



ERASMUS+ 2018-1-EL01-KA229-047747_1

**THE INVESTIGATION OF SECONDARY SCHOOL TEACHERS’
AND STUDENTS PERCEPTIONS ON MOBILE LEARNING**

Loukas K. Ilias

Esperino Gymnasio – L.T. Karditsas

August 2020

Abstract

The main aim of this study was the investigation of the perceptions of teachers of all specialties and students who participated in the European program Erasmus + KA229 entitled "innovation and Mobile Learning", and code project 2018-1-EL01-KA229-047747_1, from September 2018 to August 2020. The individual aims of the research were a) to record the teachers' and students' opinions on Mobile Learning and b) to ascertain the teachers' differences of opinion with regard to gender c) to investigate the extent to which the activities of the program affect the abilities and skills of the participants related to mobile learning, d) the participants evaluate the main mobile learning applications used in the activities of the program. 30 teachers and 84 students from different schools of 5 countries (Greece, Bulgaria, Spain, Turkey and Italy) participated in the research, responding to a structured five-leveled Likert scale questionnaire, which was distributed via e-mail to them. From the factor analysis of the major components, three factors emerged: a) "M-Learning is appropriate for teaching and learning" (11 questions), b) "M-Learning is proper for the communication between the teacher and student" (6 questions) and c) "M-Learning is suitable for personal use" (7 questions). The structural validity and reliability of the questionnaire for the Greek population was also ascertained. From the results, it was evident that both the teachers and students had a positive attitude towards Mobile Learning and they had the intention to use mobile devices in their teaching. However, a statistically significant difference in the participants' opinions in relation to gender was not discovered.

Keywords: Mobile Learning, mobile devices, Secondary School teachers' perceptions.



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1. BIBLIOGRAPHY REVIEW

1.1. What is mobile learning?

According to the literature, many definitions have been given for the concept of mobile learning without a generally accepted definition.

TECHNOLOGY-FOCUSED DEFINITION-

Any activity that allows individuals to be more productive when consuming, interacting with, or creating information, mediated through a compact digital portable device that the individual carries on a regular basis, has reliable connectivity, and fits in a pocket or purse. (eLearning Guild 360 Mobile Learning Research Report, 2007)

LEARNER-FOCUSED DEFINITIONS

- “Mobile learning is when the learning experience that you’re trying to design happens to be out and about in the world.” (Dickers, 2012)
- Learning that arises in the course of person-to-person mobile communication. (Nyiri, 2002)

1.2. Teachers 'and students' perceptions of M-Learning

Learning using mobile devices is highly valued effective, Peter Lonsdale, Chris Baber and Mike Sharples, (2003) because it is easily accessible and provides direct exchange of knowledge and information on a wide range of topics constantly enriched, is collaborative, work exchange is done almost directly by electronic transfer of files and data and provides immediate feedback, and comments and advice.

It can replace bulky books with the electronic availability of specific, selected modules for learning, comprehension and processing, appropriate to the subject and the level of the students. In addition, this type of learning attracts the interest of students and is considered a pleasant activity but also an attractive learning environment, according to research, Nix, 2005, Trifonova A., Ronchetti M., (2004). Because of this data it can be used in education for a constructive and productive cognitive and learning process.

Learning through mobile devices is a very important and constantly evolving field of research (Baran, 2014; Mannade & Hazare, 2017). The study of teachers' perceptions and attitudes towards each innovative form of learning is essential. Acceptance of the use of M-Learning is crucial for us to be able to determine its contribution to the learning process (Baydas & Yilmaz, 2018). According to Bidin and Ziden (2013) the factors that motivate teachers to use mobile devices are their characteristics, their expectations towards these devices as well as the expected pedagogical benefits.

Advances in mobile technologies have enabled educators to send instructional messages in flexible ways. With new technologies including mobile computers, Pocket PCs, Apple iPhones, Android phones, and tablets, instructors and students can communicate through voice and image as well as text. Using mobile devices for educational purposes is becoming a common expectation of learners (Lan & Huang, 2012). For instance, Valk, Rashid, and Elder (2010) demonstrated how mobile phone-facilitated learning can give students in developing countries increased access to educational materials and services, particularly in rural and remote regions. In some previous studies on small displays (e.g., Chen et al., 2003; Maniar, Bennett, Hand, & Allan, 2008), small screen size was found to create cognitive disadvantages related to students' attention and visual

perception (Kim & Kim, 2012). However, students have also reported wanting to have more options to make learning tools more convenient so they can study when and where they want to. Typically, the use of personal devices affords students' ownership of learning, which may Daesang Kim, Daniel Rueckert, Dong-Joong Kim, and Daeryong Seo Students' Perceptions and Experiences Language Learning & Technology 53 lead to positive language learning experiences (Kukulska-Hulme, 2009). However, the innovation of technology-based learning (referred to in this study as Mobile Language Learning or MLL) continues to challenge educators to develop new teaching and learning methods. Unfortunately, many teachers and students resist change in teaching and learning with new technology because they do not think of themselves as part of a new learning culture. In addition, technology-oriented trainings and resources may not meet the needs of individuals in understanding the nature of learning. Stockwell (2007) argued that survey results about mobile learning (e.g., Thornton & Houser, 2002) in classroom settings will be different when the learners have a choice to use mobile devices (e.g., mobile phones) or something else (e.g., desktop PCs) outside the classroom. In later studies, Stockwell (2008, 2010) indicated that technological, pedagogical, psychological, or even environmental barriers often prevent learners from selecting mobile devices like smartphones for vocabulary learning activities, even though they have a positive view of mobile learning.

A survey of primary school teachers in Greece showed the positive attitude of teachers towards Mobile Learning and their intention to use mobile devices in their teaching. However, no statistically significant difference was found in teachers' views on gender factors, years of teaching experience and specialization, Mpoufidou (2018).

2. THE RESEARCH

The second part of this paper attempts to investigate the perceptions of teachers and students of Secondary Education who participated in the Erasmus + KA229 program for M-Learning. For this purpose, a research was designed and implemented, the results of which are presented in this chapter. The research focuses on the views of teachers and students on the suitability of M-Learning for teaching and learning, on communication between teacher - student and students with each other as well as for personal use. In more detail, the following are examined: a) the research hypotheses related to it, b) the research methodology followed, c) the research sample, d) the method of data analysis and e) the presentation of the results.

2.1. Research cases

As mentioned above, the purpose of the research was to explore the perceptions of teachers and students of Secondary Education who participated in the European program Erasmus + KA229 entitled "Innovation and mobile learning", for M-Learning. The individual objectives of the research were:

- a) to record the views of participating students and teachers on Mobile Learning
- b) to identify differences of opinion of participants regarding gender
- c) to investigate the extent to which the activities of the program affect the abilities and skills of the participants related to mobile learning
- d) the participants evaluate the main mobile learning applications used in the activities of the program

For this purpose, the following research hypotheses are put to investigation:

Case.1 Teachers and students of Secondary Education consider M-Learning suitable for

teaching-learning.

Case.2 Teachers and students of Secondary Education consider M-Learning suitable for teacher-student communication and students with each other.

Case.3 Teachers and students of Secondary Education consider M-Learning suitable for personal use.

Case.4 The perceptions of teachers and students of Secondary Education about M-Learning depend on the "gender" factor.

2.2. Research tools

The technique of the anonymous questionnaire was used for data collection. Two questionnaires were given to the participating teachers and students. One at the beginning of the program and one at the end to investigate any changes in perceptions. The questionnaire consisted of three distinct parts (Uzunboylu & Ozdamli, 2011). The first part concerned the demographics of the research participants (eg country, gender, age, level of education), the second part contained seven general questions related to the research topic (eg possession and use of mobile devices in teaching and personal use, level of ICT knowledge), the third part contained the main questions of the research (26 questions). The final questionnaire also contained a fourth part for the evaluation of the program activities and the main mobile learning applications used. (ANNEX).

According to the foreign questionnaire, its main part consisted of 26 questions consisting of three factors called: 1st Aim-Mobile technologies A-MTF, ("M-Learning is a suitable tool for teaching and learning") (8 questions), 2nd Appropriateness of Branch AB ("M-Learning is a suitable tool for all teachers") (9 questions) and 3rd Forms of M-Learning Application and tools Adequacy of communication FMA and TSAC ("M applications - Learning are suitable for teacher-student communication ») (9 questions). Questions about teachers' views were answered on a Likert five-point scale as follows: Strongly disagree = 1, Disagree = 2, Neither agree nor disagree = 3, Agree = 4, Strongly agree = 5.

For the weighting of the questionnaire in the Greek data and the control of the validity

of the content by a team of experts of the University of Macedonia according to the postgraduate study of Despina Boufidou

The final form of the questionnaire was designed in the form of Google Forms and sent by email to the participating teachers and students through the heads of the European program of each country. The survey was conducted during the period December 2018 - June 2020 and participants could log in online throughout the day to complete the questionnaire. After collecting the answers, the data were passed and processed by the statistical package for Social Sciences (SPSS.23) and the structural validity of the questionnaire was checked with factor analysis as well as its reliability.

2.3. The research sample

The research sample consisted of

1) 30 in-service Secondary Education teachers (10 men and 20 women) aged 22 to 60 from the five countries participating in the program (Greece, Bulgaria, Spain, Turkey and Italy). Of the participants, 60% had up to 20 years of service in education, 21 (70%) work in urban schools, 6 (20%) in semi-urban schools and 2 (10%) in rural schools.

2) 84 Secondary School students (37 boys and 47 girls) mainly aged 16 to 17 from the five countries that participated in the program (Greece, Bulgaria, Spain, Turkey and Italy). Of the participants, 48 (57.1%) work in urban schools, 11 (13.1%) in semi-urban schools and 24 (28.6%) in rural schools.

2.4. Research results

1. Paired Samples Test were used to examine whether students changed their perceptions to 26 different variables for mobile learning in two different time measurements at the beginning and at the end of the program in which they participated. The results show that the students improved for the most part their perceptions regarding mobile learning in all the variables (26) of the questionnaire (Paired Samples Statistics).

There were statistically significant differences in the perceptions of the participating students in the variables:

- 2 $t(55) = -3,008, p < 0,01,$
- 3, $t(55) = -3,183, p < 0,01,$
- 4 $t(55) = -4,498, p < 0,01,$
- 5 $t(55) = -2,810, p < 0,01,$
- 6 $t(55) = -2,695, p < 0,01,$
- 11 $t(55) = -4,505, p < 0,01,$
- 13 $t(55) = -3,444, p < 0,01,$
- 14 $t(55) = -2,965, p < 0,01,$
- 15 $t(54) = -4,543, p < 0,01,$
- 17 $t(54) = -3,290, p < 0,01,$
- 21 $t(54) = -2,695, p < 0,01,$
- 23 $t(54) = -3,040, p < 0,01,$
- 24 $t(54) = -2,709, p < 0,01.$

2. Independent Samples Test were used to investigate whether there are statistically significant differences between boys and girls in the 26 key variables of the questionnaire. The results showed that: there were no statistically significant differences between people of different gender in any of the 26 variables of the questionnaire. All participants at the end of the program activities had very positive perceptions about mobile learning which in the vast majority exceeded 4 (mean > 4) on a 5-point likert scale.

3. Descriptive statistics were used to investigate the extent to which the activities of the program affect the abilities and skills of the participants related to mobile learning. The results showed that there was a very positive effect on the perceptions on the skills and confidence of the participants regarding the use of mobile learning applications in the educational process. The average in each of the 7 evaluation questions was over 4.5 on a 5-point likert scale.

4. Descriptive statistics were used to investigate the evaluation and preferences of the participants regarding the main mobile learning applications used in the program activities. The results showed that there was an excellent acceptance of the educational usefulness of the software used since the students rated on average more than 3.9 on a 5-point likert scale.

The most popular among the 11 applications evaluated was Kahoot, a free online program that allows teachers to easily and quickly create playful questionnaires to evaluate students in real time.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
1.Google Forms	84	1,00	5,00	4,4286	,90893
2.Google Docs	84	1,00	5,00	4,4286	,97296
3.Google Maps	84	1,00	5,00	4,5476	,89718
4.Google Earth	84	1,00	5,00	4,2619	,98322
5.Padlet	83	1,00	5,00	4,1084	1,23971
6.Voice Thread	84	1,00	5,00	3,9405	1,27394
7.Thingling	84	1,00	5,00	4,1429	1,24323
8.Animoto	83	1,00	5,00	4,0843	1,27073
9.Nearpod	84	1,00	5,00	3,9643	1,28426
10.Kahoot	84	1,00	5,00	4,7024	,83276
11.Rubistar	84	1,00	5,00	4,3452	,99993
Valid N (listwise)	82				

5. Paired Samples Test were used to examine whether teachers changed their perceptions of 26 different variables for mobile learning in two different time measurements at the beginning and end of the program in which they participated. The results conclude that the teachers improved for the most positive their already positive perceptions regarding mobile learning in all the variables (26) of the questionnaire (Paired Samples Statistics). There were statistically significant differences in the perceptions of the participating teachers only in the variable: 16 $t(30) = -3,195, p < 0.05$.

6. Independent Samples Test were used to investigate whether there are statistically significant differences between male and female teachers in the 26 key variables of the questionnaire. The results showed that: there were statistically significant differences between people of different genders in the variables: 1. The M-Learning tools eliminate time and space limitation $t(28) = 3,902, p < 0.05$, 18. (M-Learning applications are convenient to share my specialized knowledge with my colleagues.) $t(28) = 2,772, p < 0.05$. All participants at the end of the program activities had very positive perceptions about mobile learning which in majority exceeded 4 (mean > 4) on a 5-point likert scale. Male

teachers had a more positive approach to 25 of the 26 main questionnaire questions than women.

7. Descriptive statistics were used to investigate the extent to which the activities of the program affect the abilities and skills of the participants related to mobile learning. The results showed that there was a very positive effect on the perceptions on the skills and confidence of the participants regarding the use of mobile learning applications in the educational process. The average in each of the 6 assessment questions was over 4.3 on a 5-point likert scale.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
1.Before I further my study, I had a good understanding of how learning and education would fit my job-related development.	30	3,00	5,00	4,3000	,65126
2.My job performance improves when I apply new things that I have learned.	30	3,00	5,00	4,5333	,57135
3.I am confident in my ability to use newly learned skills on the job.	30	3,00	5,00	4,5000	,62972
4.This program by mobile learning experience was fun.	30	3,00	5,00	4,7333	,52083
5.Mobile learning increases the quality of my distance education course.	30	3,00	5,00	4,7000	,53498
6.Mobile learning has helped me pace my studies in my distance education	30	3,00	5,00	4,4667	,73030
Valid N (listwise)	30				

8. Descriptive statistics were used to investigate the evaluation and preferences of the participants regarding the main mobile learning applications used in the program activities. The results showed that there was an excellent acceptance of the educational usefulness of the software used since the students rated on average more than 3.9 on a 5-point likert scale.

