being satisfied with especially for financial support, class and laboratory facilities and computer and technology availability.

Students were asked to describe how aspects of their university contributed to either a positive or negative university experience; the survey methodology weights these factors by how important students say they are.

The students seemed to be satisfied with the quality of teaching staff, less on the quality of education they are receiving and the teaching ability, while they appeared satisfied with the willingness of teachers to sustain students' progress.

The quality of the teaching goes beyond the experience in the lecture hall and encompasses the various ways in which course material is presented. A greater use of technology to allow students, both on campus (but also at a distance), to access print, video, audio and lecture capture material when and where most suits them so that direct contact time can be for interactive sessions. In some cases, the quality of a student's learning experience will be enhanced by offering more flexible modes of delivery. This is one of main aims of the master on Sustainable Land Management.

A set of questions have been related to the skills students are developing at university and which they fill are improving more. The responses are positive for research and theoretical skill and less positive regarding critical skills, computer literacy, practical skills and mostly the education they are acquiring with respect to languages. A final question asked for if the skills they are acquiring would be useful to access the labor market. Fifty percent of them reported yes.

Students have also been asked and rated the importance of certain activities enhanced by universities in order to improve the probability of find a job after the graduation. Among the three proposed activities, i.e. run courses more relevant for enterprises, including practical classes in course and including a compulsory work placement experience, the students seem positive and rate these activities important in fulfilling this target.

Finally, students were asked if they would like to attend a new Master course, with a period in different Universities or abroad: 83% of students replied positively to this questions.

5.2 University of Alexandria

Introduction

One hundred and two questionnaires were required, and 81 questionnaires were reputed valid. Regarding the gender analysis, 45 were female (55.6%) and 36 male.

As for the age distribution, the higher percentage of students were inside the age range of 21-24 years.

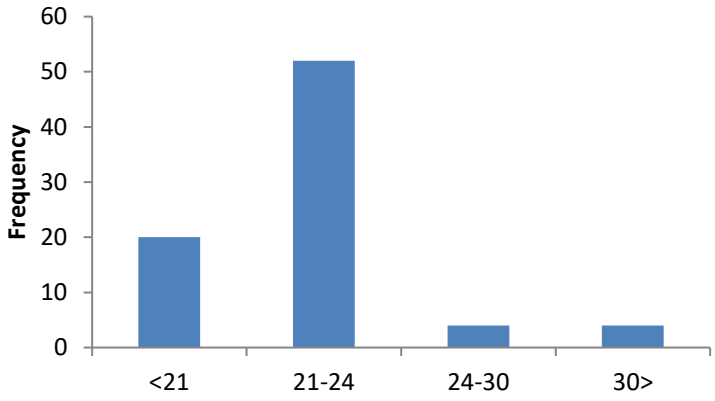


Fig. 9 Age distribution - University of Alexandria

The majority of students were enrolled in a Bachelor of Science Academic Degree; 38% of them reported to be at the final year of frequency, and 31% in the middle of their studies.

Regarding the type of accommodation, 57% of students replied that they were leaving with their parents.

Student motivation

In this set of questions, the students' motivation regarding their decision to study at the University of Alexandria and how they collected the information were studied. Before studying at the university, 23% of them answered that they got enough advance information about the courses provided by the University of Alexandria, while 33% of them reported a lack of information. The majority reported that information was found on the Internet.

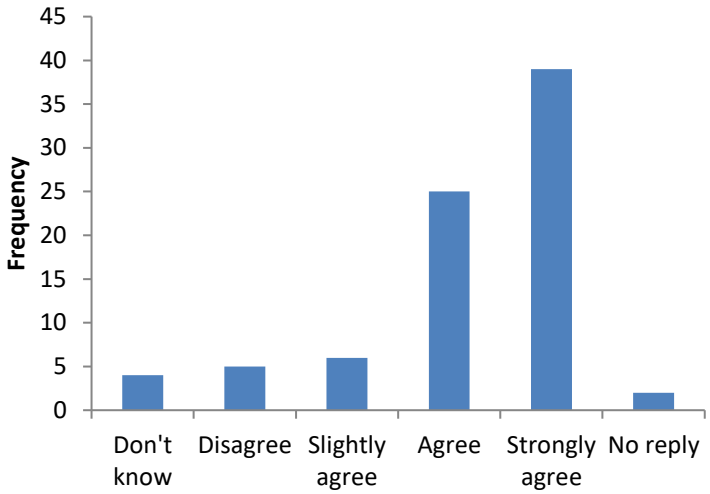


Fig. 10 Good Reputation criteria - University of Alexandria

Before enrolling at the University, students' opinions about Alexandria University's reputation were fine, with the majority of them underlining the good reputation of the University. The motivations to enroll at the University were mostly connected to the gain of valuable skills for their career, getting a qualification and finally finding a better job.

When analyzing their future plans after graduation, they equally divided between students who hoped to pursue a post-graduate Master degree and student who wanted to look for a job.

Student satisfaction

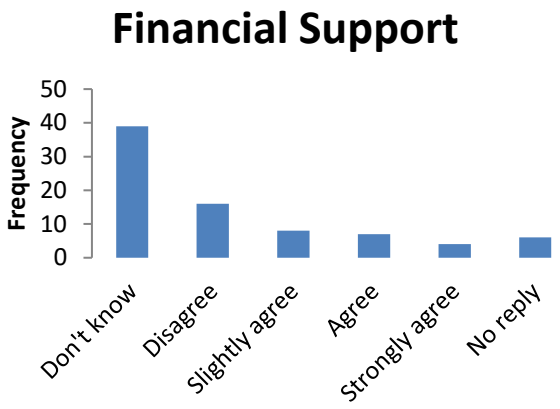
In reference to the aspect of the University of Alexandria which student are most satisfied with, it was reported to be the friendships as well as the feeling of being part of a big student community; this gave them the opportunity to create good relationships, which, in many cases, will last for many years to come. Students also report the education quality as one of the most important positive aspect of the University of Alexandria. This last result seems to be in contradiction with what they reported to be the least satisfied with. In fact, a high percentage of students underlined the lack of laboratories and facilities as constraints to their education in the University of Alexandria.

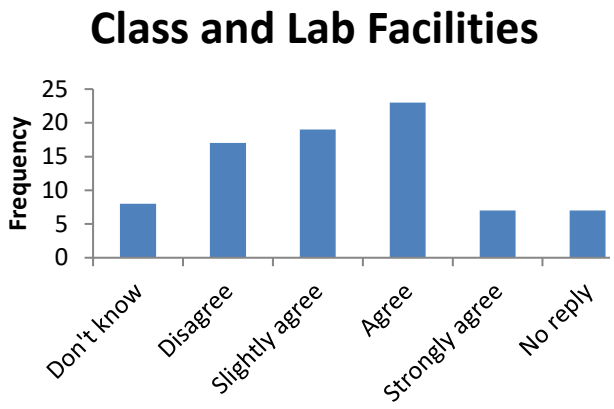
Moreover, 67% of them thought that the University mission should be to train specialists and form new skills. Interestingly, the lowest percentage of replies were associated with the option of training specialists/professionals who have to meet the job market demand.

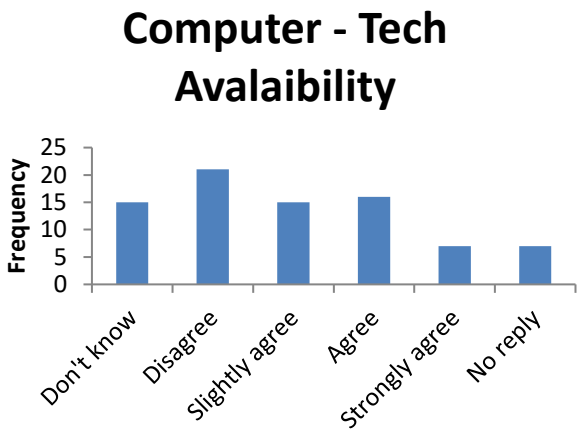
With respect to the previous University mission, 51% of students were of the opinion that the University of Alexandria has accomplished it, therefore showing an equal distribution of students regarding this important question.

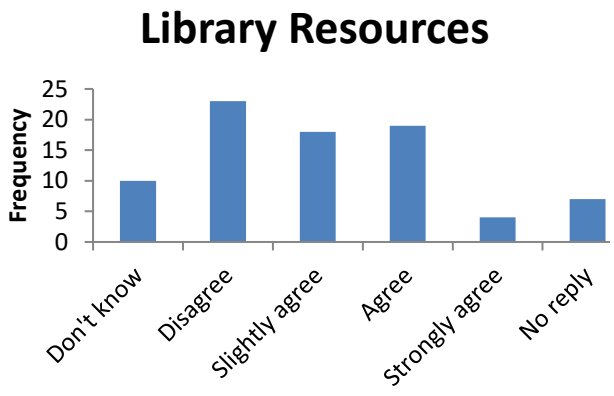
Support services and facilities

With the exception of classes and lab facilities, where students reported a satisfying support, the level of satisfaction was low or moderately low, evidence of the scarce resources connected to computer and technology availability, library resources and financial support.









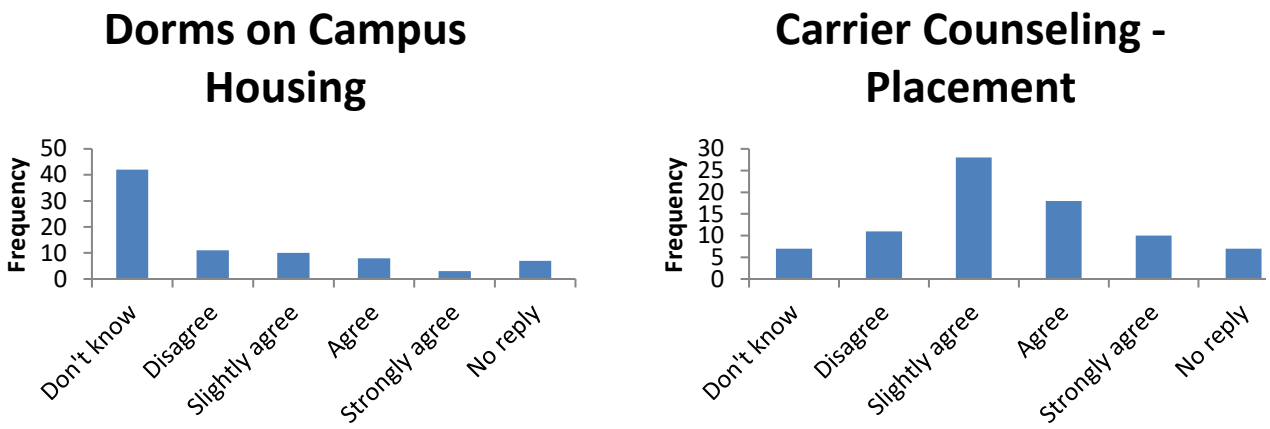


Fig. 11 Support services and facilities - University of Alexandria

A bimodal distribution seemed to apply to the question regarding the opportunity to experience a period of mobility abroad. The highest number of students disagreed with the University's support of a period of mobility abroad, but at the same time a non-marginal number of students had an opposite view and strongly agreed with the view of a University that helps in finding opportunities for a placement mobility program for students.

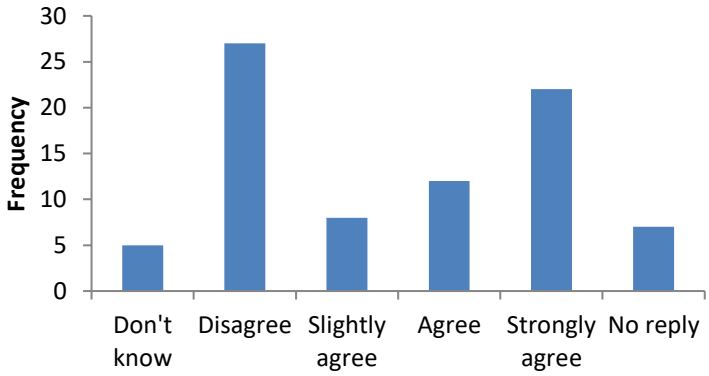
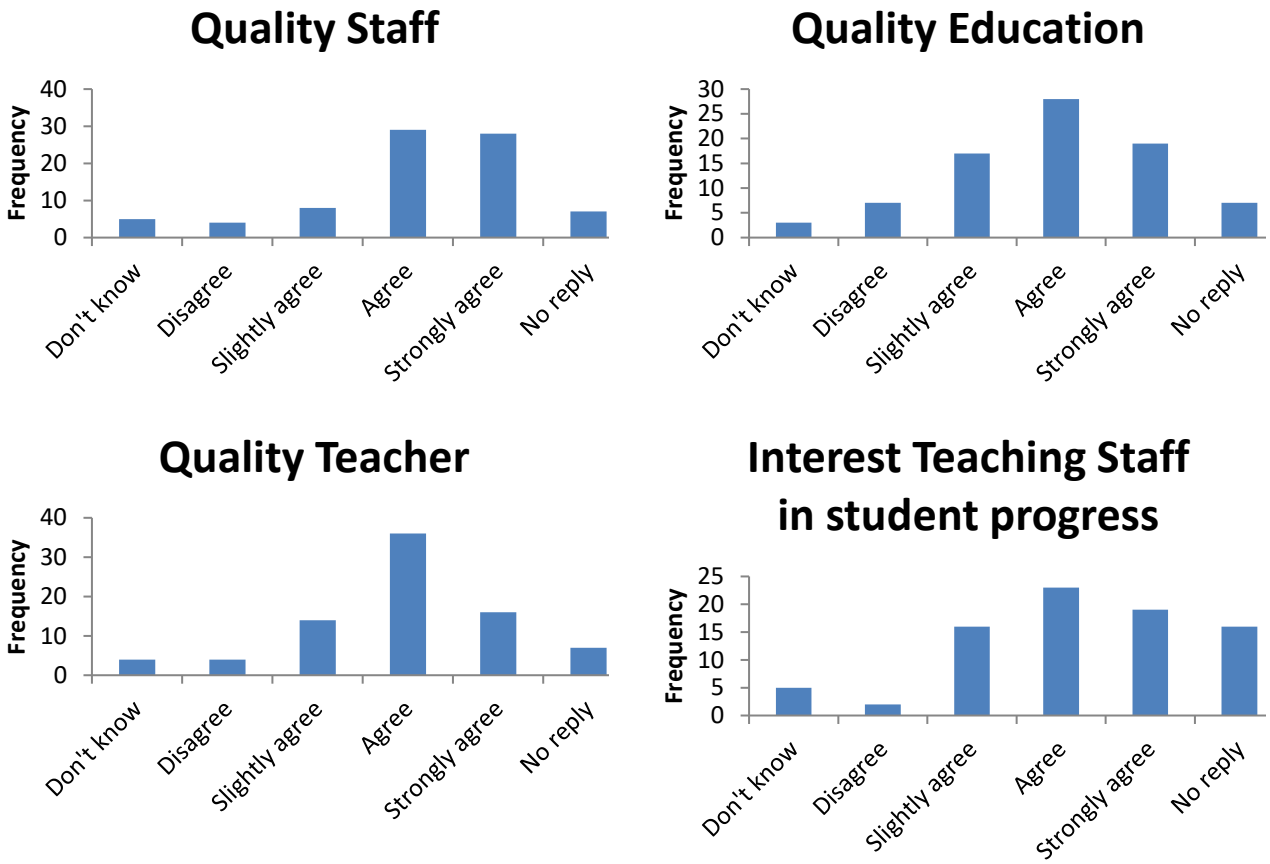


Fig. 12 Placement mobility opportunity - University of Alexandria

Educational Experiences

Figure 13.a reports six histograms regarding the educational experience of students at the University of Alexandria. The students seemed to be satisfied with the quality of staff, teaching, teaching ability, and the willingness of teachers to sustain student's progress, as well as course availability and academic advising.

Figure 13.b on the other hand reports the histograms connected to a series of questions about the students' feeling regarding the University's ability to improve their skills. In general, this ability was reported to be good, with the exception of languages and computer and technical skills, where a great percentage of students disagreed with or only slightly agreed with. In conclusion, students were asked if they believed that the skills acquired during the University period would be useful to access the job market. Interestingly, 64% of them reported a positive answer. This result is probably connected to the students' general positive view of the University of Alexandria regarding the quality of courses and staff, as well as in developing their skills.



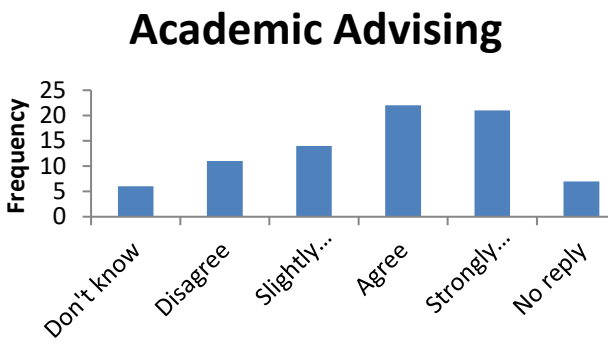
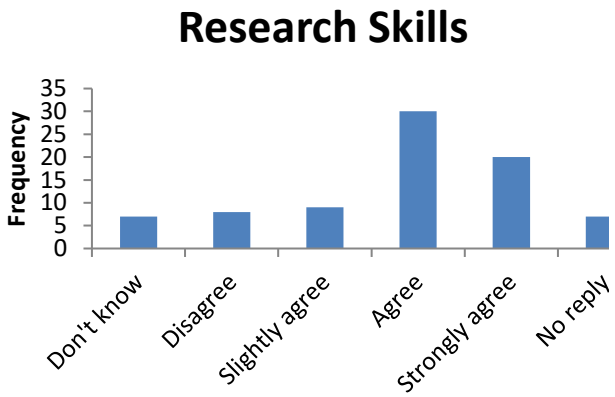
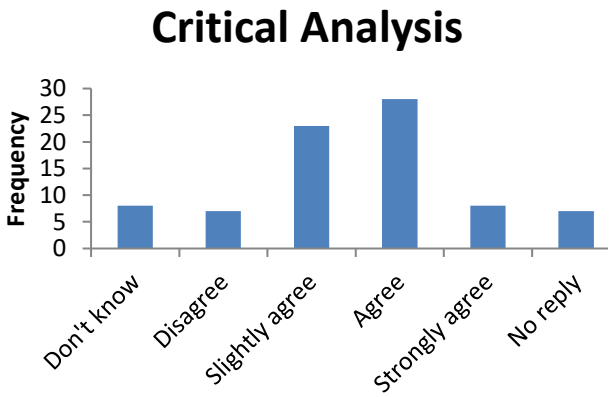
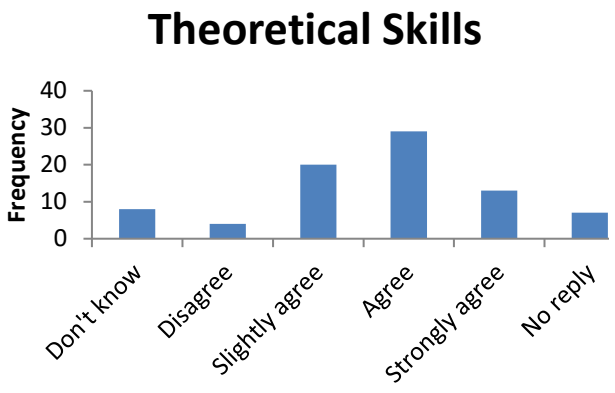
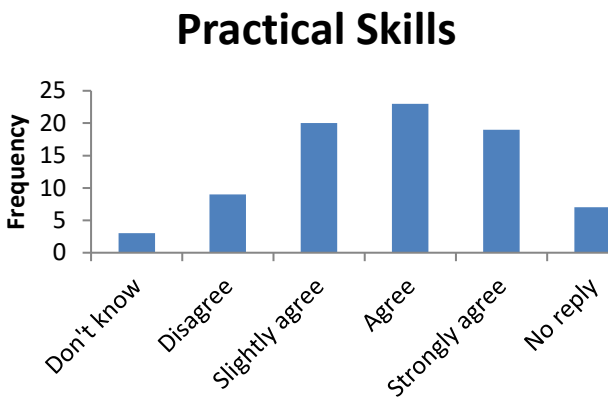


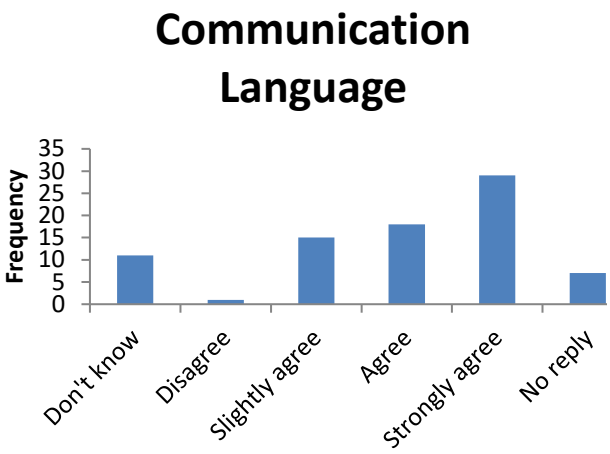
Fig.13a Educational experiences - University of Alexandria

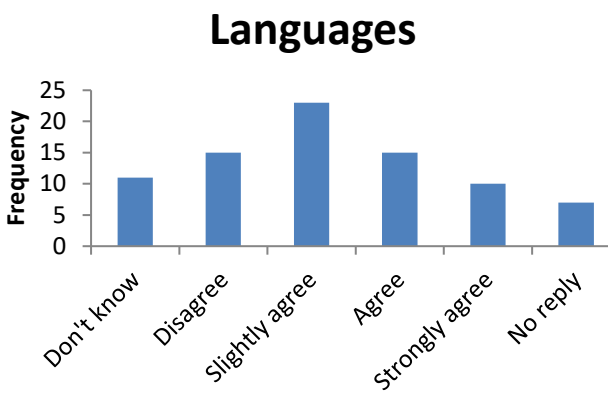


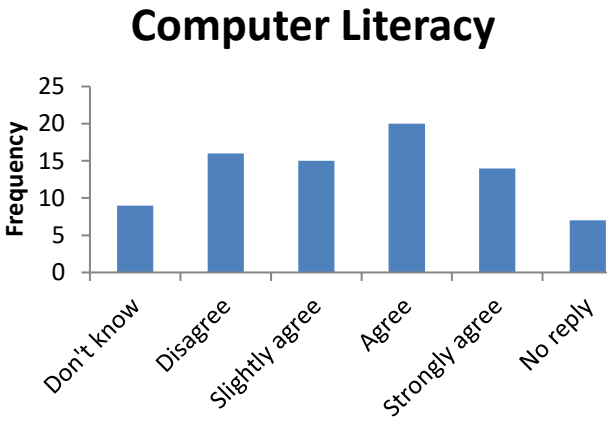


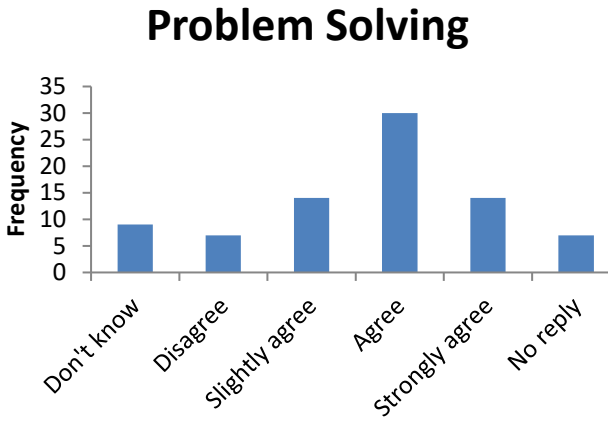


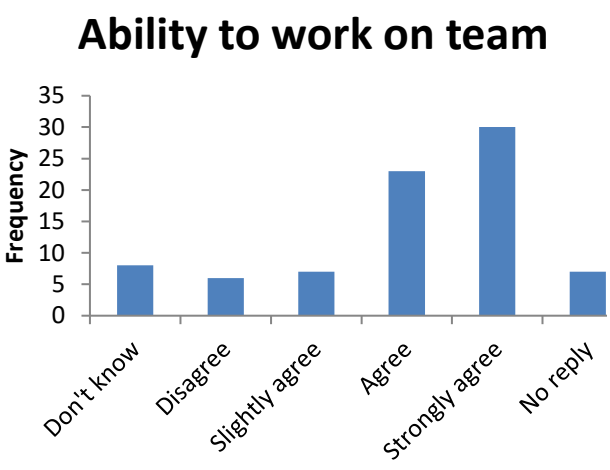



Communication Language
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Languages
Frequency
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Computer Literacy
Frequency
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Problem Solving
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Ability to work on team
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Ability to work indipendently
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply

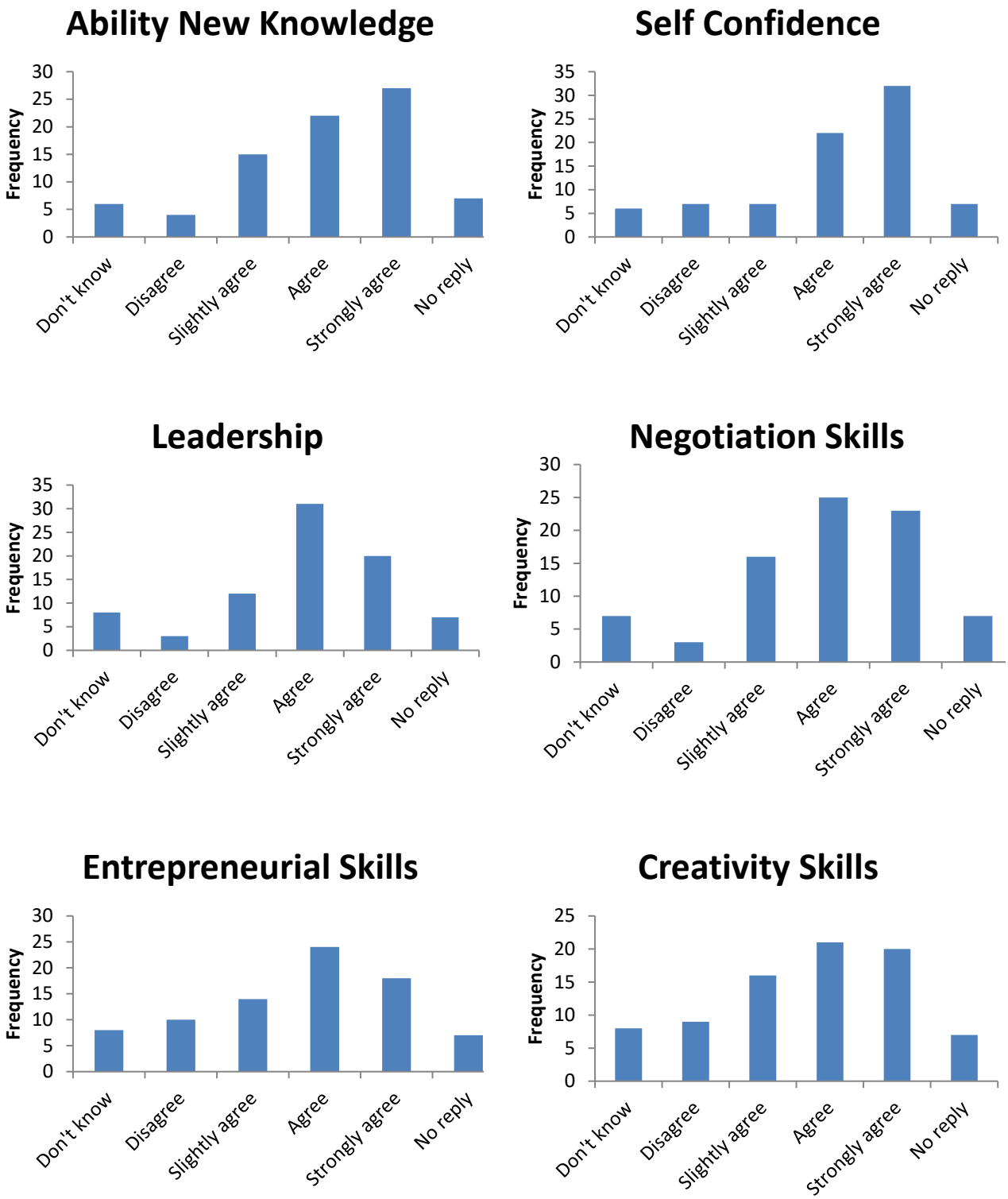


Fig. 13b Educational experiences - University of Alexandria

The following figures (14a, 14b and 14c) present what students think about the possibility to have courses more connected to the enterprise needs, as well as about the introduction of practical activities in classes and a period of compulsory placement during their studies. As shown by the following histograms and students' distribution, they either agree or strongly agree over all of these questions.

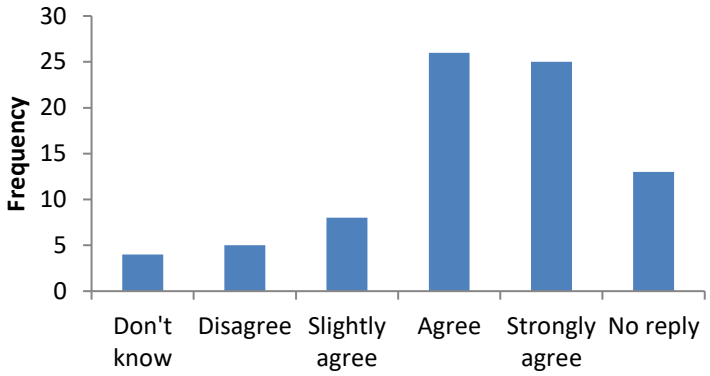


Fig. 14a Course relevance for enterprise- University of Alexandria

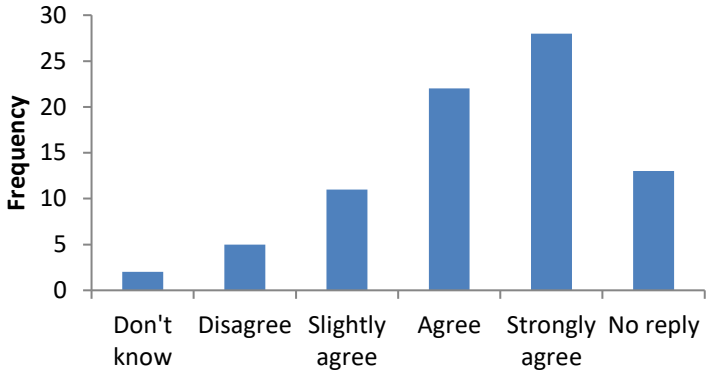


Fig. 14b Practical Classes – University of Alexandria

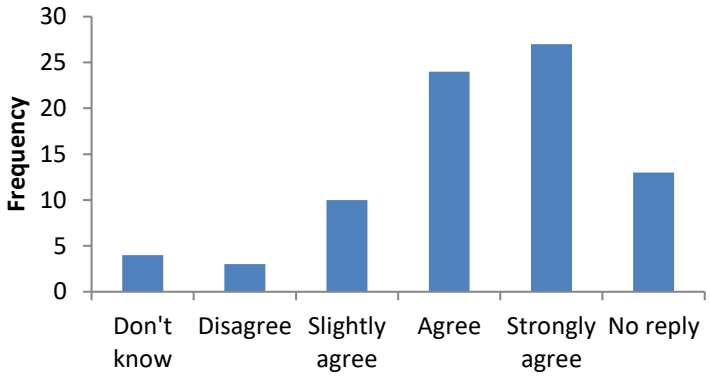


Fig. 14c Compulsory Placement - University of Alexandria

Finally, students were asked if they would like to attend a new Master course, with a period in different Universities or abroad: 64% of students replied positively to this questions.

5.3 University of Cairo

Introduction

A total amount of 52 questionnaires was reputed valid. Regarding the gender analysis, 31 were female (59.6%) and 21 male.

As for the age distribution, the highest percentage of students were in the age range of less than 21 years.

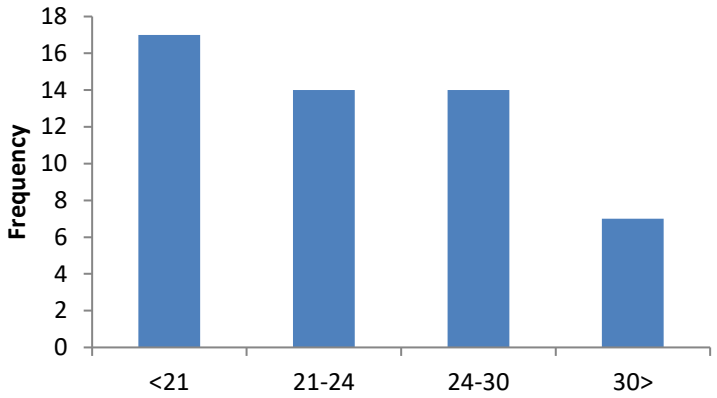


Fig. 15 Age Distribution – University of Cairo

The majority of students were enrolled in a Bachelor of Science Academic Degree and the majority of them were in the middle of their studies.

Regarding the type of accommodation, the majority lived with their parents.

Student motivation.

In this set of questions, the students' motivation regarding their decision to study at the University of Cairo and how they collected the information about their enrollment were studied. Before studying at the university, 24% of them answered that they agreed or strongly agreed to have received enough advance information about the studies provided by the University of Cairo. The majority reported that information had been collected from friends.

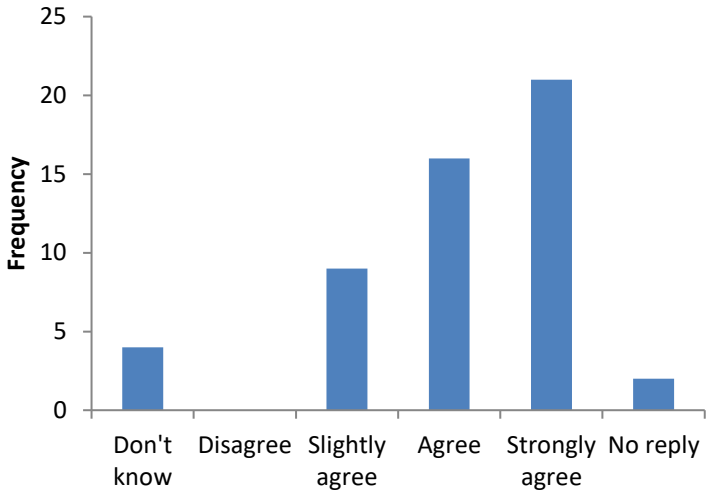


Fig. 16: Good Reputation criteria - University of Cairo

Before enrolling at the University, students' opinion about Cairo University's reputation were positive, with the majority of them agreeing or strongly agreeing with the good reputation of the University. The motivations to enroll at the University were connected to the gain of valuable skills for their career and finding a better job.

When analyzing their plan after graduation, they equally divided between students who hoped to pursue either a post-graduate master degree or a PHD course.

Student satisfaction

In reference to the aspect of the University of Cairo which students were most satisfied with, they reported it being the theoretical aspect of the didactic. As for the least satisfying aspect, it was the lack of laboratories and facilities as constraints to their education.

They thought that the University mission should be to train specialists and form new competences. With respect to the previous University mission, 55.8% of students were of the opinion that the University of Cairo had accomplished it.

Support services and facilities

With the exception of the classes, lab facilities and computer facilities, which the students reported not being satisfied with, they either agreed or strongly agreed with the other questions, regarding library resources, dorms on campus and placement, evidence of a good situation relatively to these aspects.

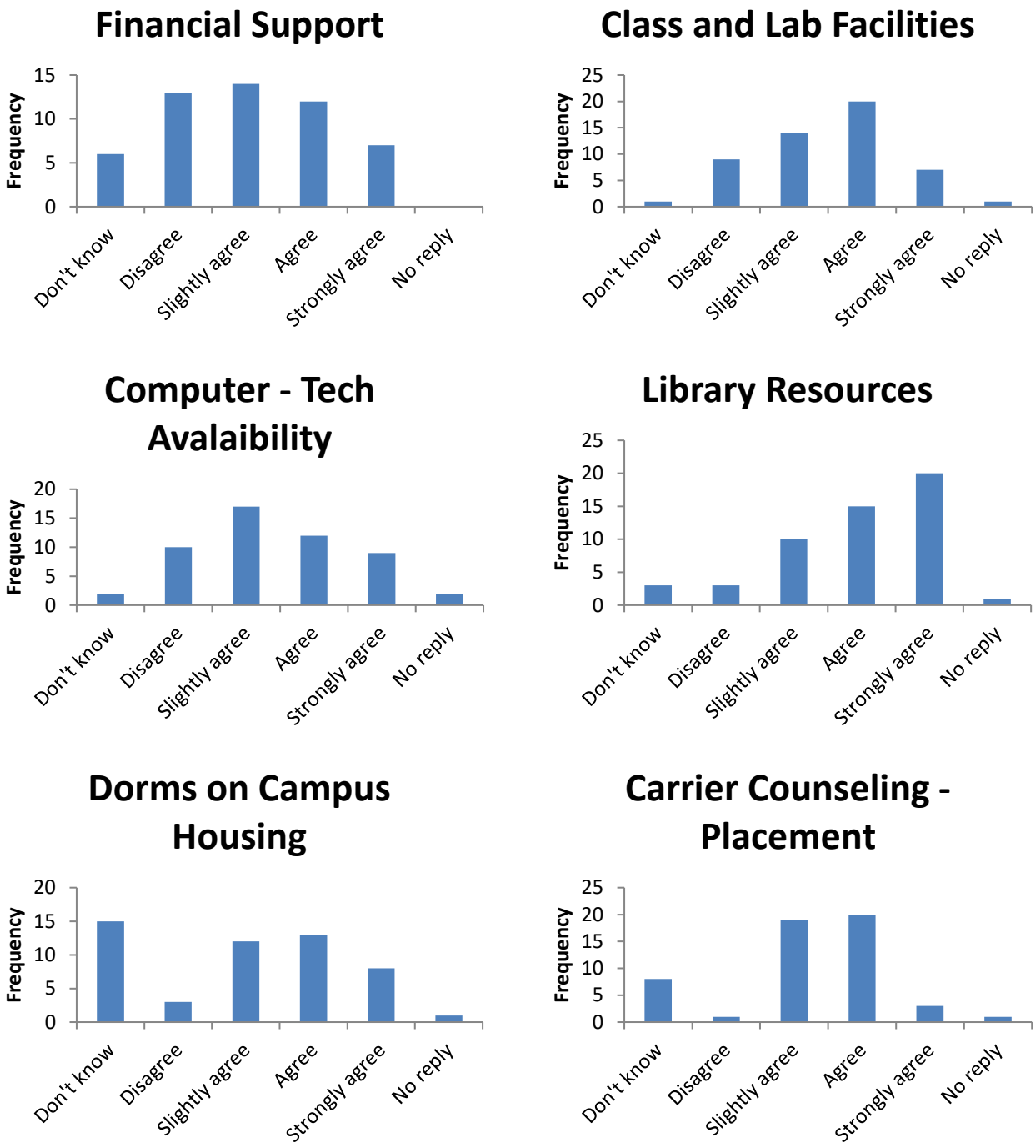


Fig. 17 Support services and facilities – University of Cairo

Moreover, the students from the University of Cairo showed a high propensity towards a period of mobility abroad during their experience at the University of Cairo.

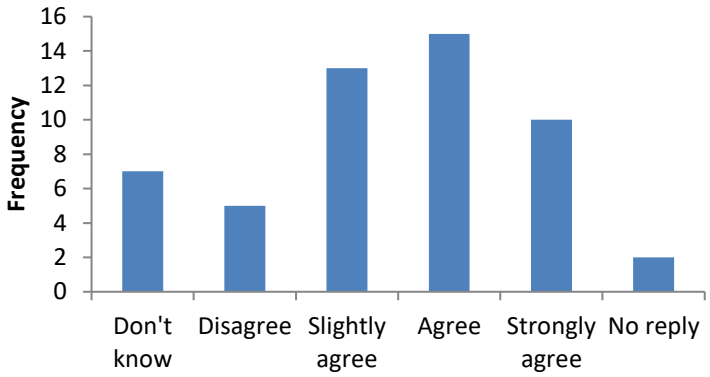
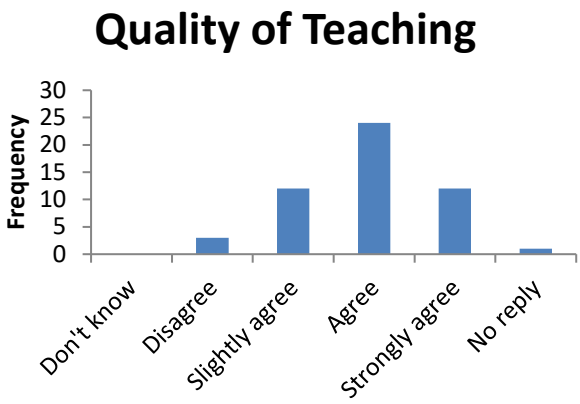
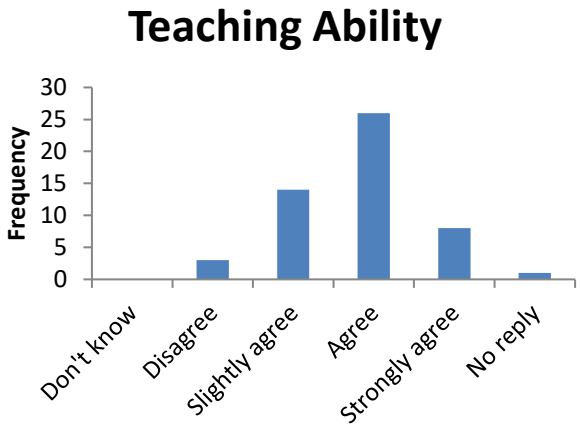


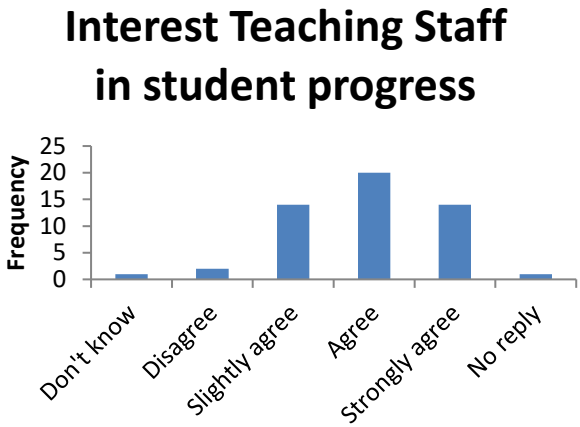
Fig. 18 Placement mobility opportunity - University of Cairo

Educational experiences

Figure 19.a reports six histograms regarding the educational experience of students at the University of Cairo. The students seemed to be satisfied with the quality of staff, teaching, teaching ability, while they appeared less satisfied with the willingness of teachers to sustain students' progress; however, the responses were positive regarding the course availability and the academic advising. Figure 19.b represents histograms connected to a series of questions about the students' feeling regarding the ability of the University of Cairo to improve their skills. In general, this ability was reported to be good with the exception, as with University of Alexandria, of languages and computer and technical skills, which a great percentage of students were not satisfied with. In conclusion, students were asked whether they believed that the skills acquired during their University period would be useful to access the job market. Interestingly, only 48% of them report a positive answer. This result is probably connected to the negative view regarding the lack of practical activity (lab activity) of the University of Cairo's students, as well as the lack of activities to develop languages and computer activity skills.







