

## Mobile Learning TeachEx

The module includes seven activities classified into four Mobile Learning areas: Outside the classroom, Digital documentation, Sharing and collaboration and Augmented reality. The table below presents the ML areas and their activities. Each area is signed by a color in order to help you to find your way in the file.

For each area, we present detailed instructions, supplementary links, and link to presentations to be used. The presentations are in the Drive.

The project domains are presented to clarify the domains of each activity.

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### Table of ML domains and module activities

| <u>Outside the classroom</u>               | <u>Digital documentation</u>                    | <u>Sharing and collaboration</u>                        | <u>Augmented reality</u>                            |
|--|---|---|---|
| <b>(I)</b> Location-based learning trip    | <b>(III)</b> Using images to enhance reflection | <b>(V)</b> Getting to know each other with shared board | <b>(VII)</b> Creating and using layered information |
| <b>(II)</b> Data collection and processing | <b>(IV)</b> Digital portfolio                   | <b>(VI)</b> Quizzes and polls                           |   |



Funded by the  
Erasmus+ Programme  
of the European Union

### Project Domains

|          | <b>Title</b>   | <b>Leader</b> |
|----------|--|---------------|
| <b>1</b> | Innovation in active teaching & learning (new pedagogical approaches, learning environments, classroom techniques, etc.)   | UCC           |
| <b>2</b> | Internationalization of education (application of learning outcomes, ECTS, DS in curriculum development)   | JU            |
| <b>3</b> | Bridging the generation gap (designing curriculum to meet the new student generation characteristics and learning strategies)  | GCU           |
| <b>4</b> | Managing diversity in the classroom – designing teaching methodologies that aim to equip staff with tools to develop diverse learning materials so as to meet different students' learning styles, abilities, disabilities and multicultural backgrounds | UBrighton     |
| <b>5</b> | Educational technology: blended learning, e-learning, mobile learning, etc.  | Groningen     |

## **Outside the Classroom**

### **I. Location-based learning trip to...**

1. **Subject:** Mobile Learning – using mobile devices in the field
2. **Developers:** Mobile learning team
3. **Rationale:** This activity demonstrates how students can collect important data accessible only outside the classroom, and do so quickly and easily. In doing so, they learn more about what they see, take photos of their findings and explore them, share them with peers and lecturers around the world, and process them together in different ways.
4. **Targets:** The workshop aims at familiarizing faculty members with the potential of having their students use mobile devices to collect data of different types outside the classroom, share it and process it together with the lecturer in order to understand a concept, find the answer to a question and gain new knowledge.
5. **The module theme** (with relation to the five project domains): 1, 5.
6. **Learning outcomes:** At the end of the workshop faculty members will be able to:
  - Use mobile devices to collect data outside the classroom
  - Identify data that can be collected only outside the classroom
  - Understand how mobile learning can enhance learning processes
  - Plan lessons in their courses using mobile devices for data collection & processing
7. **Target populations:** Faculty in higher education institutions
8. **Recommended venue/s for training:** Workshop
9. **Training Schedule:** Two one-hour meetings
10. **Training manual** (see table below)
11. **Training materials:** Relevant apps, mobile devices.

**12. Material evaluation methods and tools:**

**13. Training evaluation methods and tools** (Including the evaluation of learning outcomes):

- Each faculty will design a lesson plan for implementing mobile learning outside the classroom
- Evaluation will check relevance to learning and knowledge production

| <b>Duration in minutes</b> | <b>Activity</b>   | <b>Materials and aids</b>   |
|----------------------------|---|---|
| 10                         | Getting to know each other:<br>* Teaching experience<br>* Mobile learning experience  |   |
| 5                          | Describe a sample activity (see below)  |   |
| 10                         | In small groups: Discuss what kind of data is only available outside the classroom (for example, plant growth) collect the results for the entire group                                     |   |
| 20                         | Task: Get outside the classroom, take photos/measures of a subject using the mobile device, learn more about it using the web, compare it to your findings and publish on a relevant forum. | Help: How to use your iPad?<br><a href="https://help.apple.com/ipad/9/?lang=he">https://help.apple.com/ipad/9/?lang=he</a><br><a href="https://support.apple.com/apps">https://support.apple.com/apps</a><br><a href="https://www.apple.com/education/teachers/">https://www.apple.com/education/teachers/</a><br><a href="https://www.youtube.com/watch?v=UxhlnX2O-Q">https://www.youtube.com/watch?v=UxhlnX2O-Q</a> |
| 10                         | Back in class: Review comments on your notes in the forum, if any. What can you learn from them?  |   |
| 10                         | Discussion:<br>* How did you feel during the activity?<br>* What did you like/dislike about it?<br>* How did it feel to create new knowledge?   |   |

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|----|--|--|
| 15 | Summing up:<br>* How do you feel about this idea of mobile learning?<br>* Do you think you'd like to try it in one (or more) of your classes?<br>* What possible challenges do you anticipate?<br>* How can you avoid them/deal with them? |  |
| 10 | Follow up: Setting up a framework for sharing among faculty who wish to try this out.  |  |