The most popular among the 11 applications they evaluated was Kahoot, a free online program that allows teachers to easily and quickly create playful questionnaires to assess students in real time.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
1.Google Forms	30	3,00	5,00	4,6000	,67466
2.Google Docs	30	4,00	5,00	4,7333	,44978
3.Google Maps	30	3,00	5,00	4,6667	,66089
4.Google Earth	30	3,00	5,00	4,3333	,75810
5.Padlet	30	3,00	5,00	4,4333	,67891
6.Voice Thread	30	3,00	5,00	4,0667	,90719
7.Thingling	30	2,00	5,00	4,0000	1,01710
8.Animoto	30	3,00	5,00	4,2667	,78492
9.Nearpod	30	2,00	5,00	3,9000	,92289
10.Kahoot	30	3,00	5,00	4,7667	,56832
11.Rubistar	30	3,00	5,00	4,2000	,80516
Valid N (listwise)	30				

3. CONCLUSIONS

Today there is a continuous development of educational applications with the use of mobile devices. Therefore, it is very important to conduct research on the perceptions and attitudes of teachers in the part of introducing and utilizing M-Learning in the teaching process. Knowing the perceptions of teachers and the factors that contribute to the acceptance of such systems will help in the integration of mobile devices in the learning process.

This work has revealed that teachers and students of Secondary Education consider M-Learning applications as a suitable tool for teaching and learning. The results showed that teachers and students believe that learning through mobile devices enhances student interaction and communication between teacher and student. Finally, participants showed that they accept M-Learning applications as a suitable tool for personal use. The above perceptions of the participants did not seem to be influenced by gender. The participants positively evaluated the program in which they participated and used its applications with Kahoot at the top of their preferences.

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ANNEX

INNOVATION AND MOBILE LEARNING (STUDENTS) FINAL QUESTIONNAIRE

RESEARCH QUESTIONNAIRE - ERASMUS+ 2018-1-EL01-KA229-047747_1

Dear student,

This questionnaire is designed to undertake a survey on acceptance of Mobile Learning among participant students in ERASMUS+ 2018-1-EL01-KA229-047747_1 program. The information that you provide will help us to give better understanding about the students' acceptance and satisfaction regarding Mobile Learning in order to ensure its effectiveness as well as improving its system and services. We would greatly appreciate if you would respond to the questions sincerely and honestly. Your responses and information will be kept strictly confidential. Thank you very much for your cooperation.

The perceptions of Secondary Education teachers on Mobile Learning.

A. INDIVIDUAL DATA

Country

- Greece
- Turkey
- Italy
- Bulgaria
- Spain

Gender

- MALE
- FEMALE

AGE (Please fill your age)

- 15-19
- 20 +

Type of school

- Gymnasium
- High School
- Vocational Education
- Religious Education

Place of work

- Rural area
- suburban
- Urban area



B. OWN AND USE OF PORTABLE DEVICES

I use mobile devices (Tablets, Smartphones, etc.) in my everyday life

- Never
- Rarely
- Some times weekly
- Very often

Name the devices you use.

- Tablet
- Smartphone
- Laptop
- PDA

I own Smartphone.

- Yes
- No

Please tick, evaluating your level on ICT use

- Very Bad
- Bad
- Medium
- Good
- Very Good

C. MAIN QUESTIONS

	QUESTION	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	The M-Learning tools eliminate time and space limitation					
2	M-Learning applications create effective learning and teaching environments					
3	The teaching process should also be done with M-Learning technologies.					
4	I can use M-Learning applications as a good discussion tool in learning activities					
5	Programs such as messenger and skype when using them in M-Learning provide the opportunity for discussions with my schoolmates on my subject without limiting time and space.					
6	M-Learning learning applications can be used to complement traditional education					
7	Learning activities can be realized through M-Learning applications in e-learning					
8	An effective learning environment could be created by sending my lesson notes through M-Learning tools such as email.					



9	M-Learning applications facilitate the teaching.					
10	M-Learning applications are an effective learning tool.					
11	M-Learning Technologies are an effective tool for accurately presenting educational material.					
12	Teacher-student communication is facilitated through M-Learning tools					
13	The use of M-Learning technologies increases the motivation of students.					
14	I can have direct access to the material I need that relates to my subject through M-Learning Technologies					
15	M-Learning applications are trustworthy for personal use					
16	Communication is possible in chat programs via M-Learning technologies.					
17	M-Learning applications are a good method for interaction, which is essential in my classrooms.					
18	M-Learning applications are convenient to share my specialized knowledge with my schoolmates.					
19	Course material can be sent to students via multimedia MMS messages.					
20	M-Learning systems increase the quality of the courses.					
21	In the future I would like my classes enriched with M-Learning methods					
22	Communication between students is facilitated through M-Learning					
23	M-Learning Technologies can be used as a complement to all classes and all subjects					
24	M-Learning applications provide a comfortable environment for discussions in my specialty course.					
25	Students can access educational websites through M-Learning technologies					
26	Students can access educational websites through M-Learning technologies					

D. EVALUATION OF THE ERASMUS+ PROGRAM

	QUESTION	Strongly disagree	Disagree	Neutral	Agree	Agree, strongly
1	Before I further my study, I had a good understanding of how learning and education would fit my job-related development.					
2	My job performance improves when I apply new things that I have learned.					
3	I am confident in my ability to use newly learned skills on the job.					
4	This course by mobile learning experience was fun.					
5	Mobile learning increases the quality of my distance education course.					



6	Mobile learning has helped me pace my studies in my distance education					
7	My teachers encourage me to use the skills and knowledge I have learned through this program.					
	EVALUATION OF THE USED APPLICATIONS	Not at all useful	Low useful	Neutral	Useful	Very useful
1	Google Forms					
2	Google Docs					
3	Google Maps					
4	Google Earth					
5	Padlet					
6	Voice Thread					
7	Thingling					
8	Animoto					
9	Nearpod					
10	Kahoot					
11	Rubistar					

INNOVATION AND MOBILE LEARNING (TEACHERS) FINAL QUESTIONNAIRE

RESEARCH QUESTIONNAIRE - ERASMUS+ 2018-1-EL01-KA229-047747_1

Dear teacher,

This questionnaire is designed to undertake a survey on acceptance of Mobile Learning among participant teacher after their participating in ERASMUS+ 2018-1-EL01-KA229-047747_1 program. The information that you provide will help us to give better understanding about the teachers' acceptance and satisfaction regarding Mobile Learning in order to ensure its effectiveness as well as improving its system and services. We would greatly appreciate if you would respond to the questions sincerely and honestly. Your responses and information will be kept strictly confidential. Thank you very much for your cooperation.

The perceptions of Secondary Education teachers on Mobile Learning.

A. INDIVIDUAL DATA

Country

- Greece
- Turkey
- Italy
- Bulgaria
- Spain

Gender

- MALE
- FEMALE

AGE (Please fill your age)

- 20-29
- 30-39
- 40-49
- 50+

Years of Service in Education

- 0-9
- 10-19
- 20-29
- 30+

Type of school

- Gymnasium
- High School
- Vocational Education



- Religious Education

Place of work

- Rural area
 suburban
 Urban area

Speciality

- Theologian
 Filologist
 Mathematician
 English Language teacher
 Informatics teacher
 Natural Sciences teacher
 Economics
 Social Sciences teacher
 Other

B. OWN AND USE OF PORTABLE DEVICES

I use mobile devices (Tablets, Smartphones, etc.) in my everyday life

- Never
 Rarely
 Some times weekly
 Very often

Name the devices you use to teach your classes.

- Tablet
 Smartphone
 Laptop
 PDA

I own Smartphone.

- Yes
 No

Please tick, evaluating your level on ICT use

- Very Bad
 Bad
 Medium
 Good
 Very Good

C. MAIN QUESTIONS

	QUESTION	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
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1	The M-Learning tools eliminate time and space limitation					
2	M-Learning applications create effective learning and teaching environments					
3	The teaching process should also be done with M-Learning technologies.					
4	I can use M-Learning applications as a good discussion tool in learning activities					
5	Programs such as messenger and skype when using them in M-Learning provide the opportunity for discussions with my schoolmates on my subject without limiting time and space.					
6	M-Learning learning applications can be used to complement traditional education					
7	Learning activities can be realized through M-Learning applications in e-learning					
8	An effective learning environment could be created by sending my lesson notes through M-Learning tools such as email.					
9	M-Learning applications facilitate the teaching of my specialty subjects.					
10	M-Learning applications are an effective learning tool for the subject of my specialty.					
11	M-Learning Technologies are an effective tool for accurately presenting educational material.					
12	Teacher-student communication is facilitated through M-Learning tools					
13	The use of M-Learning technologies increases the motivation of students.					
14	I can have direct access to the material I need that relates to my subject through M-Learning Technologies					
15	M-Learning applications are trustworthy for personal use					
16	Communication is possible in chat programs via M-Learning technologies.					
17	M-Learning applications are a good method for interaction, which is essential in my classrooms.					
18	M-Learning applications are convenient to share my specialized knowledge with my colleagues.					
19	Course material can be sent to students via multimedia MMS messages.					
20	M-Learning systems increase the quality of the courses.					
21	In the future I would like to enrich my classes with M-Learning methods					
22	Communication between students is facilitated through M-Learning					
23	M-Learning Technologies can be used as a complement to all classes and all subjects					



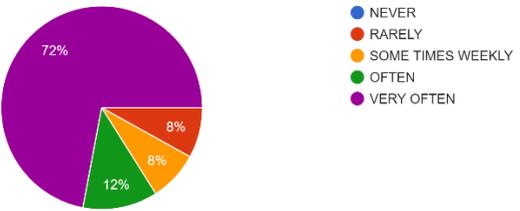
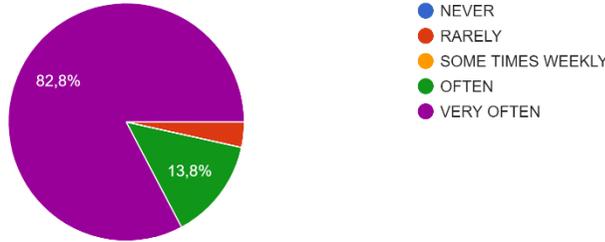
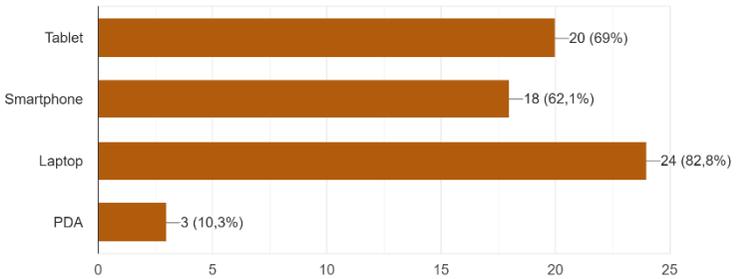
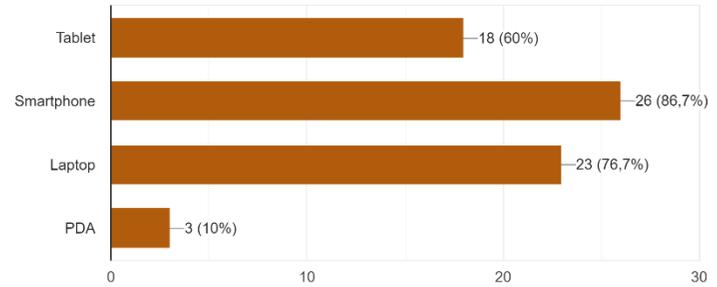
24	M-Learning applications provide a comfortable environment for discussions in my specialty course.					
25	Students can access educational websites through M-Learning technologies					
26	Students have more effective communication with M-Learning than with traditional methods.					

D. EVALUATION OF THE ERASMUS+ PROGRAM

	QUESTION	Strongly disagree	Disagree	Neutral	Agree	Agree, strongly
1	Before I further my study, I had a good understanding of how learning and education would fit my job-related development.					
2	My job performance improves when I apply new things that I have learned.					
3	I am confident in my ability to use newly learned skills on the job.					
4	This program by mobile learning experience was fun.					
5	Mobile learning increases the quality of my distance education course.					
6	Mobile learning has helped me pace my studies in my distance education					
	EVALUATION OF THE USED APPLICATIONS	Not at all useful	Low useful	Neutral	Useful	Very useful
1	Google Forms					
2	Google Docs					
3	Google Maps					
4	Google Earth					
5	Padlet					
6	Voice Thread					
7	Thingling					
8	Animoto					
9	Nearpod					
10	Kahoot					
11	Rubistar					



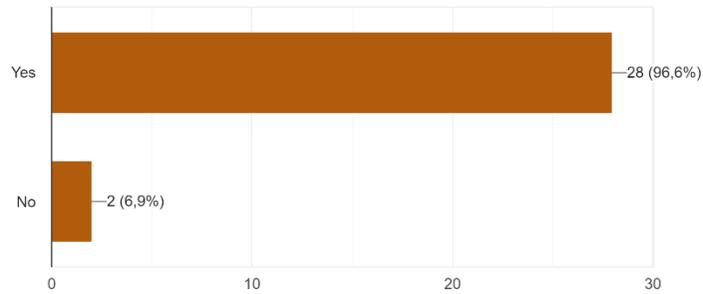
Teachers Questionnaires Result

	IN (30 responses)	OUT (30 responses)
1	<p>I use mobile devices (Tablets, Smartphones, etc.) in my everyday life 25 απαντήσεις</p> 	<p>I use mobile devices (Tablets, Smartphones, etc.) in my everyday life 29 απαντήσεις</p> 
2	<p>Name the devices you use to teach your classes. 29 απαντήσεις</p> 	<p>Name the devices you use to teach your classes. 30 απαντήσεις</p> 