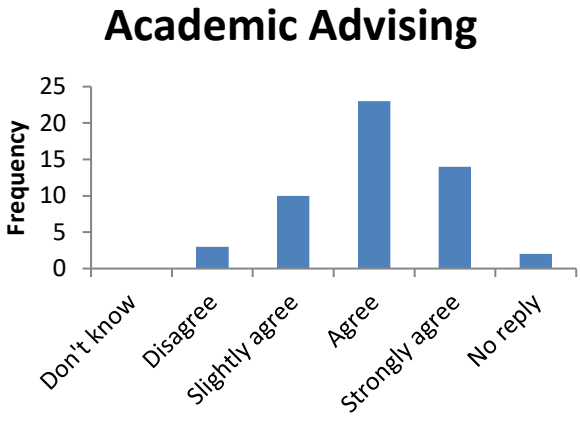
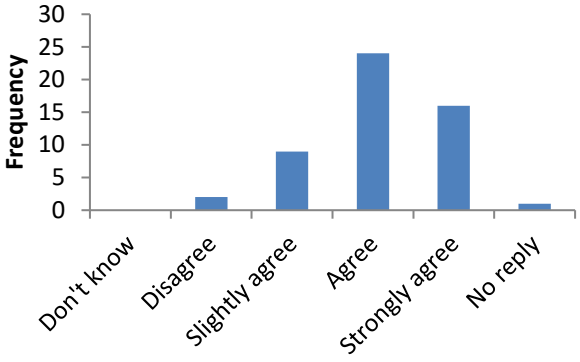
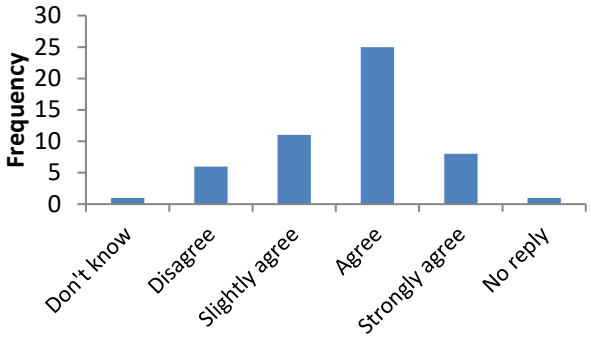


Fig.19a Educational experiences – University of Cairo

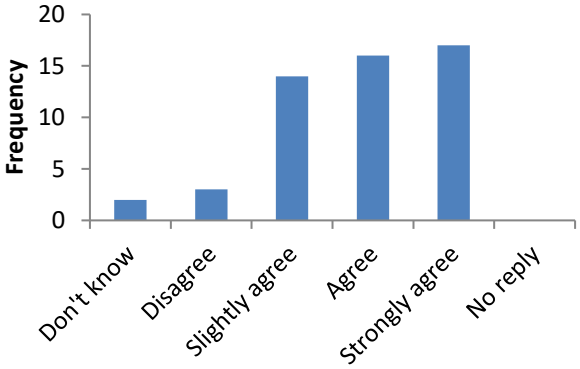
Research Skills



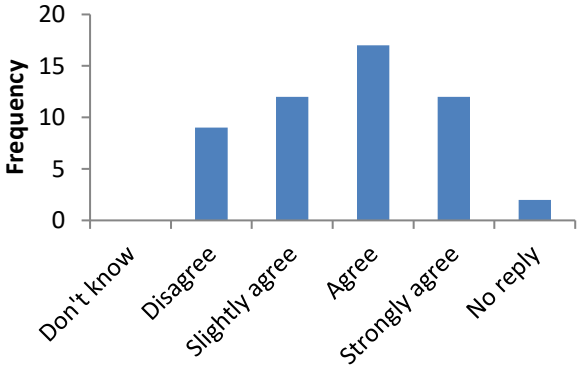
Critical Analysis



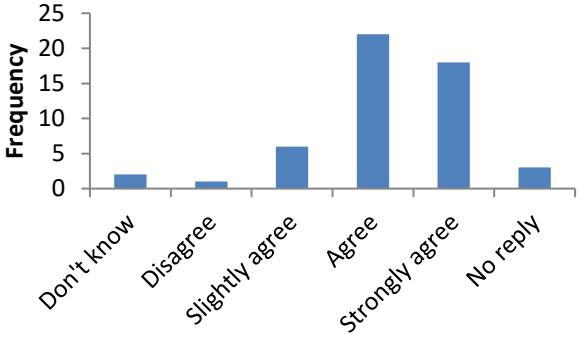
Theoretical Skills



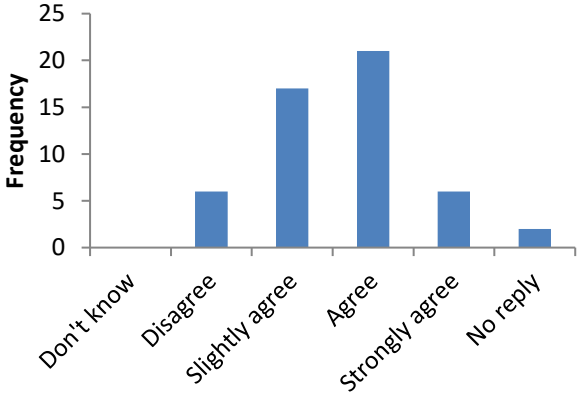
Practical Skills



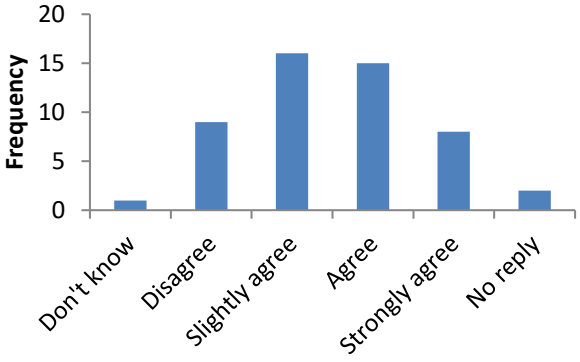
Communication Language



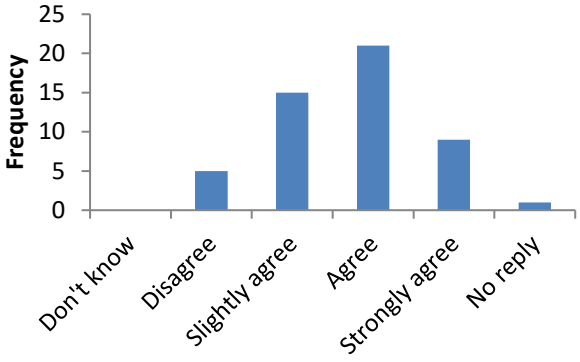
Language Skills



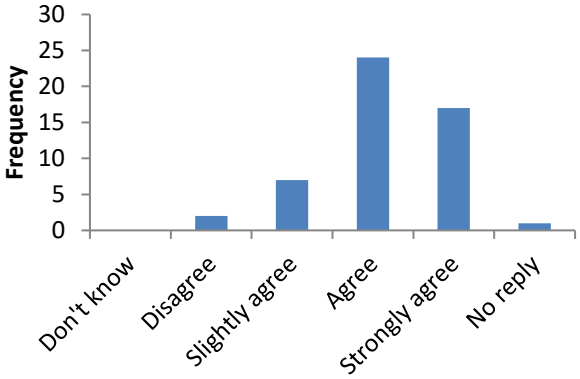
Computer Literacy



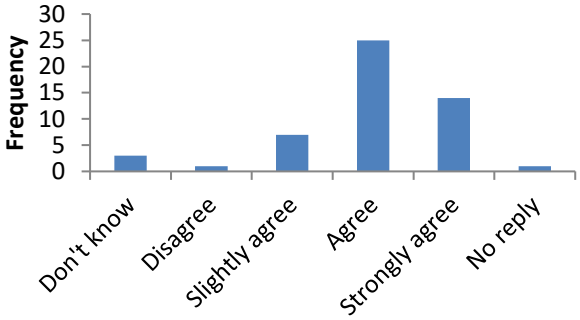
Problem Solving



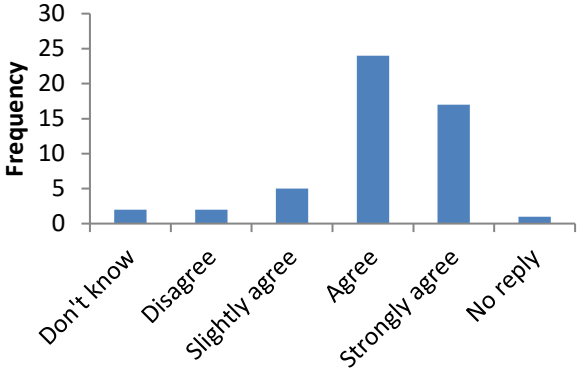
Ability to work in team



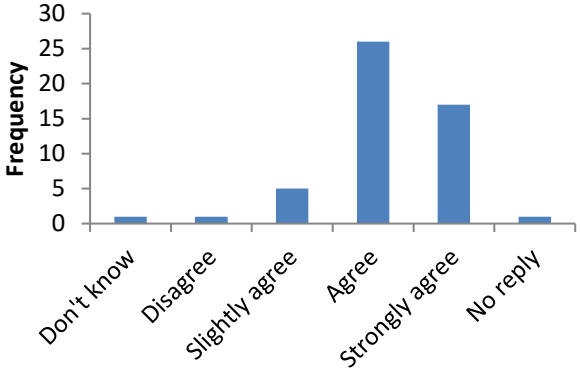
Ability to work indipendently



Ability New Knowledge



Self Confidence



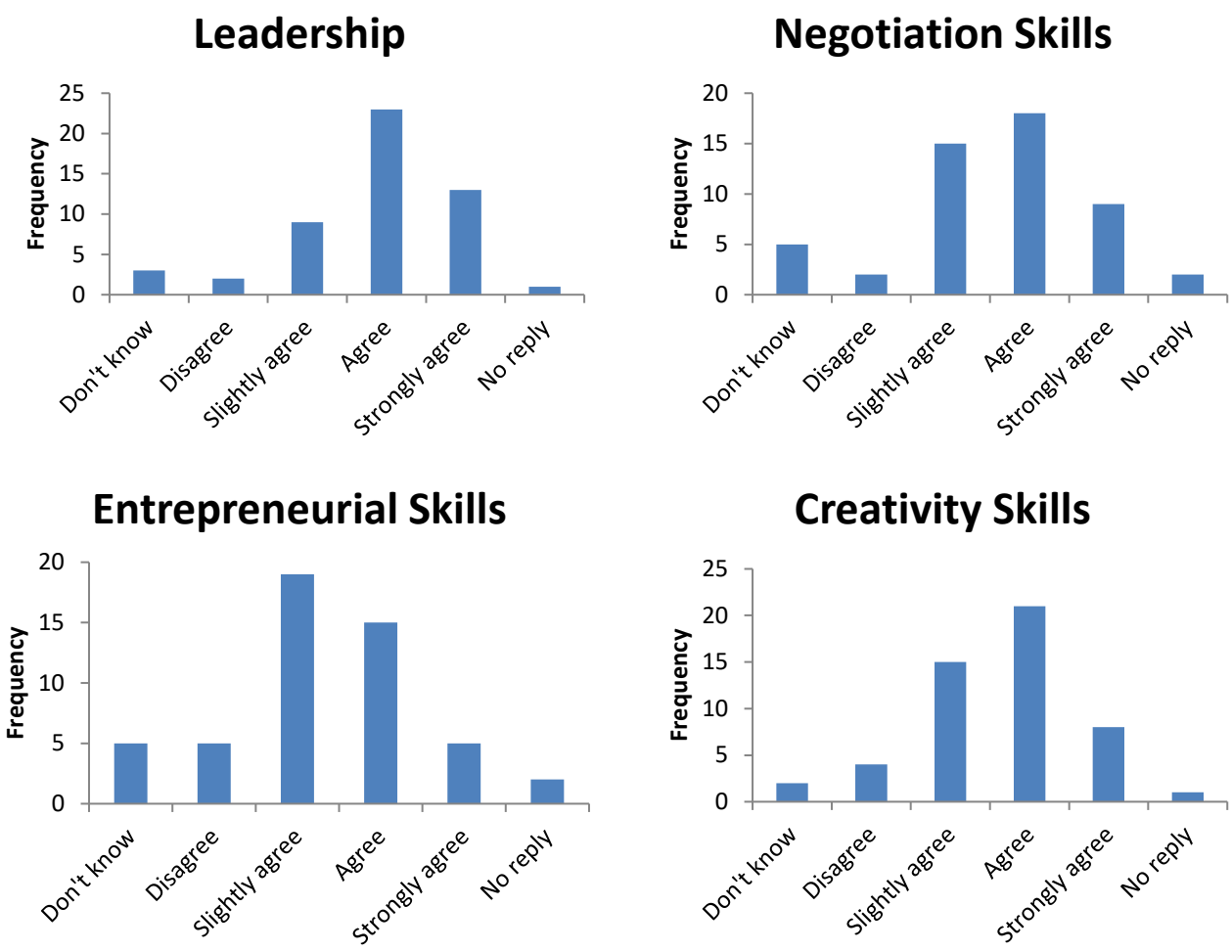


Fig. 19b Educational experiences – University of Cairo

The following figures (20a,20b and 20c) present what students think about the possibility to have courses more connected to the enterprise needs, the introduction of practical activity in classes as well as a period of compulsory placement during their studies. As shown by the following histograms and student's distribution, they agree or strongly agree over all of these questions.

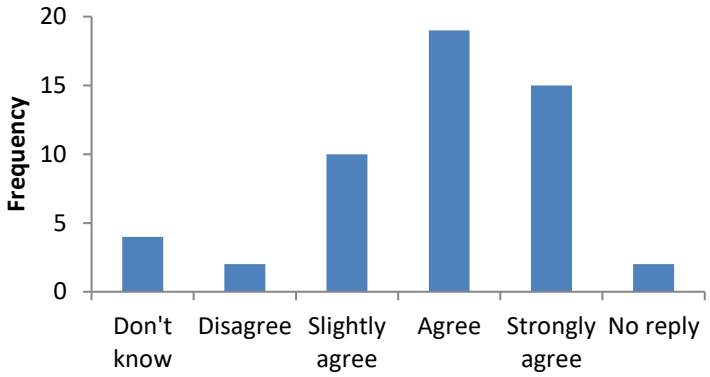


Fig. 20a Course relevance for enterprise – University of Cairo

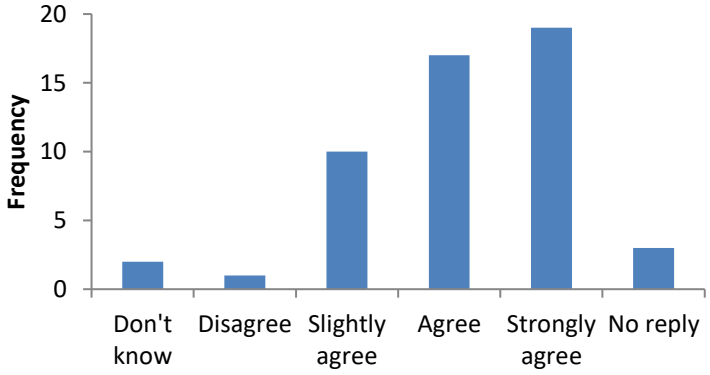


Fig. 20b Practical Classes – University of Cairo

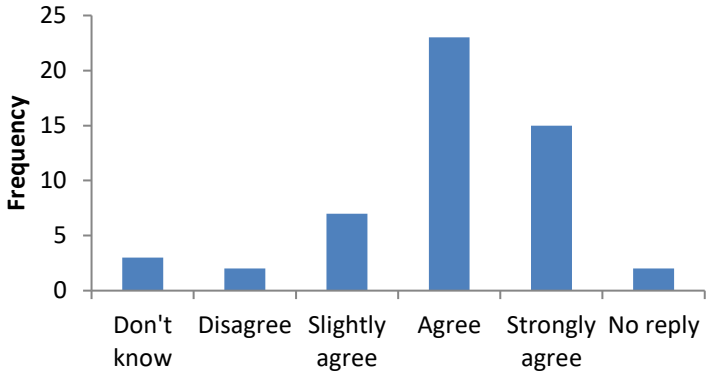


Fig. 20c Compulsory Placement – University of Cairo

In conclusion, students were asked whether they would like to attend a new Master with some period in different Universities or abroad: 61.5% of them responded positively to this question.

5.4 University of Damanhour

Introduction

Ninety-two questionnaires were collected and 87 questionnaires have been reputed valid. Regarding the gender analysis, 19 were female, 66 male and 2 did not respond to the Question regarding "Age distribution".

Regarding the age distribution, the higher percentage of students are inside the Age range of 24-30 years.

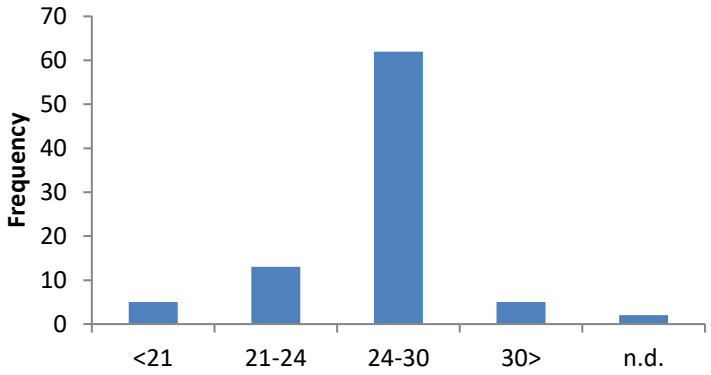


Fig. 21 Age Distribution- University of Damanhour

The majority of students are enrolled in a Bachelor of Science Academic Degree and few of them are actually enrolled in a Master (5) and PhD (4).

Students' motivation

In this set of questions, the motivation of students regarding their decision to study at the University of Damanhour and how they collect the information are studied. Before studying at the University 29.88% of them, answer that they got enough advance information about the studies provided by the University of Damanhour. The majority reports that information has been collected by using informal channels such as "Friends or relatives" and University "Job Center".

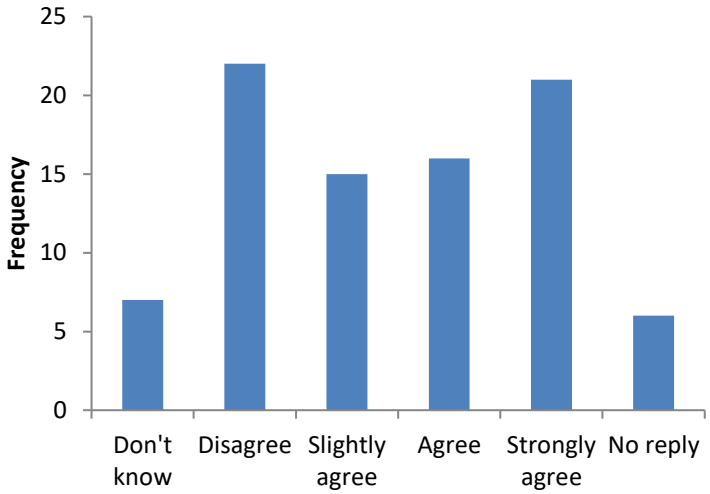


Fig. 22: Good Reputation criteria - University of Damanhour

Before enrolling at the University, students' thoughts on Damanhour University's reputation was good if we consider that the majority of them agree about the good reputation of the University even if there is more or less the same percentage of people disagreeing on the University good reputation: more than 20 students underlined its bad reputation. Forty-one students replied that the main motivation for being enrolled at the University is "to gain valuable skills for the career". It is important to note that the "access to the job market" and "gaining skills for the job market" are two of the main concerns for Damanhour Students.

For this reason, 57 students replied that starting a job is their first concern after graduation. It has to be noticed that some students, being at the beginning of their studies, replied with different options at the same time putting job and additional training (PhD or Master courses) on the same level. In any case, also if we have a look of the answers given to the open questions, access to job market is the priority.

Students' satisfaction

With reference to the aspect of the University of Damanhour for which student are most satisfied with, they report the friendship as probably the feeling of being part of a student community in good relationship with Academic Staff. Students seems to be also quite satisfied of teaching methodologies.

On the other side, three main problems can be highlighted as crucial for the quality of Damanhour University training:

1) Lacks of equipped Laboratories

2) Lacks of equipped Farms

3) General lack of facilities for Students including the absence of University campus.

They thought that the University mission should be at the same level training specialists and training specialists/professionals who have to meet the labor demand with a slightly preference for “forming new competencies”.

With respect to University mission, only 12% of students think that the University of Damanhour accomplished its mission. This very low percentage is mainly related to the above-mentioned not satisfactory aspects of the Universities. In addition, and we can say as a consequence of the main lacks of the University, students underlined that there is no match between Labor market and Training courses and that the University is not sufficiently engaged in searching job for its students after graduation.

Support services and facilities

The highest number of students disagree with the University's support in a period of mobility abroad but at the same time, a non-marginal number of students have an opposite view and strongly agree with the view of a University that helps in finding opportunities within the placement mobility program for students.

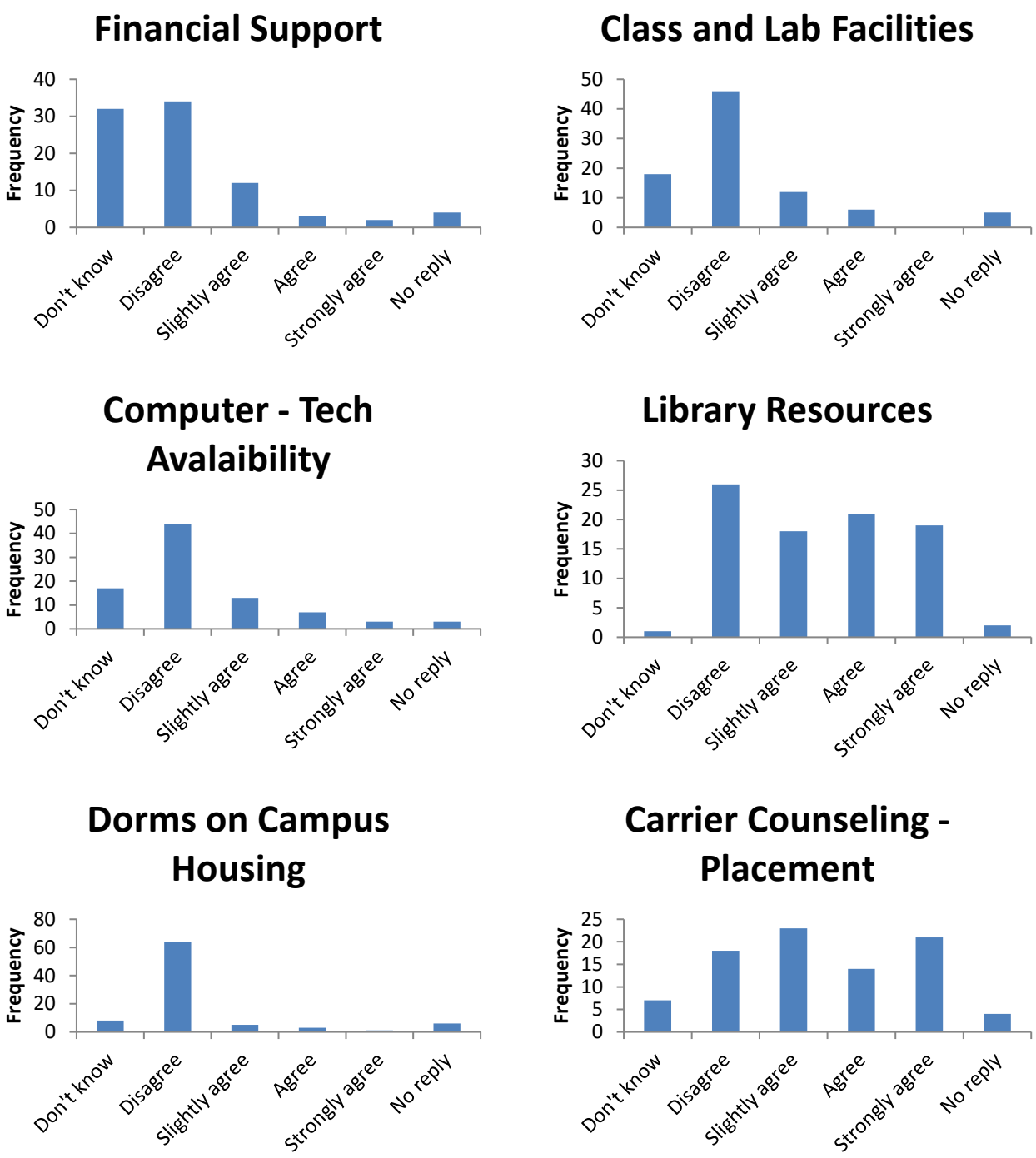


Fig. 23 Support services and facilities - University of Damanhour

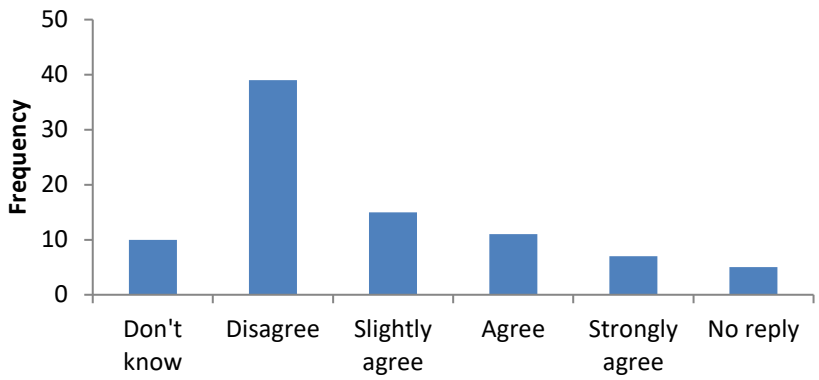
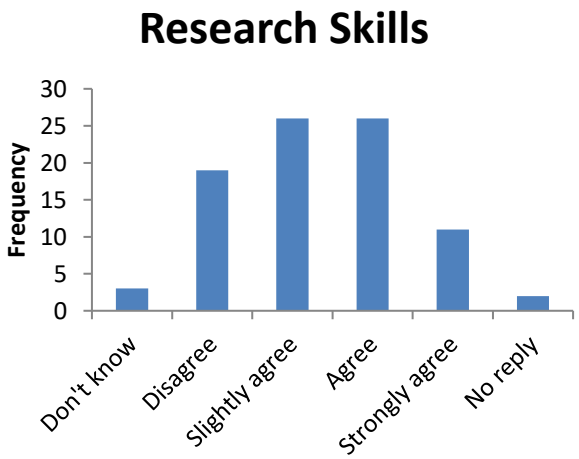
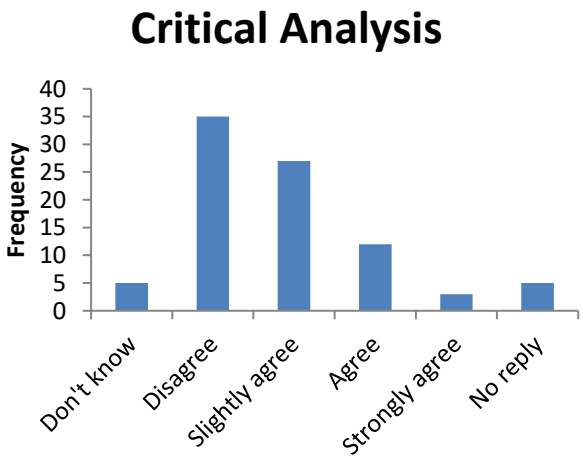


Fig. 24: Placement mobility opportunity - University of Damanhour

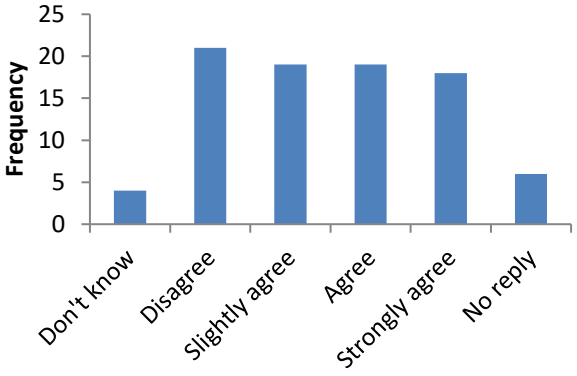
Educational experiences

Figure 25.a reports six histograms regarding the educational experience of students at the University of Damanhour. In line with the previous answers, the main problem for students at Damanhour University are related to "Practical Skills". At the same time, the graphic "Languages" shows a crucial problem related to the knowledge of foreign languages.

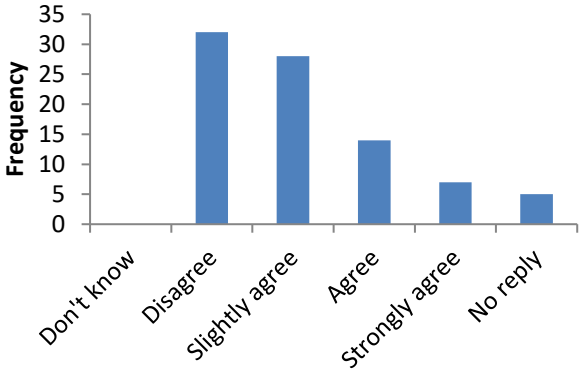




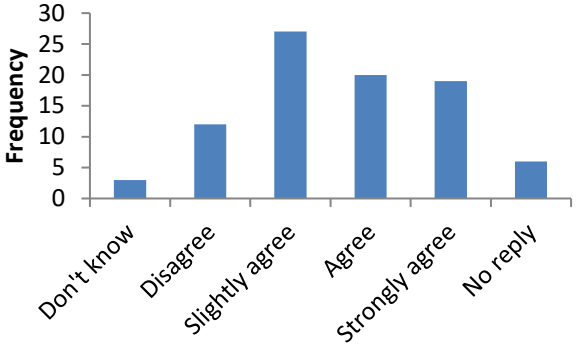
Theoretical Skills



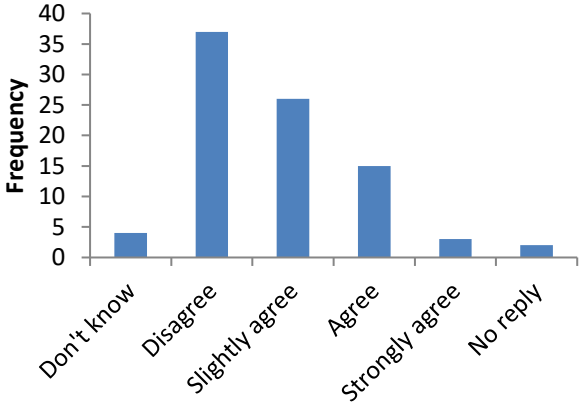
Practical Skills



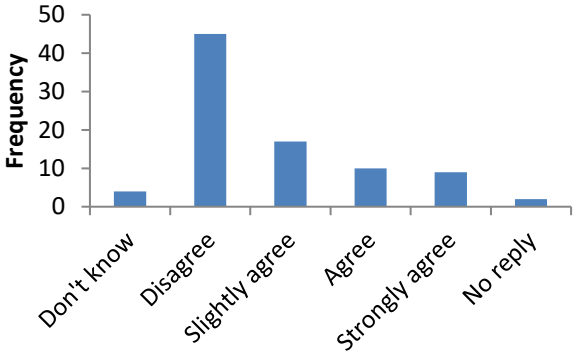
Communication Language



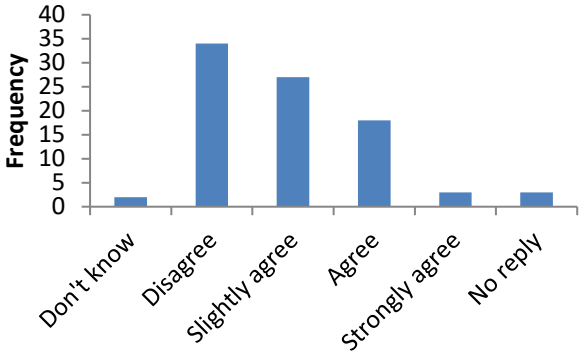
Languages



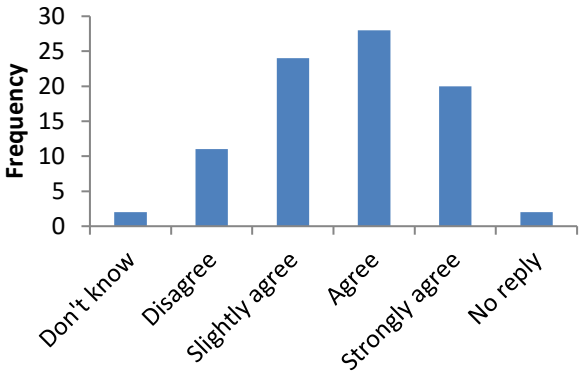
Computer Literacy



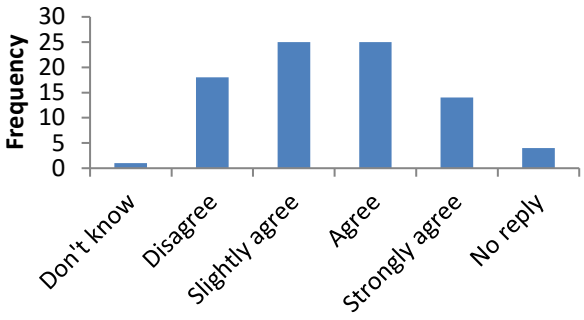
Problem Solving



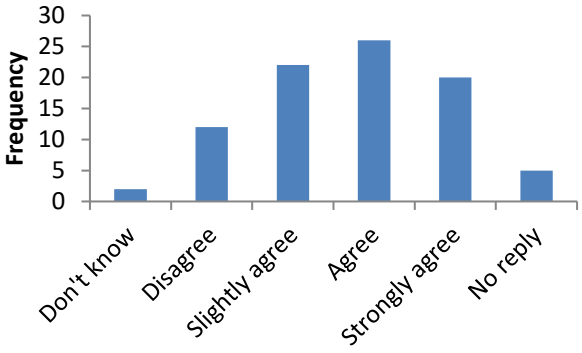
Ability to work on team



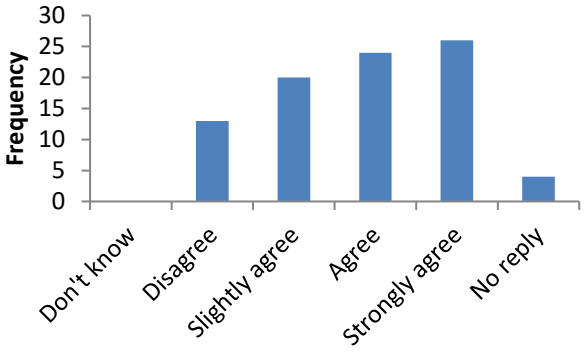
Ability to work indipendently



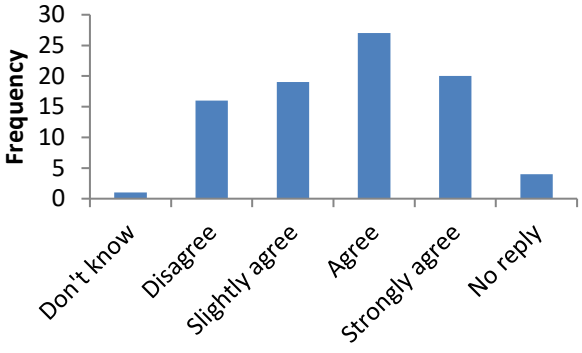
Ability New Knowledge



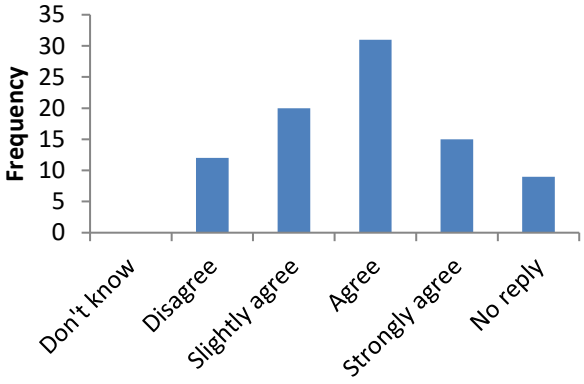
Self Confidence



Leadership



Negotiation Skills



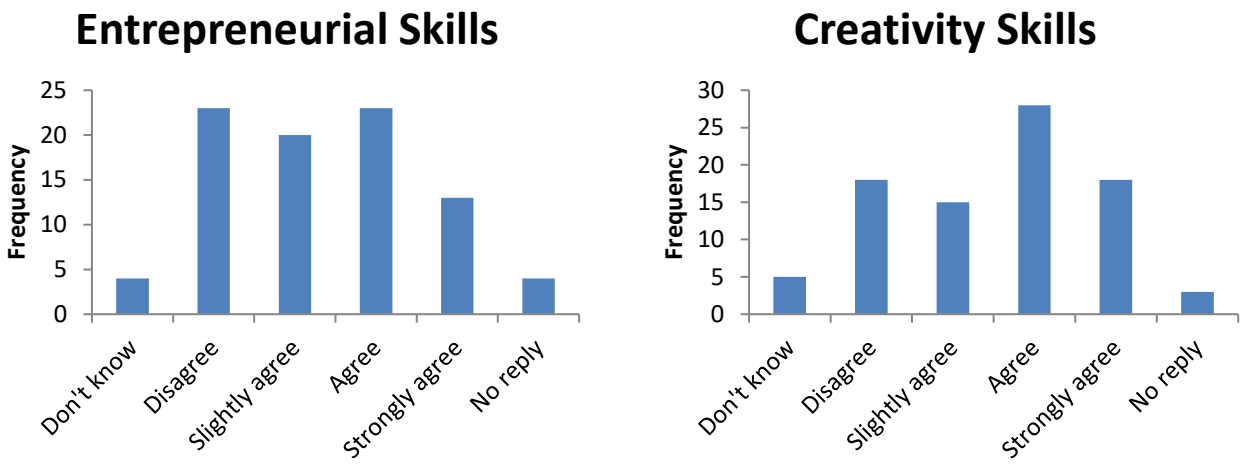


Fig. 25 Educational Experiences - University of Damanhour

The following figures 26a, 26b and 26c present what students think on the possibility to have courses more connected to the enterprise needs, the introduction of practical activity in classes and finally a period of compulsory placement during their studies. As shown by the following histograms and student's distribution, they agree or strongly agree over all of these questions.

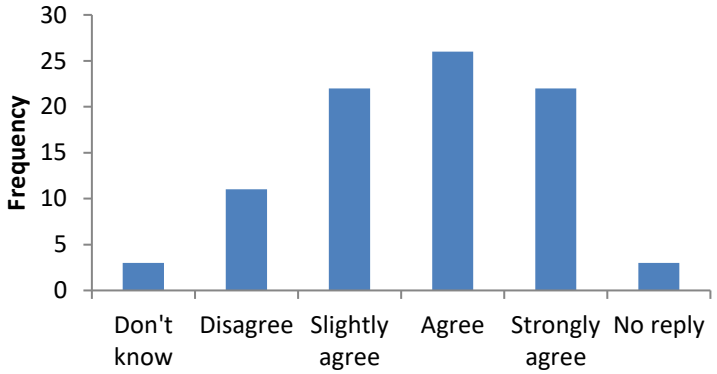


Fig. 26a: Course relevance for enterprise - University of Damanhour

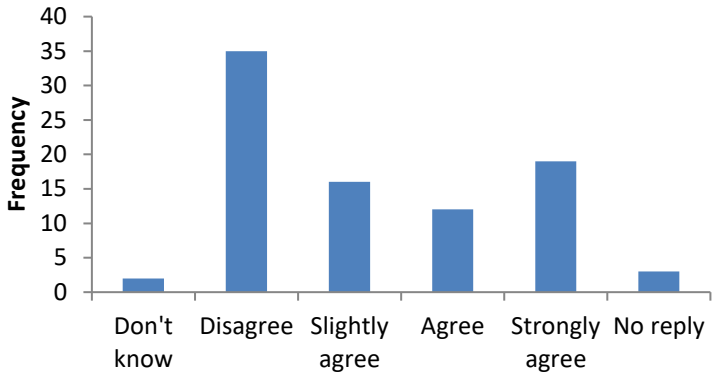


Fig. 26b: Practical Classes - University of Damanhour

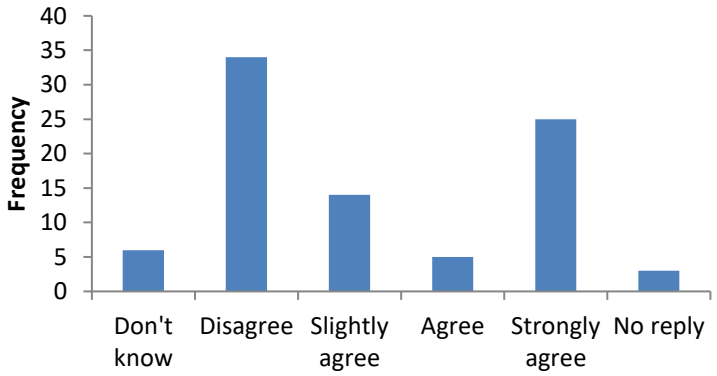


Fig. 26c: Compulsory Placement - University of Damanhour

Finally, students were asked if they would like to attend a new Master providing with some period in different Universities or abroad. 32% of students replayed yes to these questions.

5.5 University of Zagazig

Introduction

One-hundred seven questionnaires were collected and one-hundred four have been reputed valid. Regarding the gender analysis 35 were male, 66 female and 3 did not answer to the question regarding "Age distribution".

Regarding the age distribution, the higher percentage of students are equally distributed over two Age ranges: 21-24 and 24-30 years.

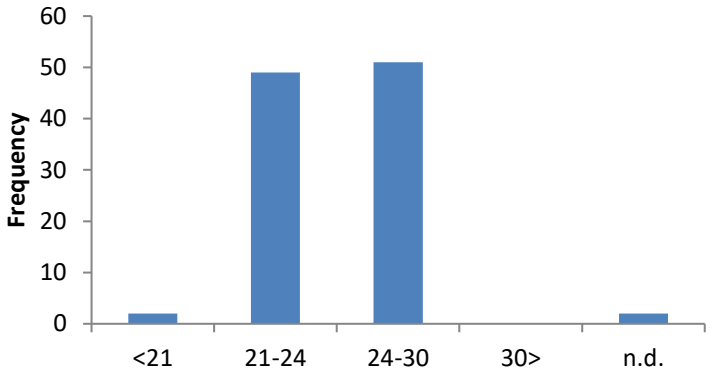


Fig. 27: Age Distribution- University of Zagazig

The majority of students are enrolled in a Bachelor of Science Academic Degree and few of them have generally indicated "Faculty of Agriculture" and only 2 indicated Master.

Students' motivation

In this set of questions, the motivation of students regarding their decision to study at the University of Zagazig was included. Before studying at the University, 32% of them answer that they slightly agree with the idea of have received advance information about the studies provided by the University of Zagazig. The majority reports that information has been collected by using informal channels such as "Friends or relatives" and in some cases "Internet".

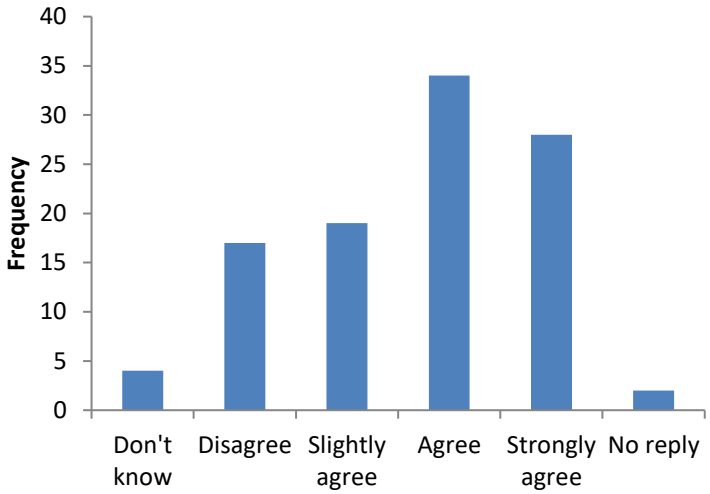


Fig. 28 Good Reputation criteria - University of Zagazig

Before enrolling at the University, students' thoughts on Zagazig University's reputation was good if we consider that the majority of them agree about the good reputation (there is a highest percentage if we consider the percentage of people whom Slightly Agree, Agree or Strongly Agree). Half of the students replied that the main motivation for being enrolled at the University is "a better alternative to working", but the absolute majority (75%) thinks that being enrolled at the university is fundamental in order to obtain "a better job". In any case, the idea of receiving qualification is still very high in students' mindset. It is important to note that the access to the job market is widely expressed as one of the main concerns when, answering to open questions, a consistent percentage of students replied that Zagazig University "needs to improve relationships between graduates and labor market".

Qualification and labor market seems to be the two main concerns and for this reason, students are equally divided between "Start to work" and "attend a post-graduate Master degree" after the graduation". It seems that students think, as obvious, about how to have access to job market but at the same time they seem to be fully aware that "get qualification" is their first job.

Students' satisfaction

With reference to the aspect of the University of Zagazig for which student are most satisfied with, they report the good cooperation among different sectors of the University, the good relationship with Academic Staff. Students seems to be equally divided on teaching methods. Some of them are satisfied, some of them not. Among them who are not satisfied of teaching methodologies, we have to stress that among the reasons beyond their dissatisfaction we can mention:

1) Lacks of equipped Laboratories

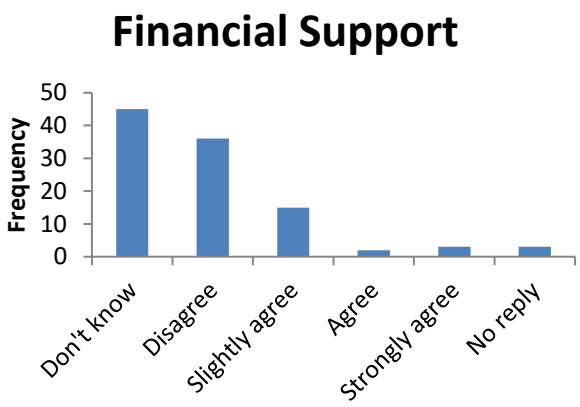
2) Job occasions after graduation

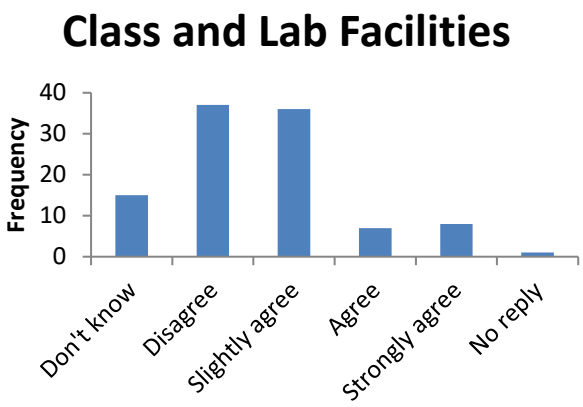
3) Low technological level of the University

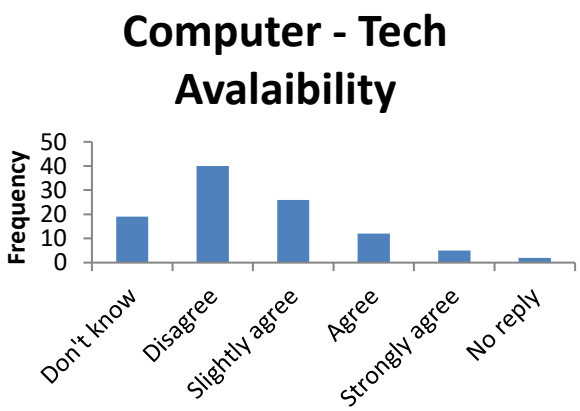
They thought that the University mission should be “forming new competencies”. Again, a real quality qualification seems to be the priority.

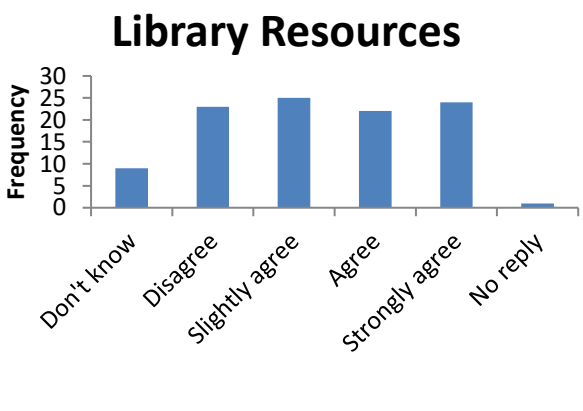
With respect to University mission 30% of students think that the University of Zagazig accomplished its mission. This low percentage is mainly related to the above mentioned not satisfactory aspects of the Universities. In addition, and we can say that students underlined that there is no match between Labor market and Training courses, that the University is not sufficiently engaged in searching job for its students after graduation and that Laboratories are not very well equipped.

