

Evaluating the quality of service in universities: A qualitative approach of studying multiple cognitive fields (Tunis University as a case study)

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ABSTRACT: *The problematic that the researchers intend to drive in this paper, focused on the advisability of the role of learning evaluation system to improve the service quality in higher education. The study based on a sample of 2674 observations with 2381 students and 293 graduates. The statistical study founded on correspondence factorial analysis (CFA) using the SPSS software. The results show that education system is theoretical rather than practical. Moreover, according to graduates' responses, the theoretical concepts were insufficient and unsatisfactory. It means that many theories were not in convenience with skills that needs by labor market. The university of Tunis (UT) curriculum focuses on the ability development to understand and memorize. According to the graduates' expectations, the market requirements were not on the priorities of most of the programs and the evaluation system does not have a practical training. The academic assessment is not always objective and it has just recalled the shortcomings and weaknesses in content field and in evaluation system. The study explains the other aspects of poor achievement of the objectives relied to operability, efficiency and professional insertion of graduates in labor market. In addition, the learning evaluation was not suitable to ensure students' ability to be competitor in labor market.*

KEYWORDS: *Correspondence Factorial Analysis (CFA), learning, service quality, efficiency.*

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I. INTRODUCTION

In recent years, the quality of higher education has become the most important concern of academic institutions seeking to make their training adequate to the demands of labor market. Improvement of university's education must be based on an evaluation in order to detect weaknesses in the university curriculum, Raissi, N. (2018). Internal evaluation encompasses the entire internal environment of university (infrastructure, staff, teachers, students, and program), Giertz B. (2000). Defining evaluation is a little complex exercise because it is a function of subjective and questionable perception. There is no such a single, uniform definition recognized by all researchers. The evaluation is defined as "a process of analyzing and making a value judgment on an action, a program, a decision-making process, as far as possible, objective bases (through regular monitoring, recorded facts and reports or documents available, ...) and a process of stakeholder implications. The evaluation gives a quantitative and qualitative assessment, in relation to a system of values that should be made as explicit as possible", Green, D., (1993). For DE Ketele (1989), "to evaluate is to collect a set of sufficiently relevant, valid and reliable information, and to examine the degree of adequacy between this set of information, and a set of criteria appropriate to the objectives initially set, or adjusted in progress route to make a decision".

II. LITERATURE REVIEW

The relationship between evaluation and other management approaches, such as monitoring and auditing, is complex. This complexity stems from the fact that evaluation encompasses and transcends these various approaches are constitute resources for the evaluation process.

2.1. Evaluation and audit

There is often confusion between the evaluation and the audit reflecting the idea that project, program or action judged according to their conformity or non-compliance with the pre-established standards and procedures, Janne P. (2006). The audit ensures, through its internal function that of control, of adjustment or a function of regulation is the case of a deviation observed or the measurements wrongly taken, while others

conceived to remove the discrepancy or sanction or simply for a recall of procedures. However, the evaluation exercise with any other ambition seeks in full to understand and dissect the processes that explain the current situation with a view for improvement, Martin M. & Stella A., (2007).

2.2. Evaluation and monitoring

The monitoring periodically monitors the implementation of an action or program, and determines the extent planning, schedule of activities, other actions required and the expected results are going according to plan, in order to intervene just in time to correct the failures that are detected, Harvey L. & Green, D. (1993). Whereas the evaluation does not presuppose that the initial formulation of the action is better and optimal, Paul, J-J. ; Suleman, F. (2005). A process that seeks to determine as systematically and objectively as possible. What has happened; the causes of the findings and their origins in order to improve both current activities and planning and decision-making, Pfeffer, N. and Coote, A., (1991). Although, the evaluation and monitoring distinguished because they do not meet the same goals, their complementarity is strong. Indeed, if the tracking systems are working properly then the assessment needed less often, and when it taken, it is easier to conduct. Therefore, evaluation often based on quantitative elements and regular monitoring information, Unesco-Cepes (2005) and Vroeijenstijn, A.I. (1995).

III. THE PURPOSES AND FUNCTIONS OF THE EVALUATION

Depending on the motivations and context in which the decision to implement an evaluation program is made, the evaluation will perform one or more functions, but rarely all simultaneously.

3.1. The evaluation appreciates the action and considers its value

In this respect, evaluation is a tool for guiding action. All its constituent elements are analyzed in order to draw up a critical assessment as objective as possible; the achievements are underlined and the insufficiencies noted to arrive at recommendations such as proposing a direction or a deepening of the action and / or to elaborate a new programming, Wahlen, S. (1998) and Vlăsceanu, L., Grünberg, L., and Pârlea, D., (2004).

3.2. Evaluation renders accounts

The evaluation appreciates the use of resources; financial, human, material; and responds to the concern of financiers to see reports that resources are used satisfactorily, Harvey, L. (1999).

3.3. Evaluation helps with decision-making

Evaluation findings, reports or recommendations provide stakeholders, including non-governmental organizations (NGOs) and donors, with options to review and enable them to make well-informed and documented decisions, Herson, P. (2002). The evaluation process also facilitates the prioritization of actions for the optimal, efficient and judicious use of resources, Harvey, L. (2002).

3.4. Evaluation contributes to internal support and learning

By highlighting past mistakes and positive points, evaluation can draw lessons from experience, to improve the performance of projects, programs or actions, McKay, J. and Kember, D. (1999).

3.5. Evaluation is an information tool

An evaluation is an opportunity for meetings and reciprocal exchanges on the content of the information provided to all the actors involved more or less directly in the action, Deming, W. E. (1993). As a process of gathering and processing relevant, valid and reliable information, the evaluation allows stakeholders to make the necessary decisions to improve the results of the action, Sahney, S., Banwet, and Karunes, S. (2004) and Harris, R.W., (1994).

IV. TYPES OF EVALUATION

An evaluation distinguishes the sponsor, the evaluator and the evaluated. Depending on the roles of the actors, we talk about external evaluation, internal evaluation and self-evaluation. Not to mention the joint evaluation and the participatory evaluation.

4.1. External evaluation

According to the generally used terminology, the evaluation is external if the actor conducting the evaluation is independent of the sponsor and has no connection with the object to be evaluated, Lawrence, J.J. and M.A. McCollough, (2001). The external evaluation is carried out by a person who has no direct responsibility for the implementation of the action, that is to say a person who has a real degree of

independence, Osseo-Asare E.A.Jr. & D. Longbottom, (2002).

4.2. Internal evaluation

According to the generally used terminology, an evaluation called internal when it carried out by an evaluator linked to the limited partner such as staff member and administrator, without calling on an independent evaluator, Azizi A. (2007).

4.3. Self-evaluation

Self-evaluation means that people evaluate their own professional work (without calling on independent evaluators). The actor evaluates his own action and only makes judgments about his own activities. An outside worker who behaves like a facilitator can be used, which is called assisted self-assessment, Akao Y (1983).