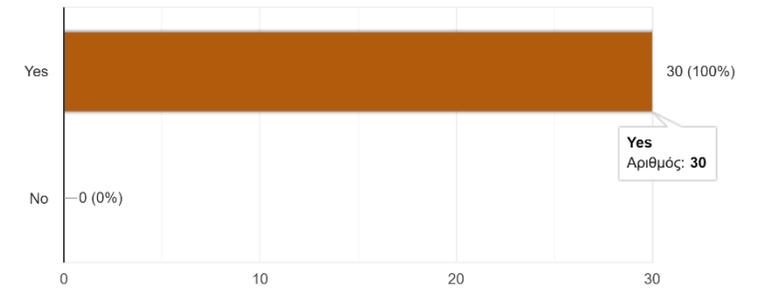


3

I own Smartphone.
29 απαντήσεις

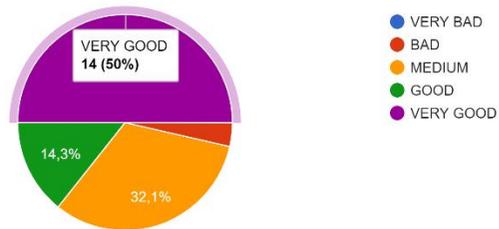


I own Smartphone.
30 απαντήσεις

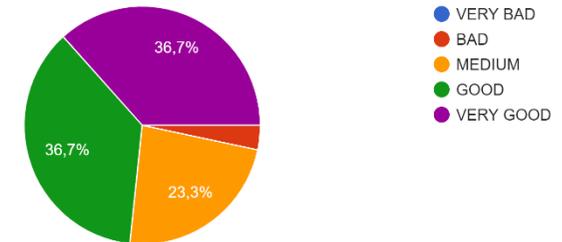


4

Please tick, evaluating your level on ICT use
28 απαντήσεις



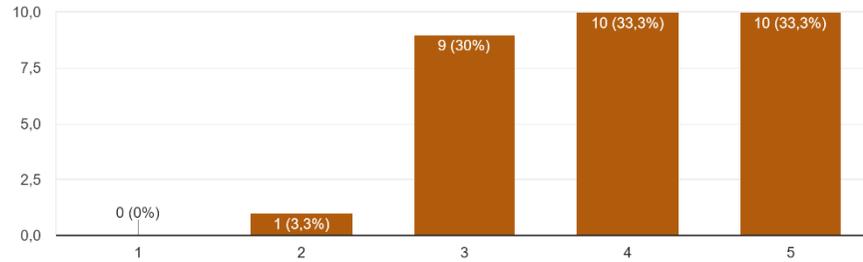
Please tick, evaluating your level on ICT use
30 απαντήσεις



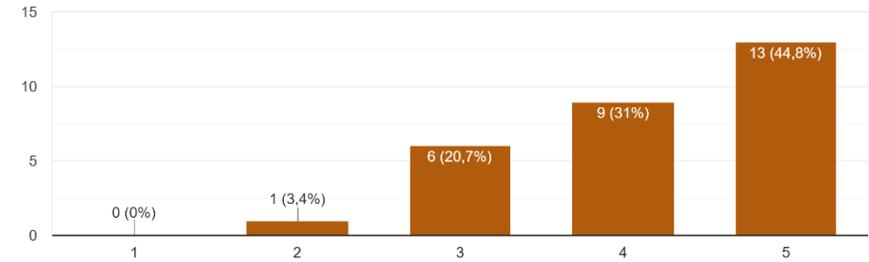


1

1.The M-Learning tools eliminate time and space limitation
30 απαντήσεις

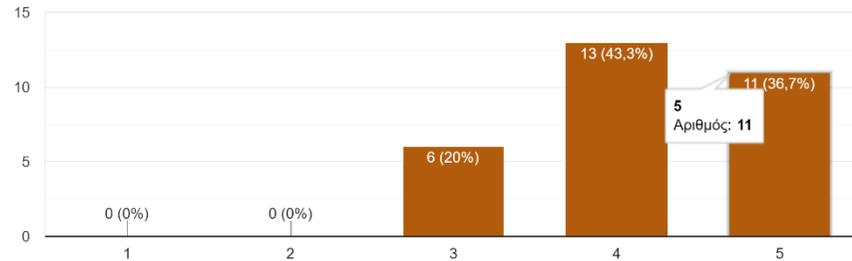


1.The M-Learning tools eliminate time and space limitation
29 απαντήσεις

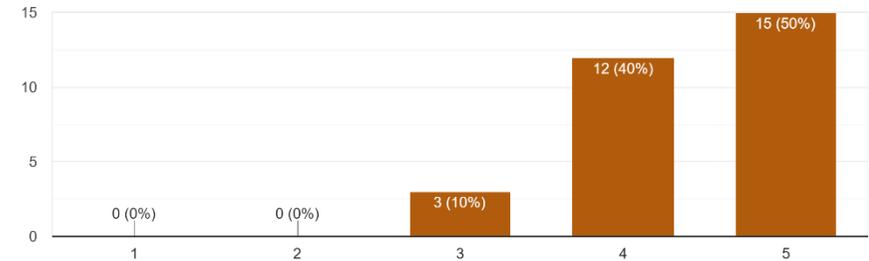


2

2. M-Learning applications create effective learning and teaching environments
30 απαντήσεις



2. M-Learning applications create effective learning and teaching environments
30 απαντήσεις

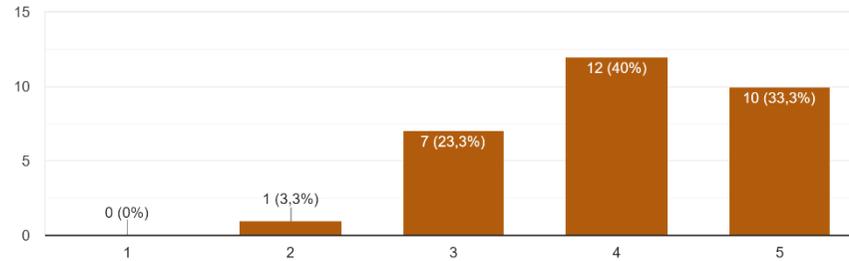




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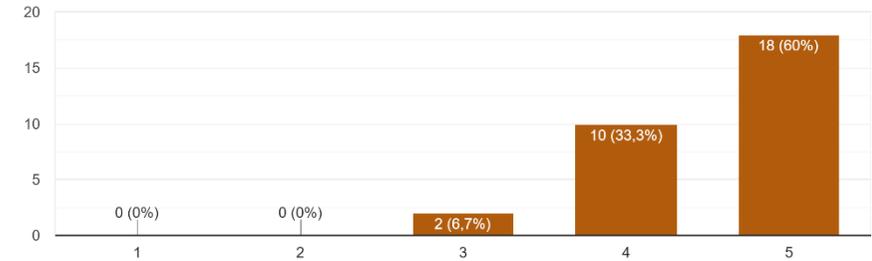
3. The teaching process should also be done with M-Learning technologies.

30 απαντήσεις



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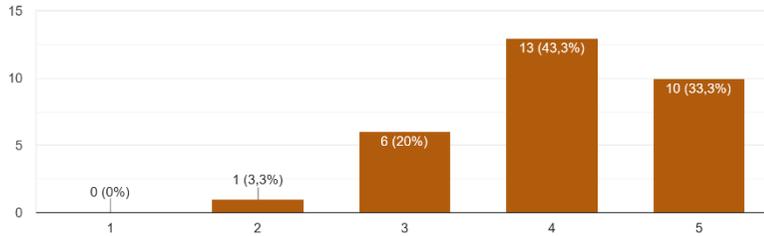
30 απαντήσεις



4

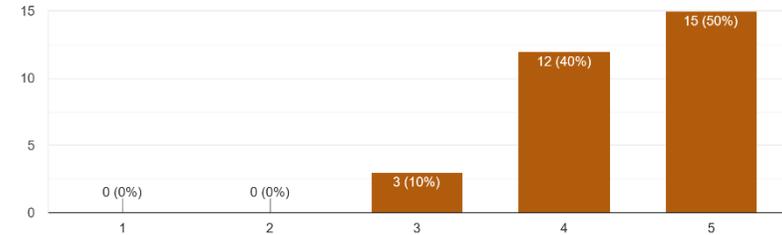
4. I can use M-Learning applications as a good discussion tool with my students in learning activities.

30 απαντήσεις



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30 απαντήσεις

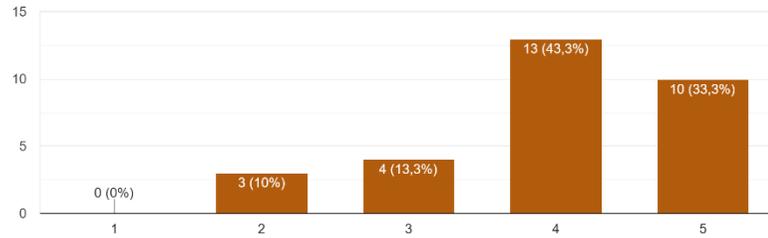




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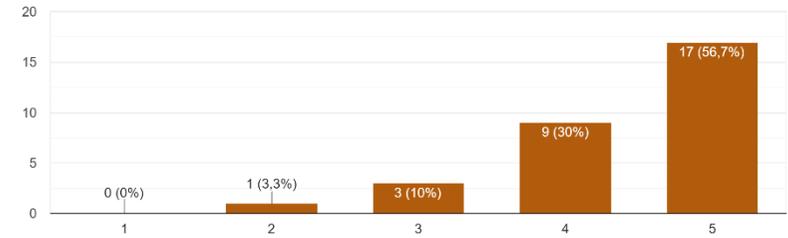
5. Programs such as messenger and skype when using them in M-Learning provide the opportunity for discussions with my colleagues on my subject without limiting time and space.

30 απαντήσεις



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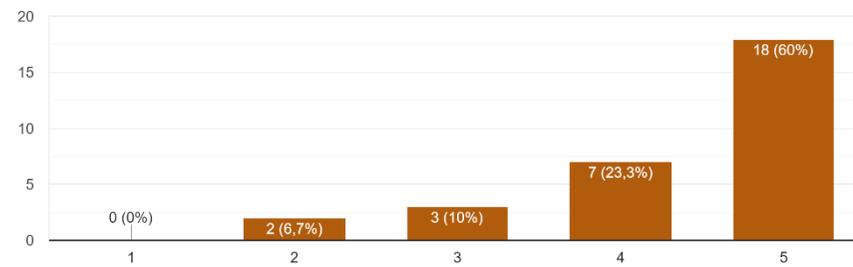
30 απαντήσεις



6

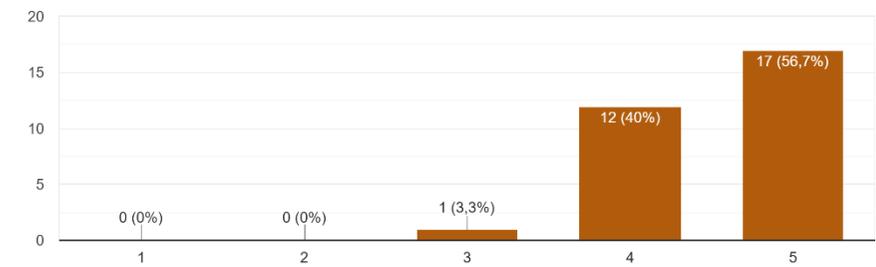
6. M-Learning learning applications can be used to complement traditional education.

30 απαντήσεις



6. M-Learning learning applications can be used to complement traditional education.

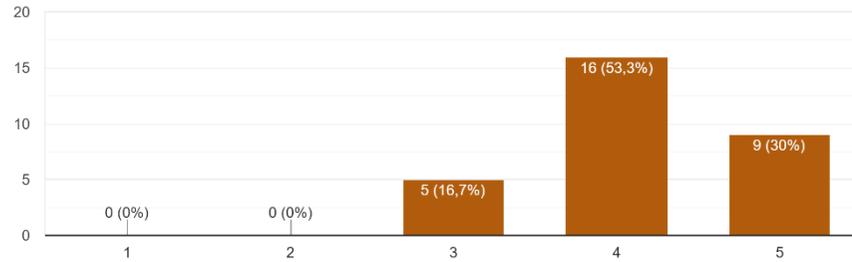
30 απαντήσεις



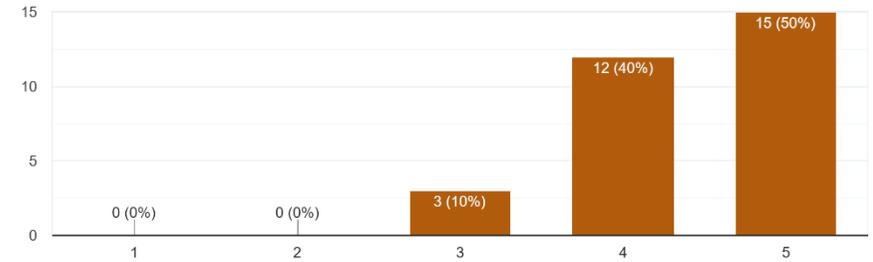


7

7. Learning activities can be realized through M-Learning applications in e-learning
30 απαντήσεις

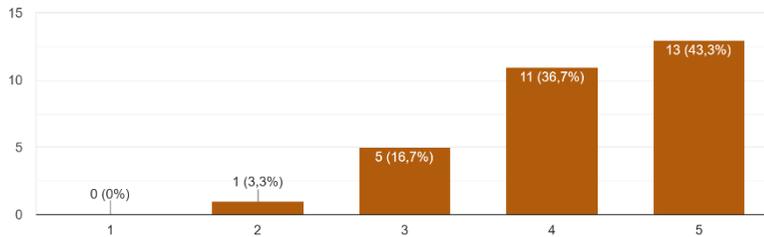


7. Learning activities can be realized through M-Learning applications in e-learning
30 απαντήσεις

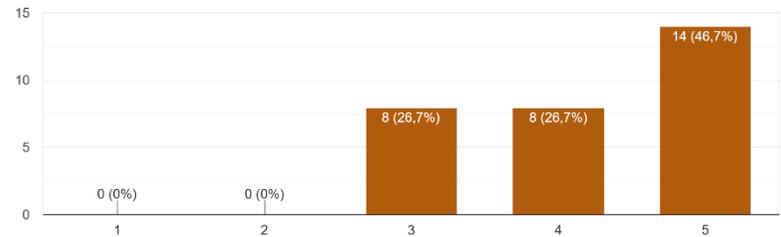


8

8. An effective learning environment could be created by sending my lesson notes through M-Learning tools such as email.
30 απαντήσεις