Support services and facilities









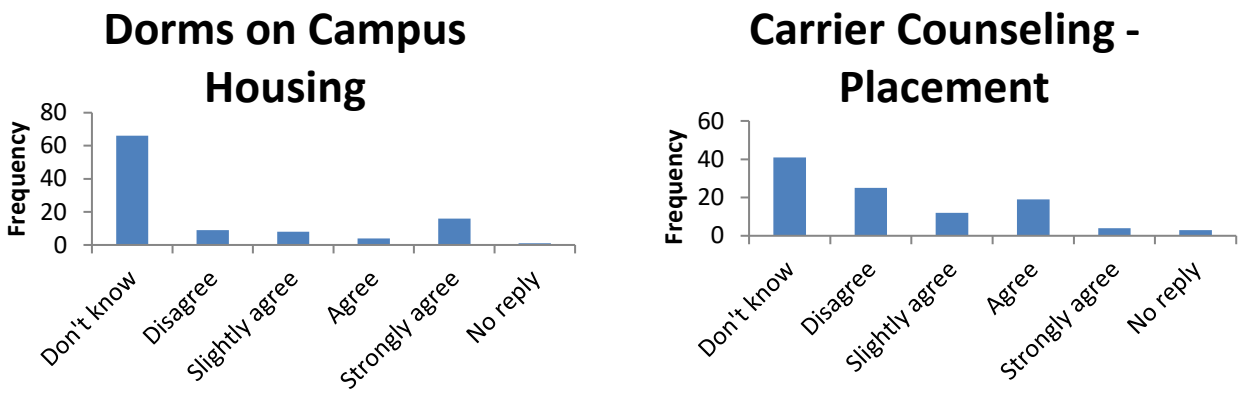


Fig. 29: Support services and facilities – University of Zagazig

The highest number of students disagree or are not aware of the University's support services in helping a period of mobility abroad

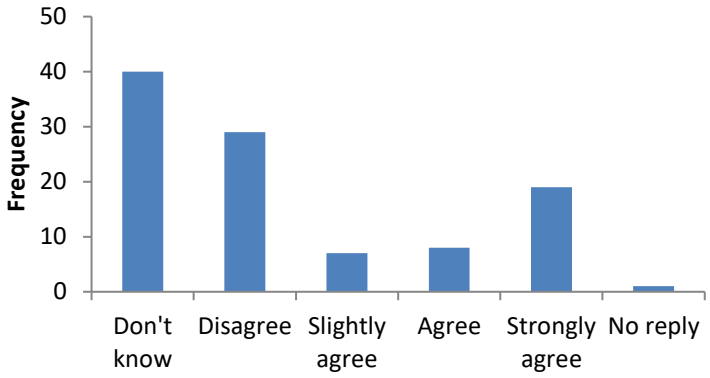
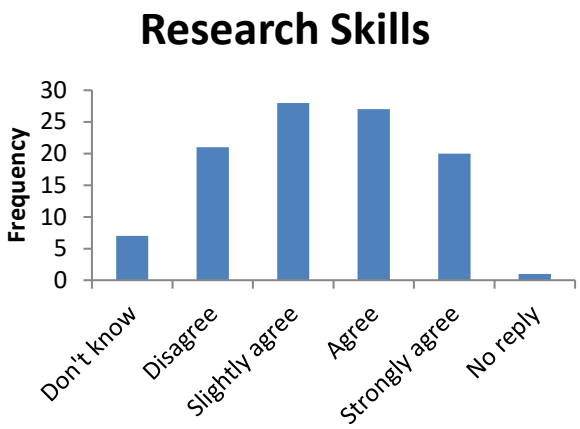
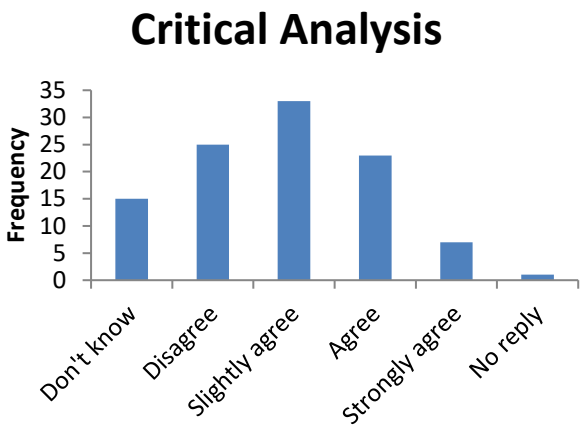


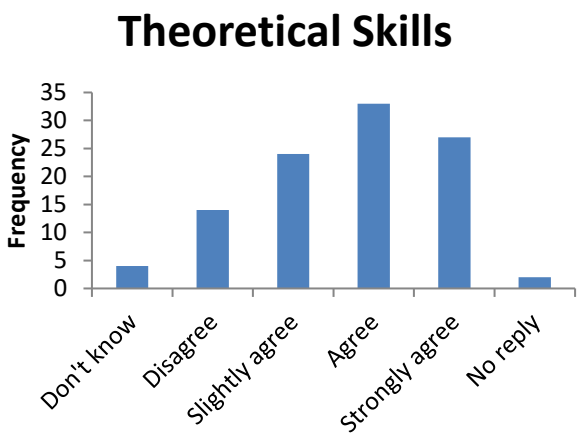
Fig. 30 Placement mobility opportunity –University of Zagazig

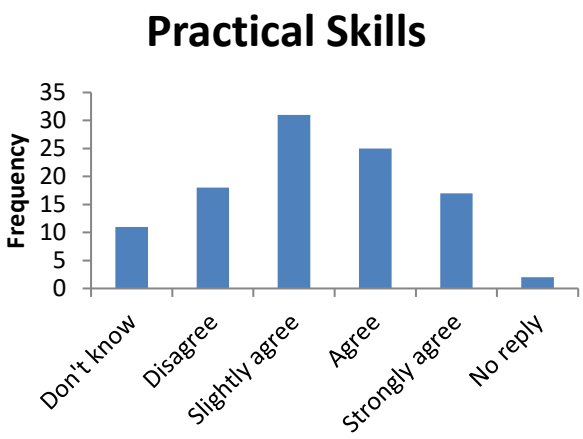
Educational experiences

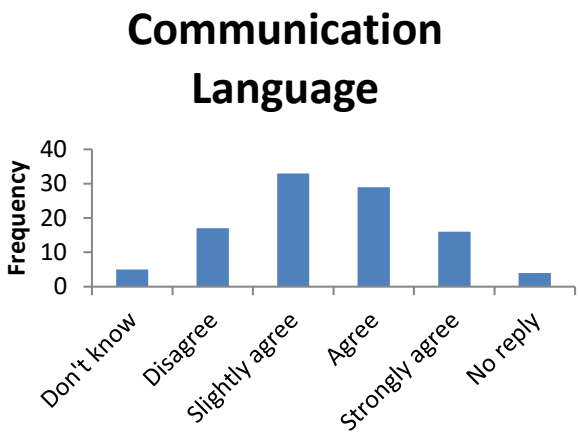
Figure 31.a reports six histograms regarding the educational experience of students at the University of Zagazig. The main problem for students at Damanhour University is related to “Languages” as the related graphs shows a crucial problem related to the knowledge of foreign languages. With respect to other graphs, it is important to note that students are divided on their opinions regarding “Research Skills” and “Critical analysis” showing a general satisfaction with some points of dissatisfaction.

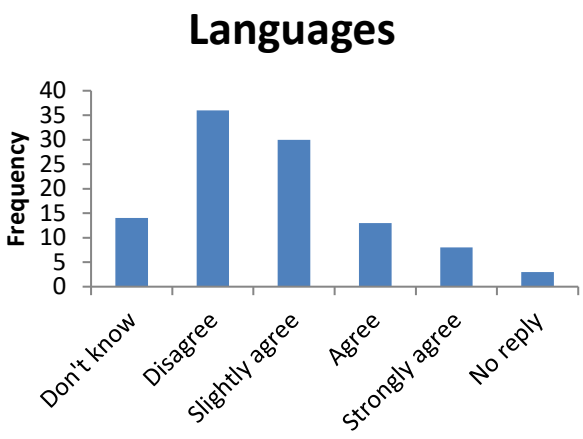

Research Skills
Frequency
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Critical Analysis
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply

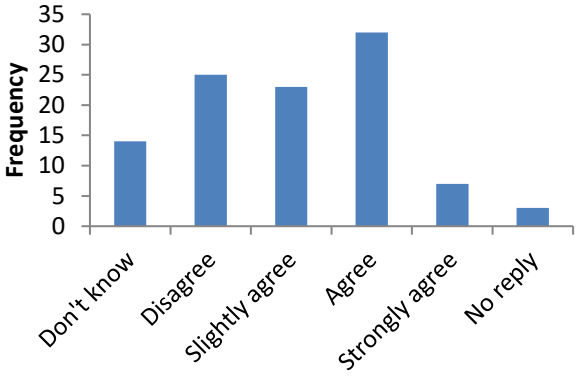

Theoretical Skills
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Practical Skills
Frequency
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply

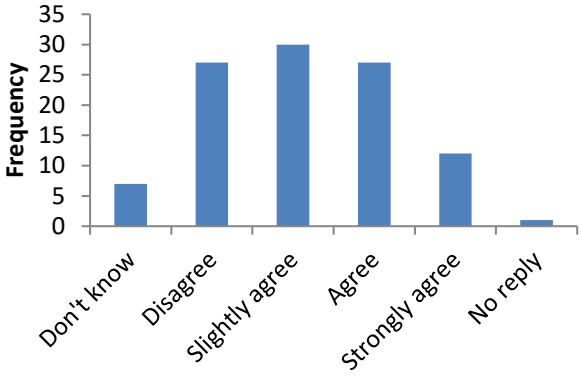

Communication Language
Frequency
40
30
20
10
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Languages
Frequency
40
35
30
25
20
15
10
5
0
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply

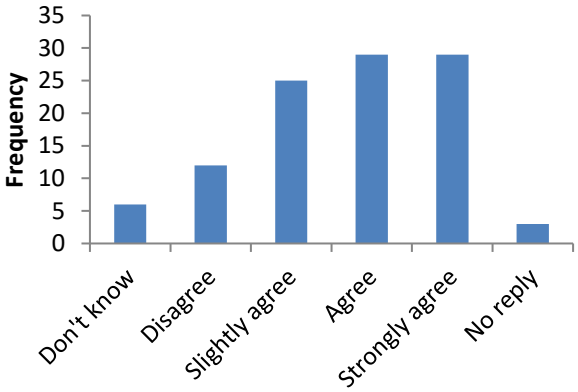
Computer Literacy



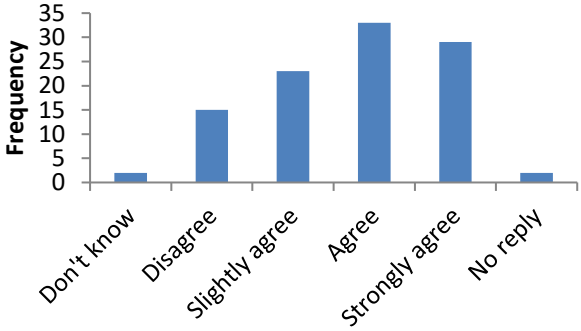
Problem Solving



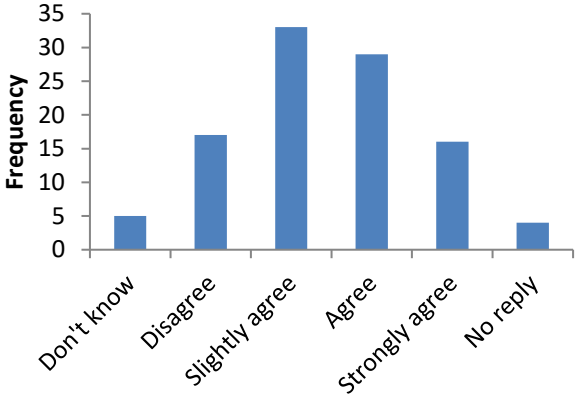
Ability to work on team



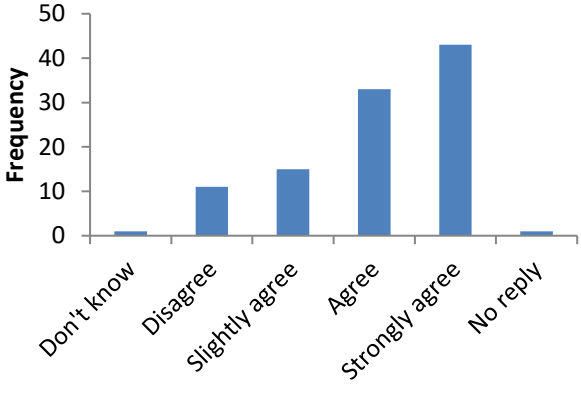
Ability to work indipendently



Ability New Knowledge



Self Confidence



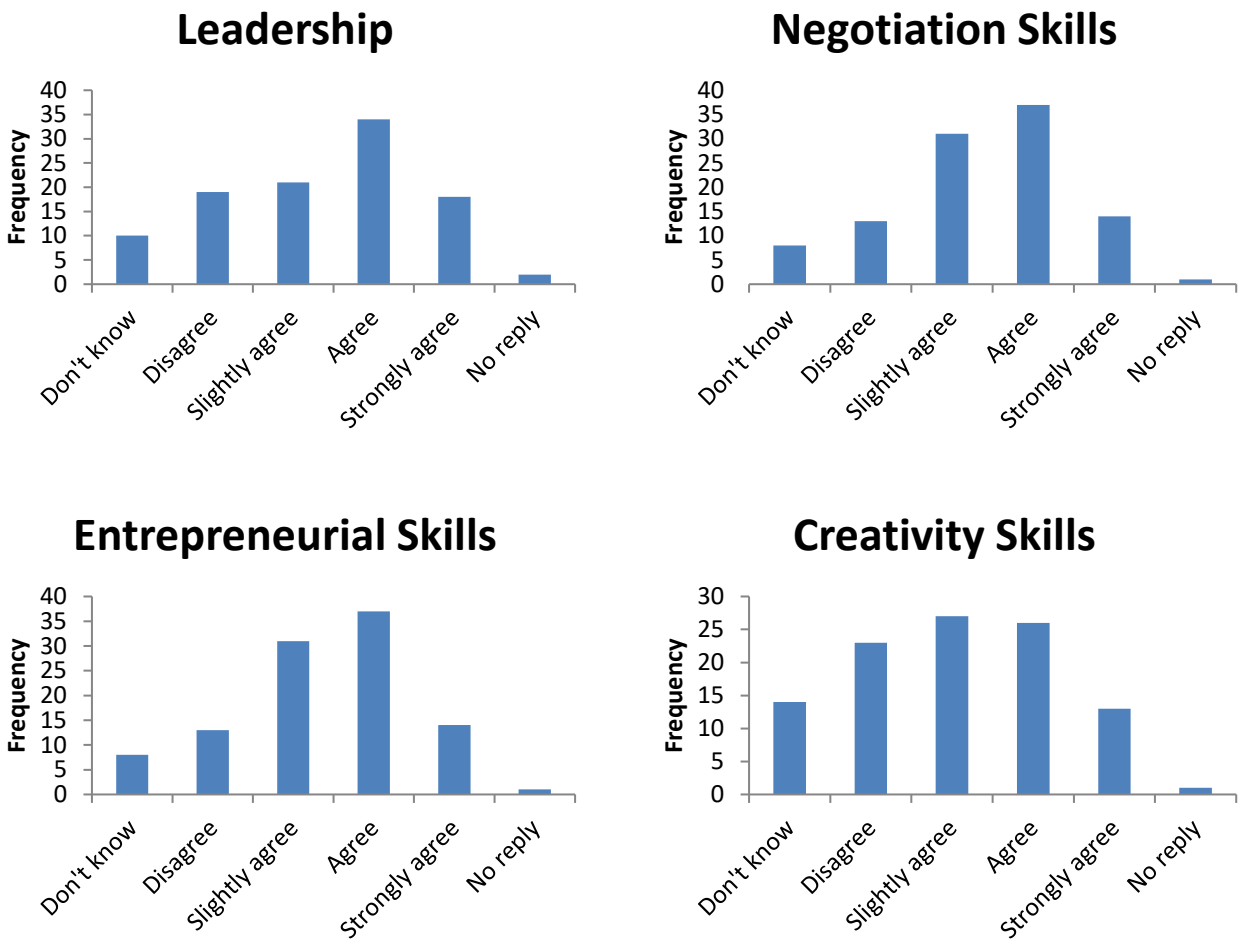


Fig. 31: Educational Experiences - University of Zagazig

The following figures 32a, 32b and 32c present what students think on the possibility to have courses more connected to the enterprise needs, the introduction of practical activity in classes and finally a period of compulsory placement during their studies. As shown by the following histograms and student's distribution, they agree or strongly agree over all of these questions.

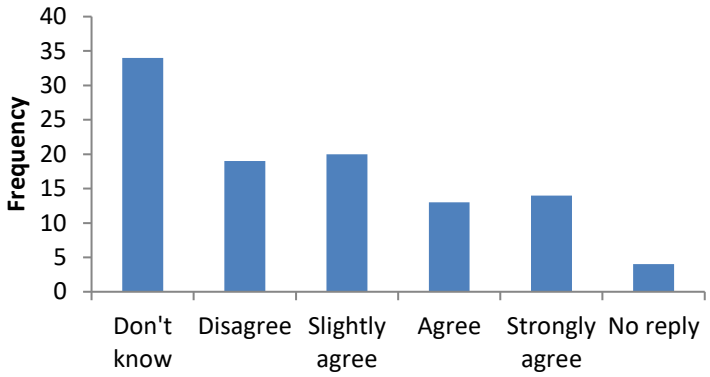


Fig. 32a: Course relevance for enterprise - University of Zagazig

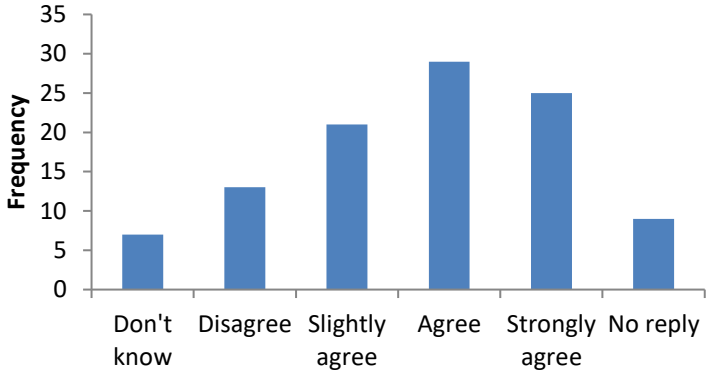


Fig. 32b: Practical Classes - University of Zagazig

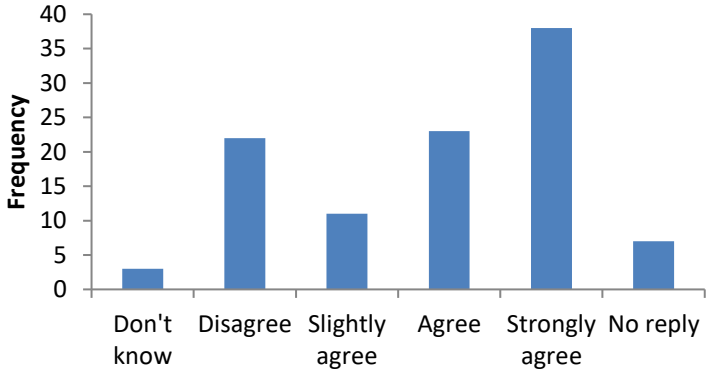


Fig. 32c: Compulsory Placement - University of Zagazig

Finally, students were asked if they would like to attend a new Master providing with some period in different Universities or abroad. 46% of students replayed yes to these questions.

6. Needs Assessment – Teachers

6.1 Summary

The purpose of this survey section is to establish the ways in which teachers of the Egyptian Universities involved in the project assess their professional development and the level of satisfaction connected to two important factors: the support services and facilities offered by their universities and the educational experiences.

Specifically, some of the issues that the teachers survey seeks to address are to:

- Detect what formal and informal professional activities have affected their professional carrier: scientific courses, educational courses, teaching's networks.
- Better understand which aspects of their University are most and least satisfied with.
- Collect their thoughts over the universities' main missions.
- Highlight the level of satisfaction regarding support services and facilities supplied by their universities as classroom and lab facilities, availability of computers and technology, career counseling and placement for students etc.
- Provide the teachers' perception regarding the quality of the teaching staff, interest that teaching staff have in the progresses of their students, etc.
- Analyze teachers' thoughts over which type of skills students are developing while attending the University: research skills, critical analysis, theoretical and or practical skills etc.
- Detect possible actions that Universities have to enhance in order to improve the employability of graduate students.

Analysis of the results of the teacher's survey can provide universities and with information to bring the Master degree course on Sustainable Land Management (SLM) in line with the needs of competences required by of the labor market and overcome possible lacks in the Egyptian education system. As previously reported, the main purpose of this survey has therefore been to provide information and evidence that can serve as a basis for the discussion and analysis of actions that can be developed to improve and enhance the higher education master on SLM on the way of:

- Improved approaches in the Egyptian educational system related to the themes of Sustainable Land Management.

- Improvements to institutional actions and services in order to facilitate graduates' transition from the university to the world of work.

According to the teachers' survey, among the 73 professors interviewed, the majority are male, 85%, and possess a PhD degree, 90%. The modal age is 35-50 years, 50% of the sample, and 60% of them have more than 15 years of teaching. Professors' teaching activity is mainly connected to soil and water science, plant nutrition, microbiology, farm machinery, agricultural engineering, animal science, horticulture, biochemistry.

It can be recognized that teacher learning and development is a complex process that brings together a host of different elements and is marked by an equally important set of factors. Also, that at the centre of the process, teachers continue to be both the subjects and objects of learning and development. From the survey, it emerges that, regarding the participation in formal and informal professional activities that have affected their career as teacher, the teachers mainly highlight the participation in scientific courses, research networks, and reading literature as the main drivers to improve the career.
Less importance is given to educational courses and teaching networks. This seems at odds with recent literature where the power of teacher co-learning emerges very strongly. University cultures that facilitate the process in networking and interchanges among school and university systems, as courses and workshops that introduce peer coaching or support collaboration and joint projects, have always strengthened of extreme importance in literature. The lesson learned is that teachers naturally talk to each other, and that such a talk can take on an educational purpose. However, it also is true that in many places, classroom teaching continues to be a solitary activity. Therefore, to move from co-learning through talk to co-learning through observation and feedback must be necessary as well as effective. Moreover, other partnerships such as those generated by external researchers working with teachers as co-researchers may contribute to modify the traditional separation between academia and the professions.
Regarding the aspects of their University they are most and least satisfied with they reported, among the most, the teachers and staff qualification, and among the least they cite the infrastructure facilities, including labs and computer facilities, lack of field training and teaching methods.

They were also asked which is the main university mission and the majority of them, 88%, reported the mission of training graduates who meets the labor market demands. Interestingly, only 45% of teacher'

reports that the University mission has been accomplished.

The set of questions related with the level of satisfaction of support services and facilities confirm what emerged in the analysis of the aspect of their University they are least satisfied. Specifically, they were asked if they are satisfied with the actual availability of classrooms and lab facilities, 48% disagree or slightly agree, with the availability of computers and technology, 44% disagree or slightly disagree, with the availability of library resources, 40% disagree or slightly disagree.

The level of dissatisfaction is higher for the facilities connected with on campus resources for visiting professors, career counseling and placement for students and the opportunities to spend mobility period abroad where the percentage of teachers, which disagree or slightly agree is in the range of 51%-61%.

A further set of questions is related to the teachers' level of satisfaction regarding the educational experience. Generally, the level of satisfaction is good for the quality of the teaching staff, i.e. their professional experience, teaching staff ability and course availability. Some lack of satisfaction emerges for the questions related to the quality of the education given to students and the Interest that teaching staff have in the progresses of their students. Here the percentage of teachers who disagree or slightly agree is around the 40%.

Teachers were also asked to express their level of satisfaction regarding different type of skills that Egyptian students are developing while attending the University.

With the exception of the theoretical skills, what emerges from the survey analysis is a large criticism over the skills students are developing during their university carrier. Around 55-60% of teachers are not satisfied of students' development of research and practical skills, critical analysis, entrepreneurial ability and creativity. The highest value of not satisfaction is connected to the language assessment, where 63% of teachers disagree or slightly agree among the development of specific skills.

These results need some reflections. Different studies have shown as engaging students in research and creative activities may promote the interest in research careers and fostering and appreciation for the research process in students. Introducing this type of skills may enhance students' education through hands-on learning activities that cultivate students’ analytical, logical, and creative thinking, problem solving, curiosity, written and oral skills, and self-reliance. It can also provide concrete examples of how theories and principles are applied to find solutions to problems. Further may introduce students to the methods of inquiry in their disciplines, foster appreciation of the research process, and stimulate students’ interest in pursuing academic or research careers. Finally, it can prepare students for advanced graduate or professional education. It has been suggested that “these shortcomings have real-world

consequences". Employers report repeatedly that many new graduates they hire are not prepared to work, lacking the critical thinking, writing and problem-solving skills needed in today's workplaces.

In the survey is also investigated the importance that teachers attribute to some actions taken by Universities to enhance the employability of graduate students. Specifically, it has been rated the possible actions connected with run courses that are more relevant to the needs of enterprises, including practical classes in courses, including compulsory work placement experience as an integral part of the curriculum. The first two actions are reputed as the main relevant in enhancing the employability of graduate students.

6.2 University of Alexandria

Introduction

A number of 22 questionnaires were collected from the University of Alexandria. All questionnaires were reputed valid. Regarding the gender analysis, only 5 were female (22.7%) and 17 were male.

Regarding the age distribution, the highest number of teachers were inside the age range of 30-50 and 50-70 years,

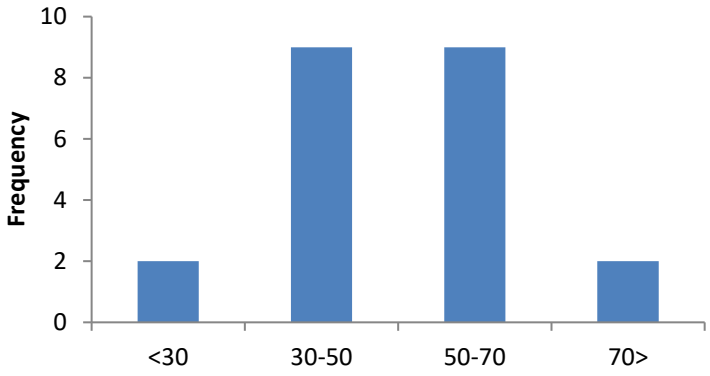


Fig. 33 Teachers' Age – University of Alexandria

The majority of teachers possess more than 20 years of teaching. From the survey emerges a modest involvement of the teaching staff in scientific courses, educational courses, and in the teachers' network, although these professional activities are reputed important for a certain number of teachers. The research network and reading literature are reputed the professional activities with the highest impact on the professional career, as well as the informal dialogue with colleagues on how to improve the teaching methods.

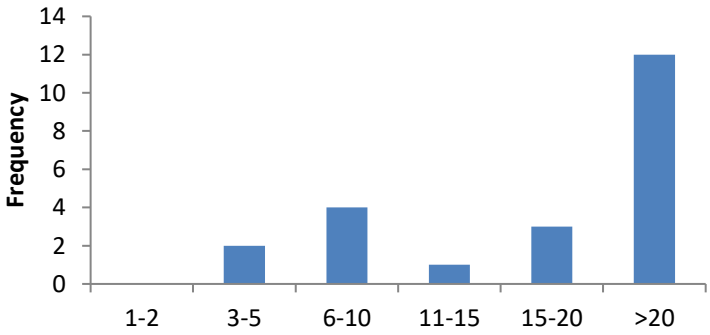


Fig. 34: Years of Teaching – University of Alexandria

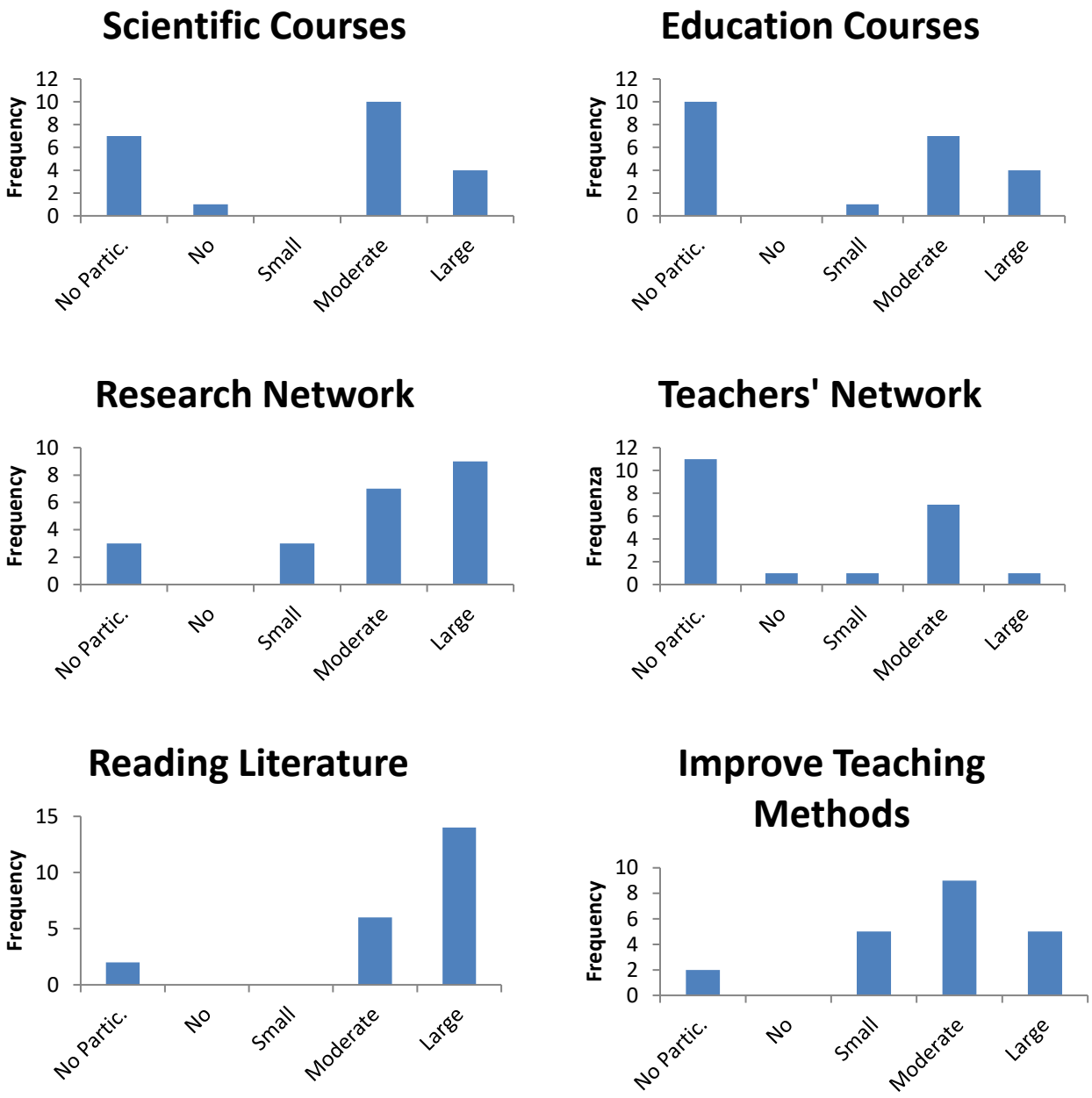


Fig.35: Teachers' Professional Activities - University of Alexandria

Teachers' satisfaction

Two open questions were supplied regarding what aspect of Alexandria University the teachers were most and least satisfied with. Regarding the aspects that the teachers were most satisfied with, they were reported to be classroom facilities, communication with students and human potential. The last open

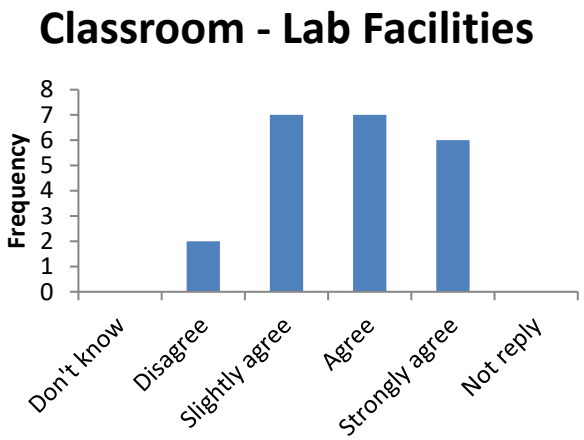
question was mainly filled with lack of infrastructure and research facilities, laboratories and library research funds.

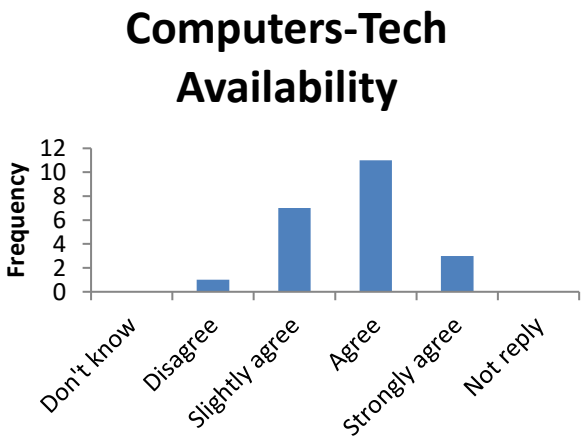
University mission

Regarding the University mission, 90% of teachers responded that it was connected to training graduates to meet the job market demands; moreover, 60% of them highlighted training specialists / professionals in different fields of study as a mission. Around 50% of teachers thought that the University of Alexandria is fulfilling its missions.

Support services and facilities

Regarding the level of satisfaction with classrooms and laboratory facilities, the responses were non homogeneous, with an important share of teachers seeming to be satisfied with the present level of labs, but many other of them only slightly agreeing with this position or completely disagreeing. Similar results could be noted for the other questions. However, a relevant level of non-satisfaction emerged for the questions regarding the opportunities to spend a period abroad. There, the majority of teachers were classified under "slightly agree"





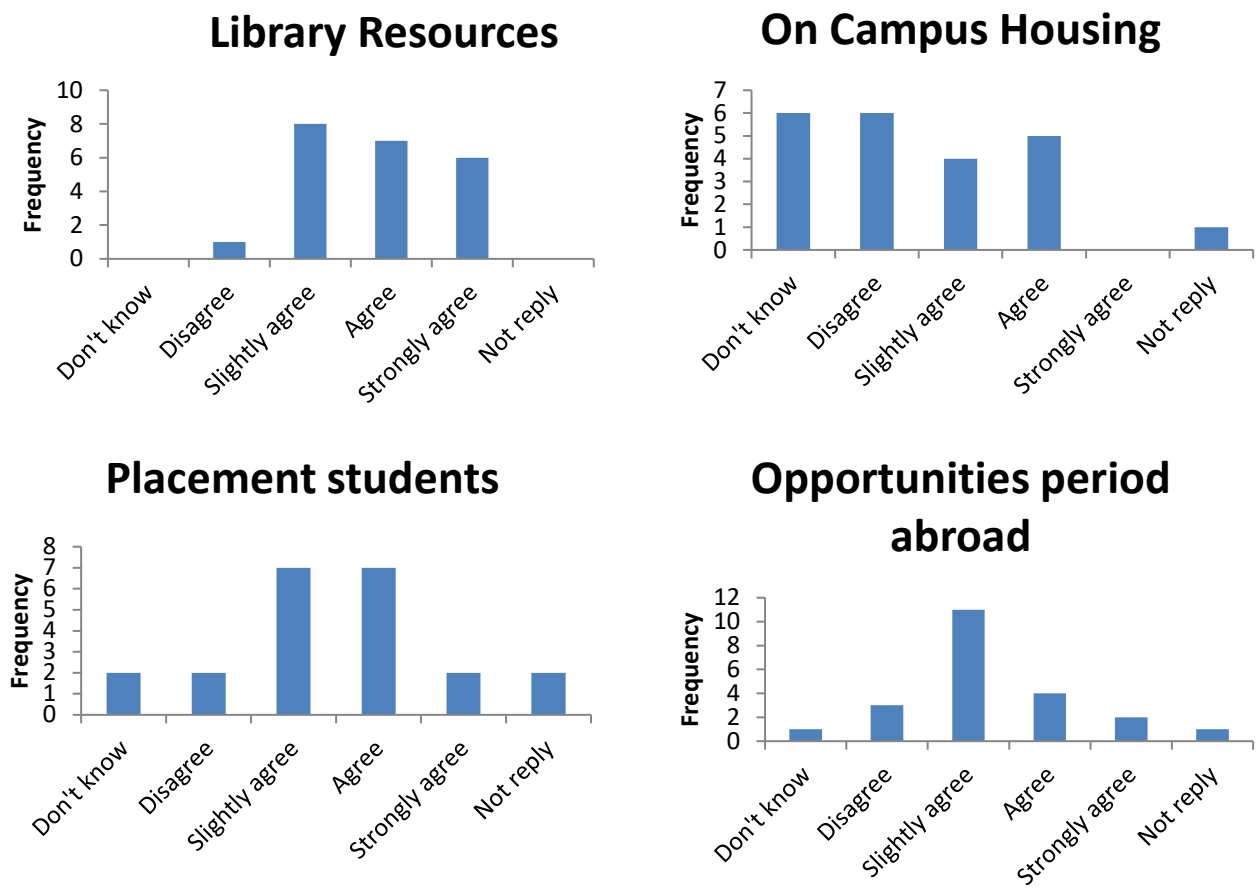


Fig. 36 Support services and facilities - University of Alexandria

Quality of Educational System

The sample of teachers is more homogeneous with respect to the set of questions associated with the educational systems. A large majority of teachers thought that the quality of teaching staff, of education, the teaching staff ability exerted by the professors were good and only some of them disagreed with the amount of interest that teaching staff has in following the progress of their students. Finally, the sample of teachers positively underlined the availability of courses at the University of Alexandria. In synthesis, the didactic supply appears to be suitable for the teacher staff team both in terms of courses availability and in terms of structures. However, these sets of replies seemed at odds with the previous section's ones. More and possible direct investigation is needed.

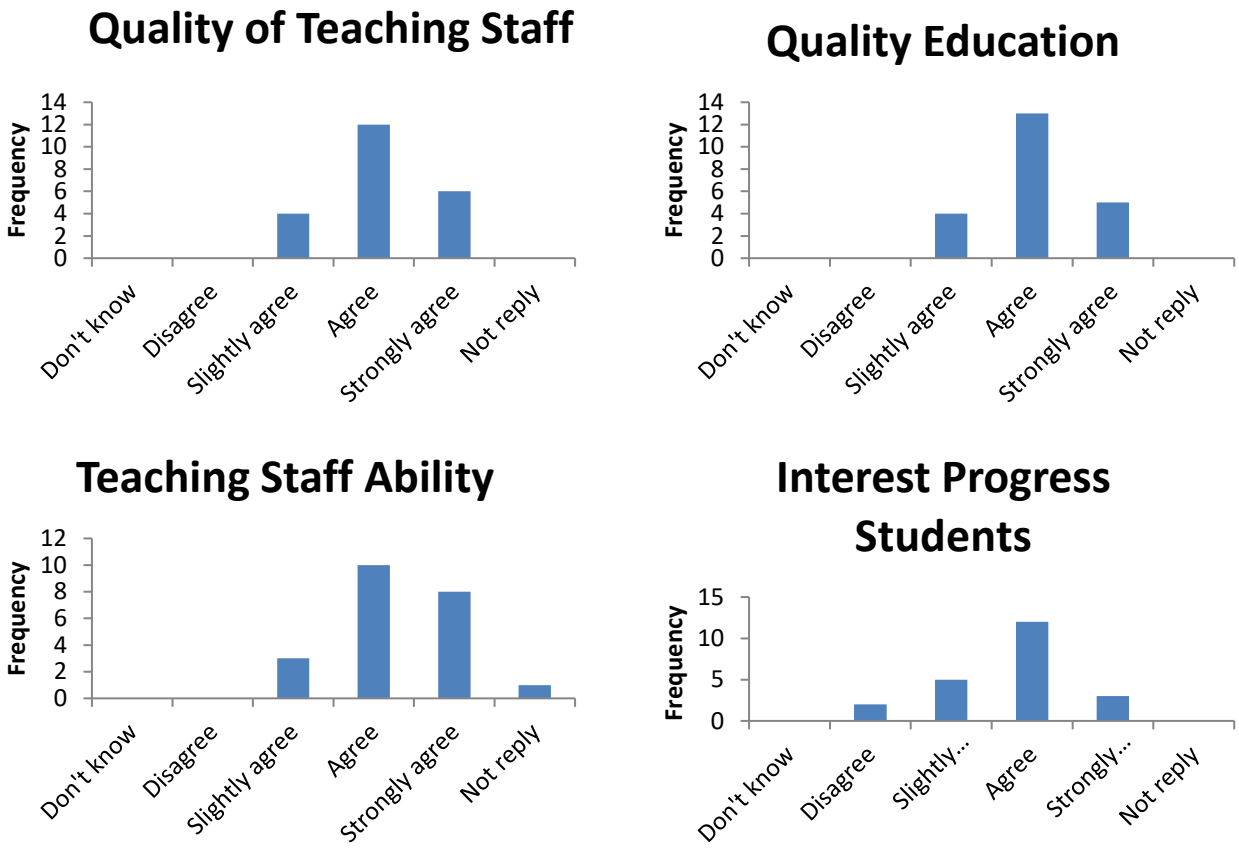


Fig. 37: Quality of Educational System - University of Alexandria

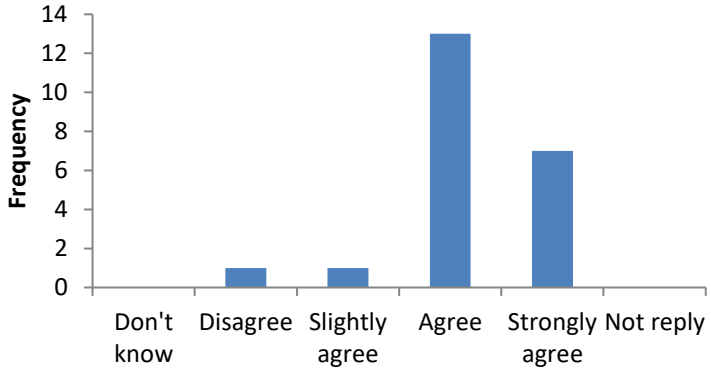
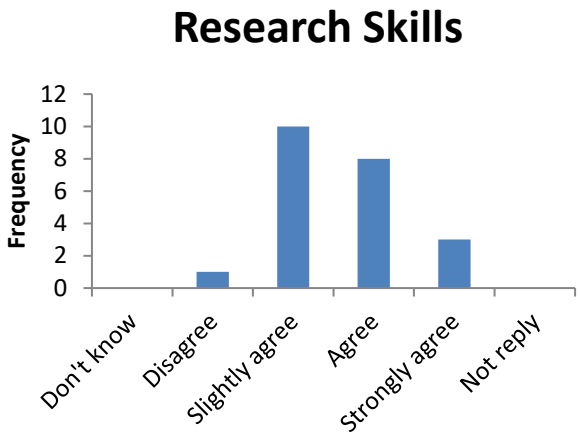
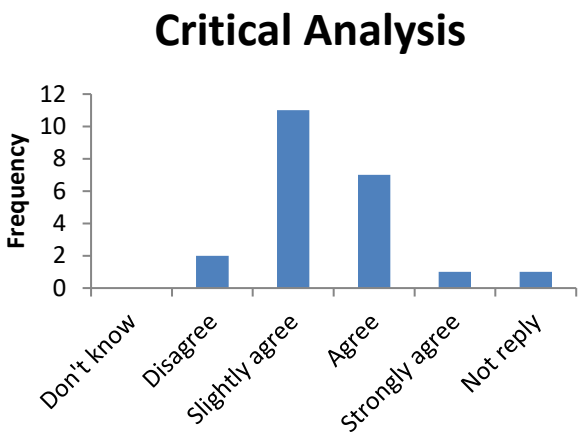


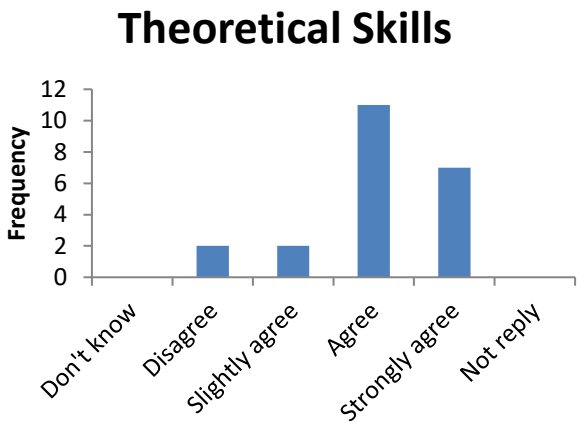
Fig. 38: Courses Availability - University of Alexandria

Teachers' level of satisfaction on the improvement of students' skills

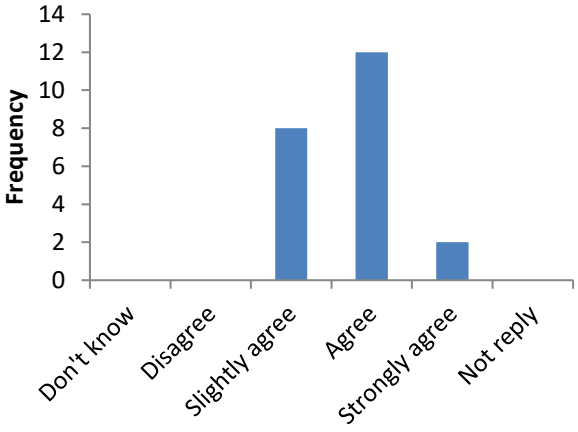
The aim of this group of questions was to investigate teachers' level of satisfaction regarding the improvement of their students' skills. The results showed that teachers seemed skeptical relatively to the improvement of the research skills, critical analysis and languages. On the other hand, they were satisfied with the improvement noted in the theoretical and practical skills. A similar attitude was reported concerning the students' ability to work alone or in team. Both the entrepreneurial ability and creativity were also reported as critical points on the didactic process in the University of Alexandria.