4.4. The joint evaluation

An internal and external project team leads the evaluation; this provides an opportunity to combine internal project perspectives with those more objective and perhaps broader external evaluators, ReVelle B. J., Moran W. J., Cox A. C. (1998).

4.5. Participatory evaluation

Participatory evaluation involves several types of actors at different stages of evaluation. The notion of participatory evaluation may seem obvious since it is hardly possible for the evaluator to conduct an evaluation alone, without meeting and involving the various parties involved in the project, Van den Berghe W. (1997).

V. EVALUATION OF HIGHER EDUCATION SECTOR

In this last decade, the evaluation of training is an obvious and indispensable necessity to guarantee profitability. It is no longer a question of training to train, but it is advisable to question the investment of the training action. The evaluation in higher education sector concerns: teaching, students, educational performance and establishment.

5.1. Evaluation by students

The assessment by the students is to make a judgment on their feelings of training. It is actually an opportunity for students to express their opinion about the entire training. This evaluation aims to improve the training concerned, based on the collection of students' feelings. This evaluation must therefore be crowned by a more in-depth analysis and diagnosis, Botha, N., and al., (2014); Jordan, A., Huitema, D., (2014); Smith, A., Raven, R., (2012).

5.2. Evaluation of educational performance

Pedagogical action is considered as a system consisting of operational objectives, a list of contents, a methodology of transmission, knowledge and skills, and a set of methods of controlling learning, A. Alhaj Ali, E. Musallam (2018); O. Ogorodnyk, and al. (2017) ; Porter, N., and al., (2015). The assessment of educational performance in university must take into account:

- Coherence in training, in particular the coherence of the sectors in relation to their objectives; formulation of the objectives of the sector, explanation, adoption, deployment (exploitation) and respect of these objectives with all the actors of the action; teachers, students and staff, without forgetting the internal coherence of each sector; in the schedule , in the different types of teaching, coherence of the training and the documentation, animation of pedagogic staff, meetings of the exam boards and attitude of a teacher to coordinate with his colleagues, Mager, D.R., Campbell, S.H., (2013); Yoosomboon, S., Wannapiroon, P., (2015); Zhou, H.Y., (2012); Zhou, H., and al., (2016).

- Pedagogical qualities which including; punctuality, diligence, respect of statutory hours of service, regularity and speed with which copies are corrected. And beyond that the quality of courses and tutorials, the mastery of the taught subject, the preparation degree of course, clarity and interest of courses and tutorials, the renewal effort of courses to adapt them to progress in research and technological developments, the opening of teacher to neighboring disciplines, the quality of knowledge control and the methodological support provided, as well as the interest shown to other actors in training, Robles, G., Gonzalez-Barahona, J., (2013).

5.3. Evaluation of acquired knowledge and know-how

Evaluating the learning outcomes or the pedagogical effectiveness consists of checking whether the pedagogical objectives have been achieved, that is, if those who have followed the training course have effectively incorporated the skills and knowledge acquired. In other words, it is a question of checking whether

the students have acquired at the end of the training cycle the skills that were targeted by the objectives of the training, Romero, C., Ventura, S., (2007). The assessment of skills necessarily involves a self-assessment, allowing both the student and the teacher to estimate their own skills. Paul and Suleman (2005) proposed a list of 33 skills in a study:

- | | |
|---|---|
| 1- Ability to learn | 16- Oral expression |
| 2- Capacity of course return | 17- Written expression |
| 3- Memory capacity | 18- Interdisciplinary knowledge |
| 4- Ability to apply methods and regulations | 19- Knowledge specific to a sector |
| 5- Analytical capacity | 20- knowledge of specific methods to a sector |
| 6- Synthesis capacity | 21- Knowledge of foreign languages |
| 7- Ability to solve a problem | 22- Critical Thinking |
| 8- Capacity of project realization | 23- Manual ability |
| 9- Self-criticism of his work | 24- Initiative |
| 10- Capacity of concentration | 25- Adaptability |
| 11- Ability to search for ideas and information | 26- Negotiation |
| 12- Ability to plan, coordinate and organize | 27- Creativity |
| 13- Ability to work in a team | 28- Taking responsibility and decisions |
| 14- Ability to work under pressure | 29- Personal involvement |
| 15- Autonomy of work | 30- Time management |
| | 31- General knowledge |
| | 32- Leadership |
| | 33- Computer skills |

Evaluating training in a higher education institution is good formulating and using relevant methods and programs to properly conduct the evaluation. In fact, throughout this section, the researchers have presented a set of methods and tools, which aims to provide a description of possible approaches to evaluation of the training process within the university to be implemented, practical experimentation to derive the effectiveness, efficiency and relevance what is known as "assessment of teaching quality", Giertz B. (2000). In order to improve the quality of training within university, an internal evaluation, which consists of describing and analyzing the internal environment of higher education establishment, must be carried out. This evaluation ensures the evolution of university and helps to improve its functioning, Rosales, G., (2011); Saaty, T.L., (1980). In the following, the researchers presented the structure of the studies at University of Tunisia then the researchers discussed analysis results of students' evaluation to know their opinions concerning their learning. In addition, the researchers presented in this study the hypothesis that the quality of programs in higher education did not satisfy the requirements of labor market.

VI. METHODOLOGY

6.1. Method of data collection

The researchers chose the questionnaire as a way of collecting data, to examine the opinions of the university's students. The first part presented the main features of respondent, such as working class, gender, education level (Demographic questions). The second part is conferring to four groups; the students, alumni who are taking to master program, graduates who are looking for job and employees. The survey based on interview technique led to a pre-established questionnaire.

6.2. Sampling

For this study, the population consists of students who are studying or having their diploma from university of Tunis. It is therefore a sample account 2674 observations presented as follow: 2381 students in bachelor program and 293 graduates. The questionnaire distributed using classroom teachers, by contacting students directly and by telephone (according to their telephone numbers provided by the university).

6.3. Survey analysis

The questionnaire designed to evaluate and analyze students and graduates opinions from Tunis University. In this investigation, the researchers used the Likert scale as a measurement instrument defined from "total disagreement" to "total agreement" as follow: strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5).

6.3.1. The sample of students in Management and IT programs

- Investigation findings of students' opinions in management program

In this case, the survey covers 1587 students enrolled in first year management program. Most of these students come from baccalaureate of Economics and Management, their percentage is around 78.9% from all students. The majority of grades obtained in secondary school degree (baccalaureate) are between 10 and 12 from 20 (57.9%) and between 9 and 10 from 20 (39.5%). The table 1 shows that satisfaction dominates at the time of orientation result, the findings presented 78.9% of students were satisfied compared to 7.9% were dissatisfied.