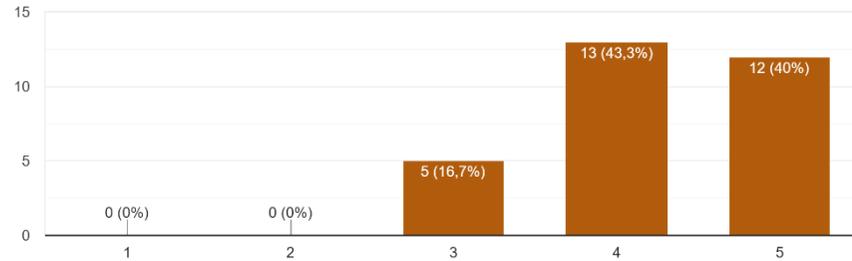
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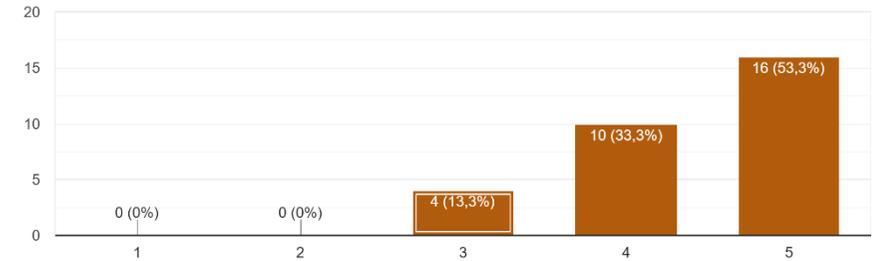


9

9. M-Learning applications facilitate the teaching of my specialty subjects.
30 απαντήσεις

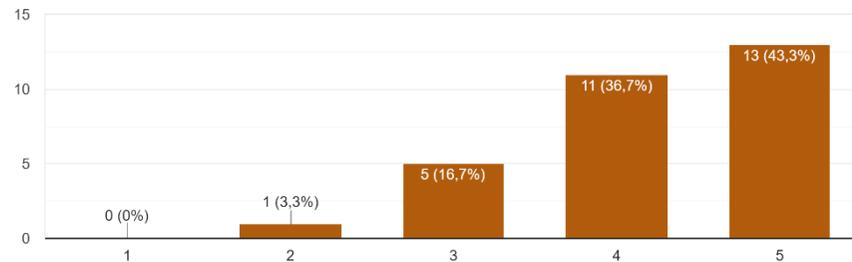


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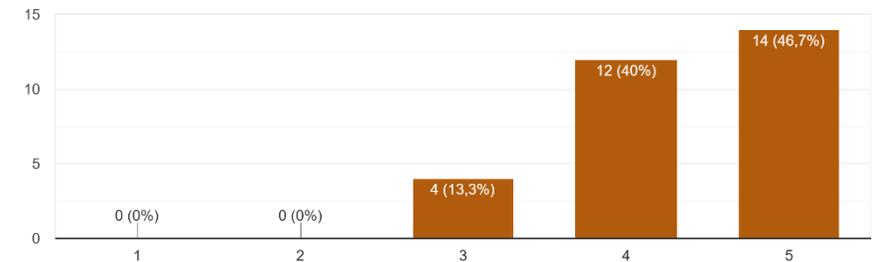


10

10. M-Learning applications are an effective learning tool for the subject of my specialty.
30 απαντήσεις



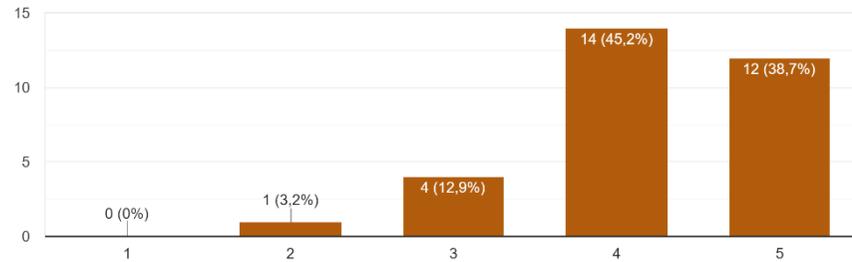
10. M-Learning applications are an effective learning tool for the subject of my specialty.
30 απαντήσεις



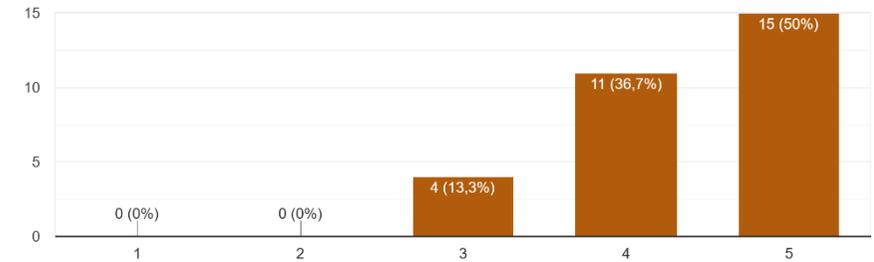


11

11. M-Learning Technologies are an effective tool for accurately presenting educational material.
31 απαντήσεις

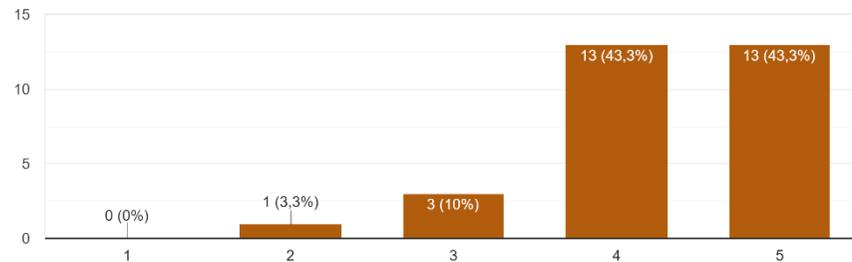


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30 απαντήσεις

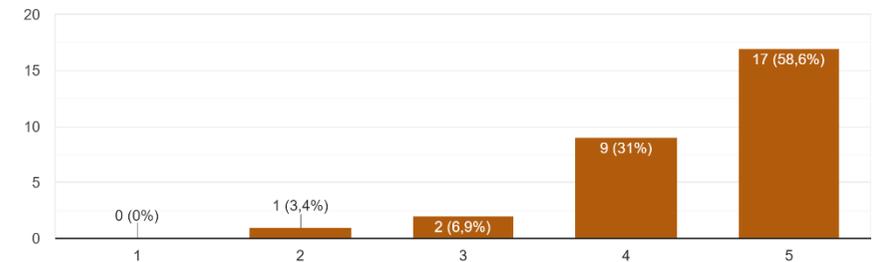


12

12. Teacher-student communication is facilitated through M-Learning tools
30 απαντήσεις



12. Teacher-student communication is facilitated through M-Learning tools
29 απαντήσεις

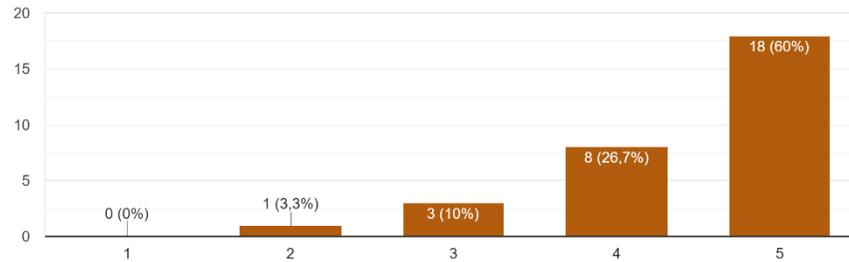




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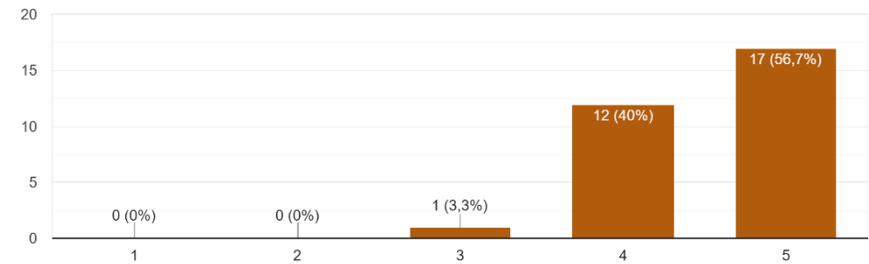
13. The use of M-Learning technologies increases the motivation of students.

30 απαντήσεις



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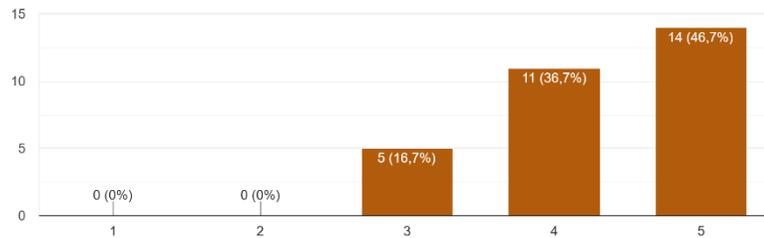
30 απαντήσεις



14

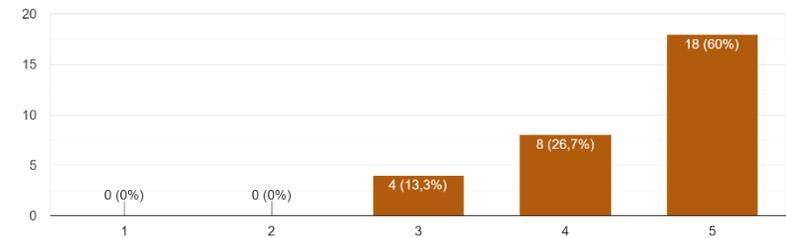
14. I can have direct access to the material I need that relates to my subject through M-Learning Technologies

30 απαντήσεις



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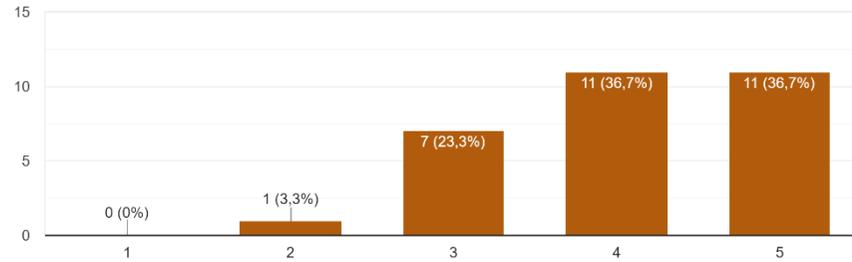
30 απαντήσεις



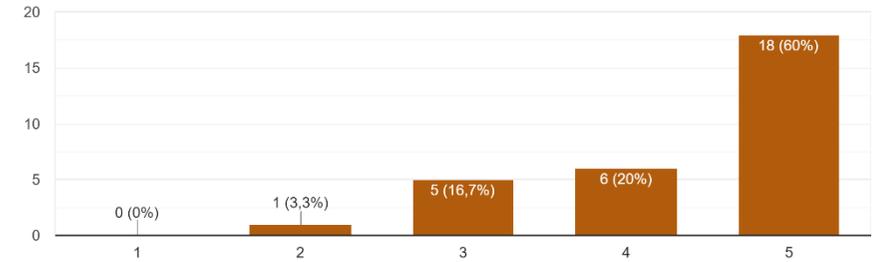


15

15. M-Learning applications are trustworthy for personal use
30 απαντήσεις

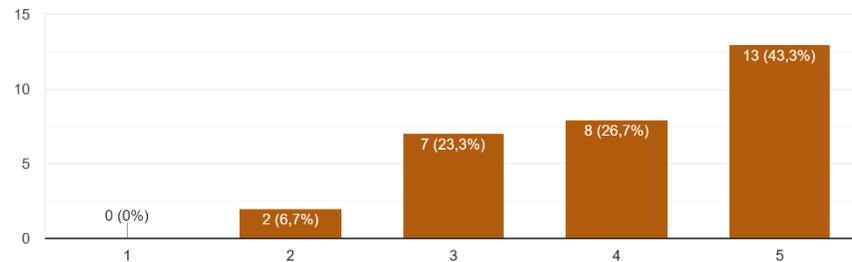


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30 απαντήσεις

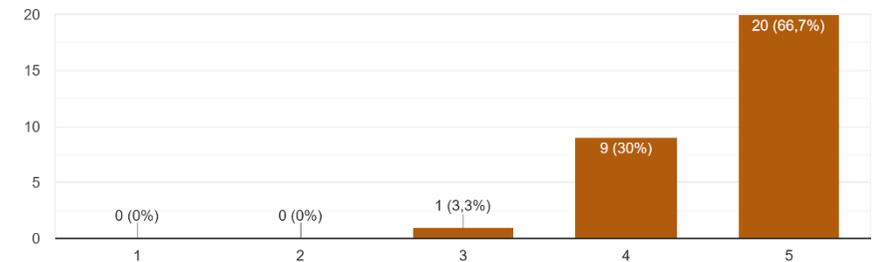


16

16. Communication is possible in chat programs via M-Learning technologies.
30 απαντήσεις



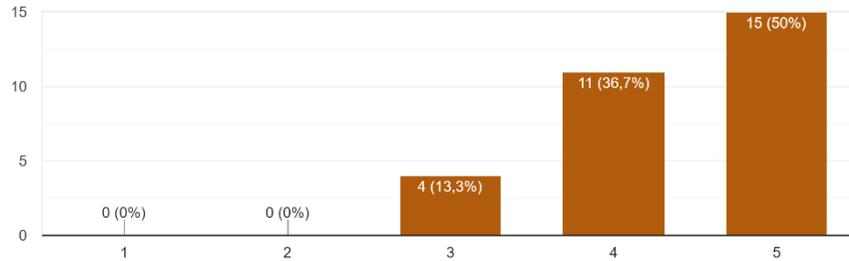
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30 απαντήσεις