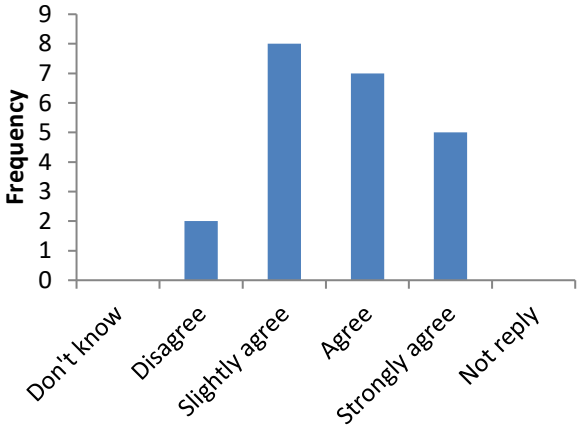




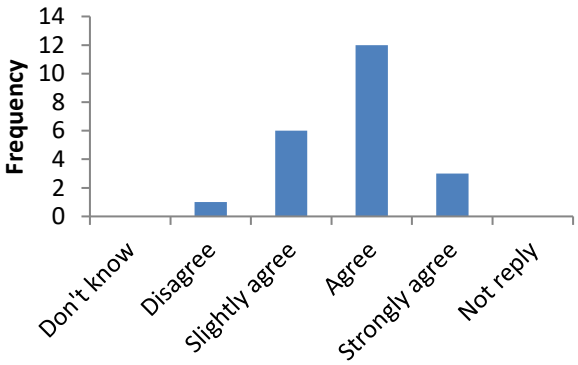
Communication Skills



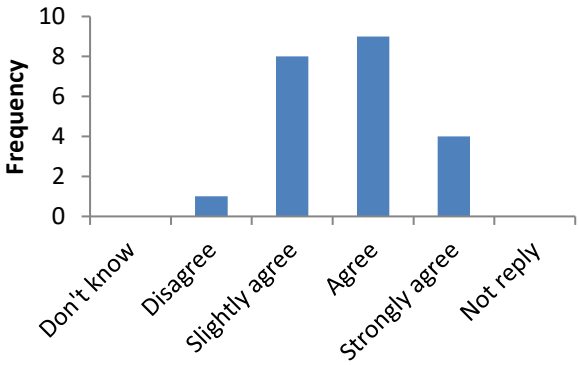
Languages



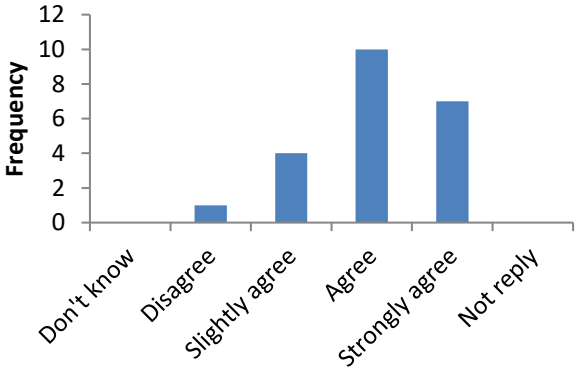
Computer Literacy



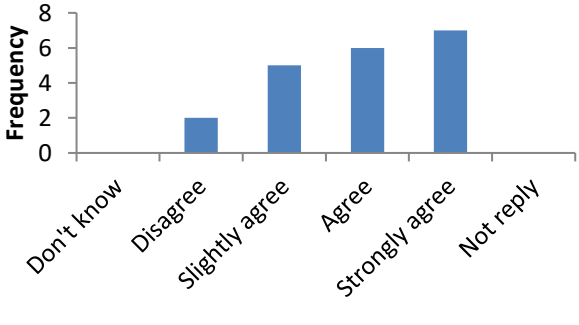
Problem Solving Skills



Ability to work in team



Ability to work independently



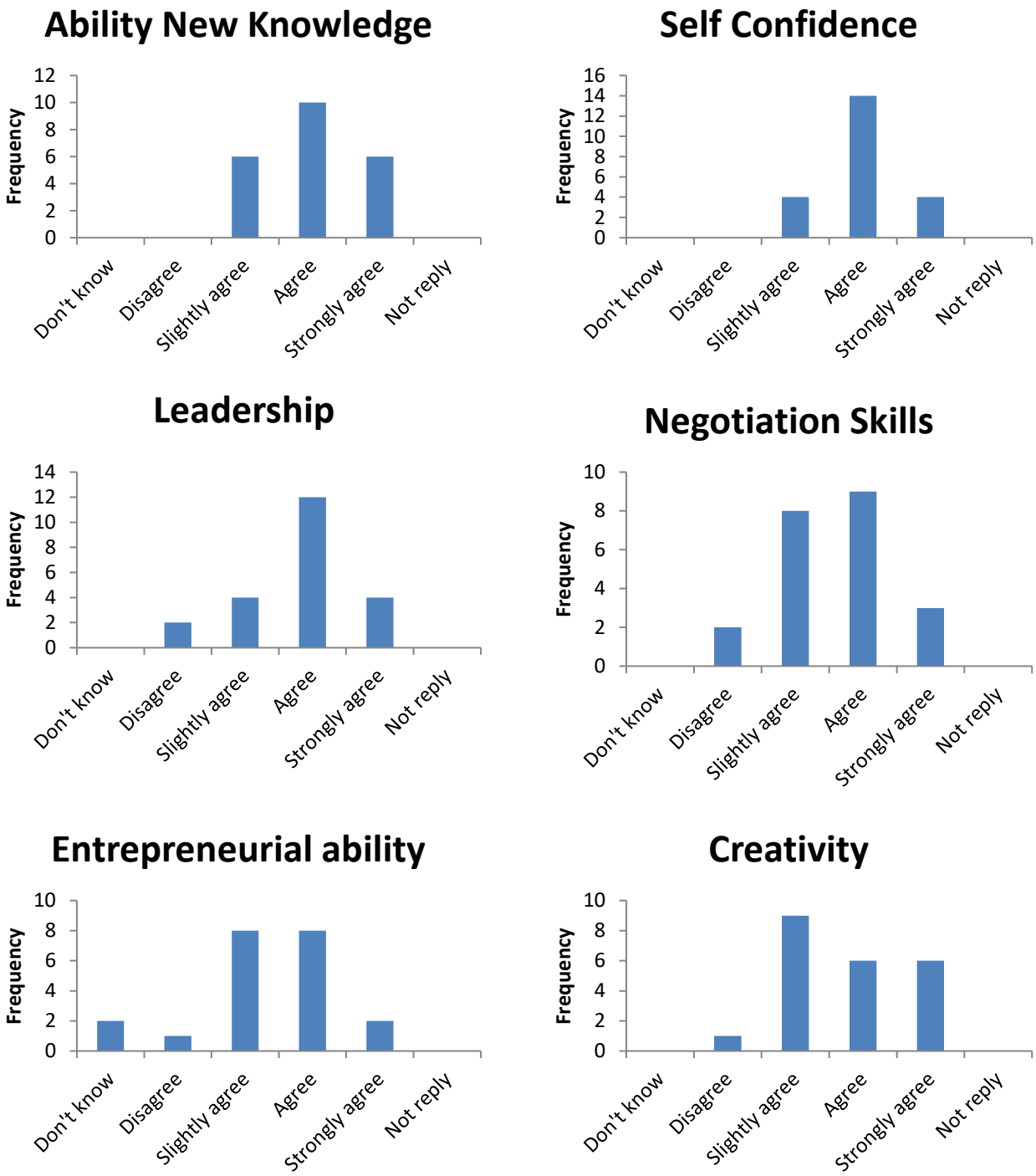


Fig. 39 Teachers' level of satisfaction on the improvement of students' skills - University of Alexandria

A final group of questions was distributed among the teachers; whose aim was to investigate the possible actions that Universities could implement in order to improve the employability of their graduate students. A strong agreement among teachers emerged regarding the idea that Universities have to run courses that

are more relevant to the needs of enterprises. 16 teachers out of 22 agreed or strongly agreed with the importance of this action. Similar results were obtained for the idea of improving the activities devoted to practical classes. Less agreement was found among teachers on the possibility to introduce compulsory placement activities for students: in this case, the group of teachers equally divided among those who disagreed or slightly agreed and those who agreed or strongly agreed.

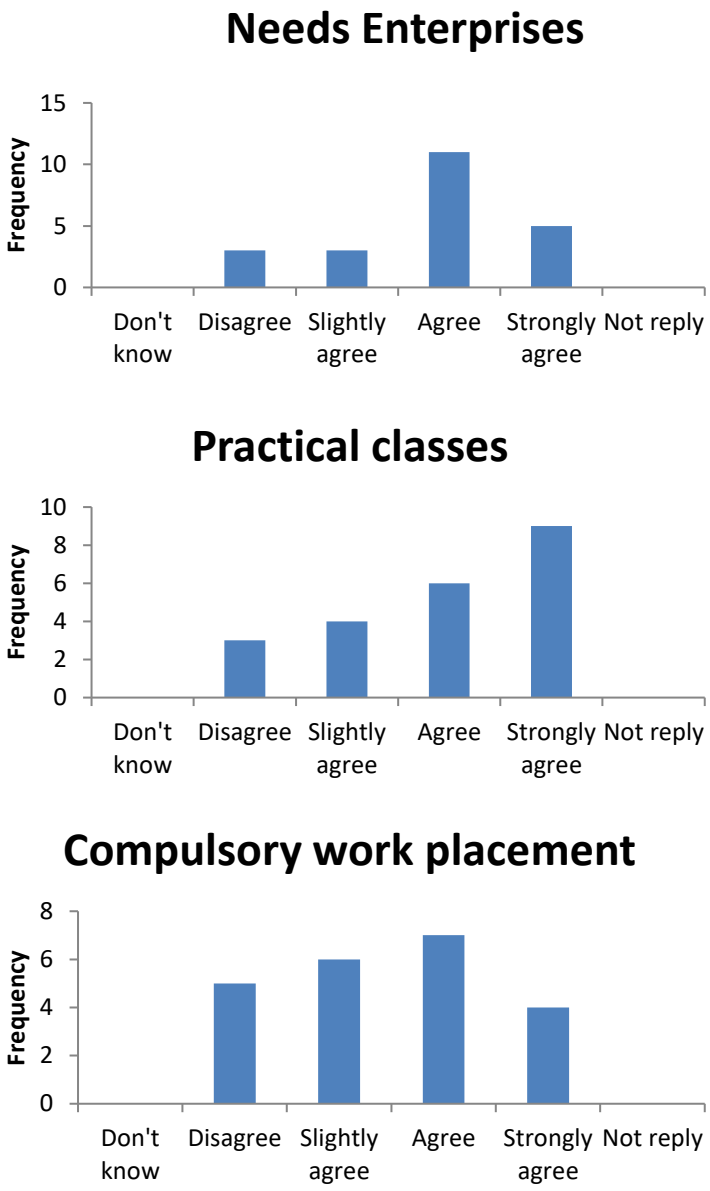


Fig. 40 Actions to enhance employability of graduates - University of Alexandria

6.3 University of Cairo

Introduction

27 questionnaires were collected from the University of Cairo. All questionnaires were reputed valid. Regarding the gender analysis, only 1 was female (3.7%) and 26 were male.

Regarding the age distribution, the highest number of teacher were inside the age range of 30-50.

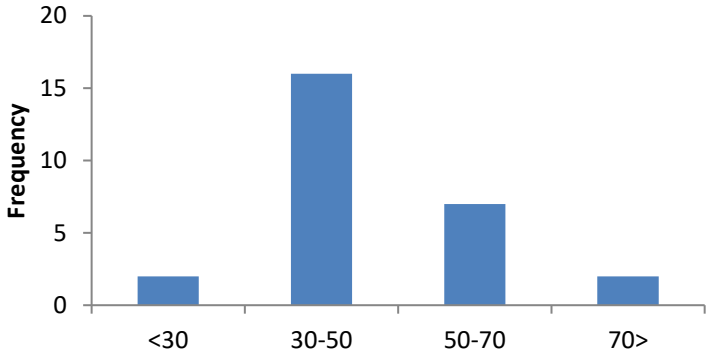


Fig. 41 Teachers' Age – University of Cairo

The majority of teachers had more than 20 years of teaching. From the survey, it emerged a good involvement of the teaching staff in scientific courses, educational courses, while less in the teachers' network. Scientific courses, the research network and reading literature were reputed the professional activities with the highest impact on the professional career, as well as the informal dialogue with colleagues on how to improve the teaching methods.

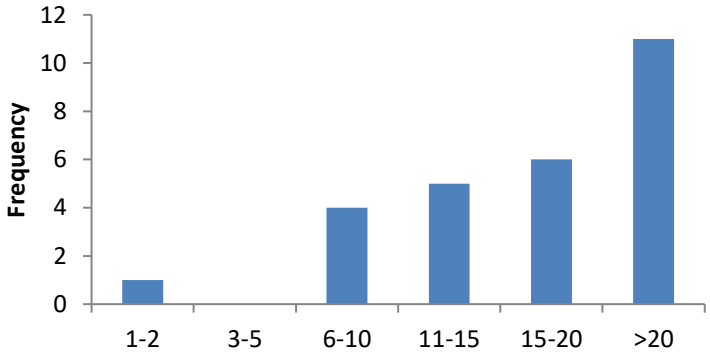


Fig. 42 Years of Teaching - University of Cairo

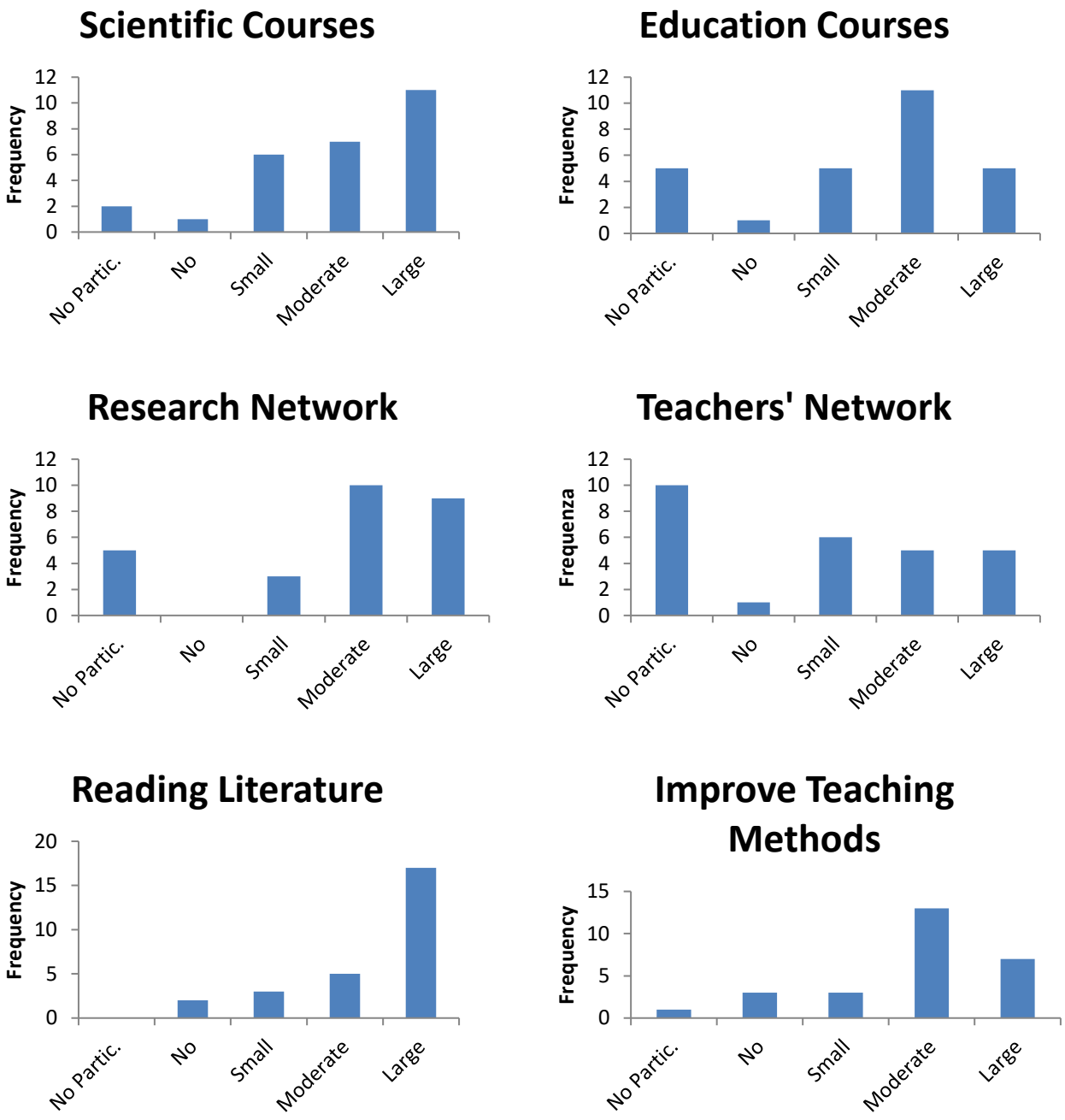


Fig.43 Teacher's Professional Activities - University of Cairo

Teachers' satisfaction

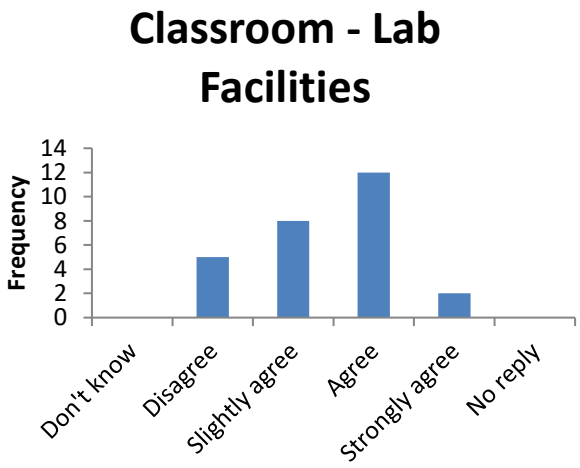
Two open questions were supplied regarding what aspect of Cairo University teachers were most and least satisfied with. Regarding the aspects which teachers were most satisfied with, they were reported to be classroom facilities and human potential. The last open question was mainly filled with lack of infrastructure and research facilities, laboratories and library research funds.

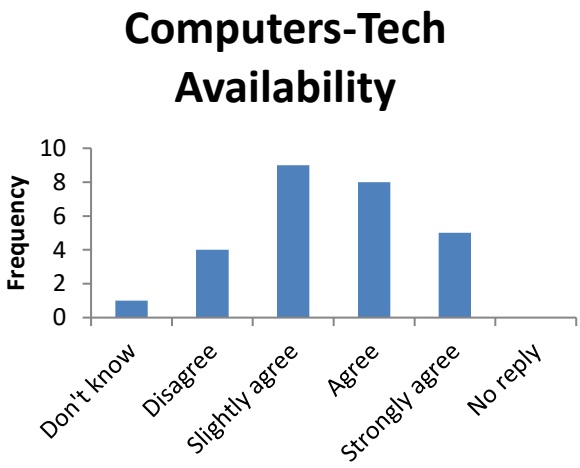
University mission

Regarding the University mission, 100% of teachers responded that was to train graduates to meet the job market demands; furthermore, 60% of them highlighted training specialists / professionals in different fields of study as a mission. Around 50% of teachers thought that the University of Cairo was fulfilling its missions.

Support services and facilities

Regarding the level of satisfaction with classrooms and laboratory facilities, the mode is concentrated around the class of teachers who agreed, but there is a large share who disagreed or slightly agreed. Less agreement was shown about the availability of computers. Similar bimodal distributions could be noted for the other questions. However, a relevant level of dissatisfaction emerged for the questions connected with the availability of on campus housing and opportunities to spend a period abroad. There, the majority of teachers were classified as "slightly agree".





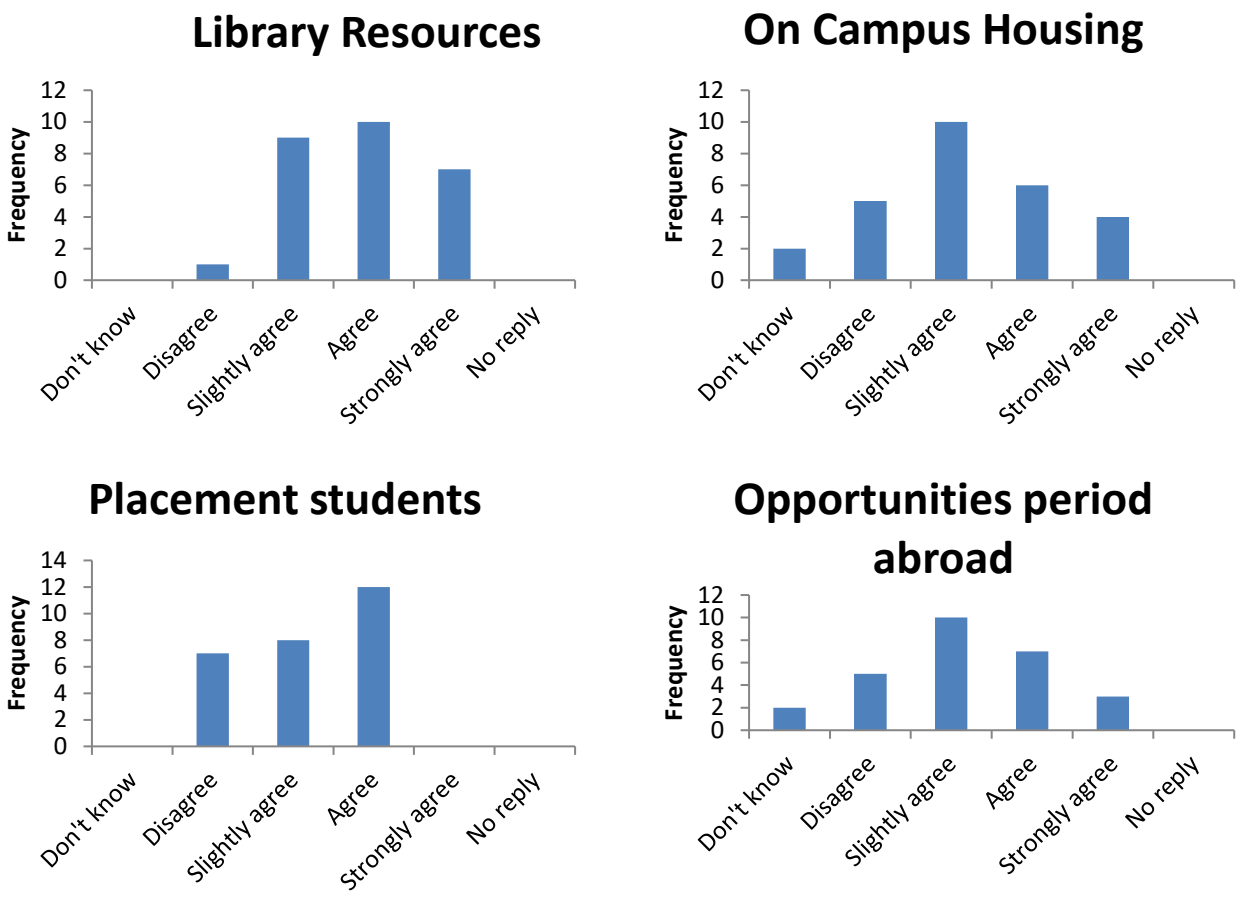


Fig. 44 Support services and facilities – University of Cairo

Quality of Educational System

As with other Universities, as well as for the Universities of Alexandria, for this set of questions the sample of teachers was more homogeneous. A large majority of them thought that the quality of teaching staff was good. Moreover, the teaching staff's ability exerted by the professors was reported to be good and only some disagreement emerged in connection with the level of interest that the teaching staff has in following the progress of their students. Finally, the sample of teachers positively underlined the availability of courses at the University of Cairo. However, a large number of teachers thought that the quality of education had to be improved.

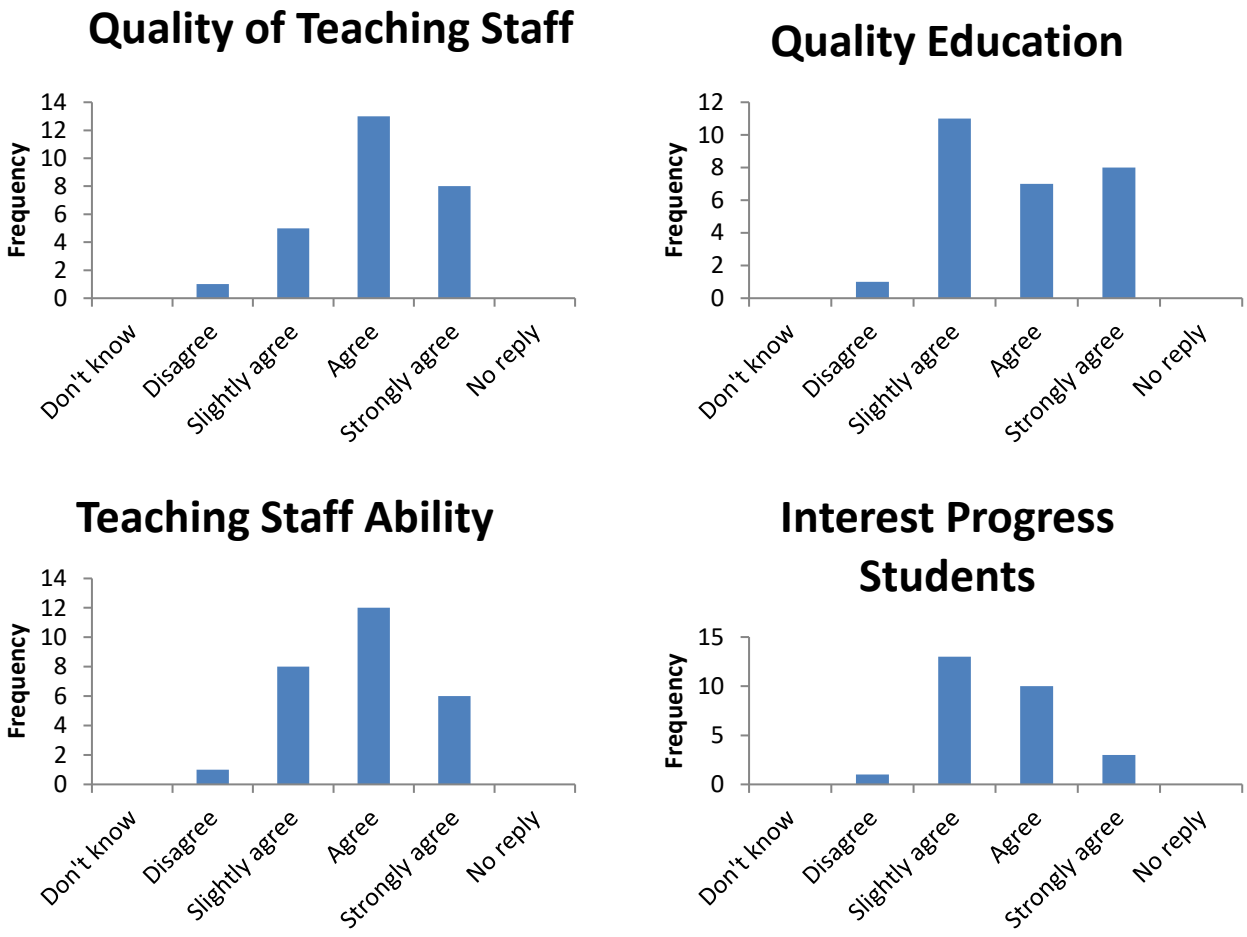


Fig. 45 Quality of Educational System – University of Cairo

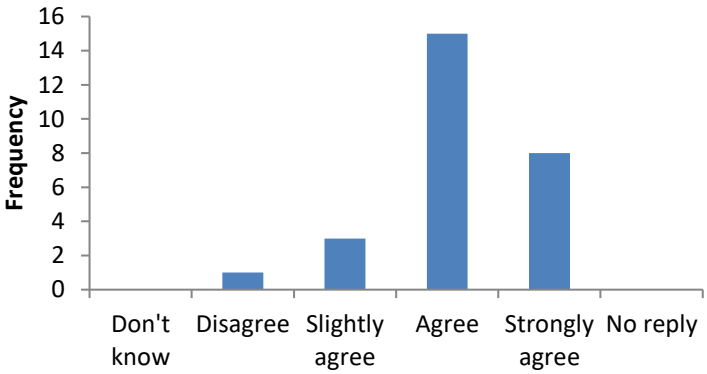
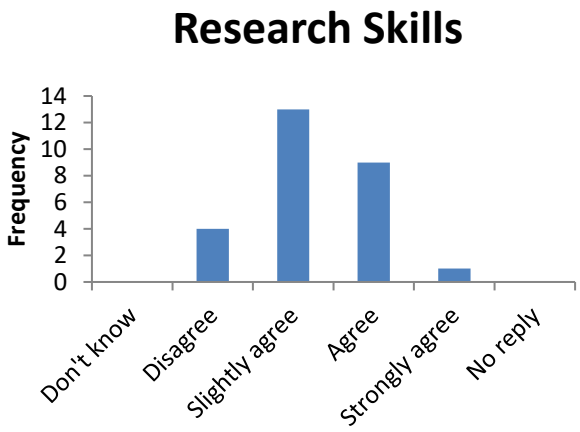
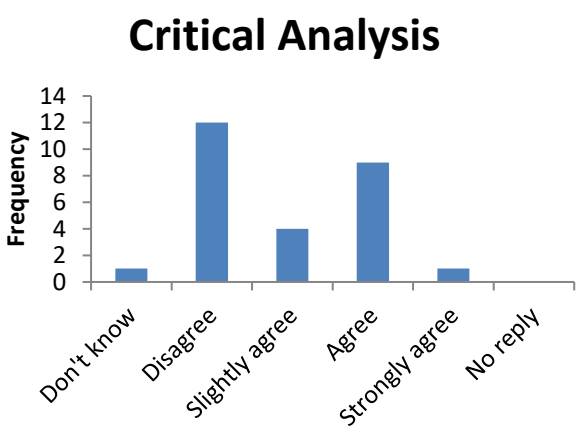


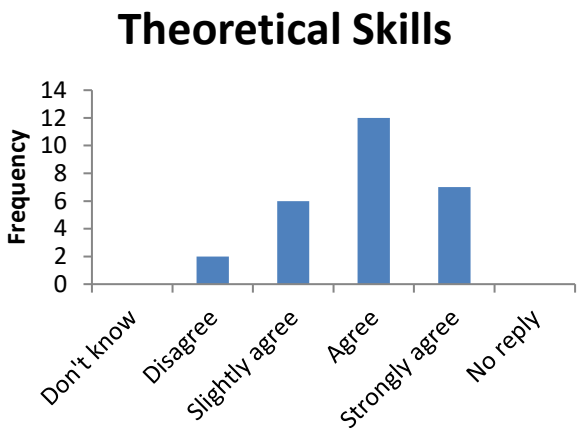
Fig. 46: Courses Availability – University of Cairo

Teachers' level of satisfaction on the improvement of students' skills

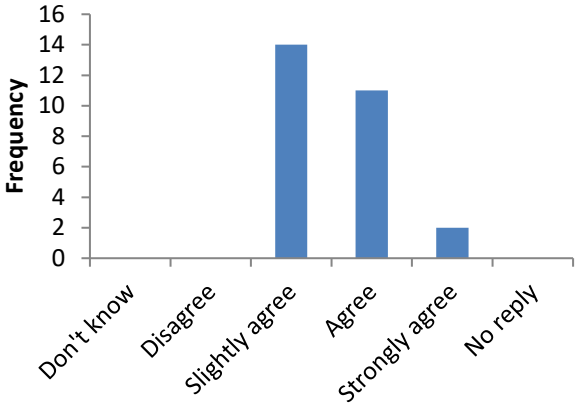
The aim of this group of questions was to investigate teachers' level of satisfaction with the improvement of their students' skills. The results showed that teachers seemed skeptical relatively the improvement of the research skills, critical analysis and languages. On the other hand, they were satisfied with the improvement noted in the theoretical and practical skills. A similar attitude was reported for the student's ability to work in team, while they are more skeptical about their ability to work alone. Both the entrepreneurial ability and creativity were also reported as critical points to the didactic process in the University of Cairo.



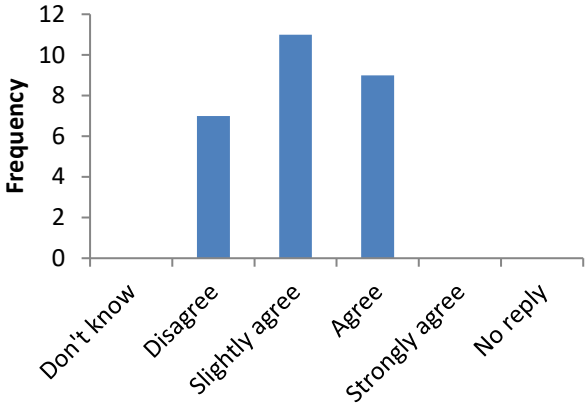




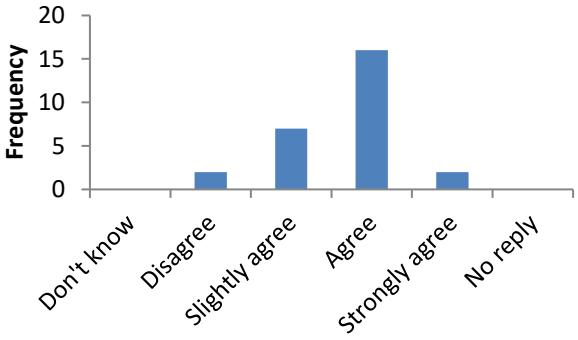
Communication Skills



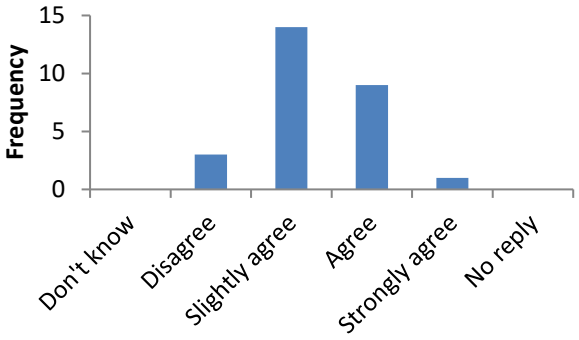
Languages



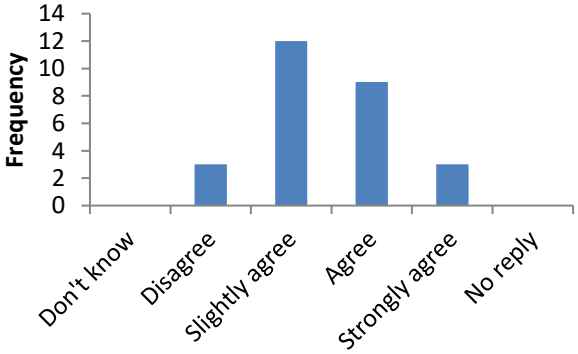
Computer Literacy



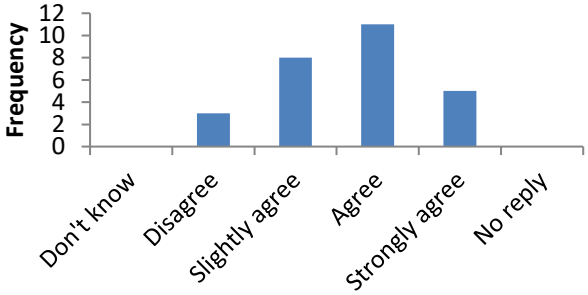
Problem Solving Skills



Ability to work in team



Ability to work independently



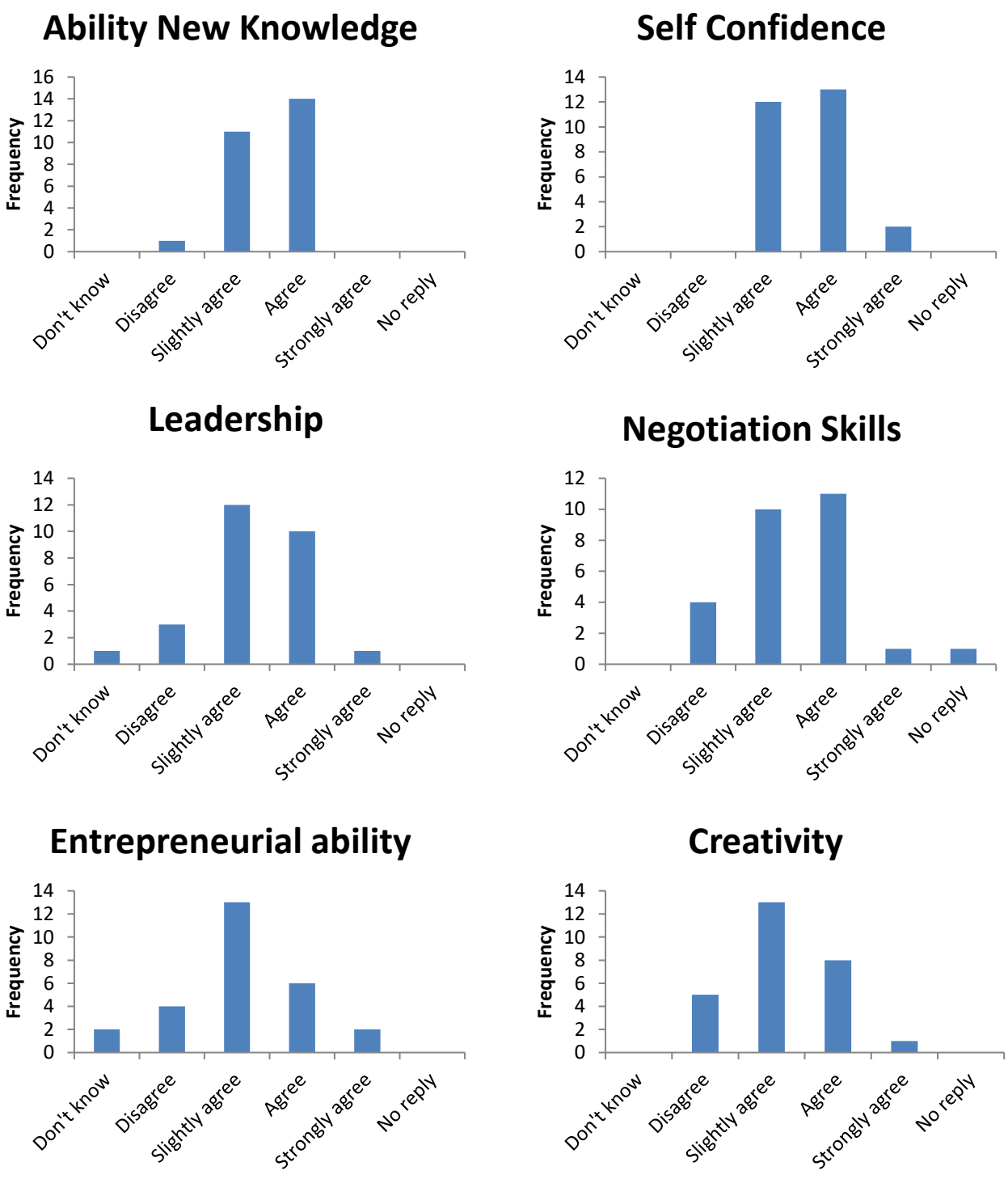


Fig. 47 Teachers' level of satisfaction on the improvement of students' skills – University of Cairo

A final group of questions was distributed among the teachers. The aim of these questions was to investigate the possible actions that Universities could implement in order to improve the employability of

their graduate students. The majority of teachers thought that, in order for the Universities to fulfill this target, they would have to run courses that are more relevant to the needs of enterprises. However, there was a relevant share of teachers who disagreed with this type of mission. Similar results were obtained for the idea to improve the number of activities devoted to practical classes. Less agreement emerged from the question regarding the possibility to introduce compulsory placement activities for students. In this case, the majority of teachers slightly disagreed with the possibility that this type action could improve the employability of graduate students.

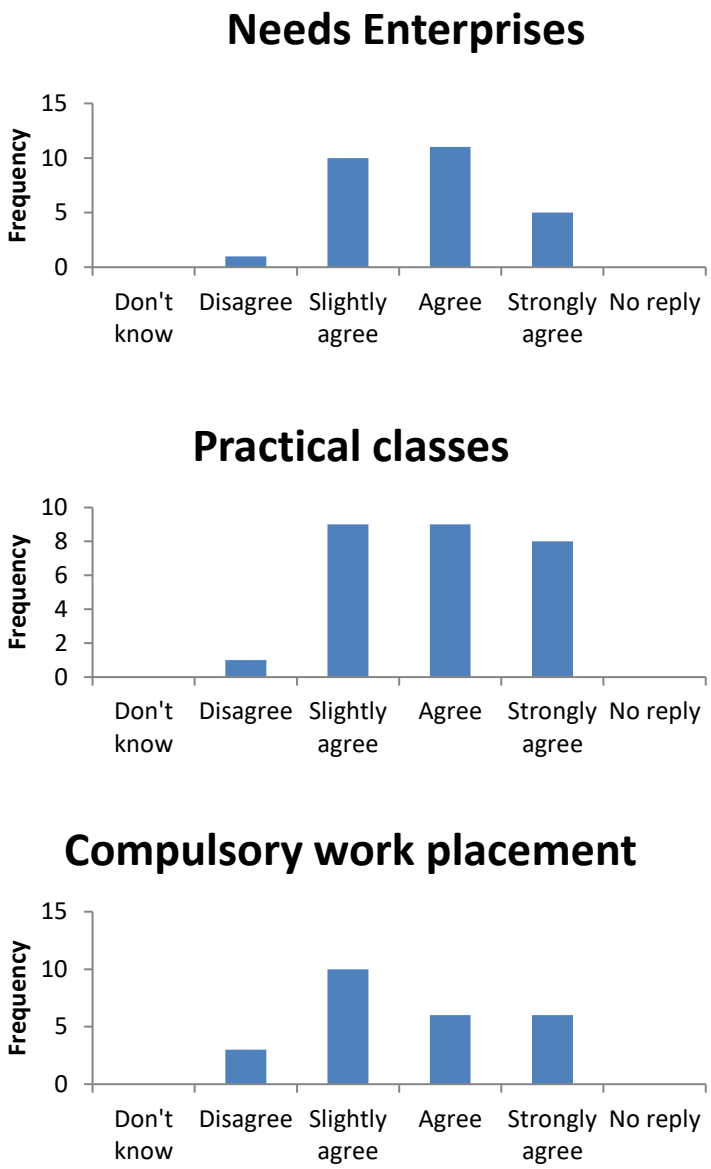


Fig. 48 Actions to enhance employability of graduates – University of Cairo

6.4 University of Damanhour

Introduction

A number of 11 questionnaires were collected from the University of Damanhour. All questionnaires were reputed valid. Regarding the gender analysis, only 3 were collected by female teachers and 8 by male. Regarding the age distribution, the highest number of teachers were inside the age range of 30-50 with few of them in the range of 50-70 years,

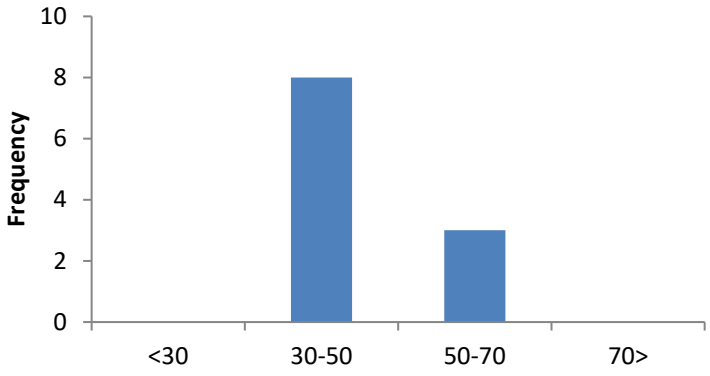


Fig. 49: Teachers' Age – University of Damanhour

Teaching experience is various but a slight majority can be recorded in the range "6 to 10 years". From the survey emerges a concrete and effective involvement in research networks on specific networks, a particular attention to scientific literature, a modest cooperation with other colleagues for improving teaching methods. It seems that Damanhour professors are fully engaged in sharing and at the same time improving their scientific knowledge.

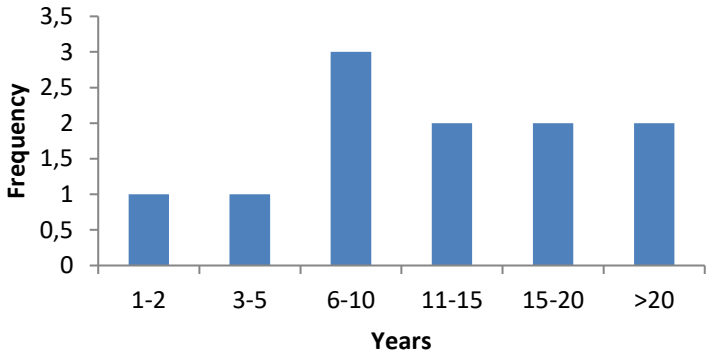


Fig. 50: Years of Teaching – University of Damanhour

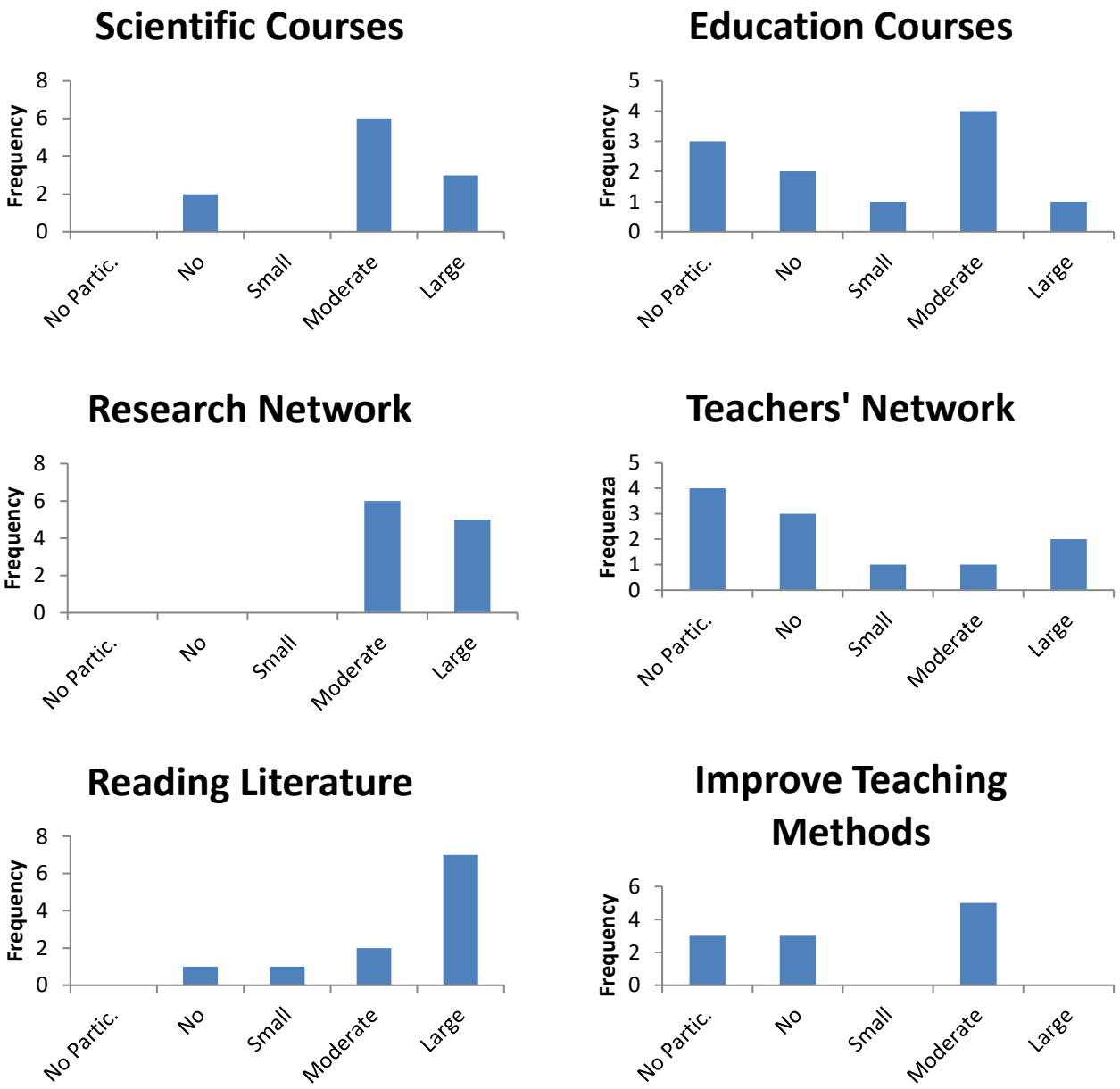


Fig.51 Teachers' Professional Activities – University of Damanhour

Teachers' satisfaction

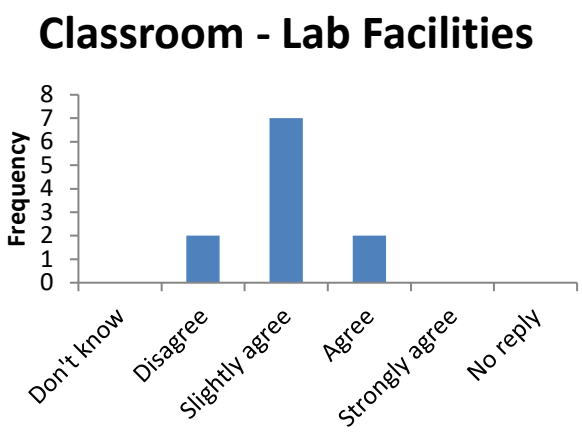
Two open questions were supplied regarding what aspect of Damanhour University the teachers were most and least satisfied with. Regarding the aspects that the teachers were most satisfied with, they report the human potential and scientific cooperation. The last open question was mainly filled with lack of infrastructure such as laboratories, farms and classes capacities. It is important to note that in these questions, teachers seem to reply the same concerns expressed by students as written in the other report.