Table 1: Degree of satisfaction at the time of orientation result

| Degree of satisfaction | Frequency | Percent |
|------------------------|-----------|---------|
| unsatisfied | 125 | 7.9 |
| satisfied | 1252 | 78.9 |
| very satisfied | 210 | 13.2 |
| Total | 1587 | 100 |

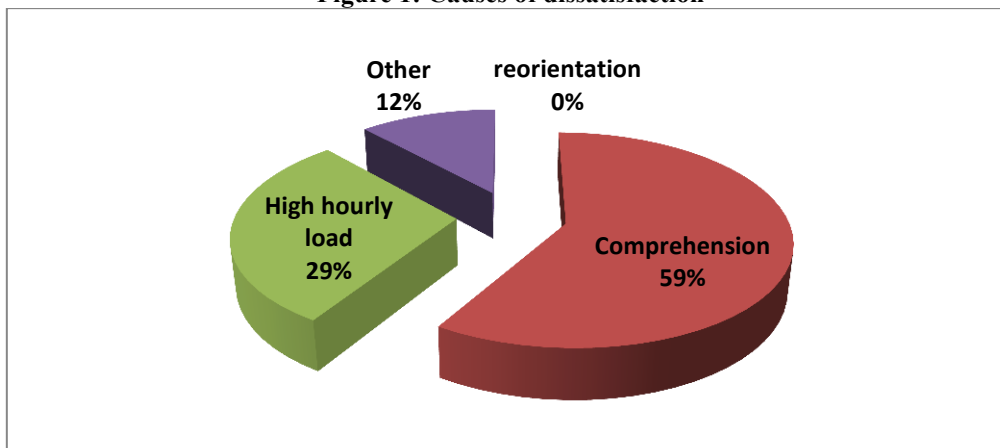
After a one semester of study, the rate of student dissatisfaction has increased remarkably from (7.9%) to (31.6%) as shown in Table 2:

Table 2: Degree of satisfaction after one semester of study

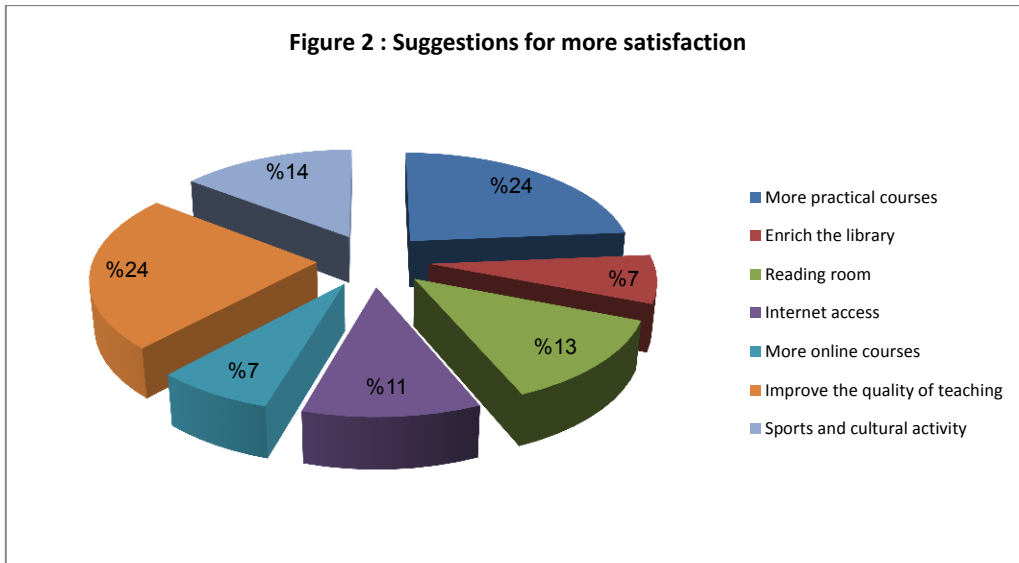
| Degree of satisfaction | Frequency | Percent |
|------------------------|-----------|---------|
| unsatisfied | 502 | 31.6 |
| satisfied | 960 | 60.5 |
| very satisfied | 125 | 7.9 |
| Total | 1587 | 100 |

This dissatisfaction is due to causes presented in Figure 1:

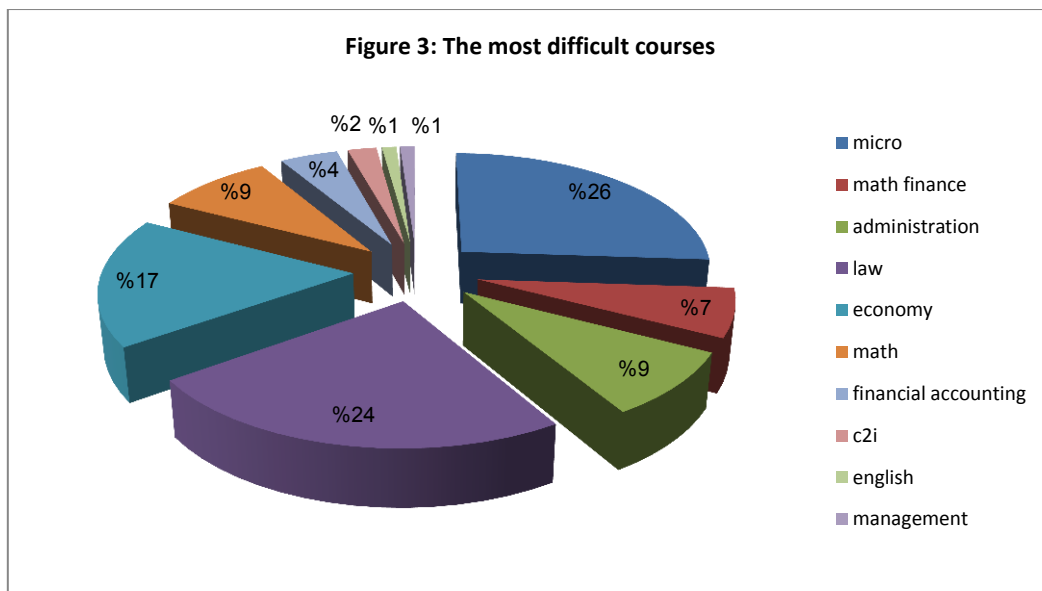
Figure 1: Causes of dissatisfaction



The researchers noted from the previous figure that the causes of student dissatisfaction could be summed up in 2 main reasons; comprehension problems (59%) and high hourly load (29%) of participants. Satisfied students suggested some recommendations to increase their satisfaction (Figure 2). There are 24% of students ask, in order to further maximize their satisfactions, more tutorials and practical courses, 24% suggest improving the quality of teaching, 7% want more sports and cultural activities.

