# LEONARDO DA VINCI ToI PROJECT

# SERIO

## On-site construction employees' occupational safety in Europe the enhancement and strengthening of their Health and Safety skills development by means of the creation of multimedia training, based on case studies with the use of contemporary devices.

2013-1-PL1-LEO05-37526

**Report on initial test courses concerning SERIO application sample**
**October – November 2014**

SERIO application initial test courses were held in five countries taking part in the project: Poland, United Kingdom, France, Italy and Turkey.

- 43 participants took part in SERIO tests in total.

Project consortium:

**SERIO initial test courses** were conducted with accordance with previously prepared test course plan.

| **Step 1: Define the test evaluation objectives** |
|---|
| - **to evaluate the test application and methodology**<br>- **to prove usefulness of the training material for the target group**<br>- **to set up the further way of developing computer programme** |
| **Step 2: Participants**<br>- who needs to be there?<br>- one large group or a few smaller? |
| **Construction schools students, postgraduates, construction employees, H&S trainers.**<br><br>**Quantity of participants:**<br><br>**- initial test courses for target group – 3-5 participants per partner.** |
| **Step 3: Venue** |
| **Poland – PZPB**<br>**Italy – CIAPE**<br>**France – MPS**<br>**Turkey – ERBIL**<br>**United Kingdom – CIOB** |
| **Step 4: Training programme** |
| **According to prepared test application consisting of mx training material.** |
| **Additional materials: project promotion materials, SERIO presentations, project leaflets, SERIO website www.serio.mobi , SERIO newsletter.** |
| **Feedback from participants - what to expect: training assessment on the SERIO questionnaire basis.** |
| **Step 5: Creating the report on SERIO initial test courses including short description of test courses and participants.** |
| **Each partner will prepare report on initial test course based on SERIO evaluation form.**<br>**Reports from partners will be summarized by PZPB and CIOB.** |

# Test of SERIO application sample test in Poland

Responsible partner: Polish Association of Construction Industry Employers

Date: October 2014 – November 2014, Poland

PARTICIPANTS OF THE TESTING COURSE:

- Construction Technical Schools students
- Construction workers
- Construction engineers
- H&S trainers
- National Labour Inspectorate

10 participants attended in the testing course.

METHODOLOGY OF THE TEST COURSE:

The participants were informed about:

- The idea of the project SERIO
- Future plans about the SERIO application.

A set of project documents were distributed to the participants covering;

- SERIO website www.serio.mobi
- SERIO leaflet and newsletter
- Sample of SERIO application
- SERIO methodology
- SERIO questionnaire

RESULTS OF THE TESTING:

Section A: Background and Experience

Two technical vocational school students, two construction employees, two H&S trainers, four National Labour Inspectorate officers took part in testing.

All of them are interested in H&S trainings and increasing safety standards in construction branch.

Participants confirmed that they had some experience in using electronic, blended learning H&S trainings. Most of them admitted to participate in face to face training rather than virtual one. No one has used H&S application on mobile devices so far.

Section B: Training Course

Participants stated that:

- application is user friendly,
- layout of exercises and text is readable,
- sometimes (it depends on device) some exercises are not visible enough on the screen,
- exercises' instruction should be more clear for the user (e.g. how to solve presented problems: click this, drag this, that etc.)
- variety of exercises make application attractive for potential users at any age
- the level of difficulty is adjusted to the presented issues.

Participants stated that application is useful to refresh and practice existing knowledge.

They admitted that it is impossible to teach or train properly anyone via electronic device. Especially when it regards human life. This comment meets with the goal of the project which is to form users habits in terms of safety thinking rather than to teach them totally new things. SERIO application will be a non-formal learning tool, supporting obligatory H&S trainings. The goal of SERIO application is to impact on individuals behaviors and way of thinking about the their safety and other co-workers.

Participants proposed additional topics to these existing ones:

- infrastructure H&S

Section C: SERIO application

The layout of the application was assessed as clear, menu as understandable and whole presented application as user-friendly.

Participants informed authors about technical problems with SERIO application installation. It was caused mainly because sample version is not converted. The final version will be in “one piece” easy to download and set up.

**Test training in Poland conclusions:**

SERIO application was received good rates in Poland. Participants were interested in application. They evaluated it on the decent level although it was only basic sample. The aim of the initial test training was to check the right directions of application development. The whole remarks were included in the General conclusions – Checklist.

# Test of SERIO application sample test 2 in Poland

Responsible partner: Warsaw University of Technology

Date: October 2014 – November 2014, Poland

PARTICIPANTS OF THE TESTING COURSE - 8 persons, including:

- WUT student - 1
- Construction employee - 6
- H&S trainer - 1

8 participants attended in the testing course.

METHODOLOGY OF THE TEST COURSE:

The participants were informed about:

- The idea of the project SERIO
- Future plans about the SERIO application,

A set of project documents were distributed to the participants covering;

- SERIO website www.serio.mobi
- SERIO leaflet and newsletter
- Sample of SERIO application
- SERIO methodology

– SERIO questionnaire

**RESULTS OF THE TESTING:**

Section A: Background and Experience

1. Do you have any experience in using electronic H&S courses?

| **Response** | |
|---|---|
| yes | 2 |
| no | 6 |

2. If you did, what type of training?

| **Response** | |
|---|---|
| Online course | 2 |
| Course on CDROM | 1 |
| Mobile application | 0 |
| Other: Please specify: | 0 |

Section B: Training Course

1. Rate the course contents according to the following characteristics:
   *[For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]*

| **Response** | **Rate** |
|---|---|
| The text is readable | 4,875 |
| Exercises instructions are clear | 3,625 |
| Variety of exercises | 4,875 |
| Difficulty | 3,75 |
| Application is user friendly | 4,625 |

2. How do you feel to what extent did the course help you with the following?
   [For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]

| **Response** | **Rate** |
|---|---|
| a. Acquire new knowledge | 3,625 |
| b. Refresh existing knowledge | 4,75 |
| c. Practice with new materials | 4,125 |
| d. Specialize on specific issues | 4,25 |

3. To what extent could this kind of training (full version) help you improve your H&S knowledge?

| **Response** | |
|---|---|
| very much | 25% |
| quite a lot | 75% |
| somewhat | 0 |
| not much | 0 |
| not at all | 0 |

4. What type of information regarding H&S would you like to put in the course?

| **Please specify** | |
|---|---|
| 1. No suggestions | **0** |

Section C: SERIO application

1. Rate the software according to the following characteristics:
   *[For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]*

| **Response** | **Rate** |
|---|---|
| The layout is clear | 4,75 |
| The menu is understadable | 5 |
| Is this sample userfriendly | 4,75 |

2. Did you have any difficulties concerning with SERIO application?

| **Response** | |
|---|---|
| No | 75% |
| Yes | 25% |

If you did, what kind of difficulties?

| **Response** | |
|---|---|
| Technical problems e.g. problems with setting up the application on my mobile devices | Module 3, lesson 2, technical error 4/5 glitch when trying to set number 5 |
| Problems with navigating | |
| | |
| Other: Please specify: | A) Module 5, lesson 1 Longer description of what to do needed<br>B) Ordering the photos in case of finger injury |

3. İs it necessary to add application manual for users?

| **Response** | |
|---|---|
| No | 12,5% |
| Yes | 87,5% |

Section D: Trainee/teachers suggestions. If any.

