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OPATEL

ERASMUS+ PROGRAMME

Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Online Platform for Academic TEaching and Learning in Iraq and Iran

OPATEL

Work Package 2

A SUMMARY OF NEEDS OF TEACHERS REGARDING ESTABLISHMENT LMS IN IRAN AND IRAQ

A SUMMARY OF NEEDS OF ISUDJ TEACHERS REGARDING ESTABLISHMENT LMS

1- Improving the essential skills about ICDL software
2- Holding training courses about multimedia content production skills
3- The need for basic training about essential hardware
4- Holding workshops about E-Learning and its advantages
5- Familiarizing the university director and managers with E-Learning to take their supporting into account establishing the LMS
6- Introducing the required facilities for LMS; software, hardware, video conference (Webinar) and discussion their application
7- Holding workshop about how to enter new information sources related to the courses and how to use them
8- Improve existing hardware, software and communication knowledge of teachers
9- The need for training about security of LMS system in order to improve the attitude of teachers
10- Improving the English language of the students and professors
11- Explanation educational standards for the evaluation of teachers and students
12- Promoting the mentality about validity of e-learning academic qualifications

DPU TRAINING NEEDS:

E-Education is a totally new phenomena in most of the countries and in order to have a successful program, we need to train the instructors as well as the necessary staff on the benefits, on the technical aspects, and on how to change their current habits of instruction.
Our university has an experiment in designing e-learning systems by designing a system to manage the university electronically and includes special sections for teaching and dealing between teaching staff and students.
The training should focus on raising the level of trainees in the skills of the computer and the Internet in order to ensure their proficiency in the use of the learning environment, and for trainers should have the ability to create or use e-learning systems with excellent skills.
The proposed field of training can be suggested as follows:
1- Servers: courses in installing, configuring, modifying and maintaining servers for e-learning systems.
2- Web Design: training course in web design, and the fields of graphics and online video.
3- Moodle Environment: training course about how to use Moodle in e-learning fields.
4- Smart E-Learning Authoring Tools**:** training on smart e-learning design
platform to create fully responsive e-learning courses, which provides a superior experience to learners. As As an example for such e-learning authoring tool is Adobe Captivate program

ICT team feedback UoD

Technical Training required justification for the following groups:

We suggest to use Moodle platform as a Learning management system and take the advantage of the huge community around the world who are using it. There are many reasons that make decision to use Moodle; for instance, it is a free and it enabling educators to create their own private website filled with dynamic courses that extend learning, anytime, anywhere (moodle.org).

Training courses will be one of the requirements of the success of this project. We suggest the following training courses:

1. Programmers: intermediate level course on PHP+MySQL with a beginner course on Linux, since Moodle platform has been developed with PHP+MySQL. This will make the IT development team gain the sufficient skills to maintain and develop the platform constantly.
2. Server Administrators: advanced course on Linux (Ubuntu or CentOS) will be needed to build, install, configure and maintain the e-learning server.
3. Moodle Managers: advanced course on best practice of how managing and administrating the whole process of running Moodle in the University, such as enrolment policies, authentication, roles and permissions. Also, the course will address implementation issues at policy and strategy level. The focus in future will be on improving UoD staff engagement to the e-Learning environment.
4. Designers: a course on video editing and graphic design for online video and graphic support materials. It will have a significant impact on the course development process and supporting the idea of providing online learning.

UoB- Basrah- ICT Staff opinions

The following points addressed from IT specialist as some of missing pointing required an improvement

1. Improve the knowledge in E Learning Platform (Moodle) and its advance features
2. Improve experience in the Author for eLearning design e.g. Adobe Presenter 11., The Xerte Project, Quick Lessons, Lesson Writer, iSpring Suite, Easygenerator, authorPOINT, GoAnimate.
3. Improve knowledge in windows server administration

TUMS: Recommendations for policy makers:

According to the diagrams plotted based on the data obtained from ICT questionnaire, the following areas need some consideration, as the activity in those areas has been seen to be "rarely used" or "sometimes used": The areas in the order of "**rarely used**" are:
SPSS/statistical software, Newsgroups, forums, video conferencing, digital library, and multimedia

So, courses on SPSS/statistical software and newsgroups can be recommended as a first priority.

The areas in the order of "**sometimes used**" are: video conferencing, Digital libraries, Power point and similar presentation software, and getting informed of national and international conferences and events.

So, courses on video conferencing and digital library can be recommended as the other priority.

A SUMMARY OF NEEDS OF SALAHADDIN UNIVERSITY-ERBIL

1. Increasing the experience of lecturers in using e-learning system for large classes.
2. Holding workshops for lecturers to learn how to use Learning Management System such as Moodle.
3. Providing all students with Salahaddin University-Erbil (SU) domain email accounts.
4. Improving lecturers' skills to better communicate with students through e-learning system, such as taking attendance and daily quizzes using Student Response System (SRS).
5. Providing internet access to all lecturers and students on campus and in dormitories.
6. Increasing the number of computers connected to internet, accessible to both educators and students.
7. Boosting the idea that learning essential computer skills, such as programming, creating a questionnaire online, and creating websites, are indispensable factors for the success of ICT and e-learning system.
8. Supporting lecturers by training them on how to be more confident in using ICT in their respective courses and how to be more interactive with their students through using e-learning system.
9. Establishing a computer network on campus that can provide useful materials to educators and students alike.
10. Encouraging teachers to post course-related materials on college websites, and to take advantage of miscellaneous ICT tools in their courses.
11. Creating a forum for lecturers where they can exchange their point of views and discuss their ideas and challenges with other lecturers around the world regarding the use of ICT in learning and teaching.
12. Promoting the adoption of ICT technology by the college examination centers which will prove beneficial to our institution.
13. Using the ICT tools for teacher's evaluation process by the Quality Assurance Directorate. Also, using e-learning tools to assess the academic progress of the students.

UoB- Baghdad- ICT Staff opinions

Training required accomplishing the above

1- Moodle developer by using MYSQL to customize moodle to fit our need
2- System administration to manage server and storage (MCSE)
3- Web developer (ASP.NET) to create interface for the system.

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Assessment study for the needs of teachers, lecturers and administrators of Islamic Azad University- Sanandaj branch (IAUSDJ) regarding e-learning

Prepared by OPATEL project team in IAUSDJ

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Dr. Issa Mohamadi
Dr Amir Sheikhahmadi

A SUMMARY OF NEEDS OF ISUDJ TEACHERS REGARDING ESTABLISHMENT LMS

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Abstract

To assess the needs of teachers, lecturers and administrators at IAUSDJ, a questionnaire was designed by OPATEL project team in IAUSDJ. The questionnaire was distributed and placed in google doc and was announced to the teachers. One hundred teachers responded to the questionnaire. In this report we are going to discuss the results in more details. The results show that most of respondents have prerequisite skills and positive attitude toward learning and using electronic education, e.g. e-learning; participants strongly believe in using e-learning for their educational purpose. The computer knowledge of the participants is in an acceptable level. Regarding the hardware infrastructure, most of respondents believe that our university does not have adequate hardware infrastructure. In terms of software infrastructure, however, they also think it does not meet the requirements of e-learning to be established. Having regarded the content structure base, the results show that most of the participants did not have enough satisfaction with this structure. They also suggest that most of our professors are also skeptical regarding security of LMS. Having noticed the results of this report we conclude that most of the participants are unsatisfied with the lack of governmental financial and political support for e-learning. The attitude of the participants towards the efficiency and superiority of the e-learning system was positive. However, most participants believe that there are serious barriers and problems to implement LMS. Generally, the skills, knowledge and requirements of teachers must be considered to setup a successful LMS and holding courses and workshops for strengthening weak points can without a doubt be helpful.

Introduction

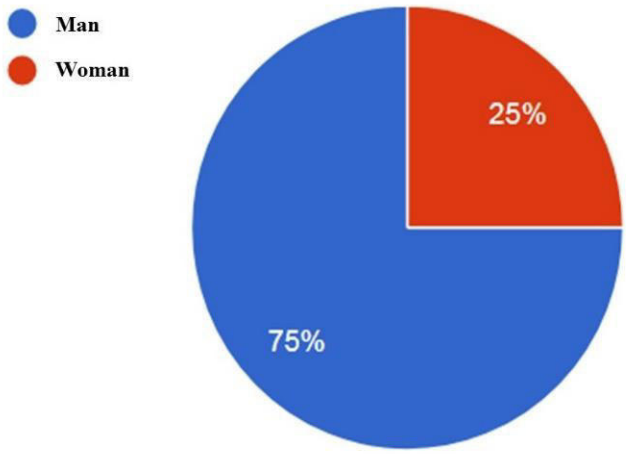
Applications of the e-learning technologies can be discussed in two aspects: firstly, the educational practices, which are orientated towards applying the interactive multimedia in order to present more attractively the teaching content and secondly, the web-based forms of didactical materials and tools and their implementation as interactive multimedia projects. In this regard, the teachers play a key role in the development and management of the educational process using ICT. By using el-learning in education, information exchange takes place at a much larger scale than traditional methods and as already mentioned teachers have the main role in e-learning system and LMS. The skills and needs of teachers must be considered to use ICT in education. In other hand, in addition to skills and needs of teachers, to set up an e-learning system, a set of factors are required which led to succeeding LMS. Then, the skills and needs of teachers can be assessed in different perspectives.

The necessary competences knowledge and skills, which the teachers of IAUSDJ need, in order to use the e-learning technologies are investigated using a questionnaire which designed to have a complete overview on teachers requirements and knowledge, and the results can be observed in current report.

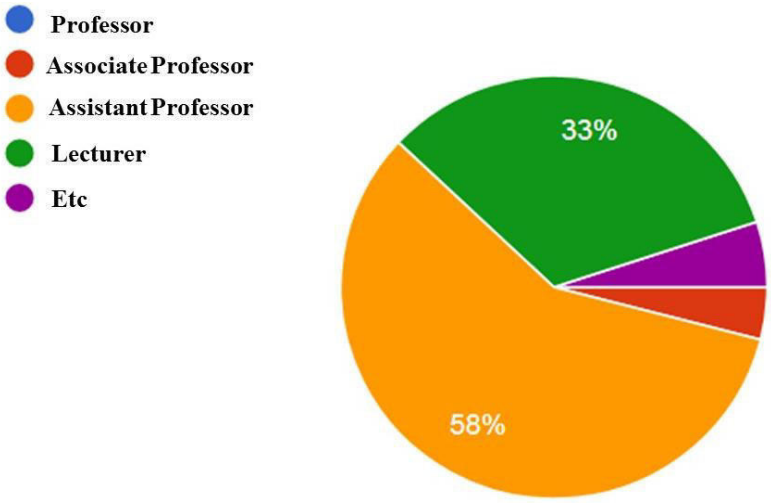
Demographic characteristics of respondents

The number of participants who responded the questionnaire, was 100 people with the following characteristics:

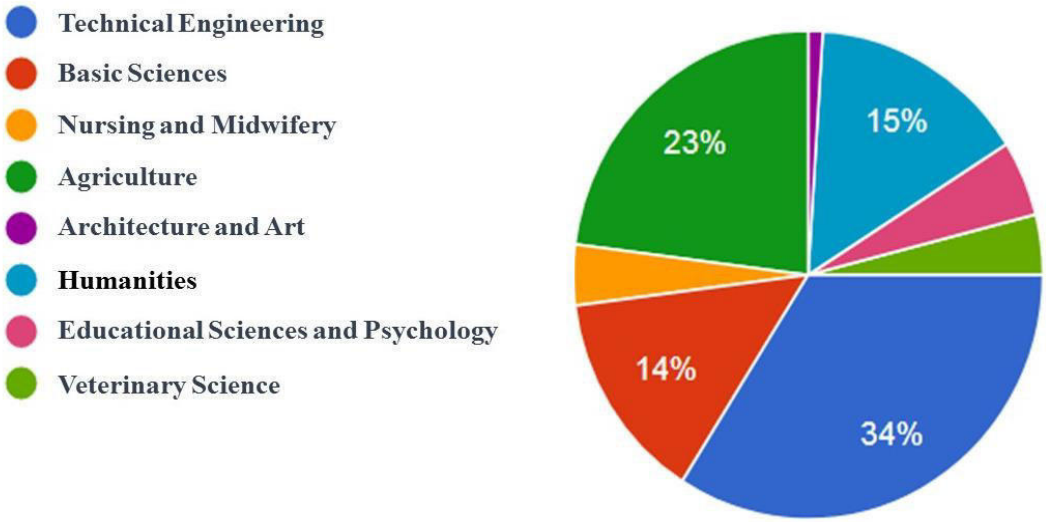
Gender:



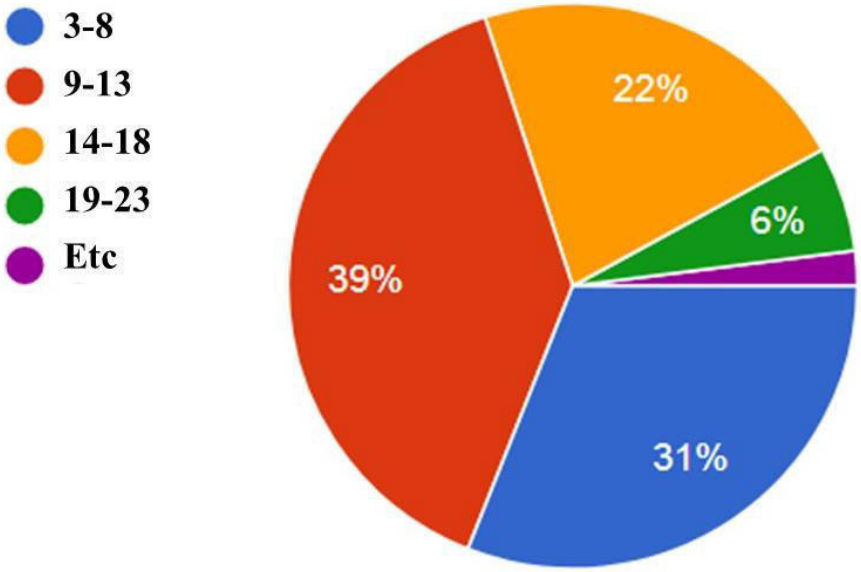
Academic degree:



Division/Faculty:



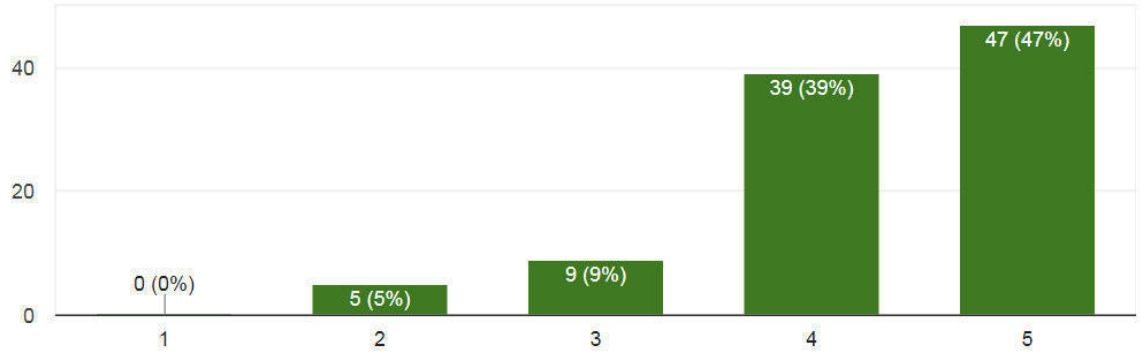
Educational background at university (year):



Skill preparation

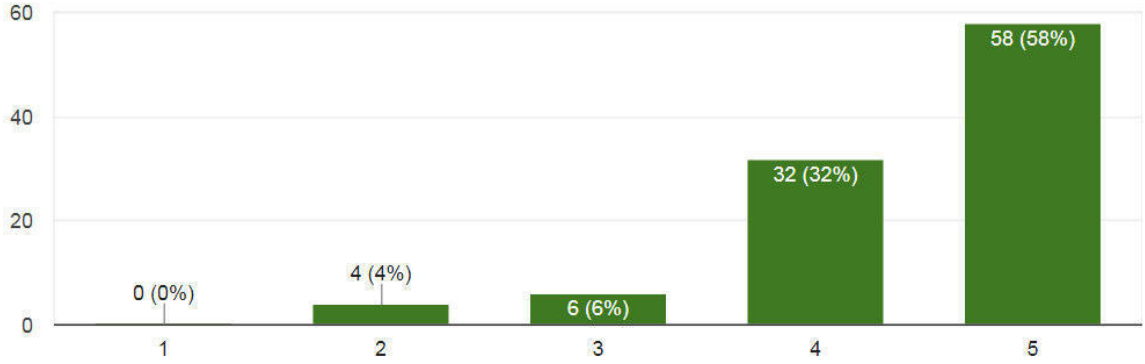
In this section, our aim is to evaluate the participans' general skills regarding computers and the internet.

Hours of using the computer in a week - at home and at work:



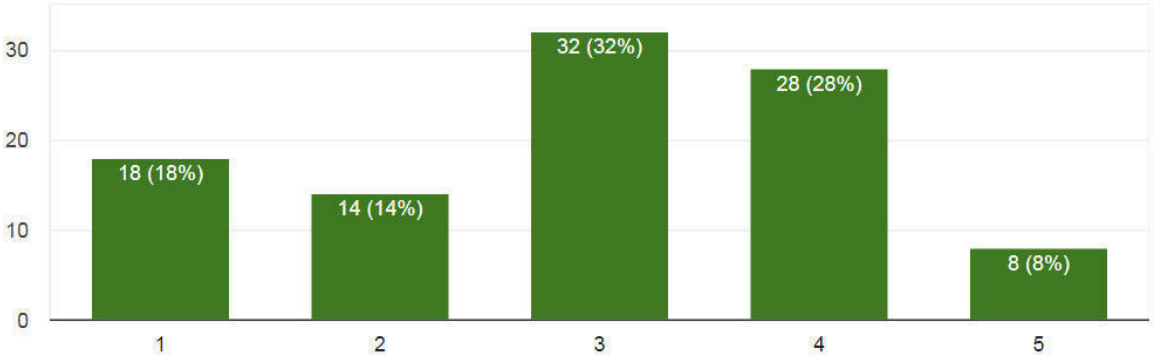
1= Very Low 2= Low 3=Moderate 4=High 5-Very High

Hours of using the internet in a week - at home and at work



1= Very Low 2= Low 3=Moderate 4=High 5-Very High

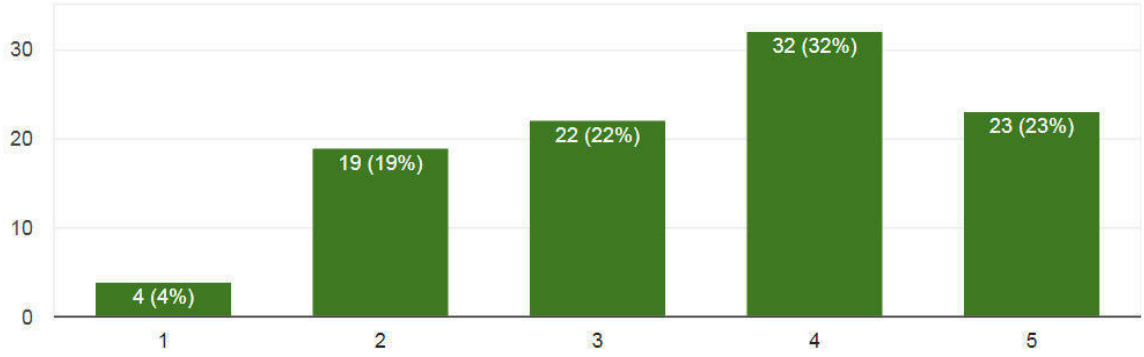
Participation in training courses regarding computer skills and e-learning



1= Very Low 2= Low 3=Moderate 4=High 5-Very High

Having considered that the main toolkit of the electronic learning is computers and the Internet, these results suggest that one can be optimistic for the establishment and use of e-learning among the professors at our university.
Organizing training courses on e-learning can help to improve the attitudes of faculty members.

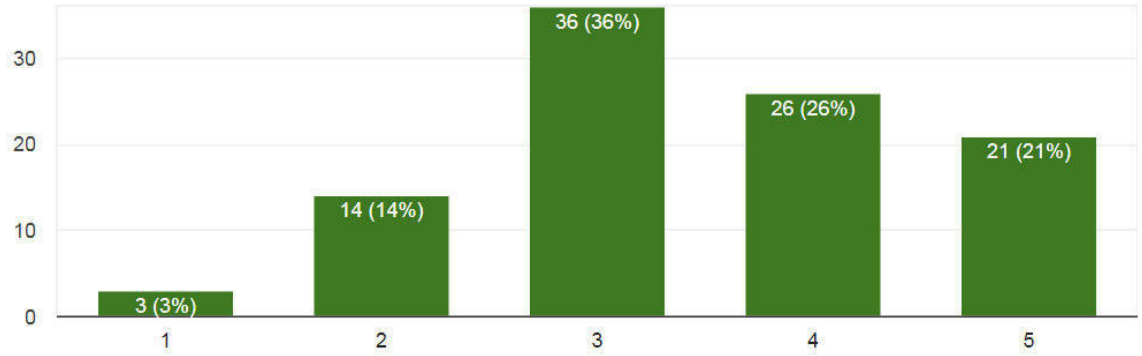
The use of personal virtual pages such as websites, weblogs, social networks and etc.



1= Very Low 2= Low 3=Moderate 4=High 5-Very High

The frequent and high level using of the Internet, computer and virtual spaces by the teachers indicates the necessity for providing training courses in order to direct this level of use for e-learning into its utter most capacity.

Basic knowledge in computers and hardware



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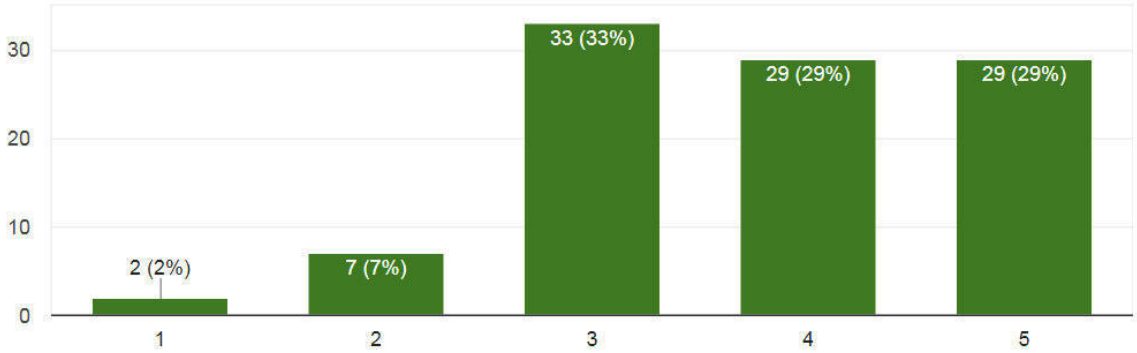
Basic knowledge in windows



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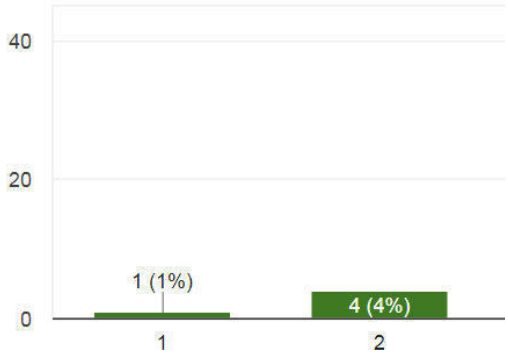
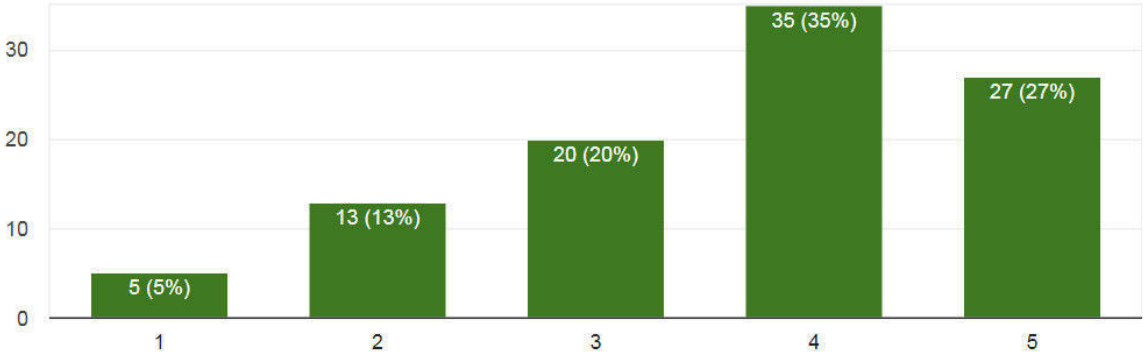
Basic knowledge in Microsoft word



1= Very Low 2= Low 3=Moderate 4=High 5-Very High

Basic knowledge in Microsoft excel



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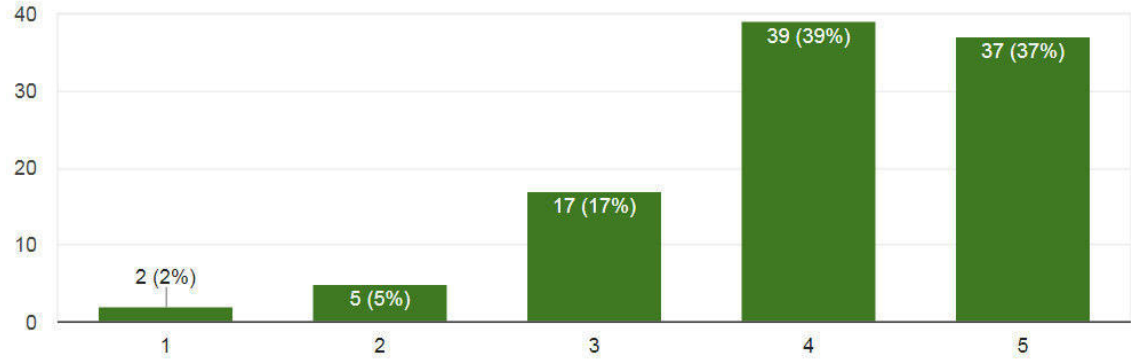
Basic knowledge in Microsoft PowerPoint



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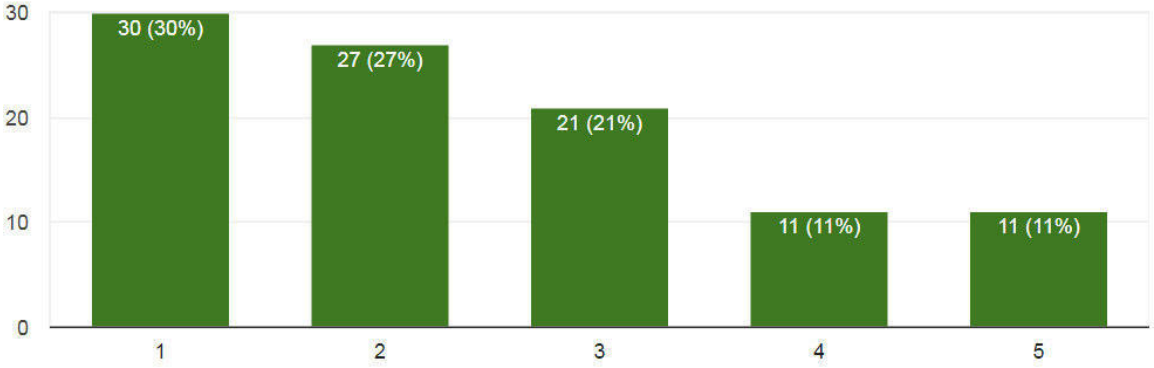
Basic knowledge in Microsoft Access



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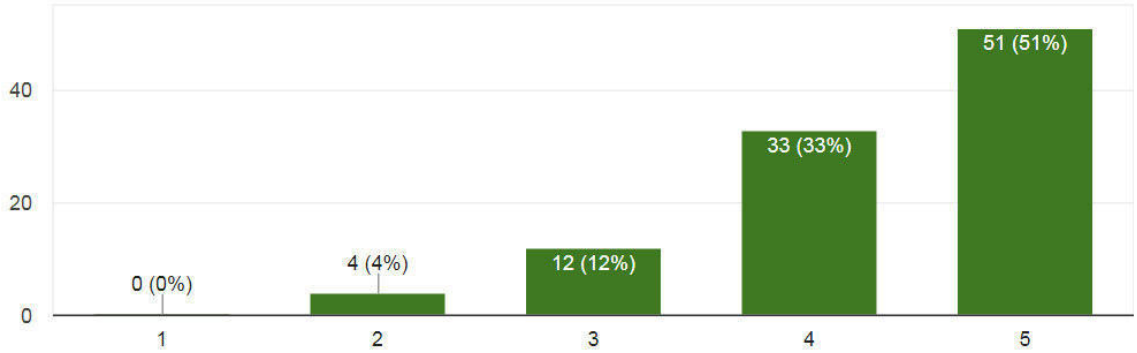
Familiarity with the Internet and search techniques



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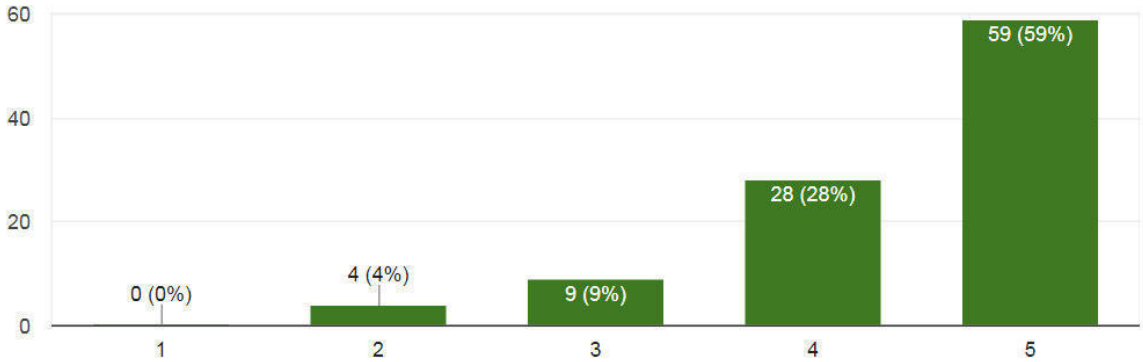
Familiarity with the E-Mail



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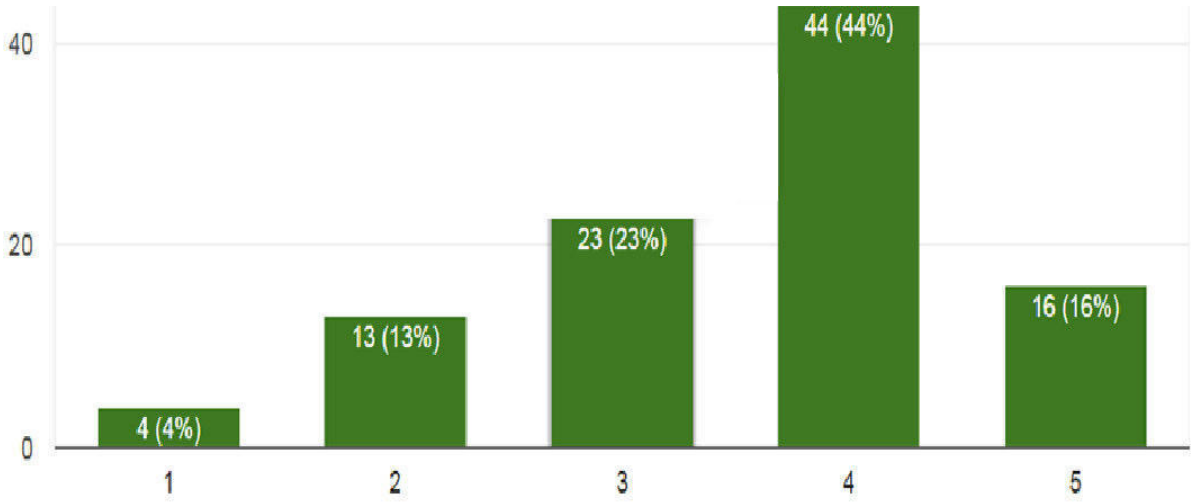
The level of ICDL skills of the teachers indicates that they have the necessary skills in the field of e-learning and they use them in educational affairs, which points out the need to enter the e-learning period.

Other specific skills for e-learning

There are some other skills that teachers should have to better working in learning management systems, in this section we assessed specific skills of respondents, the results are shown in following charts:

Use of software and multimedia systems



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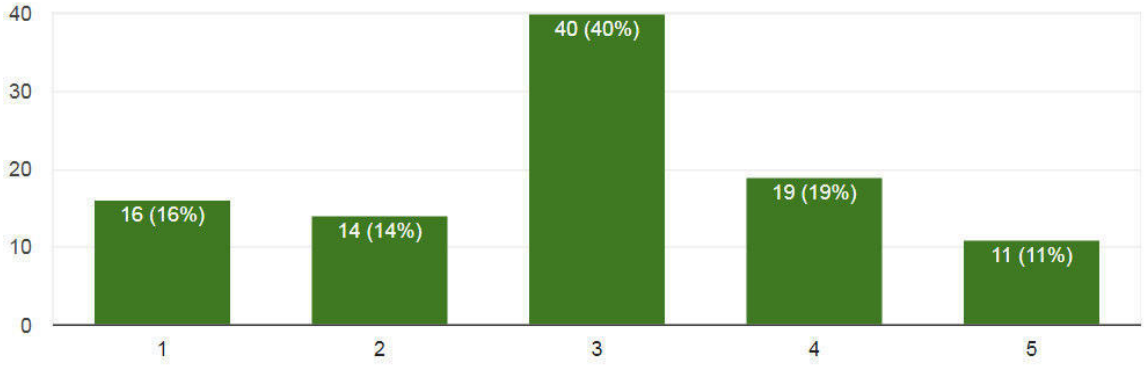
The above chart indicates that the high number of respondents use the multimedia systems in their teaching.

Familiarity with hardware



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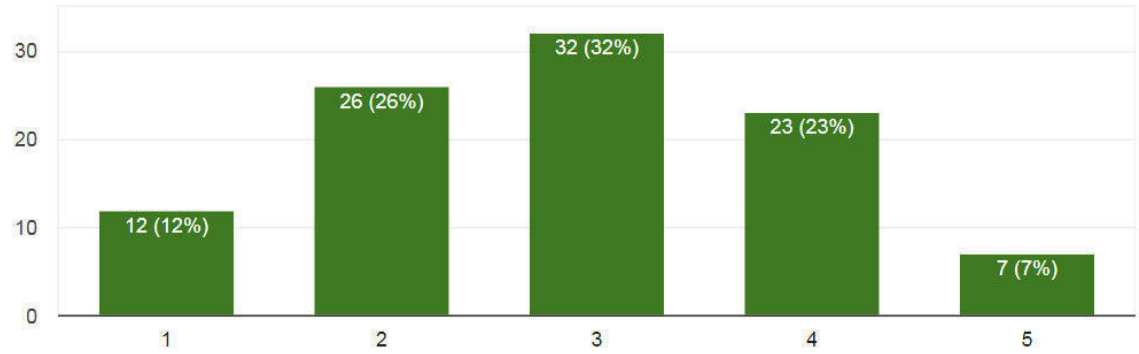
The familiarity with hardware among respondents is moderate

Educational activities in the virtual environment - interactive networking



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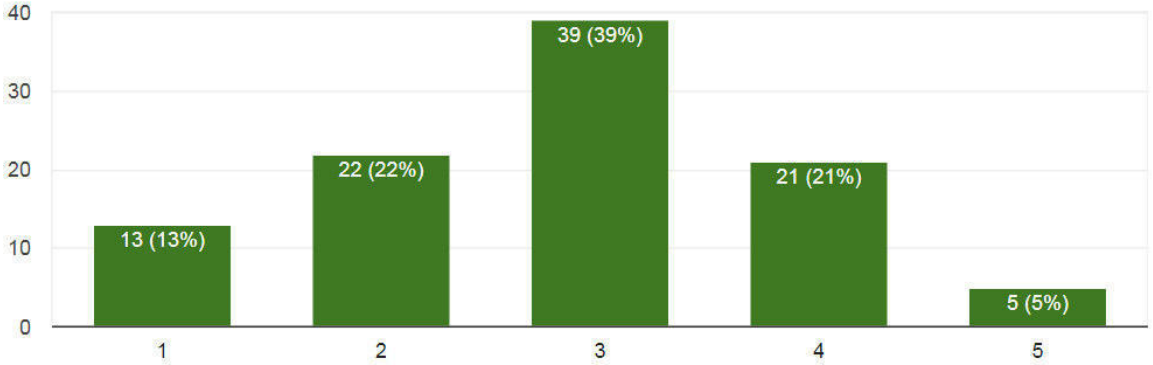
Online assessment and evaluation



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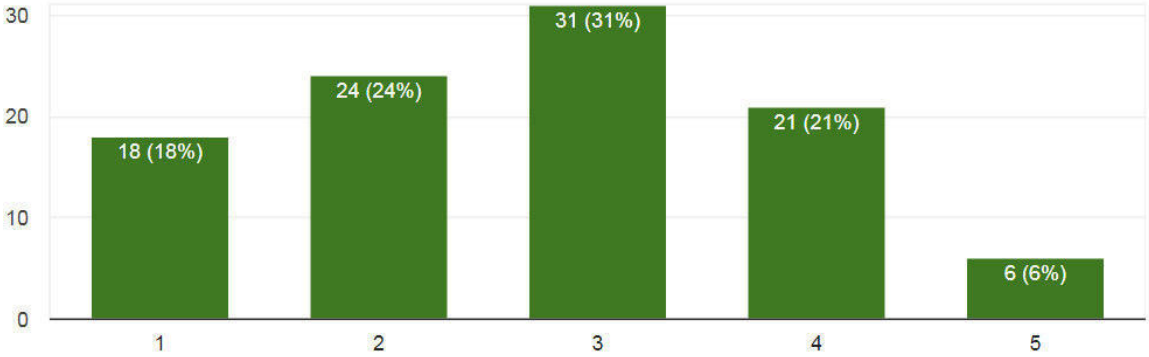
Design and production of electronic courseware content



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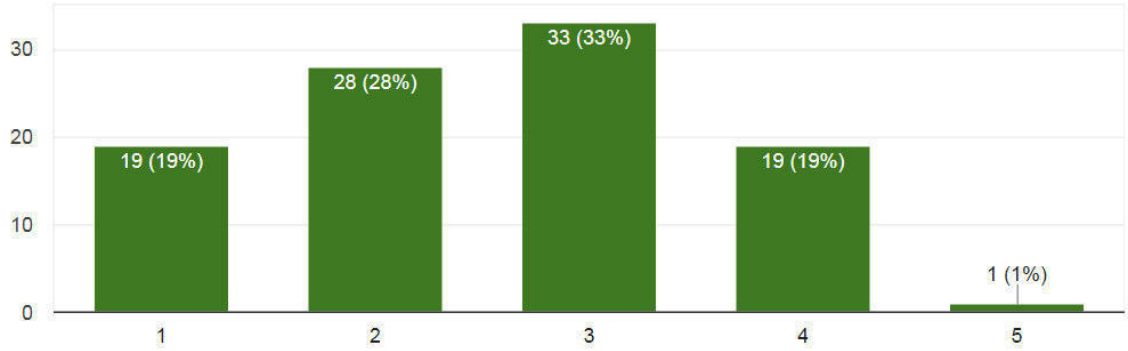
Control of the learning management system



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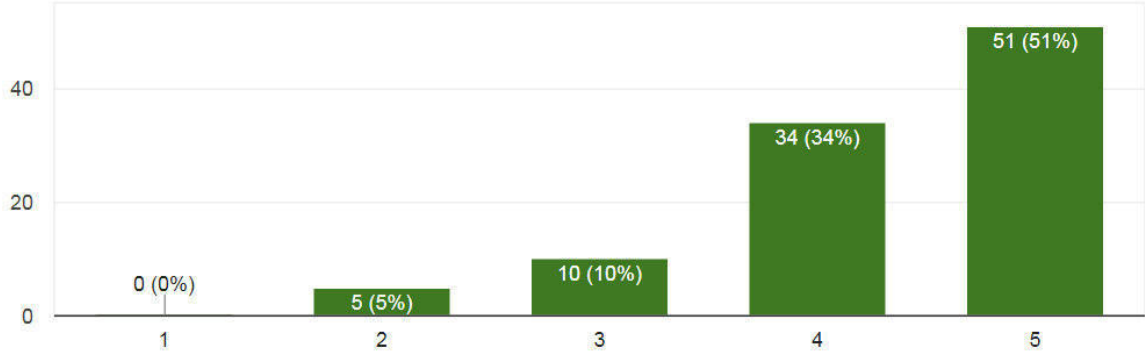
The above 4 charts indicate that the high number of respondents do use online and electronic toolkit in their management system. Then they need to be trained in these subjects.

Attitude readiness

In this part, we aimed to evaluate mental conception of IT usefulness of teachers, the respond to the questionnaire can be followed in following charts:

Information technology accelerates tasks



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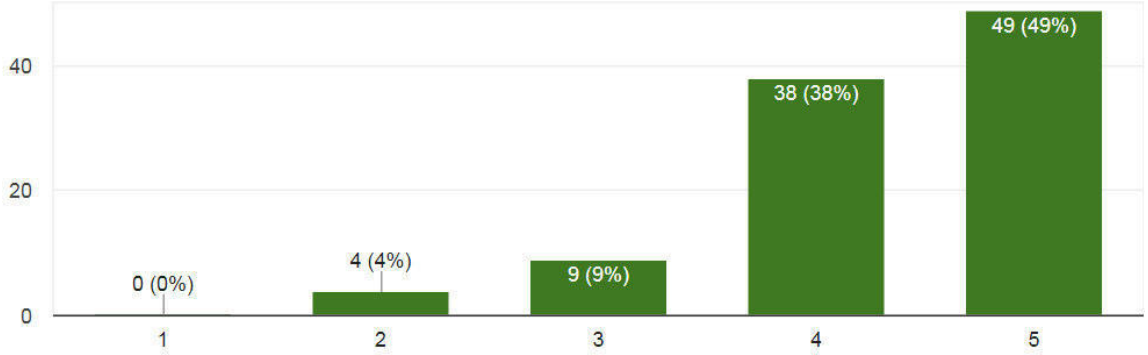
Information technology is effective in increasing productivity



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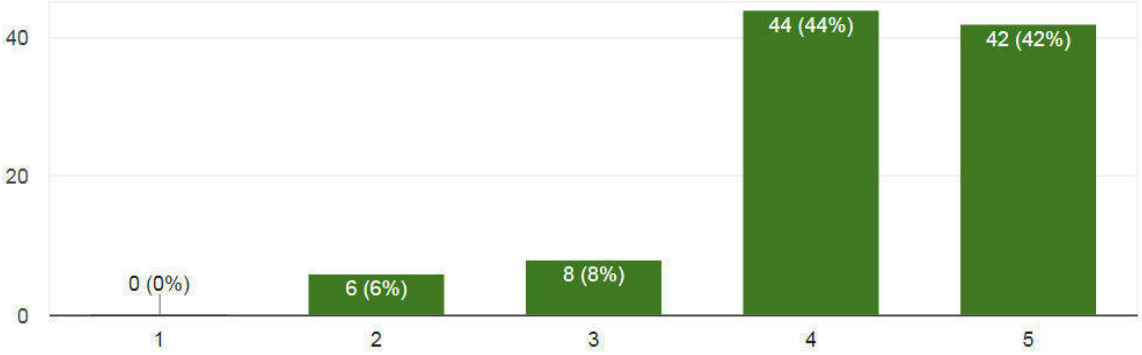
Information technology is effective in increasing access to job objectives



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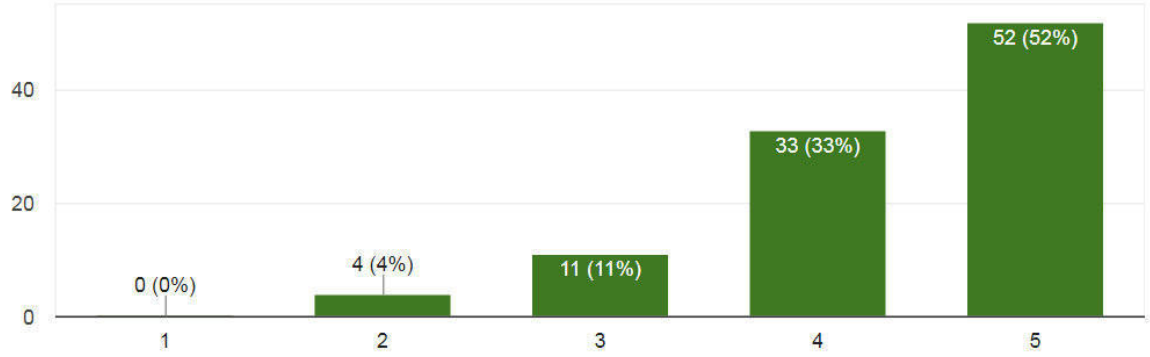
Information technology facilitates doing responsibilities



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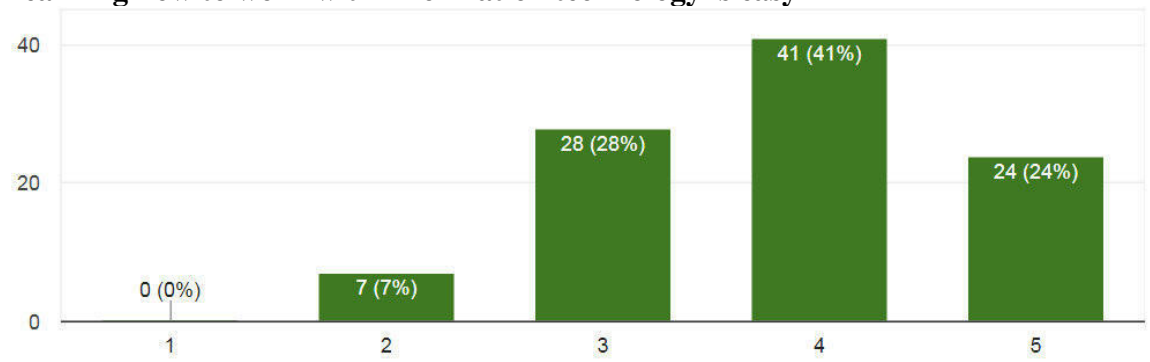
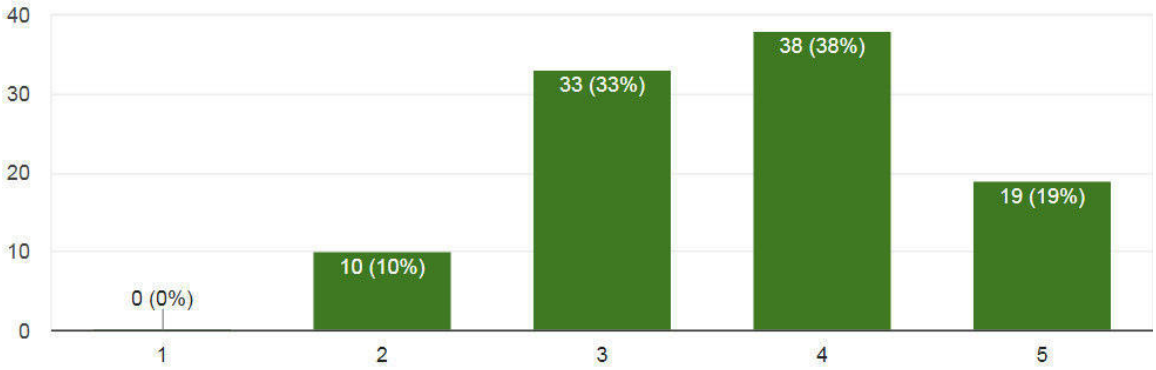
Learning how to work with information technology is easy



1= Very Low 2= Low 3=Moderate 4=High 5-Very High

The use of information technology is easy in all fields



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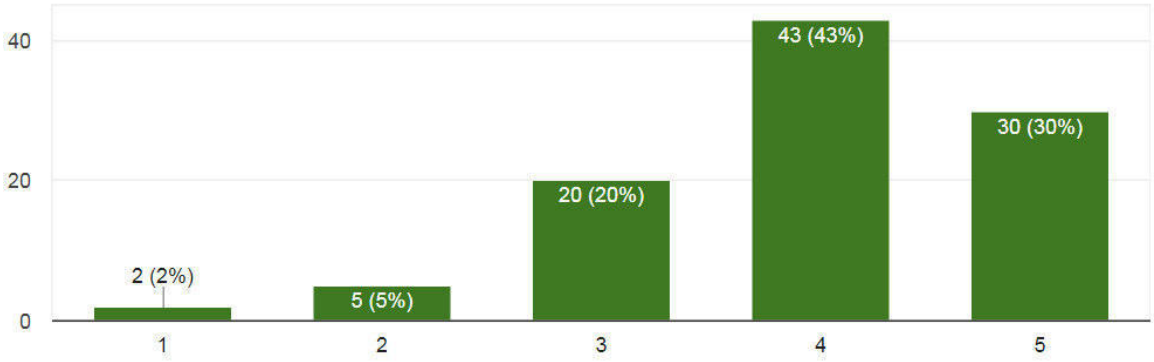
Information technology has the flexibility to address my requirements



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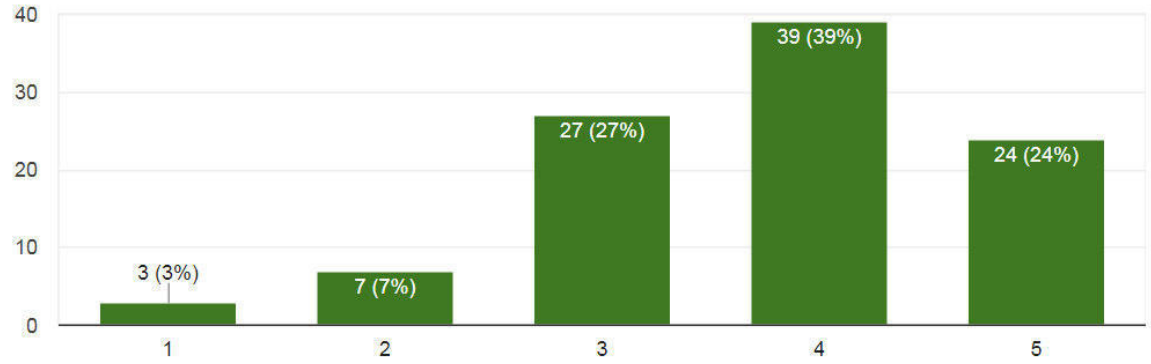
Learning from a computer and individually is easier



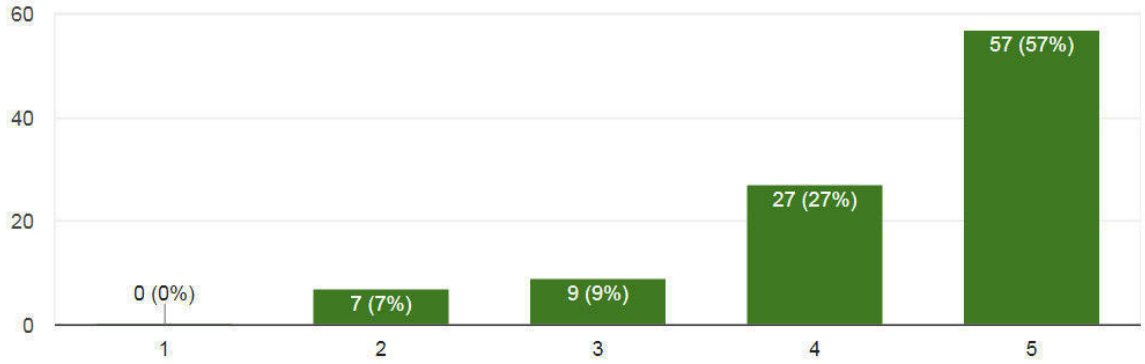
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Most participants believe that IT has a high impact on increasing job productivity, increasing availability to job objectives and ease of doing tasks, accordingly one can hope that the deployment of e-learning at the university will be welcomed very much by the addressees.