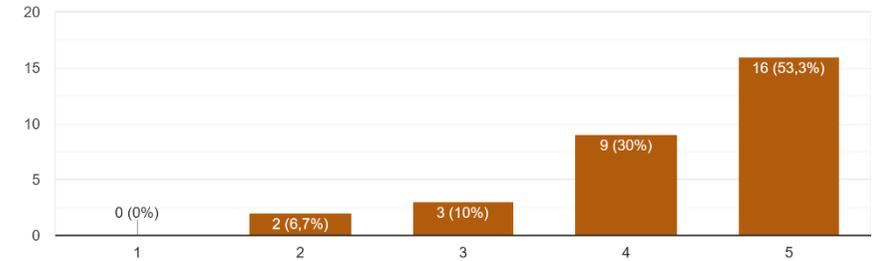


17

17. M-Learning applications are a good method for interaction, which is essential in my classrooms.
30 απαντήσεις

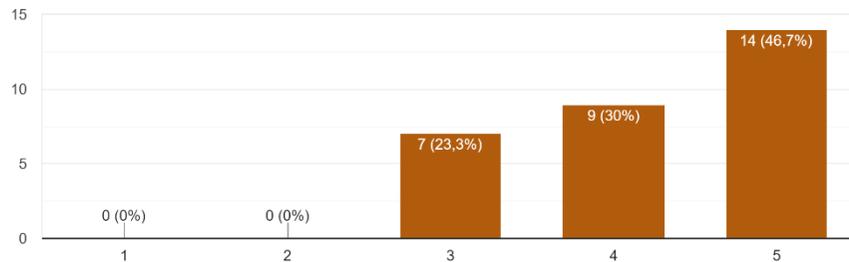


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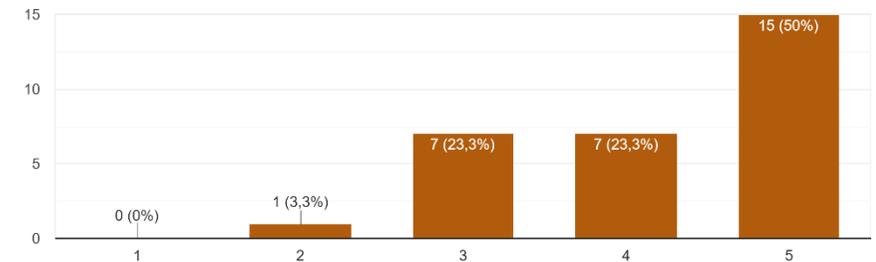


18

18. M-Learning applications are convenient to share my specialized knowledge with my colleagues.
30 απαντήσεις



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30 απαντήσεις

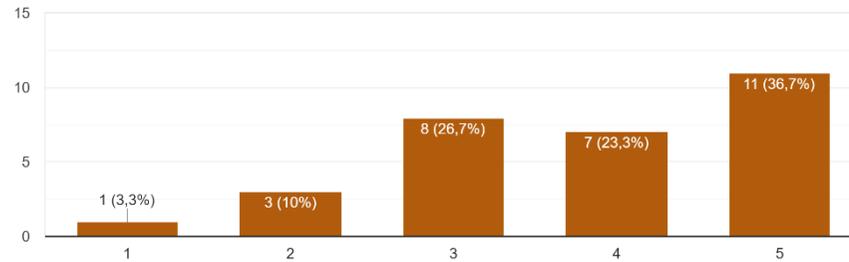




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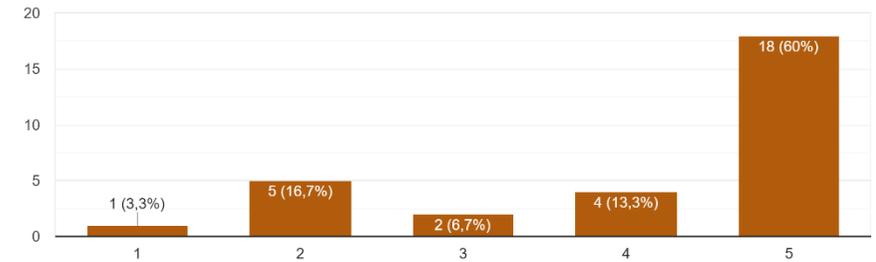
19. Course material can be sent to students via multimedia MMS messages.

30 απαντήσεις



19. Course material can be sent to students via multimedia MMS messages.

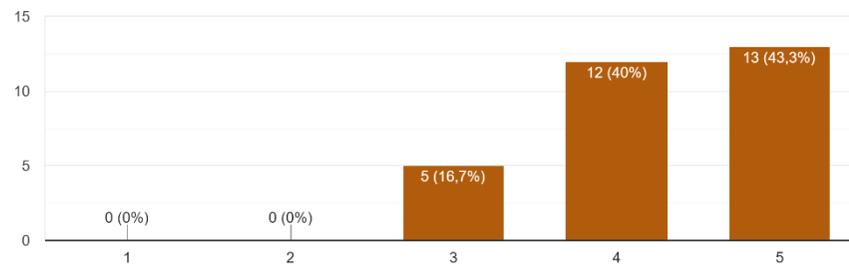
30 απαντήσεις



20

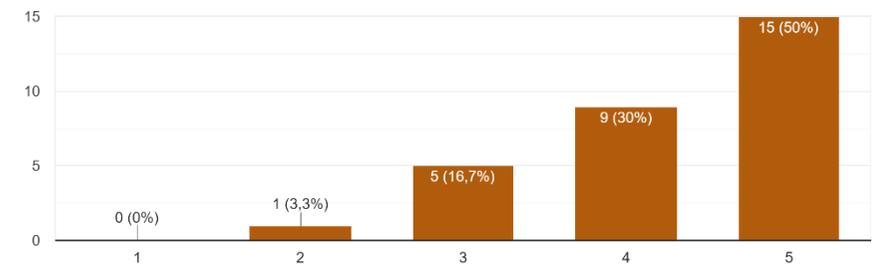
20. M-Learning systems increase the quality of the courses.

30 απαντήσεις



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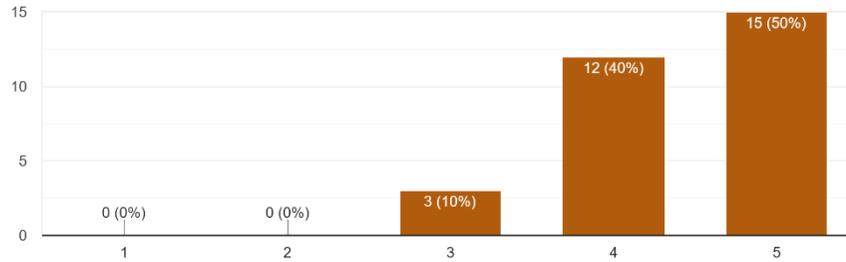
30 απαντήσεις



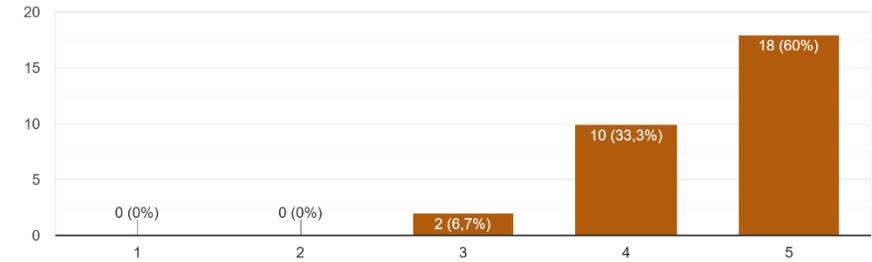


21

21. In the future I would like to enrich my classes with M-Learning methods
30 απαντήσεις

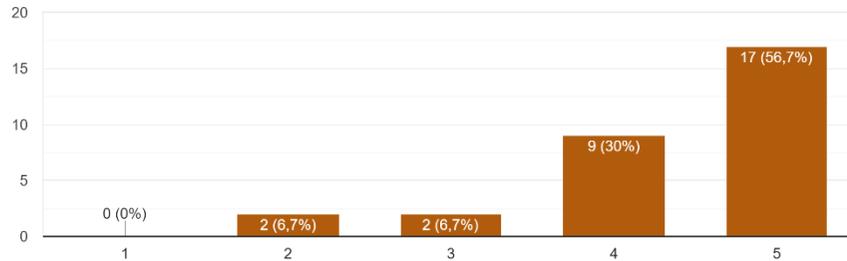


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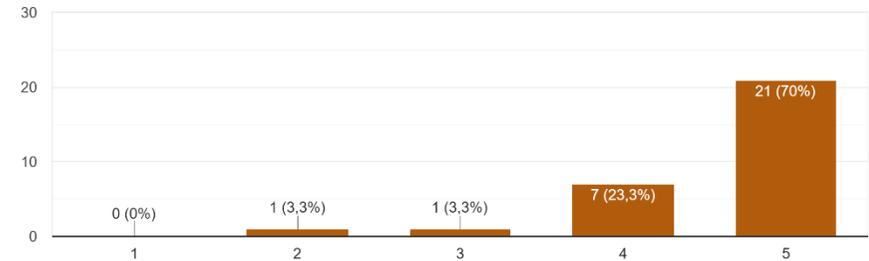


22

22. Communication between students is facilitated through M-Learning
30 απαντήσεις



22. Communication between students is facilitated through M-Learning
30 απαντήσεις

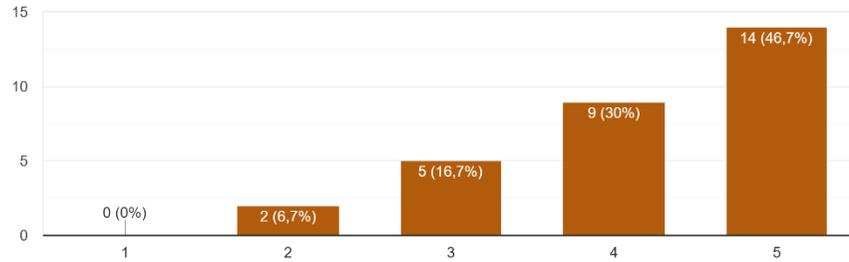




23

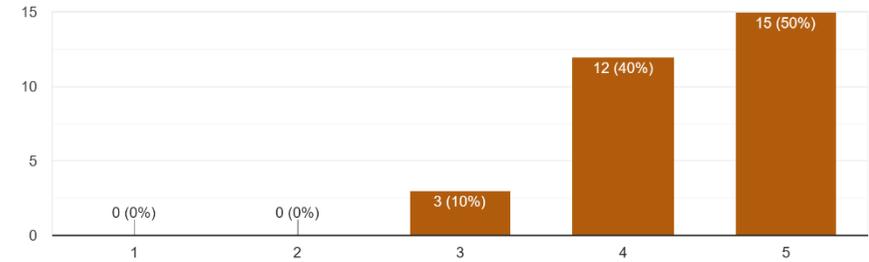
23. M-Learning Technologies can be used as a complement to all classes and all subjects

30 απαντήσεις



23. M-Learning Technologies can be used as a complement to all classes and all subjects

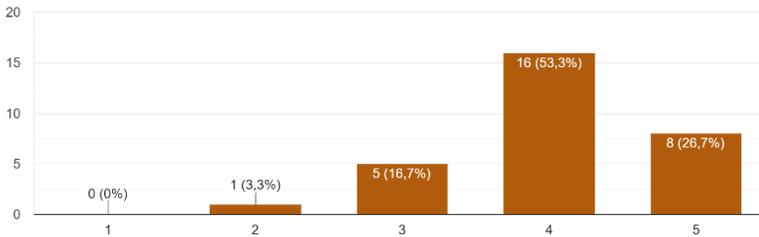
30 απαντήσεις



24

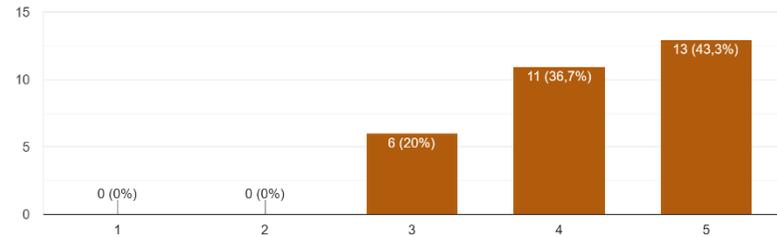
24. M-Learning applications provide a comfortable environment for discussions in my specialty course.

30 απαντήσεις



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30 απαντήσεις

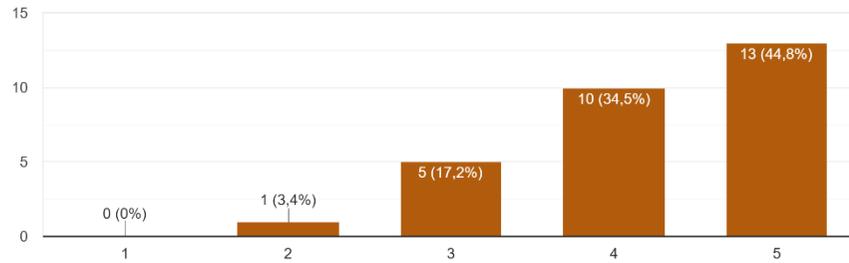




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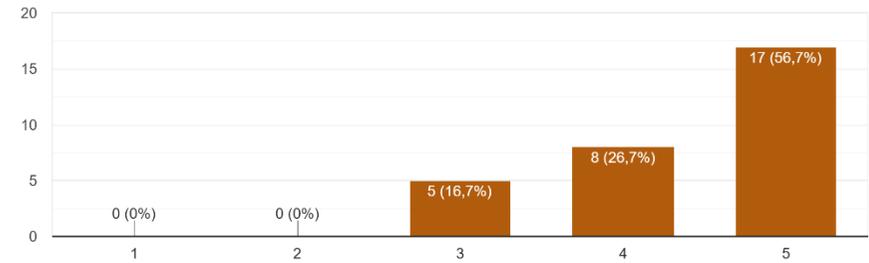
25. Students can access educational websites through M-Learning technologies

29 απαντήσεις



25. Students can access educational websites through M-Learning technologies

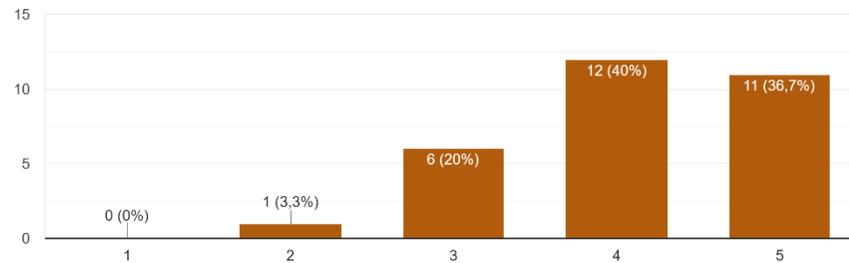
30 απαντήσεις



26

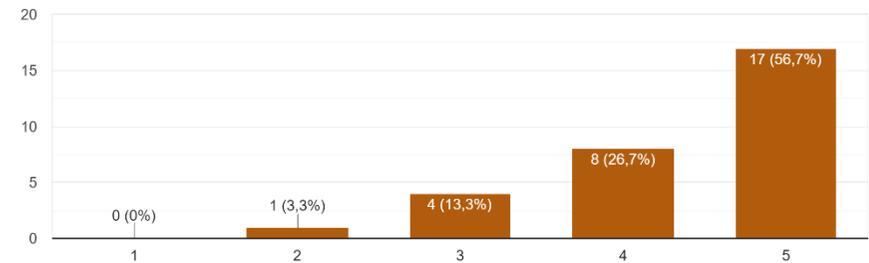
26. Students have more effective communication with M-Learning than with traditional methods.