## **II. Data collection and processing**

1. **Subject:** Data collection and analysis
2. **Developers:** Mobile learning team
3. **Rationale:** This activity demonstrates how students can collect important data quickly and easily, share it with their peers, and process it together in different ways.
4. **Targets:** The workshop aims at familiarizing faculty members with some of the possibilities for students to use mobile devices to collect data of different types outside the classroom, sharing it with their peers and process it together with the lecturer in order to understand a concept and find the answer to a question.
5. **The module theme/s** (with relation to the five project domains): 5
6. **Learning outcomes:** At the end of the workshop faculty members will be able to:
  - Use mobile devices to collect data outside the classroom
  - Understand how mobile learning can enhance learning processes
  - Plan lessons in their courses using mobile devices for data collection and processing
7. **Target populations:** Faculty in higher education institutions
8. **Recommended venue for training:** Workshop
9. **Training Schedule:** One 3-hour meeting
10. **Training manual** (see table below)
11. **Training materials**
12. **Material evaluation methods and tools:**
13. **Training evaluation methods and tools**(Including the evaluation of the learning outcomes):

\* Note that you will have to prepare the Socrative questions in advance. If you are not a Socrative user, you will have to familiarize yourself with the program (see links below), open your own virtual room, and add the room number to the third slide on the presentation attached.

[PPP - See TeachEx ML- Activity II - data collection and processing](#)

[Link to PPT](#)

| <b>Duration in minutes</b> | <b>Activity</b>  | <b>Materials and aids</b>           |
|----------------------------|--|-------------------------------------|
| 10                         | Getting to know each other:<br>* Teaching experience<br>* Mobile learning experience   |                                     |
| 5                          | Describe a sample activity (see below)   |                                     |
| 10                         | Explain about Socrative: Learners open the website on their smartphones or download the app. Instructions are provided in the attached presentation.   | * PPT<br>* Socrative (free version) |
| 30                         | Task: Go to different places in the HEI and collect information about people (see below).  | * Socrative (free version)          |
| 30                         | Back in class: Look at the results on the board & discuss issues of diversity in your institution, based on the data collected.<br>For example: How many Israeli-born and how many immigrants do we have (or men/women, or Jews/Arabs, etc.)? What positions do they hold on campus? |                                     |
| 10                         | Discussion:<br>* How did you feel during the activity?<br>* What did you like/dislike about it?<br>* How did it feel to create new knowledge?  |                                     |
| 15                         | Summing up the experiential part of the workshop:<br>* How do you feel about this idea of mobile learning?<br>* Do you think you'd like to try it in one (or more) of your classes?<br>* What possible challenges do you anticipate?<br>* How can you avoid them/deal with them?     |                                     |

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| 30 | Each participant thinks of at least one activity for one of his/her classes, and prepares it.  |  |
| 30 | The group as a whole tries out each activity without leaving the classroom, entering “false” information in order to make sure they all work. Corrections are made when necessary. |  |
| 10 | Follow up: Setting up a framework for sharing among faculty who wish to try this out.  |  |

**a. Description of sample activity:**

A freshman class was sent on a campus tour with the purpose of getting to know it and all the options available to students. Each pair of students was given a destination (place and person’s name). The Socrative “room” they were directed to contained many questions organized by campus location, and each pair had to fill in the answers for their specific location. For example, the pair sent to the library had to find out about opening hours, book borrowing rules, student assistance services, etc. The answers were entered on the students’ mobiles. As soon as the data was entered, it showed up on the screen in class. After about 25 minutes, the students returned to class. The class examined the results together, discussing the different services offered, remaining problems, etc. The table with all the data was then uploaded to the course site for further use during the year.

**b. Suggested workshop activity:**

- Walk around campus and find two faculty members, two students and two non-academic staff to interview.
- Ask each the questions on the Socrative program and enter his/her answers.
- When you’re done, go back to class.

**c. Suggested questions enter on Socrative** (The questions suggested below relate to campus diversity, but you can replace them by others relating to any topic):

1. Name or nickname
2. Gender

3. Age
4. Ethnicity
5. Country of birth
6. Marital status
7. Number of education years
8. Profession/occupation (for students, write “student”)
9. Number of siblings
10. Number of children (if none, enter “0”)
11. Physical disabilities (if none, enter “0”)
12. Learning disabilities (if none, enter “0”)

**d. Home page and online tutorials for using Socrative** (there are many more online, in many languages):

- <http://www.socrative.com/>
- <https://www.youtube.com/watch?v=spjEeN7Y1wA>
- [https://www.youtube.com/watch?v=-XydEy-Mm\\_o](https://www.youtube.com/watch?v=-XydEy-Mm_o)
- <https://www.youtube.com/watch?v=Der5RuV6rbs>