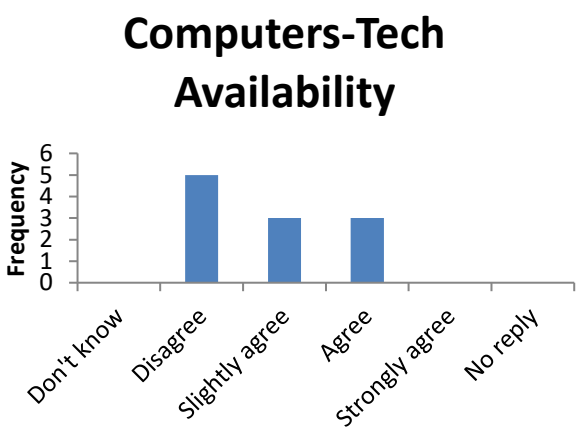
University mission

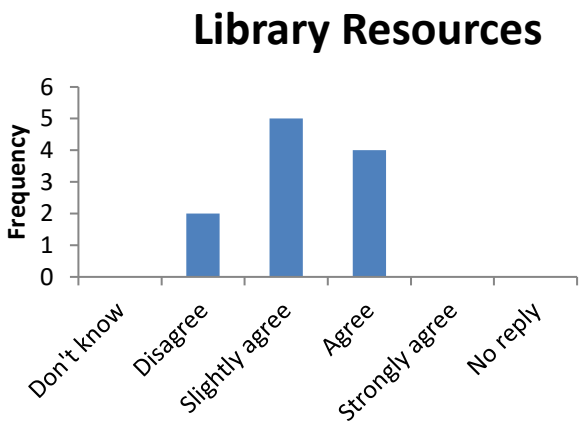
Regarding the University mission, the majority (7/11) of teachers responded that it was not accomplished. Again, this is another point of connection with Damanhour students' results. For teachers, the main mission of the University is, according to hierarchic order, to train graduates, train specialist, form new competencies.

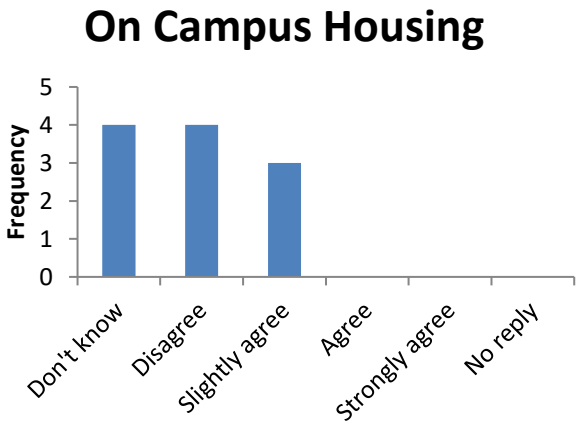
Support services and facilities

Regarding the level of satisfaction with classrooms and laboratory facilities, the responses were non homogeneous, with an important share of teachers seeming to be satisfied with the present level of labs even if they identified in the previous open question that they were not. A relevant level of non-satisfaction emerged for the questions regarding the computer and technology facilities, and on campus housing. For the other indicators, the majority of teacher slightly agree on the submitted questions.









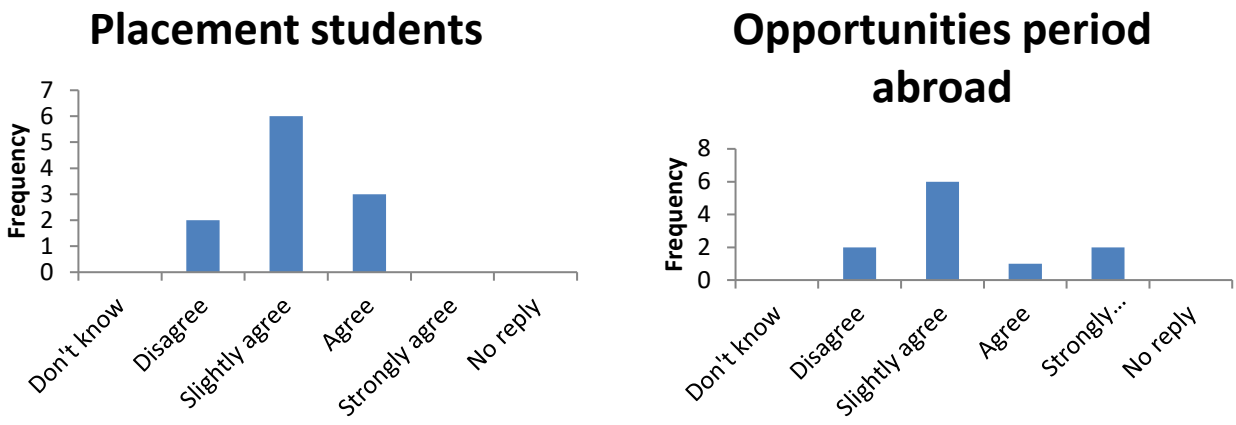


Fig. 52 Support services and facilities – University of Damanhour

Quality of Educational System

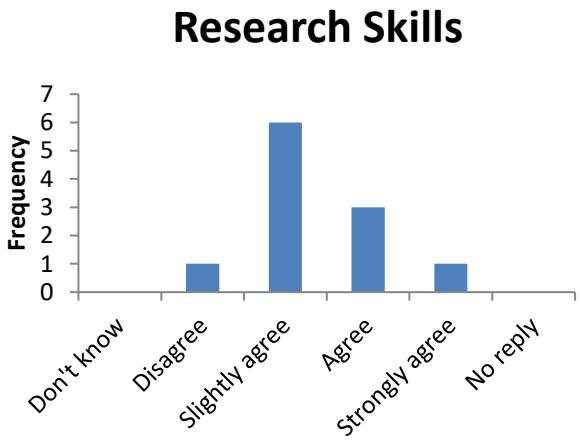
The sample of teachers is more homogeneous with respect to the set of questions associated with the educational systems, in line with the previous open question concerning the student and human potential. A large majority of teachers thought that the quality of teaching staff, of education, the teaching staff ability exerted by the professors were good. Finally, the sample of teachers positively underlined the availability of courses at the University of Damanhour. As expressed in other reports concerning teachers, more investigation seems to be needed in order to have a more complex scenario.

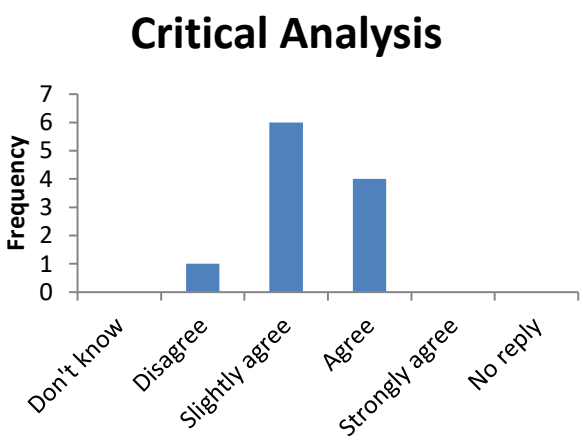
Fig. 53 Quality of Educational System - University of Damanhour

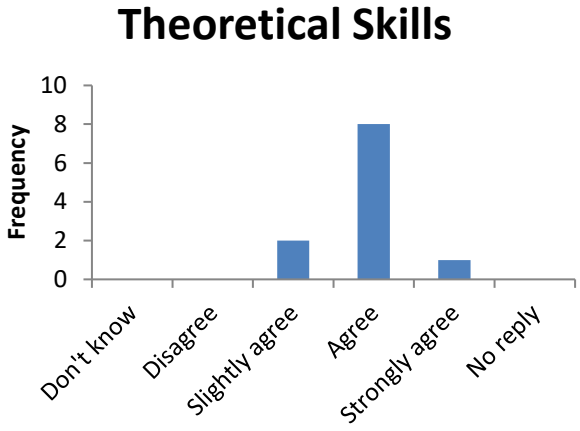
Teachers' level of satisfaction on the improvement of students' skills

The aim of this group of questions was to investigate teachers' level of satisfaction regarding the improvement of their students' skills. The results showed that teachers "slightly agree" about the improvement of the research skills. On the other hand, they were satisfied with the improvement noted in

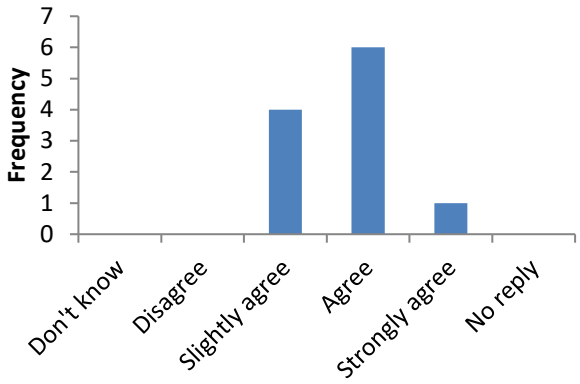
the theoretical and practical skills. Some criticalities have been underlined concerning languages and practical skills, ability to work in team. It seems that students' capabilities are more developed individually and focused on theoretical skills.



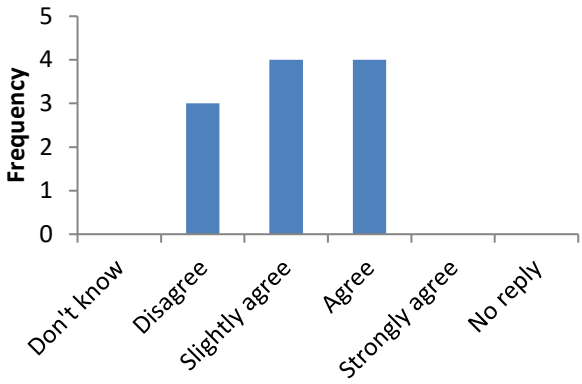




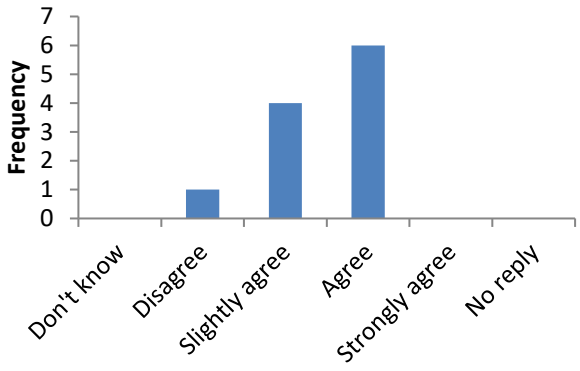
Communication Skills



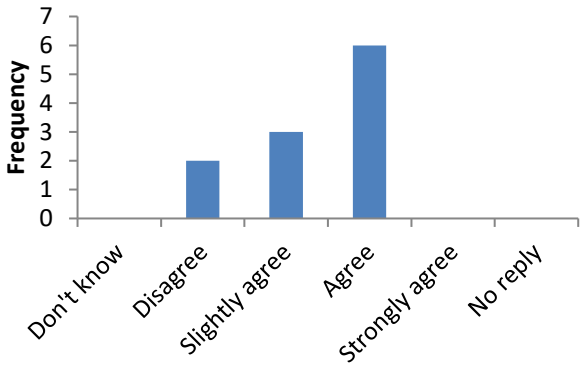
Languages



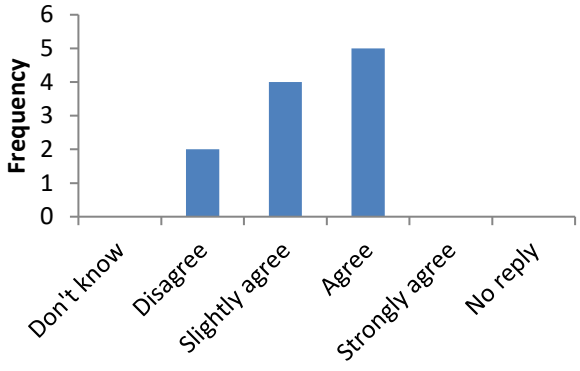
Computer Literacy



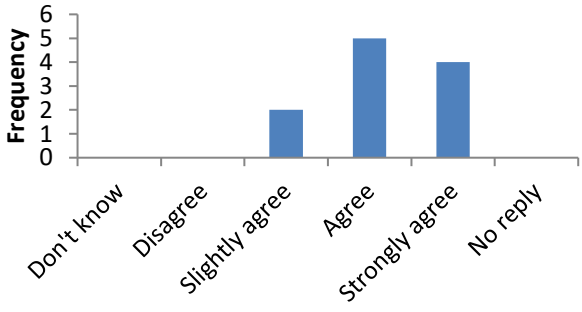
Problem Solving Skills



Ability to work in team



Ability to work independently



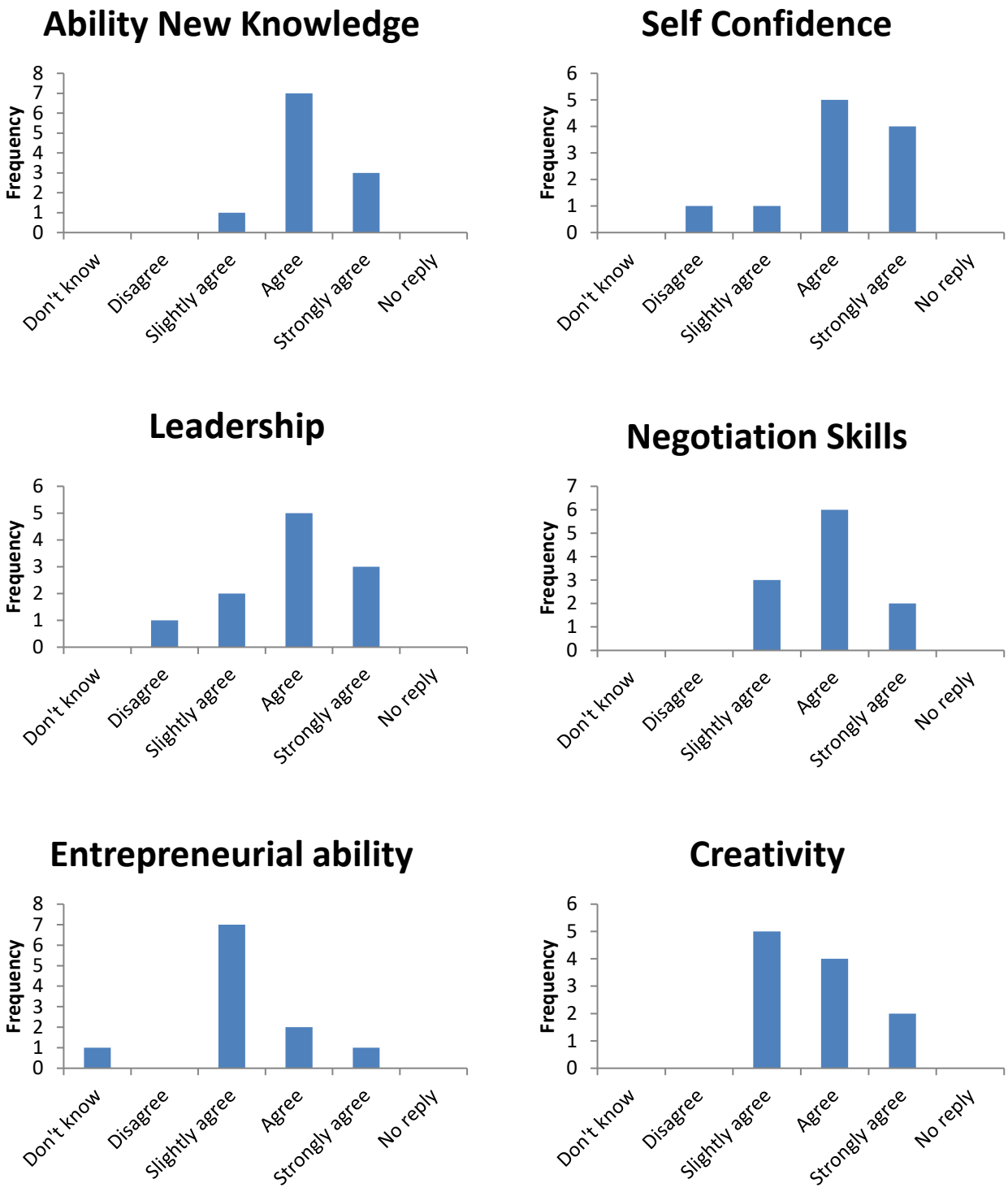


Fig. 54 Teachers' level of satisfaction on the improvement of students' skills – University of Damanhour

A final group of questions was distributed among the teachers whose aim was to investigate the possible actions that Universities could implement in order to improve the employability of their graduate students. A strong agreement among teachers emerged regarding the idea that Universities have to run courses including compulsory placement activities for students. Enterprises should be coopted in this sense, as well as practical classes should be introduced. Even if with some differences, teachers generally agree with the idea of reforming curricula for better introducing students in the job market.

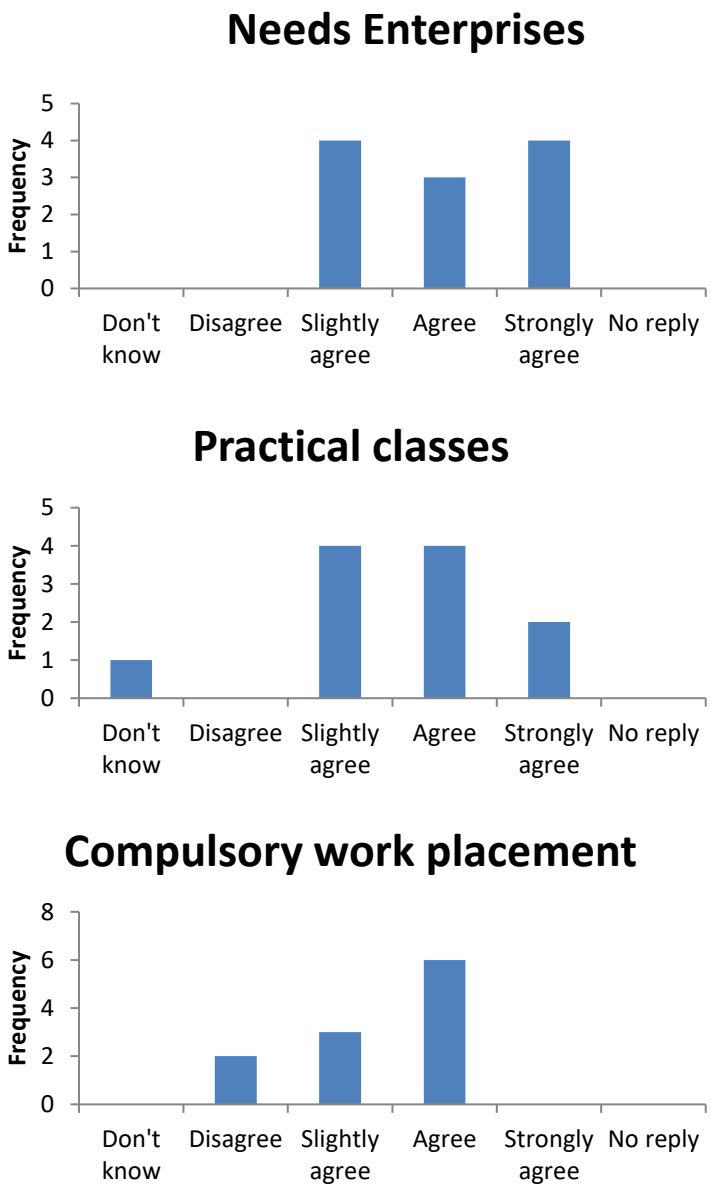


Fig. 55 Actions to enhance employability of graduates

6.5 University of Zagazig

Introduction

A number of 13 questionnaires were collected from the University of Zagazig. All questionnaires were reputed valid. Regarding the gender analysis, only 3 were collected by female teachers and 10 by male. Regarding the age distribution, the highest number of teachers were inside the age range of 50-70 years, with few of them in the range of 30-50 and 3 under 30.

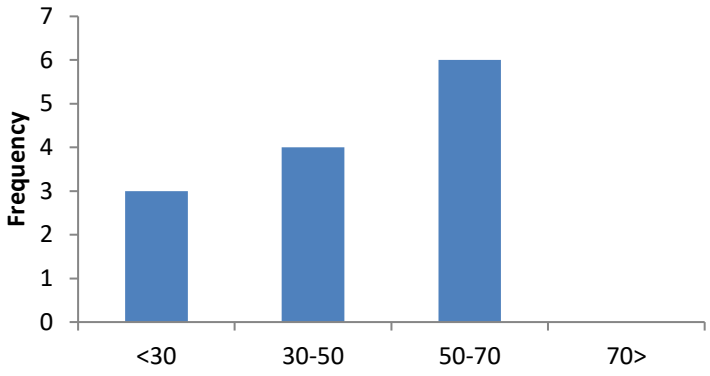


Fig. 56: Teachers' Age – University of Zagazig

Teaching experience is various but a slight majority can be recorded in the range "over 20 Years" which is obviously related with the declared age. From the survey emerges a concrete and particular attention to scientific literature and scientific courses, but a poor cooperation with other colleagues (as teachers' network). Improving teaching methods seems to be important even if, for its success, more cooperation seems to be necessary.

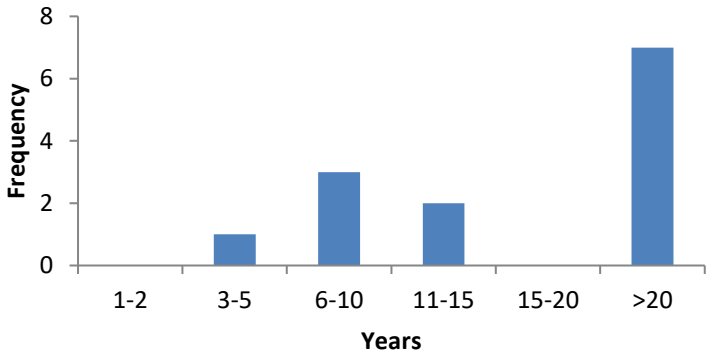
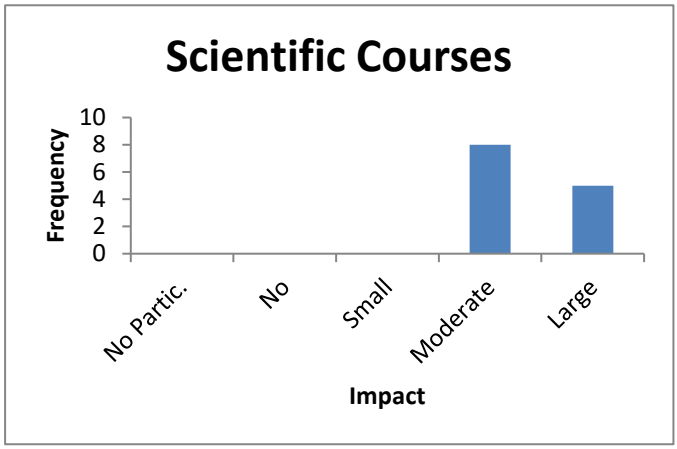
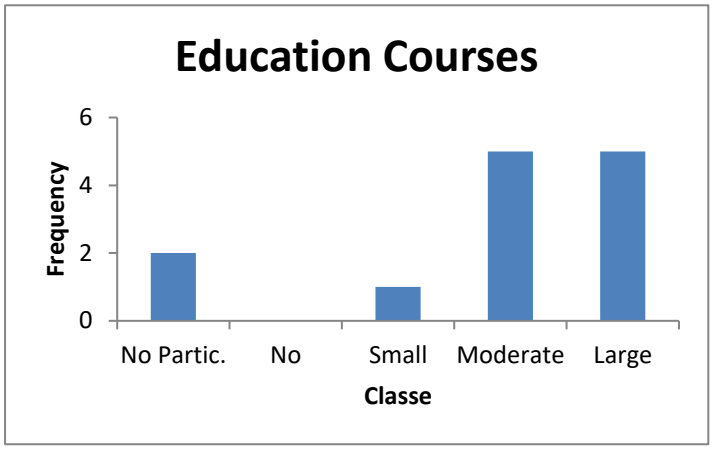
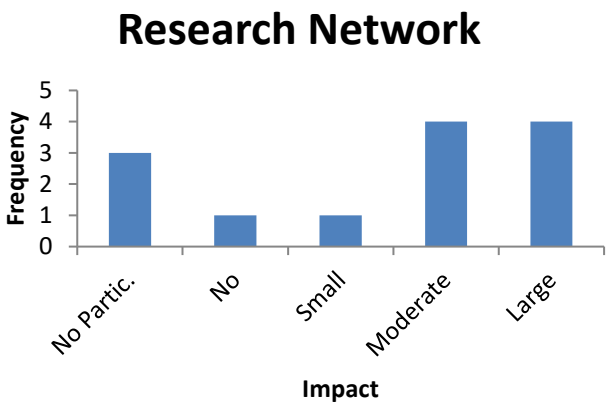
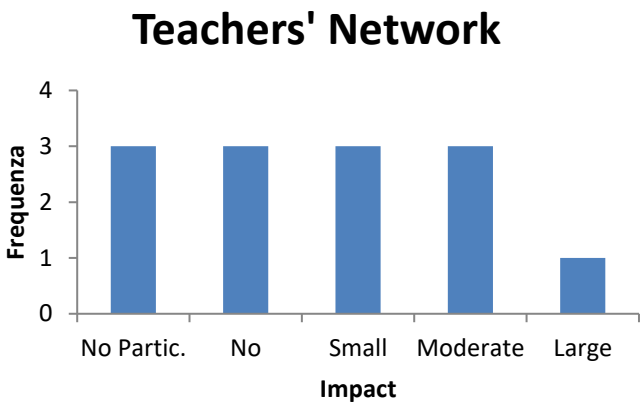


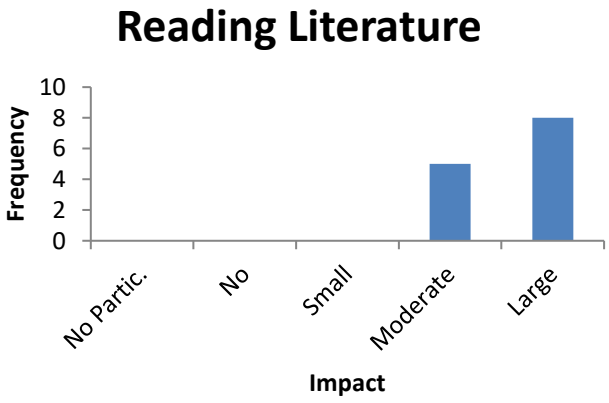
Fig. 57 Years of Teaching - University of Zagazig











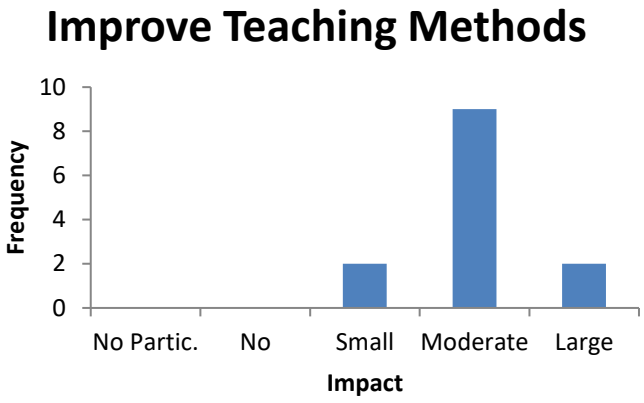


Fig.58 Teachers' Professional Activities - University of Zagazig

Teachers' satisfaction

Two open questions were supplied regarding what aspect of Zagazig University the teachers were most and least satisfied with. Regarding the aspects that the teachers were most satisfied with, they were reported to theoretical skills, Campus and Staff Members. The last open question was mainly filled with lack of infrastructure such as laboratories, farms and classes capacities. Concerns were also expressed regarding administration. It is important to note that the improvement of facilities seems to be the top priority.

University mission

Regarding the University mission, the majority (10) of teachers responded that it was not accomplished. This is another point of connection with the previous results because the absence of adequate facilities is the main reason why University mission is not accomplished. For teachers, the main mission of the University should be, according to hierarchic order, to train graduates, train specialist, form new competencies. Please note that this prioritization is the same expressed by Damanhour teachers.

Support services and facilities

Regarding the level of satisfaction with classrooms and laboratory facilities, the responses were non homogeneous with the previous answers because graphs show a general satisfaction with the present level of labs even if they identified in the previous open question that they were not. A relevant level of non-satisfaction emerged for the questions regarding opportunities for period abroad, campus and (in some cases) students' placement. Please note that in other open questions some teachers expressed concerns regarding job opportunities after graduation.

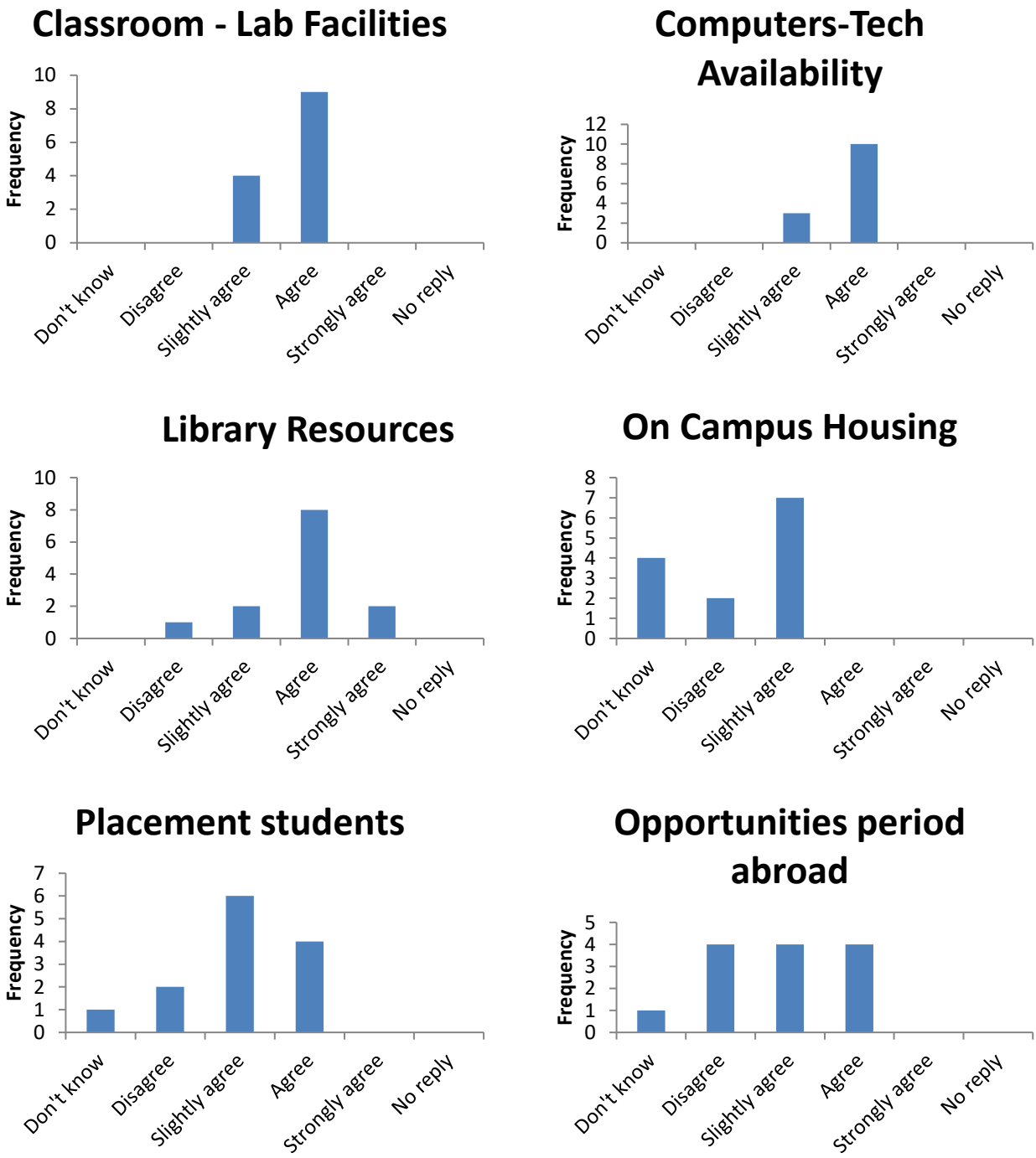
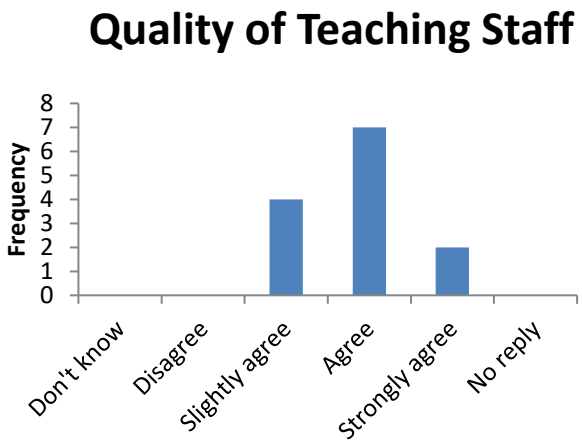
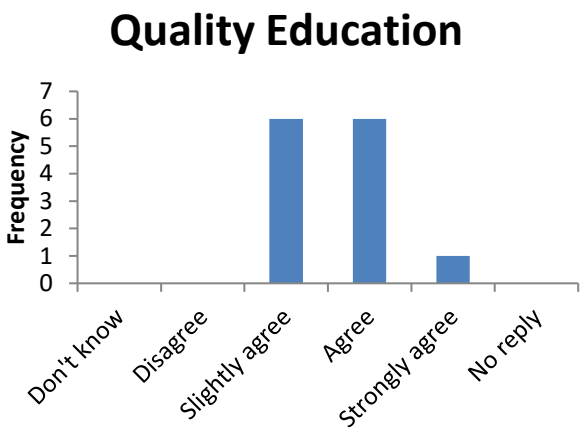


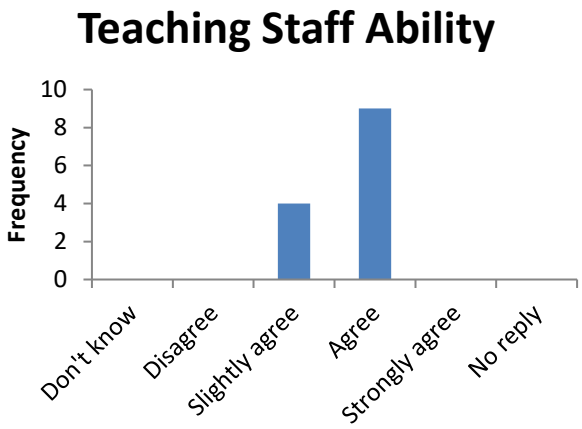
Fig. 59 Support services and facilities - University of Zagazig

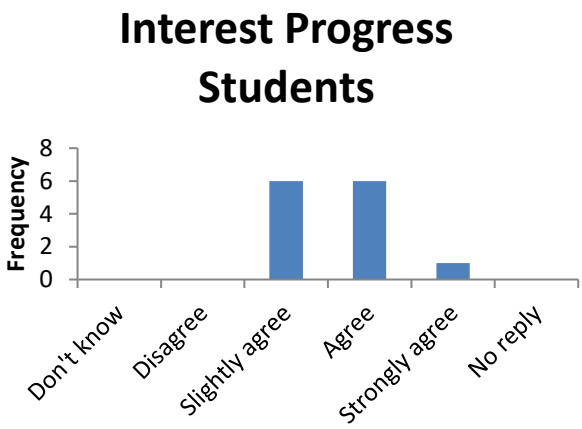
Quality of Educational System

The sample of teachers is more homogeneous with respect to the set of questions associated with the educational systems. As for the Damanhour case, a large majority of teachers thought that the quality of teaching staff, education and the teaching staff ability exerted by the professors were good. As expressed in other reports concerning teachers, more investigation seems to be needed in order to have a more complex scenario.









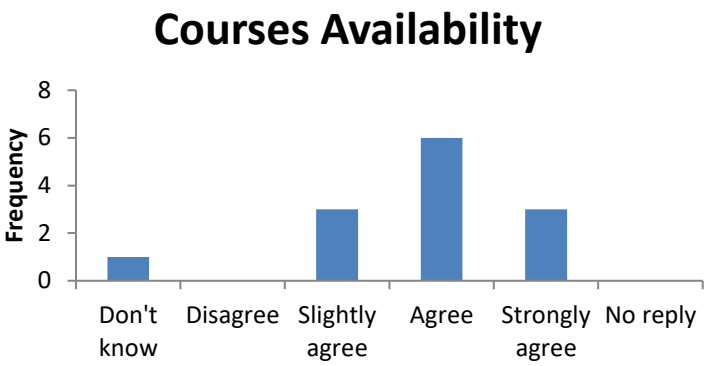
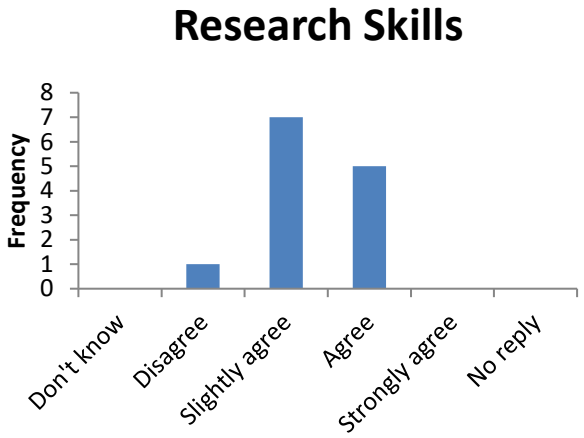
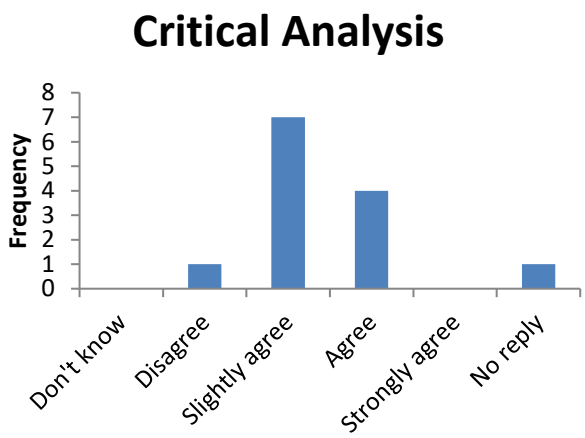


Fig. 60 Quality of Educational System - University of Zagazig

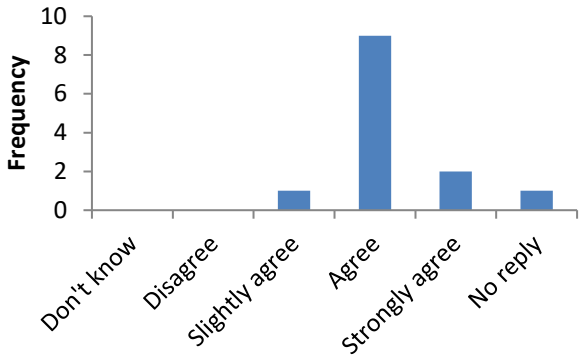
Teachers' level of satisfaction on the improvement of students' skills

The aim of this group of questions was to investigate teachers' level of satisfaction regarding the improvement of their students' skills. The results showed that teachers "slightly agree" about all the four indicators regarding research, critical and theoretical analysis, and practical skills. Again, contradiction is present if we think to the previous criticalities concerning laboratories and more in general facilities (especially for Practical skills). Some lacks in students training are identified in Languages. Moderate satisfaction is expressed for the other indicators where "slightly agree" is the most common answer.

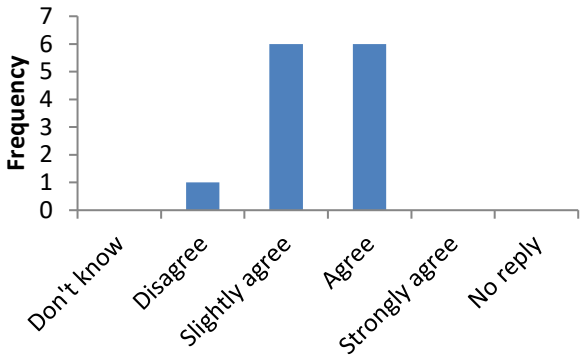




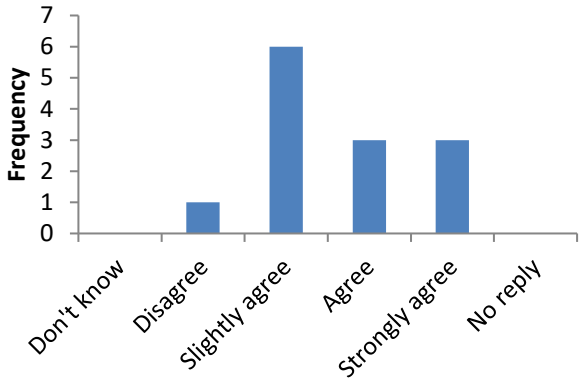
Theoretical Skills



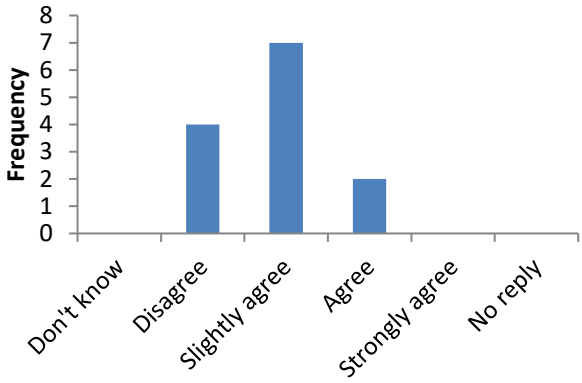
Practical Skills



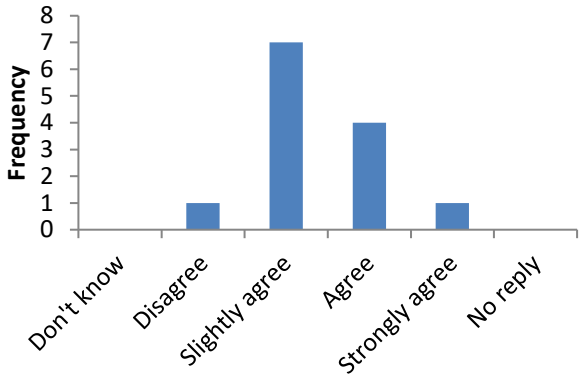
Communication Skills



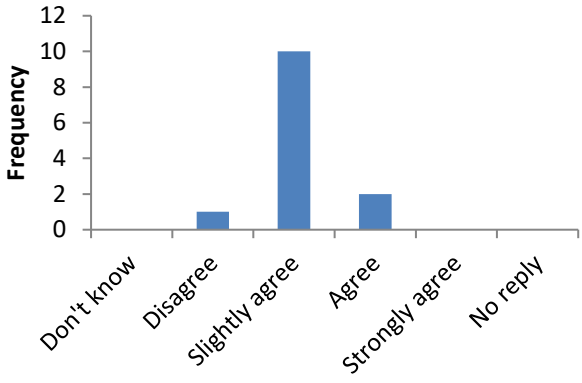
Languages

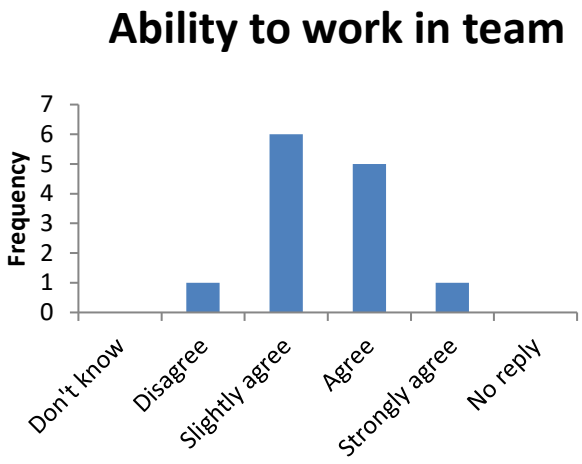


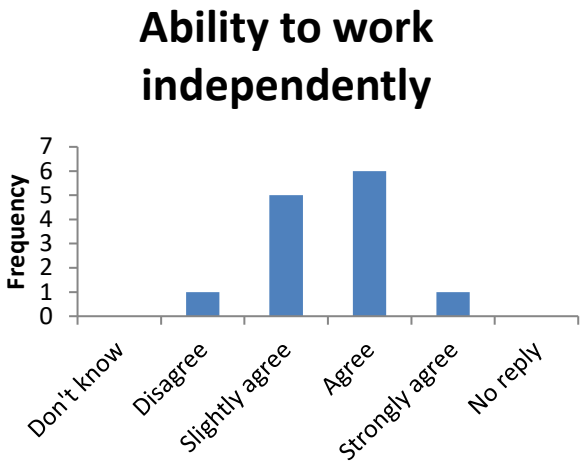
Computer Literacy



Problem Solving Skills

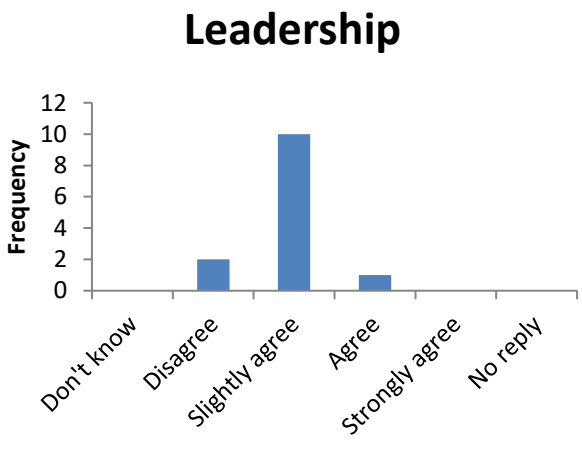



Ability to work in team
Frequency
0
1
2
3
4
5
6
7
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Ability to work independently
Frequency
0
1
2
3
4
5
6
7
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Ability New Knowledge
Frequency
0
1
2
3
4
5
6
7
8
9
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Self Confidence
Frequency
0
1
2
3
4
5
6
7
8
9
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Leadership
Frequency
0
2
4
6
8
10
12
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply


Negotiation Skills
Frequency
0
2
4
6
8
10
Don't know
Disagree
Slightly agree
Agree
Strongly agree
No reply

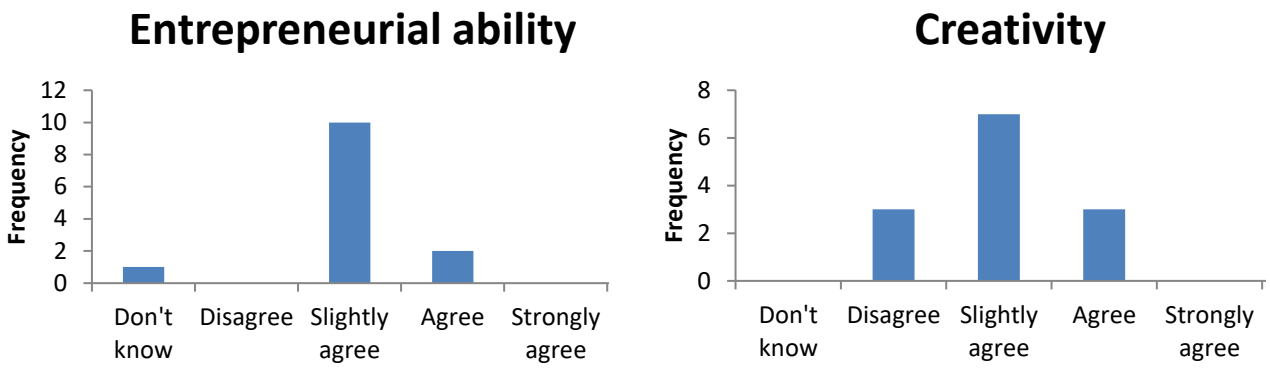
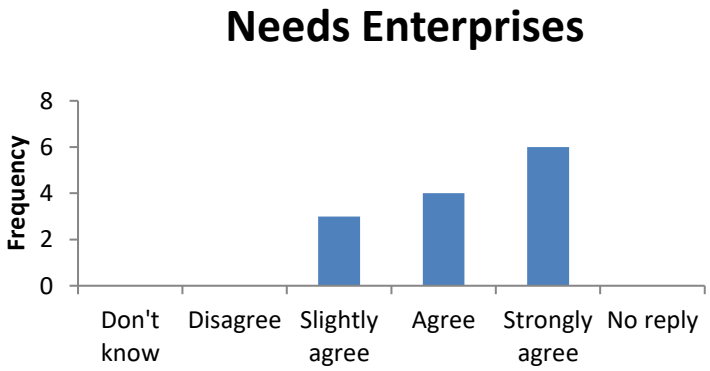


Fig. 61 Teachers' level of satisfaction on the improvement of students' skills - University of Zagazig

A final group of questions was distributed among the teachers, whose aim was to investigate the possible actions that Universities could implement in order to improve the employability of their graduate students. A strong agreement among teachers emerged regarding the idea that Universities have to run courses more adapted to enterprise's needs, practical classes and compulsory work placement. Therefore, teachers recognize that curricula reform is necessary and strongly recommended. They suggested to introduce the following courses:

Organic Farming - Genetically microorganism release into nature Engineering - English courses - Professional training concerning Sustainable Land Management - Ecosystem sustainability - Land resources sustainability - Environmental sustainability - Climate change.