No suggestions.

**Test training in Poland conclusions:**

It was pointed out that it was only demo version. SERIO application was received good rates in Poland. Participants were interested in application. The evaluation shows that:

- majority of responders never participated in online course,
- application is user friendly (no difficulties) although some explanations of exercises are necessary,
- majority of responders refresh existing knowledge "quite a lot",
- layout of the application and menu is clear,
- some technical problems were pointed out, to be checked by the programmers,
- majority of responders requested written manual for users.

# Test of SERIO application sample test in Italy

Responsible partner: CIAPE

Date: October 2014 – November 2014, Italy

PARTICIPANTS OF THE TESTING COURSE:

- 3 participants

METHODOLOGY OF THE TEST COURSE:

The participants received instructions by e-mail and phone call; they were informed about:
- The idea of the project SERIO
- Future plans about the SERIO application

A set of project documents were sent via email to the participants covering;
- SERIO website www.serio.mobi
- SERIO leaflet and newsletter
- Sample of SERIO application
- SERIO methodology
- SERIO questionnaire

**RESULTS OF THE TESTING:**

Section A: Background and Experience

2/3 participants were H&S trainers. Only one of them had some previous experience with H&s electronic course (on line course). One participant was a trainer and project manager.

Section B: Training Course

At question 1 all respondents scored 4 the readability of the text, while the instruction as well as variety of exercises were scored between 3 and 5; difficulty was scored 3 and 4, while use of the application was scored 4 and 5.

Regarding the usefulness of the course - question 2- all the issues received a score between 3 and 5 (except practice with new material which got a 2).

To question 3 all participants answered “quiet a lot”.

When asked about what kind of information to be put in the course, one participant answered “safety strategies”, while another answered “work safety issues”.

Section C: SERIO application

2/3 participants had technical problems with the application and 3/3 believe that an application manual is necessary.

Section D: Trainee/teachers suggestions. If any.

No specific suggestion came from the participants.

**Test training in Italy conclusions:**

All participants were quite satisfied with the application and found it useful and complete. Although they all referred technical problems in downloading and launch it.

# Test of SERIO application sample test in Turkey

Responsible partner: **ERBIL PROJECT CONSULTING ENGINEERING CO.INC.**

**Date :** 19-25 November 2014,
**Place :** ERBIL PROJECT CONSULTING ENGINEERING CO.INC.
Bukres sok. No:7 at the meeting room
Cankaya ANKARA TURKEY

**PARTICIPANTS OF THE TESTING COURSE:**
Ten participants attended in the course.

**METHODOLOGY OF THE TEST COURSE:**

**19.11.2014 :** The participants were informed that there will be testing session tomorrow on SERIO Project,

Enough amount of SMART phones are supplied for the testing, 2 or 3 people used the same telephone.

**20.11.2014 :** A presentation covering the idea, aims and future plans of the project is prepared and presented to the participants of the testing in order to give an idea of the project,

After the introduction of the project, a discussion took place about the aims of the application and comments are taken about the probable usage of the sectors of the application,

Application is established in the phones and made it work for them,

Meantime, a set of project documents were distributed to the participants covering;

- SERIO website www.serio.mobi
- SERIO leaflet and newsletter
- Sample of SERIO application
- SERIO methodology
- SERIO questionnaire

The group is left for tries for the following days and decided to get together in 3 days' time again,

They were asked to fill in the questionnaire that has been distributed to them and write their comments openly.

**24.11.2014 :** The group came together again to discuss about the application,

Questions are answered and their comments and the questionnaires are collected.

The questions that couldn't be answered are written as the comments of the users below.

After a discussion on the application, the meeting has ended to be together for the final form of the application.

Everybody thought that the application would be a good product for the construction workers and they said that they would require to put contribution to the project whenever it is required.

**RESULTS OF THE TESTING:**

## Section A: Background and Experience

**1.** What is your occupation?
- technical vocational school student
- university student
- construction employee
- H&S trainer

The participants are from the construction sector and they are the construction employees,

**2.** Do you have any experience in using electronic H&S courses?

| **Response** | |
|---|---|
| yes | 7 |
| no | 3 |

3. If you did, what type of training?

| **Response** | |
|---|---|
| Online course | 4 |
| Course on CDROM | |
| Mobile application | |
| Other: Please specify:H&S courses at ERBIL | 6 |

## Section B: Training Course

4. Rate the course contents according to the following characteristics:
*[For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]*

| **Response** | **Rate** |
|---|---|
| The text is readable | *4* |
| Exercises instructions are clear | *3* |
| Variety of exercises | *2* |
| Difficulty | *3* |
| Application is user friendly | *4* |

5. How do you feel to what extent did the course help you with the following?
[For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]

| **Response** | **Rate** |
|---|---|
| a. Acquire new knowledge | *4* |
| b. Refresh existing knowledge | *5* |

| | |
|---|---|
| c. Practice with new materials | *3* |
| d. Specialize on specific issues | *3* |

6. To what extent could this kind of training (full version) help you improve your H&S knowledge?

| **Response** | **#of persons** |
|---|---|
| very much | 4 |
| quite a lot | 4 |
| somewhat | 2 |
| not much | - |
| not at all | - |

7. What type of information regarding H&S would you like to put in the course?

| **Please specify** | |
|---|---|
| 1.Precautions that must be taken at the construction sites must be defined clearly. | |
| 2.Simple actions that have to be taken at the sites must be shown, like belts, helmets and others. | |
| 3.There are inspectors and these inspectors are cutting money from the workers, the amount of money can be shown to the workers when they do something wrong. In that case, they will not do dangerous things. For example, when they don't tie their belt, they should know that they will pay 100 EURO or something like this.. | |
| 4.At a large construction site, one must not be alone and always 2 people must together act.This must be emphasized also. | |
| 5.Technicians and engineers' duties must be identified separately because there is a distinguishment between the tasks of the 2 professions, while a worker can do something, an engineer must not do that.. | |
| 6.In case of the usage of an explosive, the precautions that have to be taken can be shown. | |
| 7.The people coming outside and visiting the site must be thought also, there can be some examples for them and they can be shown at the application also.Because these types of users who are not used to be in a construction site must be trained also. | |
| 8.The importance of being clean and protection of the environment (solid-wastes, drinking water, WC) must be emphasized. | |