Attitude toward Use

The purpose of this section is to evaluate the attitude toward the use of the LMS system at Sanandaj Azad University. The results show that the majority of participants have a high motivation to use ICT.

I am enthusiastic to experience new computer systems after deploying them



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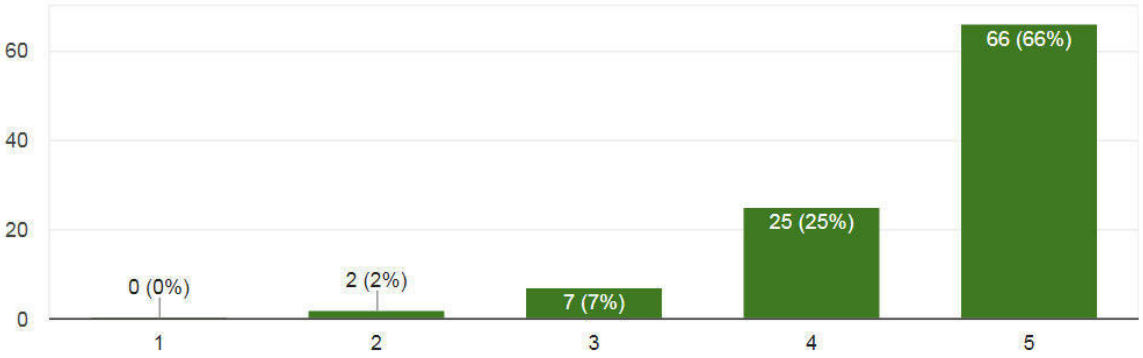
It is necessary for me to adapt myself to new technologies



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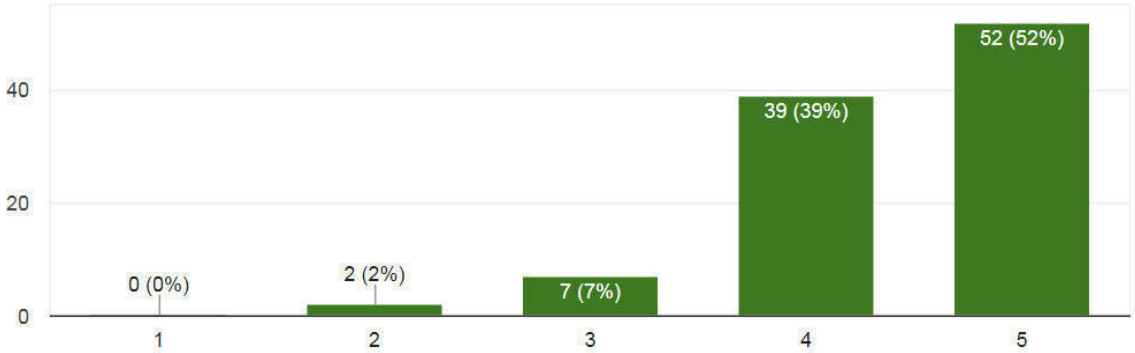
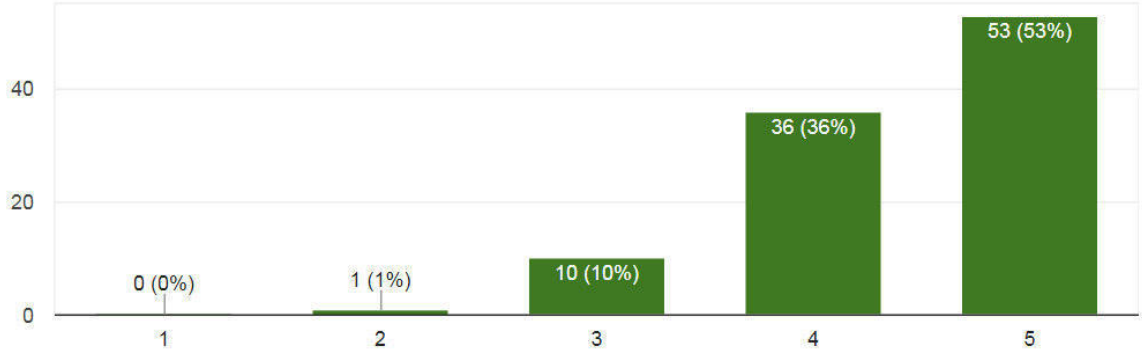
The use of a variety of information technology is pleasant



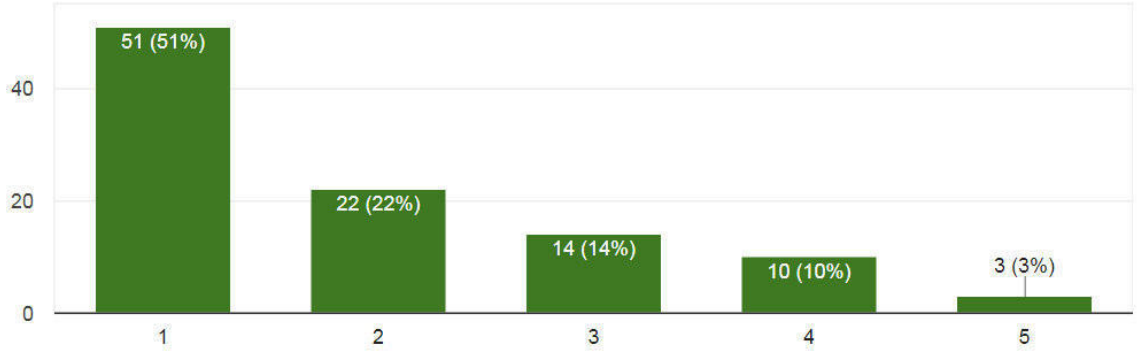
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The use of a variety of information technology is beneficial



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

I have a kind of fear, anxiety and inability to use the internet

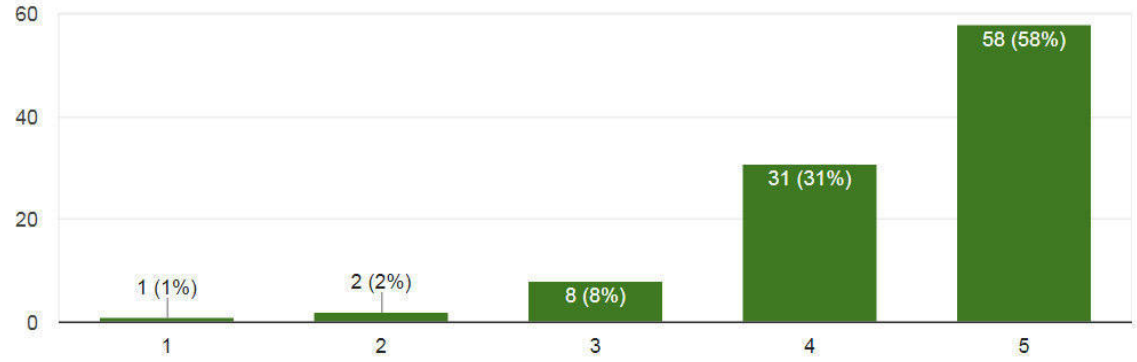


1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Decision to use

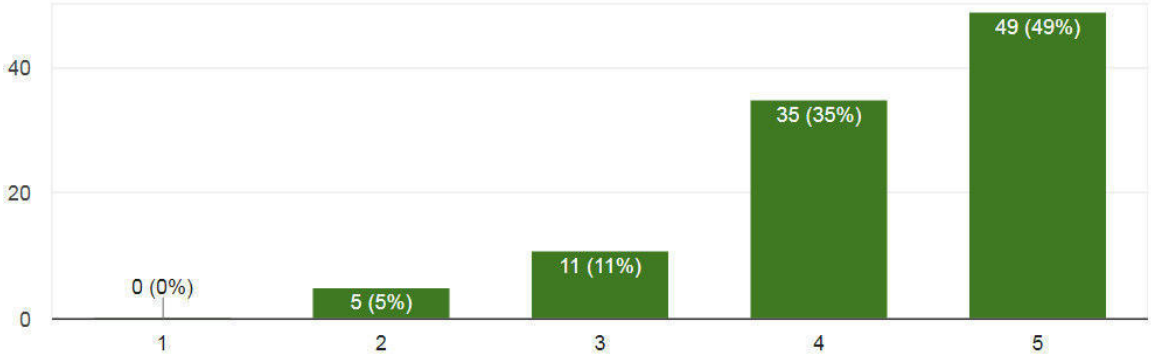
In recent years, lots of efforts have been made in Iran to make use of e-sectors such as banking, business, e-government, etc. by different walks of peoples. This has led the people of society to use information technology in different aspects. The results clearly point out that most participants want to use it in their administrative and educational affairs.

I surf the Internet to get my required information



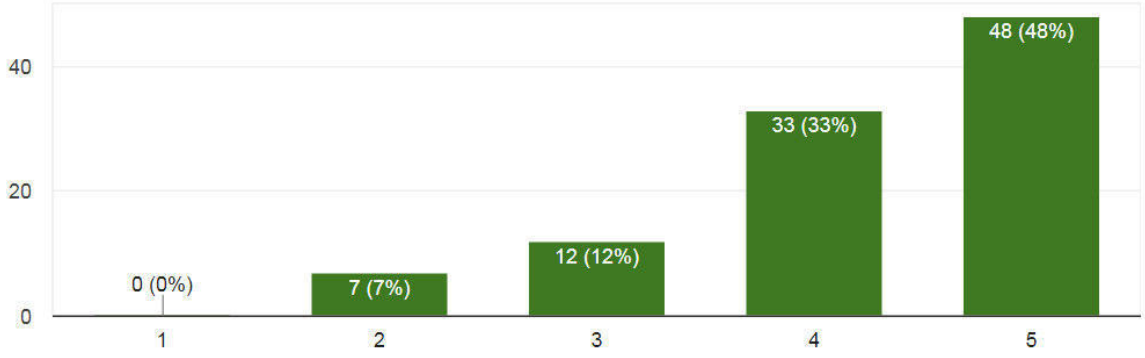
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

I decide to use IT to do my tasks duties upon possibility



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

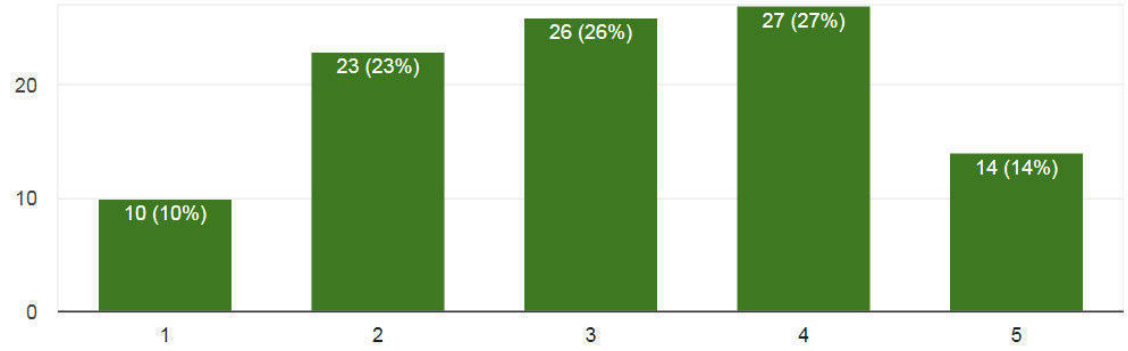
I would like to use information technology outside working hours



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Believing in e-learning

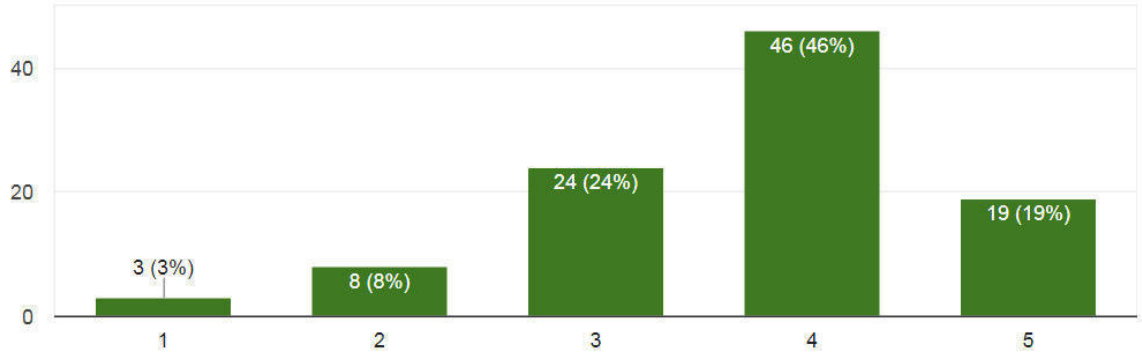
Many requirements can be learned through the training programs on television



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The results suggest that most participants have a positive attitude toward learning through media education programs such as television, although bilateral interaction such as the exchange of opinions and questions hinders the use of this method.

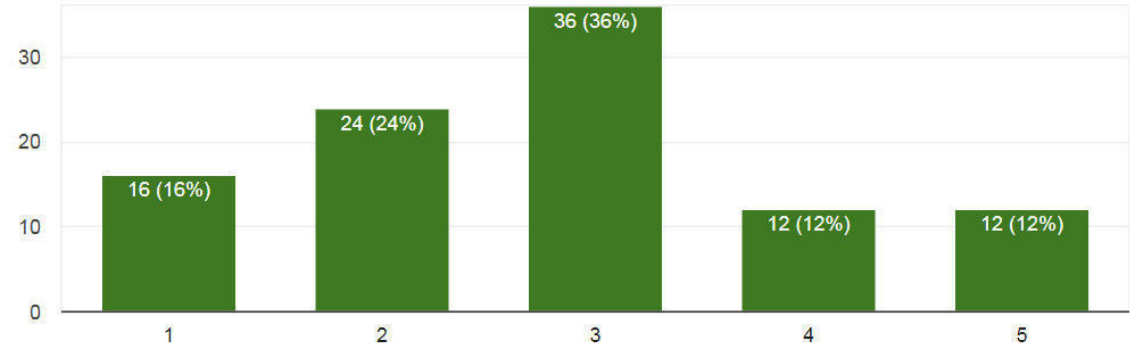
I can learn my requirements through educational assistant software and virtual spaces



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

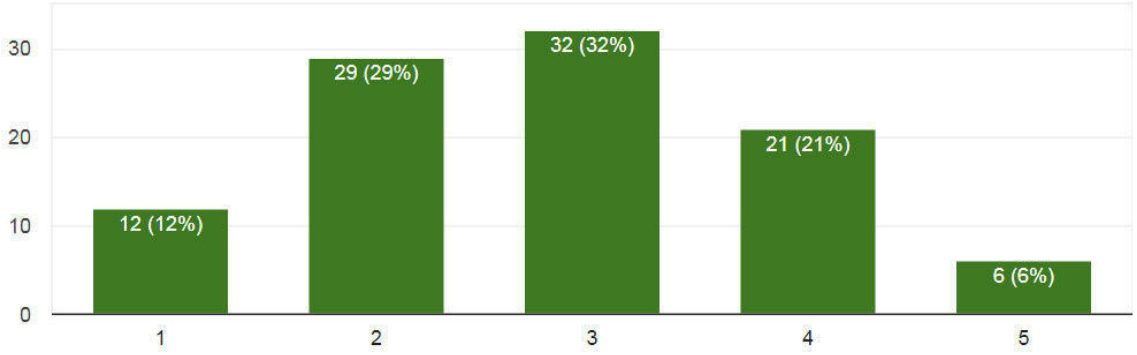
The results show that most learners believe to learn through educational assistance software and virtual spaces; this could probably be more due to the existence of an interactive relationship.

When I can learn individually, I do not need to attend classes



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Learning through TV, computers and the Internet is more difficult than learning through the classroom.



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The diversity of our departments in the study shows that many of them still believe in the physical presence of the class, which may be due to the following reasons:

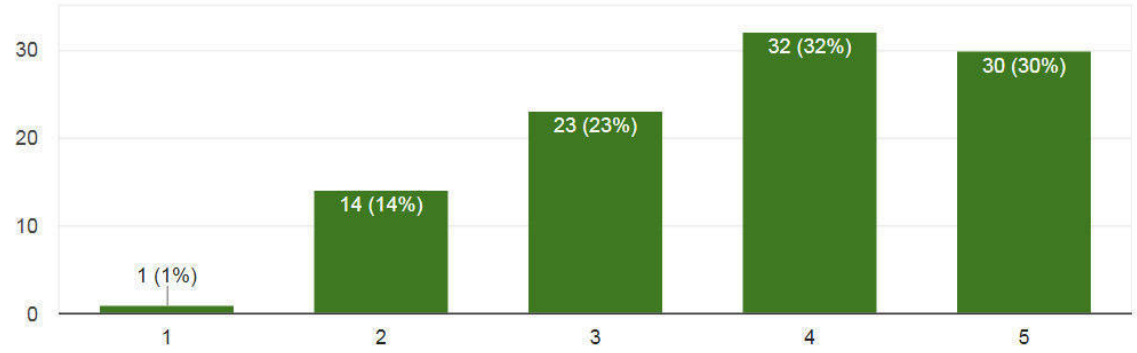
1- To believe in group learning through attendance in a class and interaction between the teacher and students
2- To have personal experiences from the traditional environment and classroom in the past and lack of trust in new educational environments.

Introducing the LMS system in addition to the traditional method and making the instructors familiar to the results and effectiveness of the LMS, it is possible to change the views of those who oppose.

Cognitive readiness

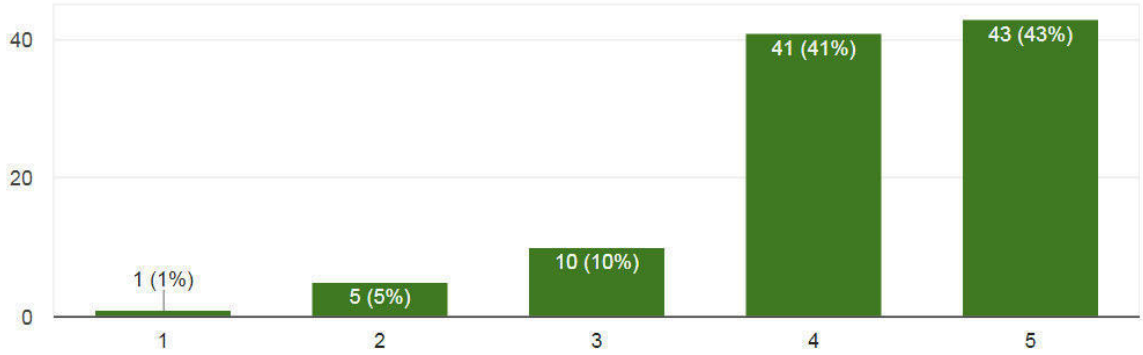
Information literacy

Using the computer and managing files



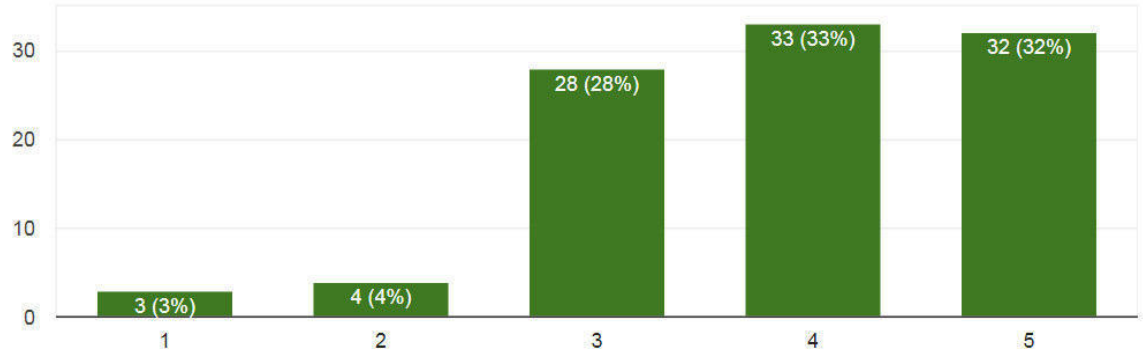
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Using the Internet and Email



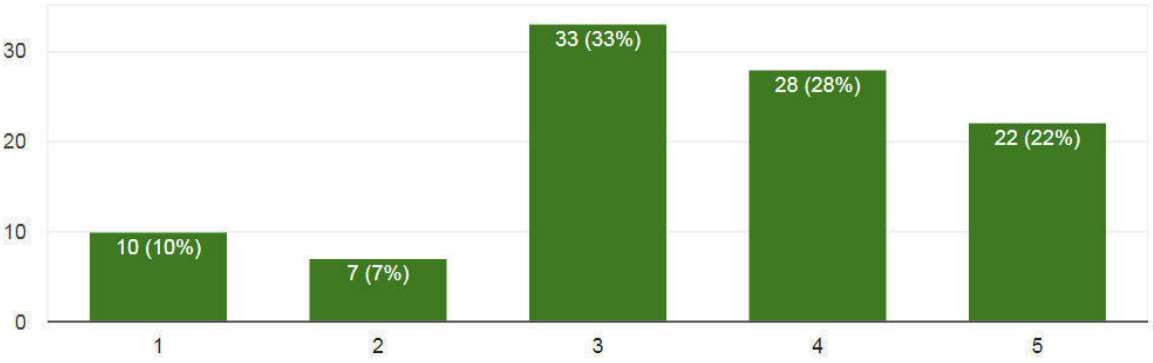
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Understanding the basic concepts



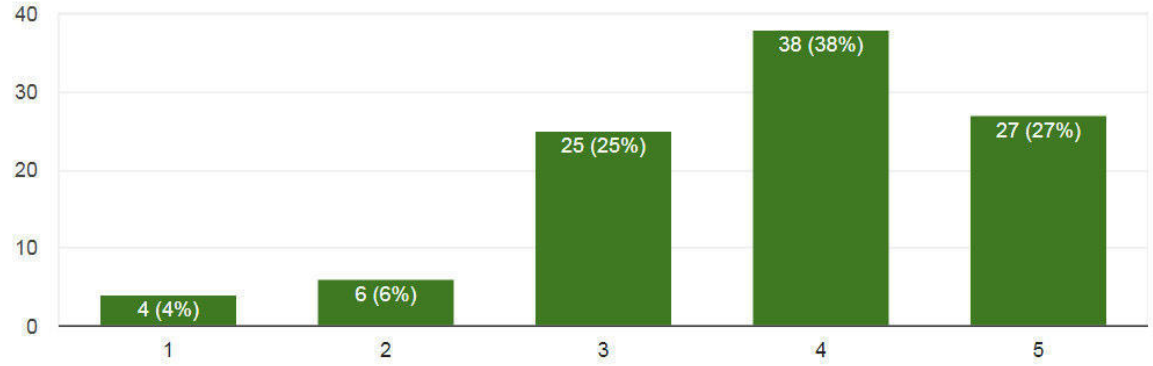
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Databases



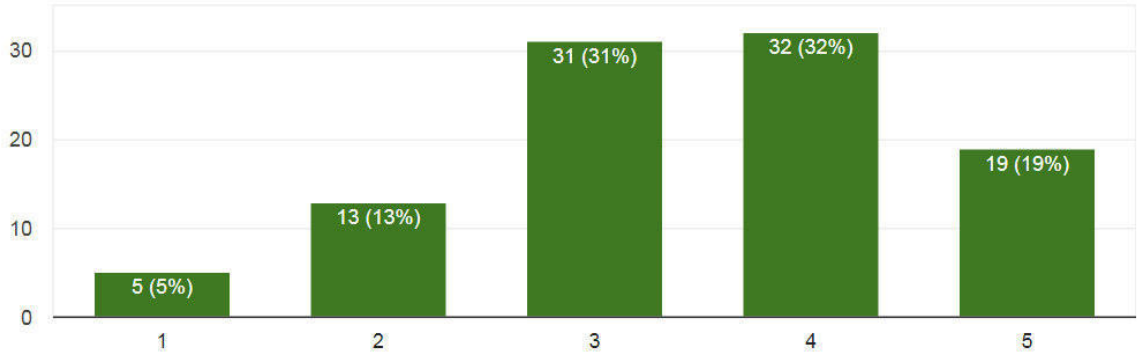
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Presentation and showing texts



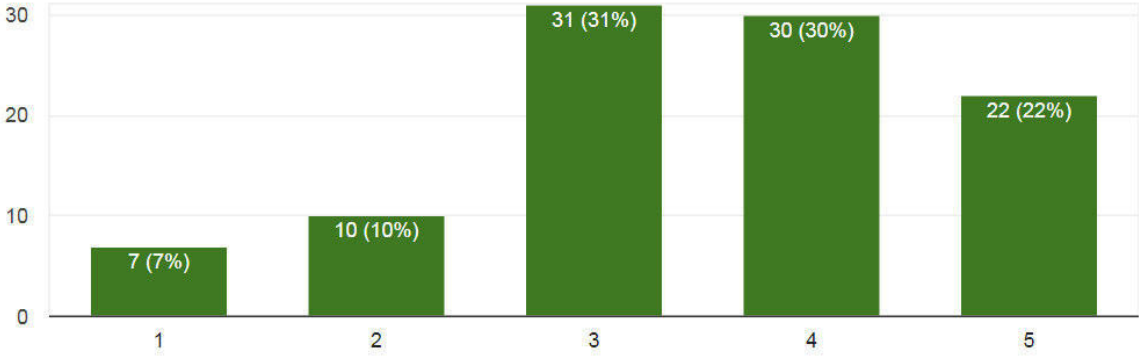
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Spreadsheets



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Word processing

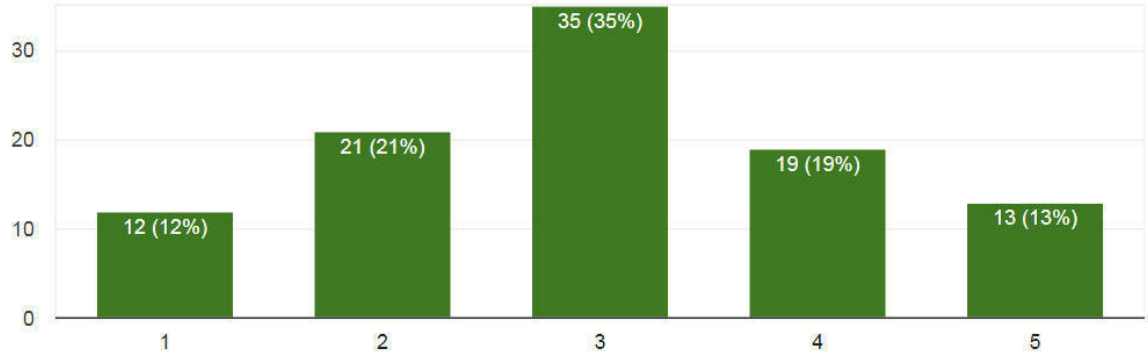


1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The results show that the computer knowledge of the participants is in an acceptable level, which suggests success in preparing for the adoption and deployment of the e-teaching and e-learning system.

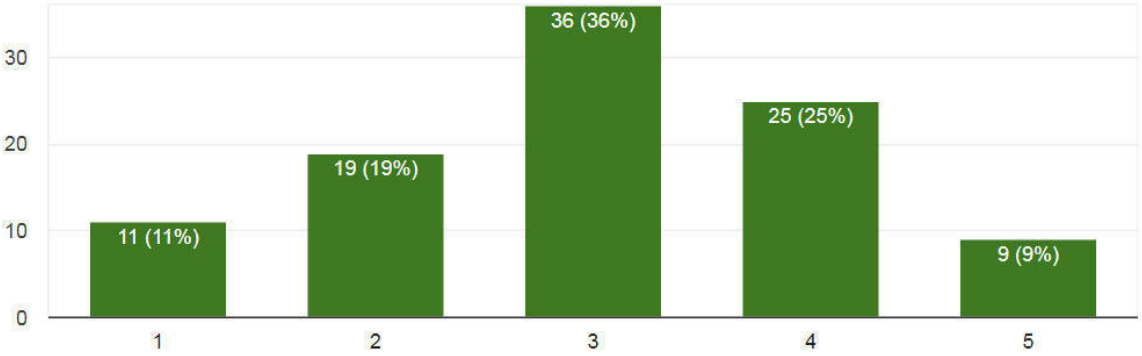
Infrastructure - Hardware sector

Appropriate hardware equipment



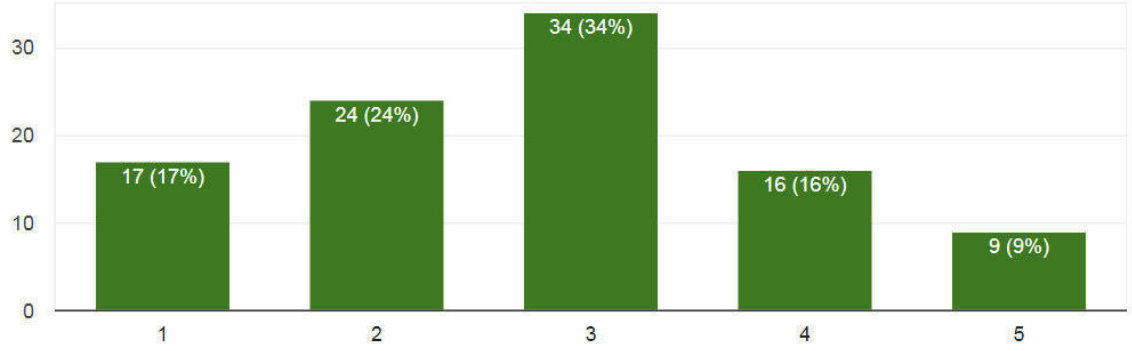
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Quality and quantity of educational sites



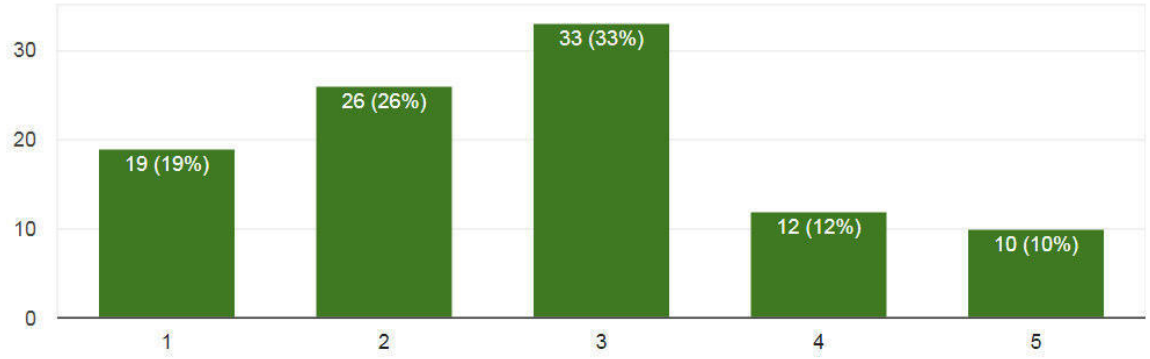
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The adequacy of internal network bandwidth



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The adequacy of network bandwidth to connect to the internet

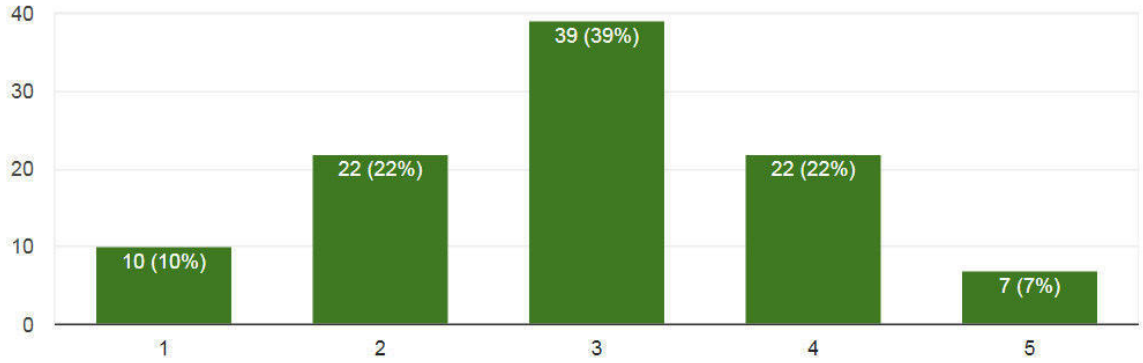


1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Regarding the hardware sector, as far as the results indicate most of the participants are not satisfied. Hardware includes the quantity and quality of learning environments and places, internal network bandwidth and Internet connection bandwidth, which need to be strengthened to launch the LMS system. It is hoped that by establishing this project, we will take an effective step to improve these failures.

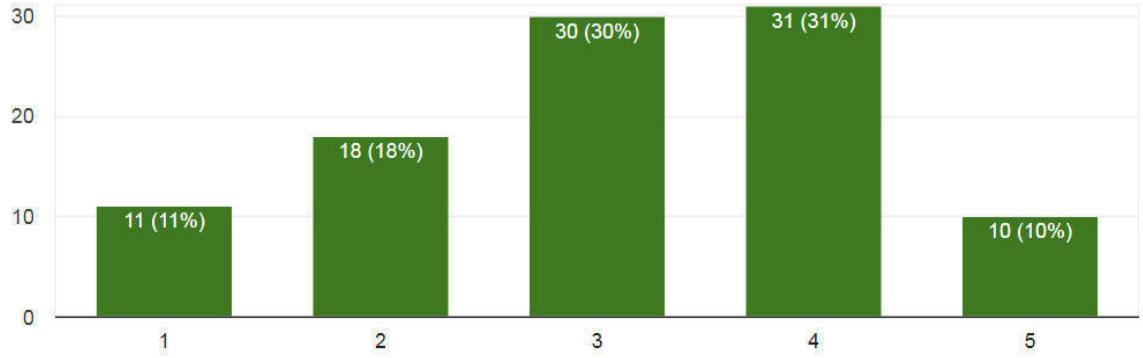
Infrastructure - Software sector

The existence of electronic websites



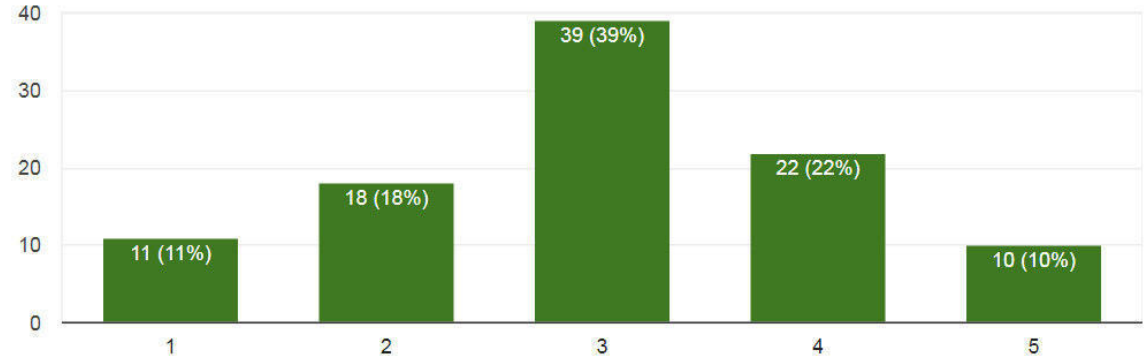
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The existence of suitable software



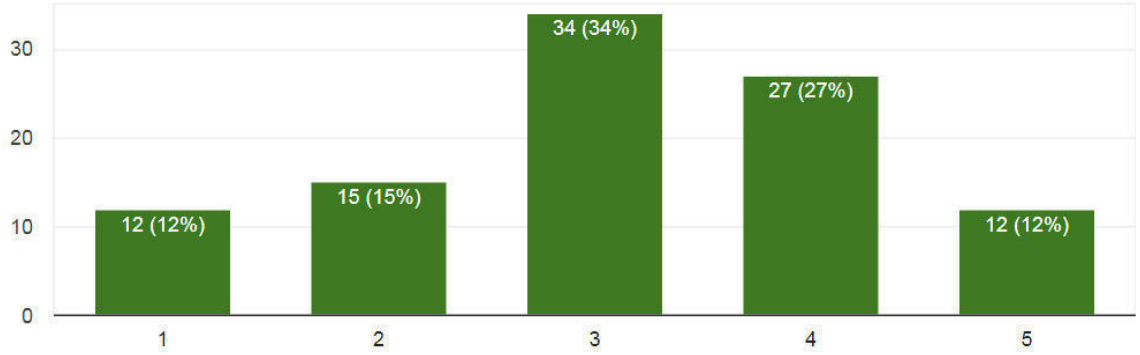
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Compatibility and compliance with standards



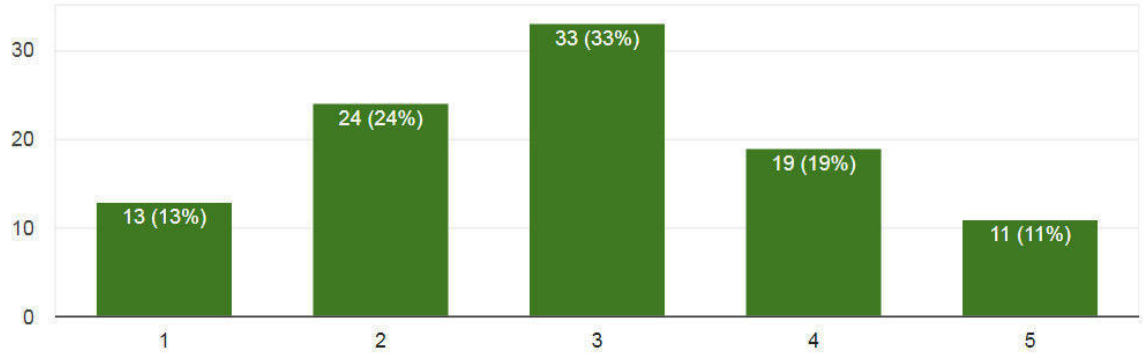
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Developing appropriate learning environments



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The existence of intelligent electronic systems



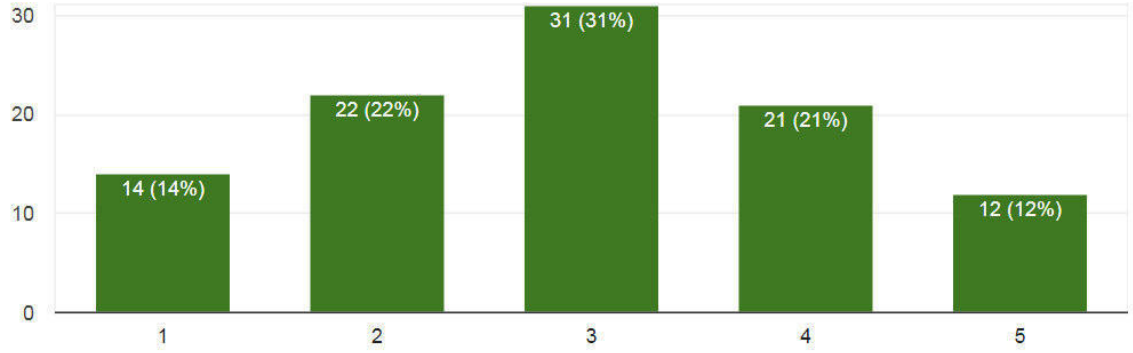
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

In the software infrastructure sector, the results suggest that most of the participants do not consider this section suitable for entering into electrical learning, although some of them expressed satisfaction with this, due to the diversity of their disciplines it seems quite normal.

Considering the need to provide the necessary software facilities in accordance with the international educational standards for using the LMS system, it is recommended to hold training courses and workshops for the professors in this regard.