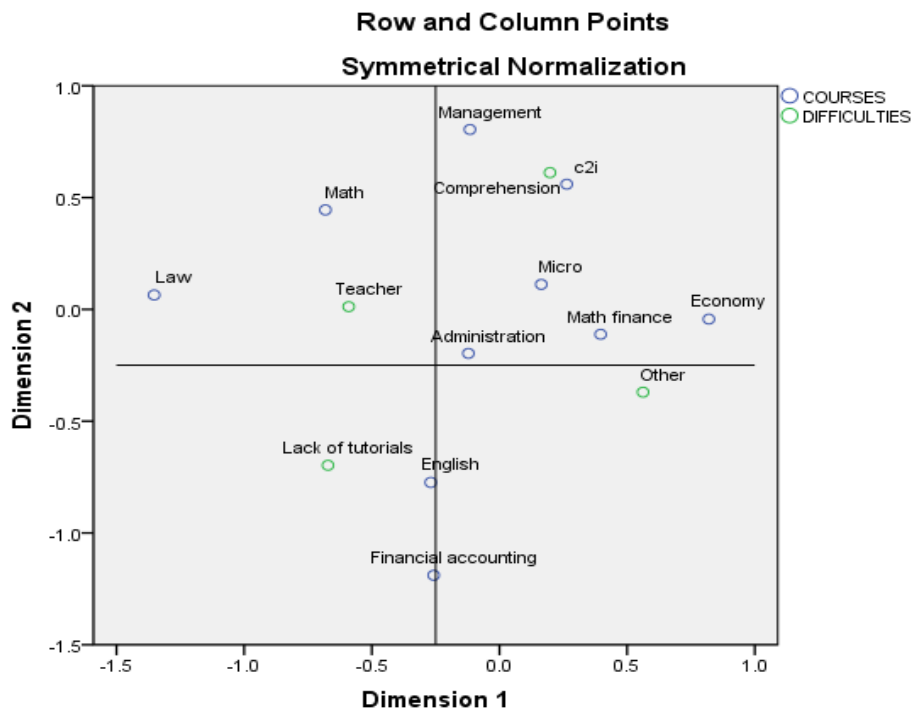


The figure 3 shows that 26% of students find difficulties in the course of Micro-economy, 24% at the course of law and 17 % in the economy.



To understand the difficulties encountered by students in these courses, researchers used the correspondence analysis technique (CAT) to study the correspondence that may exist between courses where students have encountered difficulties and the causes of these difficulties. A correspondence table that allows us to study the distribution of students according to two qualitative variables, namely courses and difficulties, was constructed.

Figure 4: correspondence between courses and difficulties



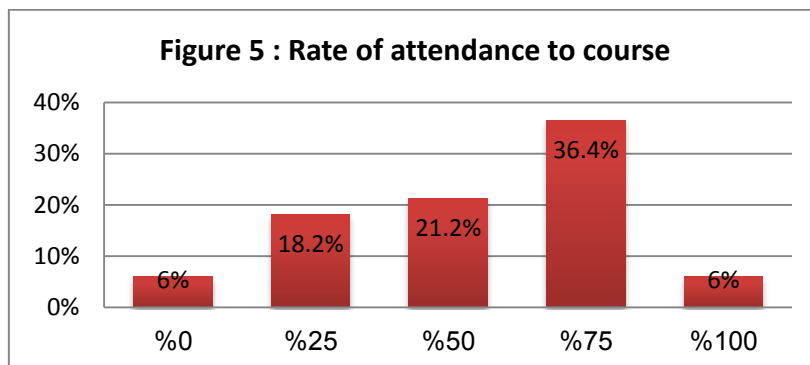
From this graph, the researchers noted that exist correspondence between:

Table 3: correspondence between courses and determinant of difficulties

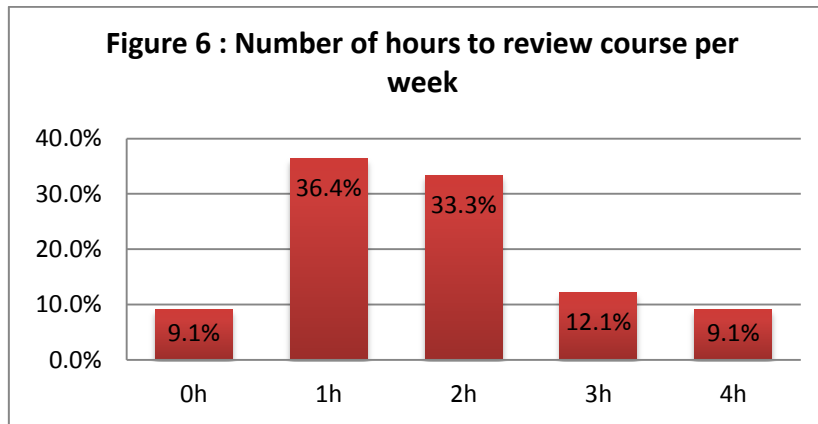
| Determinant of difficulties | Courses |
|-----------------------------|-------------------------------|
| Comprehension | c2i/management/ math |
| Lack of tutorials | English/financial accounting. |
| Teacher | Administration |
| Other | Math finance/ economy. |

- Applied License in Computer Networks (ALCN)

The survey based on a sample of 794 students enrolled in first year IT program. The students of this program come from 4 baccalaureates fields: Mathematics (30.3%), Computer Science (27.3%), Experimental Sciences (27.3%) and Technical (15.2%). The grades obtained in final classroom of secondary school are between 9 and more than 14 from 20; (9.1%) between 9 and 10 from 20, (75.8%) between 10 and 12 from 20, (9.1%) between 12 and 14 from 20 and (6%) more than 14 from 20. To analyze the results of the degree of student satisfaction with tutorials /practical courses, the researchers calculated an index that is equal to the percentage of difference between "strongly agree" and "strongly disagree". Also, if this index is positive then the students agreed with proposal item; otherwise the students disagreed (index is negative). In what follows, the researchers focused on the case where the index is negative.



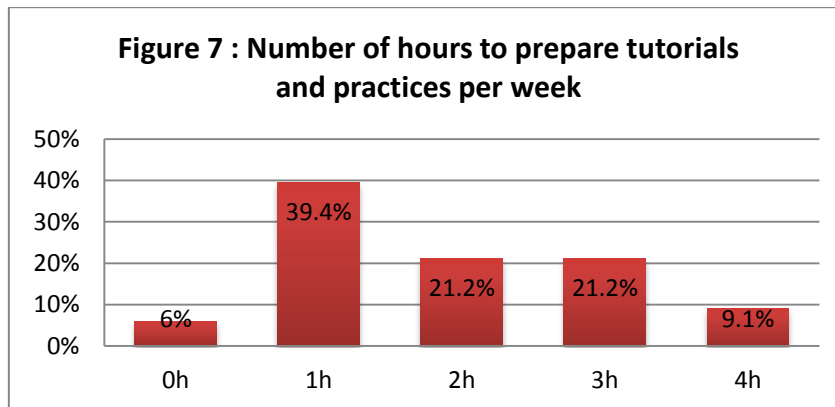
According to Figure 5, there are 36.4% of students estimate that their attendance in the course is in the order of 75%; and 36.4% spend 1 hour to review courses as average work per week, while 33.3% spend 2 hours of revision per week (Figure 6).