## Section C: SERIO application

8. Rate the software according to the following characteristics:

*[For 1= not at all, 2= not much, 3= somewhat, 4= quite a lot and 5= very much, tick off the number that represents your opinion about the following statement]*

| **Response** | **Rate** |
|---|---|
| The layout is clear | *4* |
| The menu is understadable | *3* |
| Is this sample userfriendly | *4* |

9. Did you have any difficulties concerning with SERIO application?

| **Response** | |
|---|---|
| No | 6 |
| Yes | 4 |

If you did, what kind of difficulties?

| **Response** | |
|---|---|
| Technical problems e.g. problems with setting up the application on my mobile devices | At the settlement of the application, there was difficulty but I think this will not happen when we have the final form |
| Problems with navigating | There were no problems in using the program. |
| | |
| Other: Please specify: | Some parts of the texts are not yet established. Same things are written. |

10. İs it necessary to add application manual for users?

| **Response** | |
|---|---|
| No | 3 |
| Yes | 7 |

## Section D: Trainee/teachers suggestions. If any.

***The introduction of the project was successful as all the attendants of the testing course were from construction & engineering field, application attracted their attention a lot as they were mostly used to have presentation or black-board type of training.This appliaction came to them enjoying and as they are all used to play with these kinds of applications, they tried to do their best while exercising the application and tried to give theri comments as much as possible.***
***According to us, it is very well thought and we are sure that this application will be very much helpful at the constructions sites.***

## Test training in Turkey conclusions:

- It is a very good idea to make an application on H&S and this will bring the awareness to the safety conditions at the construction sites,
- Mostly the workers with low training will have an excellent way of getting knowledge about what to do at once when some accident occurs because otherwise, very wrong help conditions are applied to the injured people,
- It is a new trend to use applications on the phone so this will have a good impact on the people and supply the training on H&S as much as possible,
- I couldn't see some of the texts as they are written in small letters, is it possible to make them zoom?
- It could be maybe more simpler, some of the examples need more attention, maybe the examples can teach in a simpler way.
- This can be a good training material at the lectures given on construction sites.

# Test of SERIO application sample test in France

Responsible partner: MPS

Date: October 2014 – November 2014, Poland

PARTICIPANTS OF THE TESTING COURSE:

6 participants attended in the testing course.

METHODOLOGY OF THE TEST COURSE:

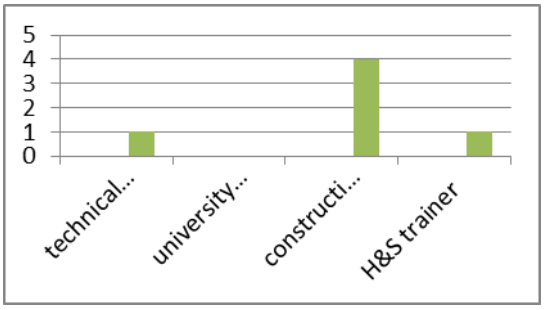
The participants were informed about:
- The idea of the project SERIO
- Future plans about the SERIO application,

A set of project documents were distributed to the participants covering;
- SERIO website www.serio.mobi
- SERIO leaflet and newsletter
- Sample of SERIO application
- SERIO methodology
- SERIO questionnaire

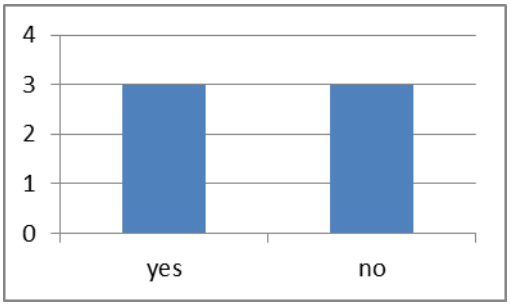
**RESULTS OF THE TESTING:**

Section A: Background and Experience

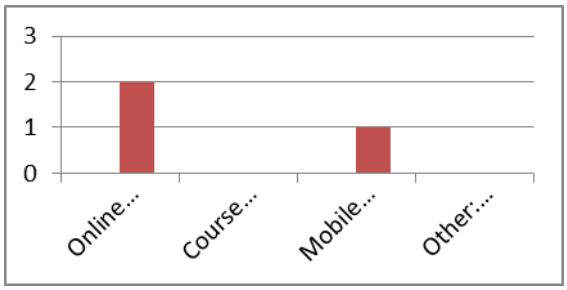
1. What is your occupation?