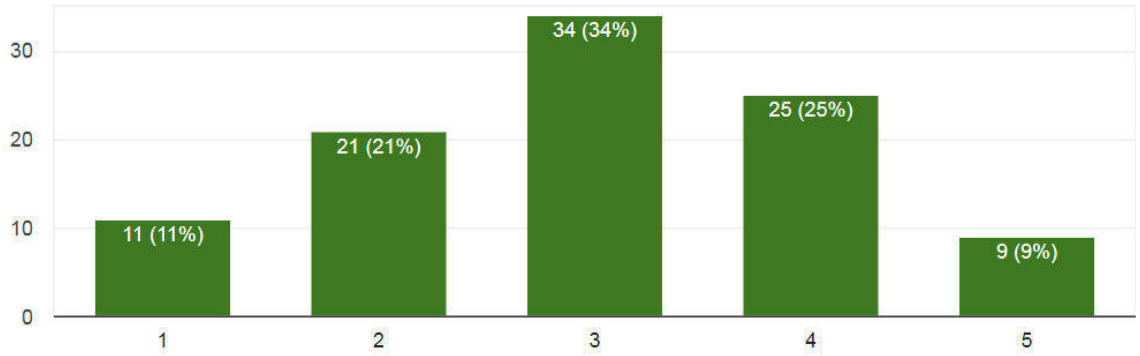
Content infrastructure

Availability of databases and electronic journals



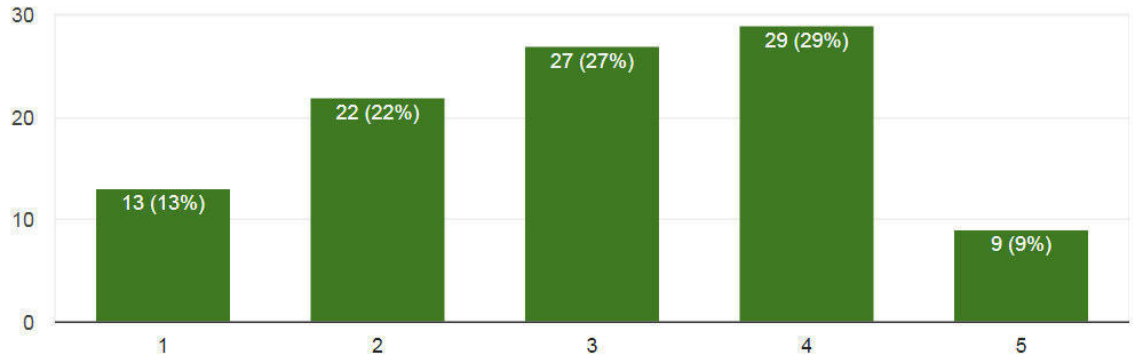
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The existence of suitable electronic ports



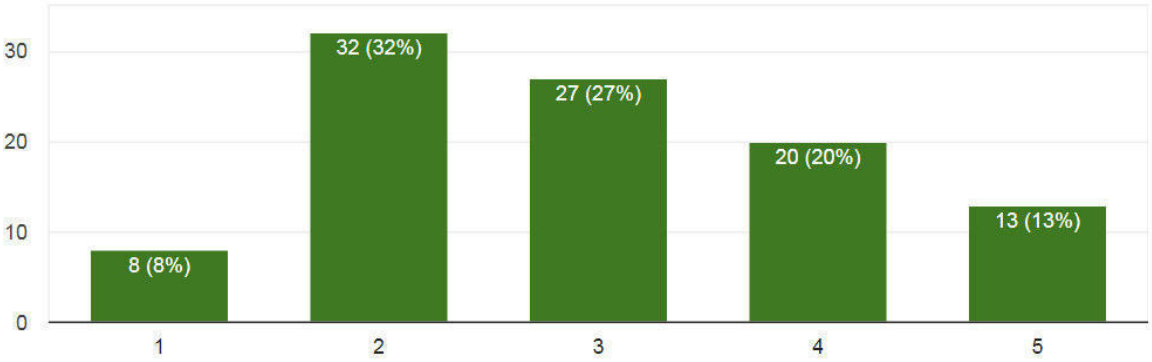
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The existence of electronic libraries



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The existence of appropriate standard for converting contents to electronic formats



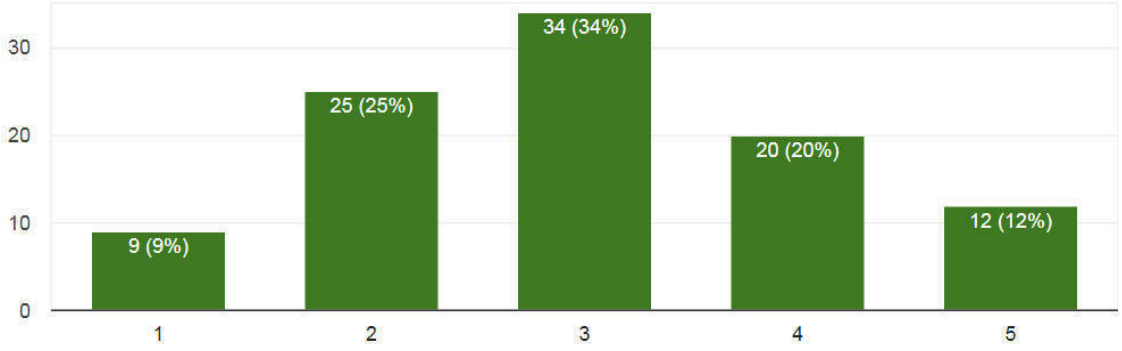
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Having regarded the content structure base, the results show that most of the participants do not have enough satisfaction with this structure. To address this problem, we need to:

1- Hold training courses for introducing databases and digital libraries.
2- draw the attention of managers to the need for strengthening the existing content infrastructure

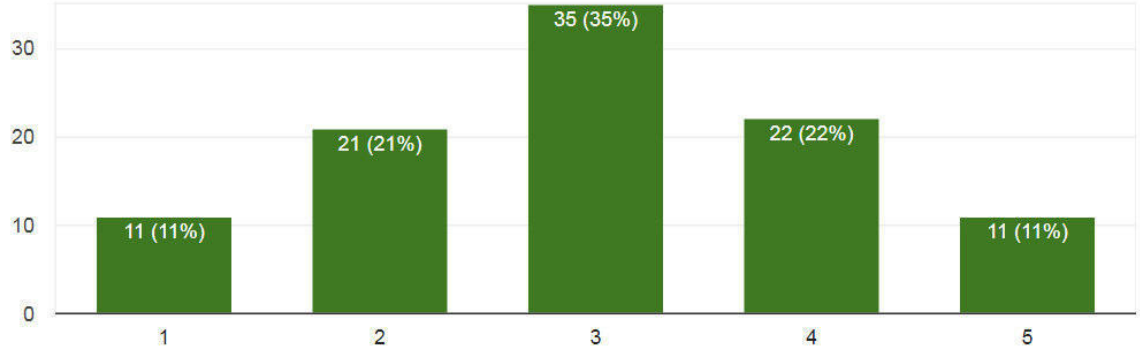
Security of the LMS system

Information and application contents security



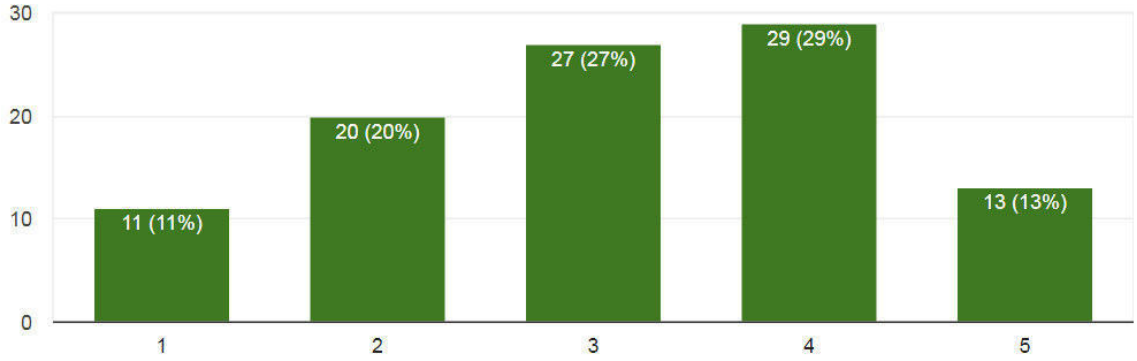
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Network and system security



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Creating security for exams and evaluations



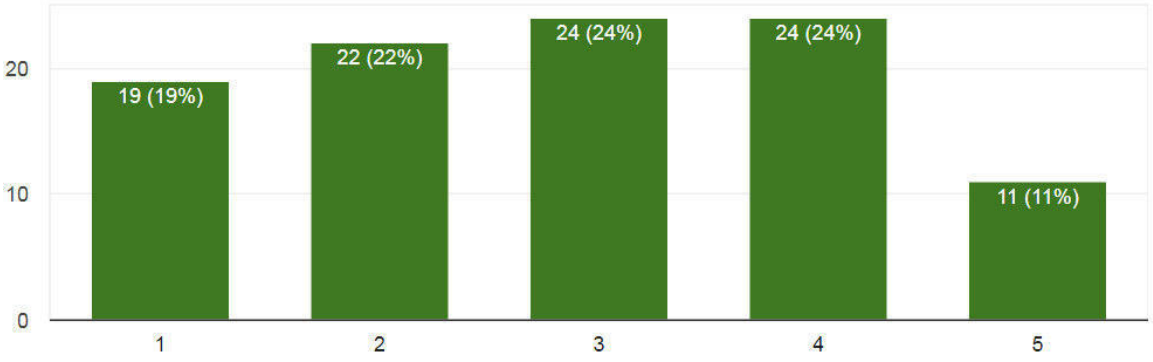
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Concerning the views of participants on the security of the LMS system, the results of this survey point out that most of the participants are skeptical that might be due to the lack of prior experience and knowledge about the system regarding its security, which requires the introducing LMS And its high security.

Political and supportive view regarding LMS

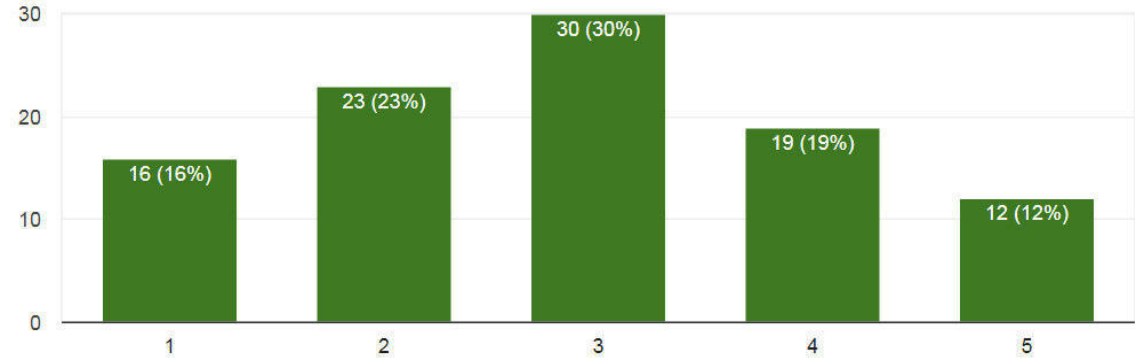
In this section, we examined the support of relevant authorities and senior executives, as well as reviewing the policies of the government and the relevant organizations from the participants' viewpoint and the specificity of the Ministry of Science programs in setting up LMS in the country.

Senior officials and managers support



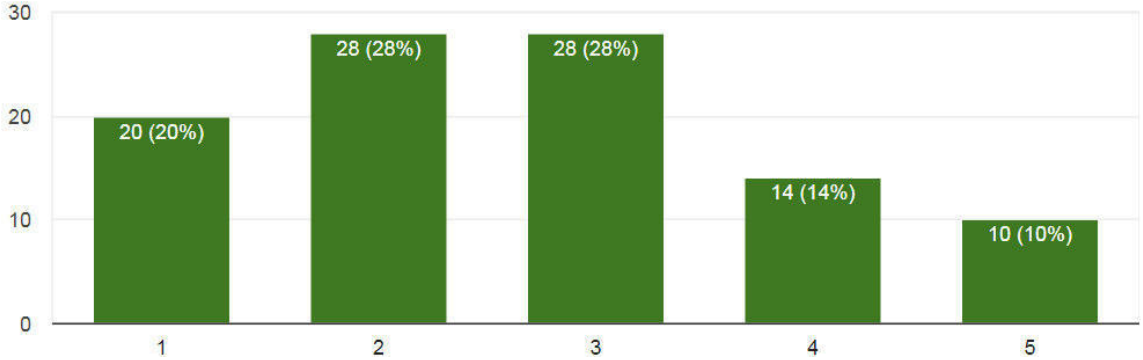
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Government support for the creation of virtual environments



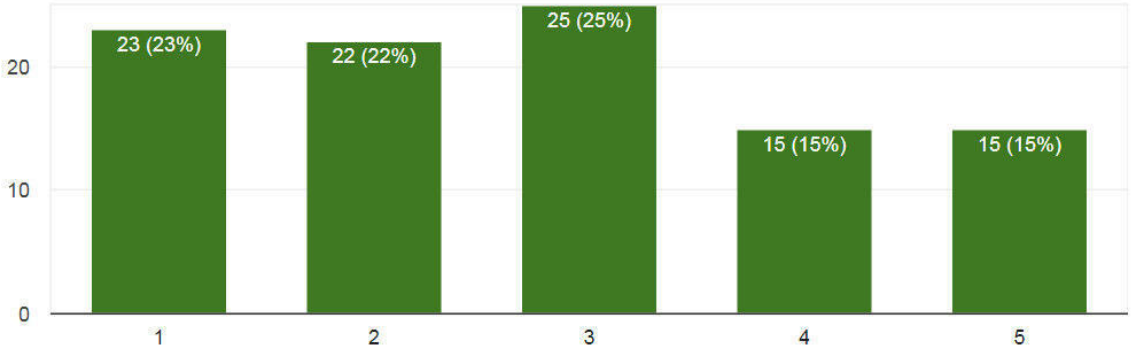
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Financial support of institutions and organizations



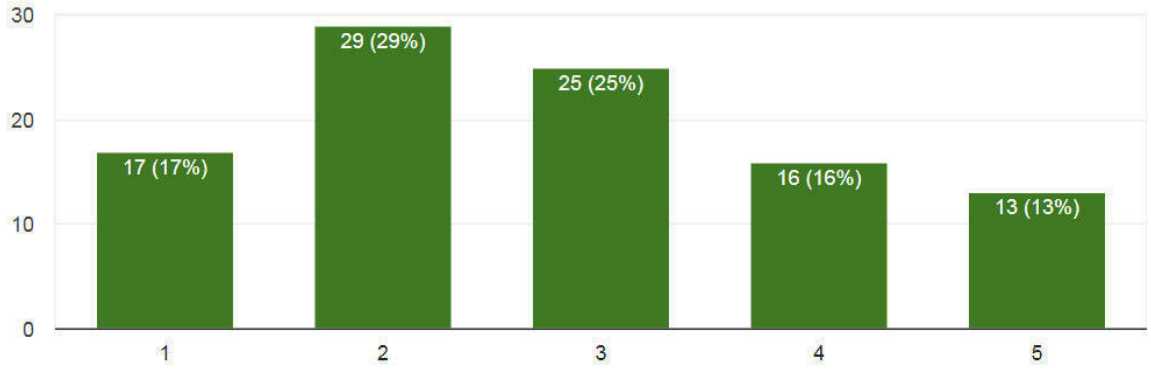
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Existence of clear policy of the Ministry of Science and technology (Higher education ministry)



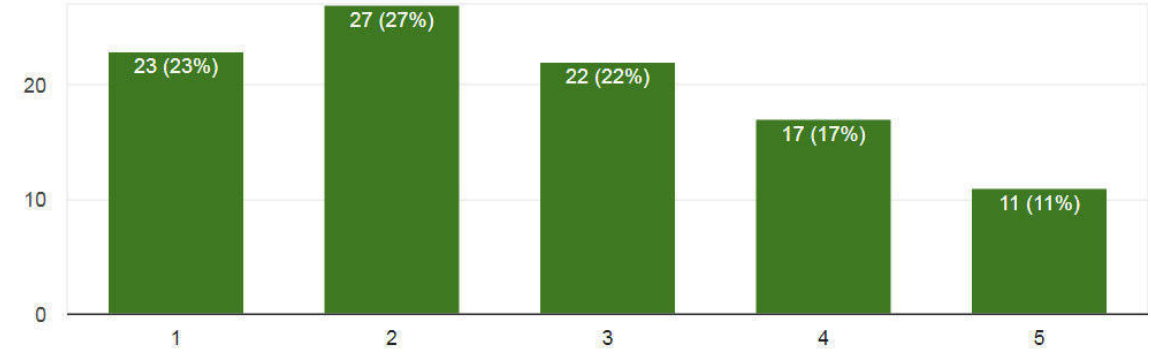
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Existence of clear plan of the university



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Government financial support



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

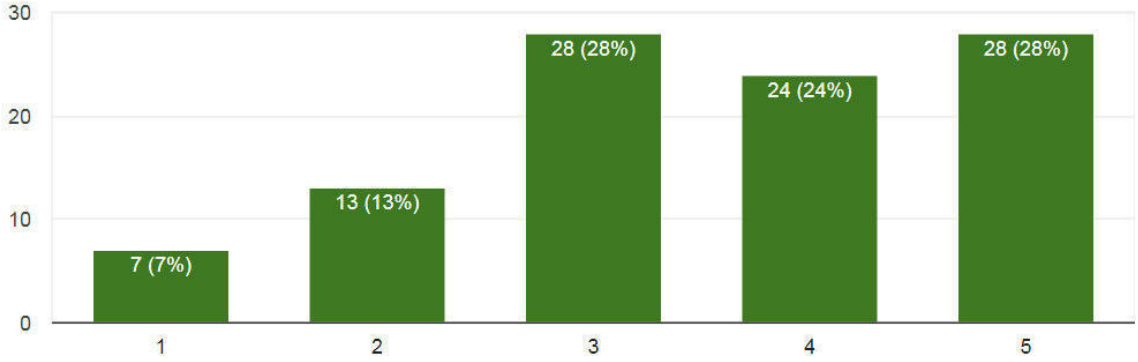
The graphs and the results of this study show that most of the participants believe in the lack of governmental financial and political support for e-learning, and believe that no specific plans have been put in place so far.

Certainly, the success of this project will have a significant impact on the perceptions of the relevant authorities, and will also push the instructors towards the use of the LMS system, which will definitely play a constructive role in improving the quality of education.

Cultural believes and attitudes

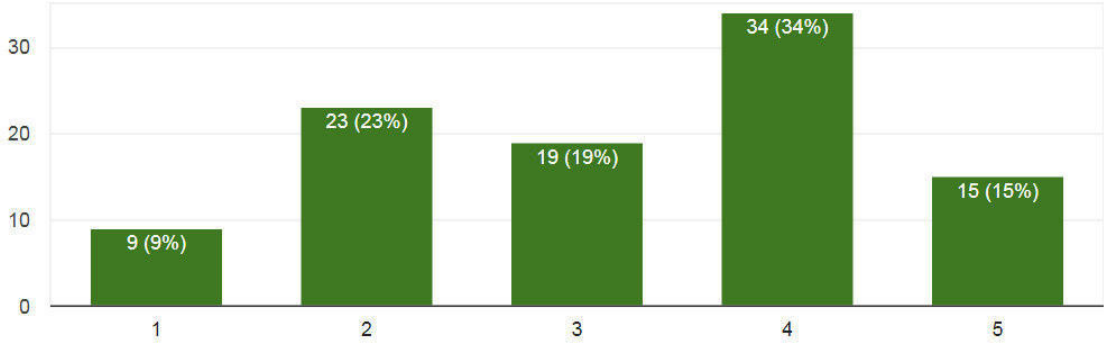
Clearly, cultural believes and attitudes in the efficiency and superiority of electronic learning plays an important role in the establishment of this system. In this section, we examine the existing attitude and readiness to enter LMS.

Believing in the superiority and high efficiency of e-learning



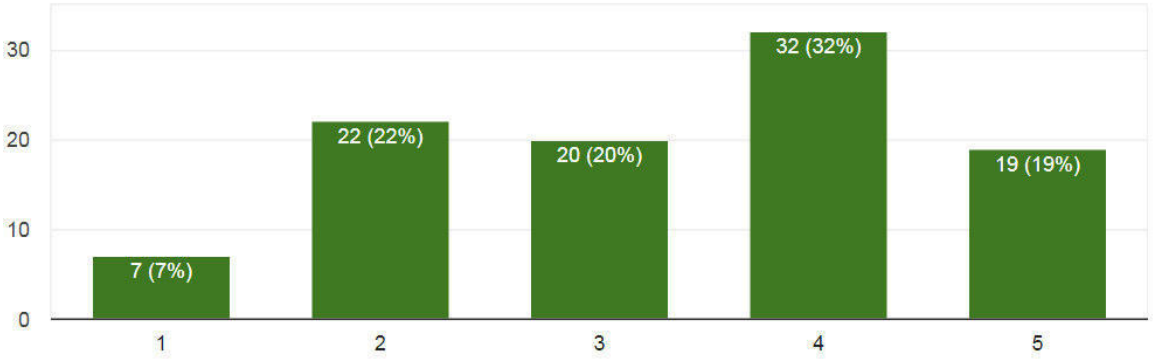
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Positive attitude about e-learning documents



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Positive attitudes and beliefs about learning



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

By examining the results and diagrams in this section, it can be seen that the attitude of the participants towards the efficiency and superiority of the e-learning system is positive, which can be attributed to the widespread use of the Internet, social networks and websites. Also, in more detail, it became clear that many of our teachers at the university are using scientific materials via specialized educational sites. Therefore, it can be concluded that the existing attitude will facilitate the entry, deployment and optimum use of the LMS system in the country.

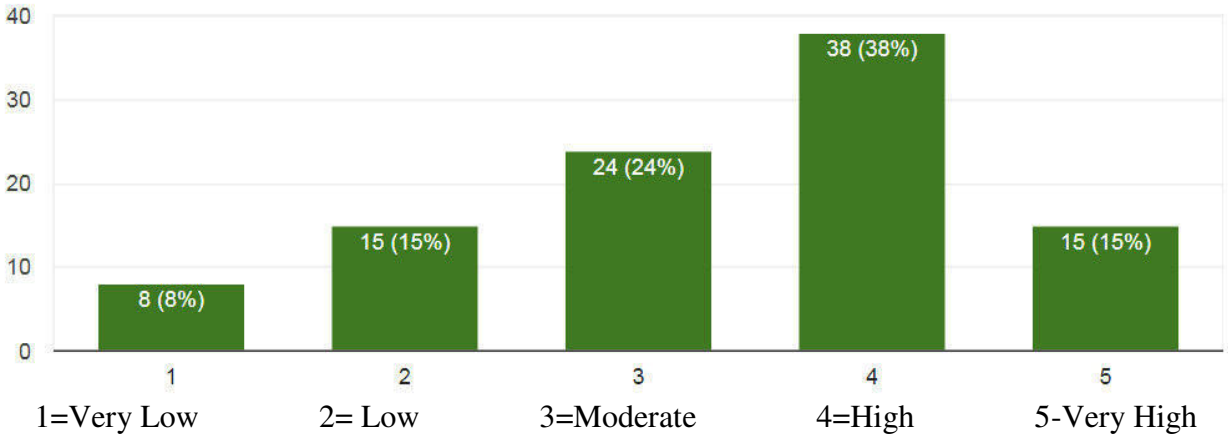
Current problems for implementing virtual training regarding your knowledge

In this section, we evaluated and summarized the obstacles on the way of establishing the LMS system. As you can see from the results of the preceding sections, the prospect of using this system is very clear, but at the same time we have to go through the following difficulties, which we will outline below:

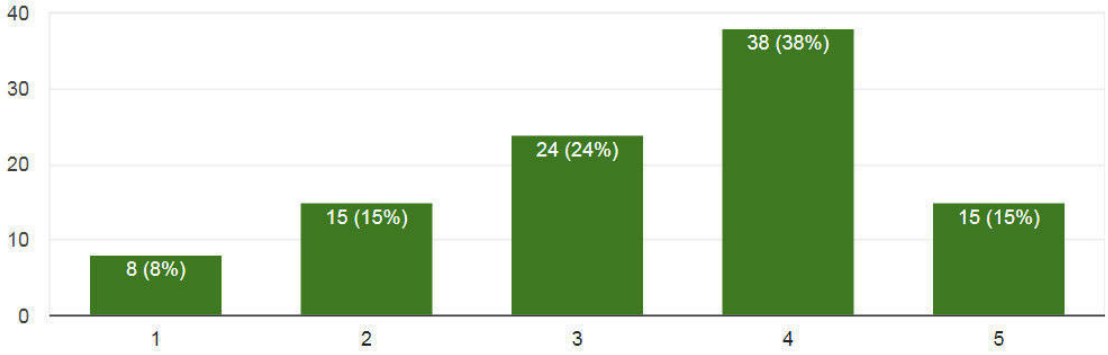
1- Technical Issues: Among these problems are the lack of infrastructure, the technical knowledge required and the security of networks, information and data.

2- Management problems: Managing and organizing information and legal issues; On the other hand, evaluating various aspects of LMS is one of the main issues that can be addressed in LMS.
3- Financial problems: Sufficient financial support by the university is a key factor in launching the LMS system.
4- Cultural barriers: Passing through the traditional way of learning as well as filtering many of the information and electronic communication paths are significant cultural barriers

Infrastructure

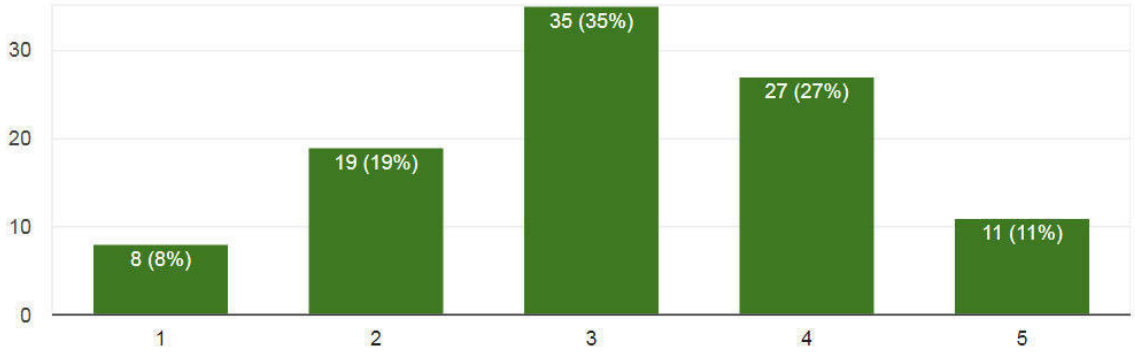


Assessment and Evaluation



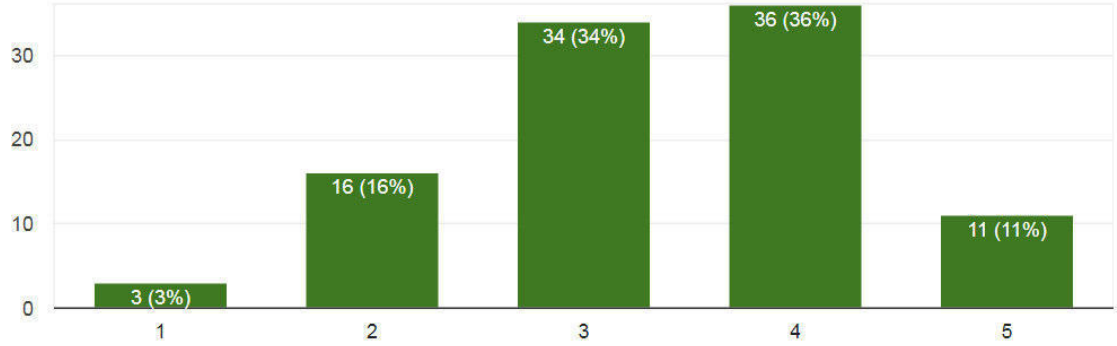
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Legal problems



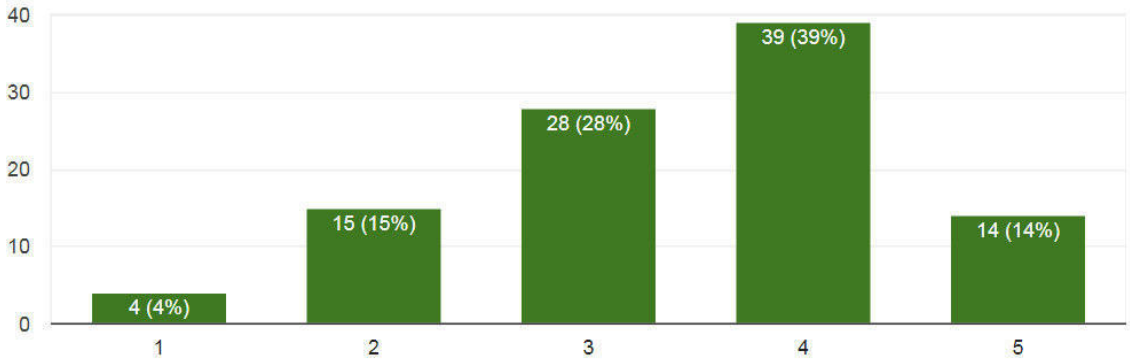
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Technical problems



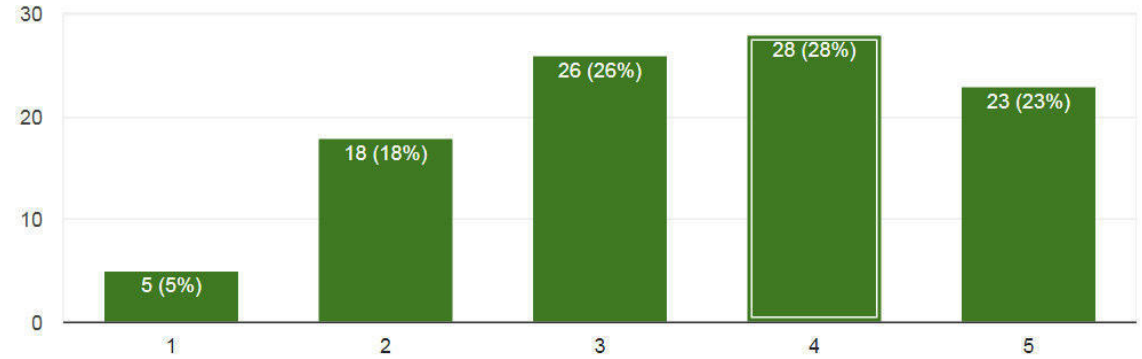
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Managing and organizing the programs



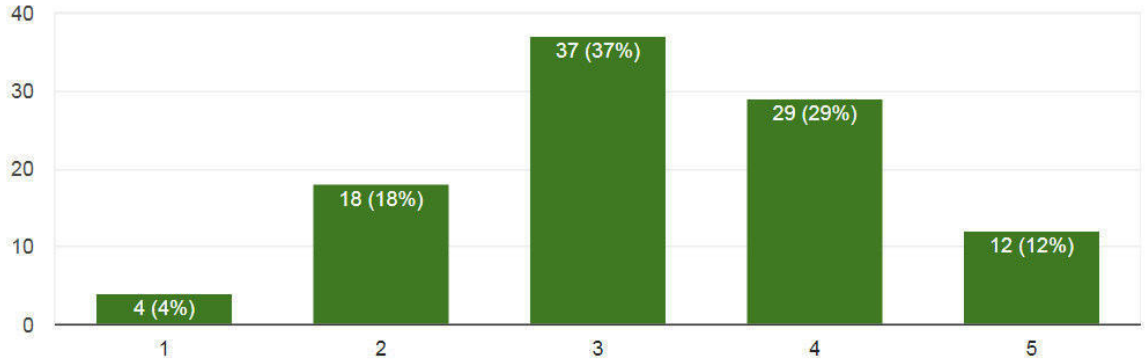
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Financial problems



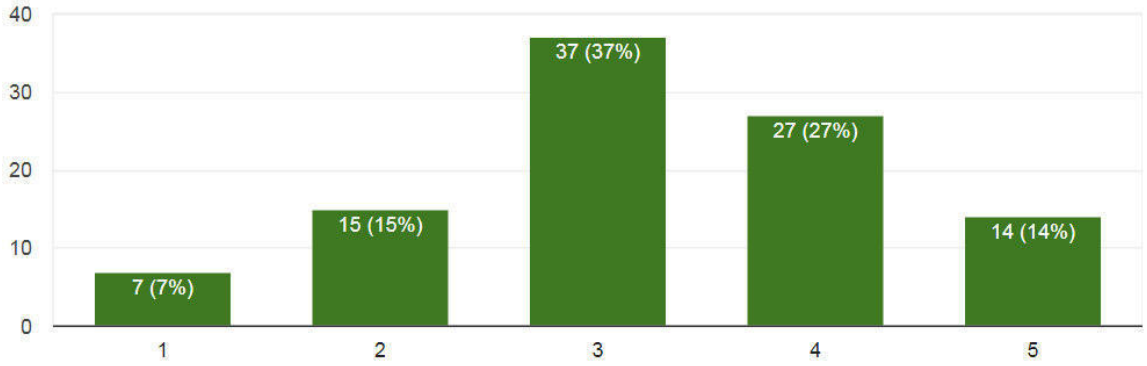
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Network and Information Security problems



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Cultural problems



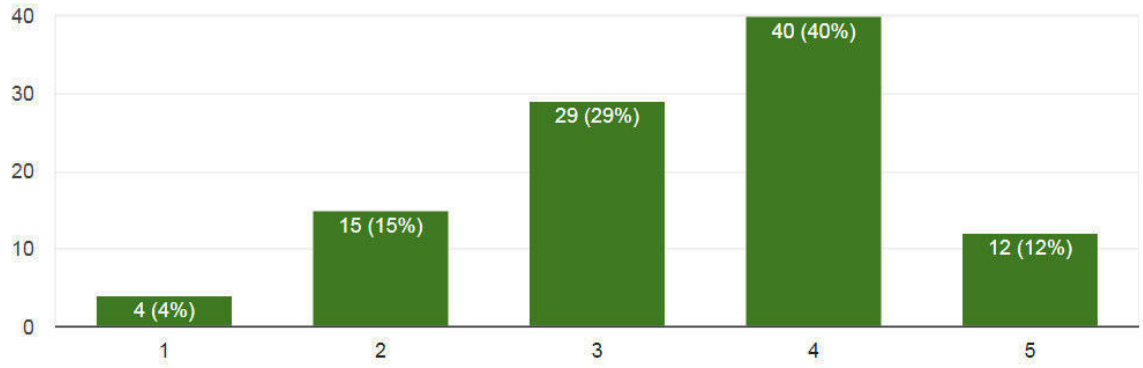
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

The results of this section show that most of the participants believe that there are serious barriers and problems in all of the above categories, which can clearly be removed by providing appropriate tutorials in the form of courses and workshops. In this way Professors and administrators are getting more familiar with the LMS directional and technical aspects that can lead to the attraction of more financial support.

Effective Methods in the Teaching-Learning Process Using Virtual Tutorials

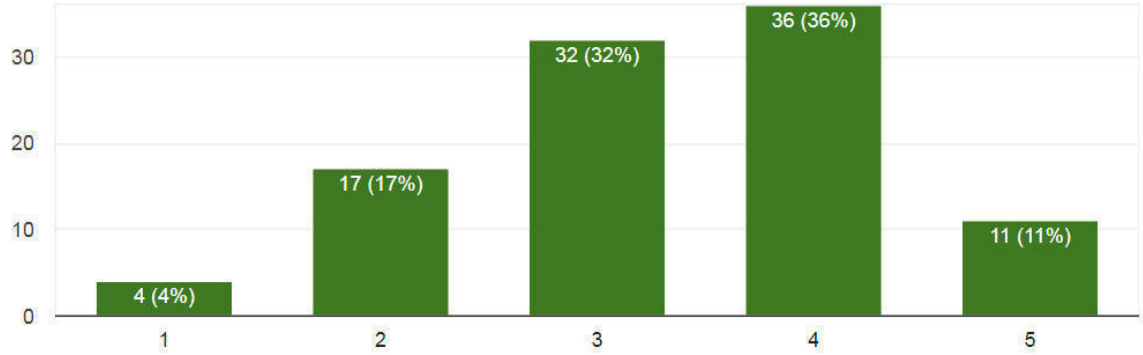
Having noticed that there are different ways in the learning and learning process of e-learning, in this section we will verify the views of the participants on each of them. Examining their opinions regarding simulating classrooms shows that applying the LMS method can improve the efficiency of this process.

Simulation



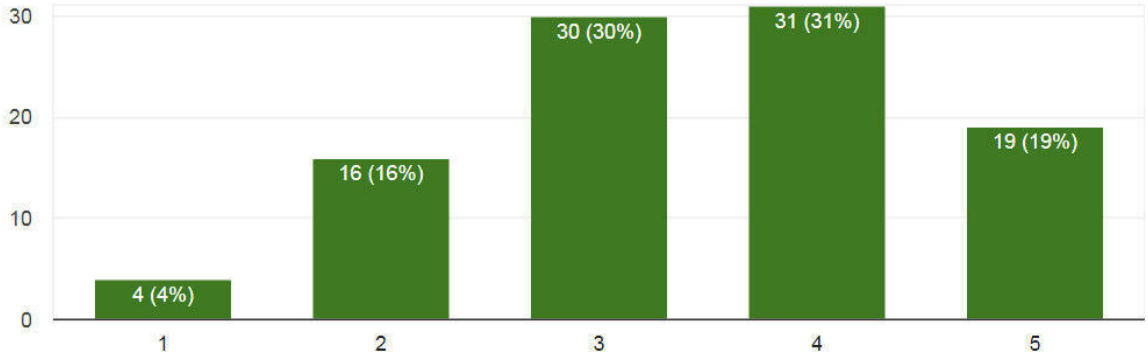
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Virtual teacher



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

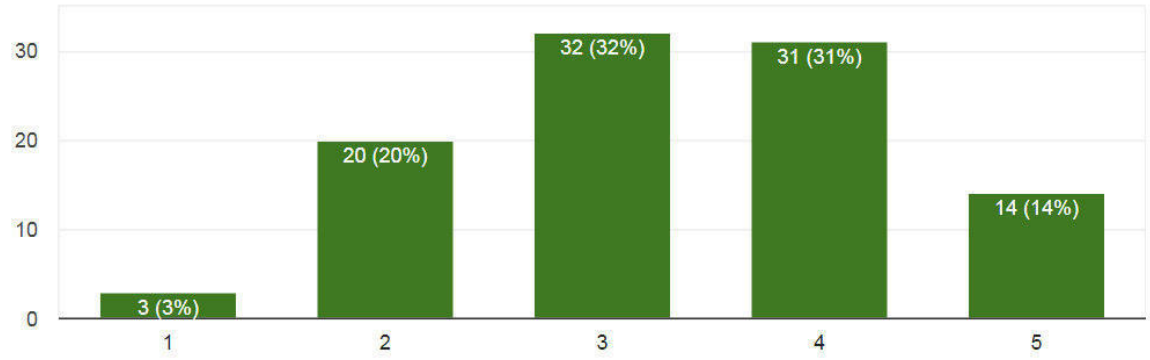
Audio and video conferences



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Vocal and visual classes can play an important role in creating an interactive environment between teachers and learners, and the results also indicate that the majority of participants are positive in this regard.

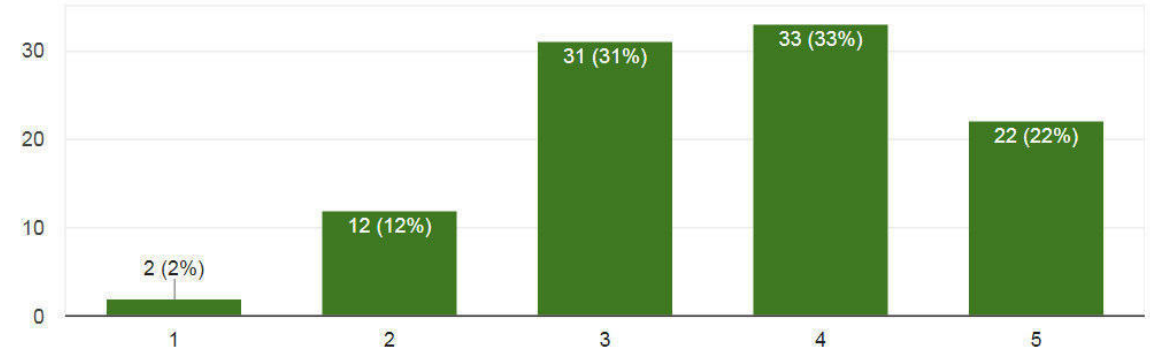
Instant messaging and chatting



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

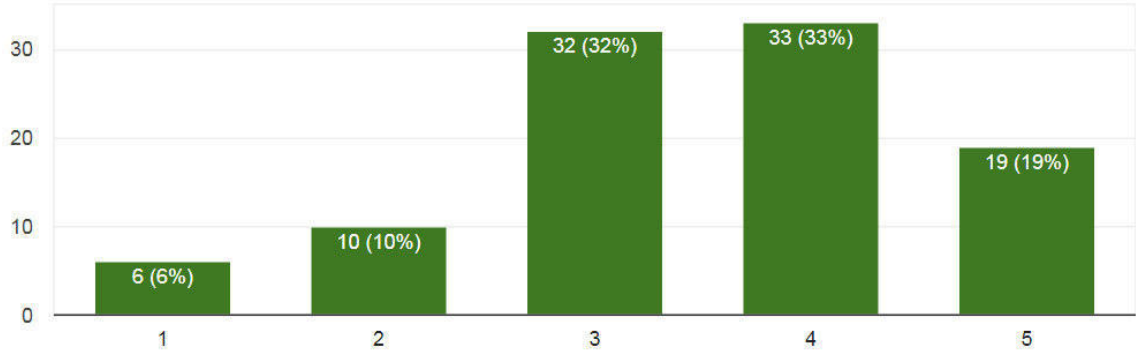
Considering that one of the obstacles is the weakness of the Internet infrastructure and its low speed, using fast messaging system and the creation a suitable environment for chatting because of its high speed in the effectiveness of LMS is very effective.

Documentation - Charts, Articles



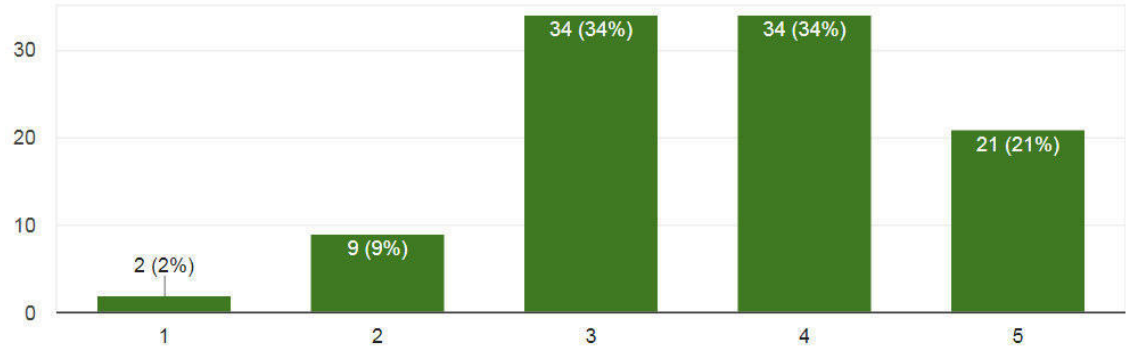
1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Bulletin Boards - News



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

Electronic text



1=Very Low 2= Low 3=Moderate 4=High 5-Very High

In addition to the above, an efficient LMS also requires the following sections:

1. Documentation, Charts and Articles: In this section, the educational resources and articles related to each lesson and charts necessary for the analysis of educational data, learning, etc are exhibited

2. Announcement boards and magazines: In this section, information is provided to inform the educational events and exams, as well as the scientific achievements of the university.

3. E-mail: Provides an opportunity for communication between instructors and learners and third parties such as group managers and educational experts.

In general, the results of this survey apparently indicate that a successful LMS should contain all of the above components.

IT specialists at Sanandaj Branch, Islamic Azad University (IAUSDJ):

1- **Dr. Amir Sheikhahmadi**
2- **Dr. Keyhan Khamforoosh**
3- **Dr. Abdulbaghi Ghaderzadeh**
4- **Ms. Om Kolsoum Shahryari**

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

TEHRAN UNIVERSITY OF MEDICAL SCIENCES

OPATEL

Report on the Information and Communication Technology (ICT) Questionnaire of Academic and Administrative Members at Tehran University of Medical Sciences (TUMS)

Based on responses from TUMS academic and administrative staff collected and analyzed on July 2017, the TUMS ICT Survey provides information on the teachers and administrative staff ICT needs. The survey was commissioned by the Directorate of International Relations, Accreditation and Ranking of Tehran University of Medical Sciences. This study is going to be presented to the Leipzig University of Applied Sciences (HTWK), the European coordinator of Online Platform for Academic Teaching and Learning in Iraq and Iran (OPATEL).

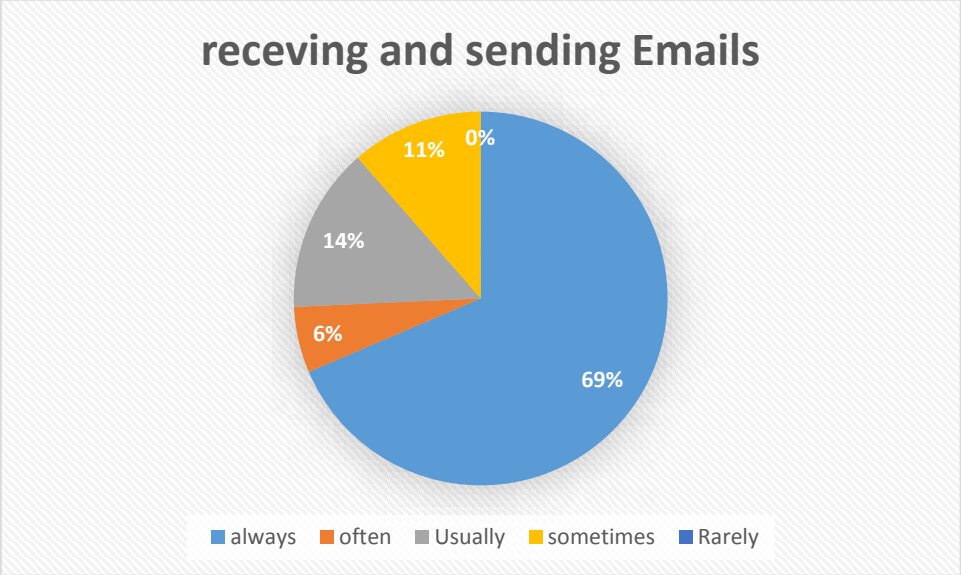
The main objectives of the survey was to

- Obtain the basic ICT knowledge of academic and administrative staff at TUMS;
- Collect the statistical data on the answered received;
- Understand the needs and challenges related to ICT needs;
- Hold relevant training workshops on the extracted ICT needs.

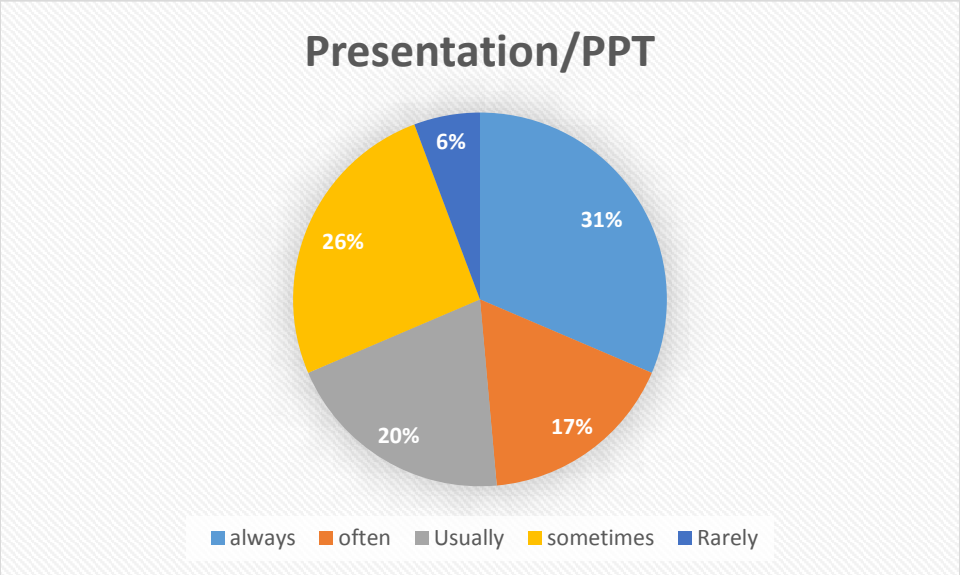
Survey Findings:

Based on the answers received from the output of the ICT questionnaire, it was declared that 34% of participants were male and 66% were female. This questionnaire consists of 18 main questions which the analytical answers are as below.