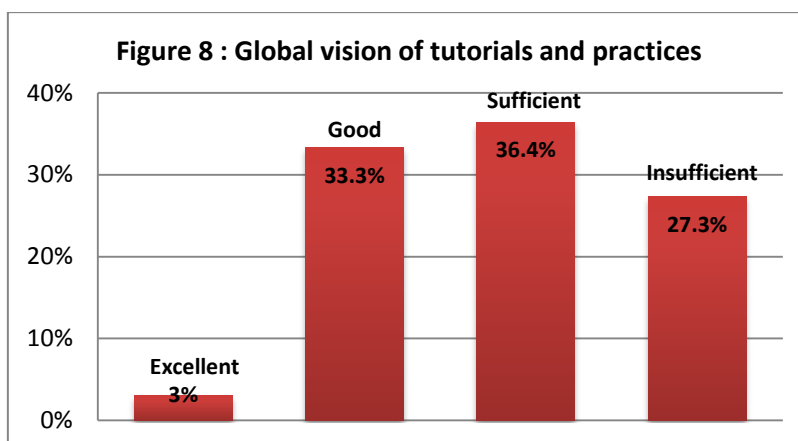
According to table 4 it is clear that the students of the first year Applied License in Computer Networks (ALCN) estimate that the requested work is not well adapted in number and degree of difficulty (-21.2%) and that the feedback in the course is not enough to check their progress (-12.1%).

Table 4: Negative aspects of the course

| Items | 1 | 2 | 3 | 4 | 5 | Indices 5-1 |
|---|-------|-------|-------|-------|-------|-------------|
| I understand the importance of courses in my education. | 15,2% | 42,4% | 21,2% | 9,1% | 9,1% | -6,1% |
| I know what I should learn and how I will be evaluated. | 18,2% | 18,2% | 33,3% | 12,1% | 12,1% | -6,1% |
| The exercises, projects and practical courses adapted to difficulties degree. | 33,3% | 21,2% | 21,2% | 12,1% | 12,1% | -21,2% |
| The feedback (comments, corrections) that I received allows me to check my improvement. | 21,2% | 27,3% | 33,3% | 6,0% | 9,1% | -12,1% |



Based on figure 7, it exists 39.4% of students that spend 1 hour of average work per week preparing tutorials and practices; and 36.4% of students believe that tutorials and practices was sufficient; 33.3% assumed they are "good" and 27.3% said they are "insufficient" (Figure 8).



The table 5 presents the aspects that students were not satisfied:

Table 5: The Negative aspects of tutorials and practices

| Items | 1 | 2 | 3 | 4 | 5 | Indices 5-1 |
|--|-------|-------|-------|-------|-------|-------------|
| The tutorials and practices applications were convenient. | 24,2% | 27,3% | 15,2% | 24,2% | 9,1% | -15,1% |
| The data and forms offered were acceptable. | 21,2% | 15,2% | 24,2% | 15,2% | 18,2% | -3,0% |
| I understood the instrumental techniques predicted. | 24,2% | 21,2% | 24,2% | 18,2% | 12,1% | -12,1% |
| The tutorials and practices allow me to develop my skills in observation and analysis in the field. | 30,3% | 24,2% | 18,2% | 12,1% | 12,1% | -18,2% |
| The evaluation of exams gives me a feedback about my educational level. | 15,2% | 24,2% | 36,4% | 9,1% | 9,1% | -6,1% |
| The tutorials and practices were appropriate to cooperative things between stakeholders (students/ teachers/ administration) | 24,2% | 12,1% | 18,2% | 24,2% | 21,2% | -3,0% |
| The requirements, the timing and organization were suitable. | 18,2% | 12,1% | 30,3% | 21,2% | 15,2% | -3,0% |

It can be concluded from this table that students feel that the tutorials and practices applications did not help them to develop their observation and analysis skills (-18.2%) and they feel that the choice of applications was not appropriate (-15.1%).

6.3.2. The analysis of Graduates sample

According to statistics provided by the investigation analysis, the total number of graduates retained to be subject of this research was 293 observations.

- The investigation of Masters Students

The survey based on a sample of 191 students enrolled in the first year of Master's degree in Intelligent Computer Systems. The majority of these students obtained their bachelor's degree from University of Tunis (92.9%) and derived from 2 fields: Applied License in Computer Networks (ALCN), 28.6% and computer sciences (CS), 57.1%. There are 57.1% of these students (graduates) did not encounter problems in their current studies while (42.9%) found some problems as Lack of equipment, Lack of practical courses, administration, teachers not competent. The rate of 50% of these students registered in the employment office and passed at least one competition to which they have all failed.

The causes of failure shown in Table 6:

Table 6: The main causes of failure

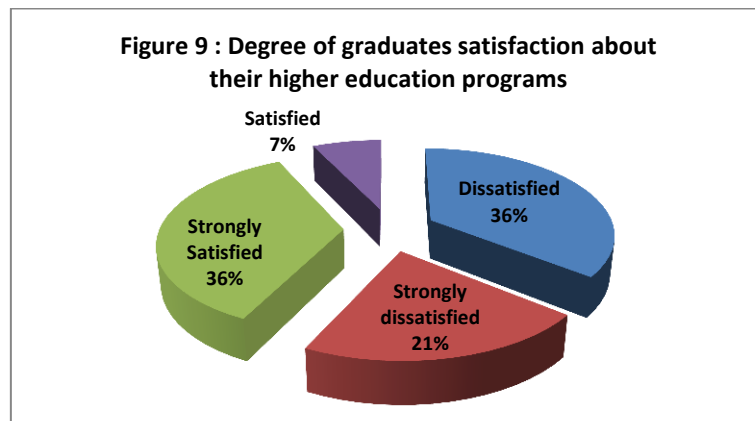
| Causes of failure | Frequency | % |
|--|-----------|------|
| The unsuitable content of exams with university education. | 32 | 16.7 |
| Insufficient preparation. | 64 | 33.3 |
| Types and styles of questions were not predicted. | 32 | 16.7 |
| Other | 64 | 33.3 |
| Total | 191 | 100 |

In the previous table (33.3%) argued that their preparation was insufficient and (33.3%) said that there are other reasons. The graduates declared that they need further training in some fields (Table 7); (45.5%) wanted to have additional training in programming languages (20%) in JAVA and (27.3%) in Languages.