2. Do you have any experience in using electronic H&S courses?

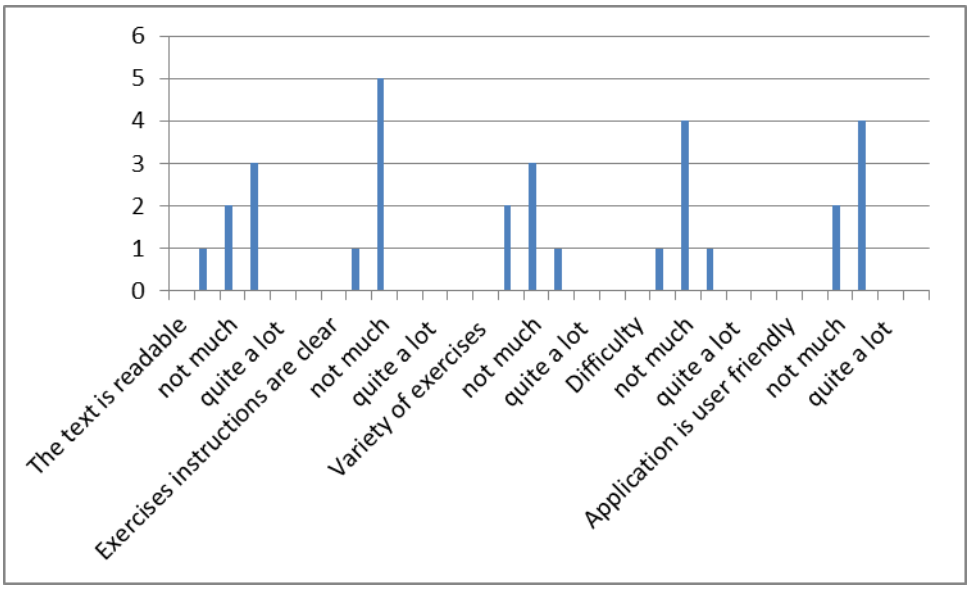



3. If you did, what type of training?

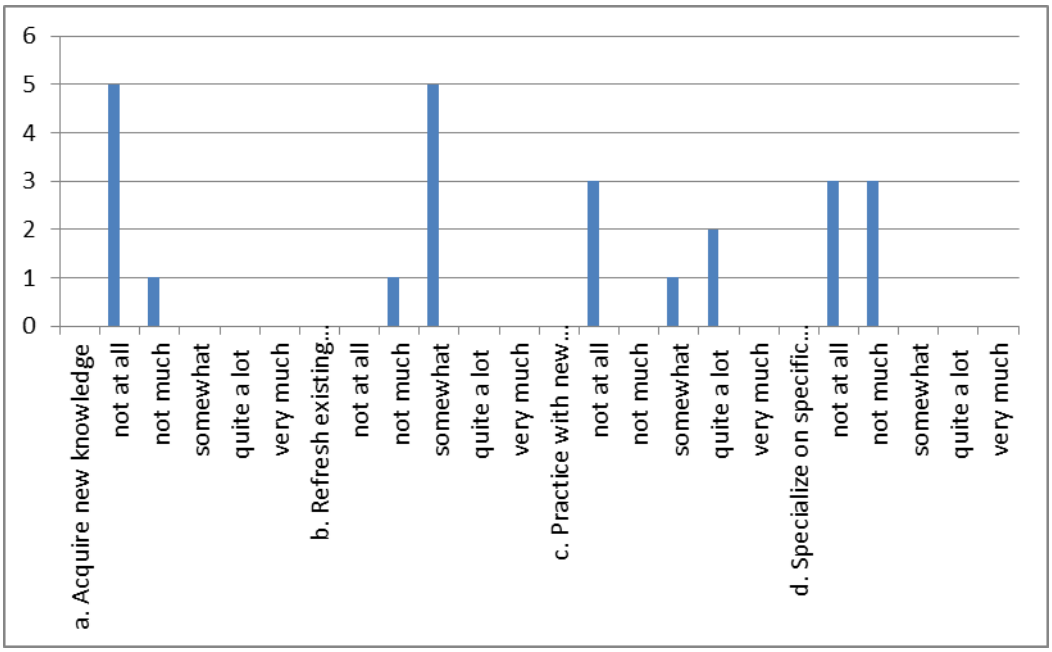



Section B: Training Course

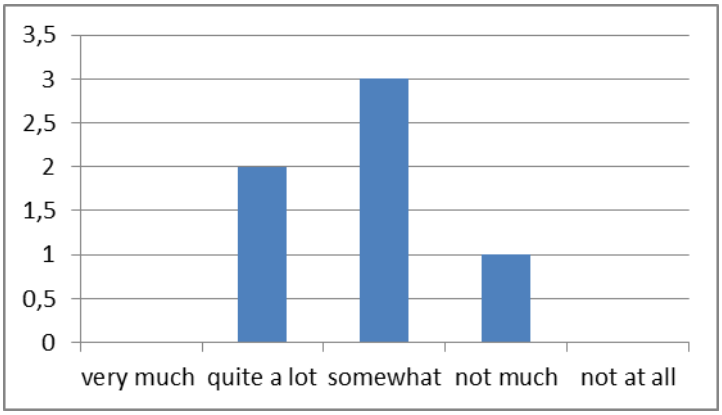
1. Rate the course contents according to the following characteristics:



2. How do you feel to what extent did the course help you with the following?




3. To what extent could this kind of training (full version) help you improve your H&S knowledge?

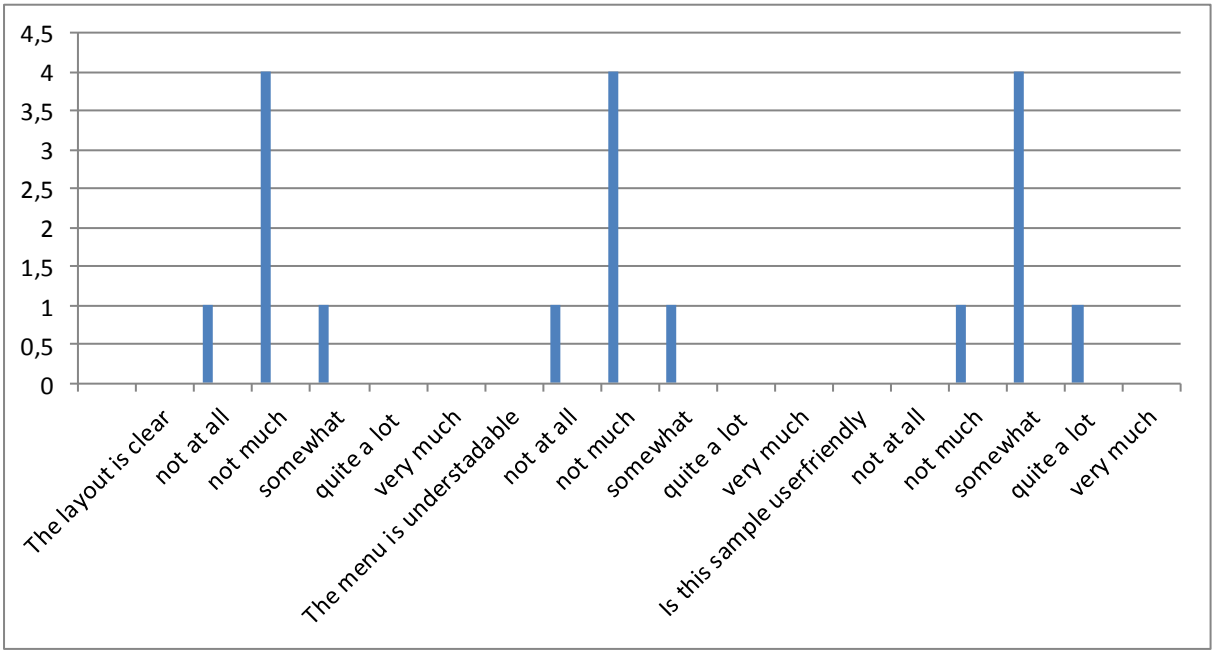



4. What type of information regarding H&S would you like to put in the course?

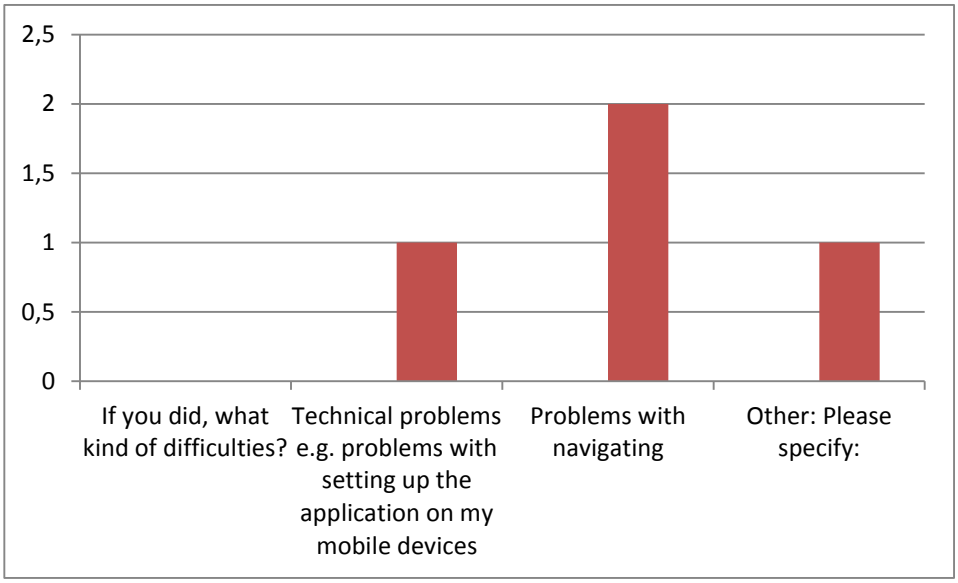
- Accident Prevention
- Required protections
- More information
- Safety standards
- Required clothing (shoes, helmet, etc.)