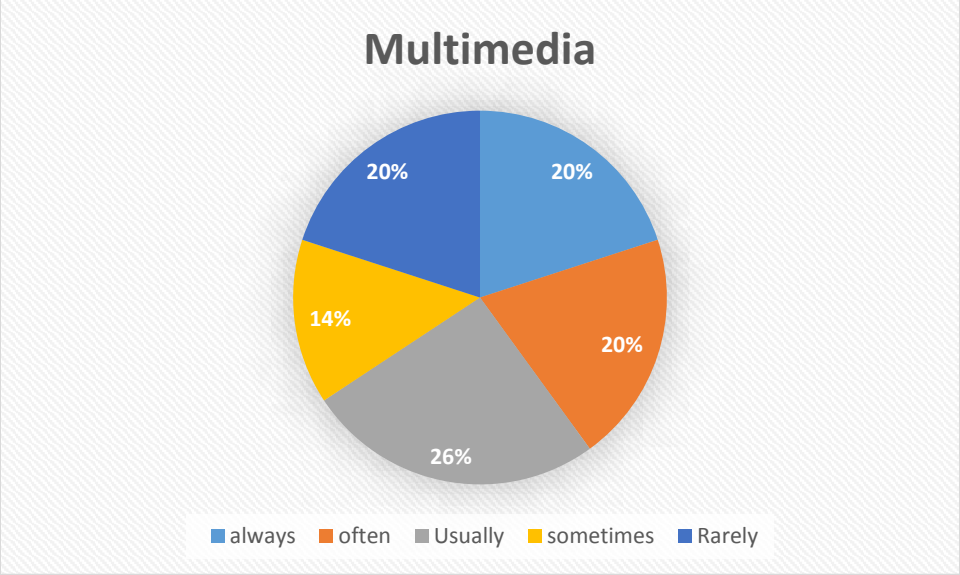
1. The extent of usage of **Internet for sending and receiving Emails** by the academic and administrative staff



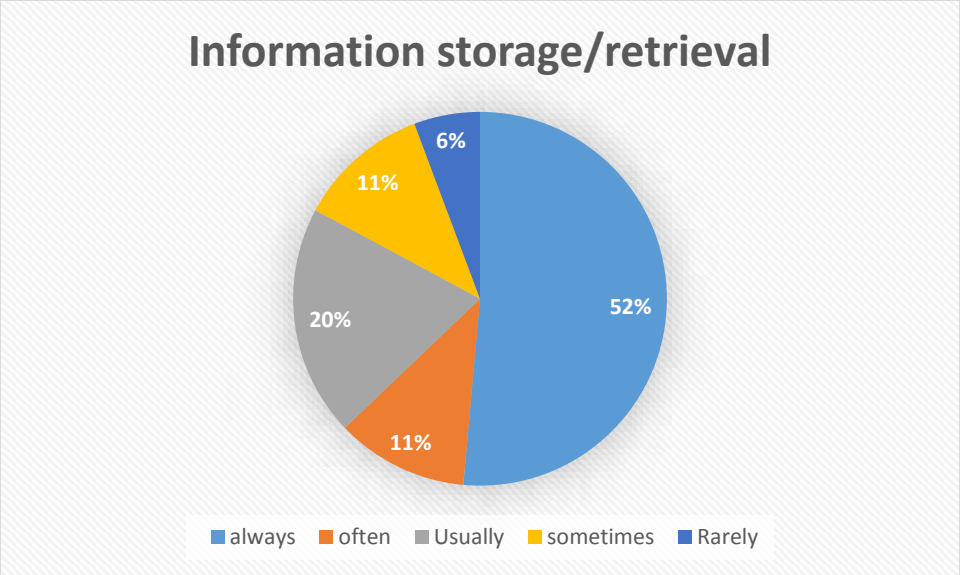
2. The extent of usage of **presentation programs such as Power point** by the academic and administrative staff



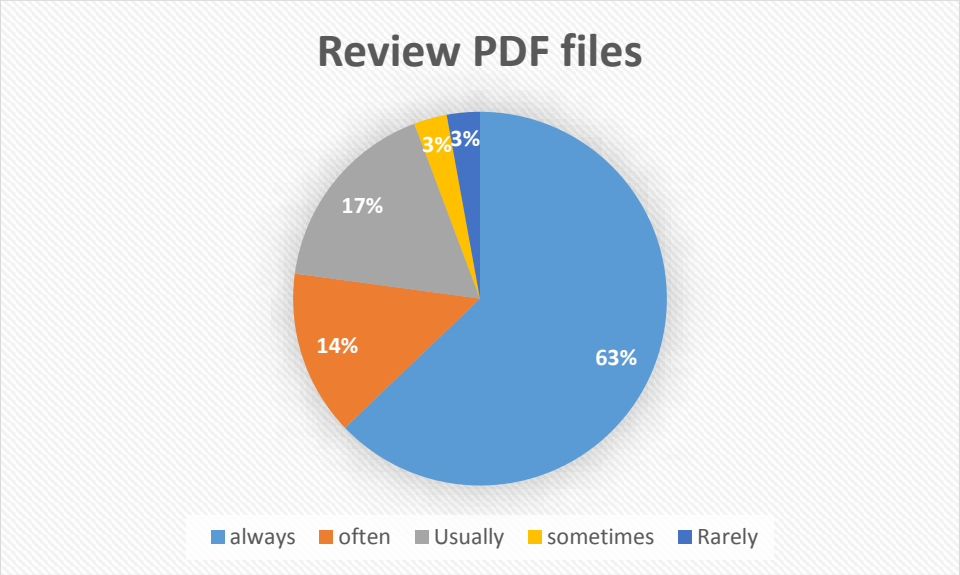
3. The extent of usage of **multimedia context** by the academic and administrative staff



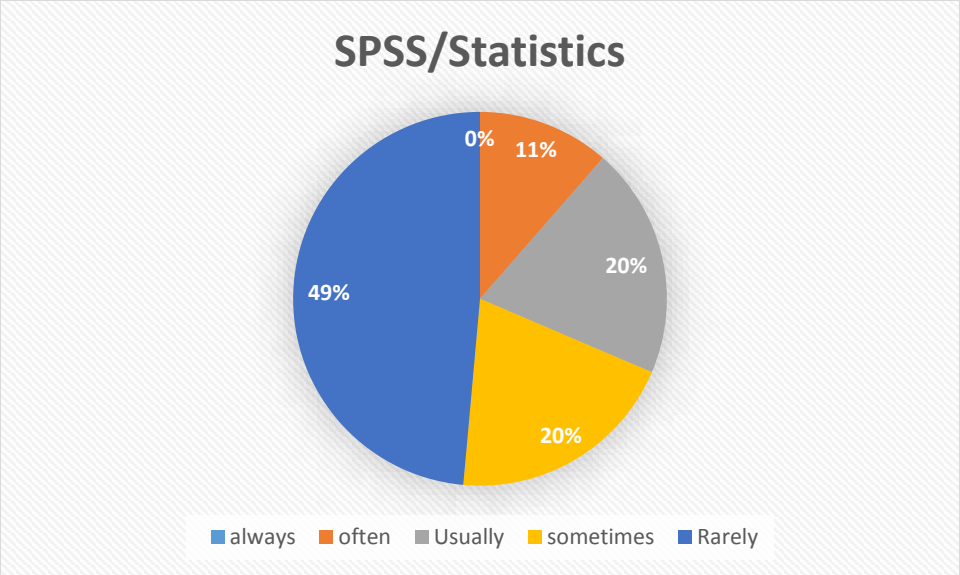
4. The extent of usage of **information storage/retrieval** by the academic and administrative staff



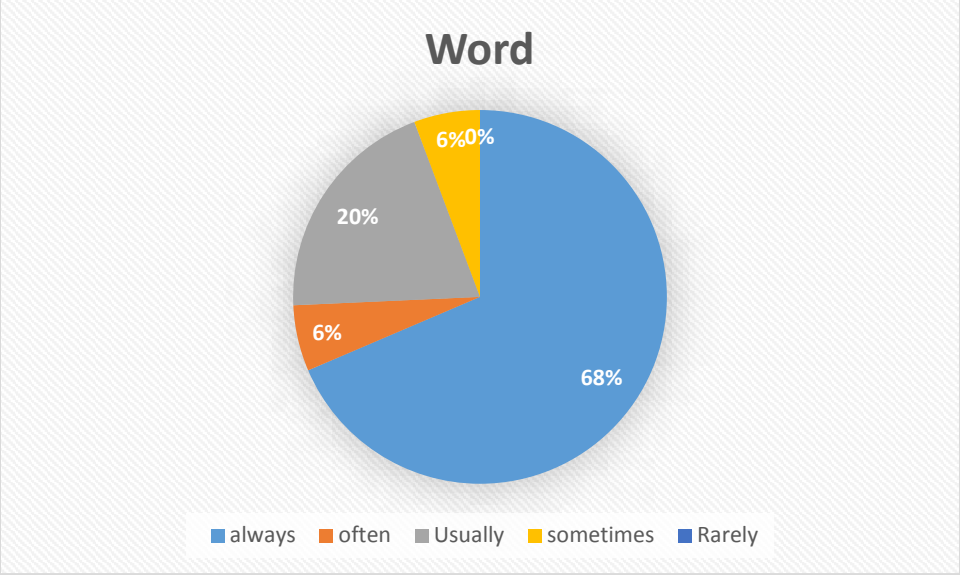
5. The extent of usage of **PDF files** by the academic and administrative staff



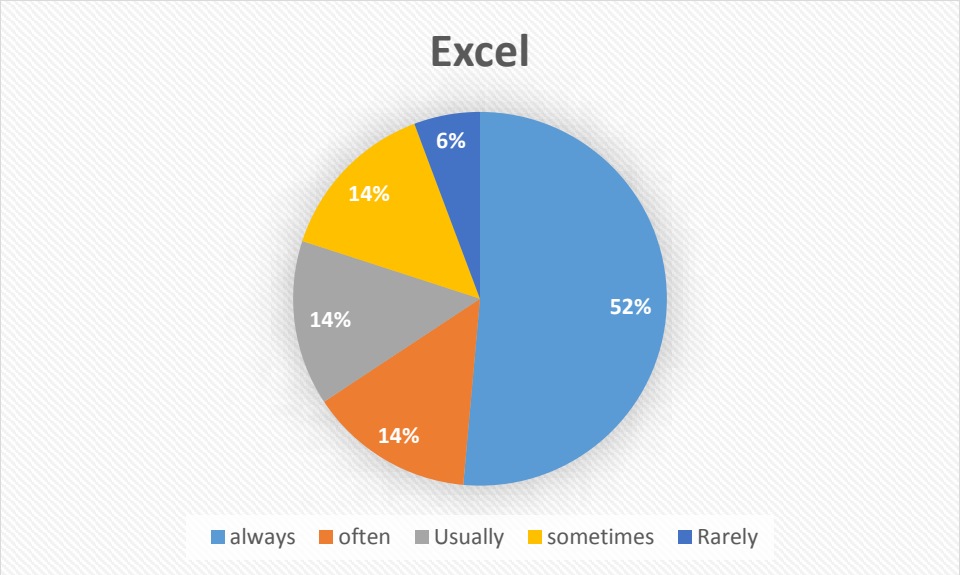
6. The extent of usage of **SPSS and other statistical software** by the academic and administrative staff



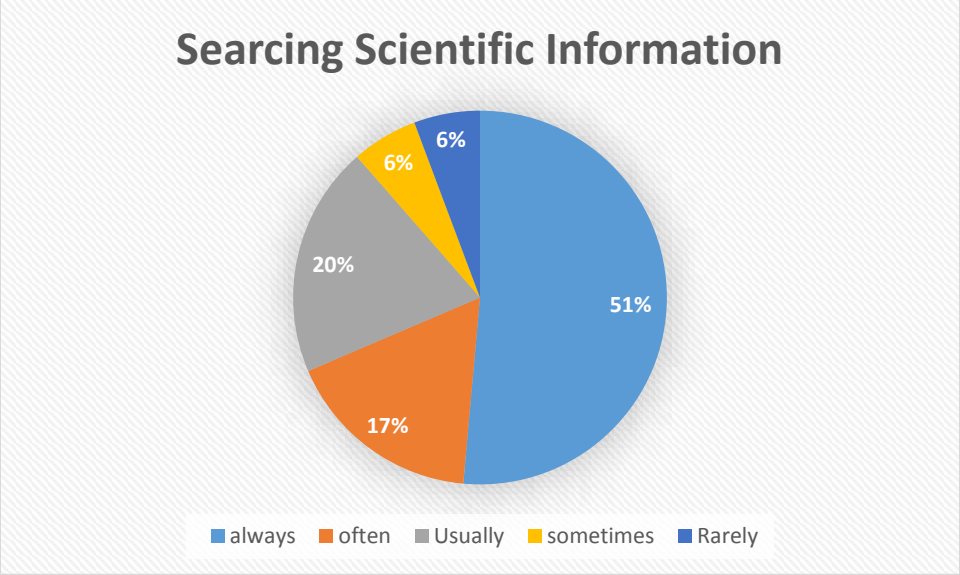
7. The extent of usage of **Word and other processing programs** by the academic and administrative staff



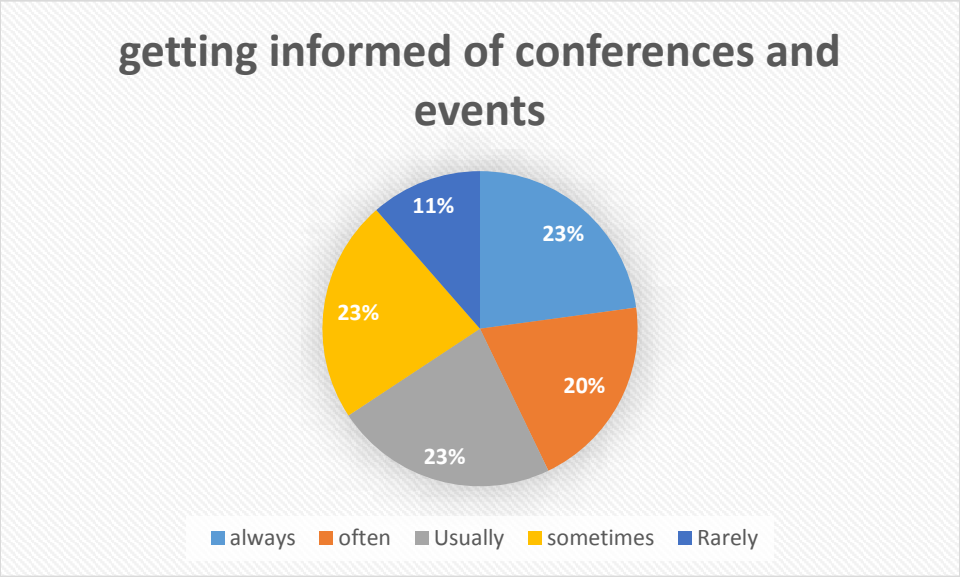
8. The extent of usage of **Excel** by the academic and administrative staff



9. The extent of usage of the Internet for **Searching scientific information** by the academic and administrative staff

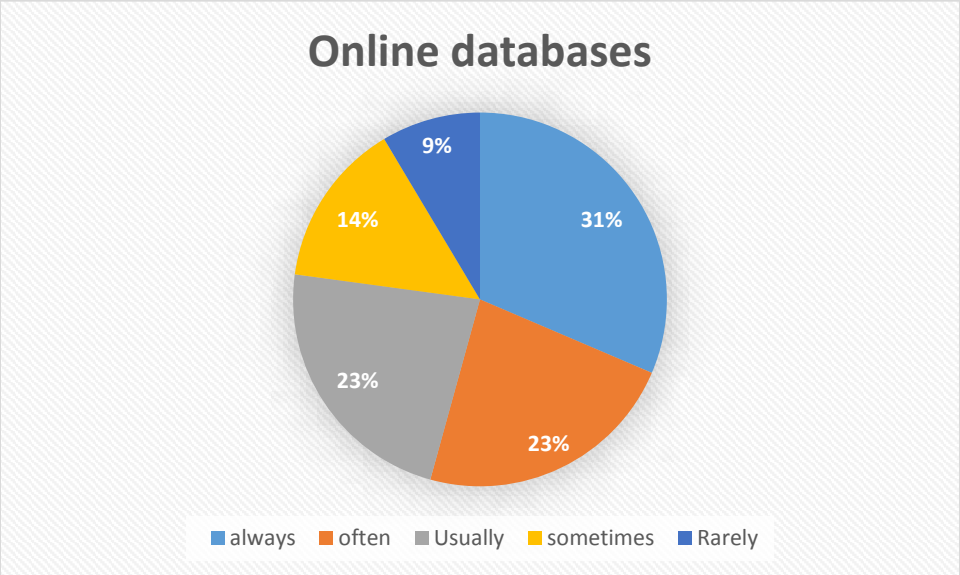


10. The extent of usage of the Internet for **getting informed of national and international conferences and events** by the academic and administrative staff

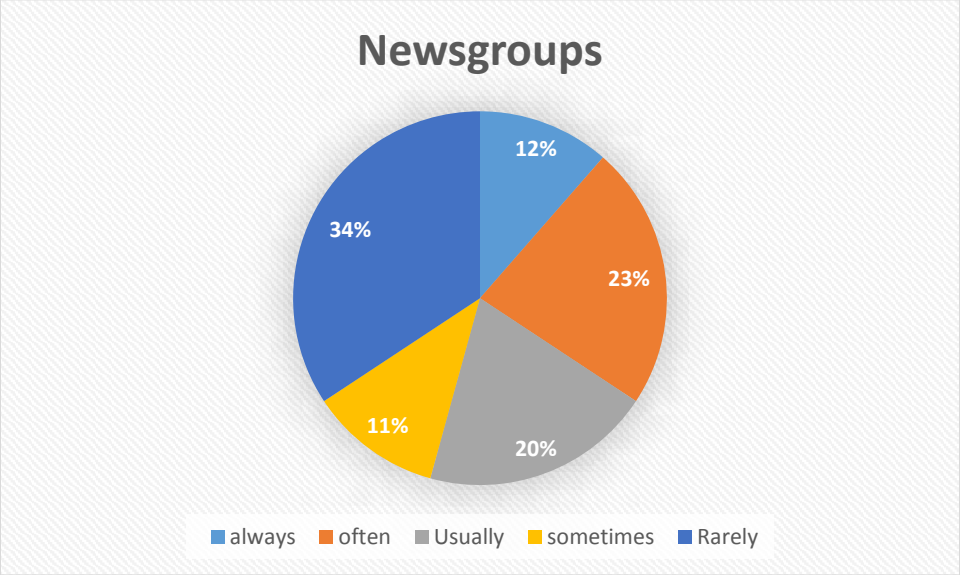


11. The extent of usage of the Internet for **Corresponding with national and international organizations** by the academic and administrative staff

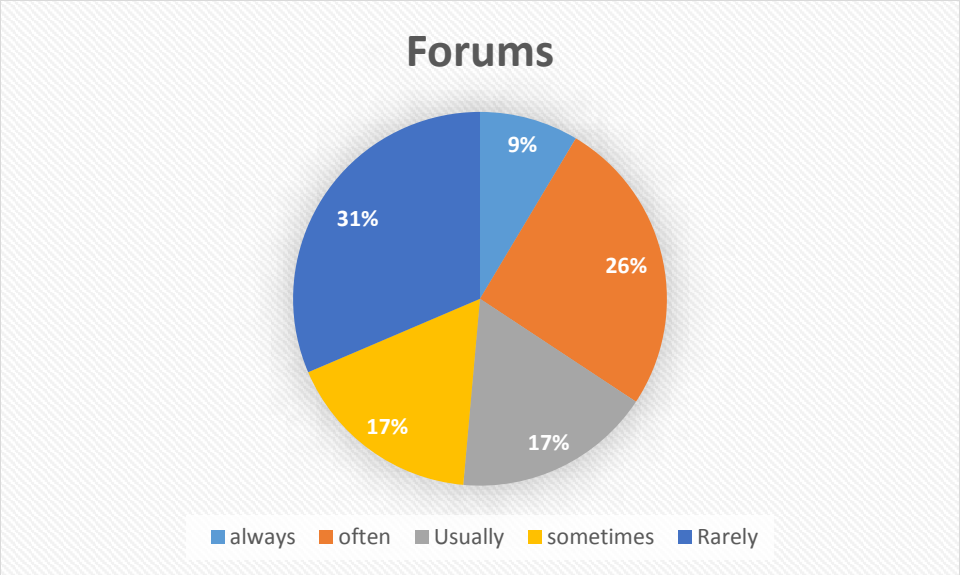
12. The extent of usage of the Internet for **using online databases** by the academic and administrative staff



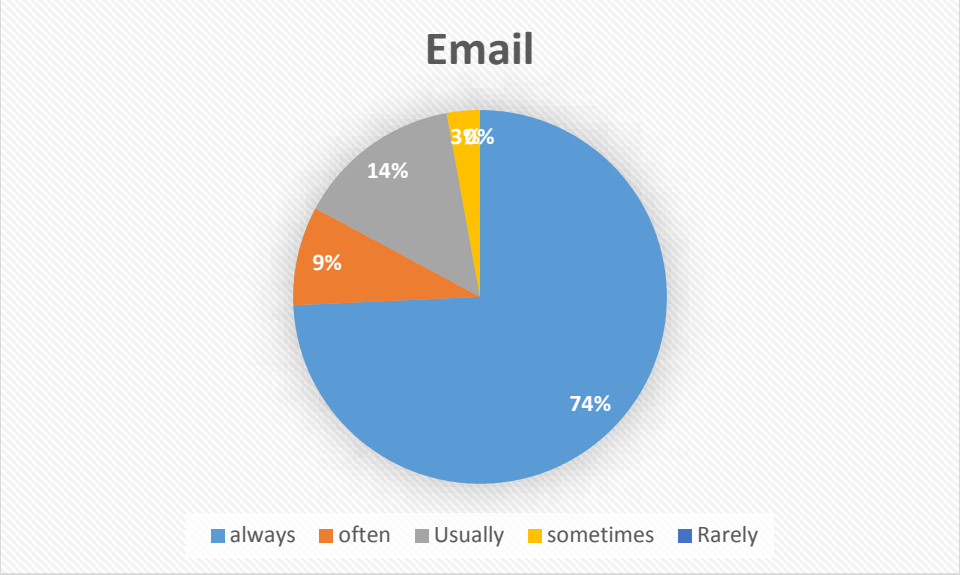
13. The extent of usage of internet-based services: **Newsgroups such as Usenet** by the academic and administrative staff



14. The extent of usage of internet-based services: **Forums** by the academic and administrative staff

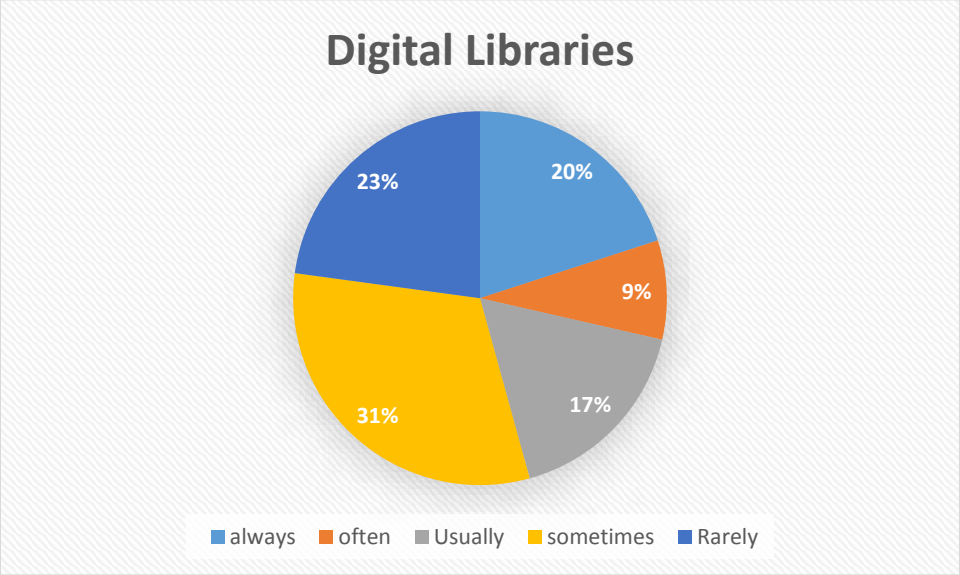


15. The extent of usage of internet-based services: **Email** by the academic and administrative staff

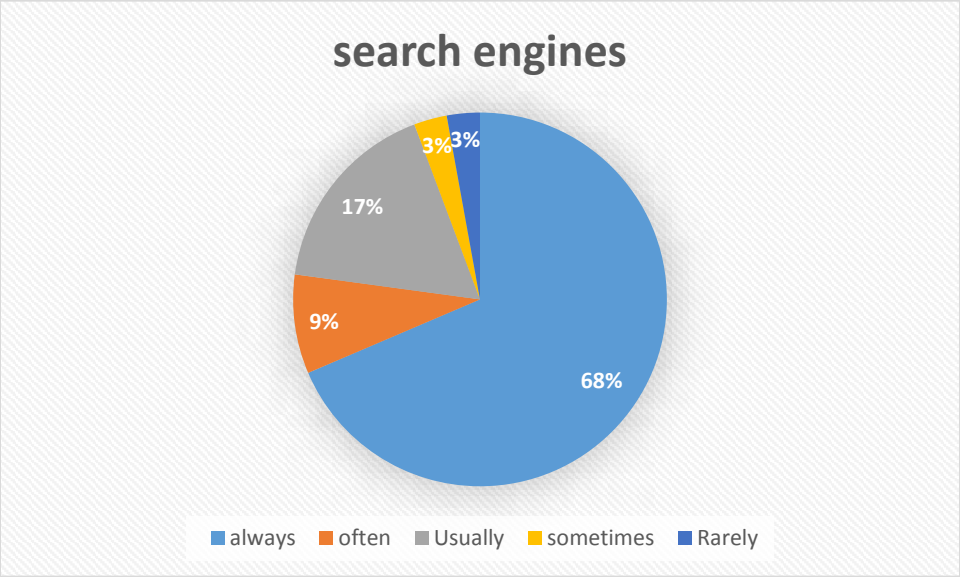


16. The extent of usage of internet-based services: **Video conference** by the academic and administrative staff

17. The extent of usage of internet-based services: **Digital libraries** by the academic and administrative staff



18. The extent of usage of internet-based services: **Search engines** by the academic and administrative staff



Recommendations for policy makers:

According to the diagrams plotted based on the data obtained from ICT questionnaire, the following areas need some consideration, as the activity in those areas has been seen to be “rarely used” or “sometimes used”:

The areas in the order of “**rarely used**” are: SPSS/statistical software, Newsgroups, forums, video conferencing, digital library, and multimedia

So, courses on SPSS/statistical software and newsgroups can be recommended as a first priority.

The areas in the order of “**sometimes used**” are: video conferencing, Digital libraries, Power point and similar presentation software, and getting informed of national and international conferences and events.

So, courses on video conferencing and digital library can be recommended as the other priority.

Online **P**latform for **A**cademic **TE**aching and **L**earning (OPATEL) Project

Funded By Erasmus+ Programme of the European Union

Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Needs and challenges in the field of Internet and Communication Technology (ICT) and e-learning platforms at Salahaddin University-Erbil (SU)

Salahaddin University-Erbil (SU) is a public institution, which was established in 1968 and is located in Erbil city, Kurdistan Region, Iraq. In academic year 2016-2017 around 3600 students graduated from SU. Now, it has 14 colleges in various fields of science and humanities. Currently, there are around 24000 undergraduate students and 1200 postgraduate students pursuing their degrees at SU. Our institution encourages the use of modern internet and communication tools to enhance contemporary learning platforms to facilitate the communication between teachers and students. For this purpose, the Avicenna E-learning Center-Erbil was established at SUE to live up to its expectations in promoting e-learning across the campus. Many teachers participated in e-learning workshops and they were trained on how to use e-learning platforms to manage their academic courses and assess the progress of their students. However, due partly to some technical shortcomings, we could not take advantage of this center to its full potential; therefore, we still have some issues with e-learning system in our institution. In order to tackle those issues that have become an obstacle in the way of e-learning progress and to gather information in regard to the needs and application of Learning Management System (LMS) in our institution, we have performed a questionnaire in three different colleges at SUE.

The outcome of the questionnaire performed at SU

1. Participants Background Information

To obtain an idea about the needs of our lecturers in ICT and e-learning platforms, we prepared a questionnaire using SurveyMonkey website and then we sent it out to the lecturers of three different colleges (Engineering, Science, and Basic Education). We got 72 responses across those three colleges. The data were automatically analyzed by the SurveyMonkey website. The majority (51.43%) of the lecturers who responded to the questionnaire were in the age range of 30-39 (see Table 1). This shows that young lecturers are more comfortable with using internet-related tools.

Table 1: The age range of lecturers who responded to the questionnaire.

ANSWER CHOICES	RESPONSES	
Under 30	10.00%	7
from 30 to 39	51.43%	36
from 40 to 49	24.29%	17
50 or more	14.29%	10
Total		70

Both male (54.29%) and female (45.71%) instructors took part in this survey as well. The results are shown in Table 2.

Table 2: The percentage of male and female responders to the questionnaire.

ANSWER CHOICES	RESPONSES	
Male	54.29%	38
Female	45.71%	32
Total		70

Lecturers at various colleges (and various departments within each college) answered the questions in the survey (see Table 3). The participation of various colleges in this survey is advantageous since we can look at the e-learning needs from the perspective of various levels of education fields, from engineering, to basic education. This type of survey gives us a

significant and clearer view about the e-learning needs of our institution at large. Now we can enlist those needs that are considered as priority to our institution, which lead us to a better conclusion in turn we can come up with better approaches to solve our problems regarding e-learning.

Table 3: The percentage of various colleges that are responded to the questionnaire.

ANSWER CHOICES		RESPONSES	
Arts		0.00%	0
Engineering		35.21%	25
Mathematics		5.63%	4
Music Education		0.00%	0
Physical Education		4.23%	3
Science		39.44%	28
Languages		7.04%	5
Social Studies/Humanities		2.82%	2
Technology		0.00%	0
Special needs		0.00%	0
Other (please specify)	Responses	5.63%	4
Total			71

It is of utmost importance we point out that the communication between teachers and students would be a challenging task for the instructors in large classes, which is mostly the case for majority of the lecturers at our universities. As shown in Table (4), the majority of the lecturers (88.41%) have more than 20 students in the class. Lecturers in our institution usually teach in lecture halls that have 70-110 students on average. These large classes are due to the high admission rate to colleges, which do not have capacity and necessary equipment for all those students. Sometimes when students cannot understand well from the class due to the overcrowded classes, they might not be able to ask questions about the topic that is not comprehensible to them yet, which results in inefficient learning process. In this case, it is crucial that lecturers embrace the the-state-of-the-art e-learning technologies to improve their

communication with students, which would make them more efficient teachers in terms of class time management, taking attendance and daily quizzes using Student Response System (SRS), such as iClicker, posting home-work assignments and student's exam grades on Moodle, assessing student's progress.

Table 4: Number of students the questionnaire participants have in the class.

ANSWER CHOICES	RESPONSES	
fewer than 10	1.45%	1
10-15	0.00%	0
16-20	8.70%	6
21-25	1.45%	1
more than 25	88.41%	61
Total		69

There are various types of Learning Management Systems, such as Blackboard, Canvas, and Moodle. According to our survey, most of the lecturers use Google application (69.01%; see Table 5) since this application is adopted by our institution as the main platform for teacher-student interaction. All the teachers are required to have Google site, which unfortunately is effectively used by a limited number of teachers. Also, according to the results of the survey, a small percentage of the lecturers use Moodle (15.49%; Table 5), which is a free and open-source LMS platform; the usage of other e-learning platforms is less common as well (15.49%, see Table 5).

Table 5: The adoption of various Learning Management Systems (LSM) at SUE.

ANSWER CHOICES		RESPONSES	
Moodle		15.49%	11
Google Application		69.01%	49
Other (please specify)	Responses	15.49%	11
Total			71

2. ICT use hindrances in teaching and learning

As shown in Table (6), there are many factors that impede the progress of e-learning system in our institution. The participants of the survey (34.72%) believe that an inadequate number of computers on our campus is one of the reasons that holds us back from using e-learning platforms. More importantly, the results show that 43.66% of the survey participants think that the scarcity of computers connected to internet hampers the broad usage of ICT by the educators across the campus. To use e-learning effectively, teachers and students should have access to internet most of the time, especially on campus and in dormitories. This way the academic courses can be managed through online platforms, and teachers would be able to communicate with students in a better way. Furthermore, it appears, according to the survey, that there are other issues that have become an obstacle to the use of ICT, for instance insufficient numbers of laptops and outdated school computers, which make the educators and students to lag behind; therefore, it would be challenging for the teachers and students to keep up a pace with the fast advancing world of information and communication technology. Also, the data show that teachers do not have proper training of ICT use.

Table 6: Obstacles to the use of ICT in teaching and learning.

	NOT AT ALL	A LITTLE	PARTIALLY	A LOT	TOTAL	WEIGHTED AVERAGE
Insufficient number of computers	6.94% 5	23.61% 17	34.72% 25	34.72% 25	72	2.97
Insufficient number of internet-connected computers	7.04% 5	14.08% 10	35.21% 25	43.66% 31	71	3.15
Insufficient Internet bandwidth or speed	7.25% 5	17.39% 12	37.68% 26	37.68% 26	69	3.06
Insufficient number of interactive whiteboards	12.68% 9	25.35% 18	38.03% 27	23.94% 17	71	2.73

Insufficient number of laptops/notebooks	9.72% 7	22.22% 16	31.94% 23	36.11% 26	72	2.94
School computers out of date and/or needing repair	7.14% 5	17.14% 12	37.14% 26	38.57% 27	70	3.07
Lack of adequate skills of teachers	7.14% 5	25.71% 18	37.14% 26	30.00% 21	70	2.90
Insufficient technical support for teachers	7.04% 5	19.72% 14	30.99% 22	42.25% 30	71	3.08
Insufficient pedagogical support for teachers	2.86% 2	28.57% 20	38.57% 27	30.00% 21	70	2.96
Lack of adequate content/material for teaching	7.04% 5	21.13% 15	47.89% 34	23.94% 17	71	2.89
Lack of content in national language	8.33% 6	41.67% 30	26.39% 19	23.61% 17	72	2.65
Too difficult to integrate ICT use into the curriculum	18.57% 13	34.29% 24	34.29% 24	12.86% 9	70	2.41
Lack of pedagogical models on how to use ICT for learning	4.23% 3	38.03% 27	26.76% 19	30.99% 22	71	2.85
School time organisation (fixed lesson time, etc.)	13.04% 9	30.43% 21	40.58% 28	15.94% 11	69	2.59
School space organisation (classroom size and furniture, etc)	6.94% 5	30.56% 22	31.94% 23	30.56% 22	72	2.86
Pressure to prepare students for exams and tests	4.23% 3	29.58% 21	39.44% 28	26.76% 19	71	2.89
Most teachers not in favour of the use of ICT at school	19.72% 14	38.03% 27	30.99% 22	11.27% 8	71	2.34
Lack of interest of teachers	11.11% 8	31.94% 23	37.50% 27	19.44% 14	72	2.65
No or unclear benefit to use ICT for teaching	12.68% 9	36.62% 26	30.99% 22	19.72% 14	71	2.58
Using ICT in teaching and learning not being a goal in our school	13.89% 10	26.39% 19	31.94% 23	27.78% 20	72	2.74

3. Teachers Skills: The confidence level of the lecturers in using ICT

According to the results of this survey, it seems that most of the participants are familiar with some widely used ICT tools, such as word processing, Excel spreadsheet, using email, downloading and installing a software on a computer, searching for online resources; however,

most of the participants are not adept in programming, creating a questionnaire online, and creating websites. Those skills can be improved by workshops that should be available for the educators.

Table 7: The extent at which teachers are confident with ICT tools employment.

	NONE	A LITTLE	SOMEWHAT	A LOT	TOTAL	WEIGHTED AVERAGE
Produce a text using a word processing programme	2.78% 2	20.83% 15	26.39% 19	50.00% 36	72	3.24
Use emails to communicate with others	2.78% 2	11.11% 8	19.44% 14	66.67% 48	72	3.50
Capture and edit digital photos, movies or other images	2.78% 2	23.61% 17	30.56% 22	43.06% 31	72	3.14
Edit text online containing internet links and images	6.94% 5	26.39% 19	31.94% 23	34.72% 25	72	2.94
Create a database	13.04% 9	34.78% 24	24.64% 17	27.54% 19	69	2.67
Create and/or edit a questionnaire online	23.61% 17	23.61% 17	30.56% 22	22.22% 16	72	2.51
Email a file to someone	5.63% 4	12.68% 9	22.54% 16	59.15% 42	71	3.35
Organise computer files in folders and subfolders	2.78% 2	18.06% 13	15.28% 11	63.89% 46	72	3.40
Use a spreadsheet (e.g., Excel)	2.78% 2	23.61% 17	29.17% 21	44.44% 32	72	3.15
Use a spreadsheet to plot a graph	8.70% 6	26.09% 18	30.43% 21	34.78% 24	69	2.91
Create a presentation with simple animation functions	4.23% 3	8.45% 6	33.80% 24	53.52% 38	71	3.37
Create a presentation with video or audio clips	4.17% 3	22.22% 16	31.94% 23	41.67% 30	72	3.11
Create and maintain blogs or web sites	25.00% 18	26.39% 19	25.00% 18	23.61% 17	72	2.47
Participate in social networks	6.94% 5	20.83% 15	40.28% 29	31.94% 23	72	2.97
Download and install software on a computer	1.39% 1	18.06% 13	15.28% 11	65.28% 47	72	3.44
Download or upload curriculum resources from/to websites or learning platforms for students to use	4.17% 3	15.28% 11	33.33% 24	47.22% 34	72	3.24

	NONE	A LITTLE	SOMEWHAT	A LOT	TOTAL	WEIGHTED AVERAGE
Teach students how to behave safely online	11.11% 8	19.44% 14	37.50% 27	31.94% 23	72	2.90
Teach students how to behave ethically online	9.72% 7	20.83% 15	40.28% 29	29.17% 21	72	2.89
Prepare materials to use with an interactive whiteboard	6.94% 5	16.67% 12	38.89% 28	37.50% 27	72	3.07
Programming	12.68% 9	29.58% 21	28.17% 20	29.58% 21	71	2.75

4. ICT based activities and material used for teaching

The results of this questionnaire demonstrate that majority of participants know how to surf and gather information online (55.56%, 43.66%, respectively, see Table 8). However, 29.17% of participants have never posted a homework assignment on the college websites and 22.22% of them have rarely posted home-work assignments on college websites (see Table 8). Also, the results indicate that majority of teachers do not use online-based student assessment process. In addition, 31.94% of the participants have never used and 27.78% sometimes have used school's website to download, upload or browse for teaching materials (see Table 8).

Table 8: ICT based activities and material used for teaching.

	NEVER	RARELY	SOMETIMES	OFTEN	ALL THE TIME	TOTAL	WEIGHTED AVERAGE
Browse/search the internet to collect information to prepare lessons	0.00% 0	1.39% 1	12.50% 9	30.56% 22	55.56% 40	72	4.40
Browse/search the internet to collect resources to be used during lessons	1.41% 1	2.82% 2	16.90% 12	35.21% 25	43.66% 31	71	4.17
Use applications to prepare presentations for lessons	2.82% 2	5.63% 4	21.13% 15	35.21% 25	35.21% 25	71	3.94
Create your own digital learning materials for students	4.23% 3	9.86% 7	32.39% 23	26.76% 19	26.76% 19	71	3.62
Prepare exercises and tasks for students	1.39% 1	8.33% 6	19.44% 14	37.50% 27	33.33% 24	72	3.93
Post home work for students on the school	29.17% 21	22.22% 16	20.83% 15	15.28% 11	12.50% 9	72	2.60

	NEVER	RARELY	SOMETIMES	OFTEN	ALL THE TIME	TOTAL	WEIGHTED AVERAGE
website							
Use ICT to provide feedback and/or assess students' learning	33.33% 24	22.22% 16	22.22% 16	12.50% 9	9.72% 7	72	2.43
Evaluate digital learning resources in the subject(s) you teach	12.50% 9	20.83% 15	38.89% 28	16.67% 12	11.11% 8	72	2.93
Download/upload/browse material from the school's website	31.94% 23	15.28% 11	27.78% 20	15.28% 11	9.72% 7	72	2.56
Download/upload/browse material from a learning platform	22.22% 16	25.00% 18	22.22% 16	22.22% 16	8.33% 6	72	2.69

5. ICT-related materials used by the teachers in the classes

The participants use internet to prepare their calsses (92.96%) and they obtain and use recources from other institutions websites around the world (85.71%); although, it appears that they do not use school's computer network to obatin materials for their classes (See Table 9). The computer network of our instituiotn needs a lot of improvement to provide beneficial materials to our teachers and students alike.

Table 9: ICT-related materials used by the teachers in the classes.

	YES	NO	TOTAL	WEIGHTED AVERAGE
Material that you've searched the Internet for	92.96% 66	7.04% 5	71	1.07
Existing online material from established educational sources	85.71% 60	14.29% 10	70	1.14
Material that is available on the school's computer network or database	32.39% 23	67.61% 48	71	1.68
Electronic offline material (e.g., CDROM)	46.38% 32	53.62% 37	69	1.54
Material of your own creation	72.86% 51	27.14% 19	70	1.27

6. Concluding Remarks, Recommendations, and Future Perspectives

As the results show that there are many aspects of ICT use in learning and teaching should be worked on and improved in our institution. Teachers skill of ICT in learning and teaching needs to be improved through holding various meetings and workshops. Also, teachers and students have to have access to computers which are connected to internet networks. Also, teachers should be encouraged and given incentives to post students homework assignments on college websites, and to integrate miscellaneous ICT tools into their courses.

The dearth of basic ICT infrastructure, such as internet networks, computers, management system, funding and support, ICT resources, professional training in IT field, has an impact on our institution to achieve its goals in reaching developed countries to systematically implement ICT technology all over the campus. The scarcity and inadequacy of the above-mentioned means impede the adoption process of ICT.

The significance of ICT technology implementation can be accomplished by performing few steps. Firstly, embracing the ICT technology and investing it in finding means that make educators to adopt ICT. For instance, a group can be made for the teachers where they can discuss their ideas and challenges regarding the ICT in learning and teaching. They can have forums to point out the advantages and disadvantages of using ICT in their classes. This can be achieved by doing academic research on ICT use in teaching. Secondly, establishment of e-learning center in our institution emboldens teachers to use Learning Management System (LMS) tools in their own respective fields. Most of the features, which are detailed below, can allow the e-learners to become more productive in exchanging their knowledge and viewpoints with their fellow colleagues:

A. Problem base creating groups of students.

Students can work as a team to solve and analyze problems that are given for a specific topic, and consequently they would be able to come up with the best answers for their assigned task as a group.

B. Information exchange between leaners

Fostering the spread of using ICT on campus by encouraging students to visit and use learning websites, such as Moodle, is a great way to make this project a big success. This can be accomplished by providing the necessary facilities to the students to share their interest and skills, which make the educators have a comprehensive idea about their learners when they are getting into a challenging task.

C. It is highly recommended that the exchanging materials, such as email records and chatting, between learners or educators, are stored well in designated locations to find it easily later on when they are needed and for the purpose of documenting the intellectual properties of teachers and students alike.

D. ICT can be exploited to follow daily schedules properly and to benefit from time-management features for both learners and educators. The educators can organize the time table for lectures and tests. In this case, the students can have a discussion with their educators to agree on a modification in the time-table when it is necessary. The visiting rate of the LMS websites can be improved by posting the updates of class activities, uploading test scores, and urging rivalry between learners, which turns them into critical thinkers. Finally, electronic learning process in our institution is confronting many impediments. For instance, students don't have a good grasp on their score metrics, such as how their grades, units, or credits are calculated; therefore, the adoption of ICT technology by the college examination centers will prove beneficial to our institution and will save it a lot of money in the process.

OPATEL Project

Online **P**latform for **A**cademic **TE**aching and **L**earning

Funded by Erasmus+ Programme of the European Union
Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Analysis and identify different entities to use ICT in education

List of needed skills in ICT and E-Learning

University of Basrah, College of Medicine try to investigate different aspects of use of ICT and E-Learning both from Teachers opinion and Student preview and staff perspective to the use of such technology in our university. Although University of Basrah, College of Medicine, implement Learning Management system in its website (basmedcol.edu.iq/elearning) but its uses by both teaching staff and students is still primitive. In this regard, a survey analysis had been conducted to address the institution status and the different readiness parameters in implementing an E-learning environment. The efforts being directed into two directions;

Teacher Survey

First, Teacher prospective, survey conducted through SurveyMonkey website to analyses the use of information technology of teacher staff, modification on the content of survey being made to fit local environment and availability,

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Hundred twenty-seven members (127) out of 183 staff members participate in the project (69.4%) showed the following **Demographic Parameters**:

Most of participating staff were above 50 years of age 40.94% with male predominance 65.08% Majority of our staff had teaching hours between 10-15 hours (39.68%) with teaching experience from 10-20 years (37.8%). 99.1% uses computer/internet for preparing their lessons and 95.28% use them in teaching in front of student in class.

The second part of survey try to address on the use of this ICT technology and obstacles as follow:

The experience with use of computer/internet extend to more than 6 years in most of staff (80.87%) with only 6.09 % have teaching experience less than 3 years. The use of computer/internet in all the time in classroom limited to 45.69% whom always use it in teaching other still prefer the traditional way of teaching like using blackboard, overhead projector,). Although internet coverage was available in the college, survey address that 81 % of response work with desktop or laptop non-connected to the internet, this is attributed to the lack of internet provision in the main lecture halls. 42.7 % use internet to search to prepare their lessons 39.2 % use application to prepare their presentation. Only 26.3% of staff communicate online with student, this percentage become rare or never from use of ICT technology in providing feedback or assess student learning.

Most of our staff depend on material search through the internet 93%, only 36 % of material were available on school computers, very few resources use their own creation apart from lecture presentation.

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When we approach to the obstacles commonly face teachers in using ICT and Learning it seems to be the highest weight being giving to the insufficient number of internet connected computer, in addition to slow speed in the internet from the provider.