30 απαντήσεις



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30 απαντήσεις

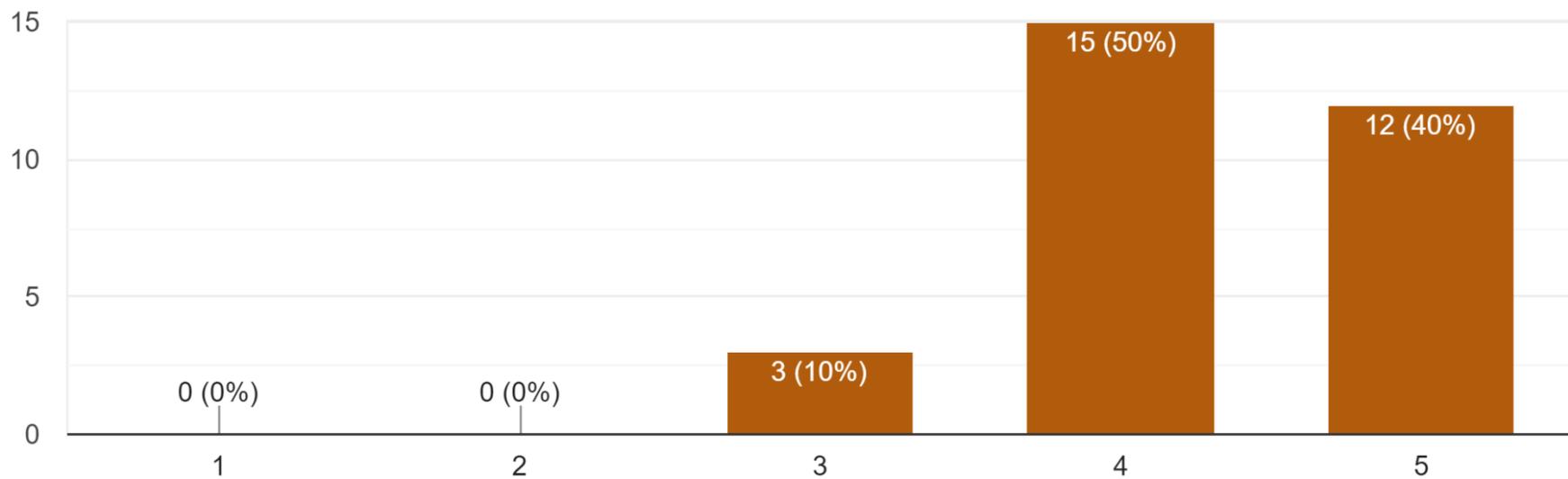


Evaluation of the Erasmus+ program



1. Before I further my study, I had a good understanding of how learning and education would fit my job-related development.