Section C: SERIO application

1. Rate the software according to the following characteristics:




2. Did you have any difficulties concerning with SERIO application?




Section D: Trainee/teachers suggestions. If any.

- Texts in bad French and English texts
- Re see the overall functioning of the application
- translation of questions and images
- improve the instructions
- make a difference between the lesson and the test
- it is not very interesting

**Test training in France conclusions:**

- ✓ Participants did not find the application interesting test
- ✓ Too many spelling mistakes in French
- ✓ Too many instructions or image are not translated
- ✓ Repetition between the practice and the test
- ✓ Sometimes vague the instructions
- ✓ A limited interest in terms of learning
- ✓ Too much handling for installation
- ✓ What is positive is that this is a new way to see or review the obligations in terms of safety in a playful way

# Test of SERIO application sample test in United Kingdom

Responsible partner: CIOB

Date: 20 November 2014, London

PARTICIPANTS OF THE TESTING:

- European Development Group, 6 people representatives of construction industry.

METHODOLOGY OF THE TEST COURSE:

The participants were informed about:

- The idea of the project SERIO
- Future plans about the SERIO application,

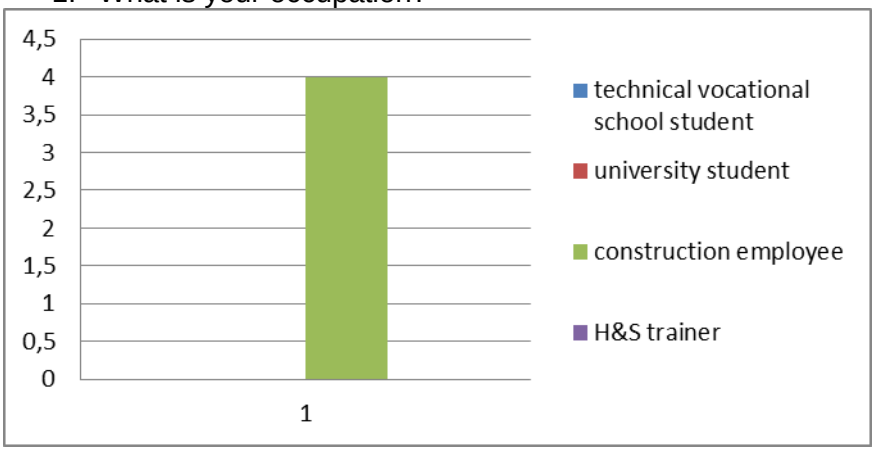
A set of project documents were distributed to the participants covering;

- SERIO presentation
- Sample of SERIO application
- SERIO methodology
- SERIO questionnaire

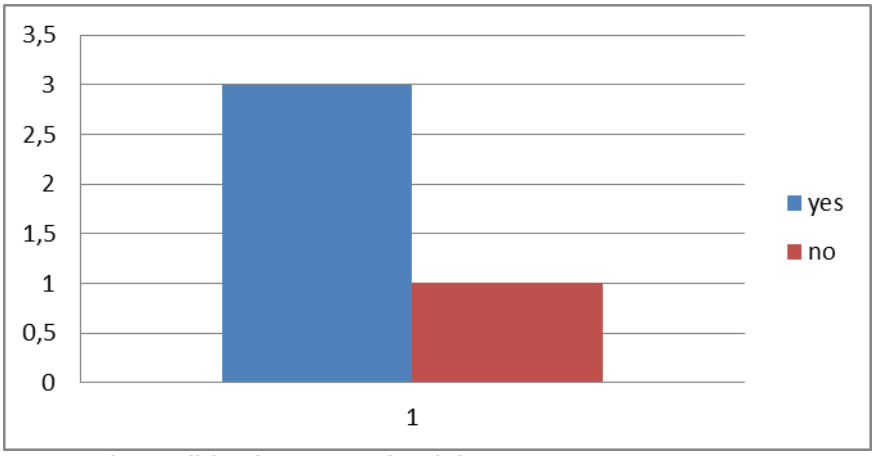
**RESULTS OF THE TESTING:**

Section A: Background and Experience

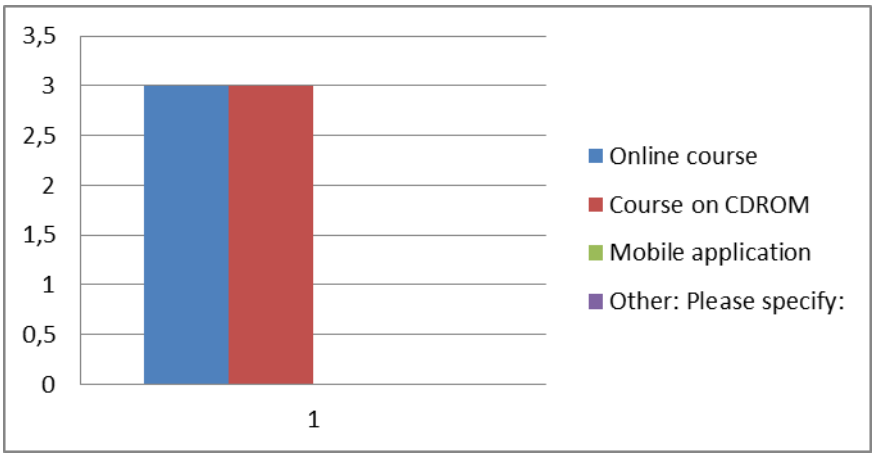
1. What is your occupation?