Partial support to the teacher in the ICT/ E learning reach in 32.4% in additional to school time organization and pressure to prepare students in the exam. As shown in table 1 below

Table 1 Obstacles Facing E learning

	Not At All	A Little	Partial	A lot	Total	Weighted Average
insufficient number of computers	12.50% 14	29.46% 33	34.82% 39	23.21% 26	112	2.69
insufficient number of internet connected computers	9.01% 10	25.23% 28	34.23% 38	31.53% 35	111	2.88
insufficient internet speed	4.55% 5	28.18% 31	39.09% 43	28.18% 31	110	2.91
insufficient number of interactive whiteboard	25.00% 28	26.79% 30	26.79% 30	21.43% 24	112	2.45
lack of adequate skills of teachers	27.27% 30	28.18% 31	38.18% 42	6.36% 7	110	2.24
insufficient support for teachers	17.12% 19	30.63% 34	32.43% 36	19.82% 22	111	2.55
lack of adequate	20.54% 23	34.82% 39	32.14% 36	12.50% 14	112	2.37

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Table 1 Obstacles Facing E learning						
	Not At All	A Little	Partial	A lot	Total	Weighted Average
material for teaching						
school time organization	**16.36%** 18	**33.64%** 37	**34.55%** 38	**15.45%** 17	110	2.49
pressure to prepare students for exams and tests	**10.71%** 12	**32.14%** 36	**37.50%** 42	**19.64%** 22	112	2.66
Most teachers not in favour of the use of ICT at school	**18.02%** 20	**39.64%** 44	**36.04%** 40	**6.31%** 7	111	2.31
No or unclear benefit to use ICT for teaching	**33.94%** 37	**35.78%** 39	**22.94%** 25	**7.34%** 8	109	2.04

The confidence with which staff can perform different IT knowledge:

it appears that 46.4 % lack knowledge on how to maintain blogs, 30.7 % fail to participate in forum on the internet. This seems to be a important factor in improve the communication with students. Lack of knowledge on how to preparing online Questionnaires appear in 20.3% and 20.1 % have insufficient knowledge in using excel spreadsheet and plot graph. To less extent create presentation with video or audio clips and participate in social networks and download and install computer software and curriculum resources. As shown in **table 2**

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Table 2 Confidence with which staff can perform different IT knowledge:

	None	A little	Somewhat	A lot	Total	Weighted Average
Produce a test using word processing programme	8.93% 10	21.43% 24	37.50% 42	32.14% 36	112	2.93
use emails to communicate with others	3.51% 4	17.54% 20	28.07% 32	50.88% 58	114	3.26
Capture and edit digital photos, movies or other images	2.63% 3	14.91% 17	35.09% 40	47.37% 54	114	3.27
edit text online containing internet links and images	4.39% 5	30.70% 35	28.07% 32	36.84% 42	114	2.97
create database	8.04% 9	27.68% 31	41.07% 46	23.21% 26	112	2.79
create/edit questionnaire online	20.35% 23	24.78% 28	38.94% 44	15.93% 18	113	2.50
organize computer file in folders or subfolders	6.25% 7	15.18% 17	36.61% 41	41.96% 47	112	3.14
use spreadsheet(e.g. excel)	15.93% 18	38.05% 43	29.20% 33	16.81% 19	113	2.47
use spreadsheet to plot a graph	20.18% 23	29.82% 34	35.09% 40	14.91% 17	114	2.45
create a presentation with simple	5.31% 6	14.16% 16	38.05% 43	42.48% 48	113	3.18

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animation functions						
– create presentation with video or audio clips	12.28% 14	20.18% 23	35.09% 40	32.46% 37	114	2.88
– participate in discussion forum on the internet	30.70% 35	28.95% 33	28.07% 32	12.28% 14	114	2.22
– create maintain blogs or websites	46.43% 52	25.00% 28	18.75% 21	9.82% 11	112	1.92
– participate in social networks	17.70% 20	23.89% 27	30.97% 35	27.43% 31	113	2.68
– download and install software on a computer	12.28% 14	18.42% 21	37.72% 43	31.58% 36	114	2.89
– download or upload curriculum resources from/to websites or learning platforms fro students to use	13.27% 15	20.35% 23	48.67% 55	17.70% 20	113	2.71

in conclusion, Staff knowledge in some basic ICT practice need to be improve especially in using spreadsheet, and participating in discussion forum and online communication with students this could be improve if the proper implantation and knowledge on **L**earning **M**anagement **S**ystem (LMS). In addition to familiarity with using of E learning tools

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Students opinions

An Opportunities were possible to meet students to address their experience in using E Learning Systems (Moodle) through a series of meeting in curriculum development. most of these feedbacks obtained in February 2017, these feedbacks will be approach in pros and Cons of the system

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Pros Points

- It is consider as integral part in the education system that provide easy way for student to obtain lectures and scientific resources in any time and any place in addition it lessens the burden on the student in collected paper form type of lectures. Copying papers
- Facilitate the student in obtain the lectures before its giving time, this will enhance the teaching environment and increase the opportunity to provide more discussion and convert our system from teaching – learning
- Establish a tool where additional educational resources can be added such as illustrated video, flash video or case report that can be accessed any time
- Opportunity to provide Quizzed (although used by limited number of staff) make the student more familiar with exam environment
- Encourage some department to upload some of their books in form of Lecture notes as reference materials in their study

Cons Points

- Difficulty in the registration process to e learning system, this could be attributed to lack of university email for student (currently only staff have university email), it would good idea if the registration will be more simplified using either Student registry no or other way
- Delay in upload the lecture content to the eLearning system, this is recognized to due to lack of familiarity of some of the staff members with how deal with e learning tools
- Lack of friendly design of Moodle, make the way of getting lectures more difficult, in addition to loss of week schedule design

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- Miss understanding in the enrollment roll of assign by some lecture and failure of assignment role to enter special course by student (that can encourage small group interactive teaching)

ICT Staff opinions

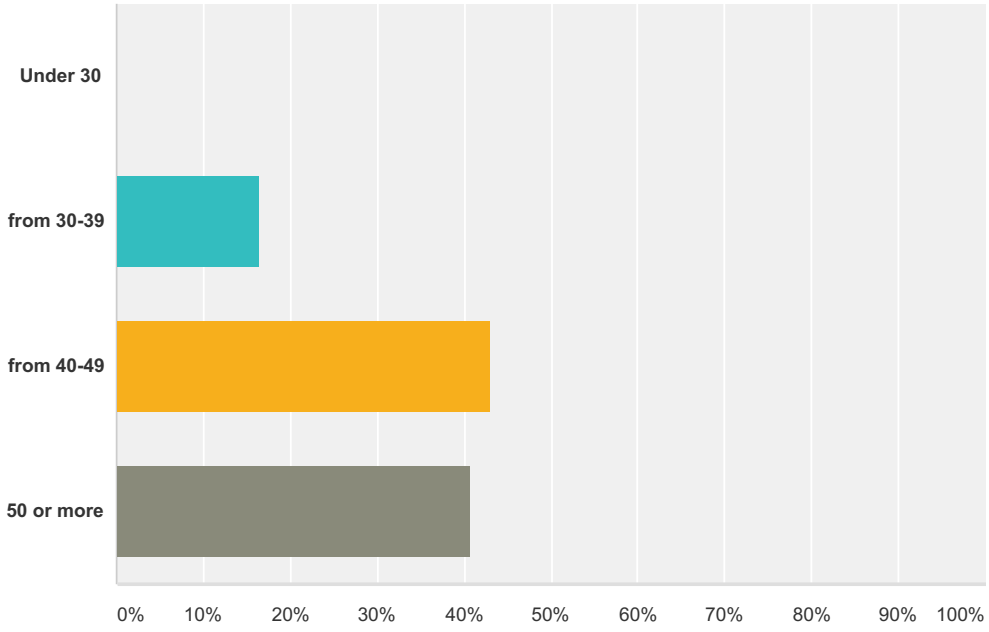
The following points addressed from IT specialist as some of missing pointing required an improvement

- Improve the knowledge in E Learning Platform (Moodle) and its advance features
- Improve experience in the Author for eLearning design e.g. Adobe Presenter 11., The Xerte Project, Quick Lessons, Lesson Writer, iSpring Suite, Easygenerator, authorPOINT, GoAnimate.
- Improve knowledge in windows server administration

Asst. Prof. Nazar S. Haddad
Vice Dean for Scientific Affairs
L.E.A.R of University of Basrah
Local Coordinator and Project Manager

Q1 Age

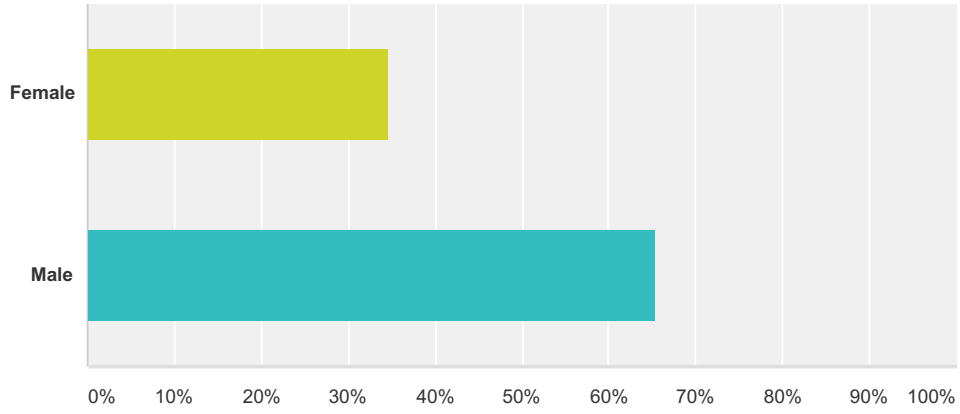
Answered: 128 Skipped: 1



Answer Choices	Responses	
Under 30	**0.00%**	0
from 30-39	**16.41%**	21
from 40-49	**42.97%**	55
50 or more	**40.63%**	52
Total		**128**

Q2 Gender

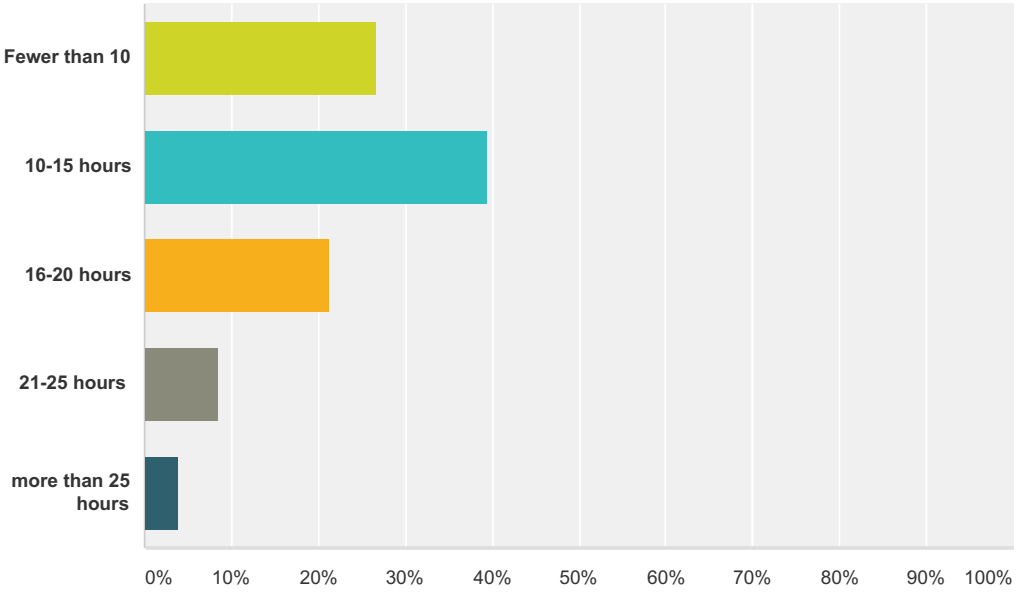
Answered: 127 Skipped: 2



Answer Choices	Responses	
Female	**34.65%**	44
Male	**65.35%**	83
Total		**127**

Q3 Teaching hours per week

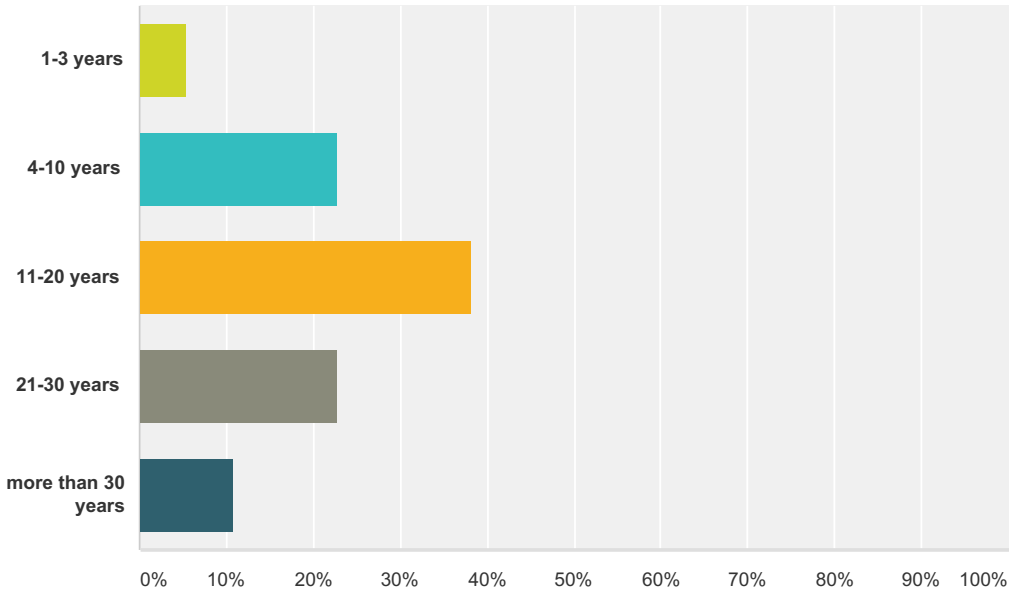
Answered: 127 Skipped: 2



Answer Choices	Responses	
Fewer than 10	**26.77%**	34
10-15 hours	**39.37%**	50
16-20 hours	**21.26%**	27
21-25 hours	**8.66%**	11
more than 25 hours	**3.94%**	5
Total		**127**

Q4 How long you have been teaching

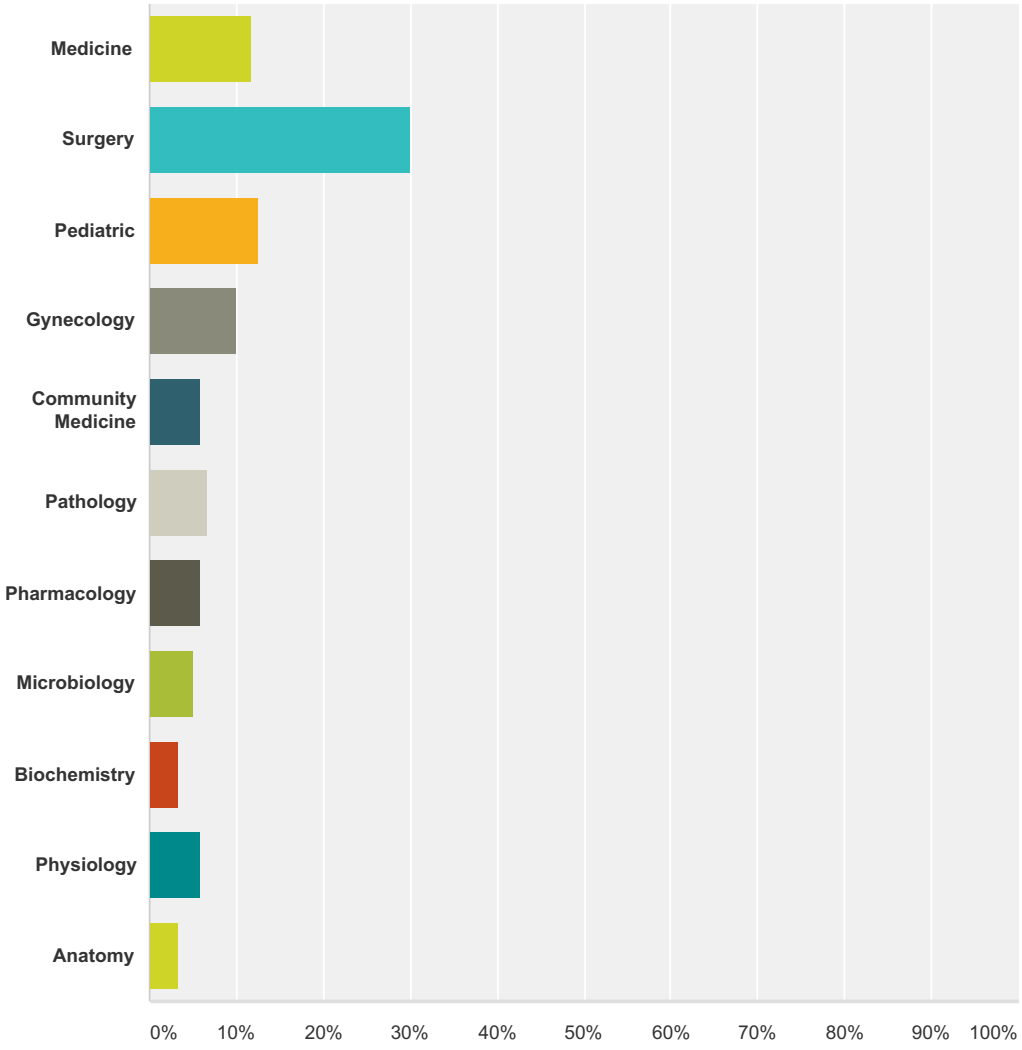
Answered: 128 Skipped: 1



Answer Choices	Responses	
1-3 years	**5.47%**	7
4-10 years	**22.66%**	29
11-20 years	**38.28%**	49
21-30 years	**22.66%**	29
more than 30 years	**10.94%**	14
Total		**128**

Q5 Department

Answered: 120 Skipped: 9

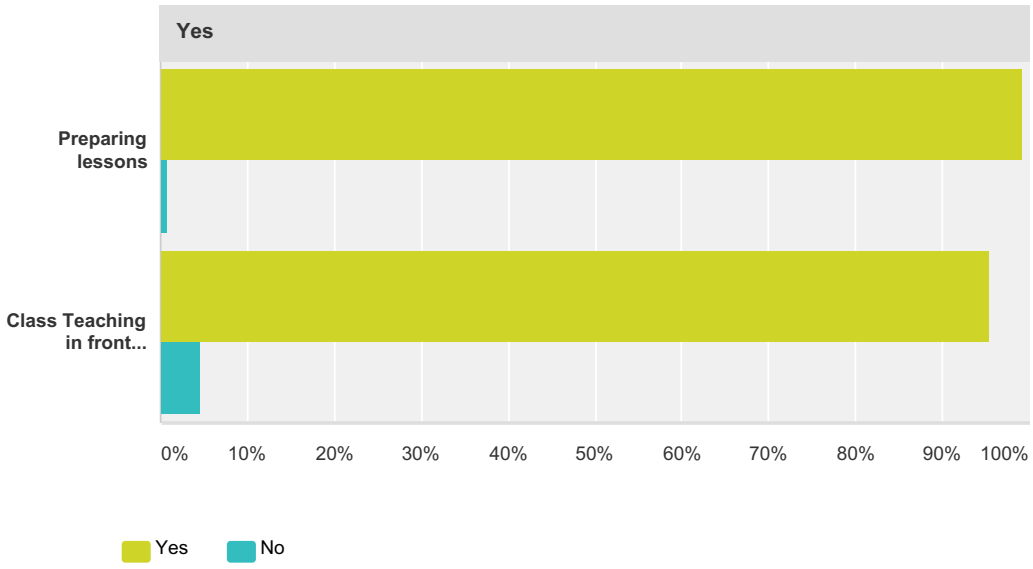


Answer Choices	Responses	
Medicine	**11.67%**	14
Surgery	**30.00%**	36
Pediatric	**12.50%**	15
Gynecology	**10.00%**	12
Community Medicine	**5.83%**	7
Pathology	**6.67%**	8
Pharmacology	**5.83%**	7
Microbiology	**5.00%**	6
Biochemistry	**3.33%**	4
Physiology	**5.83%**	7

Anatomy	**3.33%**	4
Total		**120**

Q6 Do you use computers/internet for teaching activities

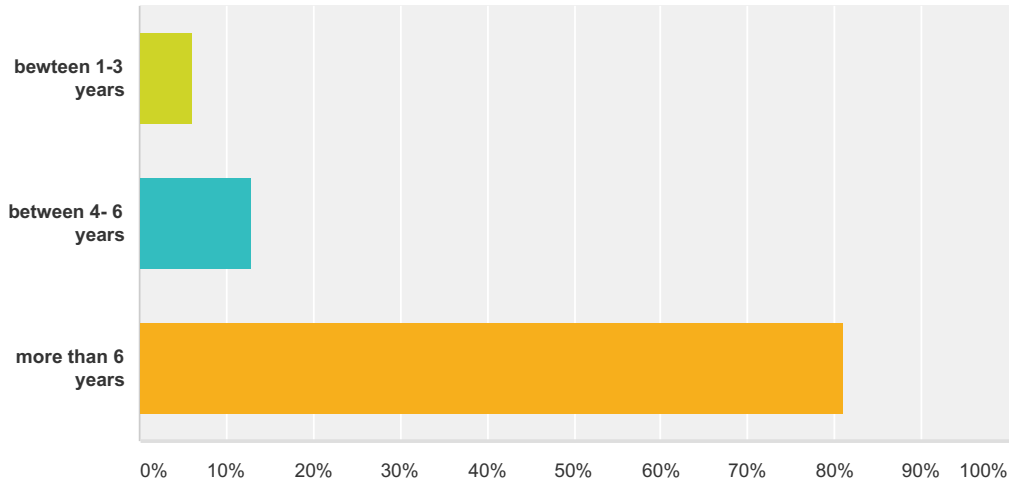
Answered: 113 Skipped: 16



Yes			
	Yes	No	Total
Preparing lessons	**99.11%** 111	**0.89%** 1	112
Class Teaching in front of/with the students	**95.33%** 102	**4.67%** 5	107

Q7 how many years have using computer/internet in your school

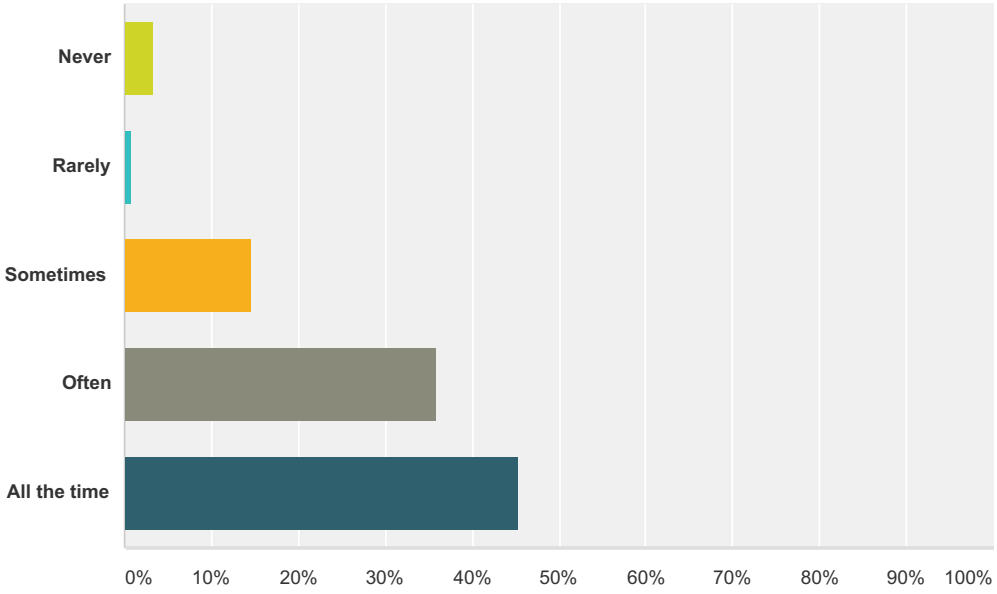
Answered: 116 Skipped: 13



Answer Choices	Responses	
bewteen 1-3 years	**6.03%**	7
between 4- 6 years	**12.93%**	15
more than 6 years	**81.03%**	94
Total		**116**

Q8 how often do you use computers/internet in your classes

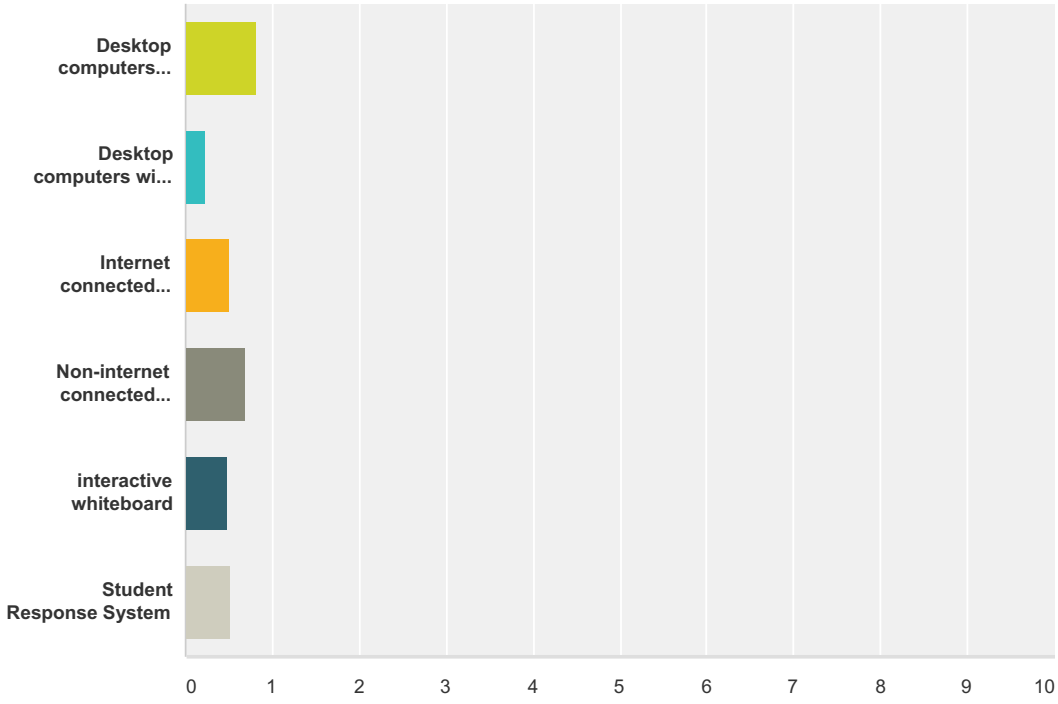
Answered: 117 Skipped: 12



Answer Choices	Responses	
Never	**3.42%**	4
Rarely	**0.85%**	1
Sometimes	**14.53%**	17
Often	**35.90%**	42
All the time	**45.30%**	53
Total		**117**

Q9 Which conditions do you have access in your classes

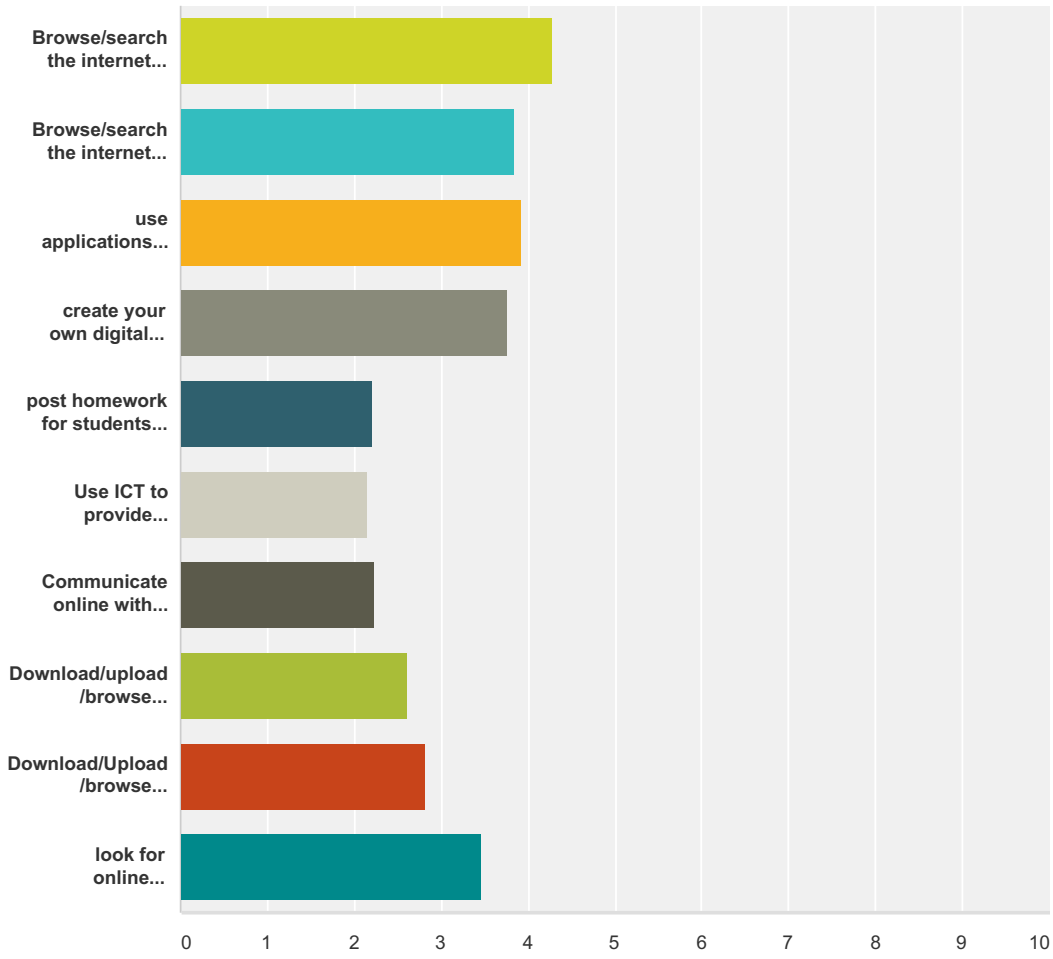
Answered: 117 Skipped: 12



	Yes	No	Total	Weighted Average
Desktop computers without internet	**81.05%** 77	**18.95%** 18	95	0.81
Desktop computers with internet	**23.26%** 20	**76.74%** 66	86	0.23
Internet connected Laptop or tablet	**50.53%** 48	**49.47%** 47	95	0.51
Non-internet connected Laptop	**69.39%** 68	**30.61%** 30	98	0.69
interactive whiteboard	**47.78%** 43	**52.22%** 47	90	0.48
Student Response System	**51.65%** 47	**48.35%** 44	91	0.52

Q10 how often do you do the following activities

Answered: 117 Skipped: 12

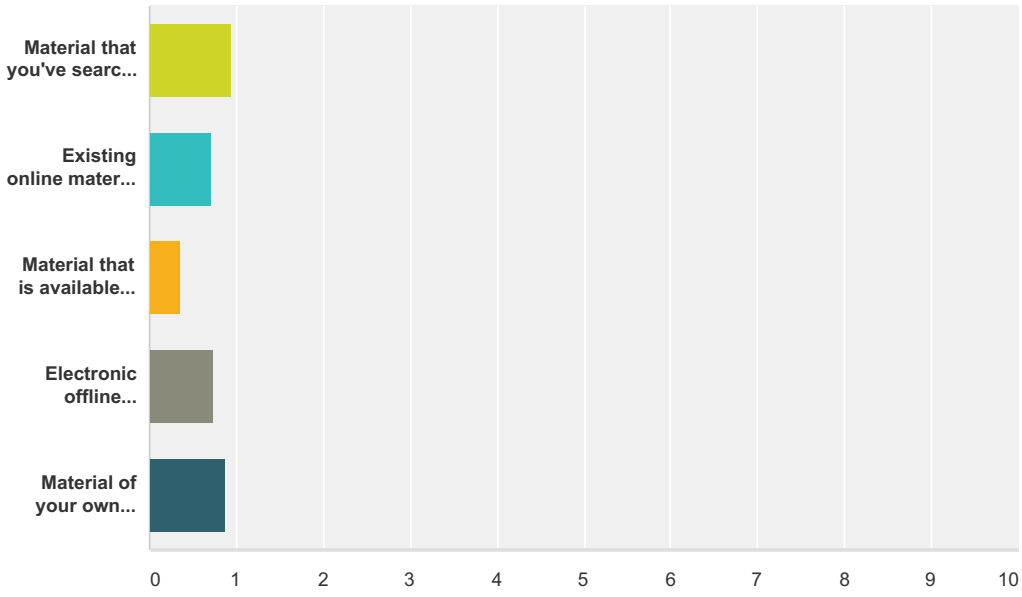


	Never	Rarely	Sometimes	Often	All the time	Total	Weighted Average
Browse/search the internet to collect information to prepare lesson	0.85% 1	0.85% 1	11.97% 14	42.74% 50	43.59% 51	117	4.27
Browse/search the internet to collect resources to be used during lessons	3.45% 4	6.90% 8	22.41% 26	37.07% 43	30.17% 35	116	3.84
use applications to prepare presentations for lessons	2.59% 3	4.31% 5	24.14% 28	36.21% 42	32.76% 38	116	3.92
create your own digital learning materials for students	4.35% 5	5.22% 6	26.96% 31	38.26% 44	25.22% 29	115	3.75
post homework for students on the school website	34.21% 39	28.95% 33	22.81% 26	9.65% 11	4.39% 5	114	2.21
Use ICT to provide feedback and/or assess students learning	37.72% 43	23.68% 27	26.32% 30	9.65% 11	2.63% 3	114	2.16
Communicate online with student	34.48% 40	25.00% 29	28.45% 33	6.90% 8	5.17% 6	116	2.23

Download/upload/browse materials from the school's website	**22.81%** 26	**22.81%** 26	**29.82%** 34	**20.18%** 23	**4.39%** 5	114	2.61
Download/Upload/browse material from a learning platfrom	**18.58%** 21	**17.70%** 20	**33.63%** 38	**23.89%** 27	**6.19%** 7	113	2.81
look for online professional development opportunities	**6.19%** 7	**9.73%** 11	**30.09%** 34	**38.94%** 44	**15.04%** 17	113	3.47

Q11 Which of the following types of materials have you used when teaching your classes with the aid of a computer and/or the internet?

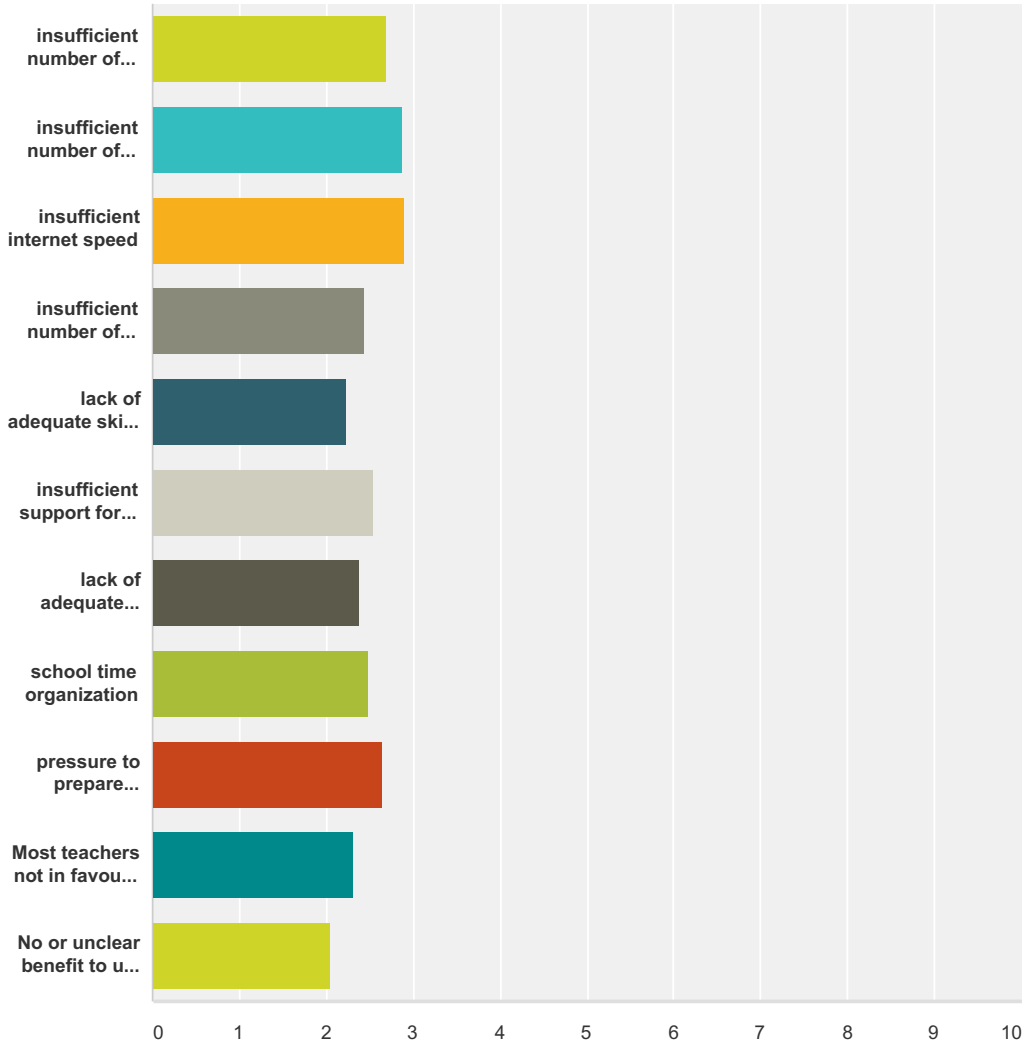
Answered: 115 Skipped: 14



	Yes	No	Total	Weighted Average
Material that you've searched the internet for	**92.92%** 105	**7.08%** 8	113	0.93
Existing online material from established educational sources	**69.72%** 76	**30.28%** 33	109	0.70
Material that is available on the school's computer	**35.78%** 39	**64.22%** 70	109	0.36
Electronic offline material (e.g.CD-ROM)	**73.87%** 82	**26.13%** 29	111	0.74
Material of your own creation	**87.39%** 97	**12.61%** 14	111	0.87

Q12 Obstacles to the use of ICT in teaching and learning

Answered: 113 Skipped: 16

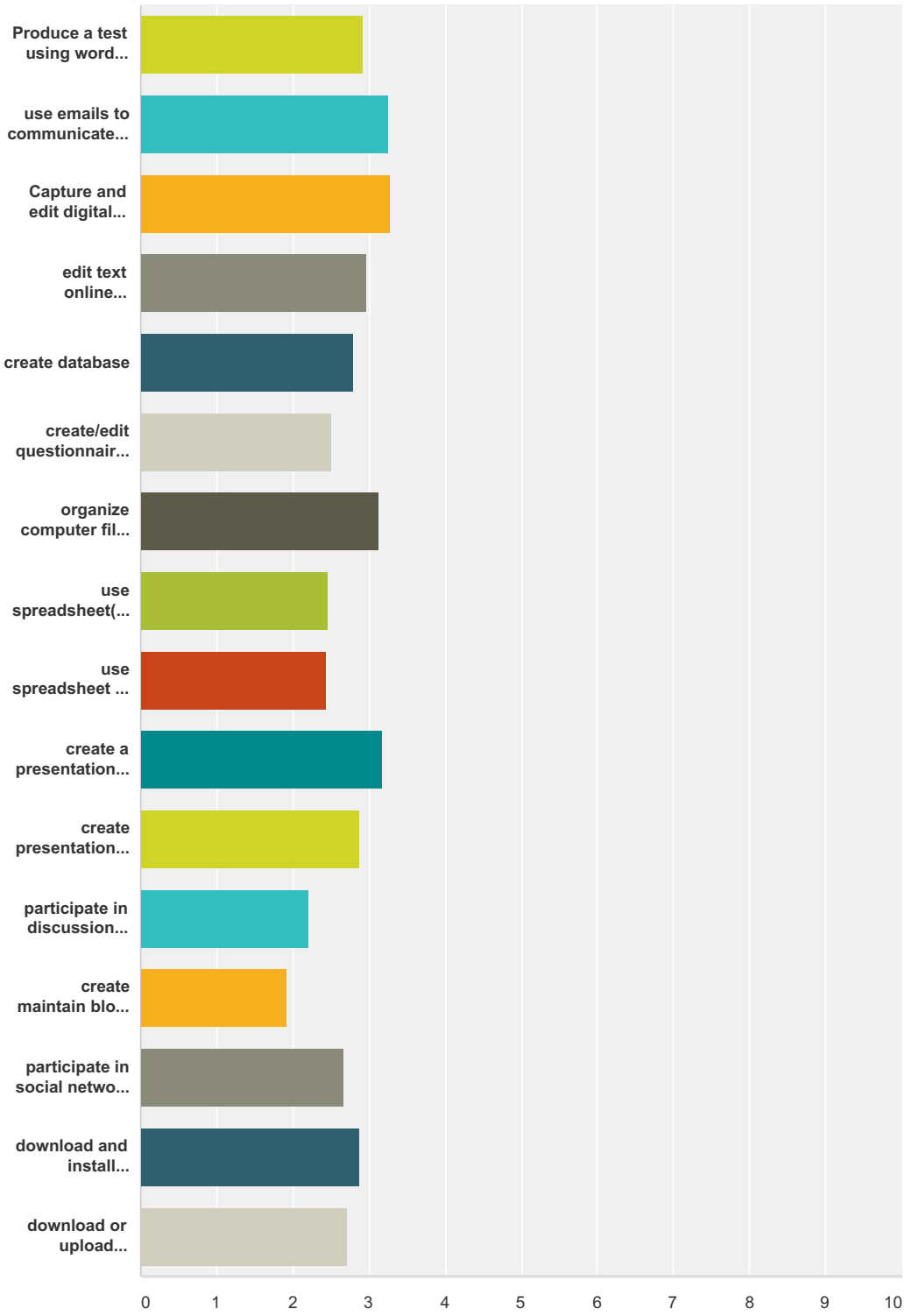


	Not At All	A Little	Partial	A lot	Total	Weighted Average
insufficient number of computers	12.50% 14	29.46% 33	34.82% 39	23.21% 26	112	2.69
insufficient number of internet connected computers	9.01% 10	25.23% 28	34.23% 38	31.53% 35	111	2.88
insufficient internet speed	4.55% 5	28.18% 31	39.09% 43	28.18% 31	110	2.91
insufficient number of interactive whiteboard	25.00% 28	26.79% 30	26.79% 30	21.43% 24	112	2.45
lack of adequate skills of teachers	27.27% 30	28.18% 31	38.18% 42	6.36% 7	110	2.24
insufficient support for teachers	17.12% 19	30.63% 34	32.43% 36	19.82% 22	111	2.55

lack of adequate material for teaching	**20.54%** 23	**34.82%** 39	**32.14%** 36	**12.50%** 14	112	2.37
school time organization	**16.36%** 18	**33.64%** 37	**34.55%** 38	**15.45%** 17	110	2.49
pressure to prepare students for exams and tests	**10.71%** 12	**32.14%** 36	**37.50%** 42	**19.64%** 22	112	2.66
Most teachers not in favour of the use of ICT at school	**18.02%** 20	**39.64%** 44	**36.04%** 40	**6.31%** 7	111	2.31
No or unclear benefit to use ICT for teaching	**33.94%** 37	**35.78%** 39	**22.94%** 25	**7.34%** 8	109	2.04

Q13 To which extent are you confident in the following?

Answered: 115 Skipped: 14



	None	A little	Somewhat	A lot	Total	Weighted Average

Produce a test using word processing programme	**8.93%** 10	**21.43%** 24	**37.50%** 42	**32.14%** 36	112	2.93
use emails to communicate with others	**3.51%** 4	**17.54%** 20	**28.07%** 32	**50.88%** 58	114	3.26
Capture and edit digital photos, movies or other images	**2.63%** 3	**14.91%** 17	**35.09%** 40	**47.37%** 54	114	3.27
edit text online containing internet links and images	**4.39%** 5	**30.70%** 35	**28.07%** 32	**36.84%** 42	114	2.97
create database	**8.04%** 9	**27.68%** 31	**41.07%** 46	**23.21%** 26	112	2.79
create/edit questionnaire online	**20.35%** 23	**24.78%** 28	**38.94%** 44	**15.93%** 18	113	2.50
organize computer file in folders or subfolders	**6.25%** 7	**15.18%** 17	**36.61%** 41	**41.96%** 47	112	3.14
use spreadsheet(e.g. excel)	**15.93%** 18	**38.05%** 43	**29.20%** 33	**16.81%** 19	113	2.47
use spreadsheet to plot a graph	**20.18%** 23	**29.82%** 34	**35.09%** 40	**14.91%** 17	114	2.45
create a presentation with simple animation functions	**5.31%** 6	**14.16%** 16	**38.05%** 43	**42.48%** 48	113	3.18
create presentation with video or audio clips	**12.28%** 14	**20.18%** 23	**35.09%** 40	**32.46%** 37	114	2.88
participate in discussion forum on the internet	**30.70%** 35	**28.95%** 33	**28.07%** 32	**12.28%** 14	114	2.22
create maintain blogs or websites	**46.43%** 52	**25.00%** 28	**18.75%** 21	**9.82%** 11	112	1.92
participate in social networks	**17.70%** 20	**23.89%** 27	**30.97%** 35	**27.43%** 31	113	2.68
download and install software on a computer	**12.28%** 14	**18.42%** 21	**37.72%** 43	**31.58%** 36	114	2.89
download or upload curriculum resources from/to websites or learning platforms fro students to use	**13.27%** 15	**20.35%** 23	**48.67%** 55	**17.70%** 20	113	2.71

University of Basrah

College of Medicine

OPATEL Project

Online **P**latform for **A**cademic **TE**aching and **L**earning

Funded by Erasmus+ Programme of the European Union
Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Nominate IT Specialists at Consortium

University of Basrah, College of Medicine nominate the following IT specialists responsible for maintaining and facilitate a successful implementation of **OPATEL Project** as part of WP2

- Prof. Ali Fadil Marhoon
- Senior Engineer Aula Mohammed
- Engineer Zena Ghazi Ibrahim
- Programmer Israa Adnan Salman

Asst. Prof. Nazar S. Haddad
Vice Dean for Scientific Affairs
L.E.A.R of University of Basrah
Local Coordinator and Project Manager

University of Basrah, Al Kornesh Street, Ashar, Basrah, 61001, Iraq
College of Medicine, University of Basrah, Al Bradheia, Basrah,61001, Iraq.
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OPATEL Project

Online Platform for Academic Teaching and Learning

Funded by Erasmus+ Programme of the European Union

Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Analysis and identify different entities to use ICT in education
List of needed skills in ICT and E-Learning

Introduction

Avi-Cenna center is established at the University of Baghdad to design, develop and implement modern E-Learning system to the university. University of Baghdad is the oldest and largest university in Iraq, and also one of the oldest universities in the Middle East.

Avi-Cena center focuses on the Information and Communication Technology (ICT) infrastructure of the university and E-learning system implementation. Therefore, the main goal of Avi-Cenna center is to make E-learning easy to use and accessible to everyone in the university. Consequently, the proposed E-learning system considers both the academic teachers and students opinions. However, implementation of E-learning system in the university is still the early stage and focusing several challenges in the network backbone, hardware requirements, and software models. Moreover, luck of financial resources delay the development and implementation of such system.

Avi–cenna center try to develop a strategy for adoption of E- learning in our university by unifying all the sector that are related with E-learning to keep up with scientific revolution. To achieve our education goal for E-learning system, we try to use all available resources to support educational process and scientific communication through optional development of information and communication systems. Also the quality standard for E-learning programs and digital education designs may be ensured to implement the E-Learning system

Based on our study of Avi-Cenna center, we found that knowledge of the academic staff needs a significant improvement in ICT practice such as modern operating systems, word and speared sheet processing and modern on-line communication tools between teachers and student. Accordingly, to improve the proper implementation and knowledge on Learning Management System (LMS), the academic staff and student need to participate in several discussion forms.

Mission

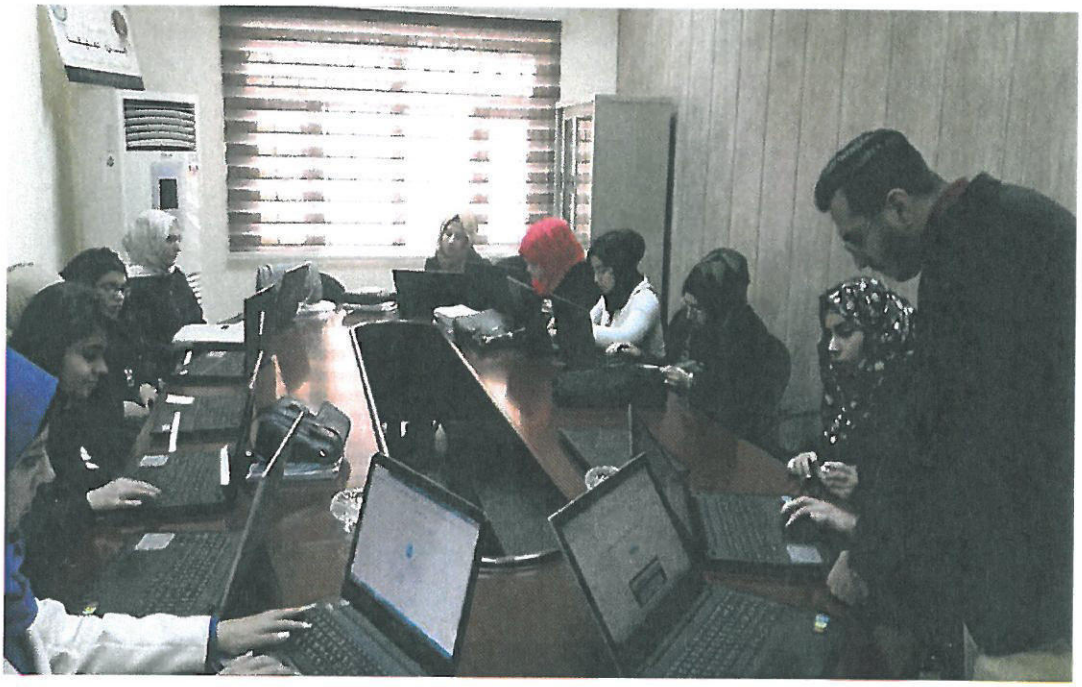
1- Improve academic teacher capabilities to create interactive classes and make the lesson more enjoyable which could improve student attendance and concentration

2- E- learning systems my help the teachers to easily explain of the complex instruction and ensure students comprehensive.