Table 7: The desired area of training

| Fields of training | Frequency | % |
|-----------------------|-----------|------|
| programming languages | 87 | 45.5 |
| Languages | 52 | 27.3 |
| JAVA | 38 | 20 |
| Other | 14 | 7.2 |
| Total | 191 | 100 |

The figure 9 showed that (36%) of graduates were strongly satisfied while (21%) were strongly dissatisfied and (36%) were dissatisfied.



Looking to training within university, the researchers offered graduates the opportunity to give their opinion concerning the improvement of some aspects related to training. There are 43% of graduates claimed that improvement of specialty courses was fundamental while 21% strongly disagreed (Figure 10).

Figure 10: Improvement of courses program

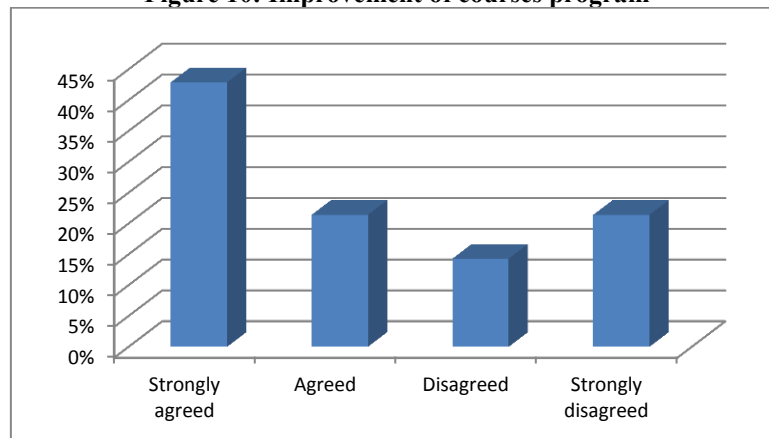
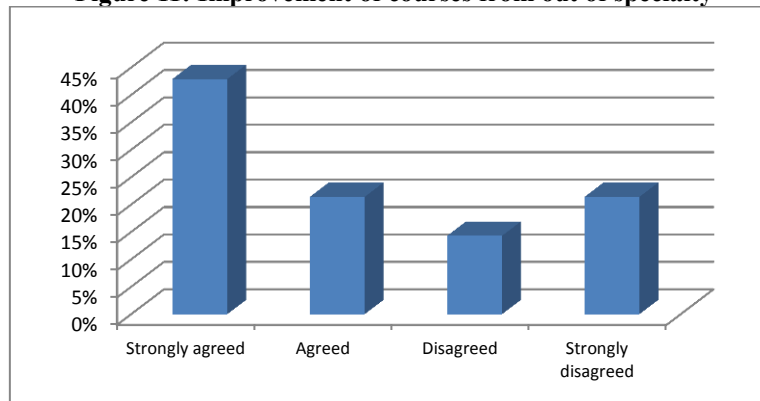


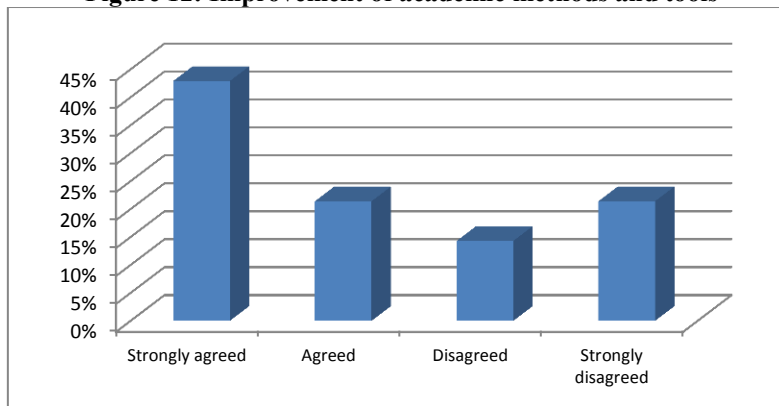
Figure 11 showed that (40%) of graduates strongly disagreed with the improvement of non-specialty subjects and (30%) were disagreed.

Figure 11: Improvement of courses from out of specialty



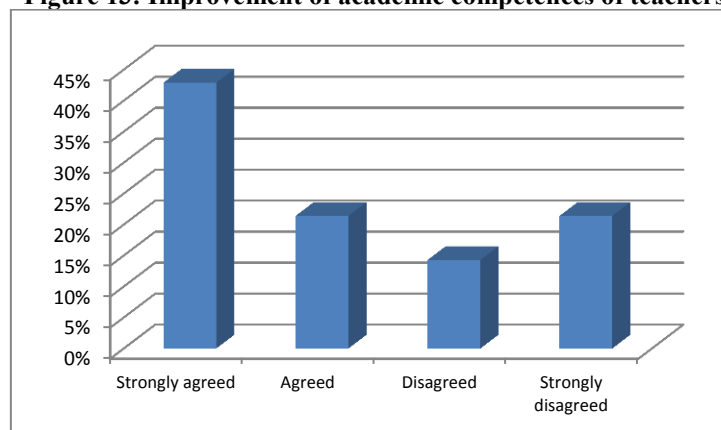
As presented in figure 12 about improvement of teaching methods and academic tools, there are 45% of graduates were strongly agreed and 25% disagreed.

Figure 12: Improvement of academic methods and tools



According to Figure 13, there are (55%) of the graduates strongly agreed with the improvement of teachers' teaching skills while (20%) strongly disagreed and (15%) disagreed.

Figure 13: Improvement of academic competences of teachers



Some motivations pushed the graduates to continue their studies; these motivations summarized in Table 8.

Table 8: The motivation of master study

| Causes | Frequency | % |
|---|-----------|------|
| To benefit from advantages offered by government to master students | 27 | 14.3 |
| To improve the basic education | 38 | 20 |
| Increase the opportunities to find good job | 44 | 22.9 |
| Access to jobs with higher wages | 16 | 8.6 |
| Avoid unemployment | 49 | 25.7 |
| Other | 16 | 8.5 |
| Total | 191 | 100 |

The researchers noted in the previous table that (25.7%) continue their studies to avoid unemployment, (22.9%) to increase their chances of finding a job and (20%) to enrich their initial university education. Table 9 showed that (42.1%) graduates want to work as research teachers after their master's degree and (31.6%) want to be teachers in secondary school.