2. Do you have any experience in using electronic H&S courses?

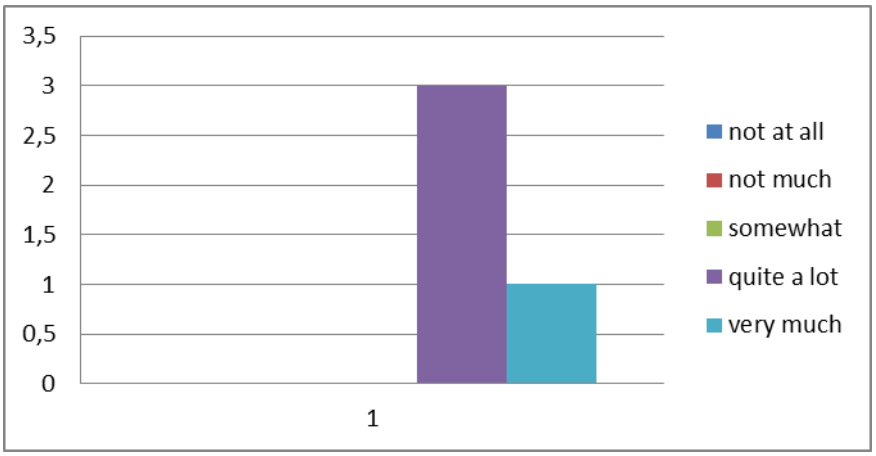


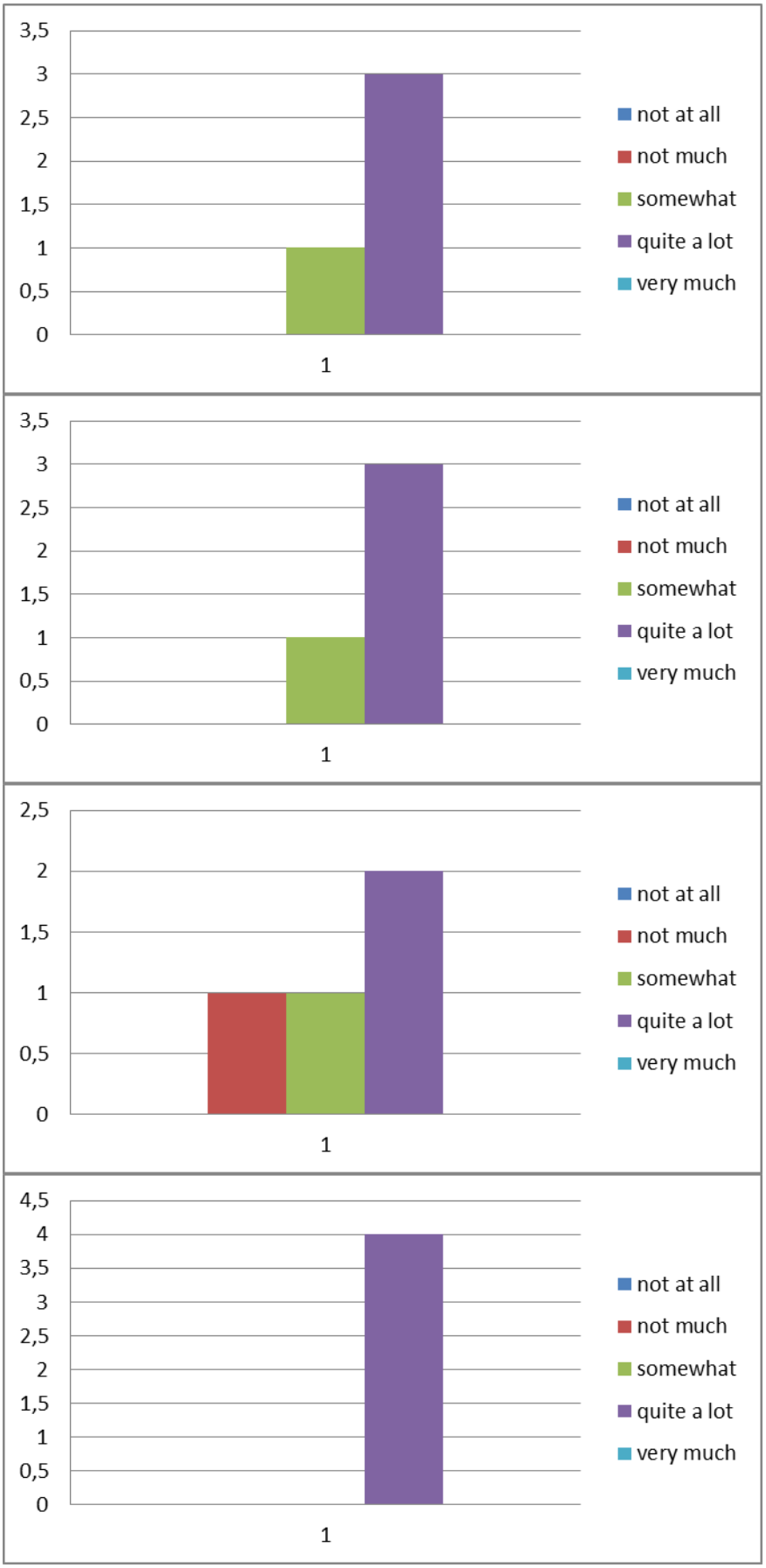

3. If you did, what type of training?



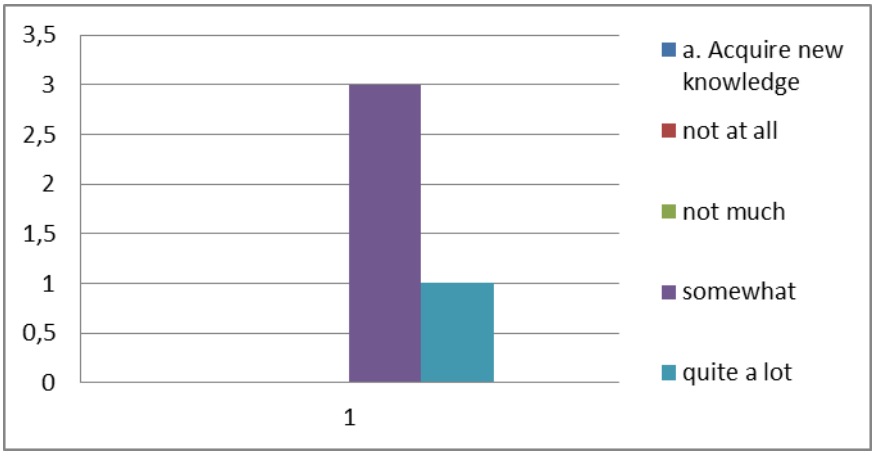

Section B: Training Course

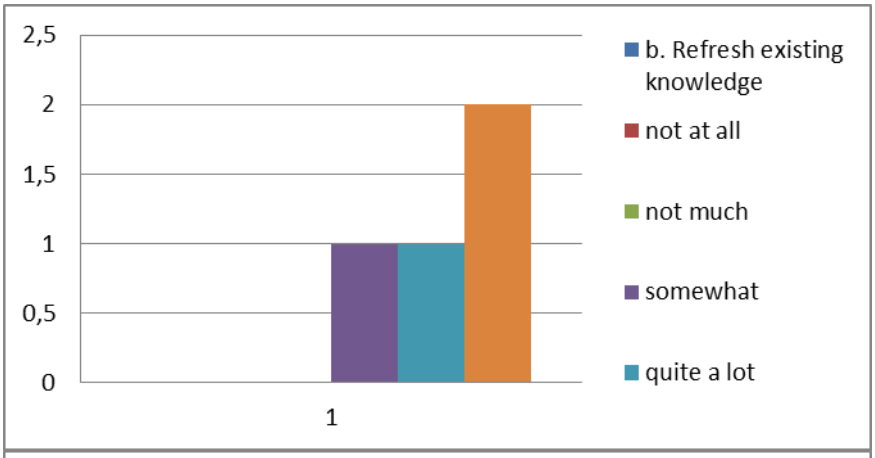
1. Rate the course contents

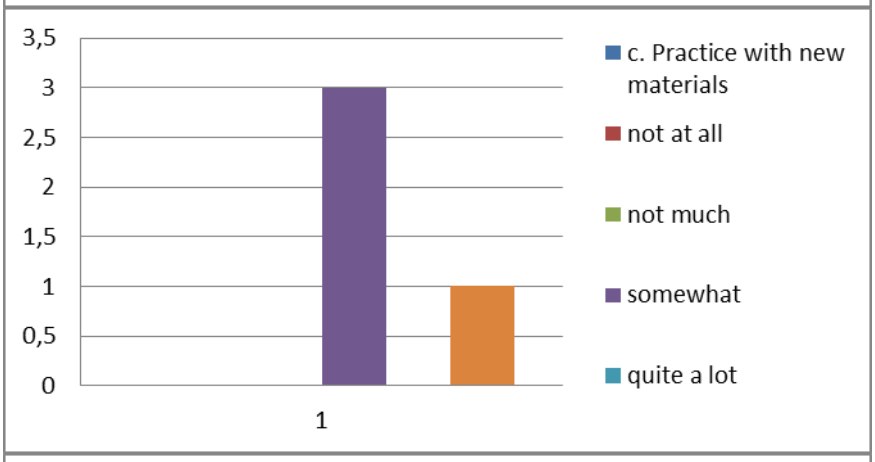


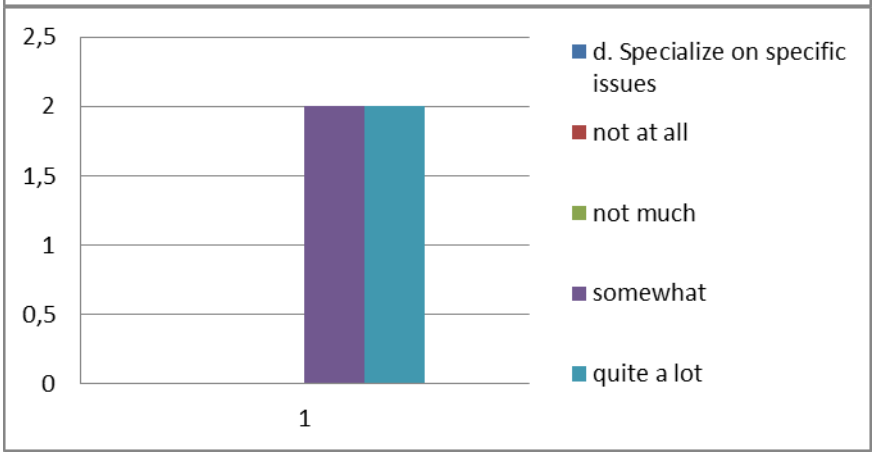



2. How do you feel to what extent did the course help you with the following?

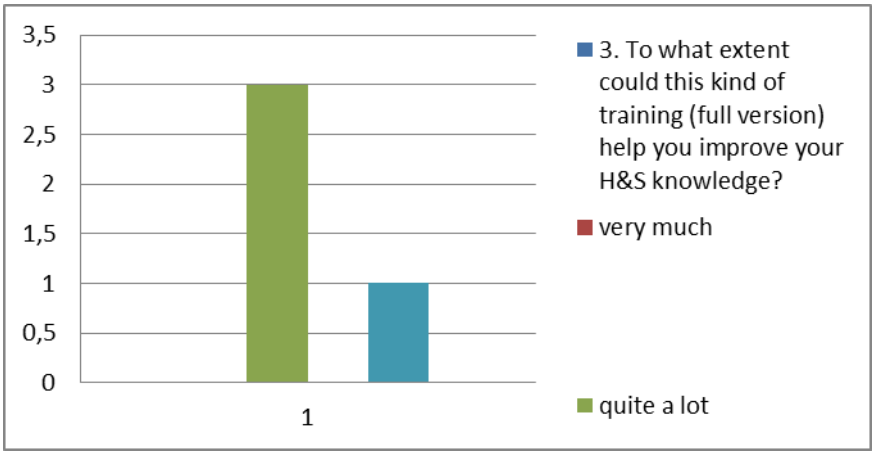


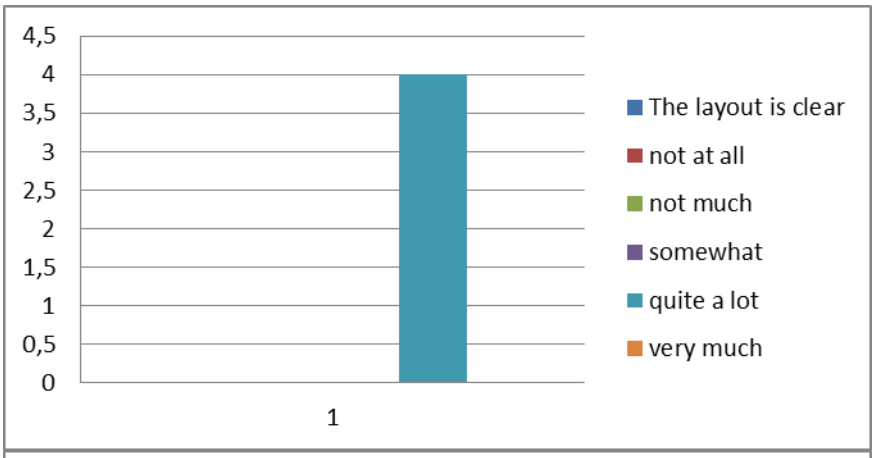

3. To what extent could this kind of training (full version) help you improve your H&S knowledge?

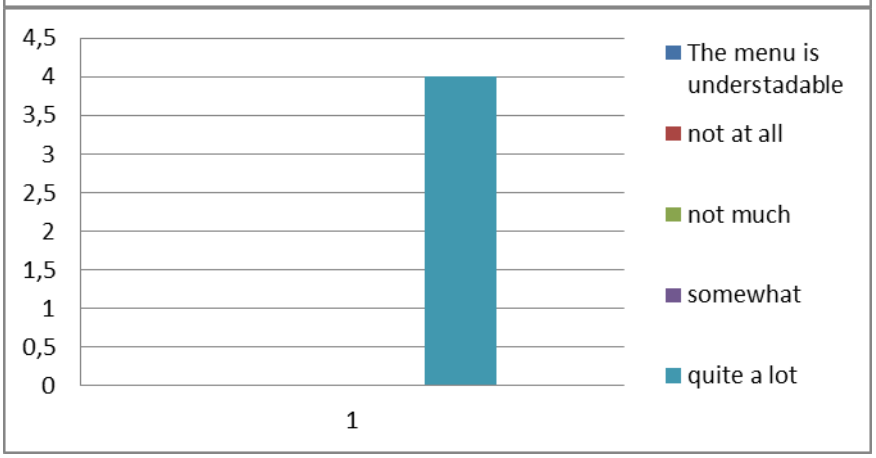


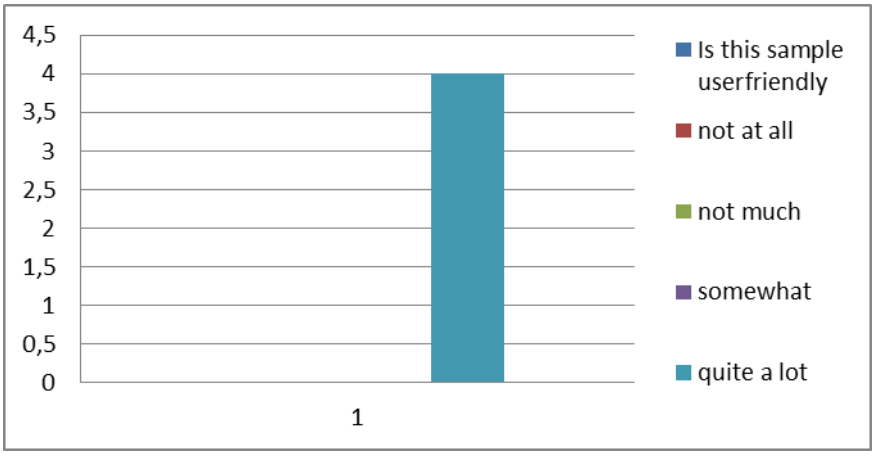

4. What type of information regarding H&S would you like to put in the course?
   - Ground works
   - Asbestos awareness
   - Working at height
   - Lifting equipment

<u>Section C: SERIO application</u>

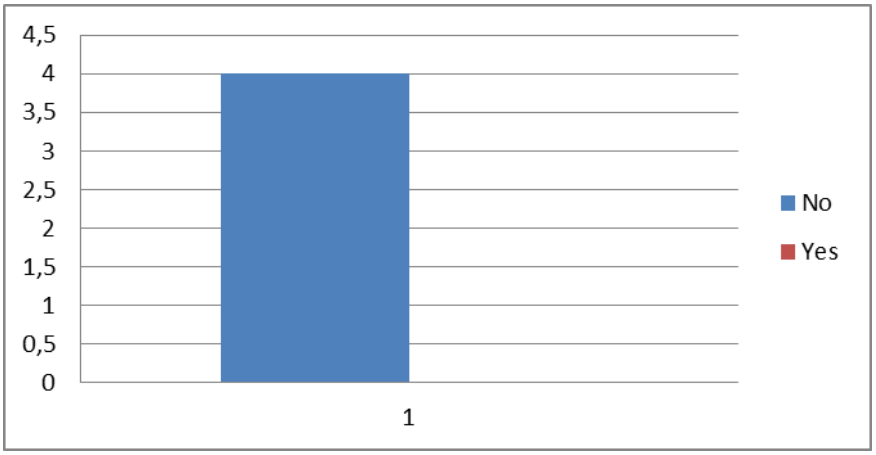
1. Rate the software



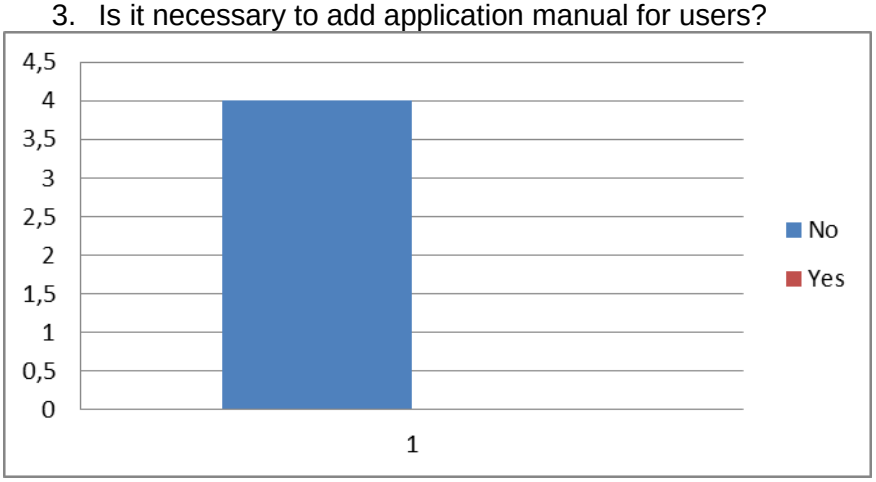



2. Did you have any difficulties concerning with SERIO application?




If you did, what kind of difficulties? **N/A**

3. Is it necessary to add application manual for users?