3- The presentation can be supporting with audio and video clips in addition in to detailed colored images to improve the retentive memory of the student .

Building E-Learning Culture

In order to educate e-learning, the Avi-Cenna center began holding meetings and seminars with various segments of the education community, including teachers, students and staff, to build a comprehensive and realistic and usable innovation within the university. Additionally, building an e-society based on information technology and its use in education.



Training required accomplishing the above

1- Moodle developer by using MYSQL to customize moodle to fit our need
2- System administration to manage server and storage (MCSE)
3- Web developer (ASP.NET) to create interface for the system.

OPATEL Project

Online Platform for Academic Teaching and Learning

Funded by Erasmus+ Programme of the European Union

Project Number: 573915-EPP-1-2016-1-DE-EPPKA2-CBHE-JP

Identify and analysis different entities to use ICT in education (E-earning) for the University of Duhok

University Of Duhok (UoD)

Duhok, Kurdistan Region - Iraq

June 2017

Introduction

E-Learning is one of the most promising topics of today development in High Education sector. E-Learning is much more than providing course materials over the internet, or moving interactions to digital platforms. E-Learning stands for providing technology related to increase the collaboration between teachers and students and increase their experience to engage more with the lectures. E-Learning includes tools enabled opportunities for curriculum development.

The implementation process should be oriented towards the involvement of all stakeholders. As such there is a need for policies that can shape the frameworks to achieve this. In order to fulfill this promise, adequate policies need to be implemented. Structure, processes and stakeholders' roles often need to be changed and transformed. This requires from University managers a deeper understanding on how to identify and dominate gaps, how to reduce bureaucracy and increase transparency, how to overcome legal and institutional barriers.

Implementation

The University of Duhok (UoD) is seeking to develop eLearning platform to meet today educational environment requirements and challenges. This project will have a great contribution to increase students' satisfactions and enhancing learning outcomes. By the end of their senior year, students should have acquired the experience to use the platform and its tools. Unfortunately, the implementation of the current Learning Management System is still unsophisticated and does not allow students and teachers to fully demonstrate this ability.

In this report a survey analysis with the representative of teachers, students and ITC staffs had been conducted to address the foundation status and the different readiness parameters in implementing an E-learning environment and what are the future needs.

Teacher Survey

The University of Duhok is pursuing to evaluate and investigate the different aspects of using ICT and E- Learning at the University for both faculty members and student prospective. A teacher questionnaire has been conducted by the eLearning development team using Google online Forms application in order to evaluate the ICT situation of the institution and its need to be fully successful in this mission when implementing eLearning Platform at the University. About 150 faculty member have participated in this survey.

On the content of survey being made and the efforts being directed according to the faculty members and students prospective, the data collected is depending on many questions and the survey has been analyzed. The Results can be summarized in terms of answers to the following questions:

Analysis and Results

The First Part of the survey addresses the use of the computer and email. The data collected from the survey has been represented according to the following four questions:

"Do you have email? How often do you use email? Do use computer at college? And do you use computer at home?"

The result of the answers of these questions is proximate, and the average is between 54% to 77%.

The second part of survey tries to address on the use of this ICT technology and obstacles as follow:

The data collected from the survey has been graphically represented below.

Results can be summarized in terms of answers to the following questions:

"For which of the following purposes do you use ICT (information communication technologies) – either ***at college or using your personal computer at home?***"

Asked to the representatives the following data has been collected which analyzed graphically as shown in Fig No.1

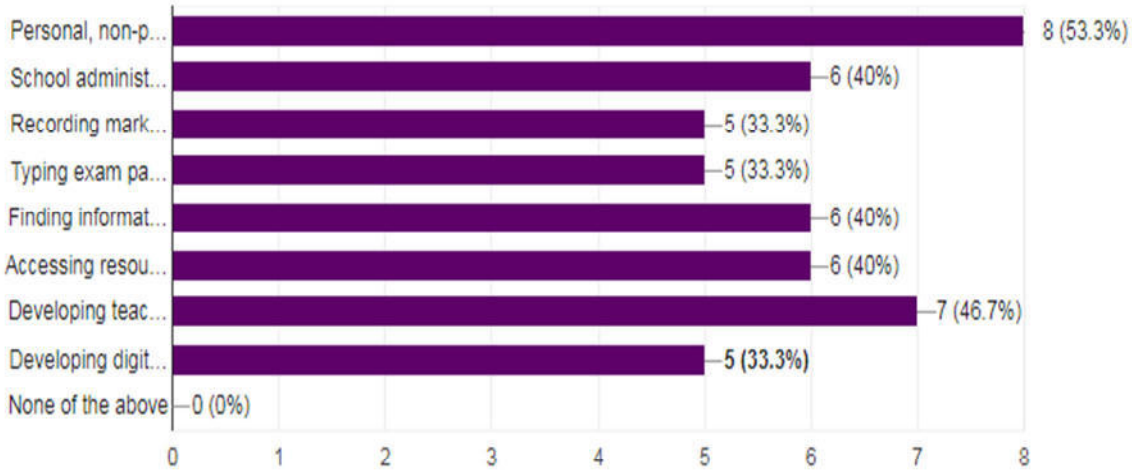


Fig. 1 for which of the following purposes do you use ICT (information communication technologies) – either at college or using your personal computer at home?

The results indicates that 53% of the answer is for the "Personal, non-professional use", which is a half of the number of the representative which is huge number that means our university needs mention of ICT. And the confidence with which staff can perform different IT knowledge is shown in the Fig No. 2.

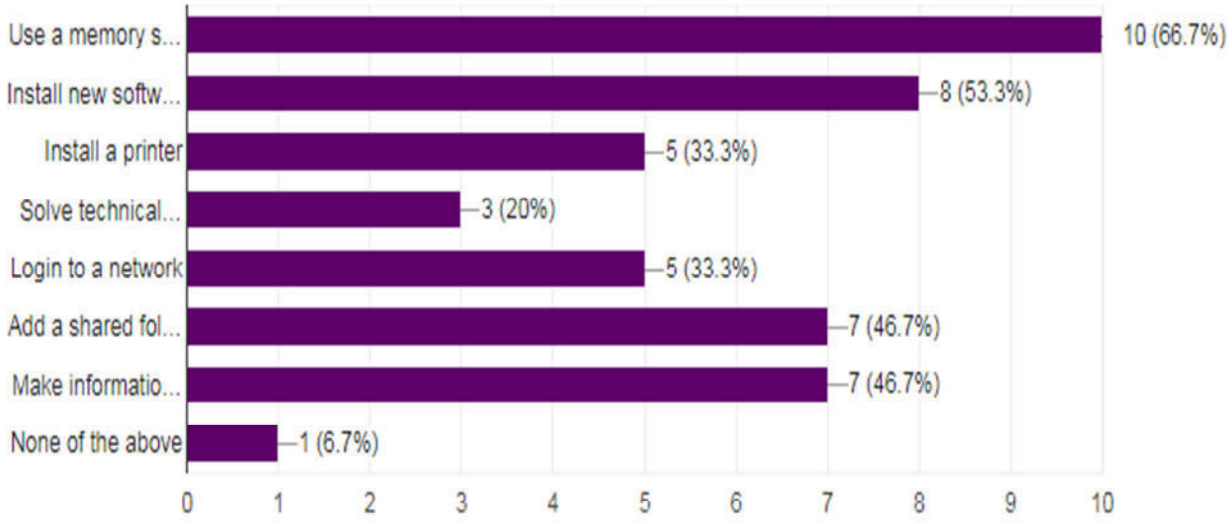


Fig. 2 Can you do the following?

The results lead to conclude that 67 % fail to participate in forum on the internet, 67 % lack knowledge on how to maintain blogs. These results are very low which indicate that our university and our staff need a more skill to deal with ITC as shown in Fig 3.

So its important factor in improves their knowledge and also improves the communication with students. Also the answer to the other questions leads also to Lack of knowledge on how to preparing online Questionnaires which appears in 20.3% and 20.1 % have insufficient knowledge in using excel spreadsheet and plot graph. And also less extent create presentation with video or audio clips and participate in social networks and download and install computer software and curriculum resources as shown in Fig 4.

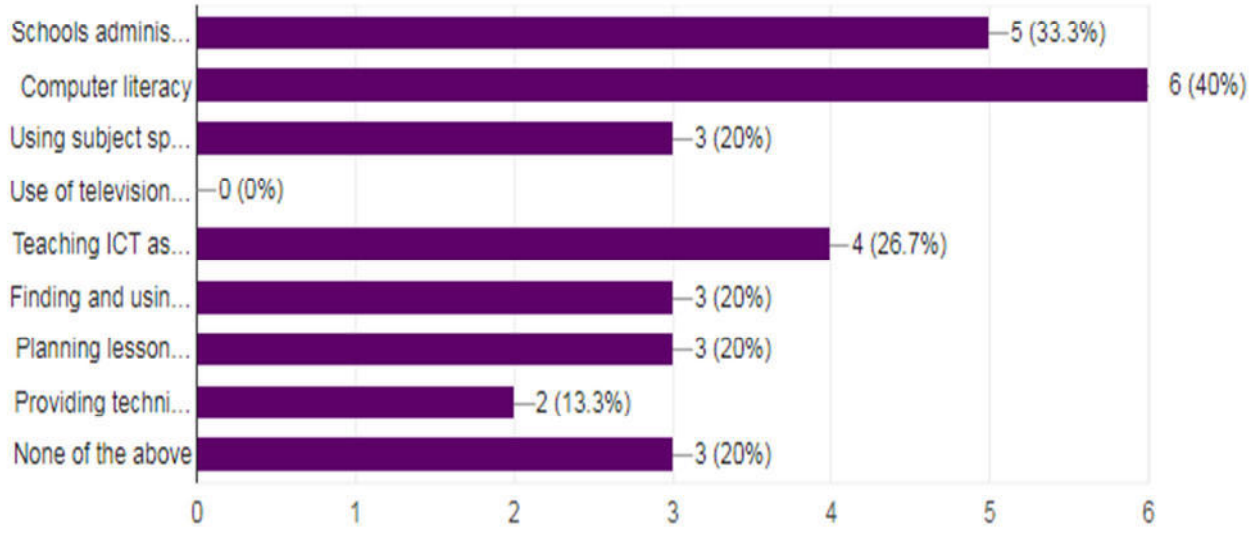


Fig 3. Have you received ICT-related training covering the following topics?

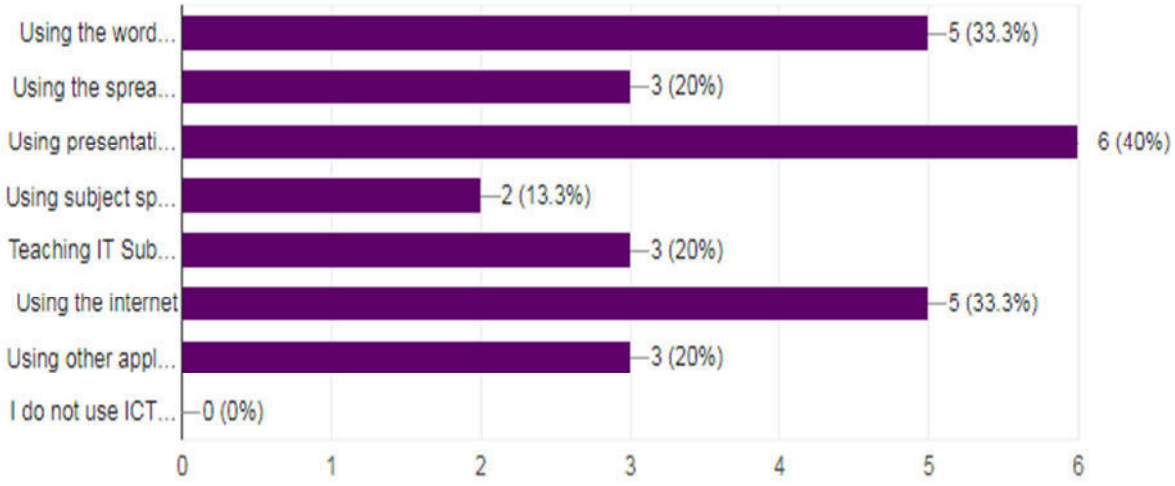


Fig. 4 in which of the following ways do you use ICTs with learners whilst completing curriculum activities?

Recommendations

After analysis the answers of the questions, our opinions reached to the following points:

- Develop UoD staff's understanding of potential of e-Learning and its advantages in the education system.
- Addresses implementation issues at policy and strategy level.
- Help the academic staff to develop their analytical skills and enhance their capabilities on leading e-Learning projects, particularly in a Curriculum Development.
- The academic staffs need many training in different ICT technology and soft skills.
- Improve knowledge in windows server administration, E-Learning Platform (Moodle) and its advance features.

Student's feedback

We have met some UoD summer training students and we had made a discussion with them regarding using an E-Learning platform at the educational organization. They have been asked to go through the existing system and provide us with their feedback as stakeholders of the platform and trying to focus more the best and bad practices of deploying the current system. This will increase end-user experiences and invite them to the central of the decision making process. Mostly, they claim that this platform is a good start. However, they mention that there is a need of more work to be done. The two main points that the agreed on were provide more training sessions for students by the ICT team at the University. Also, they point out that there are many elements and features of the platform need more development.

ICT team feedback

Technical Training required justification for the following groups:

We suggest to use Moodle platform as a Learning management system and take the advantage of the huge community around the world who are using it. There are many reasons that make decision to use Moodle; for instance, it is a free and it enabling educators to create their own private website filled with dynamic courses that extend learning, anytime, anywhere (moodle.org).

Training courses will be one of the requirements of the success of this project. We suggest the following training courses:

1. Programmers: intermediate level course on PHP+MySQL with a beginner course on Linux, since Moodle platform has been developed with PHP+MySQL. This will make the IT development team gain the sufficient skills to maintain and develop the platform constantly.
2. Server Administrators: advanced course on Linux (Ubuntu or CentOS) will be needed to build, install, configure and maintain the e-learning server.
3. Moodle Managers: advanced course on best practice of how managing and administrating the whole process of running Moodle in the University, such as enrolment policies, authentication, roles and permissions. Also, the course will address implementation issues at policy and strategy level. The focus in future will be on improving UoD staff engagement to the e-Learning environment.
4. Designers: a course on video editing and graphic design for online video and graphic support materials. It will have a significant impact on the course development process and supporting the idea of providing online learning.

OPATEL TEAM of UoD
June 2017

Kurdistan Regional Government – Iraq
Ministry of Higher Education and Scientific Research,
Duhok Polytechnic University DPU
DPU OPATEL team

Study

for the needs and design

E-Learning system

For

Duhok Polytechnic University

(DPU)

Abstract:

E-Learning management systems are web-based or software applications that allow companies and educational institutions to deliver content and resources to their learners and manage their delivery. These systems often provide easy ways for instructors to create and deliver their content while simultaneously monitoring participation and assessing performance.

These systems offer students and teachers the ability to interact with video conferencing, threaded discussions, and forums. They also facilitate administration and course documentation. They track and report on events too. These systems can be used in regulated industries to host compliance training and educational institutions can use it to enhance their classroom teaching. There are more and more courses being offered through learning management systems that provide students around the world access to education.

Build And Implement E-Learning Systems:

Duhok Polytechnic University (DPU) in Duhok is seeking a campus-wide e-management and e-education system to be implemented for the university community. The system shall be reliable and scalable, so to expand the university needs in phase I for the staff to full deployment that covers requirements for the entire student population. The system shall be a turnkey solution and shall include latest technologies in the fields of the LMS for the education process in our university.

To integrate LMS with education system, it will have their benefits.

The benefits: -

- Provides access to more information, and allows students to use their own initiative to find it.
- Class work can be scheduled around personal and professional work.
- Can be more cost effective. Reduces travel cost and time to and from educational institutes.
- Course Level Capabilities (Learners may have the option to select learning materials that meets their level of knowledge and interest).
- Learners can study wherever they have access to a computer and Internet.
- Widens access to the course: students can learn from wherever they are and numbers do not have to be limited.
- Evaluation Capabilities.
- Easy Upgrades. Simplified Learning Process.
- Lower environmental impact.
- More efficiently collect and distribute assignments.
- Provide faster feedback to students, and reliably communicate with students - (Announcements, Discussion board).
- Enhance student preparation and revision for class- (e.g. instructional video).
- Allow students to measure their progress, and allow instructors to measure student engagement - (Online tests, Discussion board, Blogs).
- Improve Equity for Students.
- Simply a 'different' way of learning, which some students enjoy.

The main objective of applying e-Learning systems in Duhok Polytechnic University, is to get all the above benefits and to connect the campus together for all the online activities especially through implement online lectures for the same subject in all campuses at the same time to reduce the cost, and the time. Also to unify the level and the assessment criteria for the learning operations.

The Training:

E-Education is a totally new phenomena in most of the countries and in order to have a successful program, we need to train the instructors as well as the necessary staff on the benefits, on the technical aspects, and on how to change their current habits of instruction.

Our university has an experiment in designing e-learning systems by designing a system to manage the university electronically and includes special sections for teaching and dealing between teaching staff and students.

The training should focus on raising the level of trainees in the skills of the computer and the Internet in order to ensure their proficiency in the use of the learning environment, and for trainers should have the ability to create or use e-learning systems with excellent skills. The proposed field of training can be suggested as follows:

1- **Servers:** courses in installing, configuring, modifying and maintaining servers for e-learning systems.
2- **Web Design:** training course in web design, and the fields of graphics and online video.
3- **Moodle Environment:** training course about how to use Moodle in e-learning fields.
4- **Smart E-Learning Authoring Tools:** training on smart e-learning design platform to create fully responsive e-learning courses, which provides a superior experience to learners. As an example for such e-learning authoring tool is Adobe Captivate program

Kurdistan Regional Government – Iraq
Ministry of Higher Education and Scientific Research,
Duhok Polytechnic University DPU
DPU OPATEL team

The proposed training _course for the OPATEL project

Duhok Polytechnic University

(DPU)

The Training:

E-Education is a totally new phenomena in most of the countries and in order to have a successful program, we need to train the instructors as well as the necessary staff on the benefits, on the technical aspects, and on how to change their current habits of instruction.

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An e-learning needs assessment in University of Torbat Heydarieh

Prepared by OPATEL project team in University of Torbat Heydarieh
Seyed Ehsan Yasrebi Naeini
Ali Maroosi
Masoud Ettehadi

Abstract
E-learning is developing paradigm of modern education. Recently, many universities used this advanced approach for education. This study assesses the requirements for implementation e-learning in University of Torbat Heydarieh. To do this, a questionnaire was designed and asked lecturers to fill it. This questionnaire evaluates lecturer's point of views regarding requirements, advantage, and disadvantages for e-learning implementation. Results show that involvement of participants in computer workshop is low or very low. All participants use social network and their personal website during the week. Results for questions in MS Excel and MS Powerpoint and Access show that knowledge in MS Powerpoint more than MS Excel and MS Access and 28% of participants have low knowledge in MS Access. Results show that most of participant like to use ICT or use ICT. Most of participants believe that participation in class is necessary even you can learn some things individually. Most of the participants are skillful in using computer and multimedia and most of them use email and internet. Relatively, all participants familiar with e-learning concepts. Knowledge of participant about databases is medium and participants familiar with presentation software. Most of participants familiar with word processing concepts and software. Results show availability of content infrastructure including electronic ports, library, journals and available standards to convert content to electronic format is medium and availability of information database and electronic journals and availability of environmental requirements for e learning, available web base stations are medium. Participants believe that required software for establishing e-learning system almost is available and internal bandwidth of networks is not sufficient for e-learning system. Participants agree that internet bandwidth even lower than internal bandwidth. Participants claim that available hardware for install e-learning system is medium. Most of participants believe that security of e-learning for content of programs, networks, systems, exams and evaluations are moderate or high. Results show that participants believe supporting of government, institutes and organizations is medium or low. Based on participant opinions financial, cultural, management and organization, technical, infrastructure, security, legal, assessment and evaluation problems are problems for implementation of e-learning systems, respectively. The best virtual Medias for e learning system from participants view point were simulation environments, documents and papers, video and voice, etc.

Introduction

Technological developments are intensely changing the training and developments landscape (Welsh et al. 2003). E-learning, or electronic learning, can be defined as presented contents by electronic Technologies such as Internet, interactive TV, and CD-ROM, satellite broadcast (Ong et al. 2004, Urdan & Weggen, 2000). Some companies and industry describing e-learning broadly to comprise any system that produces and disseminates information and is designed to enhance performance (Rosenberg, 2001).

Quality and cost of universities can be improved by e-learning. The overall aim of the OPATEL project in University of Torbat Heydarieh is to identify requirement to implement e-learning and realizes an e-learning environment in this university. E-learning is also called Web-based learning, online learning, distributed learning, computer-assisted instruction, or Internet-based learning. There are two common e-learning modes: First one is distance learning. In this mode information technology is used to send instruction to students who are far from a center site. The second type of e-learning is computer assisted training or computer based learning. In this approach computers are used to help in the delivery of multimedia packages for training (Ruiz et al. 2006). In other words, can say there are two types of e-learning asynchronous and synchronous. In asynchronous contents are prerecorded or available to use in any time or day. In synchronous e learning types all trainers should be in front of their computers simultaneously. Although these two type of e-learning are different but most of companies use mix of them for training. Blended learning that uses both classroom and technology based learning is one of the most popular learning (Elliott, 2002).

One simple example of asynchronous e-learning applications is Microsoft PowerPoint slides posted on a website. A complex example of asynchronous can be an online training simulation with graphics, animation, video, and audio components (Hall, 1997). At the beginning most of the e-learning content were simple. During the time companies understood that employees more preferred interactive contents.
In most synchronous e-learning participant involve a real time chat session from same location. But, it is possible learners log on to the session from different locations while instructor presents and discusses content on slides or other materials on computers. There are different forms of blended learning base on how asynchronous, synchronous and class room based learning approaches are combined.

E-learning has many advantages that motivate companies to use this approach for training that can be summarized as follows: Sometimes it is necessary to deliver courses to different locations consistently in this case e-learning can be helpful. In some cases companies want to deliver training to many people. E learning approach is not constrained to classroom capacity and can be helpful for training to many people. Furthermore, e-learning increases learner convenience. Learners access to asynchronous e-learning in any time. Another advantage of e-learning systems is their ability to follow activities of learners. E learning systems are cost effective because they are not

need classroom and no need travel to access them. However, initial cost to establish an appropriate e-learning courses is high (Welsh et al. 2003).

Different studies have been done to evaluate effectiveness of e-learning in the compared with classroom courses. The study in Brown (2001), showed that an intranet-delivered course improved the manufacturing employee's knowledge considerably. The studies, O'Hara (1990) and Gopher et al. (1994) showed that computer-delivered simulations improve skills of participants in the compared with the persons that not used these practices. Effectiveness of a training courses delivered via CD-ROM is studied in North et al. (2000). For instance, Gold (2001) showed that teachers who used an online course have more positive toward online instruction. The study by Kulik and Kulik (1991) showd that in short term coursed computer based e learning approach show better performance than others. In this study a questionnaire is designed and ask lecturer of University of Torbat Heydariyeh to response them. Results are summarized as follows:

Demographic characteristics of respondents:

Characteristics of participant in questionnaire is as follows: all number of participant was 25 person.

Gender: male is 88% and female is 12% of participants.

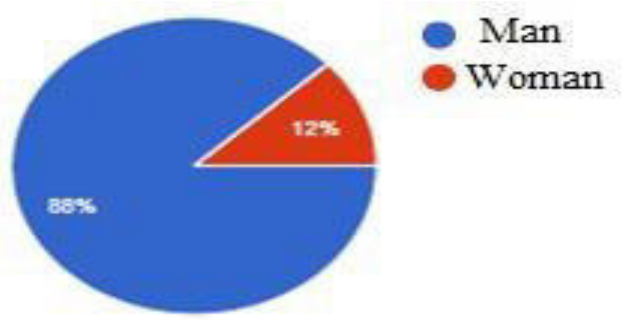


Figure 1.Gender of participants

Academic degree:
16% professor, 52% lecturer, 16% assistant professor

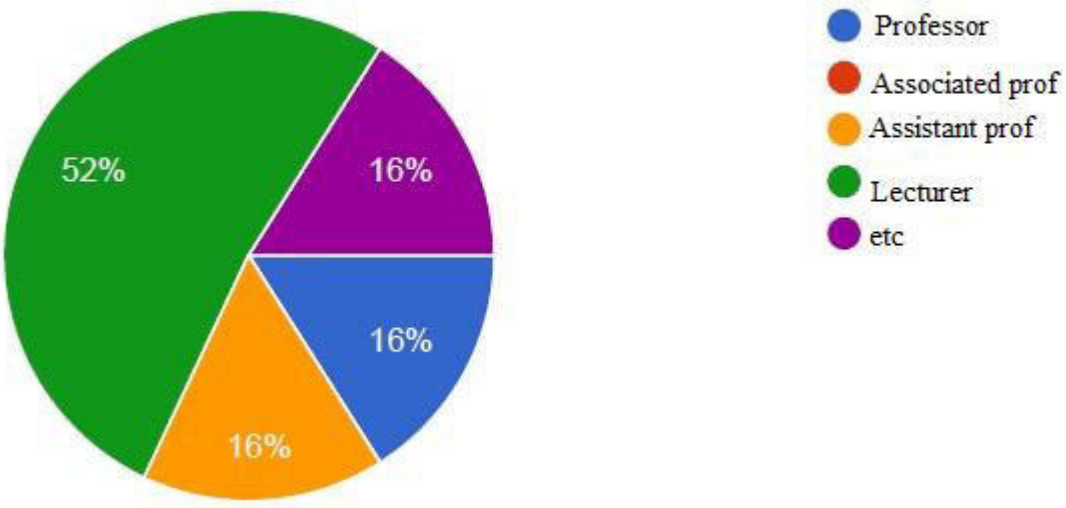


Figure 2. Academic degree of participants

Major of participants:
Most of staff with engineering major participated in questionnaire.

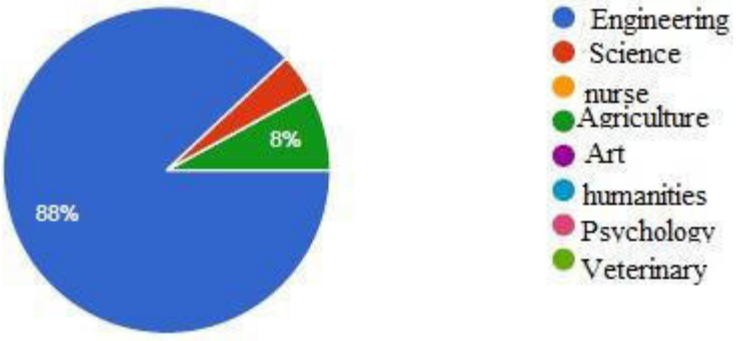


Figure 3. Major of participants

Educational background at university (year):

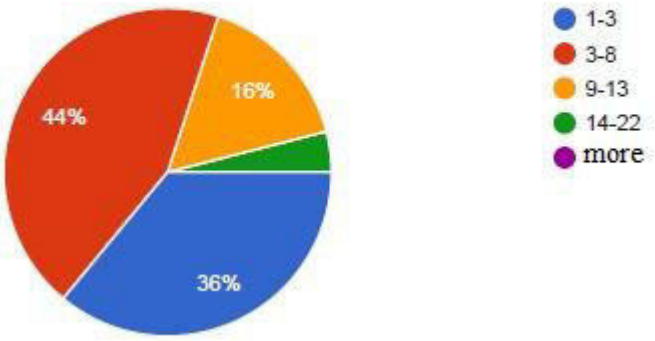


Figure 4. Experience of participants

Experience of 36% of participants in education is 1-3 years and 44% have 3-8 years experiences and 16% have 9-13 years experiences. Finally 4% of participants have 14-22 years experiences.

Skill preparation:
Participant's general skills in computers and the internet is demonstrated as follows: The results show that most of participant use computer during the week and rate of usage in most of them (72%) is very high.

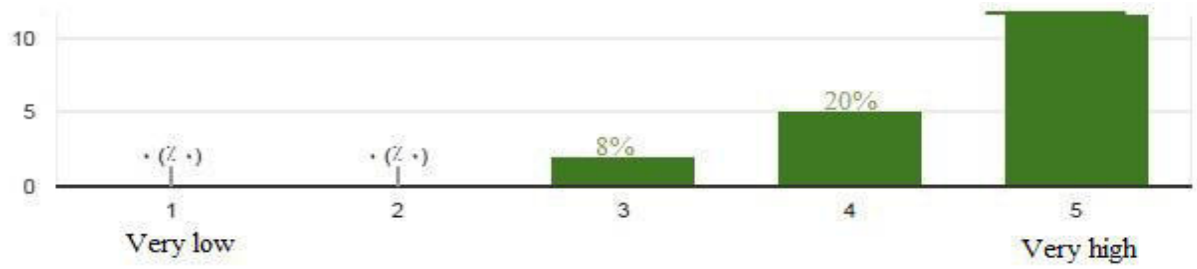


Figure 5. Use of participants in computer during a week

Use of internet during the week by participants is as follows:
Results show that rate of using internet during the week is high. Using internet is less than using computer based on the results in Fig. 5 and Fig. 6.

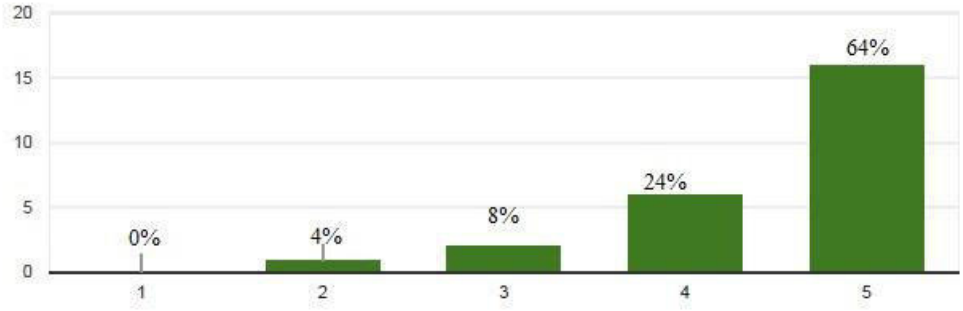


Figure 6. Use of internet during a week

Involvement of participant in computer workshops:

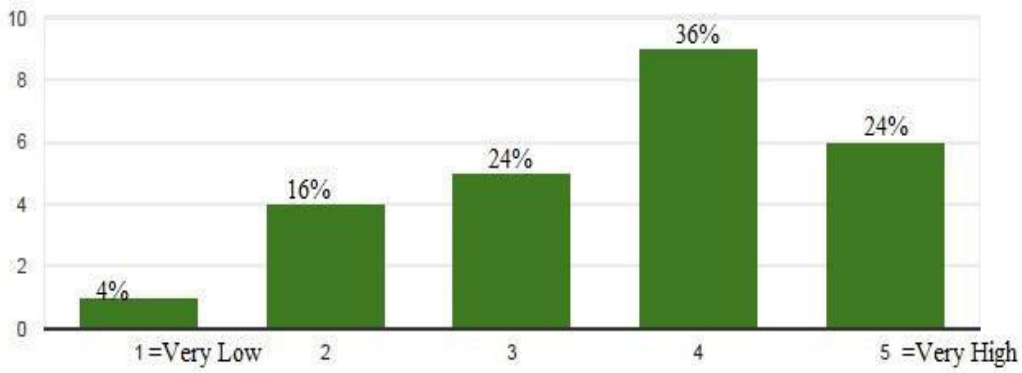


Figure 7. Involvement of participants in computer workshops

Unfortunately, 20% of participant involvement in computer workshop is low or very low.

Using of social network and personal web sites:

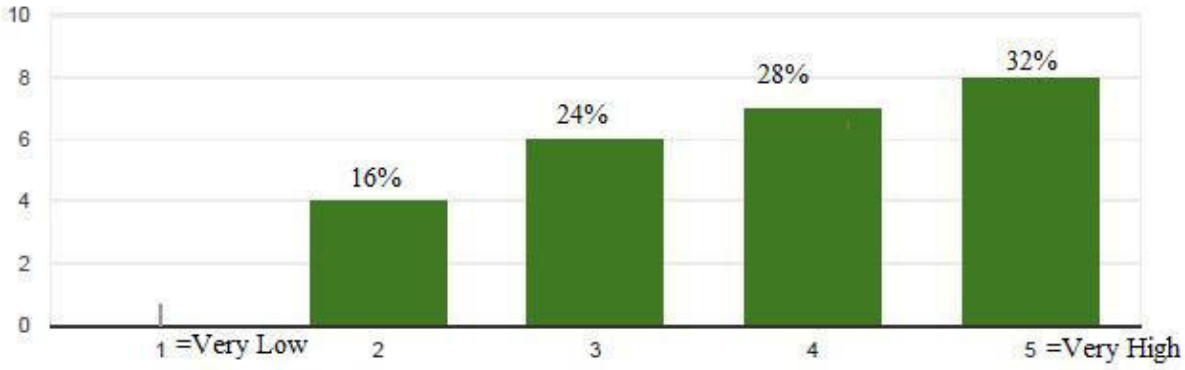


Figure 8. Frequency of using of social network and personal website during a week

Results in Fig.8 show that all participants use social network and their personal website during the week. Furthermore, rate of usage in most of them (60%) is high or very high.

Basic knowledge about computer and hardware of computer:

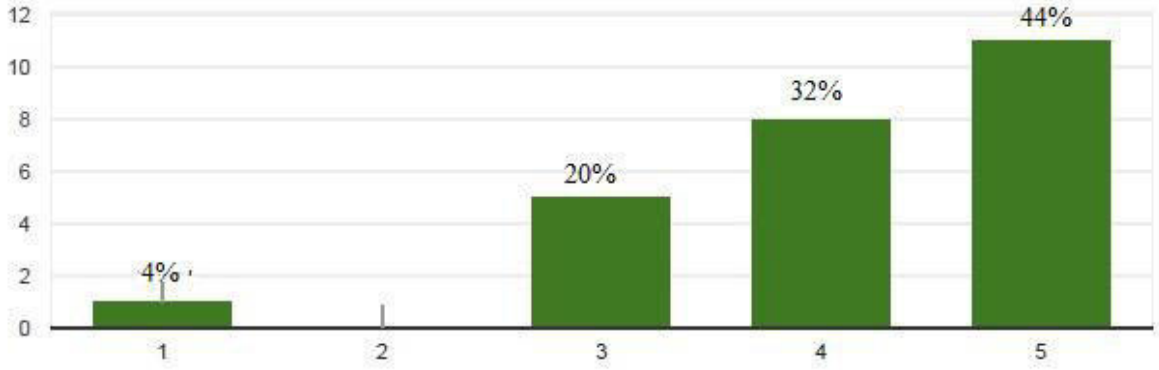


Figure 9. Familiarity with basic concepts and hardware of computer

Knowledge about MS windows:

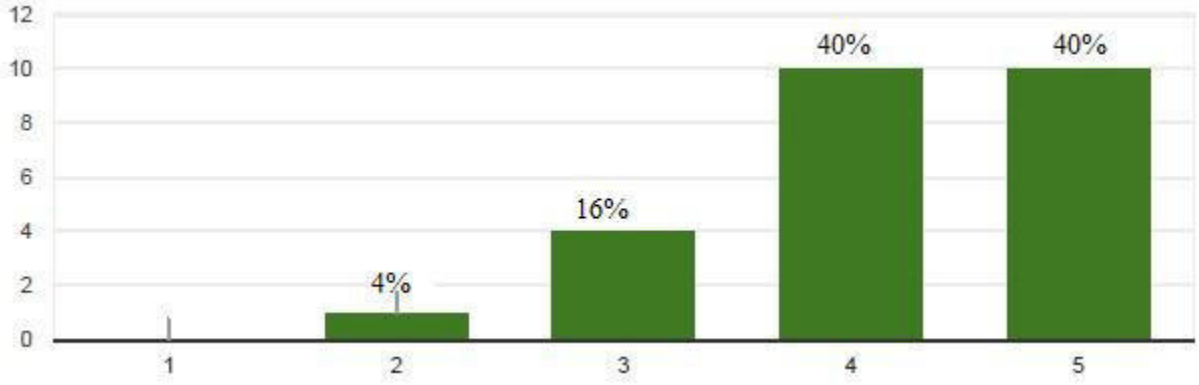


Figure 10. Familiar with basic concepts of MS Windows

As shown in Fig. 10 about 80% of participants highly familiar with Microsoft windows concepts.

Knowledge of participants in MS Excel, MS PowerPoint, MS Access:

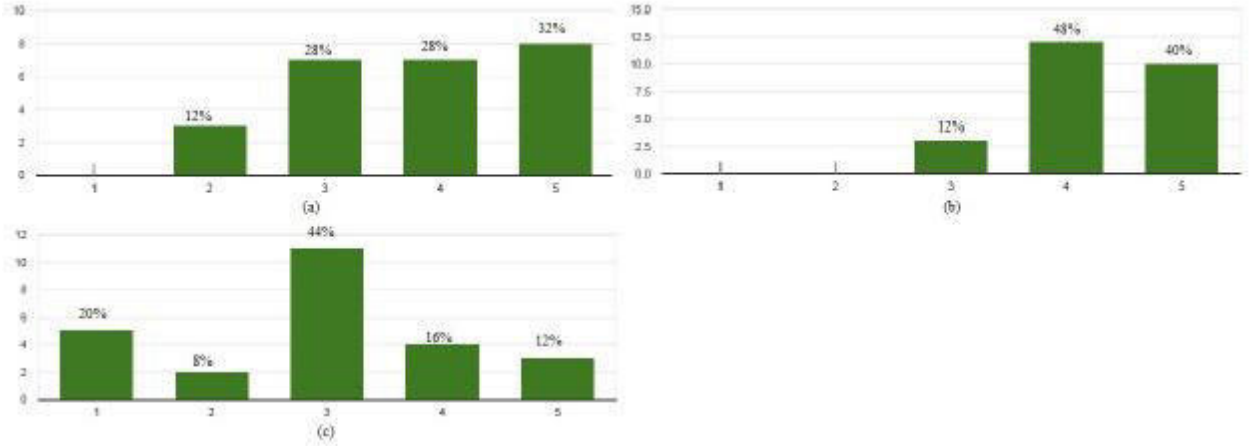


Figure 11. Knowledge of (a) MS Excel (b) MS PowerPoint (c) MS Access

Results for questions in MS Excel and MS Powerpoint and Access show that knowledge in powerpoint more than Excel and Access. 28% of participants have low knowledge in Access.

Knowledge in internet suffering:

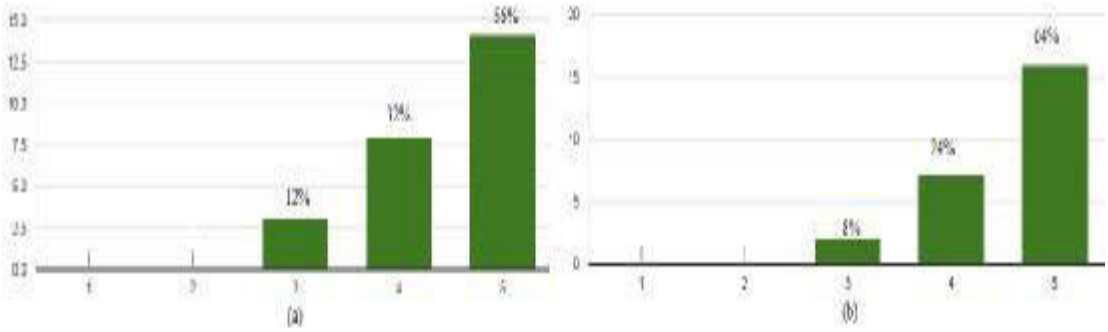


Figure 12. Frequency of (a) internet suffering (b) using email

As shown in Fig. 12 most of participant expert in internet suffering and use email frequently.

Use of software and multimedia systems:

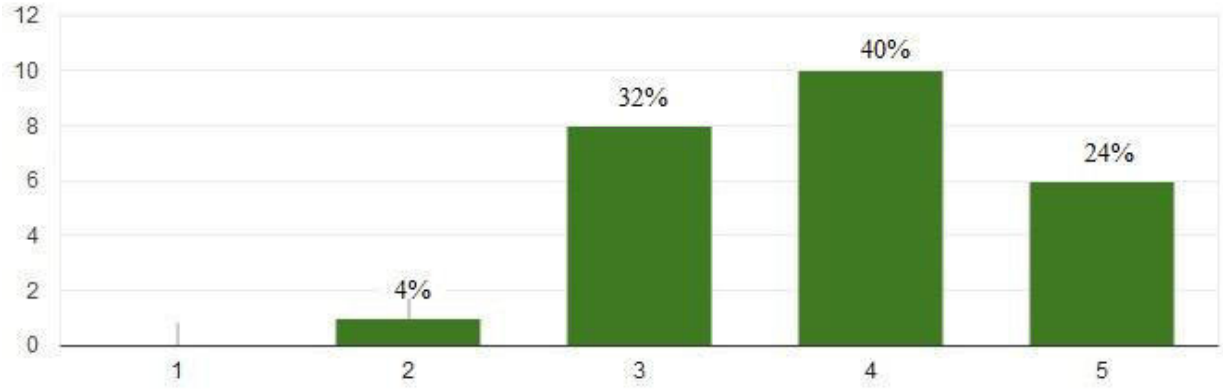


Figure 13. Use of multimedia and software

Results in Fig. 13 show that using of participants from multimedia and software for education is relatively high.

Virtual environment education activity:

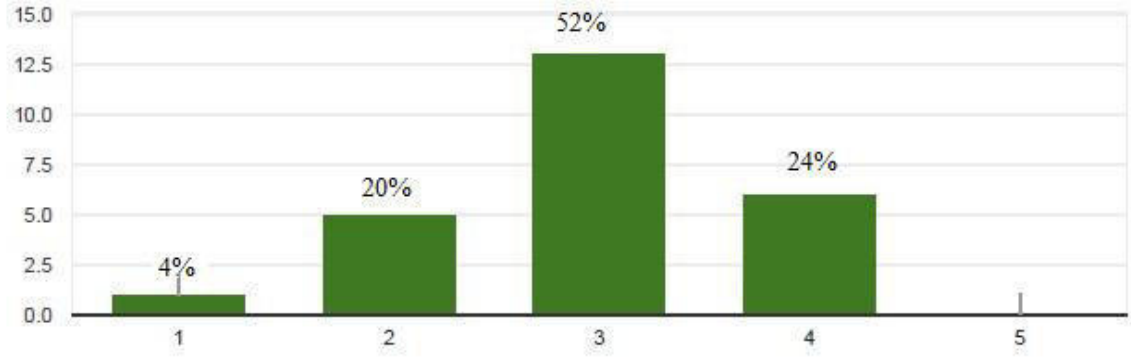


Figure 14. Use of virtual environment for education

Results of above figure show that education activity of participant in virtual environment is relatively medium or low.

Using of online evaluation:
About 6% of participant rarely use online evaluation in their education, 32% use moderately from online education and 56% of participants use from online evaluation usually.

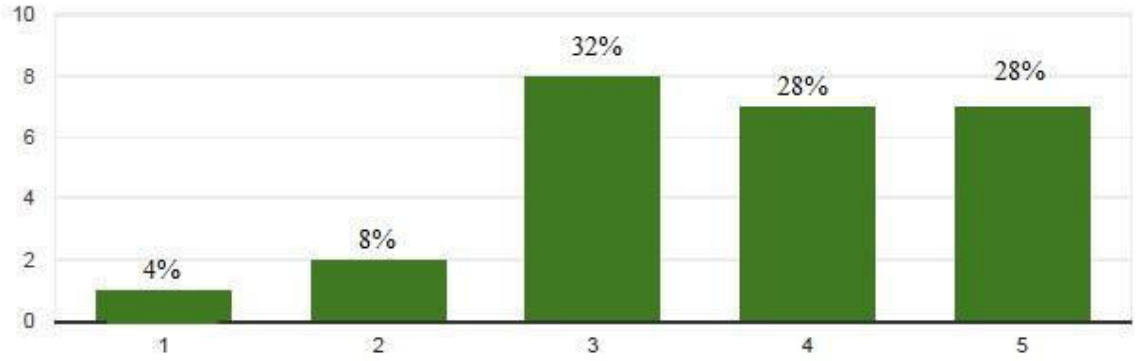


Figure 15. Using of online evaluation

Preparing electronic contents for education:
Involvement of the 44% of participants to provide electronic contents for education is medium.

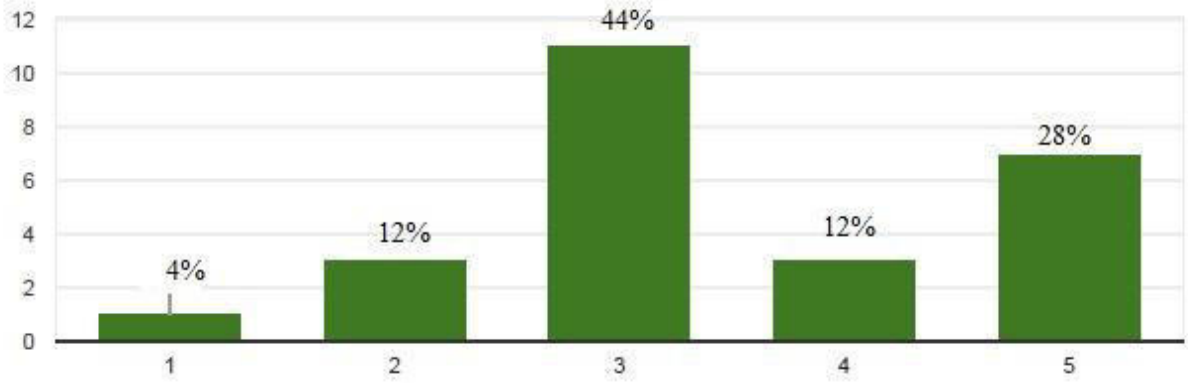


Figure 16. Preparing electronic contents for courses

Control system of learning management:
From below fig can say most of participant averagely use of control system for learning management. The number of participant that use rare or high almost is equal.