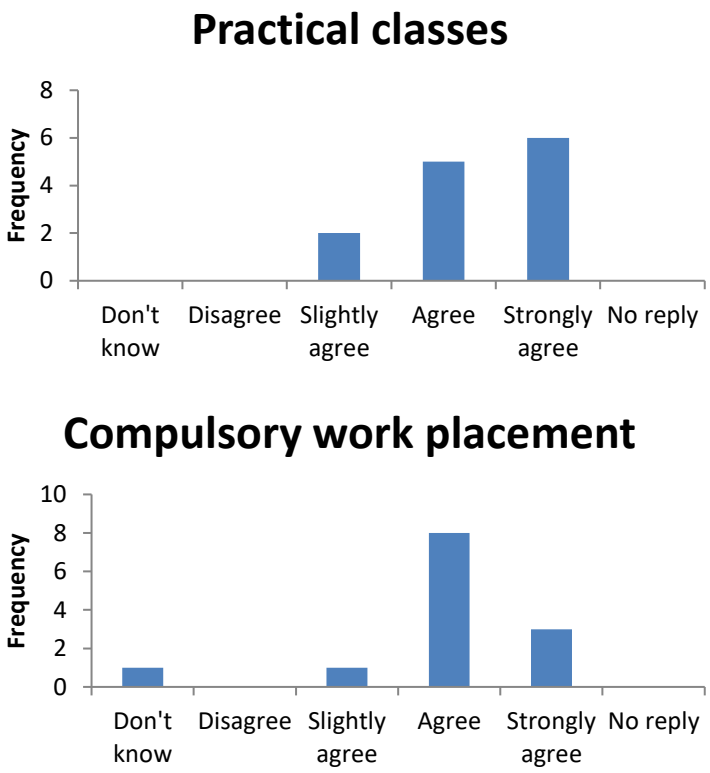


Fig. 62 Actions to enhance employability of graduate students - University of Zagazig

7. Needs Assessment Enterprises

7.1 Summary

Introduction

The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered has the aim to identify strengths and weaknesses of the education system, evaluate the current impact and consider areas for improvement.

There was a minimum of five questionnaires required for each University. 21 questionnaires have been collected from the four Universities, and all of them have been used in the quantitative analysis, even if not all the questions have been properly answered, and in one case, a whole part of the questionnaire is missing.

Company identification details

All the enterprises are located in the northern part of Egypt, between Cairo, Giza, Ismalia and Sadat City. Only one enterprises are located in the southern part of the country. With regard to the economic sector, not all the companies answered to this question. However, summarizing the information gathered from the questionnaires, some main areas could be identified. Most of the enterprises declare to be involved in agricultural commodities production such as ornamental plants, seed, nursery production and vegetables. A second group works in manufacturing field concerning fertilizer and pesticide production. A small number of enterprises is involved in research field and just one company declares to be focused in peaceful use of atomic energy.

All the enterprises analyzed started their activities during the last 30/20 years. Notably, two of them started their activities more than one hundred years ago. On the other side, the most recent was set up in 2016.

Regarding the ownership status, the picture is quite diverse but most of them (8) are a branch of a foreign company, 6 are 100% Egyptian owned and 4 are a joint venture. The other enterprises did not answer to the question.

The question regarding the number of employees with a university degree cannot be used properly in some questionnaires since only few companies expressed this number in percentage form. Moreover, 4

companies did not answer to the question. However, generally speaking, most of the companies seem to have a very high percentage of employees with a university degree. These high percentages are primarily related to companies working in the sectors of research and atomic energy uses that obviously require high instruction level.

The main market area is represented by Egypt itself for the most part of the companies analyzed. A small number of them also work in the Arab countries. Only one company declares to have western countries as a market area, thus showing a low propensity to export.

In the last part of this set of questions, companies were asked about their major employment concerns. Among the possible answers, companies mostly agree on the unsuitable qualification level of labor forces and the concern about the lack of professional skills. Less important seems to be the concern about the lack of practical training during the academic studies or the lack of advanced technological equipment.

Recruitment

Concerning the recruitment issue, in the first question of this section the companies were asked about the number of recent graduates recruited in the last ten years. All the companies have recruited recent graduate during the last ten years. Unfortunately, it is impossible to provide more quantitative data because the answers are not comparable between themselves. Some of the companies provide data expressed as percentages, while others report just the absolute number of recently recruited employees.

According to the employers, the preferred graduate background should be related to the agriculture science field, with a focus varying within a large number of different topics in function of the special production or the research field covered by each company. Some of the employers, but in a less extent, also consider useful to have graduate employees with an engineering or business studies background.

Regarding the qualifications that are mostly taken into account in the selection of university graduates, a specific degree is considered a fundamental factor by almost all of the companies. A Masters' degree is not commonly considered a benefit and, surprisingly, a doctoral degree seems to have no importance in the selection process within the companies analyzed.

With regard to which factors are considered important when recruiting University graduates, beside academic qualifications, the results are quite surprising, as showed in the histogram below (Figure 1). Apparently, having an international profile, in terms of having a degree from a foreign University, is not considered important. Nine companies declare that they do not agree, and six companies declare that they slightly agree on its importance. On the other hand, nine companies strongly agree, and three companies agree on the importance of a period of work placement during studies.

Finally, there is not a consensus about factors such as having studied or worked abroad, and the University's ranking.

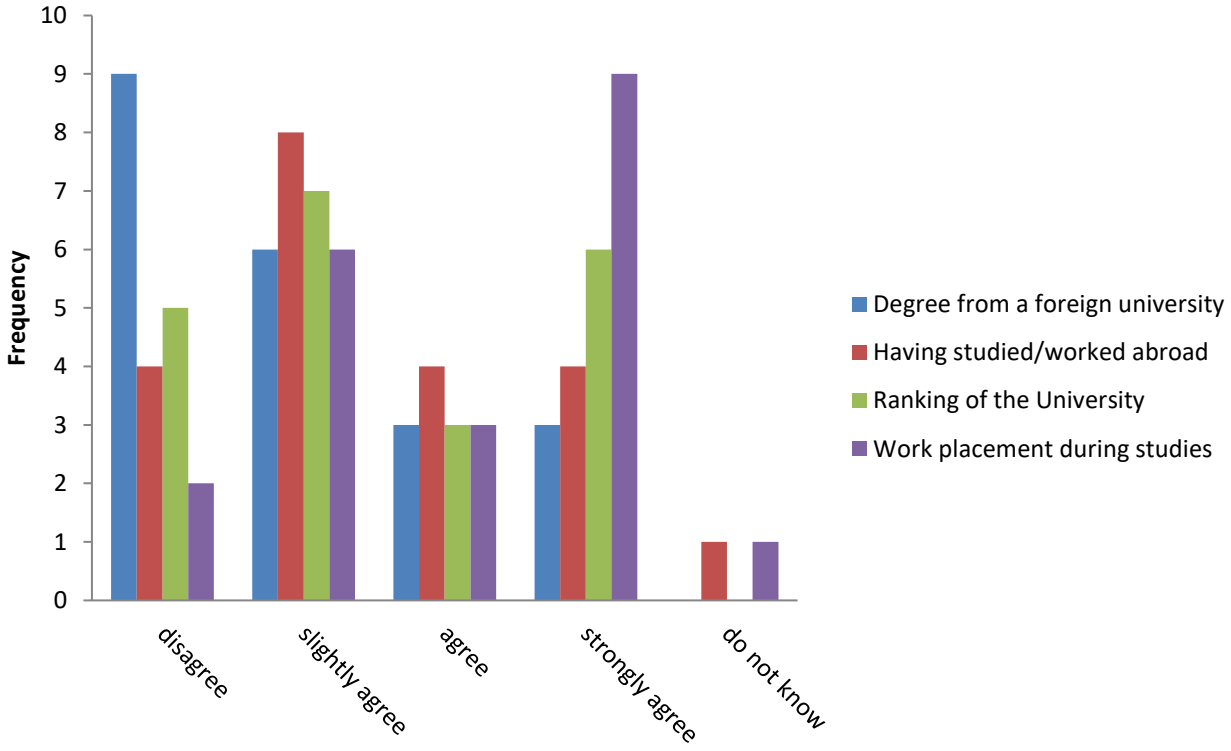


Fig. 63 Importance of the following factors in the recruitment of University graduates

Figure 64 reports the critical characteristics that are more difficult to find when employing university graduates, from the companies' perspective. What all the companies agree on, is that recent graduates seem to lack, most of all, technical knowledge and practical skills. All the other possible answers are quite less represented.

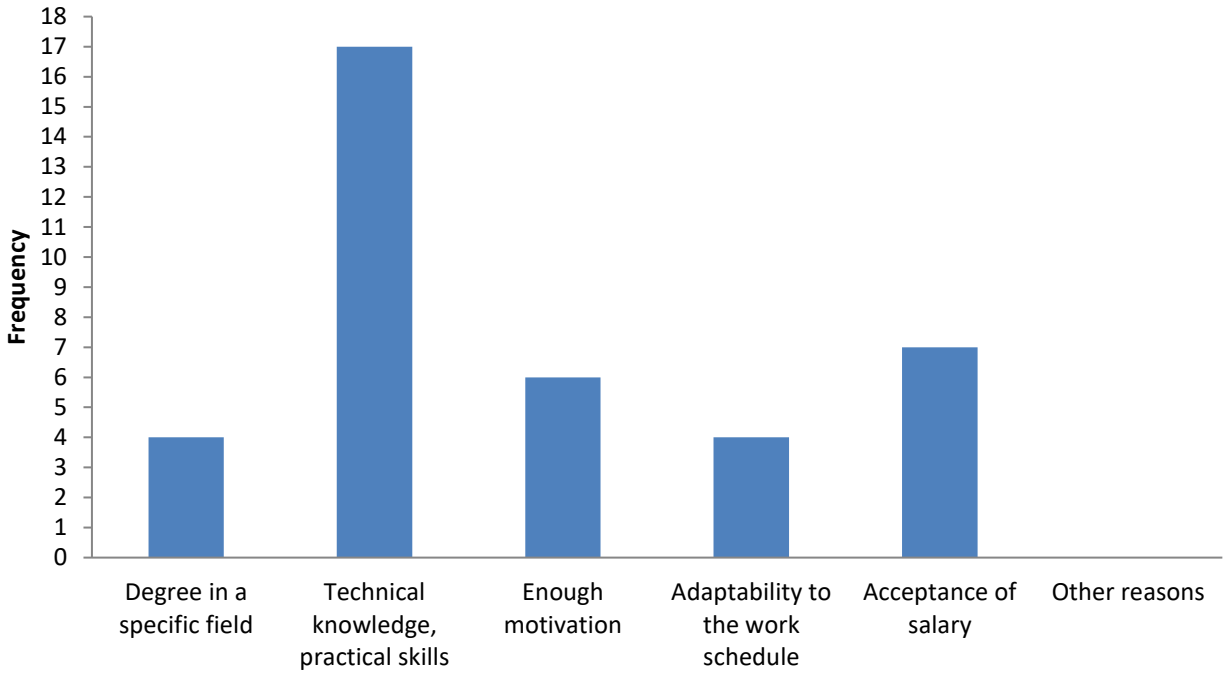


Fig. 64 Aspects more difficult to find when employing recent graduates

Skills

In this section a series of questions about which skills or other requirements graduates lack, much more in detail than in the previous question, were asked to employers.

Coherently with the previous figure (no. 63), the lack of practical skills seems to be one of the most critical problem when employing graduates. Almost half of the companies strongly agree on this aspect. Similar conclusions can be drawn for other factors that seem to be important for the companies such as decision-making skills, work experience, leadership and decision making skills.

On the other hand, graduates do not seem to be lacking under the theoretical skills point of view. In fact, only few companies (3 out of 21) strongly agrees on considering these skills a weakness in recent graduates.

For all the other skills listed in the questionnaires, it not easy to draw conclusions because the answers provided by the companies are quite contrasting. This is particularly true for integrity and ability to work in team.

Finally, companies were asked which actions universities should take to enhance the employability of graduate students. Not all the answers were provided. However, as showed in figure 65, all the actions suggested in the questionnaire are considered relevant or strongly relevant. In particular, more than half of the companies strongly agree on the need to run courses that are more relevant to the needs of enterprises. Same conclusion can be draw for the attendance of practical classes.

Also, compulsory work placement experience as an integral part of the curriculum is suggested by the companies as added values in terms of employability.

These aspects are perfectly coherent with the lack of practical skills highlighted by the companies when employing recent graduates, as seen in the previous questions.

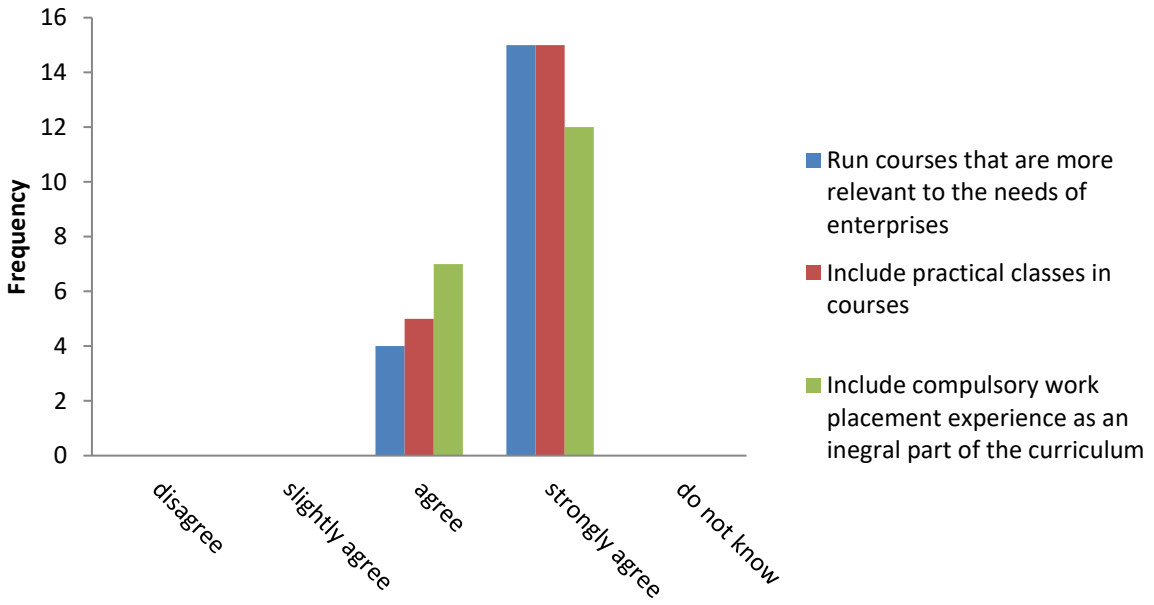


Fig. 65 Importance of the following actions taken by universities to enhance the employability

Cooperation with universities

This section aim is to investigate any cooperation forms existing between companies and Universities. Companies were asked which forms of cooperation with the Universities have been established so far. One company did not answer this question. The most important aspects are that only very few companies do not have any kind of relationship with the universities. On the other hand, all the other companies show some types of collaboration with universities through different approaches. Participating in business

forums and conferences organized by Universities seems to be the most common kind of cooperation probably because this is also the easiest form of collaboration.

In addition, the discussion for designing curricula, having experienced staff engaged in vocational training and research cooperation agreements seem to be frequent.

Apparently offering internships to University students is the less common form of collaboration within all the different collaborations considered.

7.2 University of Alexandria

Introduction

The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered have the aim to identify strengths and weaknesses of the education system, evaluate current impact and consider areas for improvement.

There was a minimum of five questionnaires required. The University of Alexandria collected questionnaires from 5 enterprises, and all of them have been considered valid.

Company identification details

Four enterprises are located in the north-western part of Egypt. The last one is located in the southern part of the country. With regard to the economic sector these companies work in, three main areas have been identified to summarize all the detailed information gathered from the questionnaires. Three enterprises are involved in agricultural commodities production. One enterprise works in the manufacturing field concerning s fertilizer production. The last one is an enterprise focused on research activity.

All the enterprises analyzed started their activities during the last 30 years. The oldest company is 28 years old and the more recent was set up in 2008.

With the exception of one enterprise, which is a branch of a foreign company, all the others are 100% Egyptian owned. One company preferred not to answer this question.

The percentage of employees with a university degree is very different form one company to another, varying form a minimum of 10% to a maximum of 80%. The lowest percentages can be found in the companies involved in agricultural commodities production. The companies involved in manufacturing and research activities have the highest percentages of employees with a university degree (80% for the company in the research field). One company did not answer this question.

The main market area for four enterprises is represented by Egypt itself. One of them also works in the Arab countries. The last one declares to have both Arabic countries and western countries as market area.

In the last part of this set of questions, companies were asked about their major employment concerns. Among the possible answers, the lack of professional skills is the most common (4 out of 5), followed by the unsuitable qualification level of labor force (2 out of 5). Two companies also stressed the concern about the lack of practical training during the academic studies and advanced technological equipment.

Recruitment

Concerning the recruitment issue, in the first question of this section the companies were asked about the number of recent graduates recruited in the last ten years. All the companies have recruited recent graduate during the last ten years. Unfortunately, it is impossible to provide more quantitative data because the answers are not comparable between themselves. Some of the companies provide data expressed as percentages, while others report just the absolute number of recently recruited employees.

According to the employers, the preferred graduate background should be related to the agriculture science field. In addition to this, some of the employers also consider useful to have graduate employees with an engineering or business studies background.

Regarding the qualifications that are mostly taken into account in the selection of University graduates, a specific degree is considered a fundamental factor in the selection of University graduates by the four companies. Masters' degree is an added value only for one company. A doctoral degree seems to have no importance in the selection process within the companies analyzed.

With regard to which factors are considered important when recruiting University graduates beside academic qualification, the results are quite surprising as showed in the histogram below (fig. 66). Apparently, having an international profile, in terms of degree from a foreign University and study periods abroad, seems to be not important. On the other hand, the ranking of the University and the skills acquired during an internship within the university period are highly valued.

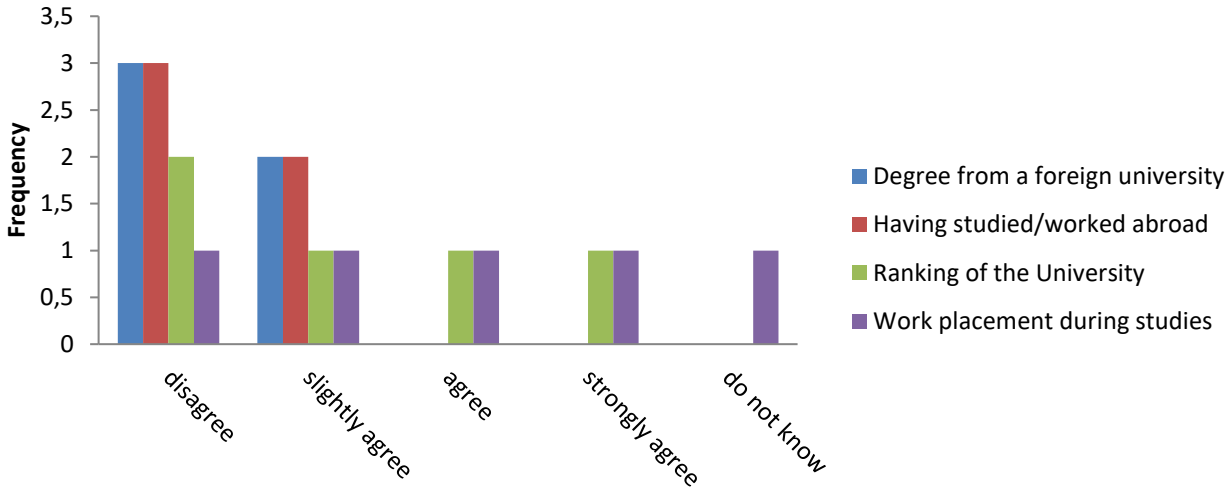


Fig. 66 Importance of the following factors in the recruitment of University graduates – University of Alexandria

Figure 67 reports the critical characteristics that are more difficult to find when employing university graduates from the companies' perspective. Recent graduates seem to lack most of all technical knowledge and practical skills. Some companies also stressed the difficulty to find enough motivation and the low acceptance of salary. It seems not to be a problem to find graduate with a specific degree or with high adaptability to work schedule.

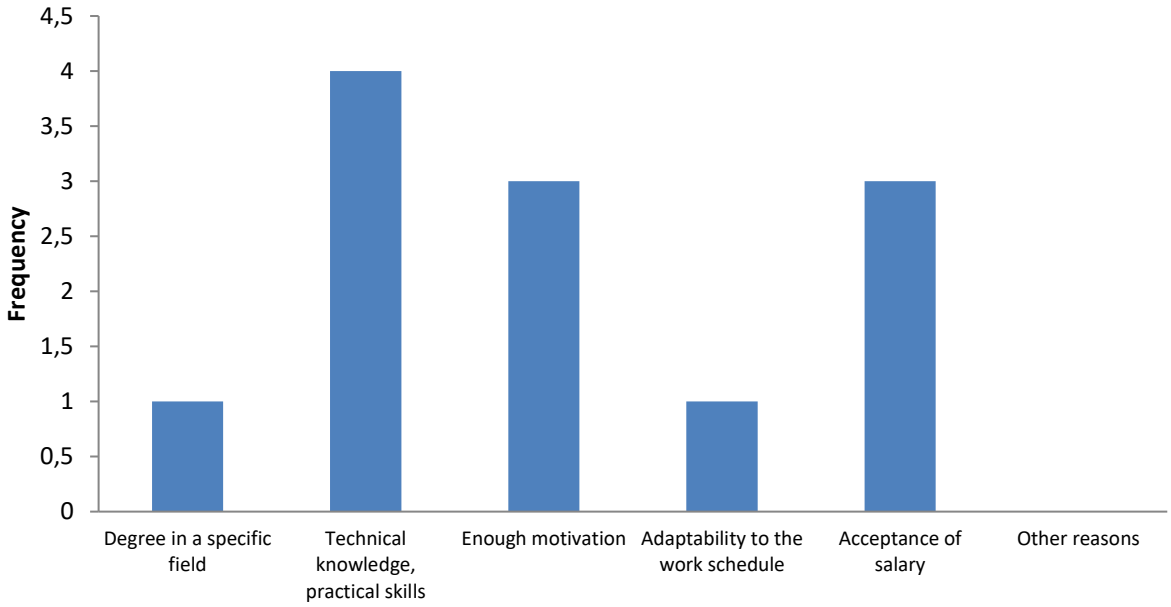
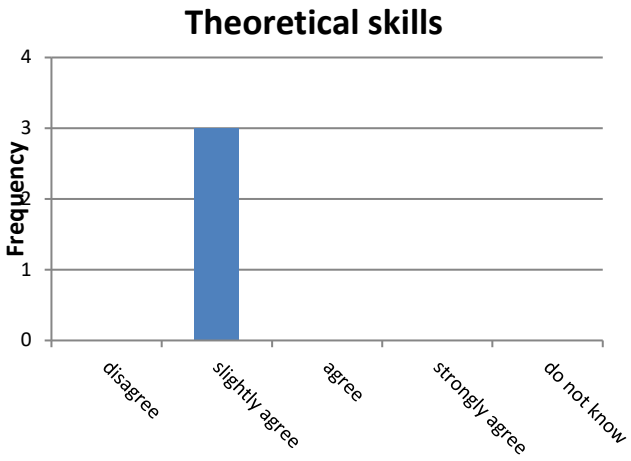


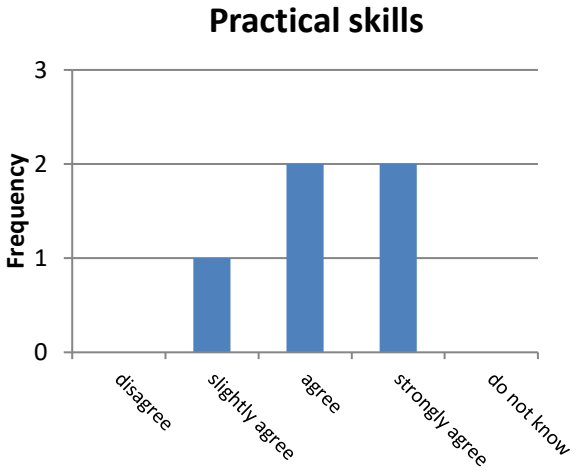
Fig. 67 Aspects more difficult to find when employing recent graduates – University of Alexandria

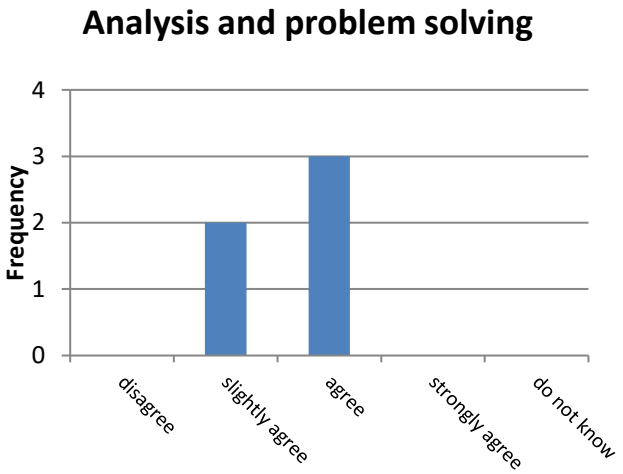
Skills

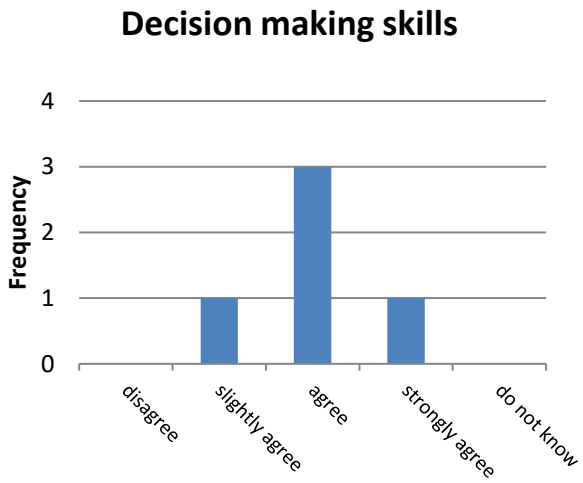
Figure 68 reports the histograms connected to a series of questions about which skills or other requirements graduates lack, much more in detail than in the previous question.

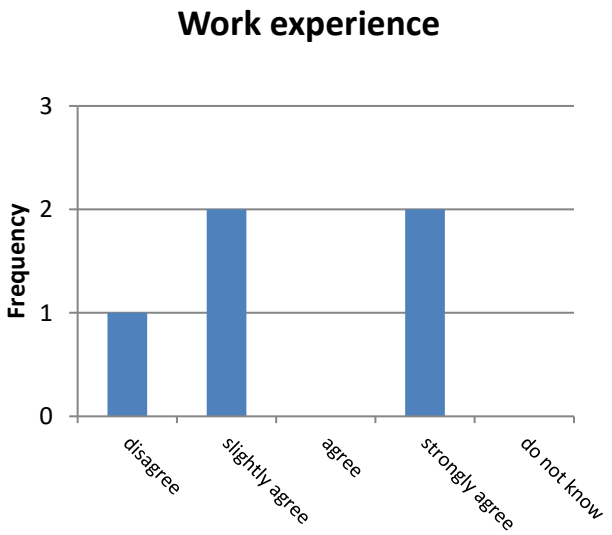
Coherently with the previous figure (n.67), the lack of practical skills seems to be the most critical problem when employing graduates. Most of the companies (4 companies out of 5) agree and strongly agree on this aspect. In general, other skills that are considered not easy to find in recent graduates are decision-making skills, leadership and negotiation skills. On the other hand, graduates seem to be strong enough under the theoretical skills point of view. For all the other skills listed in the questionnaire, it is not easy to draw conclusions because the answers provided by the companies are quite contrasting.

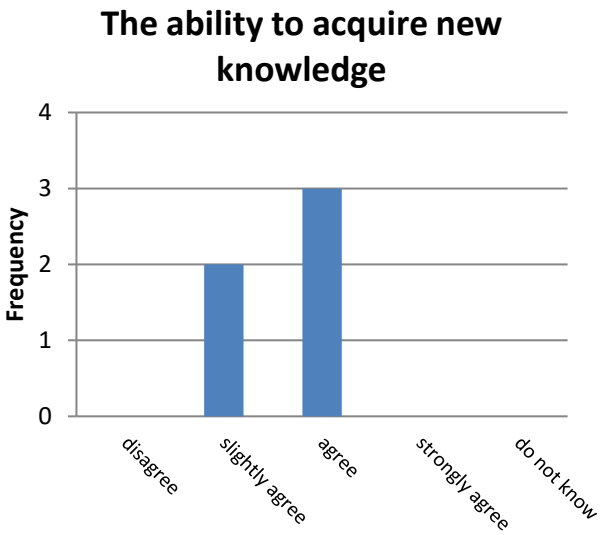

Theoretical skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

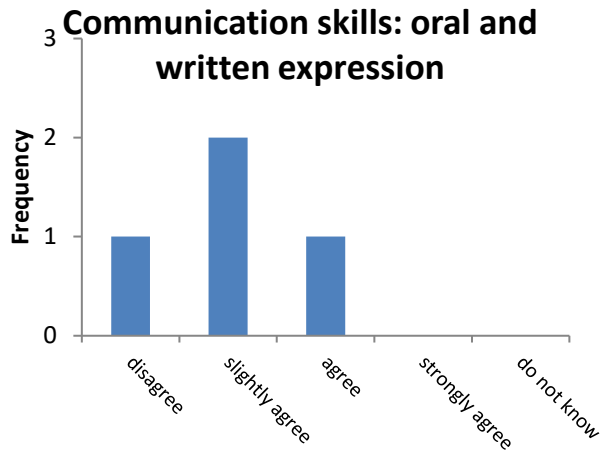

Practical skills
Frequency
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Analysis and problem solving
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

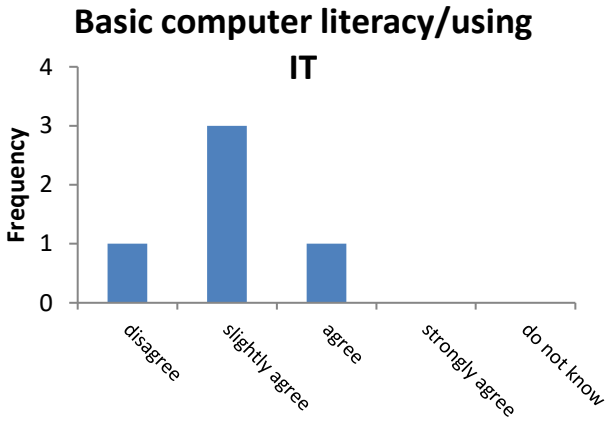

Decision making skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

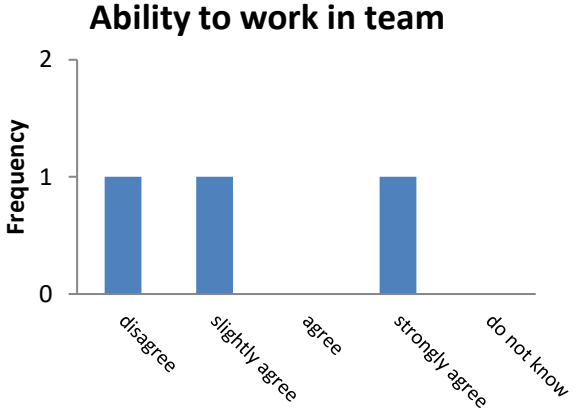

Work experience
Frequency
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

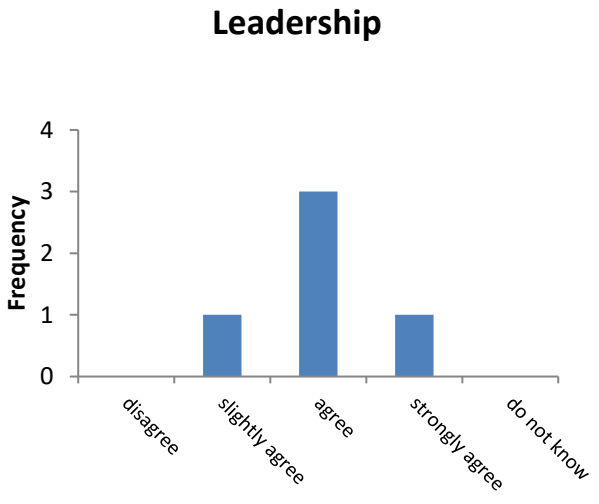

The ability to acquire new knowledge
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

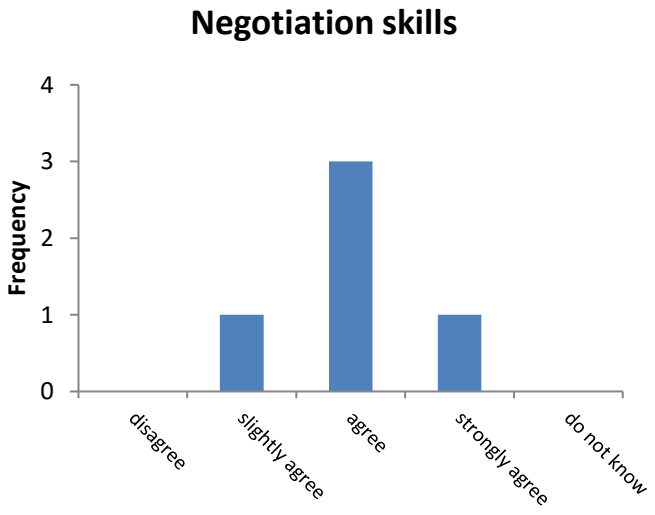

Communication skills: oral and written expression
Frequency
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Integrity
Frequency
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Basic computer literacy/using IT
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Ability to work in team
Frequency
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Leadership
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know


Negotiation skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

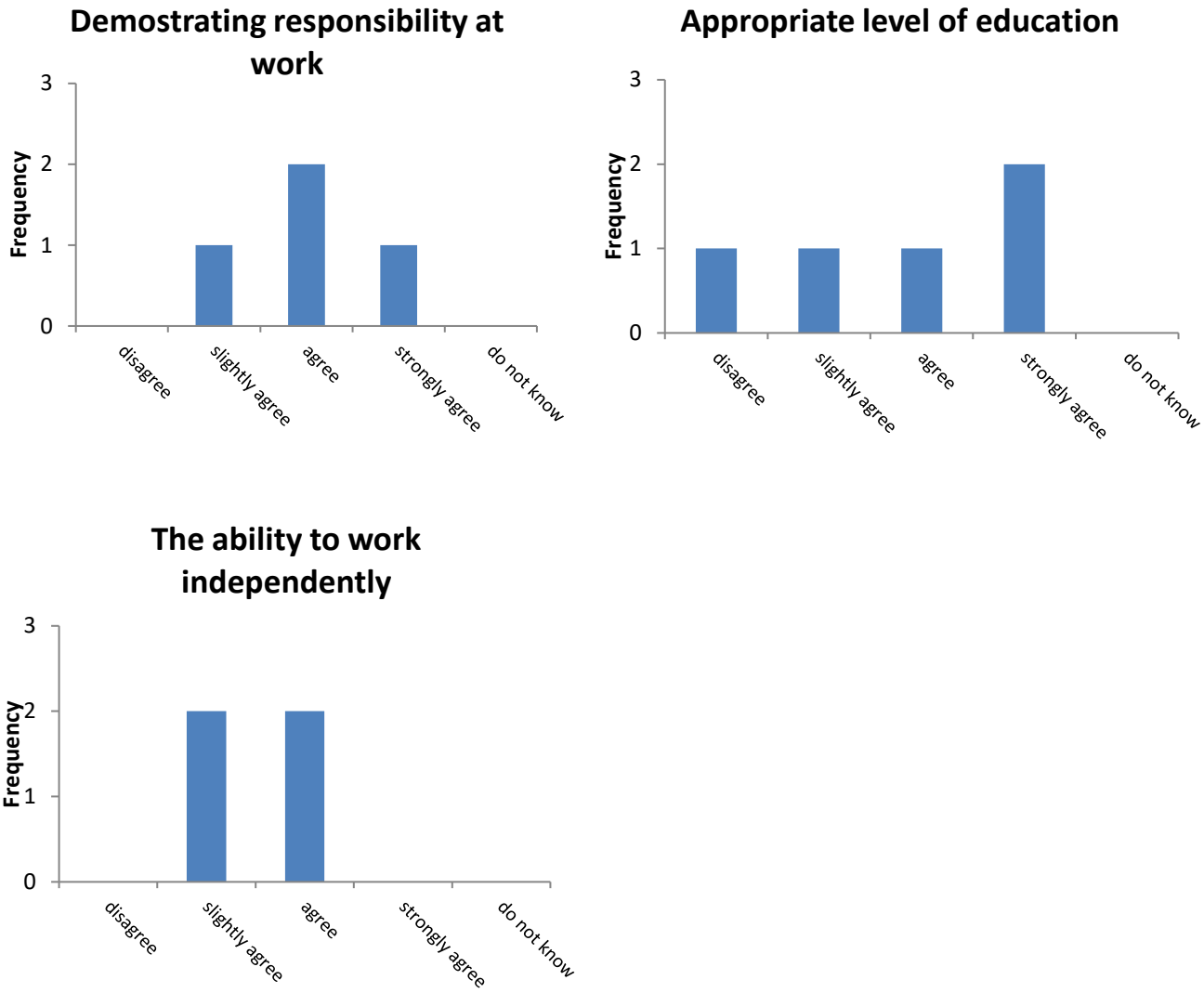


Fig. 68 Graduates' missing skills – University of Alexandria

Finally, companies were asked which actions universities should take to enhance the employability of graduate students. As showed in figure 69, all the actions suggested in the questionnaire are considered relevant or strongly relevant. In particular, 4 companies out of 5 strongly agree on the need to include practical classes in courses and compulsory work placement experience as an integral part of the curriculum. This aspect is perfectly coherent with the lack of practical skills highlighted by the companies in employing recent graduates, as seen in the previous questions.

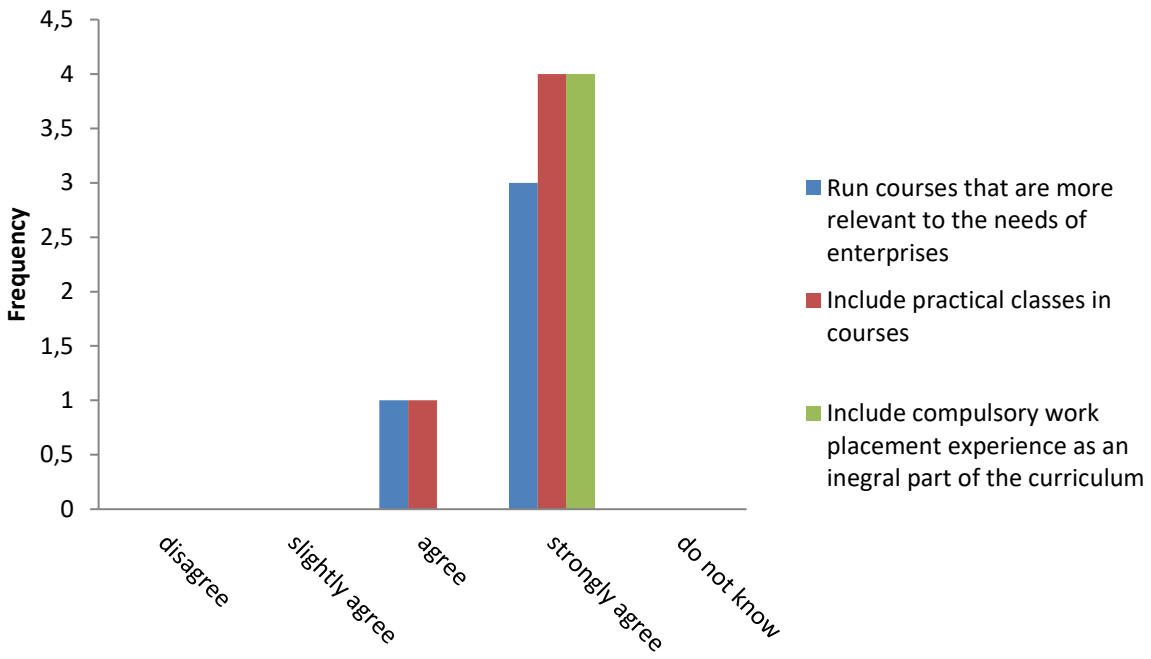


Fig. 69 Importance of the following actions taken by universities to enhance the employability – University of Alexandria

5. Cooperation with Universities

This section's aim is to investigate the cooperation of companies with Universities. Companies were asked which form of cooperation with the Universities have been established so far.

Only 1 enterprise out of 5 does not have any kind of relationship with universities. On the other hand, all the other companies show a close collaboration with universities using different approaches.

Participation in business forums and conferences organized by Universities seems to be the most common kind of cooperation. In addition, the offer of internships to University students, research cooperation agreements and the presence of experienced staff engaged in vocational training seem to be frequent. Only two companies declare to be involved in the discussion for designing curricula, which is the less common form of collaboration.

7.3 University of Cairo

Introduction

The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered have the aim to identify strengths and weaknesses of the education system, evaluate current impact and consider areas for improvement.

There was a minimum of five questionnaires required. The University of Cairo collected questionnaires from 6 enterprises and all of them have been considered valid.

Company identification details

All the six enterprises are located in the northern part of Egypt between Cairo and Giza. With regard to the economic sector these companies work in three main areas that have been identified to summarize all the detailed information gathered from the questionnaires. Two enterprises are involved in agricultural commodities production such as ornamental plants and seeds. One of them is involved in both production (seeds) and manufacturing (pesticide) activities. Two more seem to be focused on research activity and the last one is an enterprise that deals with the peaceful use of atomic energy.

Among the enterprises analyzed two of them started their activities more than one hundred years ago. The more recent company was set up in 1999.

Regarding the ownership status, the picture is diverse. One enterprise is a branch of a foreign company, another one is 100% Egyptian owned, three companies are a joint venture and, finally, one company preferred not answer this question.

The question regarding the number of employees with a university degree cannot be used properly since only three companies expressed this number in percentage form. However, in these companies there seems to be a very high percentage of employees with a university degree. These high percentages are related to companies working in the sectors of research (98%) and atomic energy uses (80%) that obviously require high instruction level. One company did not answer to this question.

For all six enterprises the main market area is represented by Egypt itself. Only one of them also works in the Arab countries. No one declares to have western countries as market area showing a low propensity to export.

In the last part of this set of questions, companies were asked about their major employment concerns. Within the possible answers, they all agree on the lack of professional skills. Two companies also stressed the concern about the unsuitable qualification level.

Recruitment

Concerning the recruitment issue, in this section of questions, companies were firstly asked about the number of recent graduates recruited in the last ten years. All the companies have recruited recent graduates during the last ten years. Unfortunately, it is impossible to provide more quantitative data because the answers are not comparable between themselves. Some of the companies provide data expressed as percentages while others report just the absolute number of recently recruited employees.