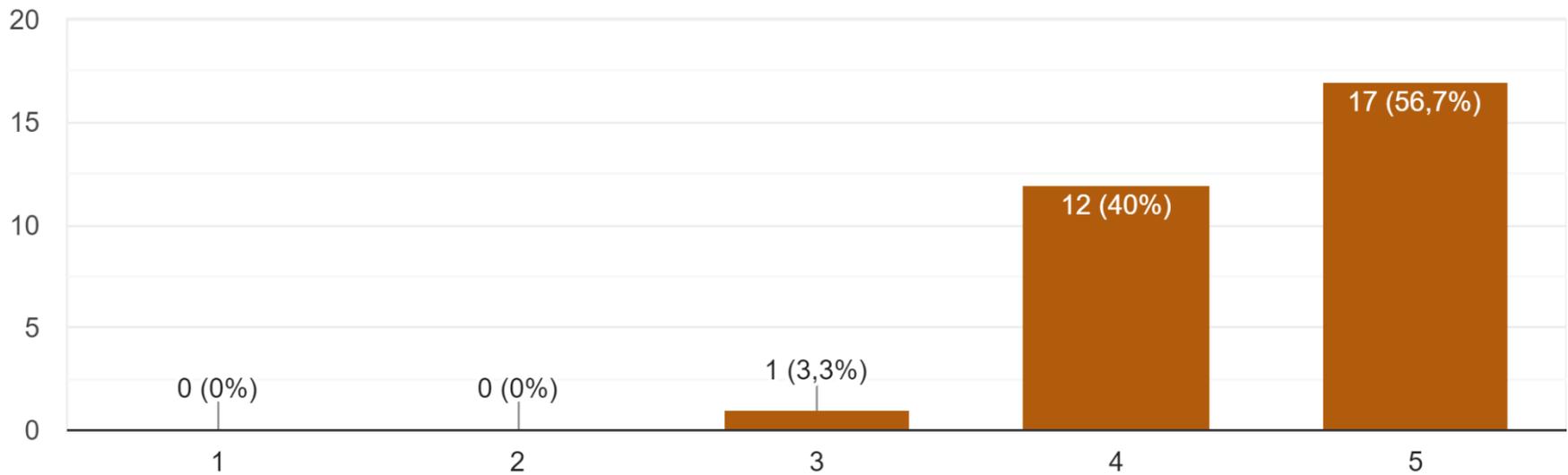
30 απαντήσεις





2. My job performance improves when I apply new things that I have learned.

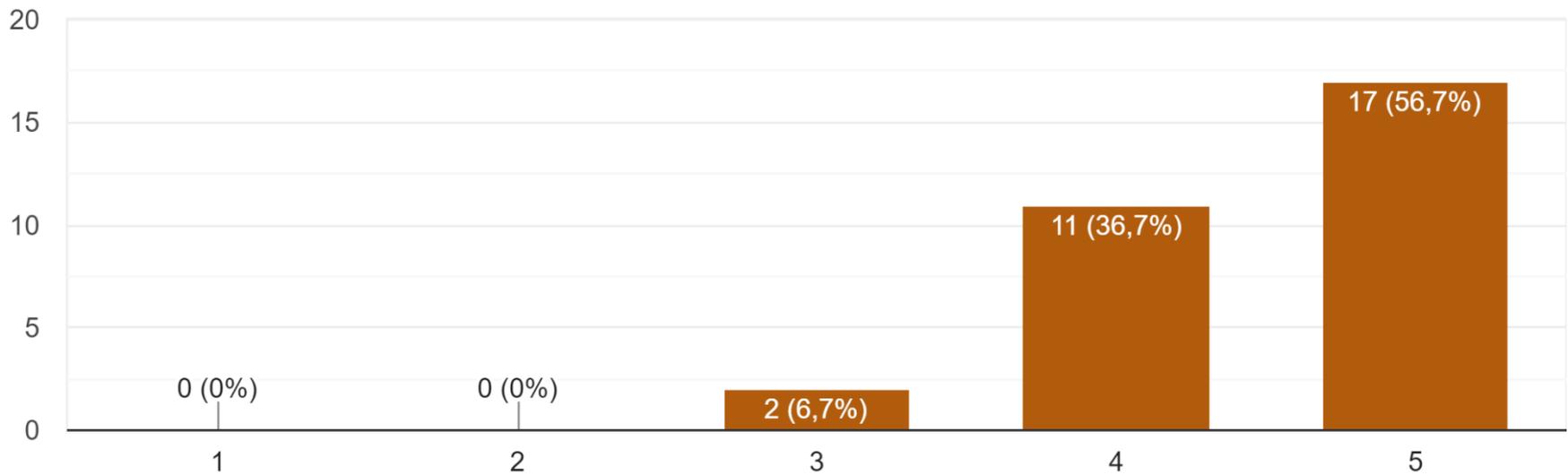
30 απαντήσεις





3. I am confident in my ability to use newly learned skills on the job.

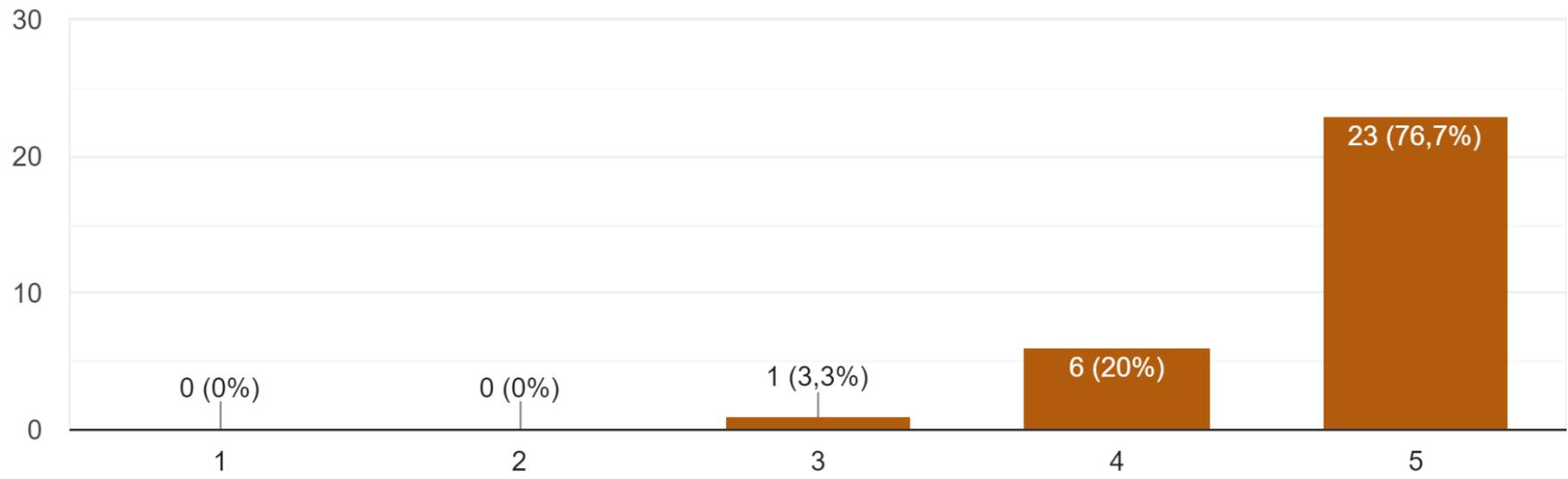
30 απαντήσεις





4. This program by mobile learning experience was fun.

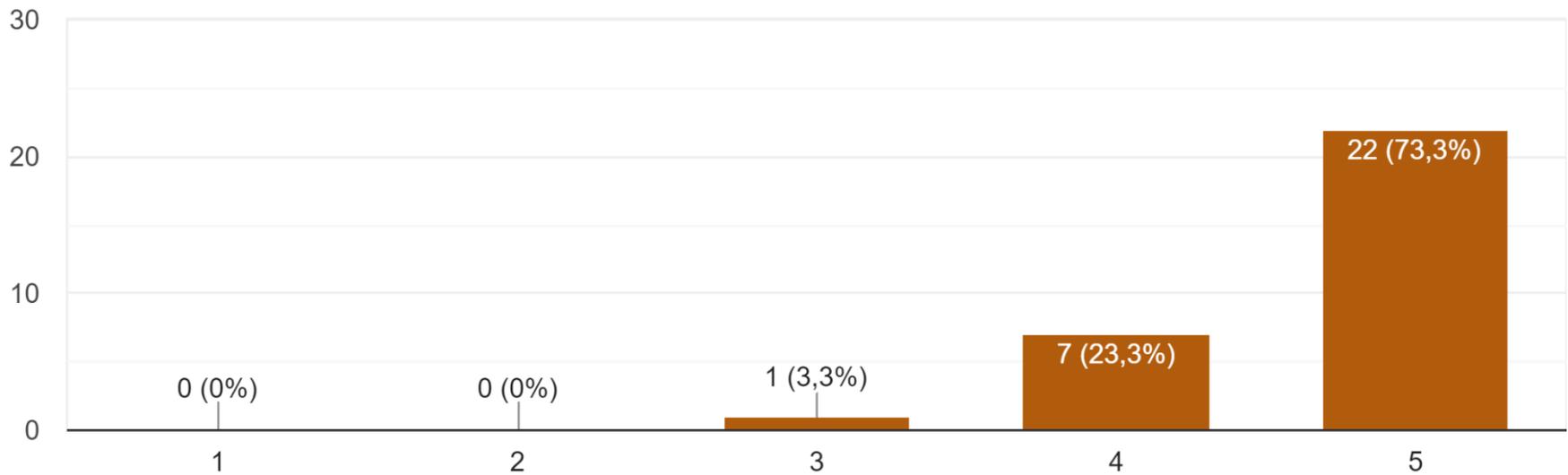
30 απαντήσεις





5. Mobile learning increases the quality of my distance education course.

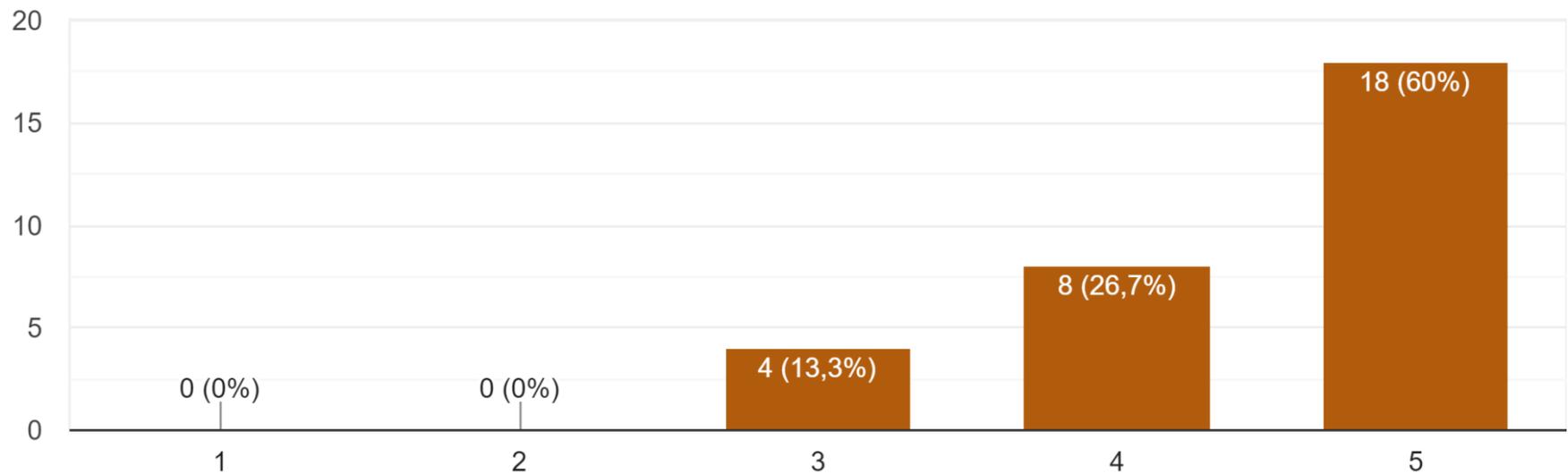
30 απαντήσεις





6. Mobile learning has helped me pace my studies in my distance education

30 απαντήσεις

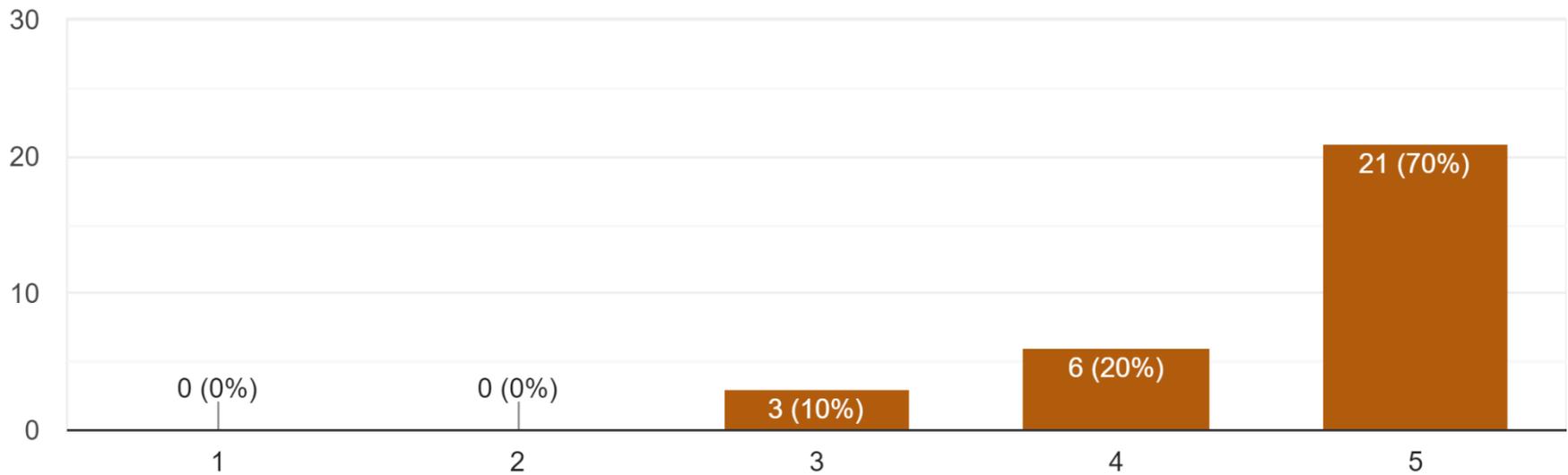


Evaluation of the used applications



1. Google Forms

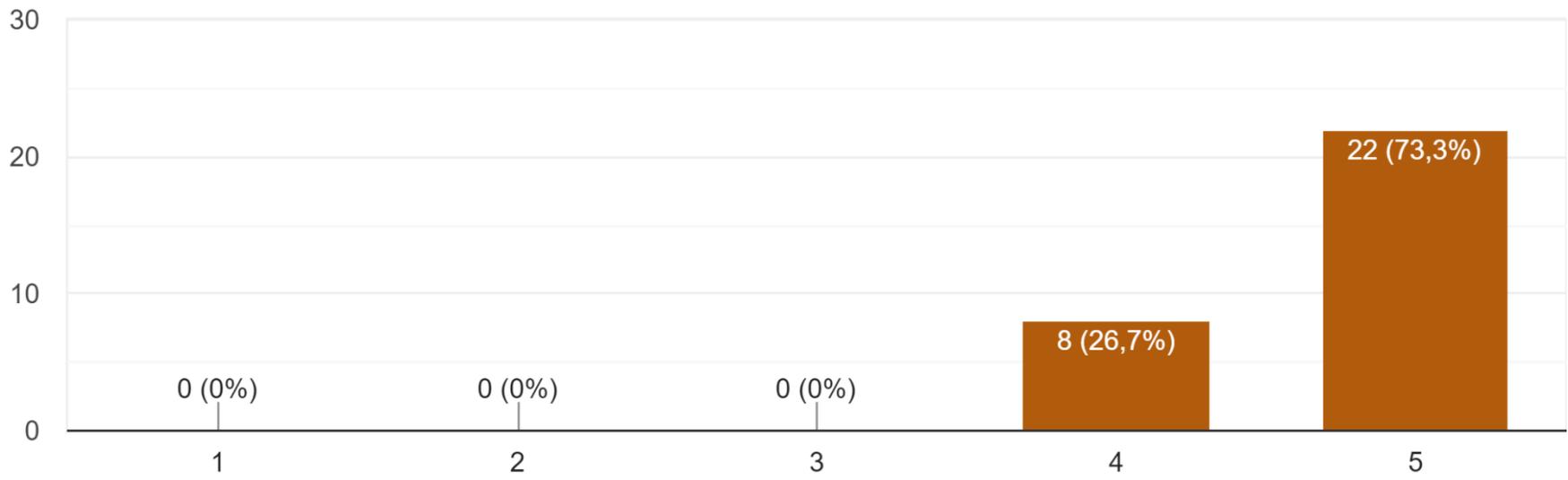
30 απαντήσεις





2. Google Docs

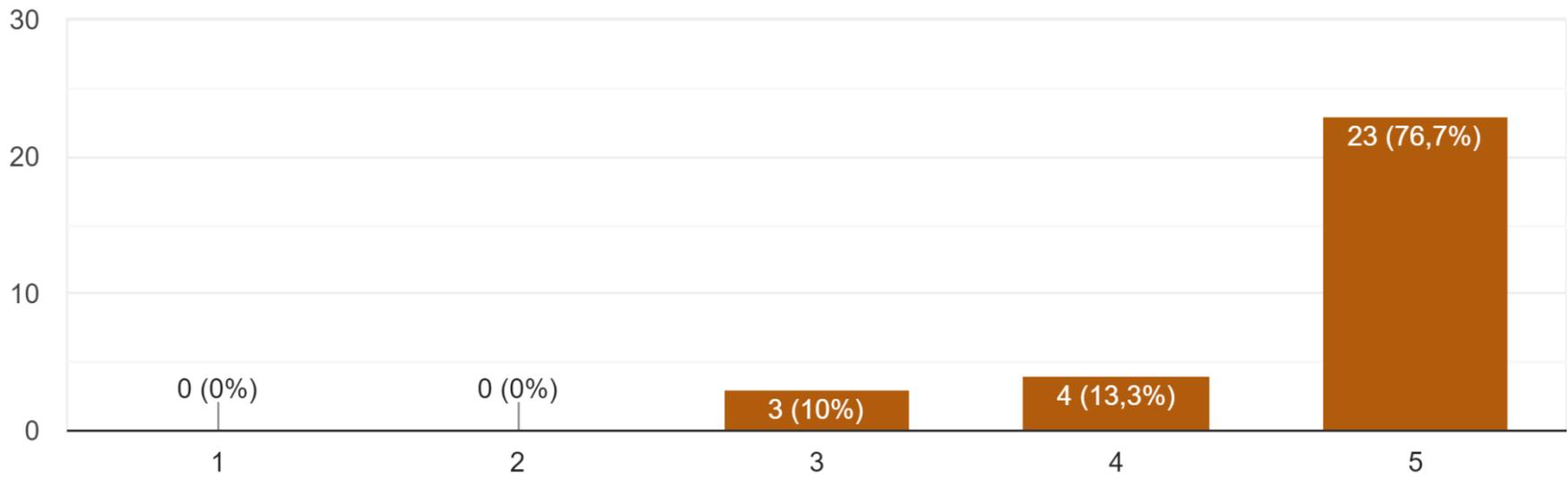
30 απαντήσεις





3. Google Maps

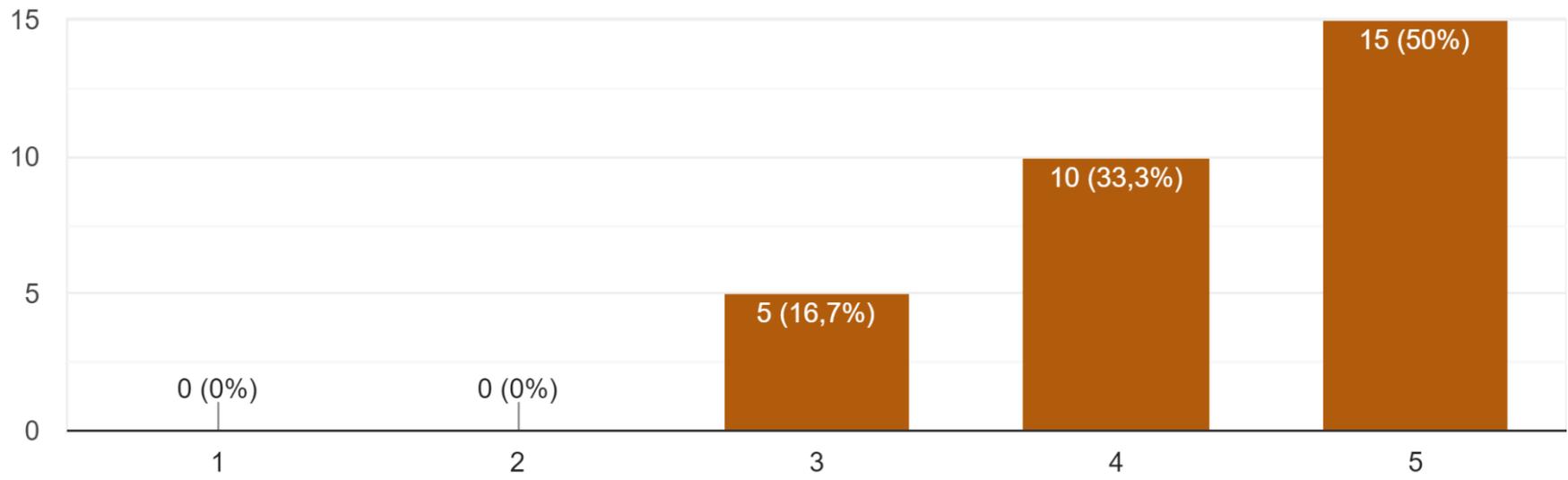
30 απαντήσεις





4. Google Earth

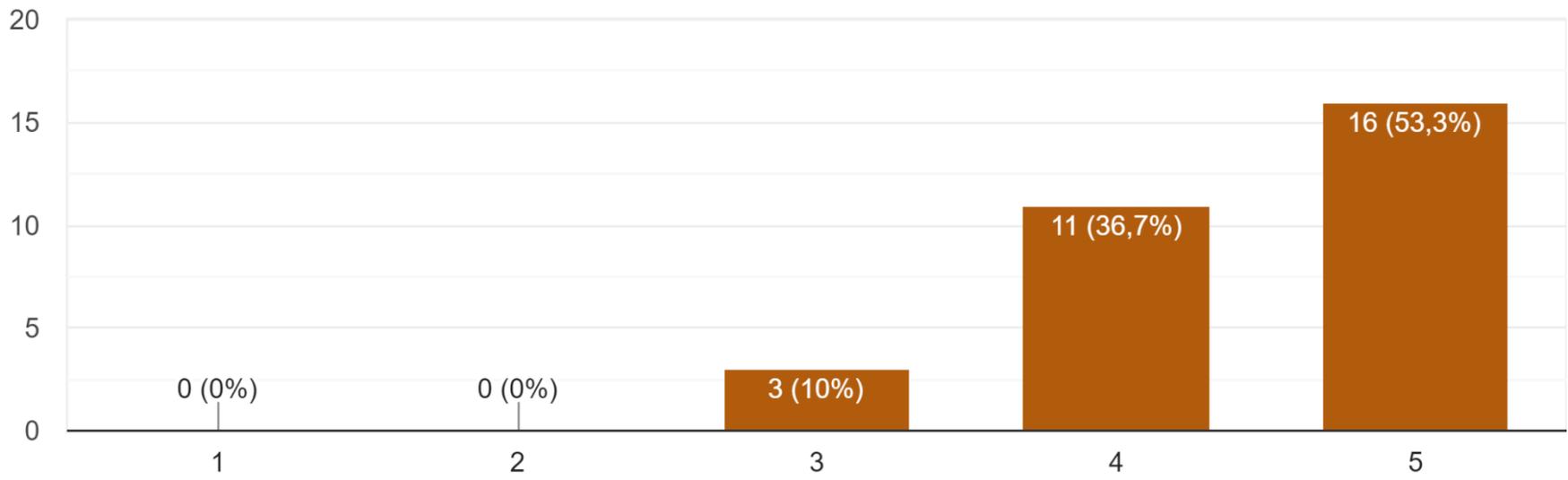
30 απαντήσεις





5. Padlet

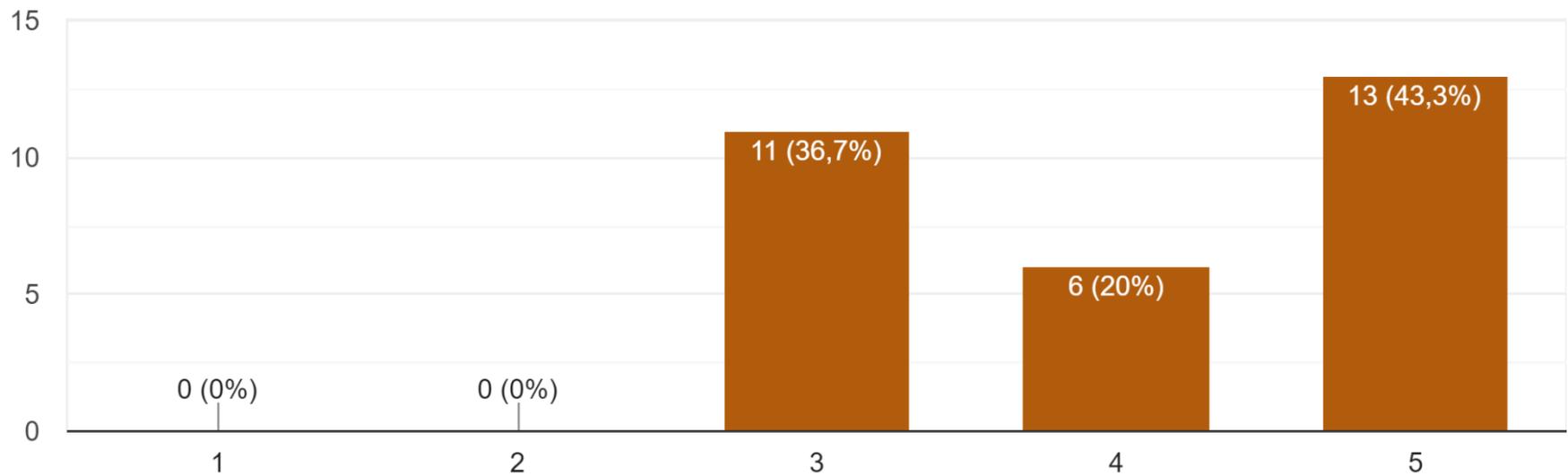
30 απαντήσεις





6. Voice Thread

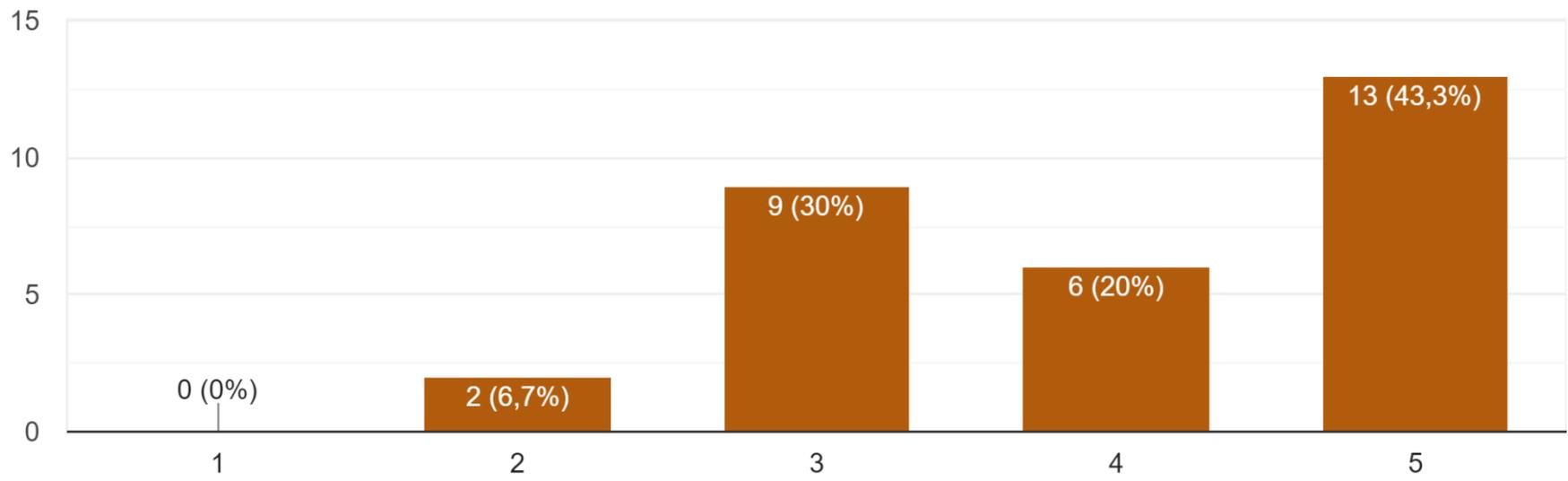
30 απαντήσεις





7. Thingling