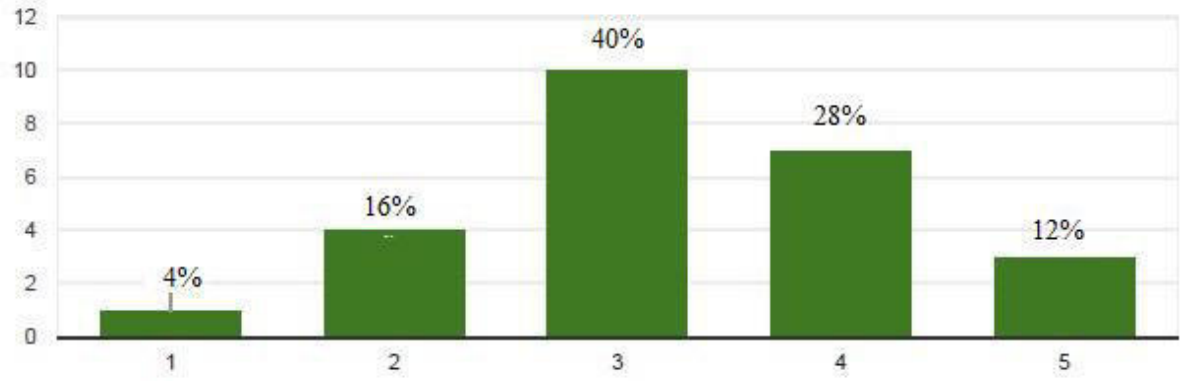


Figure 17. Control system of learning management

Efficiency of ICT:
Most of participants agree that by using ICT can improve efficiency of tasks.

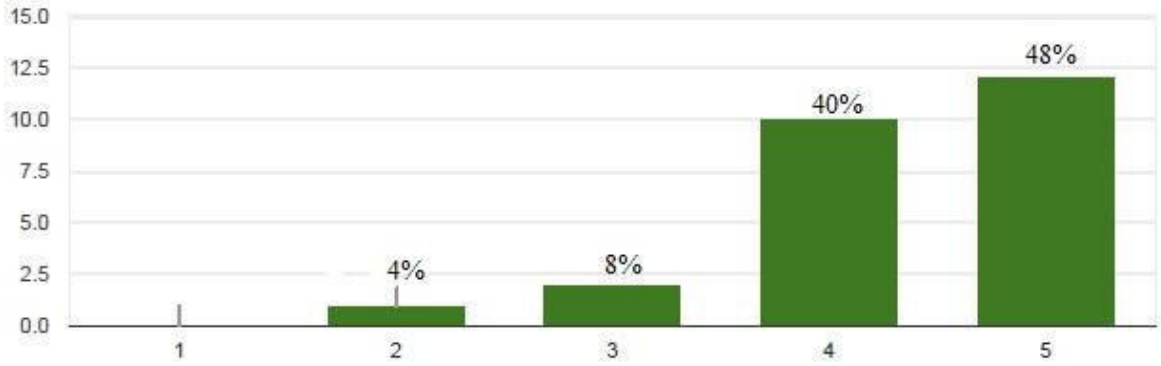


Figure 18. Efficiency perception of using ICT

Accessibility of resource by ICT:
All participants believe that by ICT can access more resources that are needed for job.

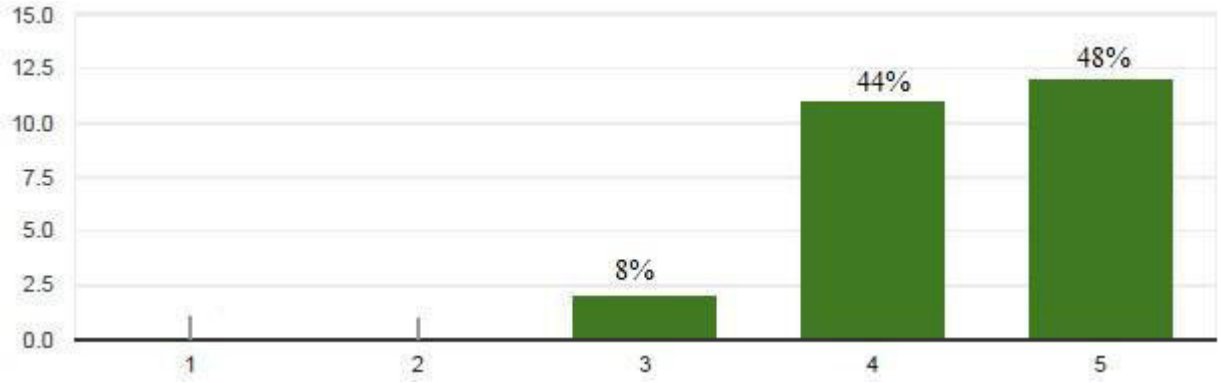


Figure 19. Accessibility by ICT

Ease of use of ICT:

Most of participant based on following figures believe that using of ICT for their works is easy.

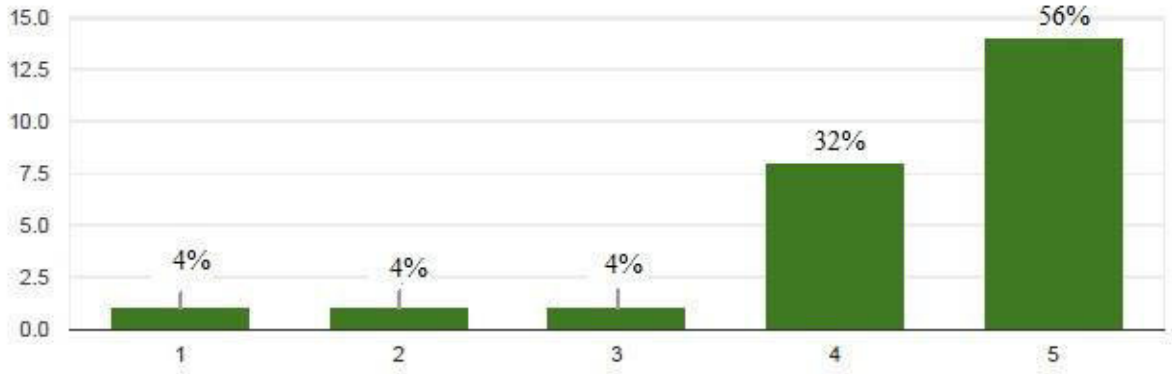


Figure 20. Ease of use regarding ICT

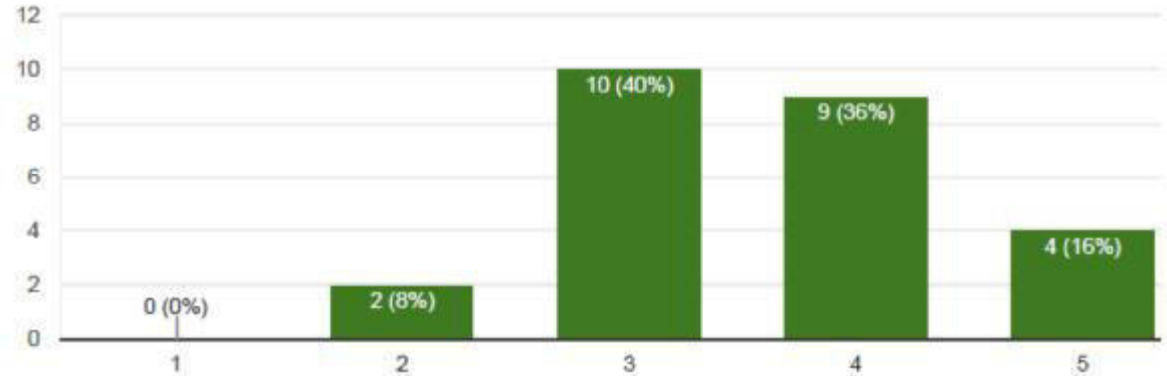


Figure 21. Easy using information of ICT in all cases

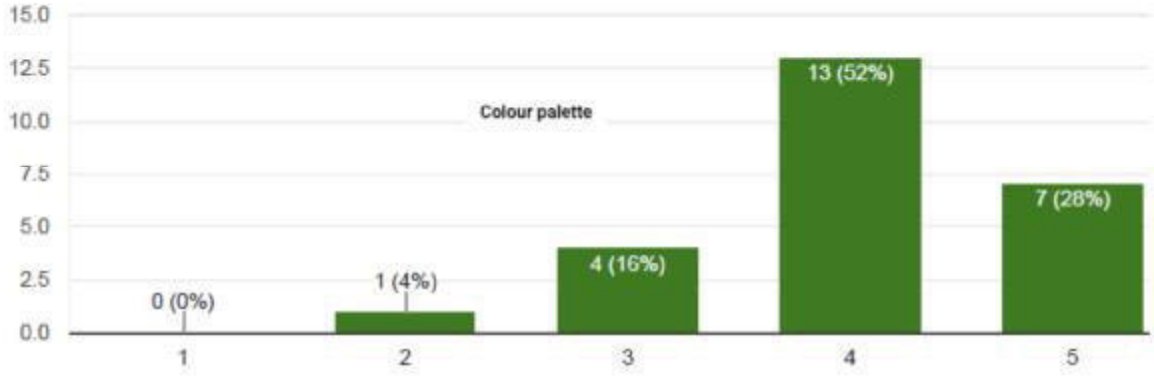


Figure 22. Ease of using information from ICT personally

Flexibility of ICT:

Following results show that all participant believe that ICT is flexible base on their needs.

Figure 23. Flexibility based on required task

Attitude toward using ICT:
Based on the following results attitude of participant toward using ICT is positive.

I am enthusiastic to experience new computer systems after deploying them

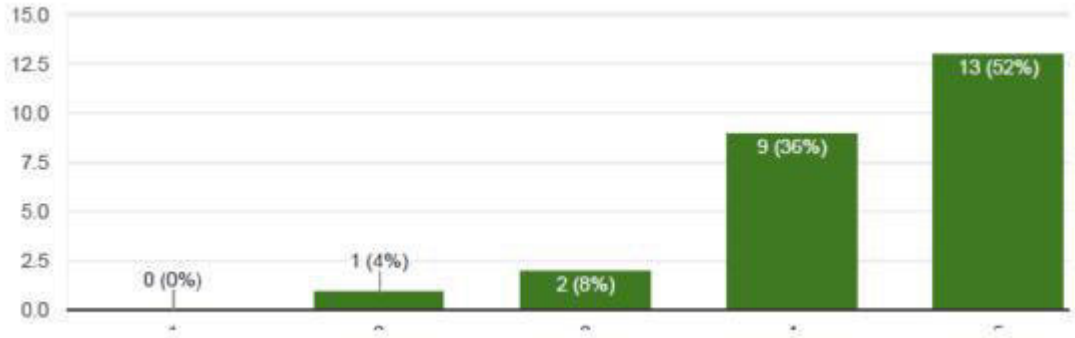


Figure 24. **enthusiastic** toward examination of new established system

It is necessary for me to adapt myself to new technologies

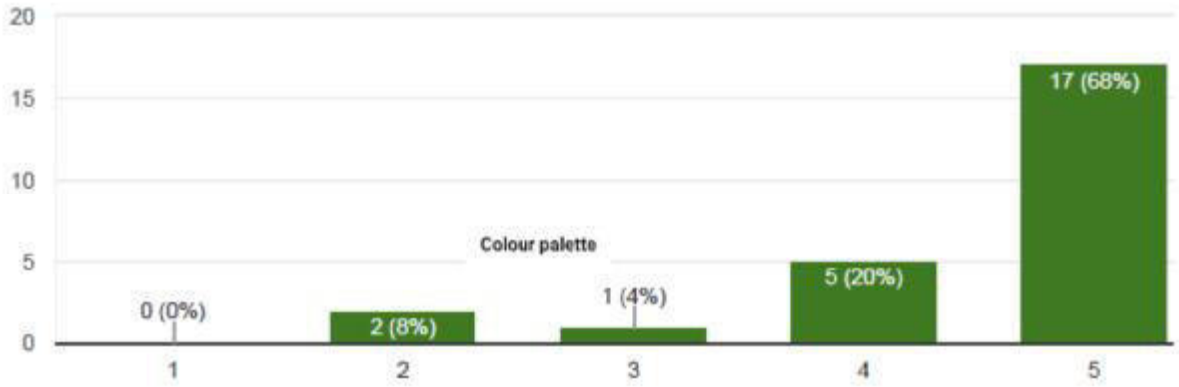


Figure 25. Adapt to new technology

The use of a variety of information technology is pleasant

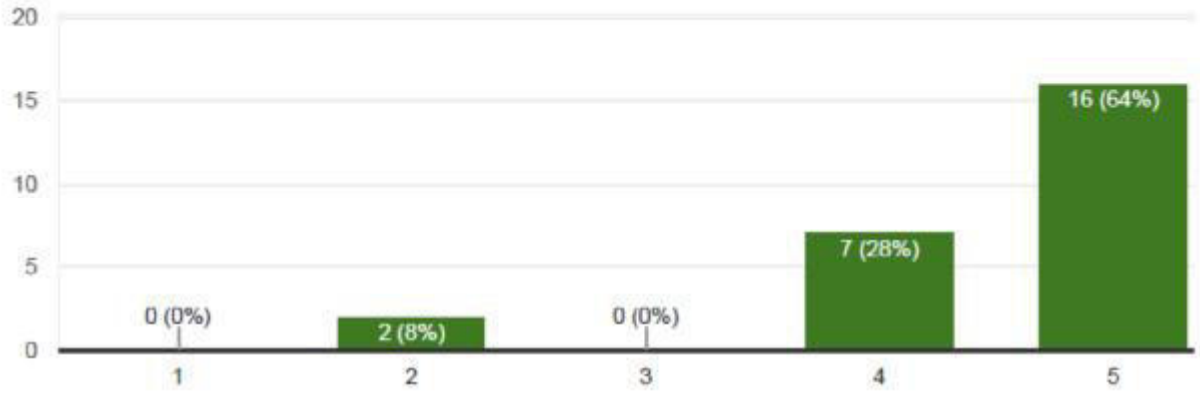


Figure 26. Pleasant of using ICT

The use of a variety of information technology is beneficial

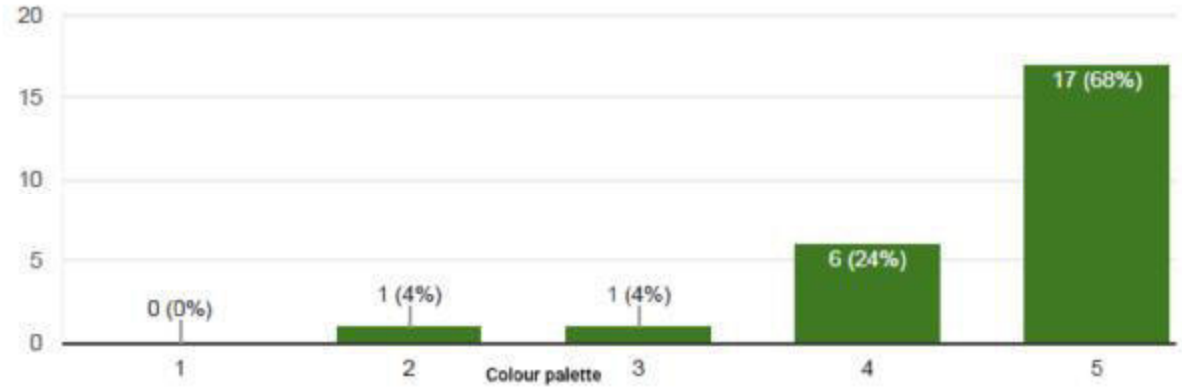


Figure 27. The use of a variety of information technology is beneficial

Amount of fear, anxiety and inability to use the internet

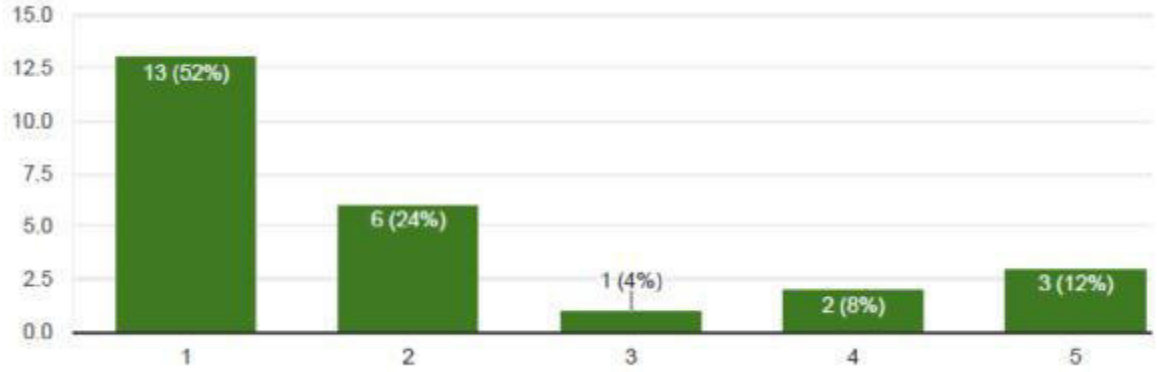


Figure 28. Fear, anxiety and inability to use the internet

Intention to use:
In this section questions regarding intention to use ICT are responded by participants. Results show that most of participant like to use ICT or use ICT.

I surf the Internet to get my required information

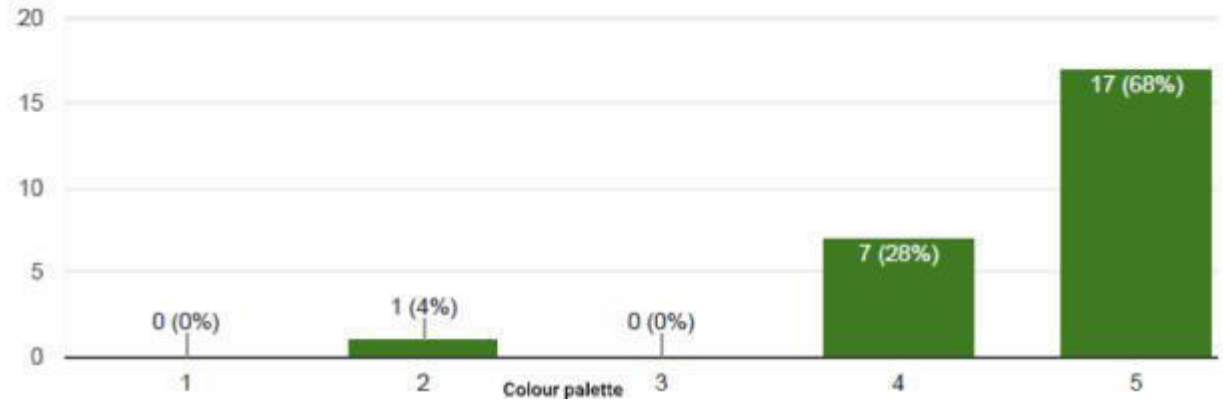


Figure 29. Internet surfing

I use ICT out of my office work hours

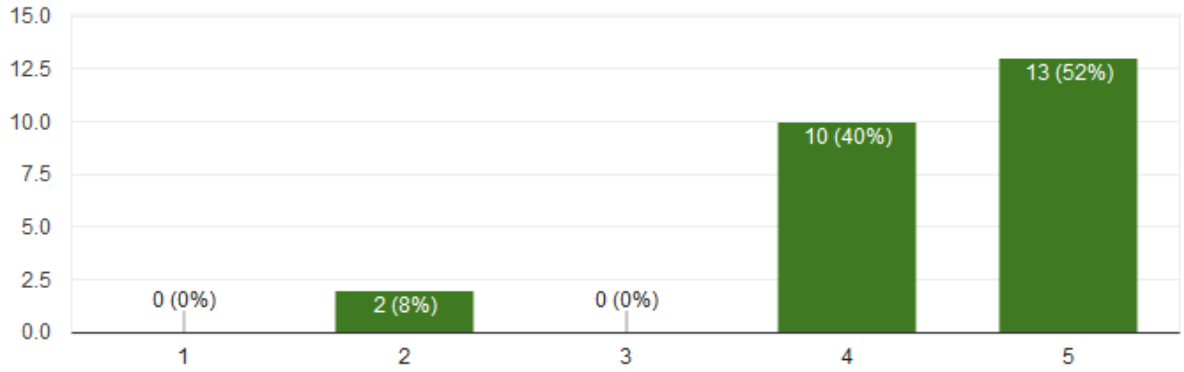


Figure 30.Using ICT out of my office work hours

Using ICT for doing my work when it is possible.

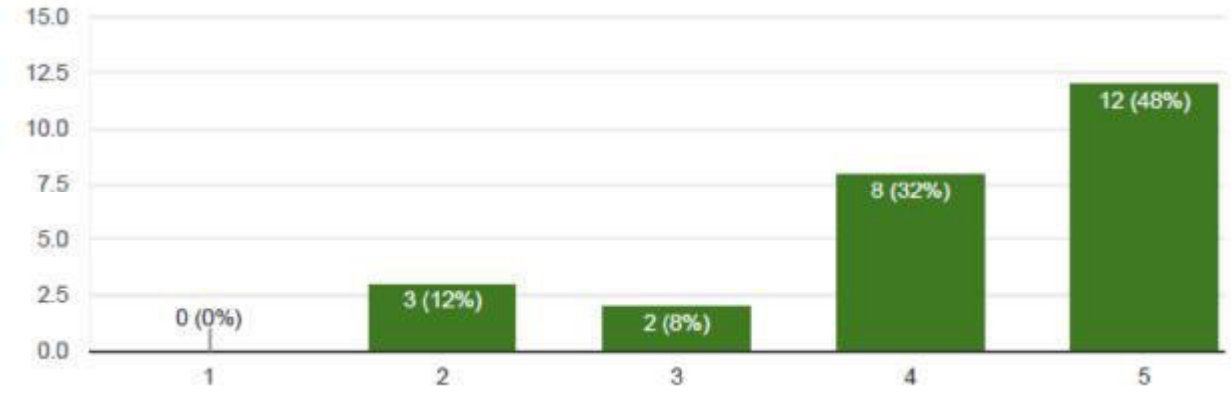


Figure 31. Using ICT in doing my works

Believing in e-learning
Many requirements can be learned through the teaching programs on television

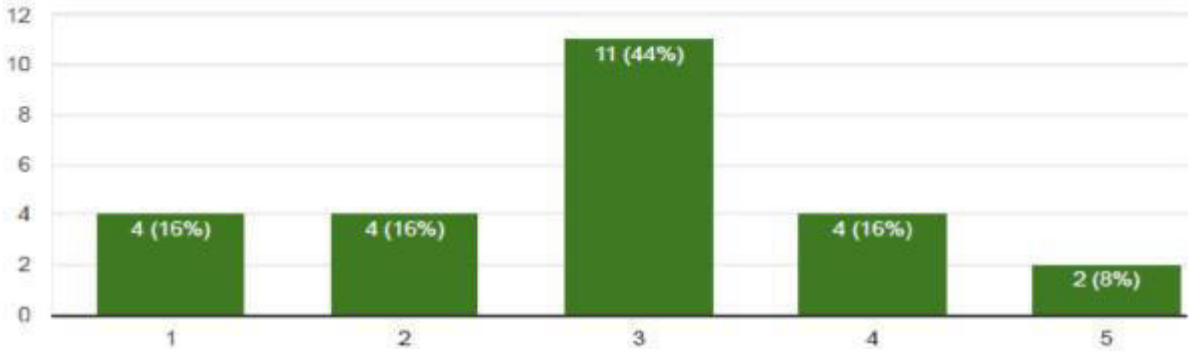


Figure 32. Learning through TV

I can learn my requirements through educational software and virtual environments

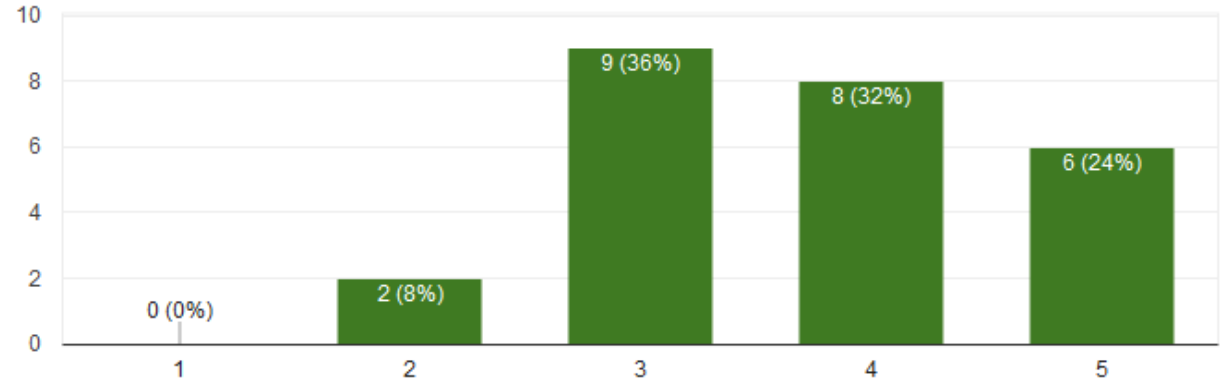


Figure 33. **Learning through educational software and virtual environments**

Learn individually without participation in class
Most of participants believe that participation in class is necessary even you can learn some things individually.

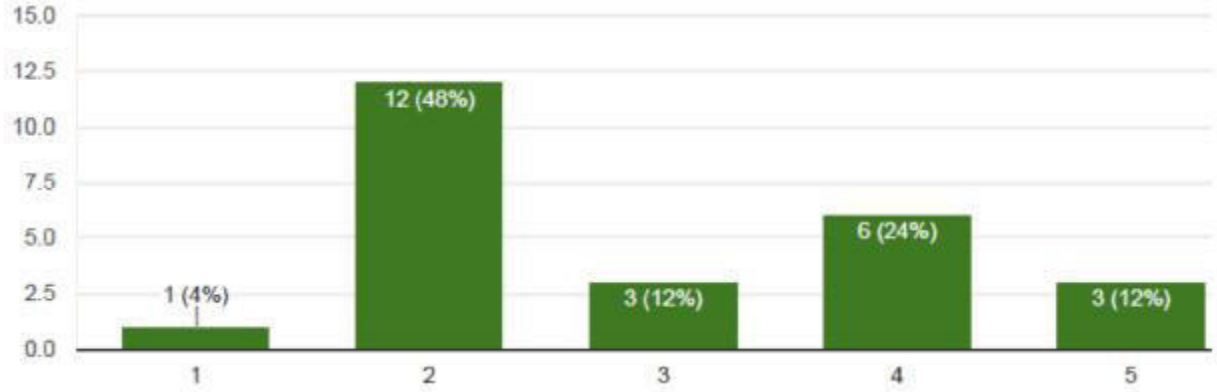


Figure 34. When can learn individually no need to participate in class

Figure 35. Learning through TV and Internet is hard than classroom

Other prerequisite skills useful for e-learning:

Some of skills are useful to handle e-learning management in the following section skill of participants are assessed.

Using of multimedia and computers:
Most of the participants are skillful in using computer and multimedia.

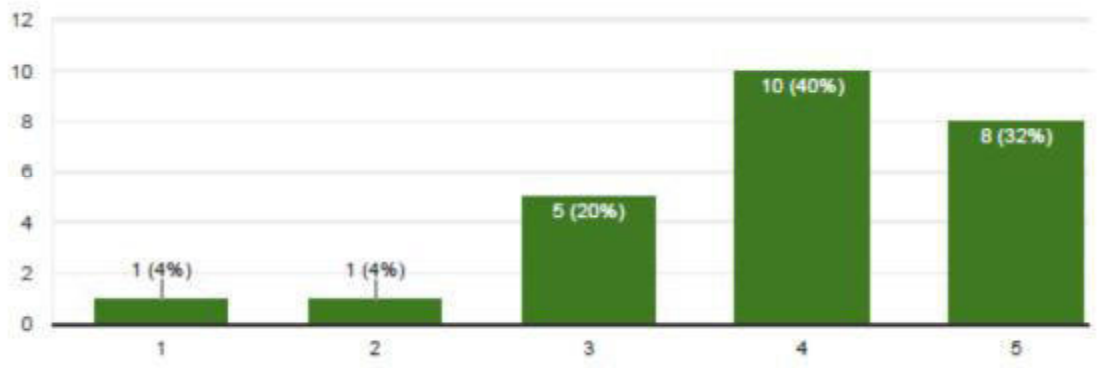


Figure 36. Use of multimedia and computers

Using Email and internet:
Most of participant use email and internet for their works.

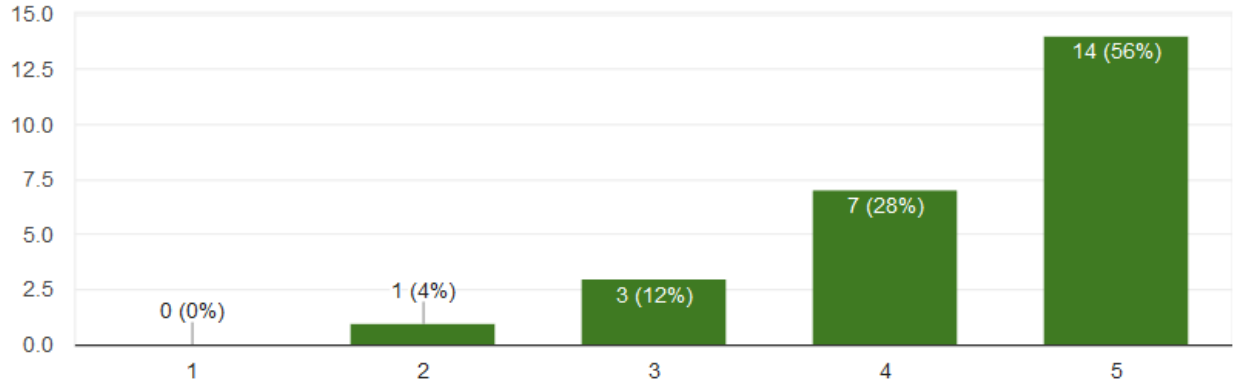


Figure 37. Using email and internet

Basic concept in e learning:
Relatively, all participants familiar with e-learning concepts

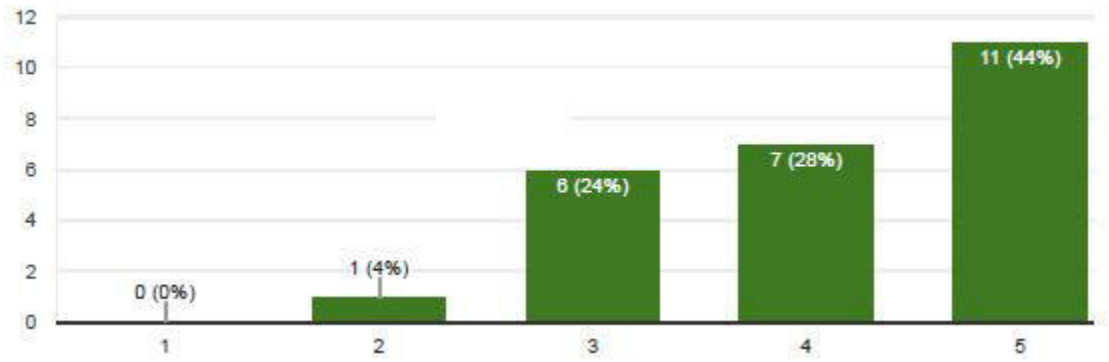


Figure 38. Basic concepts related to e-learning

Familiar with databases:

Knowledge of participant about databases is medium.

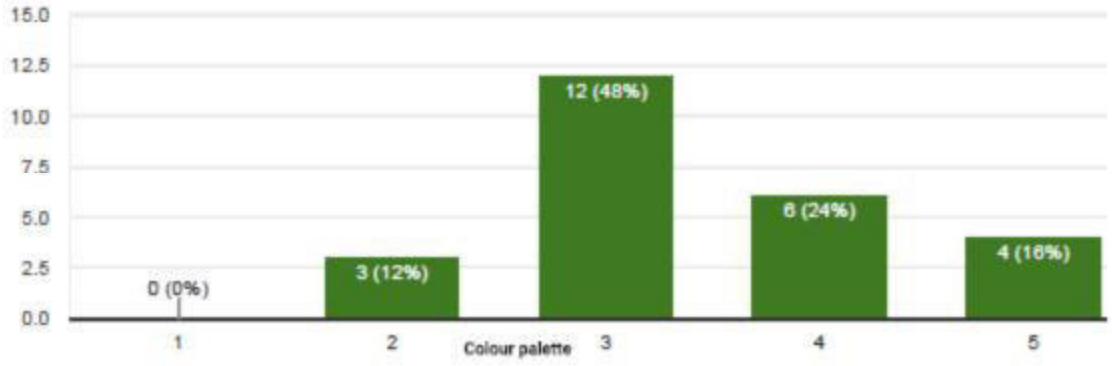


Figure 39. Familiar with databases

Display and presentation:

Participants familiar with presentation software

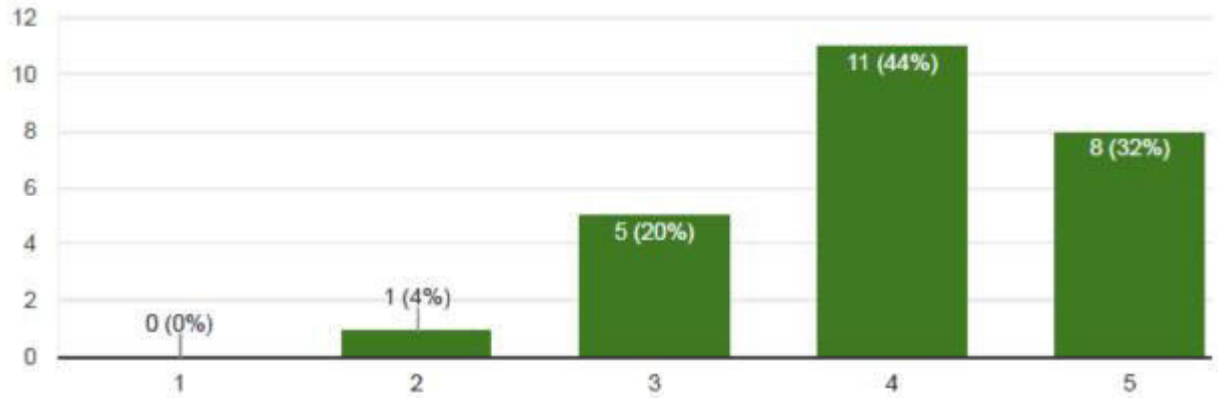


Figure 40. Presentation of materials

Word processing
Most of participant familiar with word processing concepts and software

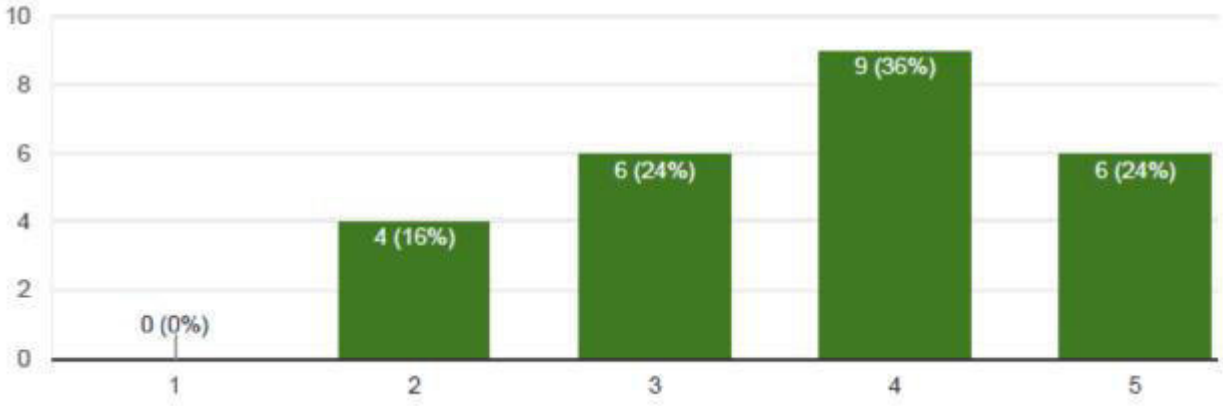


Figure 41. Familiarity with Word processing concepts

Required hardware infrastructure:
In following section we evaluate opinion of participant about hardware requirement to realize e-learning.

Available hardware:
Participants believe that available hardware for install e-learning system is medium

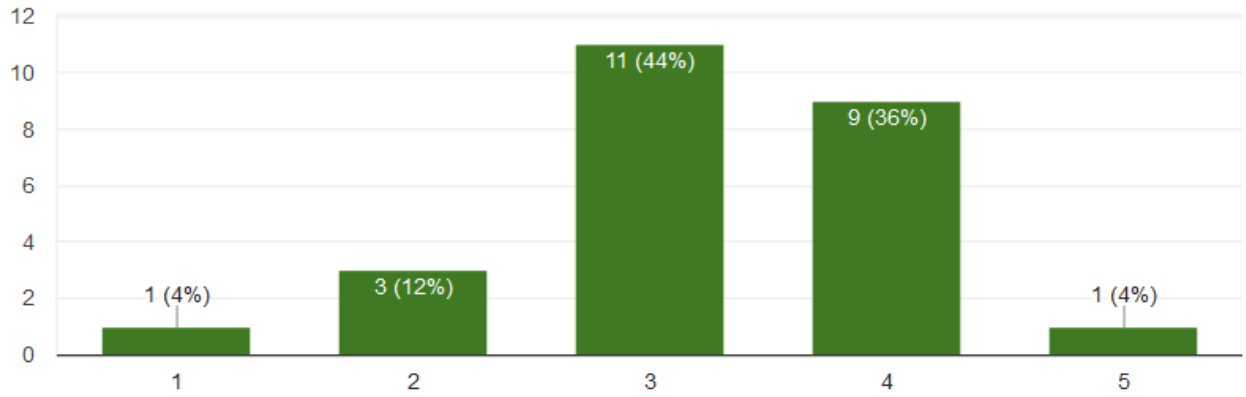


Figure 42. Available hardware for establishing e-learning system

Available site for education

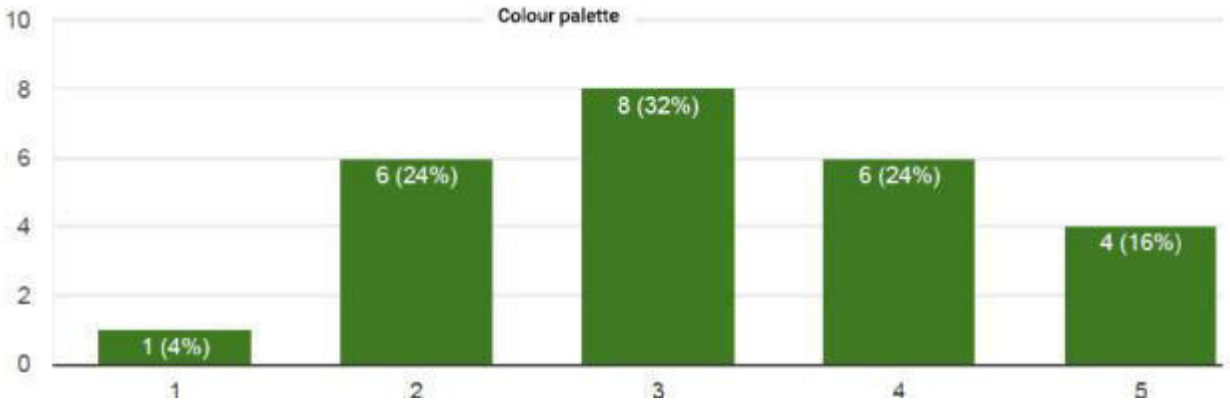


Figure 43. Available site for education

Available internal bandwidth

Participants believe that internal bandwidth of networks is not sufficient for e-learning system

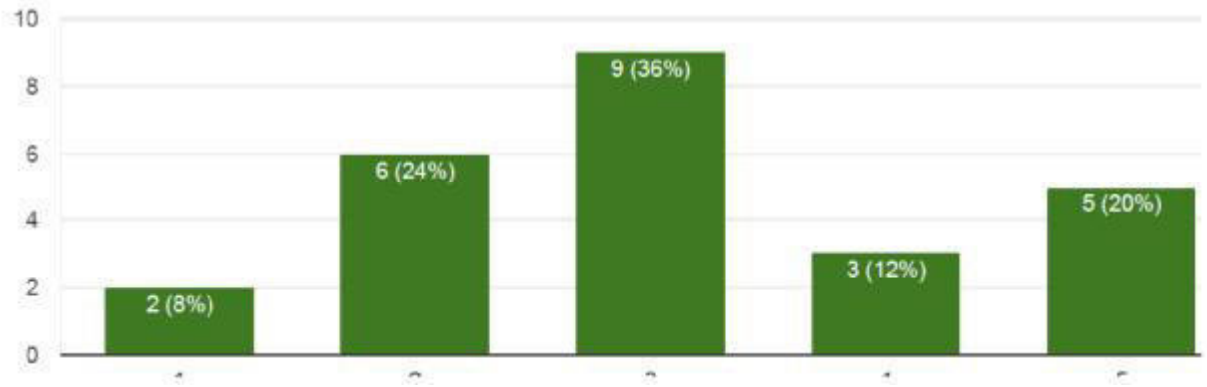


Figure 44. Available internal bandwidth

Available internet bandwidth

Participants believe that internet bandwidth even lower than internal bandwidth.

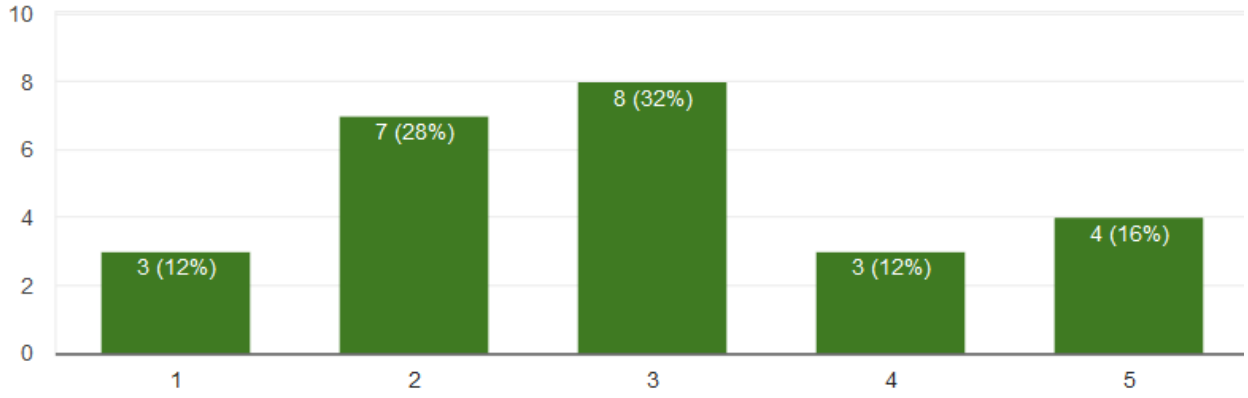


Figure 45. Available internet bandwidth

Required software infrastructure:

Existence website:
Based on participant responses available web base stations are medium

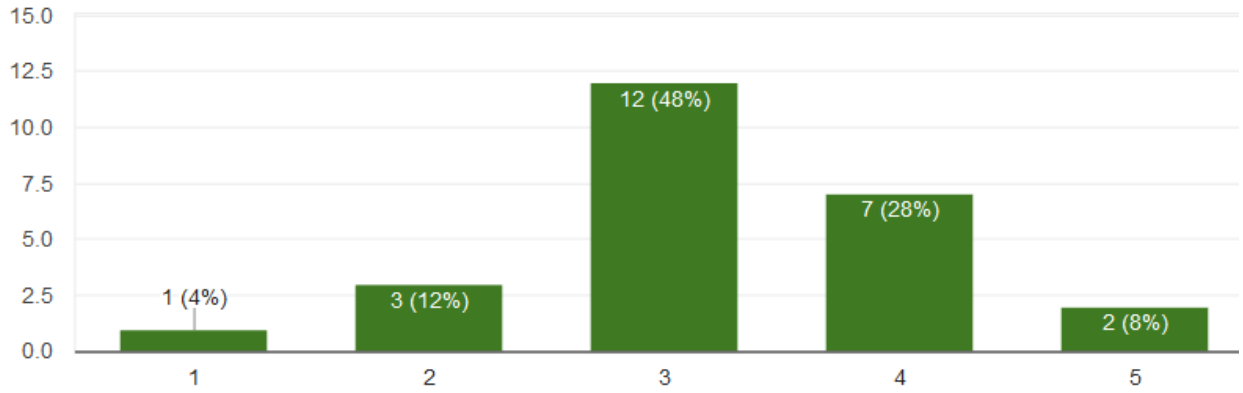


Figure 46. Existence website or web base stations

Availability of required software

Participants believe that required software for establishing e-learning system almost is available.

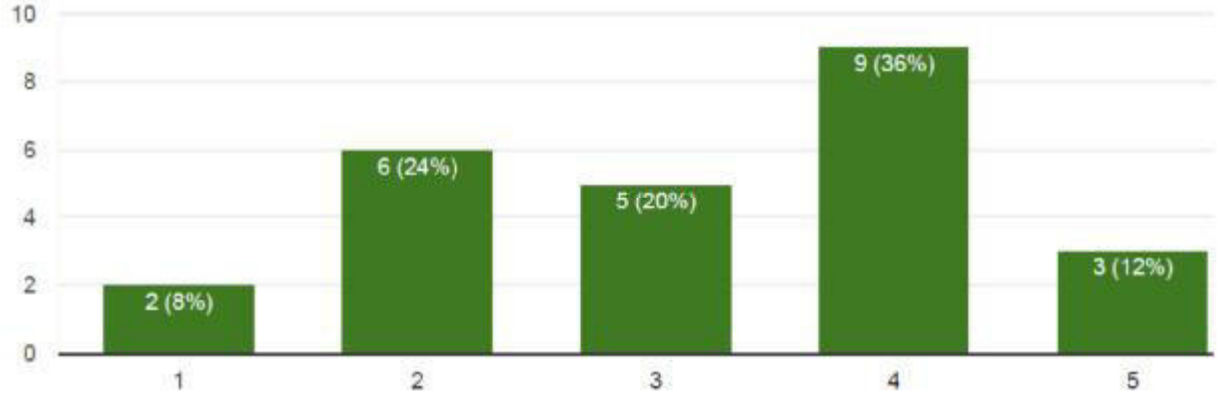


Figure 47. Availability of required software

Development of e-learning environment

From results can say availability of environmental requirements for e learning is medium.

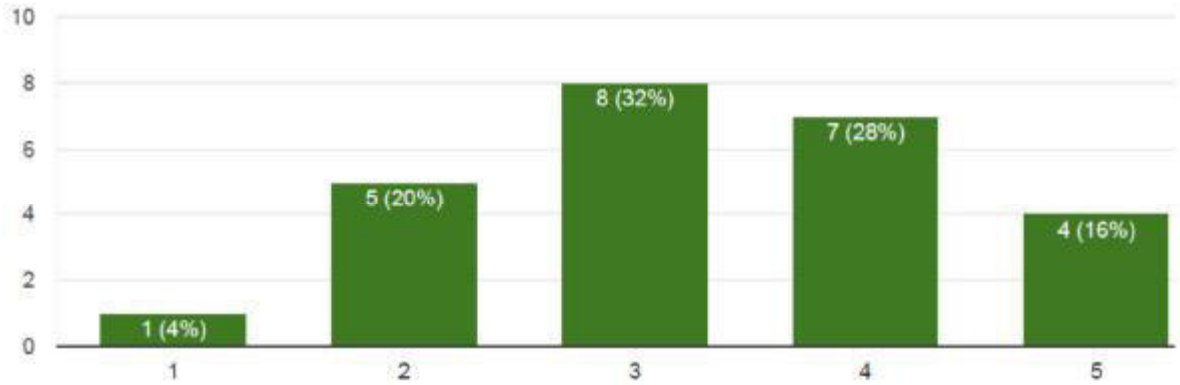


Figure 48. E-learning environment

Availability of intelligent electronic systems

Figure 49. Availability of intelligent electronic systems

Content infrastructure:

Availability of information database and electronic journals:
Based on participants opinions availability of information database and electronic journals is medium.