According to the employers, the preferred graduate background should be related to the agriculture science field with a focus in topics that are function of the special production or research field covered by each company. This is true for all the enterprises except the one engaged in atomic energy use that did not provide any answer to this question.

Regarding the main academic titles that are mostly taken into account in the selection process for recent graduates, to have a specific degree is considered a fundamental factor in the selection of University graduates by five companies out of six. Masters' degree is an added value only for 4 companies. A doctoral degree seems to have no so much appeal in the selection process within the companies analyzed. Only two companies consider it as an important factor in the selection of graduates.

With regard to which factors are considered important when recruiting University graduates beside academic qualification or title, the results are quite surprising as showed in the histogram below (Figure 1). Apparently, having an international profile through a foreign University's degree is not univocally considered important. Three companies out of six declare do not agree on its important. On the other hand, most of the companies agree or strongly agree on the importance in having studied or worked abroad. Generally, skills acquired during an internship within the university period are positively valued. Finally, there is not a general consensus about the importance of the University's ranking as a factor for recruitment.

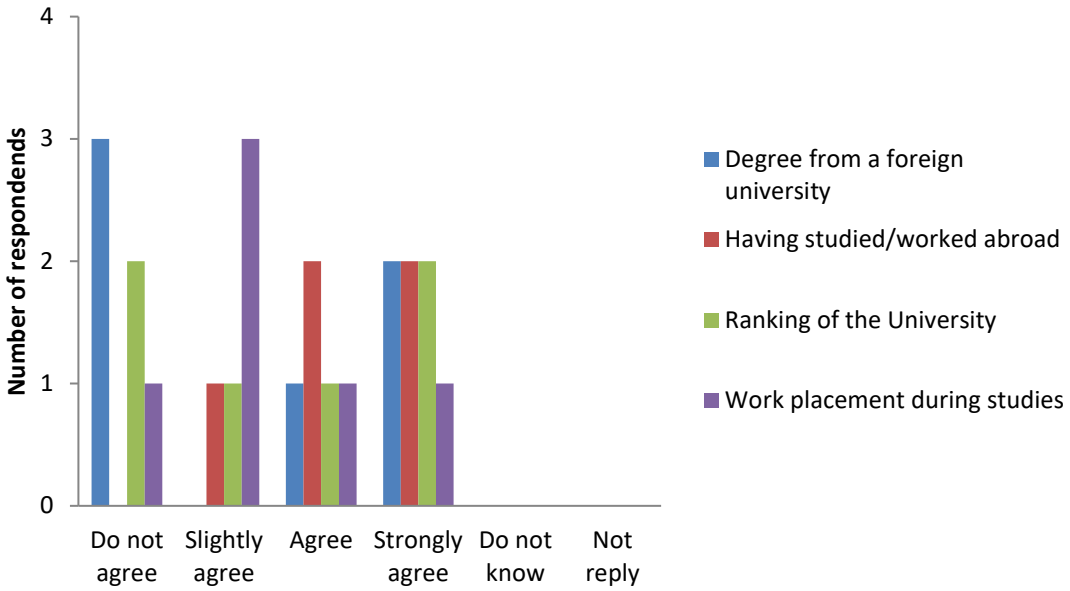


Fig. 70 Importance factors in the recruitment of University graduates – University of Cairo

Figure 71 reports the critical characteristics that are more difficult to find when employing university graduates from the companies' perspective. Recent graduates seem to lack most of all technical knowledge and practical skills. Some companies also stressed the difficulty to find graduate with a specific degree. None the other aspects listened in the questionnaire are taken into account by the companies.

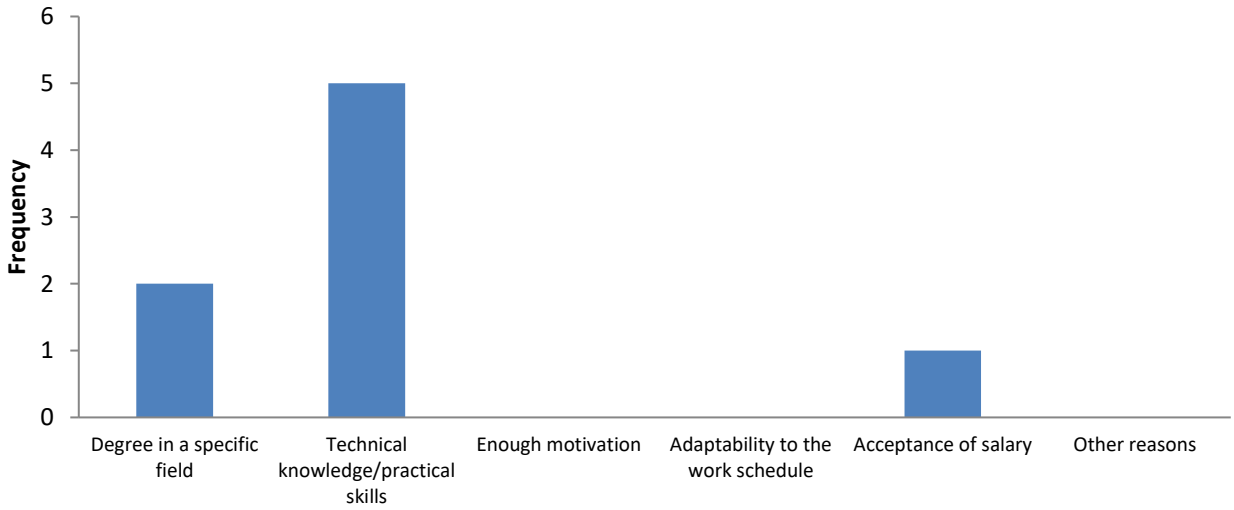


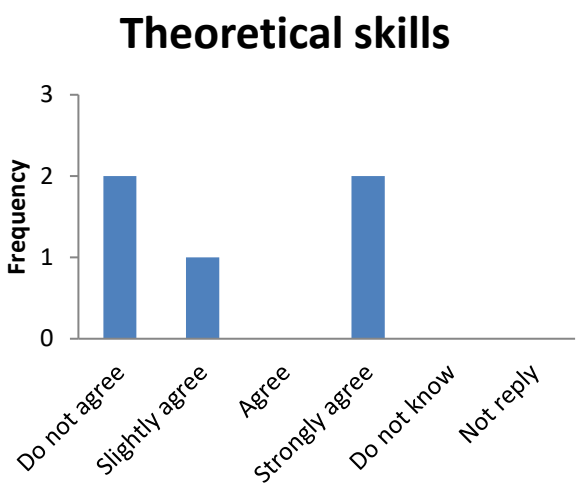
Fig. 71 Aspects more difficult to find when employing recent graduates – University of Cairo

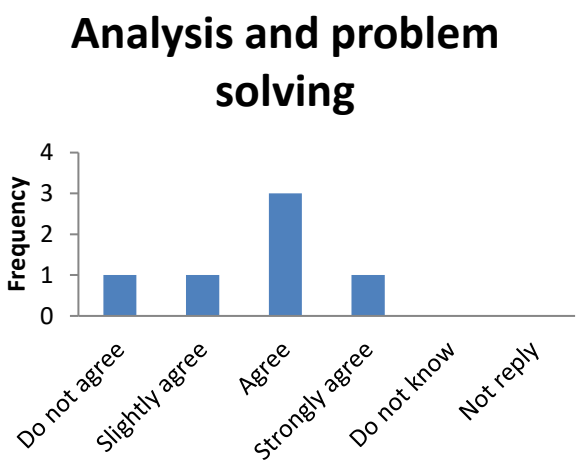
Skills

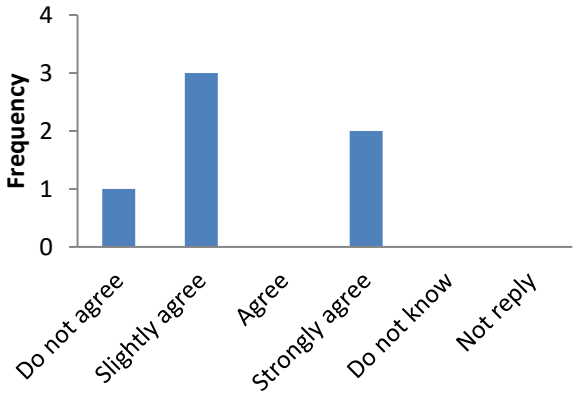
Figure 72 reports the histograms connected to a series of questions about which skills or other requirements graduates lack with a more detail than on the pervious question.

Coherently with the previous figure n. 71, the lack of practical skills seems to be the most critical problem when employing graduates. Five companies out of six agree and strongly agree on this aspect. Same conclusion can be drawn for work experience. Almost all the companies agree or strongly agree on this aspect stressing its lack in graduates. In general, other skills that are considered not easy to find in recent graduates are leadership, ability to work in team and negotiation skills decision. On the other hand, graduates seem to be strong enough under the theoretical skills and the appropriate level of education point of view. These skills are not considered a weakness in recent graduates.

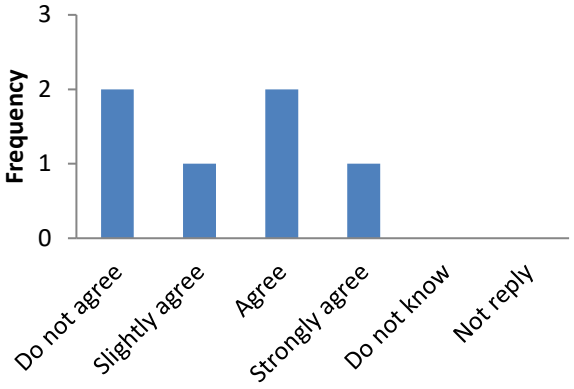
For all the other skills listened in the questionnaire it not easy to draw conclusions because the answers provided by the companies are quite contrasting.



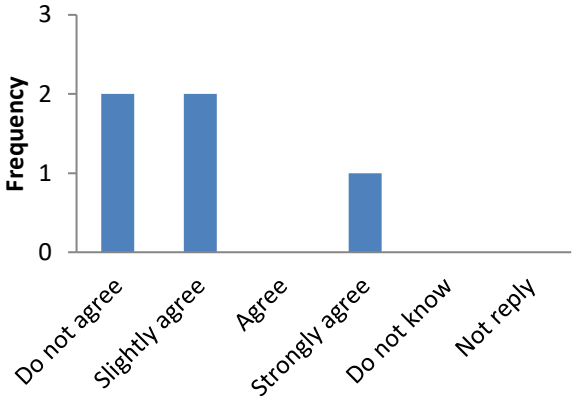




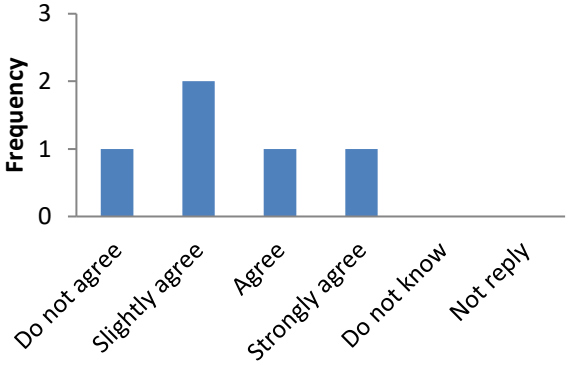
Ability to acquire new knowledge



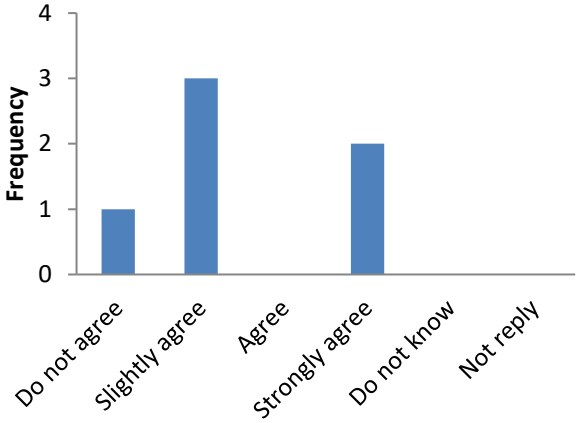
Ability to work independently



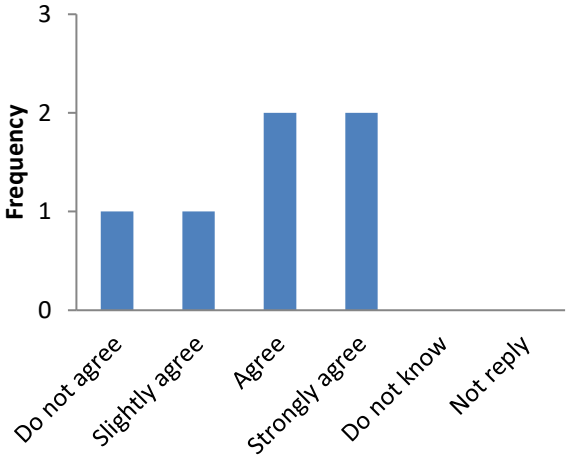
Communication skills: oral and written expression



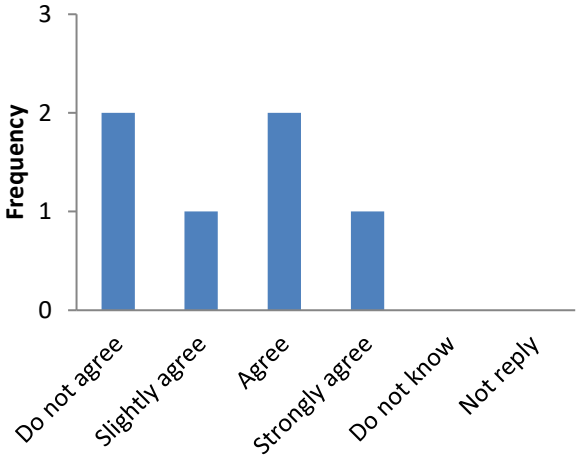
Basic computer literacy/using IT



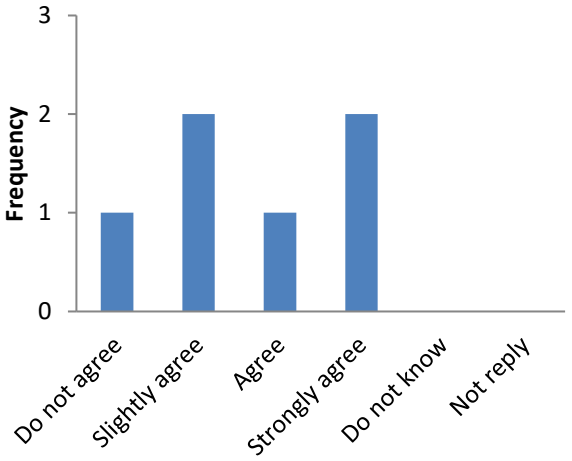
Ability to work in team



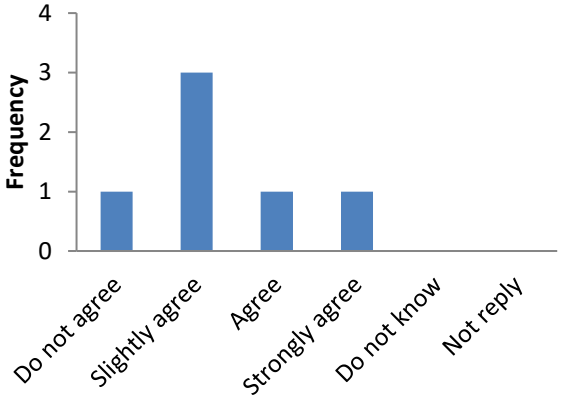
Leadership



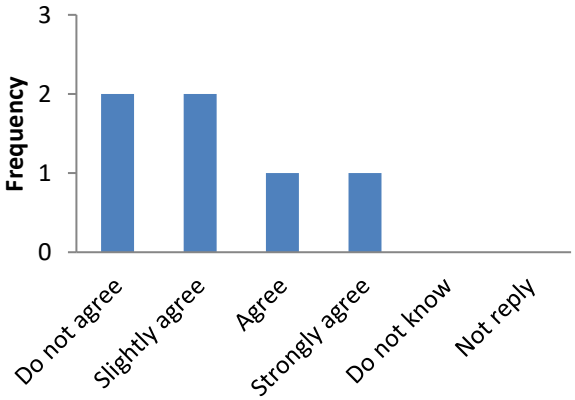
Negotiation skills



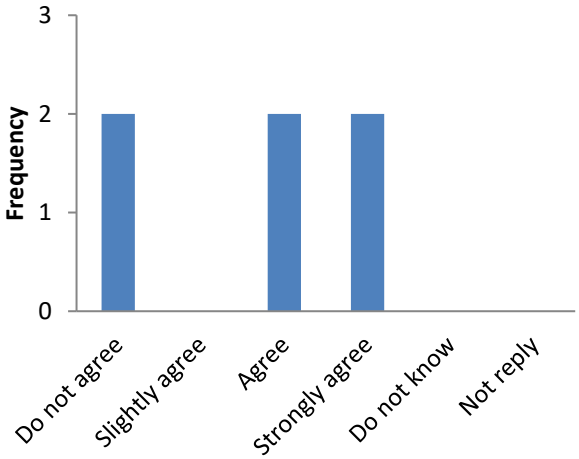
Demonstrating responsibility at work



Appropriate level of education



Work experience



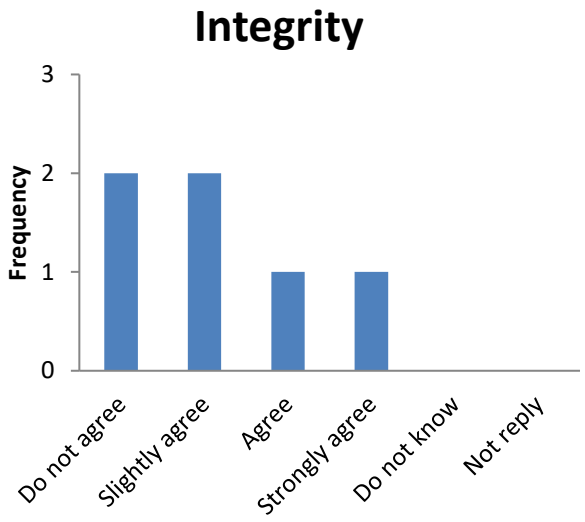


Fig. 72 Graduates' missing skills – University of Cairo

Finally, companies were asked which actions universities should take to enhance the employability of graduate students. As showed in figure 73, all the actions suggested in the questionnaire are considered relevant or strongly relevant. In particular, all the companies strongly agree on the need to include practical classes in courses. Also compulsory work placement experience as an integral part of the curriculum is suggested by the companies as a value added in terms of employability. This aspect is perfectly coherent with the lack of practical skills highlighted by the companies in employing recent graduates, as seen in the previous questions.

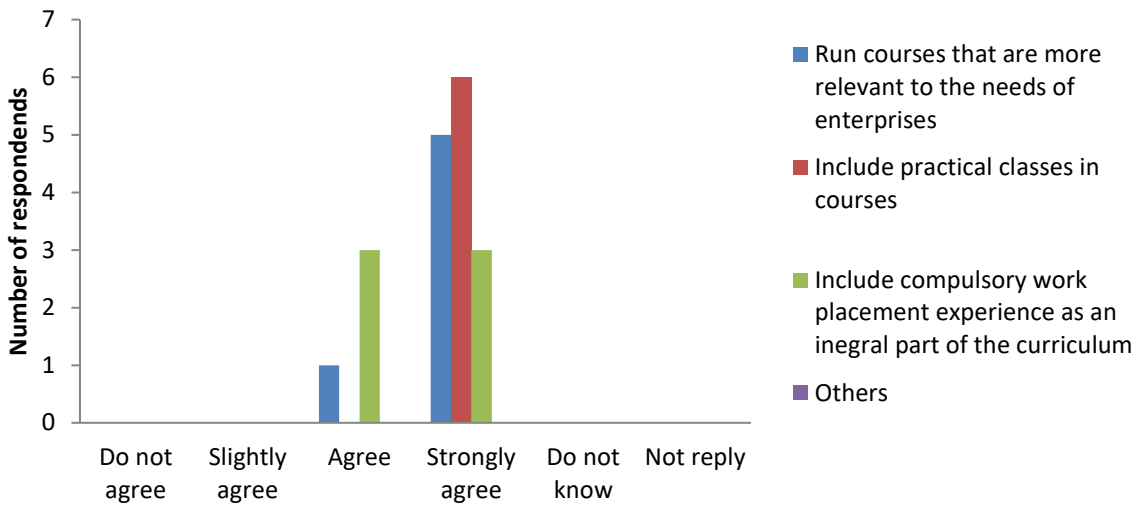


Fig. 73 Importance of actions taken by universities to enhance the employability – University of Cairo

Cooperation with universities

This section's aim is to investigate any cooperation form between companies and Universities. Companies were asked which form of cooperation with the Universities has been established so far.

Only one enterprise out of six does not have any kind of relationship with the universities. This is probably due to the security reason. In fact, this company is the one involved in atomic energy uses. On the other hand, all the other companies show a collaboration with universities trough different approaches.

Participation in business forums and conferences organized by universities seems to be the most common kind of cooperation. This is probably also the easier form of collaboration. In addition, the offer of internships to University students, the discussion for designing curricula and the presence of experienced staff engaged in vocational training seem to be frequent.

Only two companies declare to be involved in research cooperation agreements, which is the less common form of collaboration.

7.4 University of Damanhour

Introduction

The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered has the aim to identify strengths and weaknesses of the education system, evaluate the current impact and consider areas for improvement.

There was a minimum of five questionnaires required. The University of Damanhour collected questionnaires from 6 enterprises, and all of them have been considered valid.

Company identification details

All the six enterprises are located in the northern part of Egypt between the Nubaria district and Sadat city. With regard to the economic sector, these companies work in two main areas that have been identified to summarize all the detailed information gathered from the questionnaires. Three enterprises are involved in agribusiness and production. The other three are involved in manufacturing (pesticide and fertilizers) activities.

Four of enterprises analyzed started their activities during the last ten years. The other two started their activities in 1998 and 1988, respectively.

Regarding the ownership status, the picture is diverse. Three enterprises are a branch of a foreign company, two are 100% Egyptian-owned, and one is a joint venture.

The question regarding the number of employees with a university degree shows very high percentages, varying from 60% up to 100%. One company did not answer this question.

For four of the six enterprises, the main market area is represented by Egypt itself. Only two of them work in the Arab countries. One enterprise works both in Egypt and in the Arab countries. None of them declares to have western countries as a market area, thus showing a low propensity to export.

In the last part of this set of questions, companies were asked about their major employment concerns. Among the possible answers, they all agree on the unsuitable qualification level of labor forces. One company also stresses the concern about the lack of professional skills.

Recruitment

Concerning the recruitment issue, in the first question of this section the companies were asked about the number of recent graduates recruited in the last ten years.

All the companies have recruited recent graduates during the last ten years. Unfortunately, it is impossible to provide more quantitative data because the answers are not comparable between themselves. Some of the companies provide data expressed as percentages, while others report just the absolute number of recently recruited employees.

According to the employers, the preferred graduate background should be related to the agriculture science field, with a focus on topics such as agricultural engineering and chemistry.

Regarding the qualifications that are mostly taken into account in the selection of university graduates, a specific degree is considered a fundamental factor by all the companies. A Masters' degree and a doctoral degree are an added value only for 3 companies.

With regard to which factors are considered important when recruiting University graduates, beside academic qualifications, the results are quite surprising, as showed in the histogram below (Figure 74). Apparently, having an international profile, in terms of having a degree from a foreign University, is not unanimously considered important. Three companies out of six declare that they do not agree or slightly agree on its importance. On the other hand, most of the companies agree or strongly agree on the importance of having studied or worked abroad. In general, skills acquired during internships within the university period are positively valued. Finally, there is a general consensus about the importance of the University's ranking as a factor for recruitment.

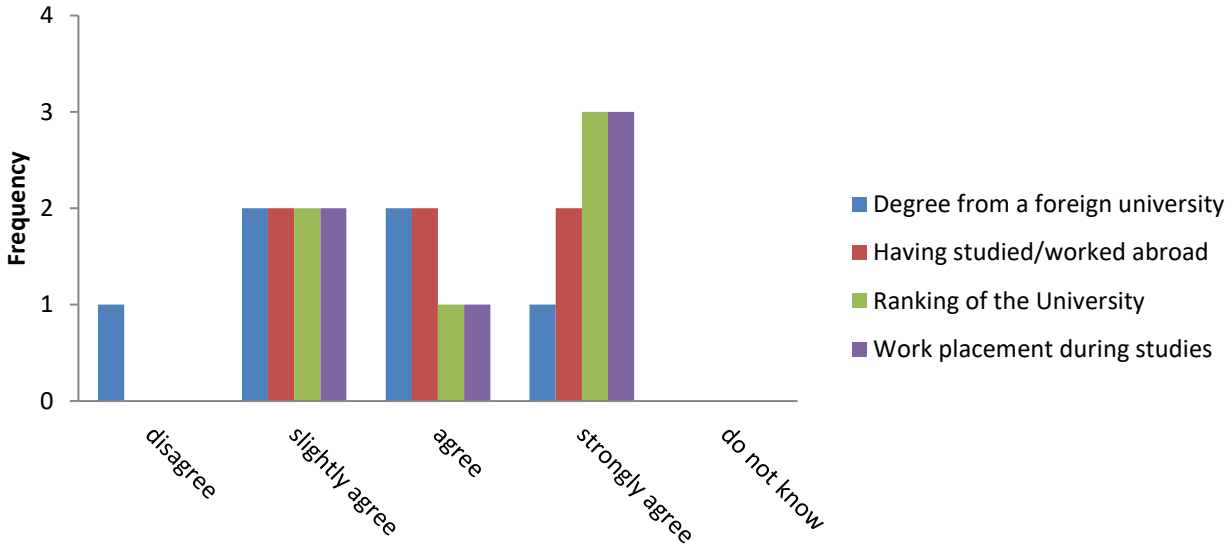


Fig. 74 Importance of the following factors in the recruitment of University graduates - University of Damanhour

Figure 75 reports the critical characteristics that are more difficult to find when employing university graduates, from the companies' perspective. Recent graduates seem to lack, most of all, technical knowledge and practical skills, according to 4 companies out of 6. Some companies also stressed the lack of adaptability to the work schedule and the lack of acceptance of salary. One company did not answer this question.

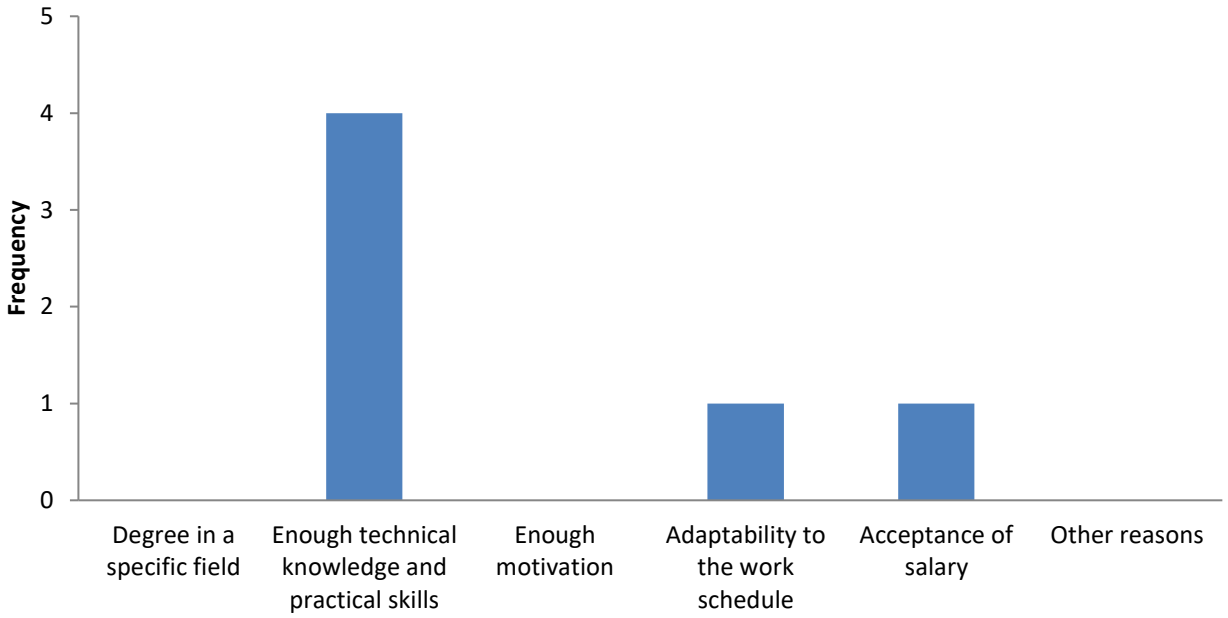


Fig. 75 Aspects more difficult to find when employing recent graduates - University of Damanhour

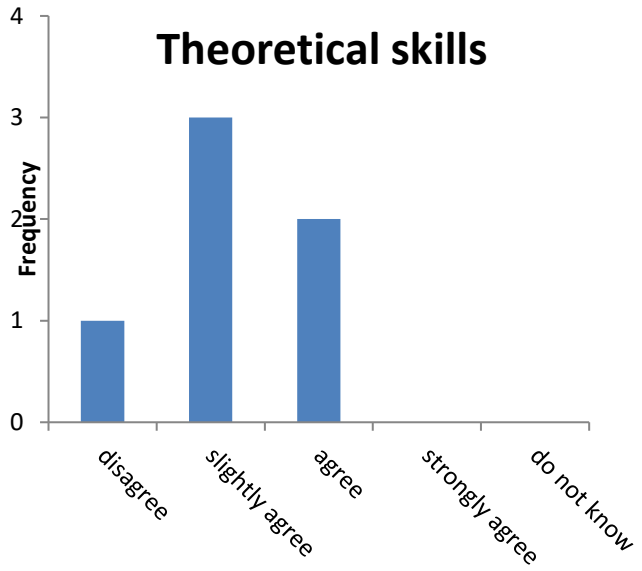
Skills

Figure 76 reports the histograms connected to a series of questions about which skills or other requirements graduates lack, much more in detail than in the previous question.

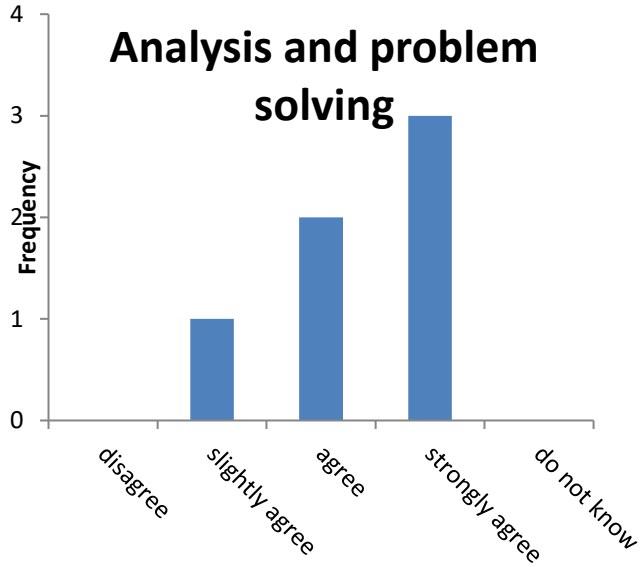
Coherently with the previous figure (n. 75), the lack of practical skills seems to be one of the most critical problem when employing graduates. 5 companies out of 6 agree or strongly agree on this aspect. The same conclusion can be drawn for integrity, leadership, ability to acquire new knowledge, analysis and problem solving, and decision-making skills. Almost all the companies agree or strongly agree on these aspects stressing their lack in graduates. On the other hand, graduates do not seem to be lacking under the theoretical skills point of view.

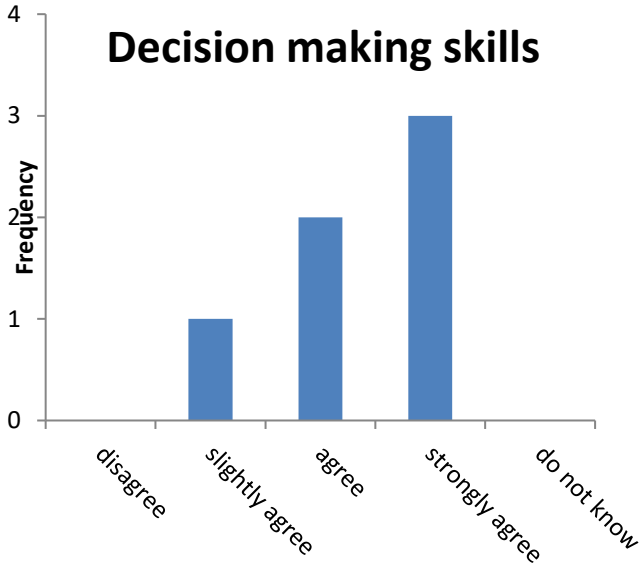
In fact, these skills are not considered a weakness in recent graduates.

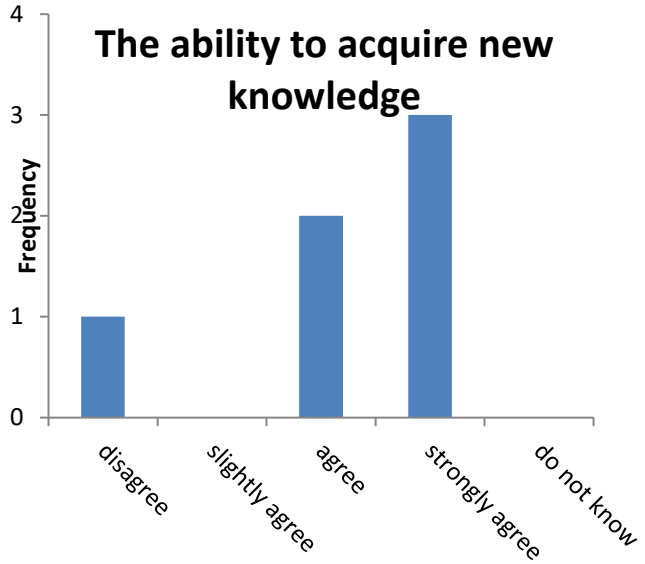
For all the other skills listed in the questionnaires, it not easy to draw conclusions because the answers provided by the companies are quite contrasting.

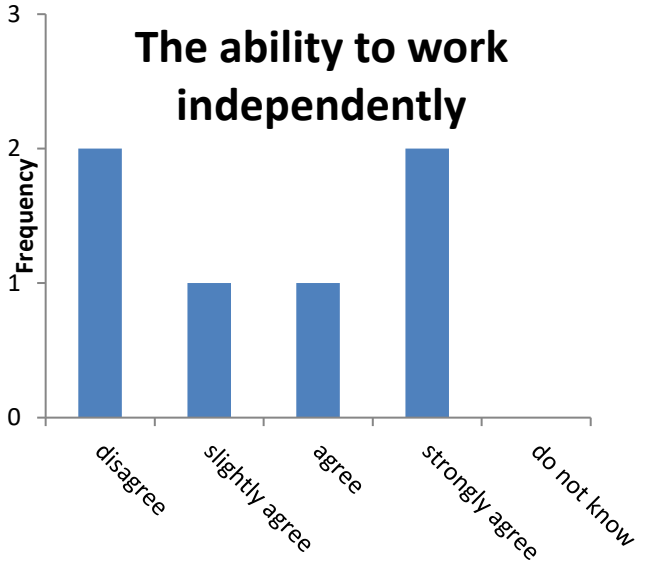

Theoretical skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

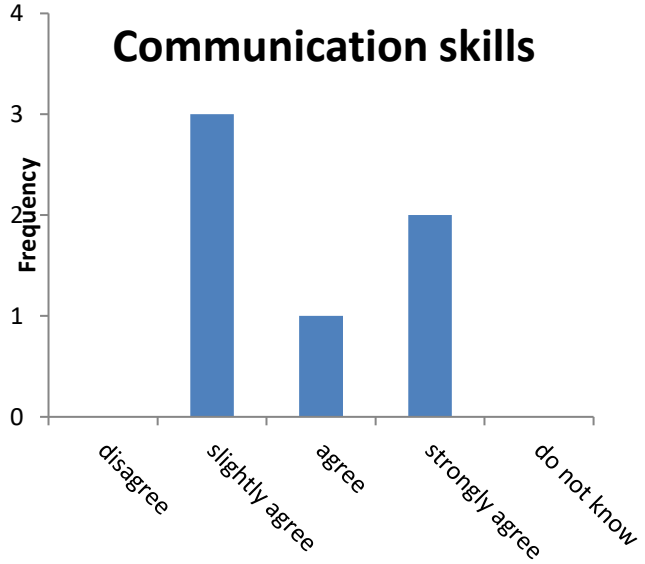

Practical skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

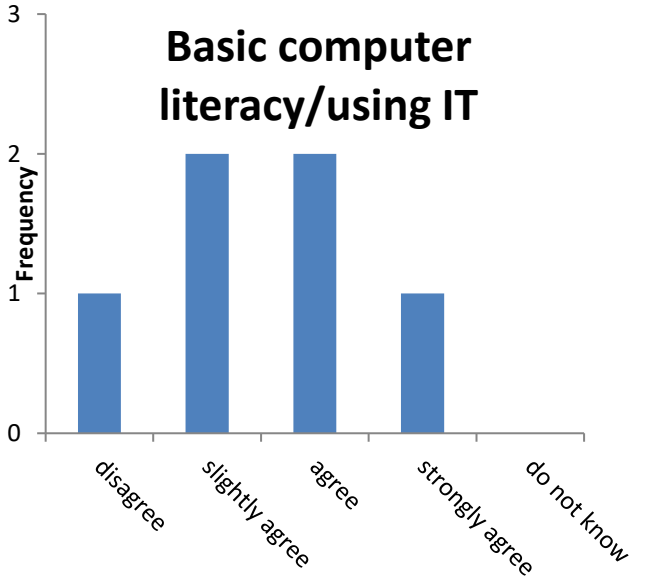

Analysis and problem solving
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

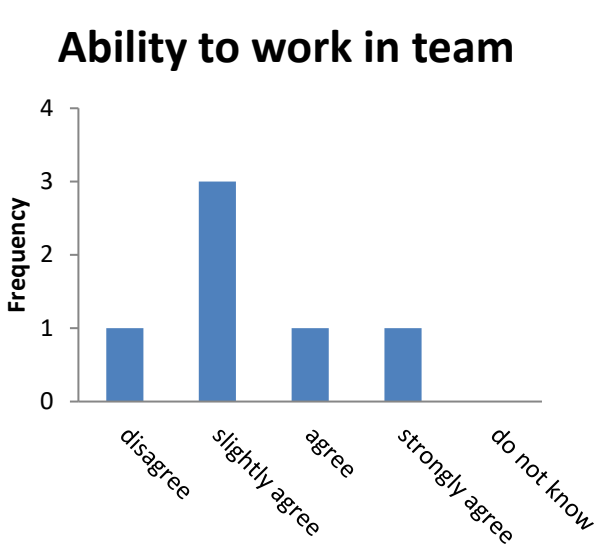

Decision making skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know

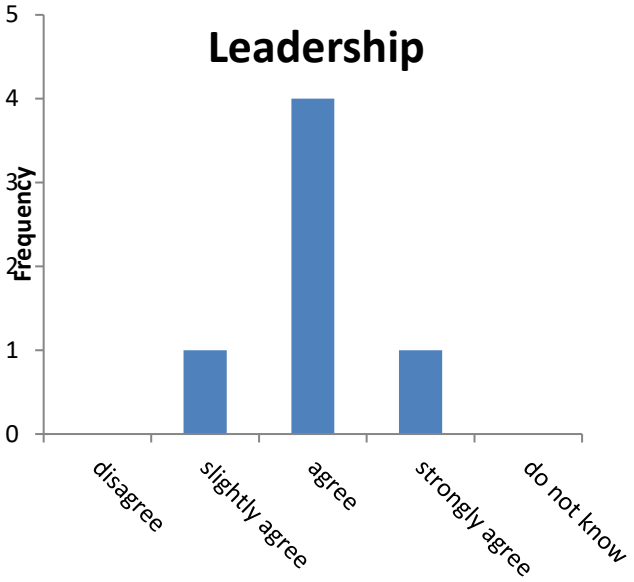

The ability to acquire new knowledge
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know


The ability to work independently
Frequency
0
1
2
3
disagree
slightly agree
agree
strongly agree
do not know

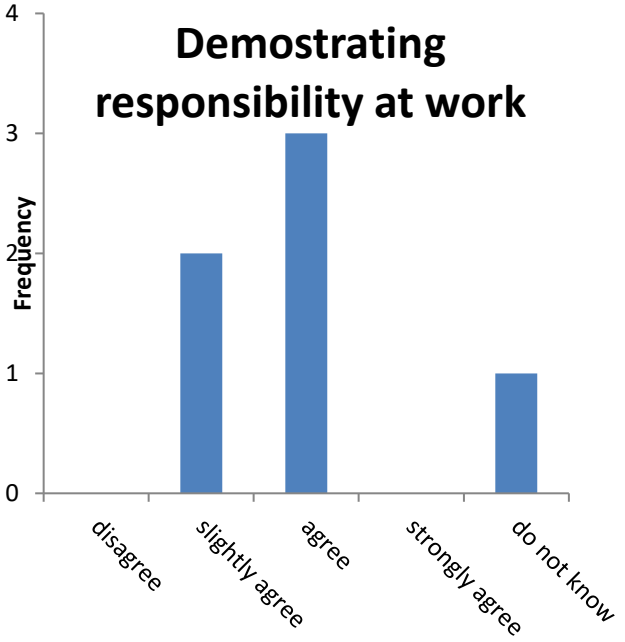

Communication skills
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know


Basic computer literacy/using IT
Frequency
0
1
2
3
disagree
slightly agree
agree
strongly agree
do not know


Ability to work in team
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know


Leadership
Frequency
0
1
2
3
4
5
disagree
slightly agree
agree
strongly agree
do not know


Negotiation skills
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know


Demostrating responsibility at work
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know

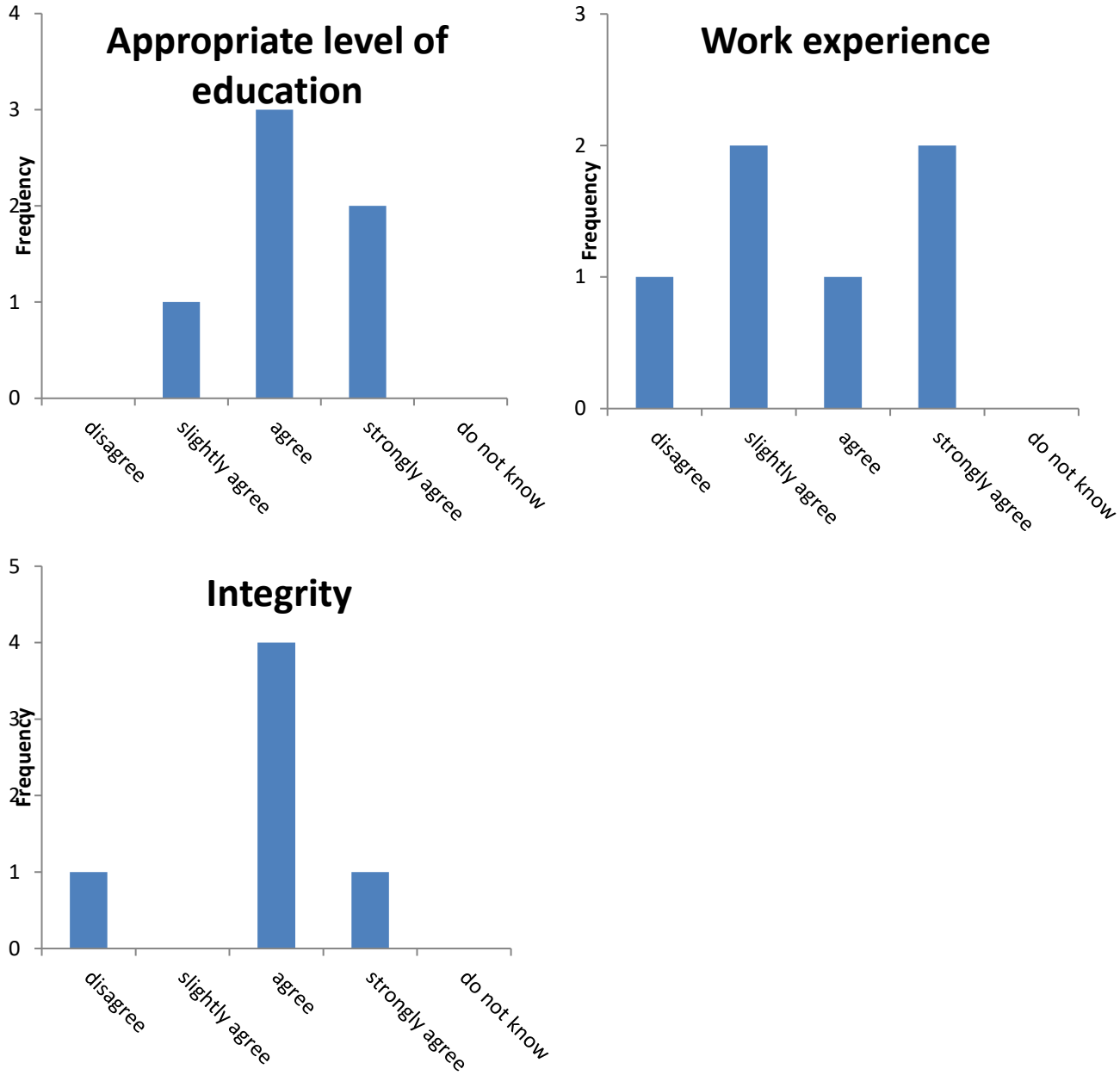


Fig. 76 Graduates' missing skills - University of Damanhour

Finally, companies were asked which actions universities should take to enhance the employability of graduate students. As showed in figure 77, all the actions suggested in the questionnaire are considered relevant or strongly relevant. In particular, most of the companies strongly agree on the need to run courses that are more relevant to the needs of enterprises.

Also, compulsory work placement experience as an integral part of the curriculum and the attendance of practical classes are suggested by the companies as added values in terms of employability. This aspect is

perfectly coherent with the lack of practical skills highlighted by the companies when employing recent graduates, as seen in the previous questions.