Section D: Trainee/teachers suggestions. If any.

**N/A**

**Test training in United Kingdom conclusions:**

It is clear that it is very first limited version of application with only a few exercises. Nevertheless SERIO application has been received very well. Participants were interested in application and would be keen to install it when ready.

The answers show that:

- majority of responders participated in H&S online courses before but **have never dealt** with mobile application like this
- application is user friendly (no difficulties)
- majority of responders refreshed existing knowledge from “somewhat” to "very much",
- layout of the application and menu is clear,
- no technical problems were pointed out
- no one feels that written manual for users is needed, due to simplicity and transparency of the application
- following topics might need further attention:
    a. Ground works
    b. Asbestos awareness
    c. Working at height
    d. Lifting equipment

**General Conclusions:**

Participants assessed the sample on the quite good level. Participants found the SERIO application idea valuable and helpful during day to day work. Most remarks are referring to the technical issues which will be improved. The final version of the course will more extended. Checklist placed below will helpful partnership to improve all software defects on this stage of works.

**Checklist**

| Remarks | Improved | Failed |
|---|---|---|
| Add materials and exercises concerning infrastructure H&S. | | |
| All exercises have to be in national languages. Some parts in sample were not translated. | | |
| Exercises' description should be more comprehensible. Some descriptions are too vague in the sample. | | |
| CPR game needs explanation how to solve the task. | | |
| Modules should be divided into Lessons. | | |
| Lessons should be divided into Exercises. | | |
| Lack of letters in Polish exercise's descriptions. | | |
| Information appearing in Polish version upon choosing bad or god answer (Lesson 2 Ex 1) is in English. | | |
| Some content of the menu is in English. | | |
| It could be good to add option of ZOOM IN of presented content. | | |
| Additional content can be added:<br>a. Ground works<br>b. Asbestos awareness<br>c. Working at height<br>d. Lifting equipment | | |
| Why is there repetition between test and practice? | | |
| Installation should be far less complex. | | |
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