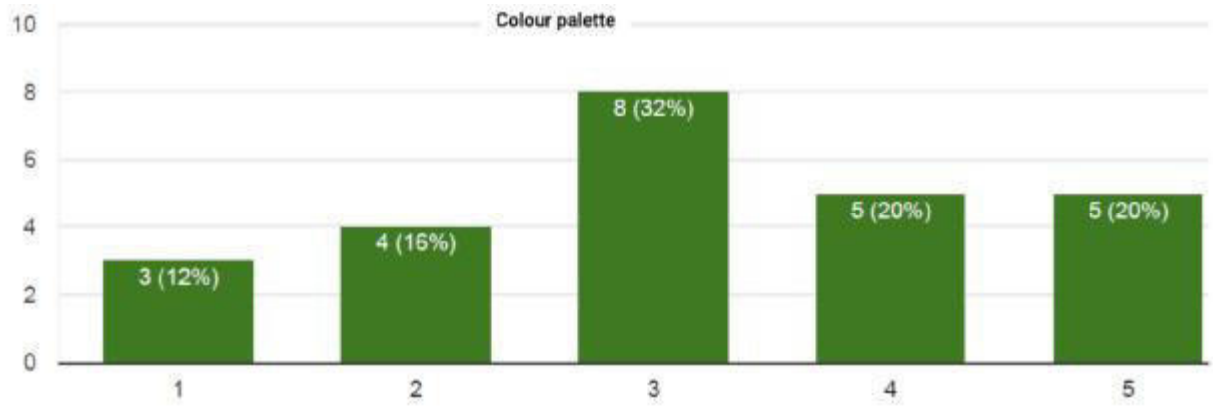


Figure 50. Availability of information database and electronic journals

Available electronics ports:

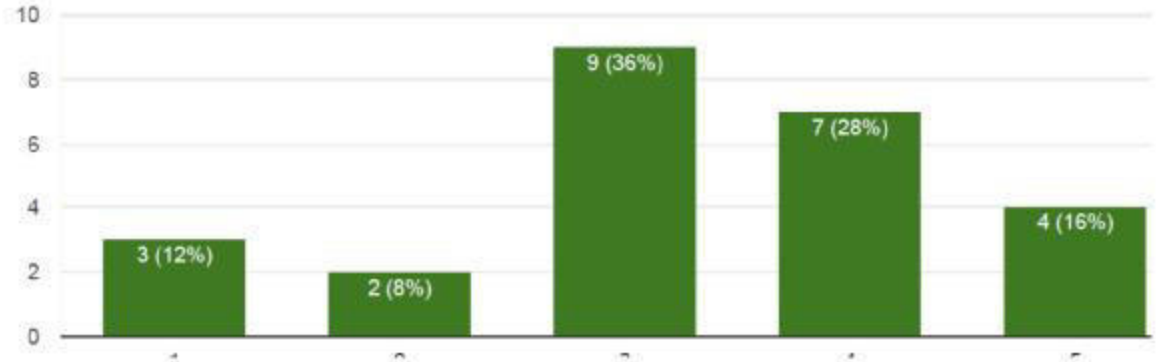


Figure 51. Availability of electronic ports

Availability of electronic libraries:

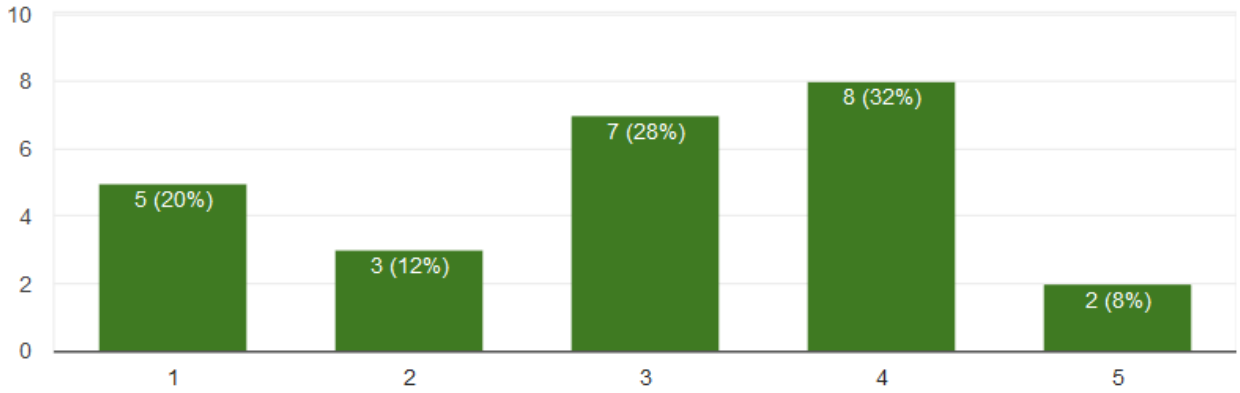


Figure 52. Accessibility of electronic library

Available standard to convert contents to electronic format:

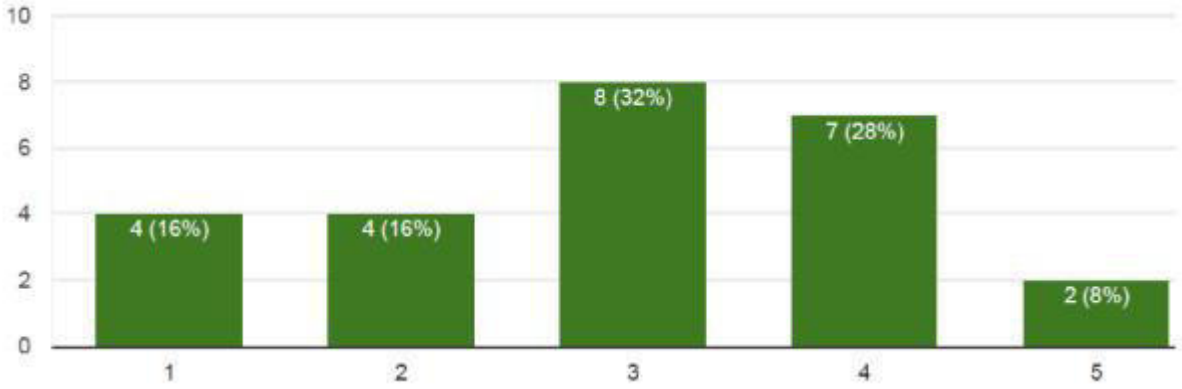


Figure 53. Standard to convert contents to electronic format

As shown in above figures availability of content infrastructure including electronic ports, library, journals and available standards to convert content to electronic format is medium.

Security:

Security of information and content of programs:

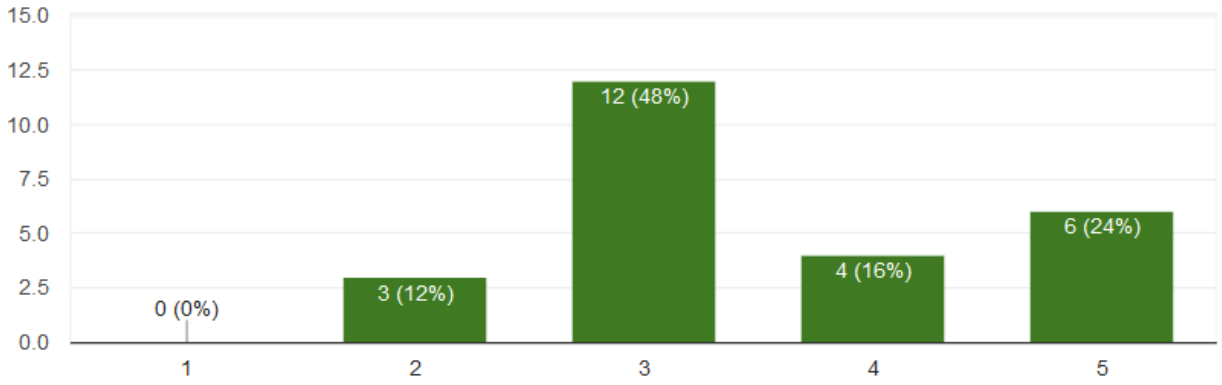


Figure 54. Security of information and content of programs

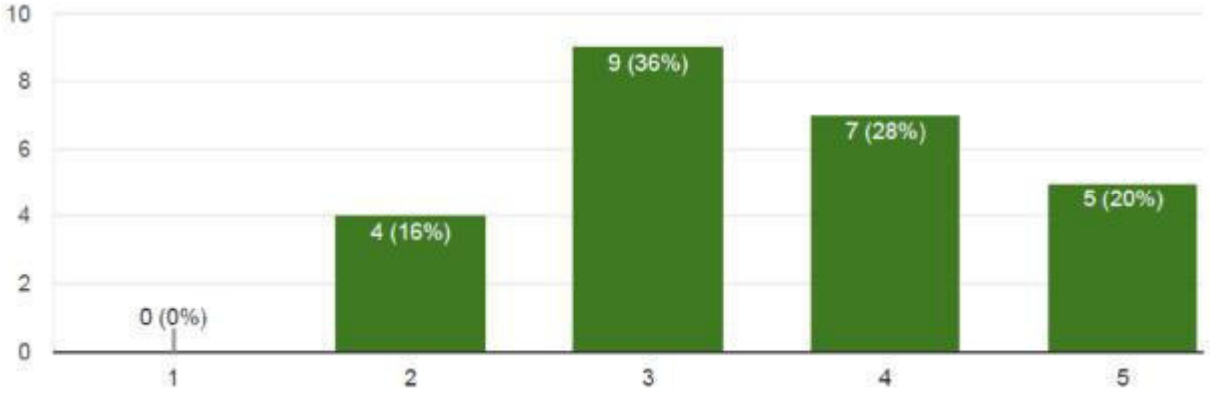


Figure 55. Security of networks and systems

Security for exams and evaluations

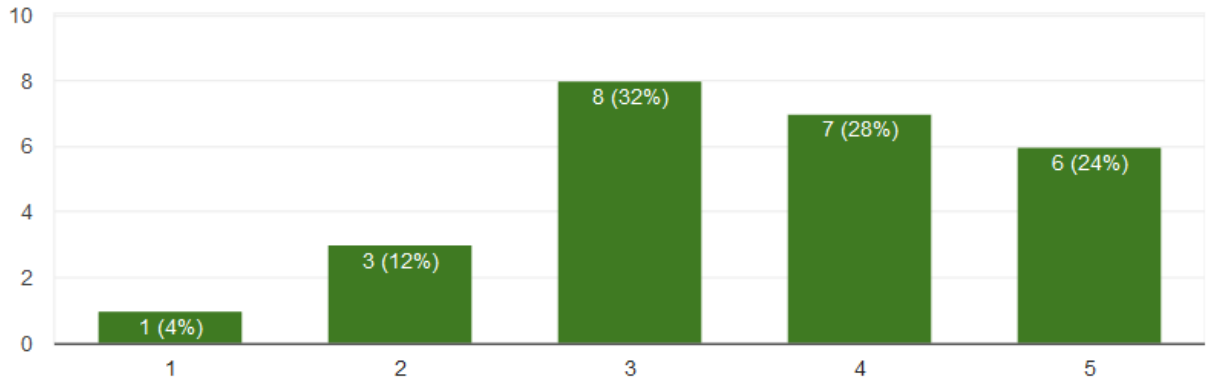


Figure 56. Security for exams and evaluations

Based on above results most of participants believe that security of e-learning for content of programs, networks, systems, exams and evaluations are moderate or high.

Supportive and policy:

Support of official managers:

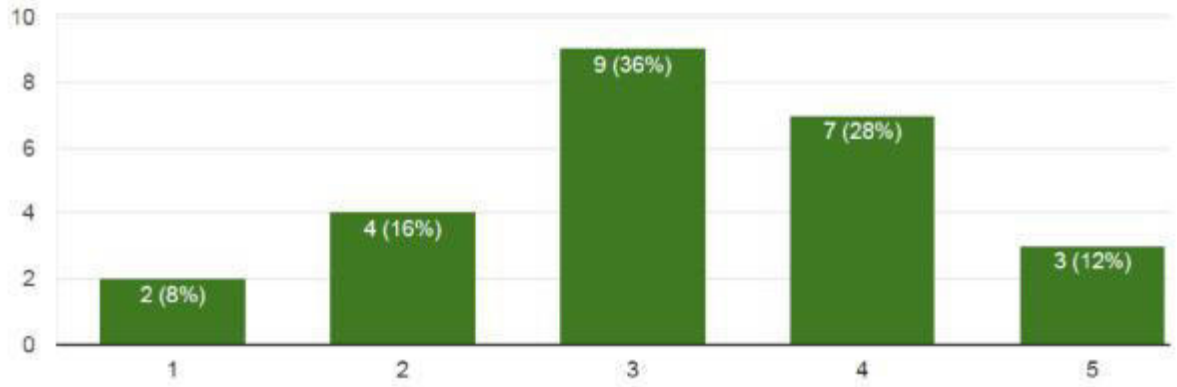


Figure 57. Support of official managers

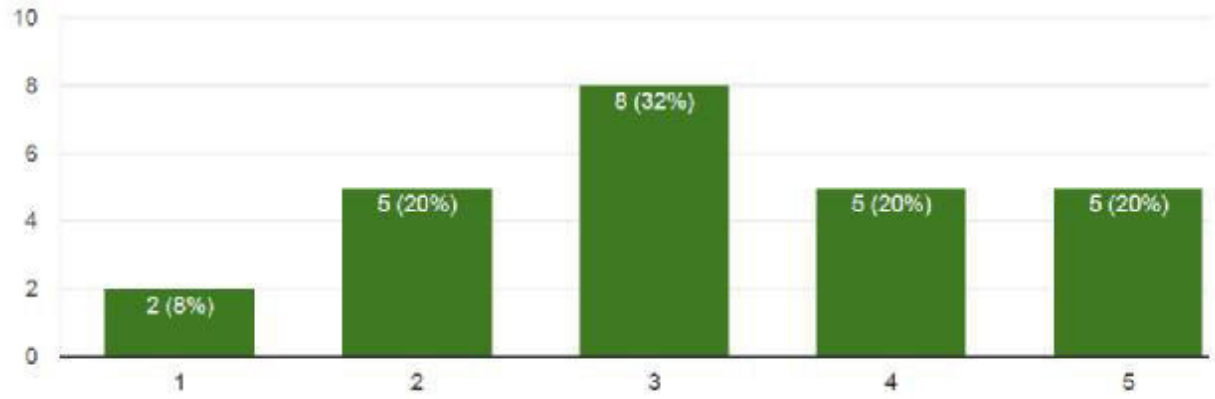


Figure 58. Government support for establishing e-learning environment

Financial supports of institute and organizations:

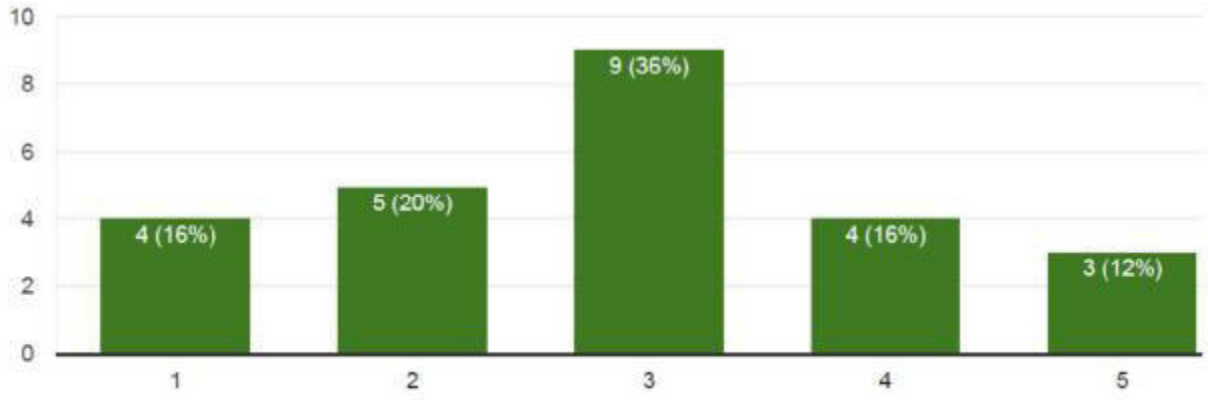


Figure 59. Financial supports of institute and organizations

Above results regarding supporting e-learning systems show that participants believe supporting of government, institutes and organizations is medium or low.

Cultural believes and attitudes:

In this section believes of participants regarding efficiency and advantage of e-learning system evaluated. Following result show that attitude of participants toward efficiently of e learning system is not high.

Effectiveness and superiority of e learning systems:

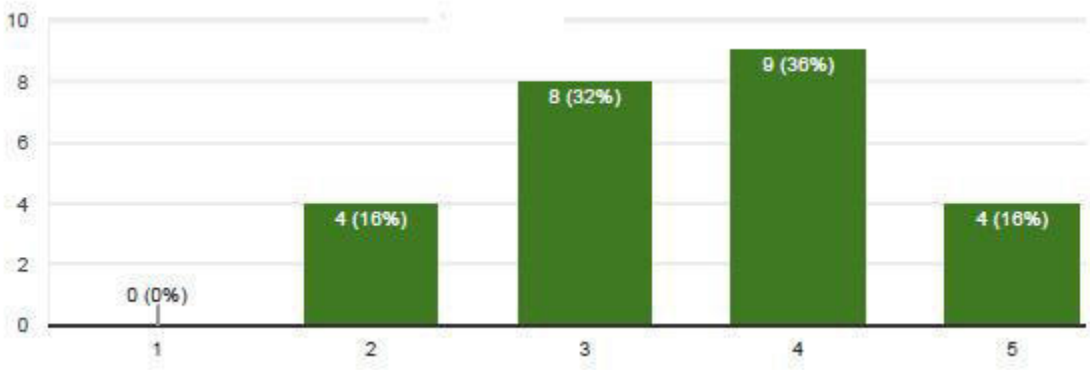


Figure 60. Effectiveness and superiority of e learning systems

Positive attitude toward e-learning certificates and degrees

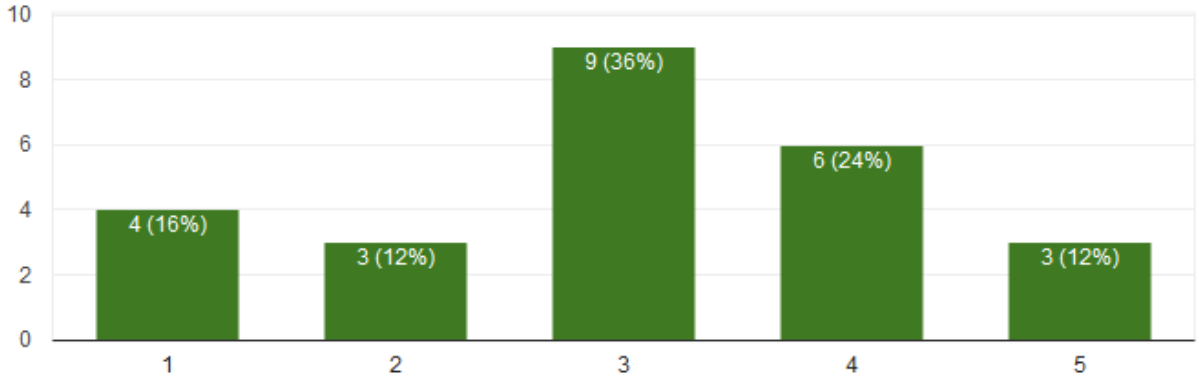


Figure 61. Positive attitude toward e-learning certificates and degrees

Positive attitude toward e-learning system

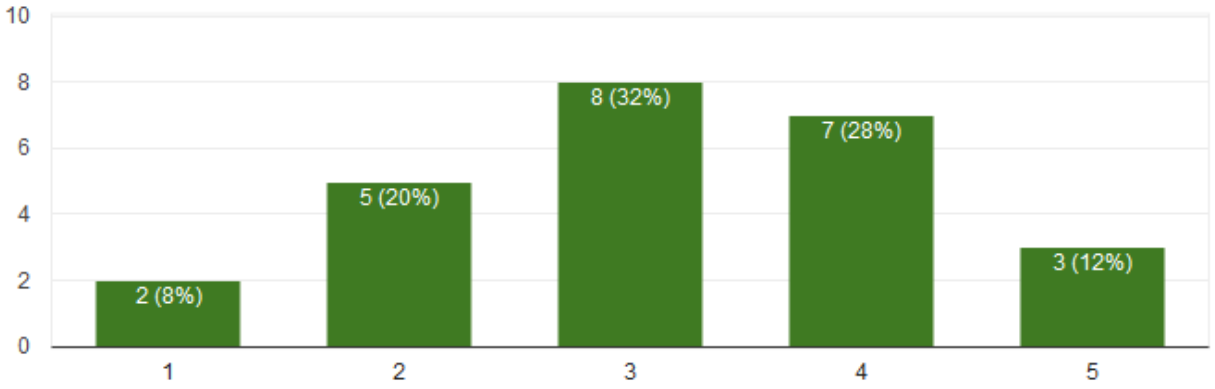


Figure 62. Positive attitude toward e-learning system

Problem during implementation an e-learning system:

Financial, cultural, Management and organization, Technical, Infrastructure, security, Legal, Assessment and Evaluation problems are problems for implementation of e-learning systems based on participant opinions, respectively.

Infrastructure problems:

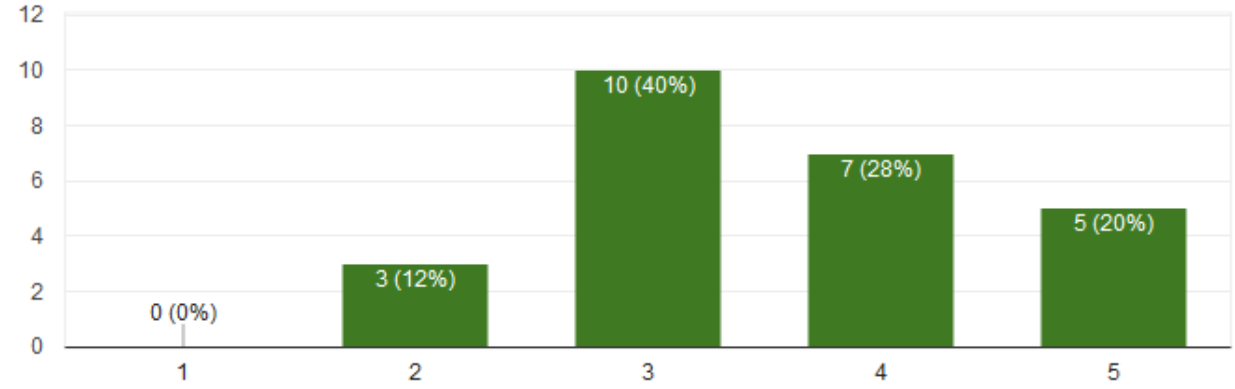


Figure 63. Infrastructure problems

Assessment and Evaluation problems:

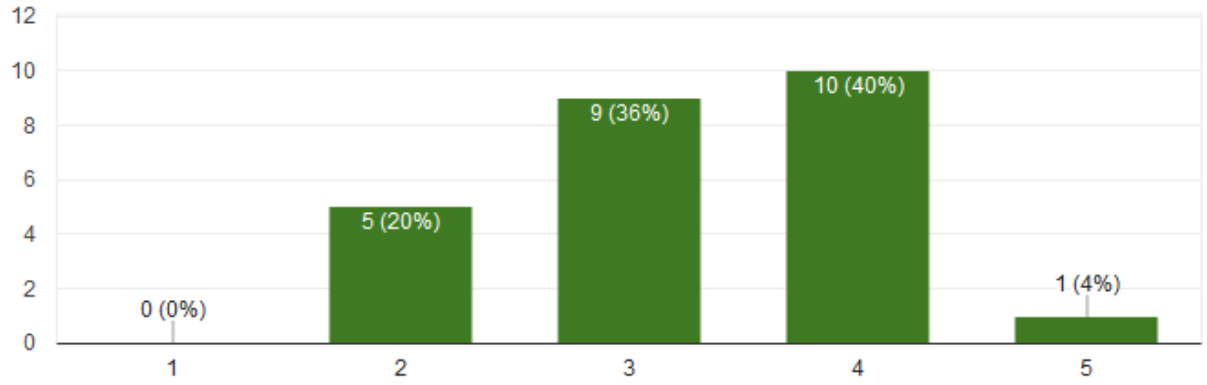


Figure 64. Assessment and Evaluation problems

Legal problems:

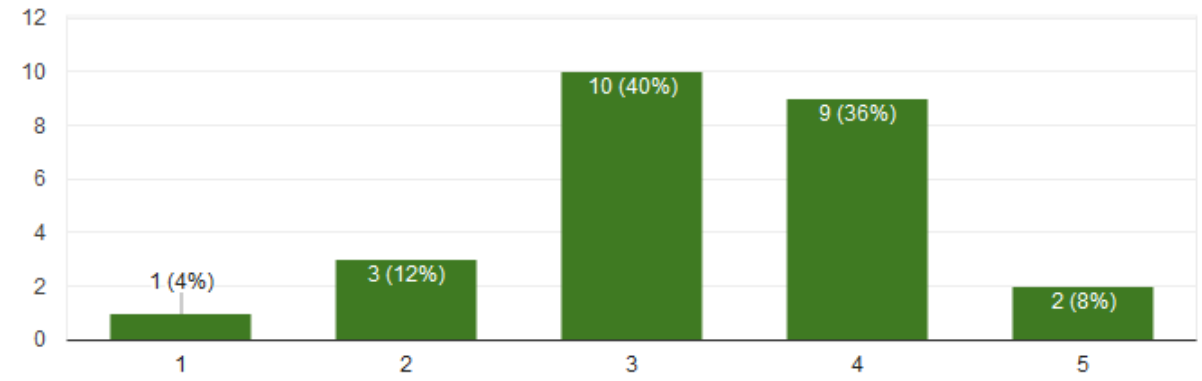


Figure 65. Legal problems

Technical problems:

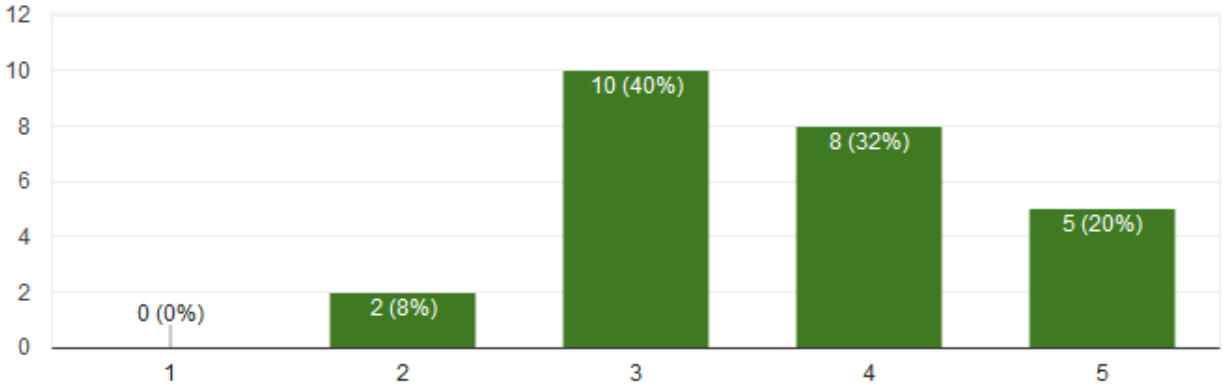


Figure 66. Technical problems

Management and organization problems:

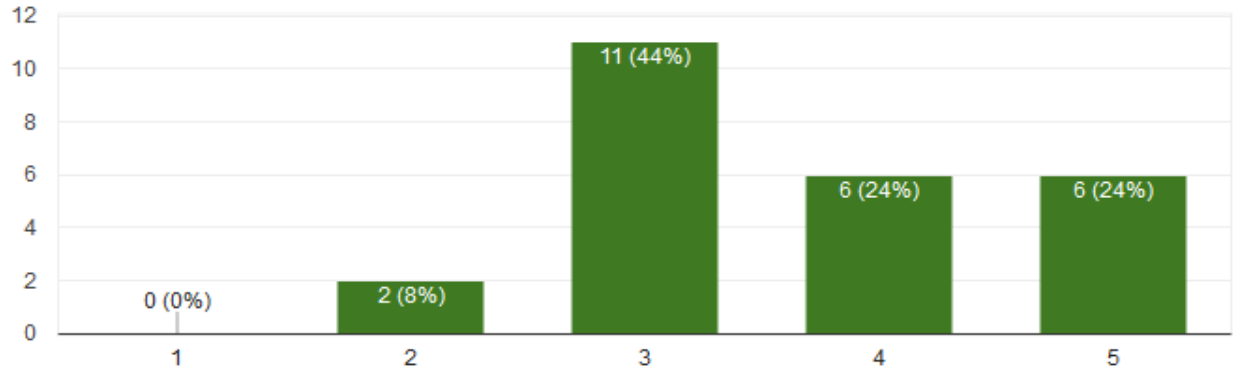
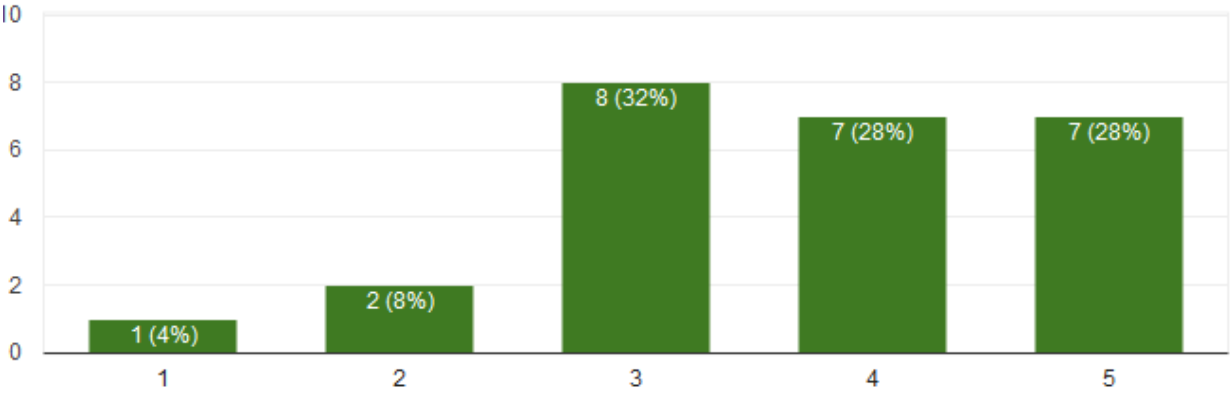


Figure 67. Management and organization problems

Financial problems:



Security problems:

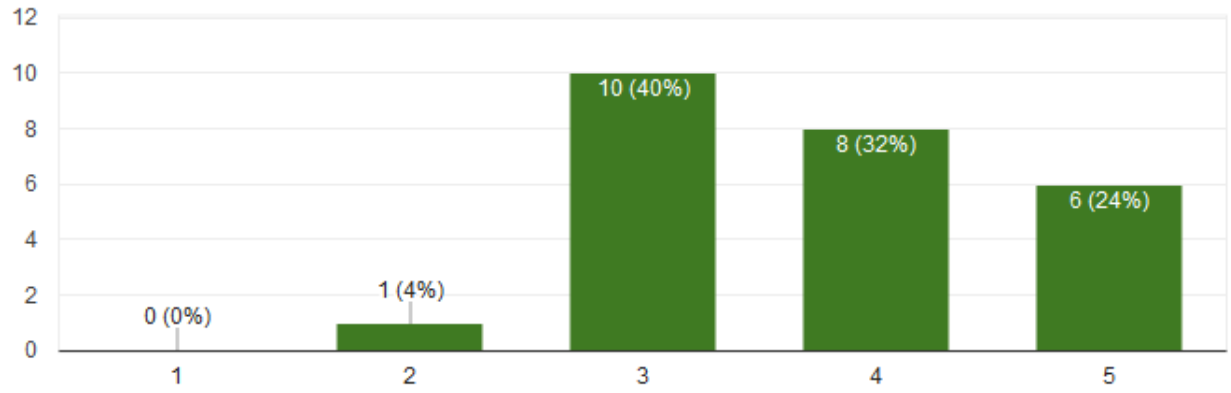


Figure 68. Security problems

Cultural problems:

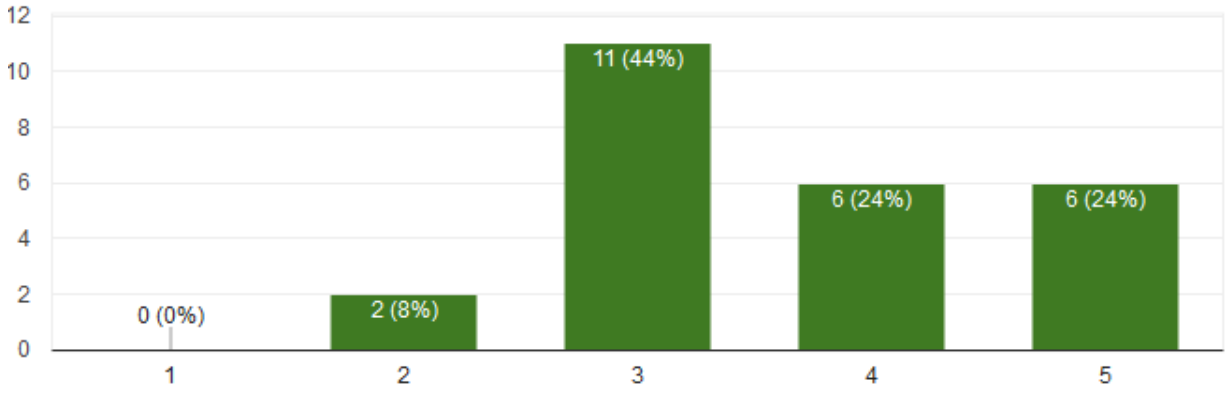


Figure 69. Cultural problems

Effective Methods in the Teaching-Learning Process Using Virtual Tutorials

This section evaluates viewpoints of participants regarding effectiveness of different methods for e-learning systems.

Effectiveness of simulation in e-learning:

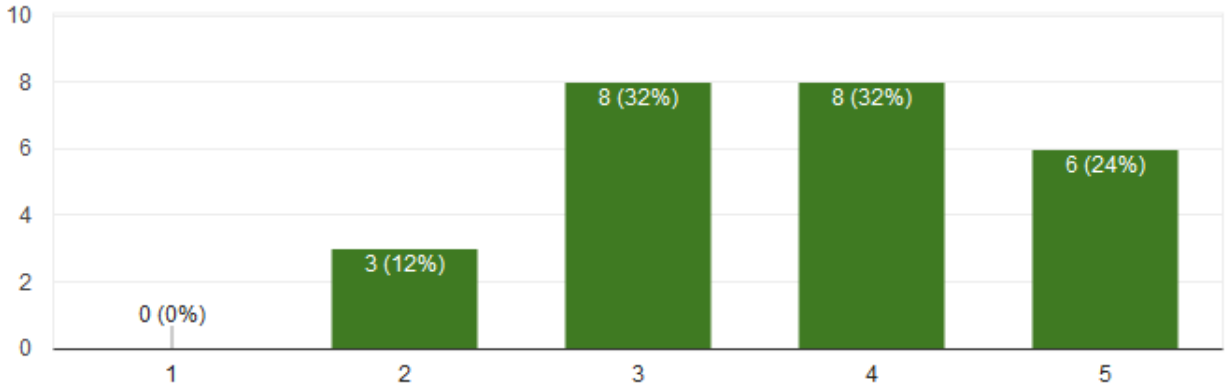


Figure 70. Effectiveness of simulation in e-learning

Effectiveness of virtual instructors in e-learning:

Effectiveness of Voice and video conference in e-learning systems:

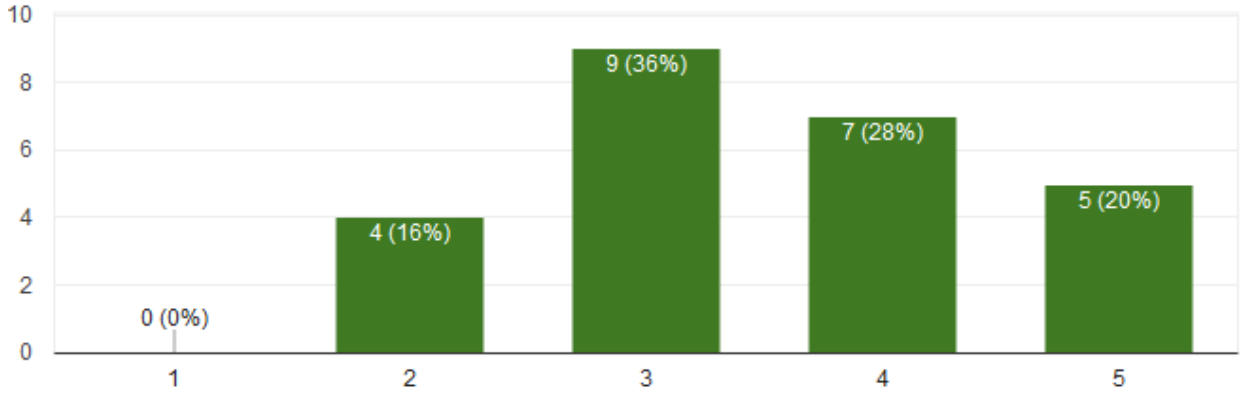


Figure 72. Voice and video conference effectiveness in e-learning systems

Chat and instance message effectiveness in e-learning systems:

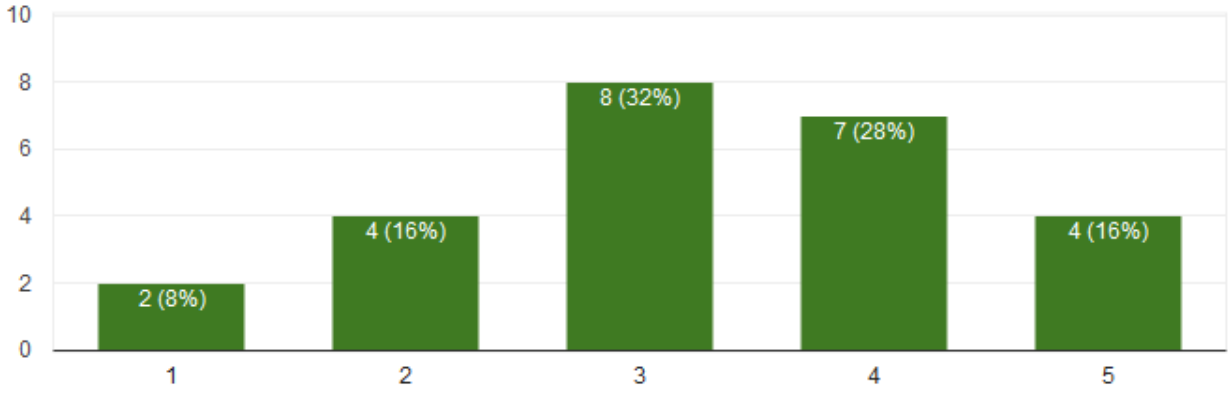


Figure 73. Chat and instance message effectiveness in e-learning systems

Documents, papers and figures effectiveness in e-learning systems:

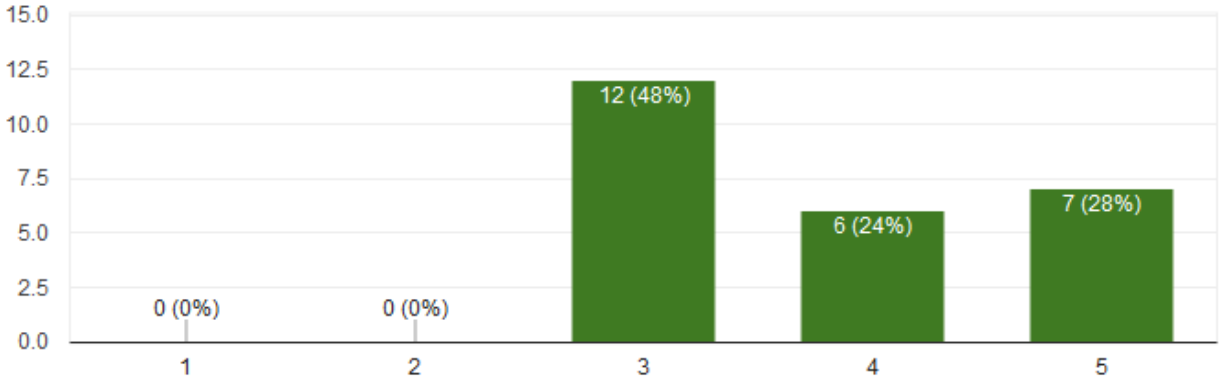


Figure 74. Documents, papers and figures effectiveness in e-learning systems

Bulletin Boards and news effectiveness in e-learning systems:

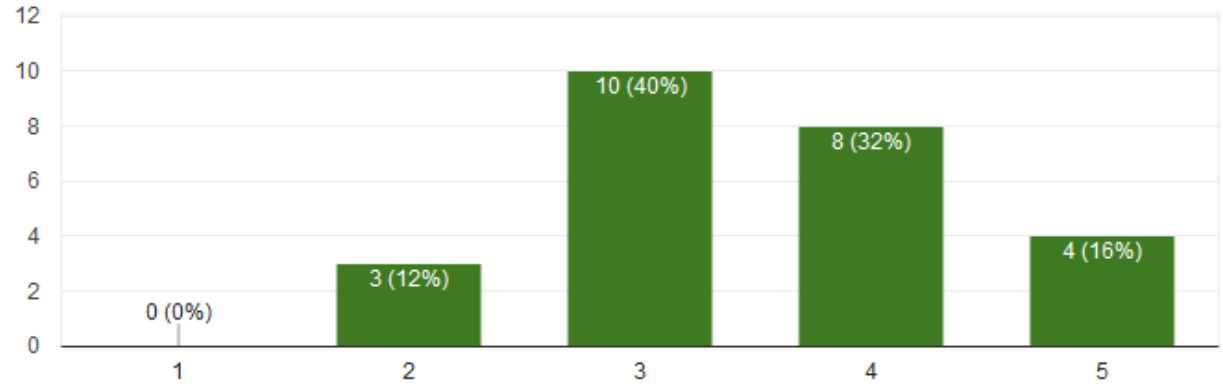


Figure 75. Bulletin Boards – News effectiveness in e-learning systems

Email effectiveness in e-learning systems:

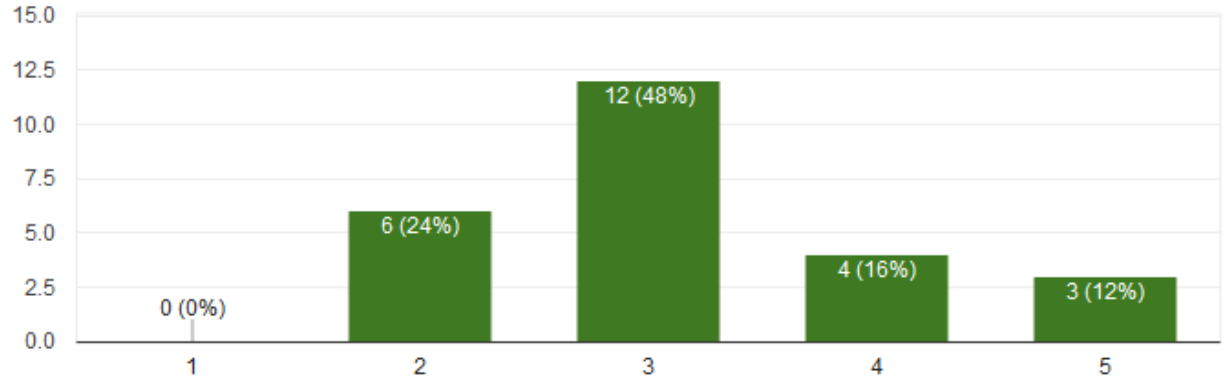


Figure 76. Email effectiveness in e-learning systems

Electronic text effectiveness in e-learning systems:

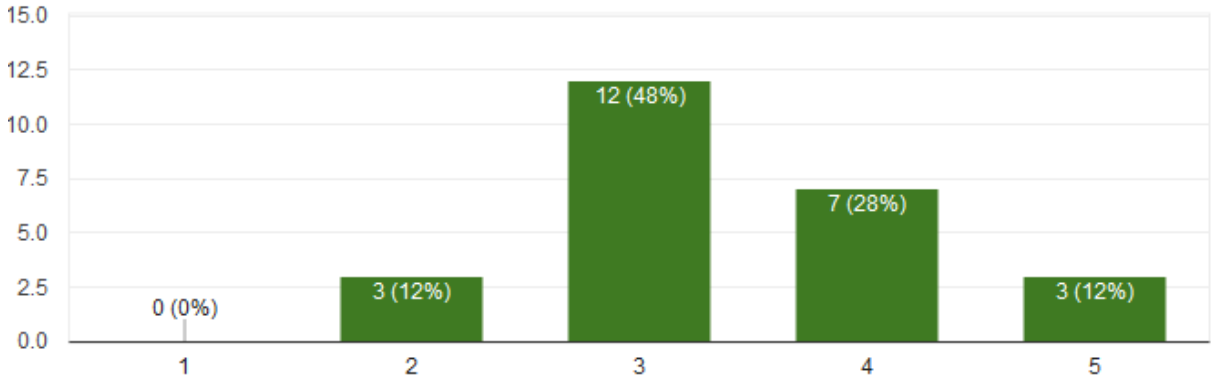


Figure 77. Electronic text effectiveness in e-learning systems

Above results show that between virtual media simulation environments, papers and documents, voice and video, bulletin boards, chat, electronic text and email are effective in e learning system.

Conclusion:

In this study a questionnaire is designed and filled by lecturers of University of Torbat Heydarieh to evaluate skills, attitude of participants toward e learning system. Required software and hardware infrastructures were also assessed in this work. Results show that involvement of participants in computer workshop is low or very low. All participants use social network and their personal website during the week. Results for questions in MS Excel and MS Powerpoint and

Access show that knowledge in MS Powerpoint more than MS Excel and MS Access and 28% of participants have low knowledge in MS Access. Results show that most of participant like to use ICT or use ICT. Most of participants believe that participation in class is necessary even you can learn some things individually. Most of the participants are skillful in using computer and multimedia and most of them use email and internet. Relatively, all participants familiar with e-learning concepts. Knowledge of participant about databases is medium and participants familiar with presentation software. Most of participants familiar with word processing concepts and software. Results show availability of content infrastructure including electronic ports, library, journals and available standards to convert content to electronic format is medium and availability of information database and electronic journals and availability of environmental requirements for e learning, available web base stations are medium. Participants believe that required software for establishing e-learning system almost is available and internal bandwidth of networks is not sufficient for e-learning system. Participants agree that internet bandwidth even lower than internal bandwidth. Participants claim that available hardware for install e-learning system is medium. Most of participants believe that security of e-learning for content of programs, networks, systems, exams and evaluations are moderate or high. Results show that participants believe supporting of government, institutes and organizations is medium or low. Based on participant opinions financial, cultural, management and organization, technical, infrastructure, security, legal, assessment and evaluation problems are problems for implementation of e-learning systems, respectively. The best virtual Medias for e learning system from participants view point were simulation environments, documents and papers, video and voice, etc.

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