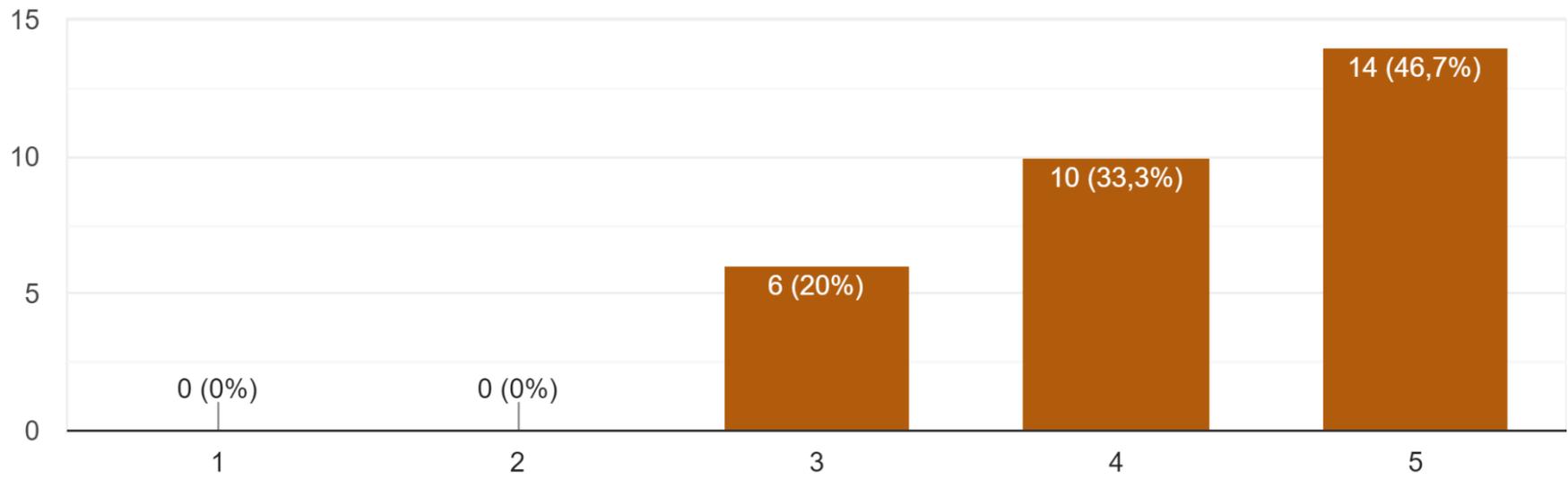
30 απαντήσεις





8. Animoto

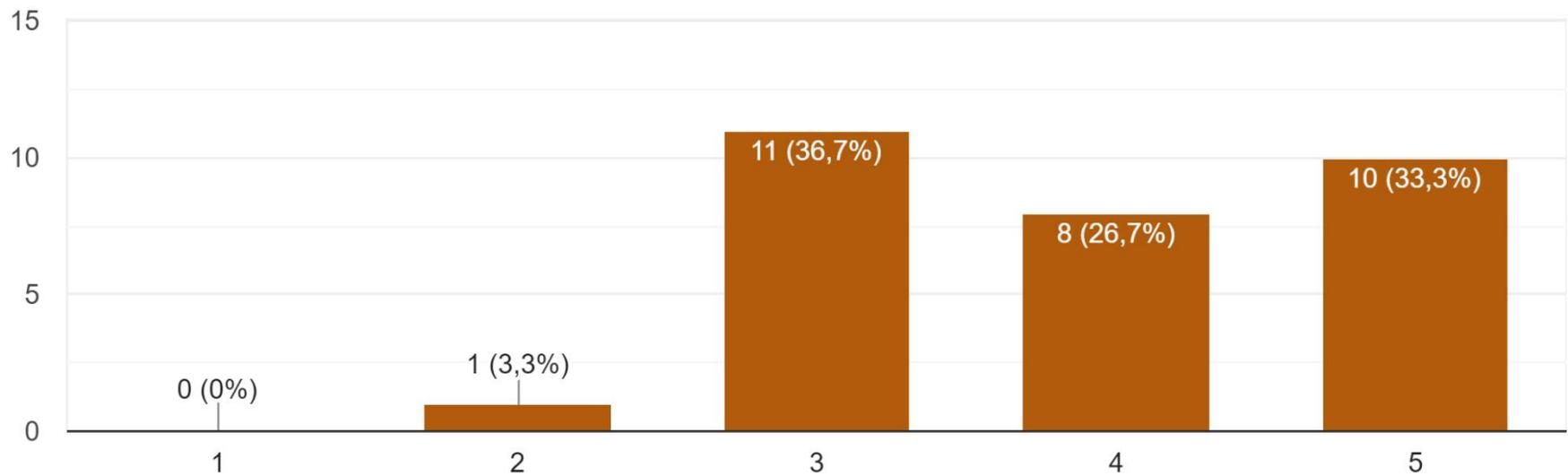
30 απαντήσεις





9. Nearpod

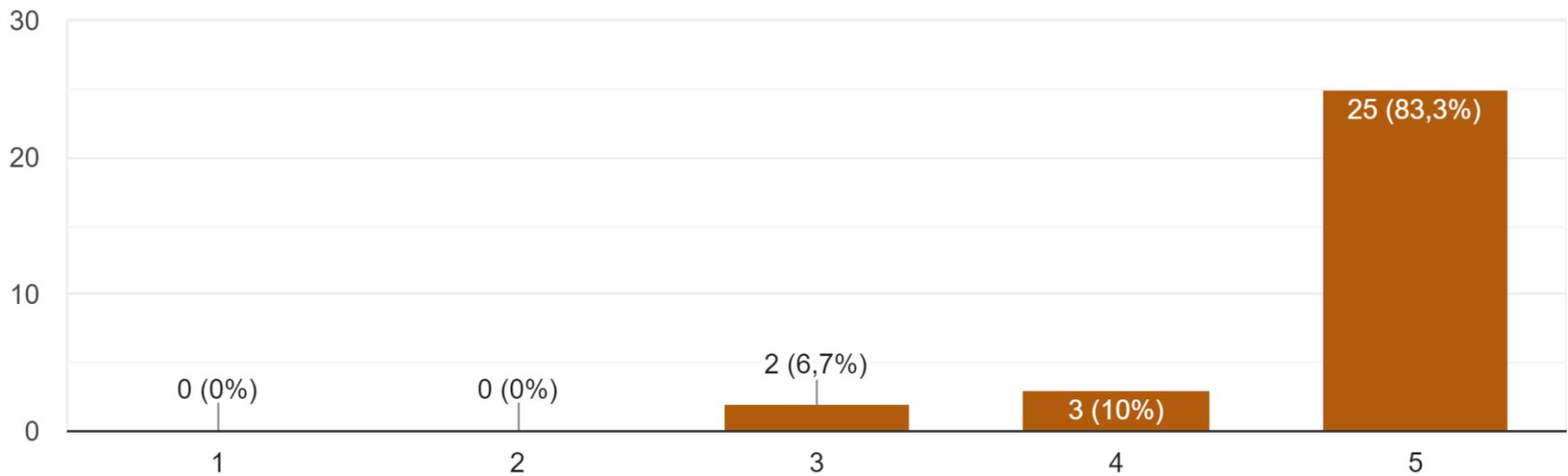
30 απαντήσεις





10. Kahoot

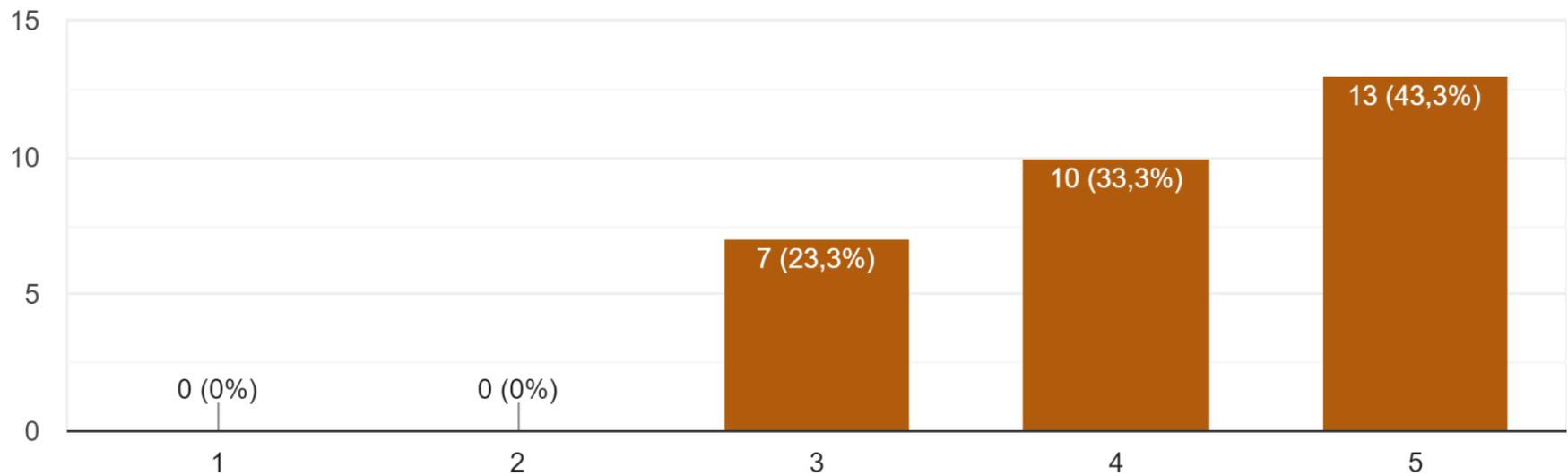
30 απαντήσεις





11. Rubistar

30 απαντήσεις





<p>Country 29 απαντήσεις</p> <table border="1"> <thead> <tr> <th>Country</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Greece</td> <td>24,1%</td> </tr> <tr> <td>Turkey</td> <td>10,3%</td> </tr> <tr> <td>Italy</td> <td>17,2%</td> </tr> <tr> <td>Bulgaria</td> <td>13,8%</td> </tr> <tr> <td>Spain</td> <td>34,5%</td> </tr> </tbody> </table>	Country	Percentage	Greece	24,1%	Turkey	10,3%	Italy	17,2%	Bulgaria	13,8%	Spain	34,5%	<p>Country 30 απαντήσεις</p> <table border="1"> <thead> <tr> <th>Country</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Greece</td> <td>20%</td> </tr> <tr> <td>Turkey</td> <td>16,7%</td> </tr> <tr> <td>Italy</td> <td>36,7%</td> </tr> <tr> <td>Bulgaria</td> <td>13,3%</td> </tr> <tr> <td>Spain</td> <td>13,3%</td> </tr> </tbody> </table>	Country	Percentage	Greece	20%	Turkey	16,7%	Italy	36,7%	Bulgaria	13,3%	Spain	13,3%
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