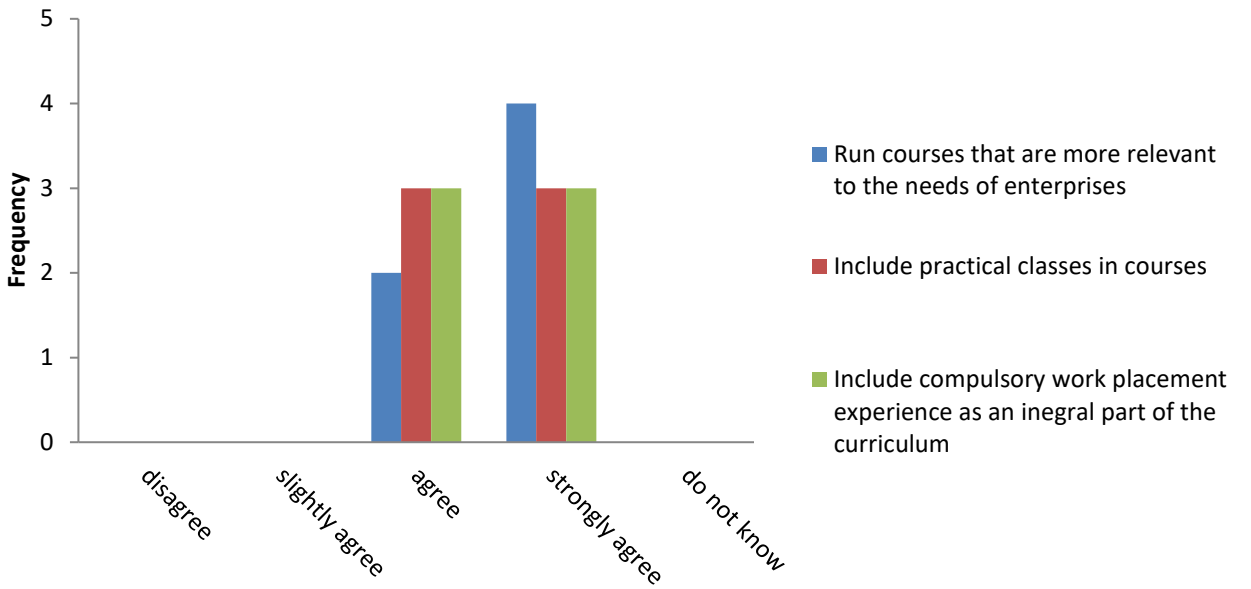


Fig. 77 Importance of the following actions taken by universities to enhance the employability - University of Damanhour

Cooperation with universities

This section's aim is to investigate any cooperation forms existing between companies and Universities. Companies were asked which forms of cooperation with the Universities have been established so far.

Only one enterprise out of six does not have any kinds of relationship with the universities. On the other hand, all the other companies show a collaboration with universities, trough different approaches.

Research cooperation agreements seems to be the most common kind of cooperation.

In addition, the discussion for designing curricula and the participation in business forums and conferences organized by universities seem to be frequent.

It is interesting note that none of the companies declare to offer internships to University students.

7.5 University of Zagazig

Introduction

The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered has the aim to identify strengths and weaknesses of the education system, evaluate the current impact and consider areas for improvement.

There was a minimum of five questionnaires required. The University of Zagazig collected questionnaires from four enterprises, and all of them have been used in the quantitative analysis, even if not all the questions have been properly answered, and in one case, a whole part of the questionnaire is missing.

Company identification details

All the 4 enterprises are located in the northern part of Egypt, between Cairo and Ismalia. With regard to the economic sector, only one company provided information, declaring to be involved in nursery production, vegetables and seeding.

All the enterprises analyzed started their activities during the last twenty years. The oldest one started its activity in 1998. The most recent was set up in 2016.

Regarding the ownership status, the data is quite uniform. One company did not provide any answer; three enterprises are a branch of a foreign company.

Only one enterprise answered the question regarding the number of employees with a university degree, showing a very high percentage (80%).

For all the companies analyzed, the main market area is represented by Egypt itself. None of them declares to have western countries as a market area, thus showing a low propensity to export.

In the last part of this set of questions, companies were asked about their major employment concerns. Among the possible answers, one of them agrees on the unsuitable qualification level of labor forces. Two companies stress the concern about the lack of professional skills. One company declares as major concerns both the unsuitable qualification level of labor forces and the lack of professional skills.

Recruitment

Concerning the recruitment issue, in the first question of this section the companies were asked about the number of recent graduates recruited in the last ten years.

All the companies have recruited recent graduates during the last ten years, varying from a minimum of 1 to maximum of 15.

According to the employers, the preferred graduate background should be related to the agriculture science field, with a focus on topics such as food and seed production.

Regarding the qualifications that are mostly taken into account in the selection of university graduates, a specific degree is considered a fundamental factor by all the companies. A Masters' degree and a doctoral degree are not considered an added value by any of the companies.

With regard to which factors are considered important when recruiting University graduates, beside academic qualifications, the results are quite surprising, as showed in the histogram below (Figure 78). Apparently, having an international profile, in terms of having a degree from a foreign University, is not considered important. Two companies declare that they do not agree, and two companies declare that they slightly agree on its importance. On the other hand, all the companies strongly agree on the importance of a period of work placement during studies.
Factors such as having studied or worked abroad, and the University's ranking do not seem to be considered important in the selection of graduates.

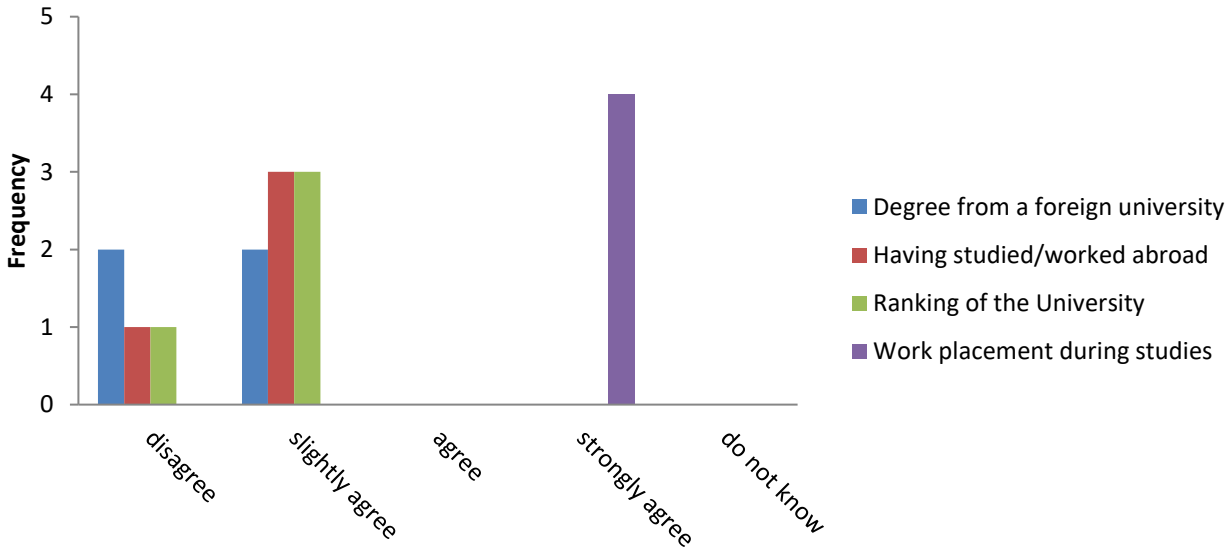


Fig. 78 Importance of the following factors in the recruitment of University graduates - University of Zagazig

Figure 2 reports the critical characteristics that are more difficult to find when employing university graduates, from the companies' perspective. What all the companies agree on, is that recent graduates seem to lack, most of all, technical knowledge and practical skills. Three companies also stressed the lack of motivation.

In addition, two companies consider the lack of adaptability to the work schedule, and the lack of acceptance of salary as a problem.

Fig. 79 Aspects more difficult to find when employing recent graduates - University of Zagazig

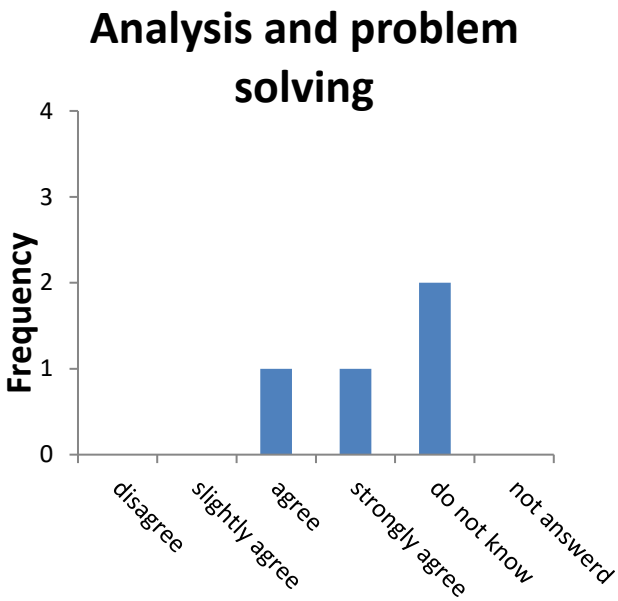
Skills

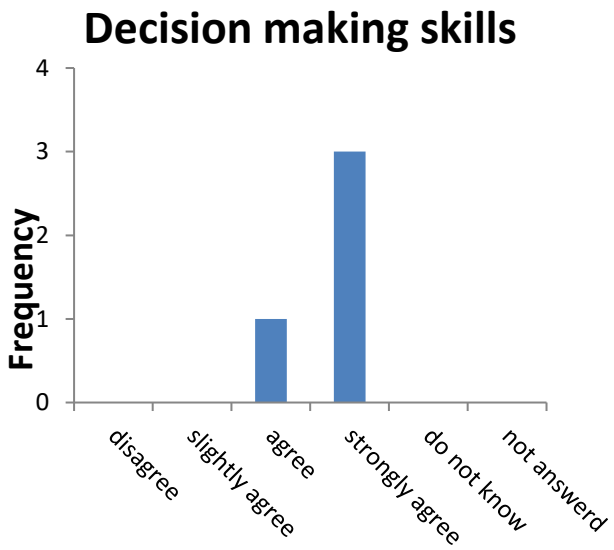
Figure 80 reports the histograms connected to a series of questions about which skills or other requirements graduates lack, much more in detail than in the previous question.

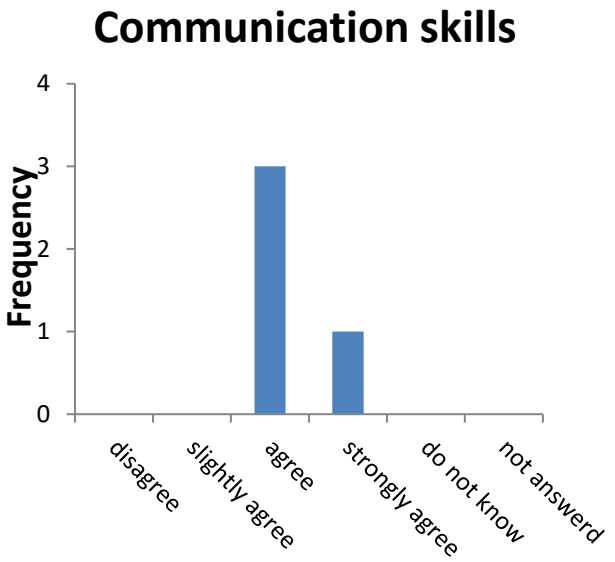
Coherently with the previous figure (n. 79), the lack of practical skills seems to be one of the most critical problem when employing graduates. All the companies agree or strongly agree on this aspect. The same conclusion can be drawn for the following factors, on which 3 companies (out of 4) strongly agree: decision making skills, ability to work in team, leadership, and integrity.

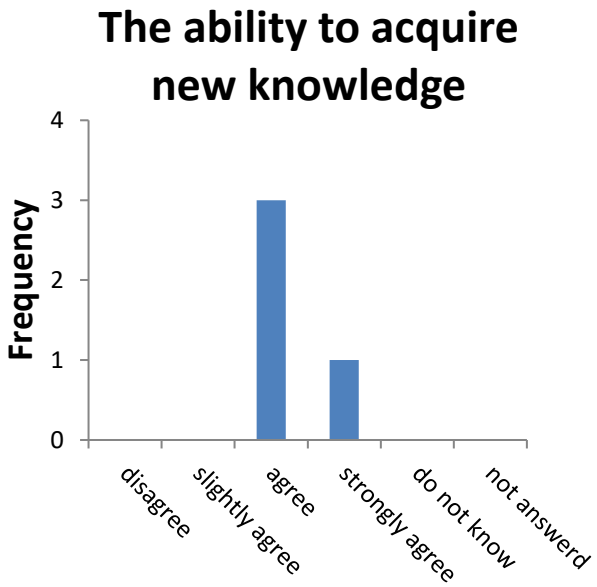
On the other hand, graduates do not seem to be lacking under the theoretical skills point of view. In fact, only one company strongly agrees on considering these skills a weakness in recent graduates.

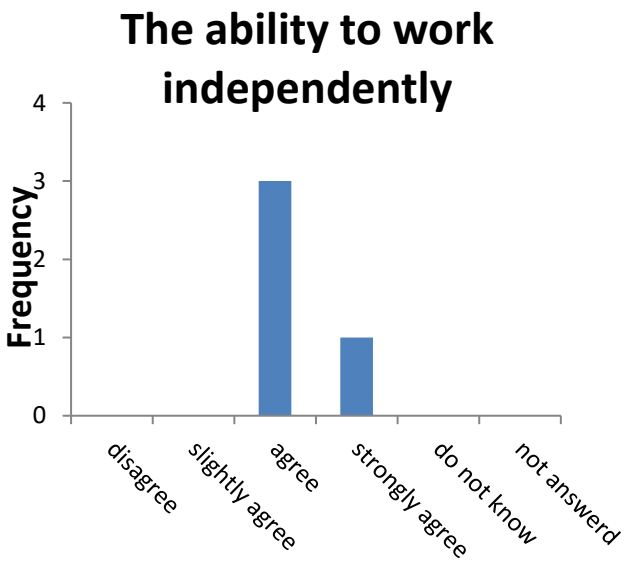
For all the other skills listed in the questionnaires, it not easy to draw conclusions because the answers provided by the companies are quite contrasting.



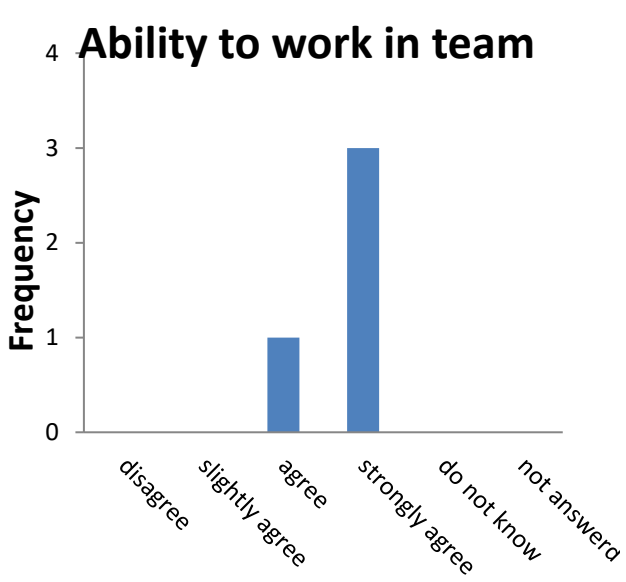


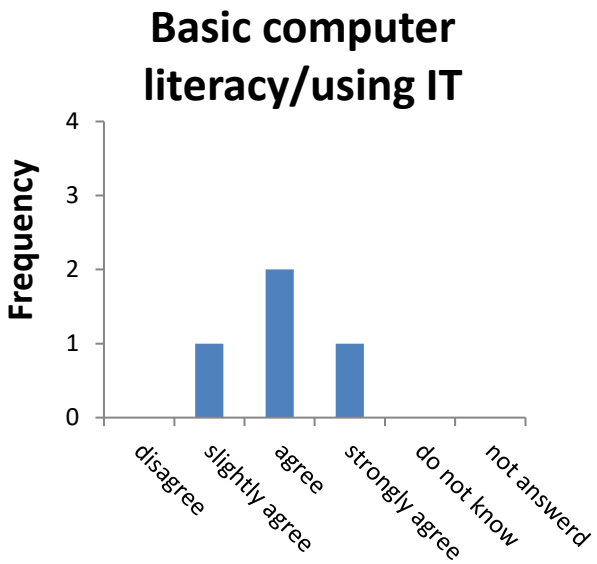

Communication skills
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know
not answerd

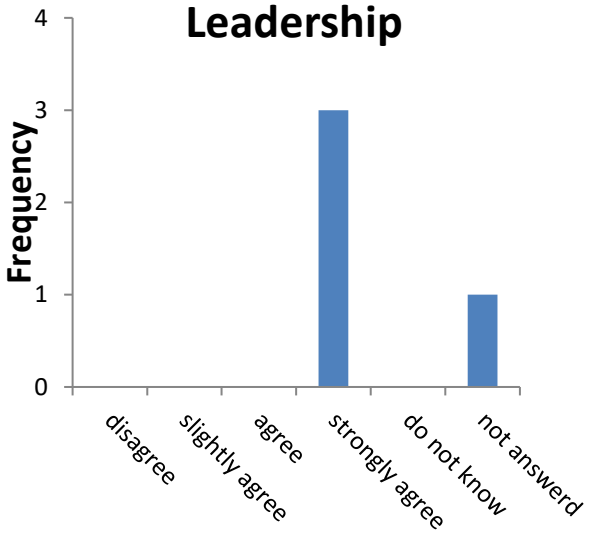

The ability to acquire new knowledge
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know
not answerd

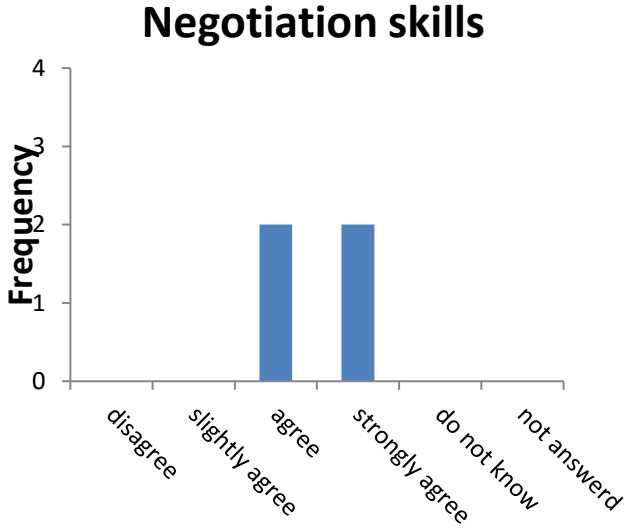

The ability to work independently
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know
not answerd


Work experience
Frequency
0
1
2
3
4
disagree
slightly agree
agree
strongly agree
do not know
not answerd


Ability to work in team
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know
not answerd


Basic computer literacy/using IT
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know
not answerd


Leadership
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know
not answerd


Negotiation skills
Frequency
4
3
2
1
0
disagree
slightly agree
agree
strongly agree
do not know
not answerd

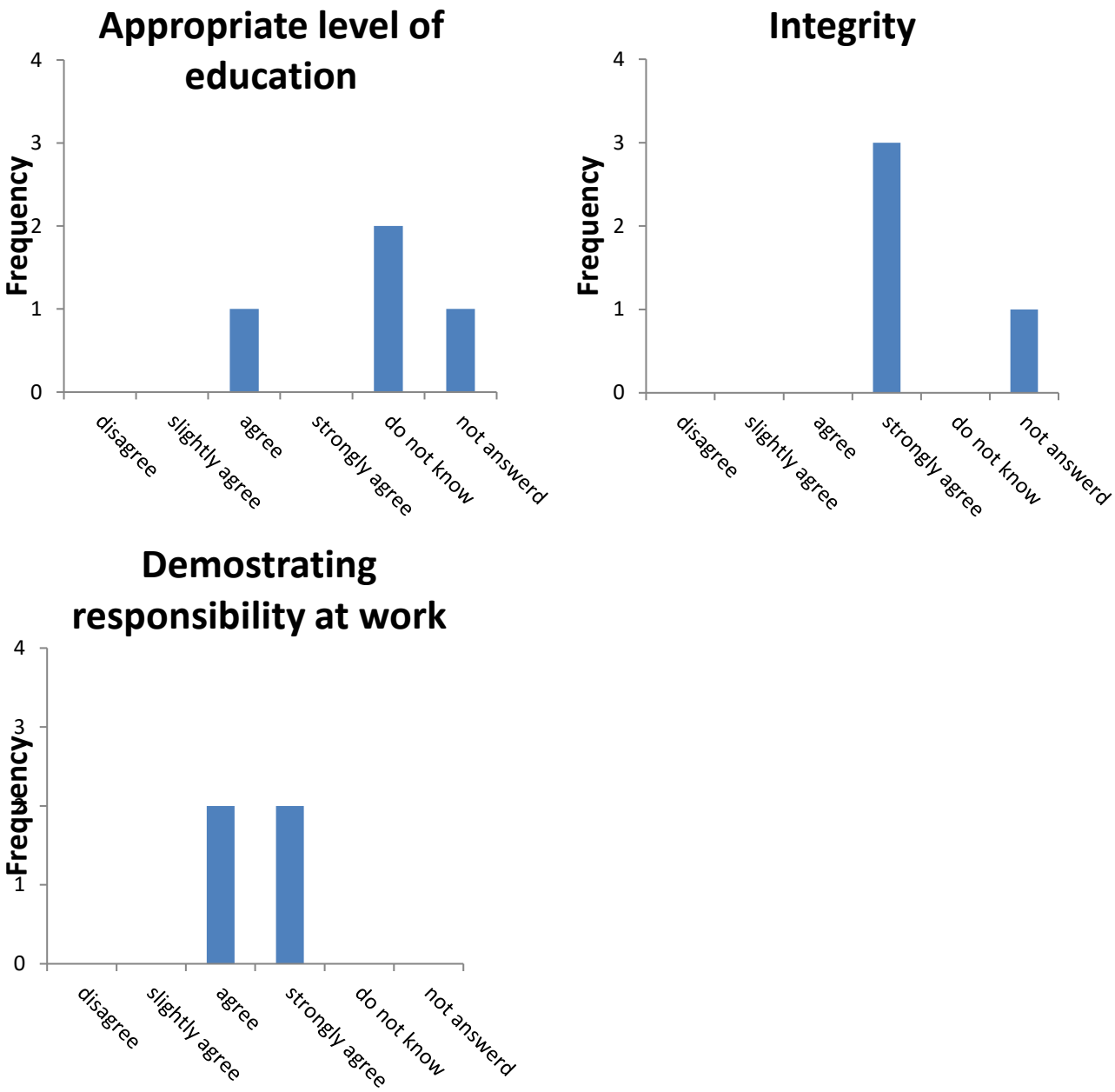


Fig. 80 Graduates' missing skills- University of Zagazig

Finally, companies were asked which actions universities should take to enhance the employability of graduate students. One company did not answer this question.

As showed in figure 81, all the actions suggested in the questionnaire are considered relevant or strongly relevant. In particular, three companies strongly agree on the need to run courses that are more relevant to the needs of enterprises.

Also, compulsory work placement experience as an integral part of the curriculum and the attendance of practical classes are suggested by the companies as added values in terms of employability (two companies strongly agree and one company agrees on this point).

This aspect is perfectly coherent with the lack of practical skills highlighted by the companies when employing recent graduates, as seen in the previous questions.

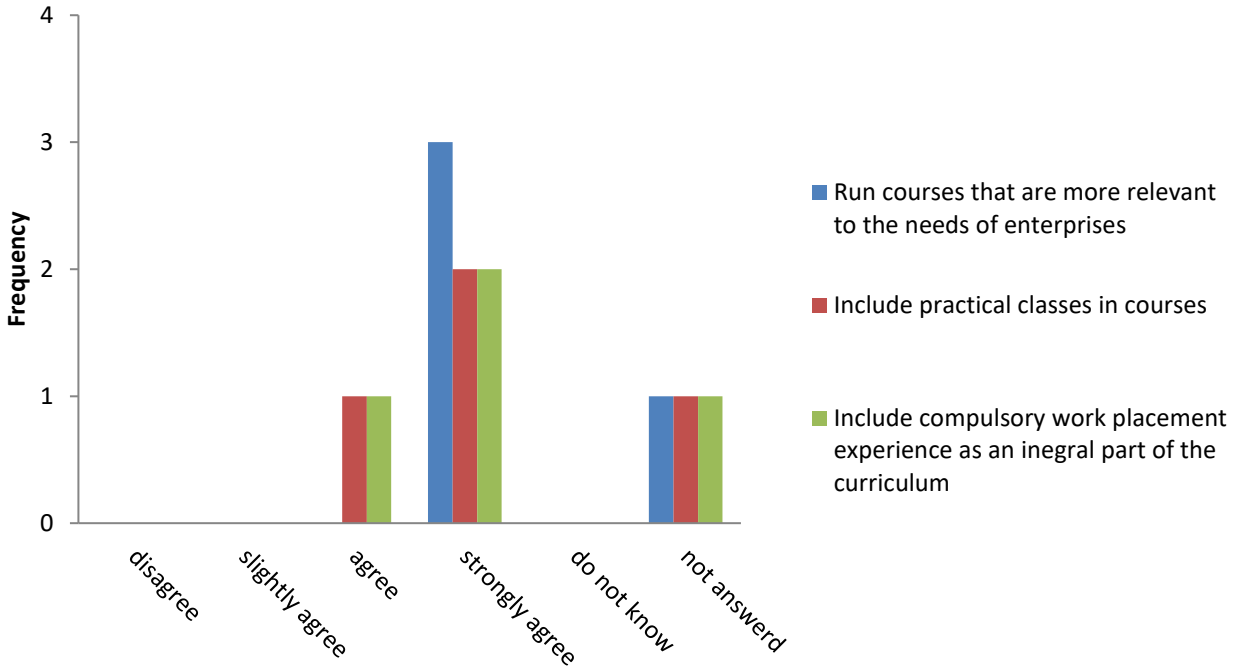


Fig. 81 Importance of the following actions taken by universities to enhance the employability - University of Zagazig

Cooperation with universities

This section's aim is to investigate any cooperation forms existing between companies and Universities. Companies were asked which forms of cooperation with the Universities have been established so far. One company did not answer this question.

On the other hand, all the other companies show some types of collaboration with universities.

Participating in business forums and conferences organized by Universities seems to be the most common kind of cooperation.

In addition, the discussion for designing curricula, offering internships to University students, and having experienced staff engaged in vocational training seem to be frequent.

8. Conclusion

The ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egyptian Country) Project is designed to contribute at the enhancement of capacity building and modernization of the Higher Education of Egypt ensuring high quality educational curricula.
The main aim of the project focuses on the update of Master curricula taking into account new approaches to tackle land degradation and desertification processes.
The new Master will be designed to be student-oriented while building a multi-stakeholder collaborative and international educational network on Sustainable Land Management, thus creating new cooperative opportunities and relationships to better compete in the market work.

This survey represents the first step to plan a new master course. In fact, through this survey, the curricula already provided by the Universities, together with the perception on the skills and educational level provided by each involved Universities, in terms of level of satisfactions, have been deeply analyzed.
The results and findings of the survey reveals a series of strengths and weaknesses of the current education system that can be used as a basis for discussion and analysis among project partners and other stakeholders involved in the educational system in order to develop new higher educational policies and improve and enhance program curricula better facing labor market needs. Furthermore, trought this survey, it is now possible to better understand the expectations of students ,teachers and enterpreuers as users of the educational system and how these expectations are met so far.

The good news from the survey is that both students and teachers recognize the importance to implement a Master based on innovative learning methods aiming at improving the quality of teaching and learning while ensuring high quality educational curricula.

- Teacher and student are satisfied about the quality of the teaching staff. This result can therefore be considered as a good sign of the level of education provided by Egyptian universities. However, students and teachers highlight the importance of developing creativity, critical and problem-solving skills by a combination of traditional learning methods with new educational one based on the use of new technologies. This approach is considered the most appropriate and effective to meet the students, professionals and employers' expectation and needs.

There is however always the possibility for improvement. This survey identifies several noteworthy findings and results that have to be taken into account in order to improve the actual education system.

- A lack or shortage in practical and technical skills. There is an overall agreement amongst students, teachers and employers related to the fact that acquiring technical knowledge and practical skills is a priority for the students in terms of employability. There is a recognized need to implement the education programs including internships that allow students to fill the gaps in what are considered to be basic practical skills that employers think to be necessary to access the labor market.

  Enhancement action: Introduce a strong practical component in the master courses though a compulsory work placement experience in the curriculum or though implementing courses with a more practical approach in line with the labor market requests.

Close related to this previous point, the survey's results seem to suggest a close cooperation within all the actors involved in the system especially between education institutions and workplace that are often two spheres too distant each other and cut off from the policy level.

- Strengthen the cooperation between enterprises and universities. Universities and enterprises should work together and cooperate as much as possible. Moreover, this cooperation between universities and enterprises should begins earlier in the academic career of the student and not only at the end of the career just before a blind jump in the labor market.

  Enhancement action: To cover this gap two different kinds of actions may be taken into consideration. Firstly, create new and more frequent opportunities of collaboration not only through seminars or workshop but also with new approaches and a more intensive involvement of the enterprises in research projects. Secondly, companies should be actively involved in the planning of new degree courses for a closer match with the labor market in function of the future recruitment.

- Foreign language skills: The importance of foreign language learning is strongly recognized by all the actors involved in the education system. A high level of foreign language skills is considered a fundamental asset for successfully accessing the labor market.

  Enhancement action: Assess improvements in foreign language learning in those degree programs where this skill is considered to be of great importance in the labor market. Including a double languages approach or the use of tutorial services may be useful practical solutions.

Finally, some findings are closely related to the educational experience most of all in terms of quality of teaching and learning.

- Strengthen the quality of teaching and learning. Both students and teachers agree in considering the possibility of improving the quality of learning and teaching. The shortage of interactive and practical lectures in addition to the theoretical lectures is often highlighted. Moreover, it seems that a strong collaboration between teachers within joint projects or simple teaching networks would enhance a higher level of quality learning.

  Enhancement action: Promote the use of new technologies and innovative learning approaches with innovative learning materials behind the traditional reference material, such as interactive games, videos, e-learning and distance lectures, should be a prior approach in new Master course.

Appendix: Questionnaires

ILHAM-EC project
CURRICULUM EVALUATION

General Instructions

This survey is part of the Evaluation Assessment of Egyptian Universities carried out under the framework of the ILHAM-EC (Interuniversity Learning in Higher education on Advanced Land Management- Egyptian Country) project, which aims at increasing the professionalism of Egyptian young students by supporting the development of a new inter-university postgraduate Master on Sustainable Land Management (SLM).
The survey includes questions on the curricula provided by your University, including single course or master courses.

If you have any question or comment please contact:

Desertification Research Center (NRD-UNISS)
University of Sassari (IT)
Email: nrd@uniss.it
Or
(insert local contact)
…….
……

We would appreciate if **you could fill the form electronically** using your own word processor and send it back to the local contact by **...**.

Thank you for your precious time

COURSE TITLE _____

FACULTY OR DEPARTMENT_____

AVERAGE NUMBER OF STUDENTS ATTENDING THE COURSE_____

COURSE HOURS_____

LANGUAGE(S) OF INSTRUCTION_____

TRAINEESHIP PERIOD (IF REQUIRED)_____

ENTRY REQUIREMENTS (IF ANY)_____

COURSE OBJECTIVES

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

COURSE ORGANIZATION: describe the course contents and structure

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

TEACHING METHODS

Lectures	□	n. hours (%)___
Practice Exercises	□	n. hours (%)___
Labs	□	n. hours (%)___
Other	□	_____ n. hours (%)___

If practice exercises and laboratory activities are part of the course, please describe them.

COURSE MATERIALS: Required (and/or optional) readings (including authors and editions), background reading, softwares etc.

COURSE ASSIGNMENTS: Please describe, briefly, what students are required to do during the course, such as exams, essays, reports presentation, team work etc.

_____

_____

ASSESSMENT METHODS AND CRITERIA:

Oral □
Multiple-choice test □
Open-book test □
Written assignment □
Other □ _____

Please explain the grading criteria

_____

_____

Comments or suggestion:

_____

_____

_____

_____

_____

Thanks for your collaboration

ILHAM-EC project
Needs Assessment of Egyptian Universities
Teacher Questionnaire

General Instructions

This survey is part of the Evaluation Assessment of Egyptian Universities carried out under the framework of ILHAM-EC (Interuniversity Learning in Higher education on Advanced Land Management- Egyptian Country) project, which aims at increasing the professionalism of Egyptian young students by supporting the development of a new inter-University Postgraduate Master on Sustainable Land Management (SLM).
The survey asks about your teaching experience including your level of satisfaction with various aspects of University.

Completion of the survey will take approximately 15 minutes.
Your responses will be treated confidentially. To help ensure anonymity, DO NOT write your name on the questionnaire.

If you have any question or comment, please contact:

Desertification Research Center (NRD-UNISS)
University of Sassari (IT)
Email: nrd@uniss.it
Or
(insert local contact)
…….
……

We would appreciate if you could complete this survey and send it back to the local contact by .....

Thank you for your precious time

BACKGROUND INFORMATION

Gender: ☐ Female ☐ Male

I am aged: ☐ <30 ☐ 30–50 ☐ 50-70 ☐ >70

My highest level of education (completed) is _____

I am employed as: ☐ permanent teacher ☐ fixed term contract for a period of more than 1 year ☐ fixed term contract for a period of 1 year or less

Teaching Field _____

Name of the University_____

I have been working as a teacher for: ☐ 1-2 years ☐ 3-5 years ☐ 6-10 years ☐ 11-15 years ☐ 15-20 years ☐ >20 years

PROFESSIONAL DEVELOPMENT

In the last 2 years, I have participated in the following formal and informal professional activities that have affected my career as teacher:

	Participation (Y/N)	No Impact	A small impact	A moderate impact	A large impact
Scientific Courses/workshops	☐	☐	☐	☐	☐
Education courses/workshop on methods or other education-related topics	☐	☐	☐	☐	☐
Participation in research networks on topics related to my field of interest	☐	☐	☐	☐	☐
Participation in a network of teachers formed specifically for the professional developments of educational methods	☐	☐	☐	☐	☐
Reading professional literature (e.g. journals, evidence-based papers)	☐	☐	☐	☐	☐
Engaging in informal dialogue with my colleagues on how to improve our teaching method	☐	☐	☐	☐	☐

TEACHER SATISFACTION

Please describe what aspect of this University you are **MOST** satisfied with

_____

_____

_____

Please describe what aspect of this University you are **LEAST** satisfied with

_____

_____

_____

UNIVERSITY MISSION

Please circle the number from the evaluation options that is closest to your personal experience. If you do not have any experience of the topic, please circle 0.
Evaluation scale: 1 = I do not agree; 2 = I slightly agree; 3 = I generally agree; 4 = I completely agree; 0 = No experience of the topic.

What should be, in your opinion, the main mission of the University? (maximum 2)
☐ training specialists / professionals in different fields of study
☐ training graduates who meets the labor market demands
☐ forming new competencies
☐ Other:_____

In your opinion, is the University mission accomplished?
Yes □
No □

Why?

_____

_____

_____

SUPPORT SERVICES AND FACILITIES

I am satisfied with:

Classroom and lab facilities	1	2	3	4	0
Availability of computers and technology	1	2	3	4	0
Library resources	1	2	3	4	0
On-campus housing for visiting professors	1	2	3	4	0
Career counseling and placement for students	1	2	3	4	0
Opportunities to spend mobility period abroad	1	2	3	4	0

EDUCATIONAL EXPERIENCES

I am satisfied with:

Quality of the teaching staff	1	2	3	4	0
Quality of the education given to students	1	2	3	4	0
Teaching staff ability	1	2	3	4	0
Interest that teaching staff have in the progresses of their students	1	2	3	4	0
Courses availability	1	2	3	4	0

I am satisfied with the following skills that students are developing while attending the University:

Research skills	1	2	3	4	0
Critical analysis	1	2	3	4	0
Theoretical skills	1	2	3	4	0
Practical skills	1	2	3	4	0
Communication skills (oral and written expression, writing and presenting reports, etc.)	1	2	3	4	0
Languages	1	2	3	4	0
Computer literacy	1	2	3	4	0
Problem solving skills	1	2	3	4	0
Ability to work in team	1	2	3	4	0
Ability to work independently	1	2	3	4	0
Ability to acquire new knowledge	1	2	3	4	0
Self-confidence	1	2	3	4	0
Leadership	1	2	3	4	0
Negotiation skills	1	2	3	4	0
Entrepreneurial ability	1	2	3	4	0
Creativity	1	2	3	4	0

Rate the importance of the following actions taken by Universities to enhance the employability of graduate students

1) Run courses that are more relevant to the needs of enterprises	1	2	3	4	0
2) Include practical classes in courses	1	2	3	4	0
3) Include compulsory work placement experience as an integral part of the curriculum	1	2	3	4	0
4) Others (please specify) _____					

Considering the Sustainable Land Management subject, in your opinion which are the educational courses that have to be introduced and that are not provided by your University?

_____
_____
_____

Comments or suggestion:

_____
_____
_____
_____
_____
_____
_____

Thanks for your collaboration

ILHAM-EC project
Needs Assessment of Egyptian Universities
Student Questionnaire

General Instructions

This survey is part of the Evaluation Assessment of Egyptian Universities conducted under the framework of the ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egyptian Country) project, which aims at increasing the professionalism of Egyptian young students by supporting the development of a new inter-University Postgraduate Master on Sustainable Land Management (SLM).
The survey includes questions on your experience at your University, including what motivates you to go to University and your level of satisfaction with various aspects of University.

Completion of the survey will take approximately 15 minutes.
Your responses will be treated confidentially. To help ensure anonymity, DO NOT write your name on the questionnaire.

If you have any question or comment, please contact:

Desertification Research Center (NRD-UNISS)
University of Sassari (IT)
Email: nrd@uniss.it
Or
(insert local contact)
…….
……

We would appreciate if you could complete this survey and send it back to the local contact by ....

Thank you for your precious time

BACKGROUND INFORMATION

Gender: ☐ Female ☐Male

I am aged: ☐ <21 ☐ 21–24 ☐ 25-30 ☐ >30

I am: ☐ a first year student ☐ in the middle of my studies ☐ a final year student

Name of Degree enrolled in _____

Name of the University_____

Accommodation: ☐With Parents ☐ On-campus housing ☐Other_____

STUDENT MOTIVATION

Please circle the number from the evaluation options that is closest to your personal experience. If you do not have any experience of the topic, please circle 0.
Evaluation scale: 1 = I do not agree; 2 = I slightly agree; 3 = I generally agree; 4 = I completely agree; 0 = No experience of the topic.

Before studying at this University:
I got enough advance information about the studies provided by this institution: 1 2 3 4 0

I got information about the institution and its study provision from:

Job center 1 2 3 4 0

Student counsellor 1 2 3 4 0

Friends or relatives 1 2 3 4 0

Internet 1 2 3 4 0

Media/newspaper 1 2 3 4 0

Other, please specify _____

I knew that this University had a good reputation 1 2 3 4 0

What were your main motivations in enrolling to the University?

to gain valuable skills for my career	1	2	3	4	0
because other people have told me I should	1	2	3	4	0
because I want to solve problems in my community	1	2	3	4	0

because I don't know what else to do	1	2	3	4	0
because it's a great place to develop friendships	1	2	3	4	0
because it's a better alternative than working	1	2	3	4	0
to get qualification	1	2	3	4	0
so I can get a better job	1	2	3	4	0

If other, please specify: _____

What is your future plan after graduation?

1) Attend a post-graduate Master degree
2) Attend a PhD course
3) Start to work

STUDENT SATISFACTION

Please describe what aspect of this University you are **MOST** satisfied with

_____

_____

_____

Please describe what aspect of this University you are **LEAST** satisfied with

_____

_____

_____

UNIVERSITY MISSION

What should be, in your opinion, the main mission of the University? (maximum 2)

☐ training specialists / professionals in different fields of study
☐ training graduates who meet the labor market demands
☐ forming new competencies
☐ Other:_____

In your opinion, is the University mission accomplished?

Yes □
No □

Why?

_____

_____

_____

SUPPORT SERVICES AND FACILITIES

I am satisfied with:

Financial aid services	1	2	3	4	0
Classroom and lab facilities	1	2	3	4	0
Availability of computers and technology	1	2	3	4	0
Library resources	1	2	3	4	0
Dorms and on-campus housing	1	2	3	4	0
Career counseling and placement	1	2	3	4	0
Opportunities to spend mobility period abroad	1	2	3	4	0

EDUCATIONAL EXPERIENCES

I am satisfied with:

Quality of the teaching staff	1	2	3	4	0
Quality of the education I am receiving	1	2	3	4	0
Teaching ability	1	2	3	4	0
Interest that teaching staff take in my progress	1	2	3	4	0
Course availability	1	2	3	4	0
Academic advising	1	2	3	4	0

I am satisfied with the following skills I am developing while attending University:

Research skills	1	2	3	4	0
Critical analysis	1	2	3	4	0
Theoretical skills	1	2	3	4	0
Practical skills	1	2	3	4	0
Communication skills (oral and written expression, writing and presenting reports, etc.)	1	2	3	4	0
Languages	1	2	3	4	0
Computer literacy	1	2	3	4	0
Problem solving skills	1	2	3	4	0
Ability to work in team	1	2	3	4	0
Ability to work independently	1	2	3	4	0
Ability to acquire new knowledge	1	2	3	4	0
Self-confidence	1	2	3	4	0
Leadership	1	2	3	4	0
Negotiation skills	1	2	3	4	0
Entrepreneurial ability	1	2	3	4	0
Creativity	1	2	3	4	0

Do you believe that the skills acquired/developed during the University will be useful to access the labour market?

Yes □

No □

Why?

_____

_____

_____

Rate the importance of the following actions taken by Universities to enhance the employability of graduate students

5) Run courses that are more relevant to the needs of enterprises (involving enterprises 'staff)	1	2	3	4	0
6) Include practical classes in courses	1	2	3	4	0
7) Include compulsory work placement experience as an integral part of the curriculum	1	2	3	4	0
8) Others (please specify) _____					

In case you are a student attending a new Master, whether the course required some periods abroad or in a different university (from few weeks to several months), would it be a problem for you to attend it?

Yes □ Why?_____

No □

Comments or suggestion:

_____

_____

_____

_____

_____

Thanks for your collaboration

ILHAM-EC project
Employers' perceptions of the employability and skills of graduates in Egyptian faculties

General Instructions

This survey is part of the Evaluation Assessment of Egyptian Universities carried out in the framework of the ILHAM-EC (InterUniversity Learning in Higher education on Advanced Land Management- Egyptian Country) project, which aims at enhancing capacity building in Higher Education of Egypt ensuring high quality educational curricula that meet professional, employer and socio-economic needs of the Partner Country by developing a new inter-University postgraduate Master on Sustainable Land Management (SLM).
One of the current challenges facing modernization of higher education is to explore how higher education can increase its relevance to labour market needs, ensuring that learners are equipped not just with vocational knowledge and skills, but with the 'tools' which will enable them to compete in the new marketplace.
The survey includes several questions in order to gain employers' perceptions on the match between their requirements as employers and the education and training of graduates. The information gathered will be used to identify strengths and weaknesses of the education system, evaluate current impact and consider areas for improvement.

Completion of the survey will take approximately 10 minutes.
Your responses will be treated confidentially.
If you have any question or comment, please contact:

Desertification Research Center (NRD-UNISS)
University of Sassari (IT)
Email: nrd@uniss.it
Or
(insert local contact)
…….
…….

We would appreciate if you could complete this survey and send it back to the local contact by …….

Thank you for your precious time

COMPANY IDENTIFICATION DETAILS INFORMATION

Company Name _____ Tel: _____
Location _____ Region: _____

What is the main activity/ economic sector your company operates?

_____

When did the activity of your company started (specify the year)? _____

Which is the status of your enterprise in terms of ownership:
A branch of a foreign company □ 100% Egyptian owned □ A joint venture □

What is the approximate percentage of employees who have a University degree?

Which market areas does your company work in?

1) Local area
2) Egypt
3) Arab countries
4) Western Countries

In your general opinion, which are the major employment concerns for your company?
Unsuitable qualification level of labour force □
Lack of professional skills □
Others (please specify) _____

RECRUITMENT

In the last 10 years, have you recruited any recent graduates?
Yes □ How many? _____
No □

On which subjects would you prefer your employee to be graduated on?

_____
_____
_____

State if the following factors are important in the selection of University graduates:

1) A specific degree Yes No
2) A Masters' degree Yes No
3) A doctoral degree/PhD Yes No

Please circle the number from the evaluation options that is closest to your personal experience. If you do not have any experience of the topic, please circle 0.
Evaluation scale: 1 = I do not agree; 2 = I slightly agree; 3 = I generally agree; 4 = I completely agree; 0 = No experience of the topic.

Importance of the following factors in the recruitment of University graduates

1) Possession of a degree from a foreign University	1	2	3	4	0
2) Having studied or worked abroad	1	2	3	4	0
3) The ranking of the University where they studied	1	2	3	4	0
4) Work placement during studies	1	2	3	4	0

What are the aspects more difficult to find when employing recent graduates?

1) Degree in a specific field
2) Enough technical knowledge and practical skills
3) Enough motivation
4) Adaptability to the work schedule
5) Acceptance of salary
6) Other reasons (please specify) _____

SKILLS

Which skills and/or other requirements do you think recent graduates lack?

1) Theoretical skills	1	2	3	4	0
2) Practical skills	1	2	3	4	0
3) Analysis and problem solving	1	2	3	4	0
4) Decision making skills	1	2	3	4	0
5) Creativity	1	2	3	4	0
6) The ability to acquire new knowledge	1	2	3	4	0
7) Ability to work independently	1	2	3	4	0
8) Communications skills: oral and written expression	1	2	3	4	0
9) Basic computer literacy/using IT	1	2	3	4	0
10) Ability to work in team	1	2	3	4	0

11) Leadership	1	2	3	4	0
12) Negotiations skills	1	2	3	4	0
13) Demonstrating responsibility at work	1	2	3	4	0
14) Appropriate level of education	1	2	3	4	0
15) Work experience	1	2	3	4	0
16) Integrity	1	2	3	4	0

Importance of the following actions taken by Universities to enhance the employability of graduate students

9) Run courses that are more relevant to the needs of enterprises	1	2	3	4	0
10) Include practical classes in courses	1	2	3	4	0
11) Include compulsory work placement experience as an integral part of the curriculum	1	2	3	4	0
12) Others (please specify) _____					

COOPERATION WITH UNIVERSITIES

Has your enterprise ever participated in activities involving cooperation with Universities such as:

1) Discussion for designing curricula; □
2) Offer of internships to University students □
3) Participation in business forums and conferences organized by Universities □
4) Research cooperation agreements □
5) Experienced staff engaged in vocational training □
6) No participation □
7) Others (please specify) _____

Please add below any other comment you might have:

_____
_____
_____
_____
_____
_____
_____
_____

Thanks for your collaboration

Appendix: Photos Universities of Alexandria, Cairo, Damanhour and Zagazig meetings

University of Alexandria meeting

University of Cairo meeting

University of Damanhour meeting

University of Zagazig meeting