Table 9: Types of jobs after master's degree

| Types of jobs | Frequency | % |
|-----------------------------|-----------|------|
| Researcher | | 42.1 |
| Teacher in secondary school | | 31.6 |
| Entrepreneur | | 5.3 |
| Employees | | 10.5 |
| Other | | 10.5 |
| Total | | 100 |

- Graduates who are looking for job

The survey based on a sample of 68 observations. These graduates presented by field as follow: (38.1%) are from financial and accounting program, (28.6%) E-service, (19%) ALCN and (14.3%) have a degree in CS. (81%) of these graduates are registered in the employment office and (76.2%) have passed at least one job competition to which they have all failed. In Table 10 presented the main causes of failure in the competitions:

Table 10: The main causes of failure

| Causes | Frequency | % |
|---|-----------|------|
| Unsuitable content of job competition exam with university formation. | 10 | 14.3 |
| Insufficient preparation. | 10 | 14.3 |
| Types and forms of questions no predicted. | 13 | 19 |
| Other | 36 | 52.4 |
| Total | 68 | 100 |

In the previous, table (19%) see that their failure is due to the types and forms of questions that are unforeseen and (52.4%) argued that there are other reasons. From the sample studied there are (76.2%) graduates are still looking for their first job, while (23.8%) could not keep their job. There are (61.9%) want to work in the public sector and (38.1%) to private sector. Table 11 showed the main methods that graduates have used in their job search:

Table 11: Job search methods

| Methods | Frequency | % |
|-------------------------------|-----------|------|
| Job application in newspaper | 15 | 21.9 |
| Contacts and personal network | 8 | 12.3 |
| Job application in Internet | 18 | 26 |
| Job competition | 10 | 15.1 |
| Employment office | 13 | 19.2 |
| Other | 4 | 5.5 |
| Total | 68 | 100 |

There are (26%) of graduates use job offers on the internet, (21.9%) by reading newspapers and (19.2%) by visiting the employment office. According to graduates' opinions, the unemployment situation was due to several reasons as presented in table 12, mainly caused by lack of contact and personal relationships (25.9%).

Table 12: Explanation of the unemployment situation

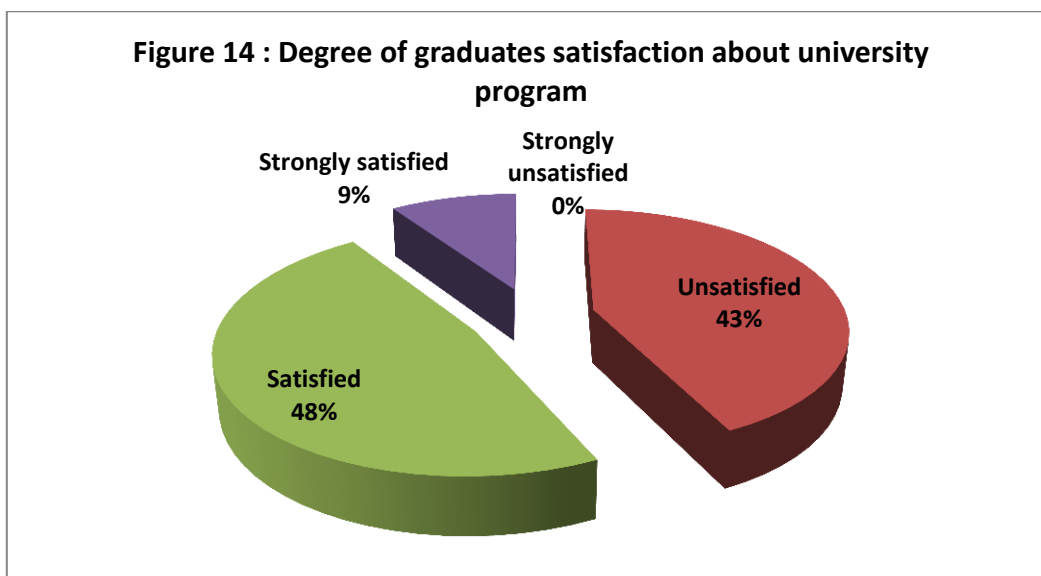
| Unemployment situation | Frequency | % |
|---|-----------|------|
| Unsuitable academic program to market needs | 13 | 18.5 |
| No competitive diploma | 13 | 18.5 |
| Lack of contact and personal relationships | 18 | 25.9 |
| Lack of information | 13 | 18.5 |
| Other | 13 | 18.5 |
| Total | 68 | 100 |

To help them find a job, the graduates suggested some integration services that must be available within the university (Table 13); (53.6%) see the need for an orientation and placement office and (25%) suggest job search initiation courses.

Table 13: Suggestion of some help services for insertion

| Suggestions | Frequency | % |
|--------------------------------------|-----------|------|
| Assistance office | 36 | 53.6 |
| Association of graduates | 10 | 14.3 |
| Training of labor market integration | 17 | 25 |
| Other | 5 | 7.1 |
| Total | 68 | 100 |

Looking back on their university education within the university, there are (48%) of graduates satisfied with their training, while (43%) unsatisfied, and only (9.5%) are strongly satisfied (Figure 14).



There are (95.2%) of graduates have proclaimed their need for further training in certain fields (Table 14); (43.8%) of them want to have additional training in languages and (34.4%) in information system.

Table 14: The desired area of training

| Training | Frequency | % |
|--------------------|-----------|------|
| Languages | 30 | 43.8 |
| Information system | 23 | 34.4 |
| IT Developing | 4 | 6.3 |
| Web design | 4 | 6.3 |
| Other | 7 | 9.8 |
| Total | 68 | 100 |

Moreover, to improve the training, they give some proposals summarized in table 15: (61.1%) propose courses that are more practical and (11.1%) propose the improvement of the final study projects

Table 15: Training Improvement Proposals

| Proposals | Frequency | % |
|---|-----------|------|
| Increase the hours of practical courses | 42 | 61.1 |
| Improve training | 8 | 11.1 |
| Reduce the hours of theoretical courses | 4 | 5.6 |
| Other | 15 | 22.2 |
| Total | 68 | 100 |

- The analysis of employees' sample

The survey covers a sample of 34 observations. They come mainly from ALCN (71.4%), E-service (14.3%) and Financial and accounting program (14.3%). There are (85.7%) of graduates do at least one job competition, (16.7%) were successful. The table 16 presented the main causes of failure in the competitions:

Table 16: The main causes of failure

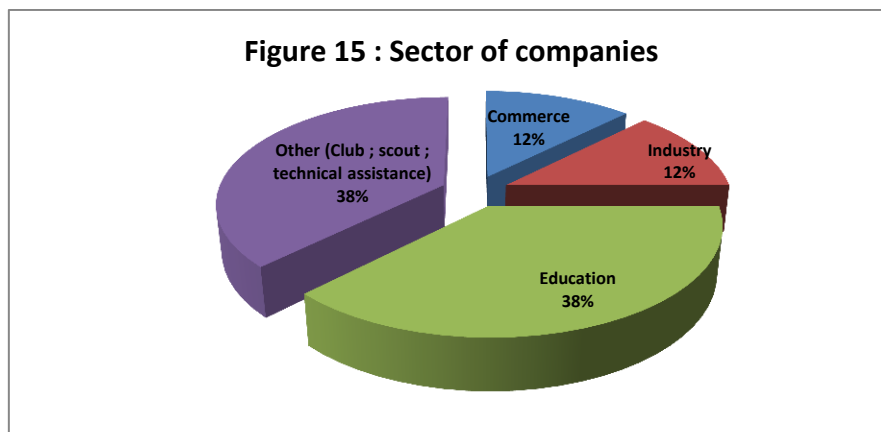
| Causes | Frequency | % |
|---|-----------|------|
| Unsuitable academic program to market needs | 5 | 14.3 |
| Lack of preparation | 10 | 28.6 |
| Types and forms of questions no predicted. | 5 | 14.3 |
| Other | 15 | 42.9 |
| Total | 34 | 100 |

In the previous table (28.6%) argued that their preparation was insufficient and (42.9%) said that there are other reasons. The employees were able to get their current job by using several methods. Table 17 showed that (75%) recruited by reading job advertisements in the newspapers, using personal contacts and relationships and through the employment office.

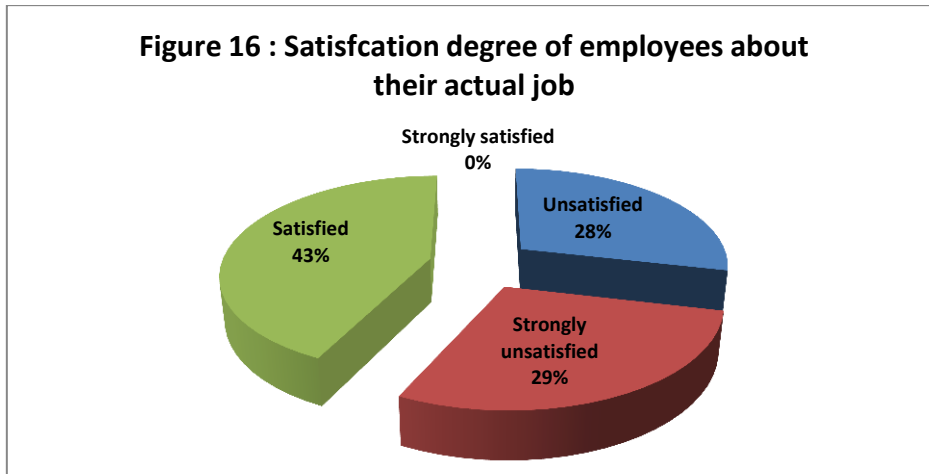
Table 17: Job Search Methods

| Methods | Frequency | % |
|-------------------------------|-----------|------|
| Job application in newspaper | 9 | 25 |
| Contacts and personal network | 9 | 25 |
| Job competition | 4 | 12.5 |
| Employment office | 9 | 25 |
| Other | 4 | 12.5 |
| Total | 34 | 100 |

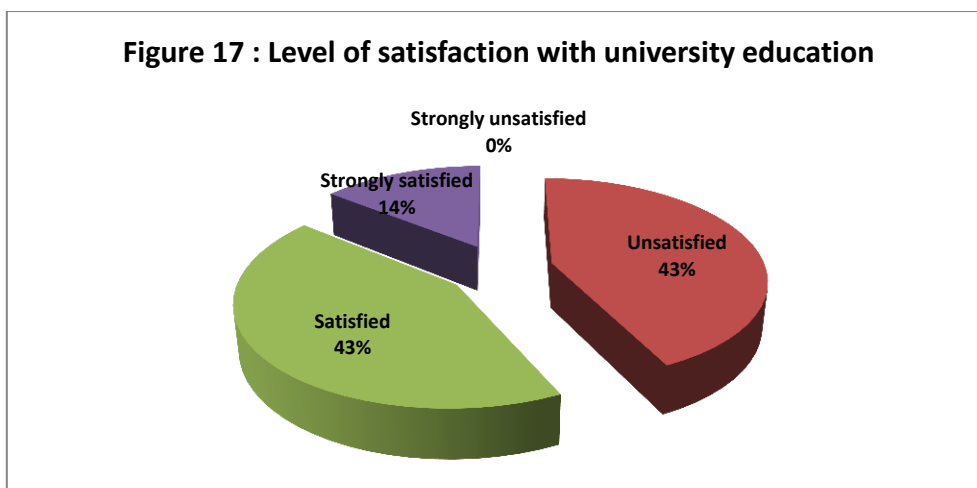
Looking for their current job (43%) did not find difficulties while (57%) see that their skills were not competitive enough. The employees were from private companies (71.4%) and associations (28.6%) as presented in figure 15.



The situation of major graduates was presented as follow: (20%) with stable job and (80%) under temporary contracts. The figure 16 presented the satisfaction degree of employees about their actual job.



There are (43%) satisfied, (29%) strongly unsatisfied and (28%) unsatisfied. From the sample, it appears that 30% of employees earned a monthly amount less than 500DT and 70% an amount more than 500DT. Looking back at their education in the university, there are (57.1%) of employees argued that their current work had not link with their basic training. When asked about their level of satisfaction with their university education, (43%) were satisfied with their training while (43%) are unsatisfied (Figure 17).



There are (85.7%) of employees declared their need for additional training in certain areas (Table 18); the (44%) of them wanted to have additional training in languages and (44%) in Computer Science.

Table 18: The desired area of training

| Training | Frequency | % |
|---------------|-----------|-----|
| Languages | 15 | 44 |
| CS | 15 | 44 |
| IT developing | 4 | 12 |
| Total | 34 | 100 |

Referring to results of this survey, taking into account the various deficiencies and constraints found; the researchers retrieved a global view of students' opinions concerning certain aspects of their university curriculum and their degree of satisfaction with the programs offered.

VII. CONCLUSION AND DISCUSSION

The study presented different aspects that encountered during an internal evaluation of a higher education programs. The assessment of training quality by students and graduates revealed that there are inappropriate universities programs to labor market requirements. The findings showed that difficulties occurred by students were about lack in practical courses, academic equipment uselessness, and absence of operation training in labor market before graduated. Moreover, the graduates had another kind of problems as Unsuitable higher education formation to market needs, no competitive diploma, lack of contact and personal relationships,

and lack of information. All of findings proved the hypothesis, which argued that quality of programs in higher education did not satisfy the requirements of labor market. Also, this study can help decision-makers to improve the quality of training and to coordinate more with labor market. The difficulties encountered by researchers throughout this article summarized as administrative and technical, during the data collection phases with students and companies. In addition, researchers proposed as perspectives the automation of the research approach and to deploy it at university observatory, and to generalize to other universities in Tunisia.

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