## **Digital Documentation**

### **III. Using images to enhance reflection**

1. **Subject:** Using images to enhance reflection
2. **Developers:** Mobile learning team
3. **Rationale:** Reflection is an essential skill for learning. When rethinking the process the learner gains a better understanding of it. In documenting the process by taking pictures and choosing the ones that best represent the process, the learners think about thinking.
4. **Targets:** The faculty will be able to use the mobile technology for documentation and taking images for reflection purposes.
5. **Module themes** (with relation to the 5 project domains): 1, 4, 5.
6. **Learning outcomes:** Faculty members will be able to
  - 1) Use mobile technology to document teamwork.
  - 2) Evaluate and reflect on the team processes.
  - 3) Use mobile technology to analyze their learning process.
  - 4) Produce a clip based on a synthesis of the images.
  - 5) Improve collaborative work skills and enhance the active learning experience.
  - 6) Reflect on their learning process.
  - 7) Evaluate the entire process and implement it by preparing student activities.
7. **Target populations:** Faculty members
8. **Recommended venues for training:** Workshop
9. **Training schedule:** One meeting of 4 academic hours
10. **Training manual** (see table below)

**11. Training materials:** Using the following apps (instructions are linked): [WeVideo](#), [Animoto Video Maker](#), [Perfect Video](#), [Adobe Voice](#), [iMovie](#)

**12. Material evaluation methods and tools:**

**13. Training evaluation methods and tools** (Including the evaluation of learning outcomes):

[PPP - See TeachEx ML- Activity III - Documentation and reflection](#)

[Link to PPT](#)

| <b>Duration in minutes</b> | <b>Activity</b>  | <b>Materials and aids</b>   |
|----------------------------|--|---|
| 10                         | Introduction:<br>Mobile learning characteristics and advantages.   | Slides 1-3 + explanations   |
| 10                         | Assignment: <ol style="list-style-type: none"> <li>1. In teams, build the tallest tower possible.</li> <li>2. One of the team members documents the group process by taking pictures and videos with the tablet's camera.</li> </ol> | Slides 4-5  |
| 30                         | Activity:<br>The faculty members work in teams of 4-5 to build the tallest tower out of 40 straws and Scotch Tape.<br><br>One of the group members documents the process by taking pictures/videos.                                  | Slide 6 (detailed instructions)<br>For each group: <ul style="list-style-type: none"> <li>● 40 straws + tape</li> <li>● Scissors</li> <li>● Tablets (1 per team)</li> </ul> |
| 5-10                       | Documenting tools: <ol style="list-style-type: none"> <li>1. WeVideo,</li> <li>2. Animoto Video Maker</li> <li>3. Perfect Video</li> <li>4. Adobe Voice</li> <li>5. iMovie</li> </ol>  | Slides 7-8  |
| 40                         | Process: <ol style="list-style-type: none"> <li>1. Browsing the images and videos.</li> <li>2. Deciding which best reflect the teamwork process</li> <li>3. Creating the movie</li> </ol>  | Slides 7-8<br>Film production technical support.  |

|       |  |   |
|-------|--|---|
| 20-30 | <p>Presentation:<br/>Each group presents the product (the tower) and the movie to the class. After determining which tower is the tallest, discuss the building process as well as the reflection process.</p> | <p>Slide 9<br/>If there are multiple groups, it could take longer.<br/>Apple TV is needed to present the groups that work with Apple devices.</p> |
| 15    | <p>Discussion and reflection:</p> <ol style="list-style-type: none"> <li>1. Why it is important?</li> <li>2. Is the film production process a reflective one?</li> </ol>                                       | Slides 10-13  |
| 15    | <p>Summary:<br/>Implementation Ideas for students.<br/>Ted movie about building a tower and creativity</p>   | Slides 14-15  |

#### **IV. Digital portfolio:**

1. **Subject:** Digital portfolio
2. **Developers:** Mobile Learning group
3. **Rationale:** A digital portfolio provides a space that gathers students' insights of their learning experiences and products. It reflects what students have created and learned, how and why. Digital portfolios are truly valuable for both students and lecturers, and can be used to evaluate the learning process and products. Using mobile devices to manage a digital portfolio enables fluent documentation within and outside the classroom.
4. **Targets:** The aim of this activity is to expose faculty to the option of using mobile devices to collect evidence into digital portfolios that reflect the students' learning process, products and reflection.
5. **The module theme/s** (with relation to the 5 project domains): 1 3 5
6. **Learning outcomes:** Participants/faculty members will be able to
  - 1) Create digital portfolios/learning diaries.
  - 2) Collect sample works and to reflect about them using one of the tools presented.
  - 3) Introduce their students to the digital portfolio concept.
  - 4) Use digital portfolio to evaluate their students' learning processes and outcomes.
7. **Target populations:** Faculty members
8. **Recommended venues for training:** Workshop
9. **Training schedule:** Two hours
10. **Training manual** (see table below)
11. **Assessment/evaluation:**
  - Short survey at the end of the workshop
  - Number of faculty members using digital portfolios as part of their evaluation of learning in their courses.
  - Quality of digital portfolios of students in different courses.

### Reading materials:

- Rapp 2014 [Assessment and assurance of learning using e-portfolios](#)
- Emmett D. 2011 <http://www.aabri.com/manuscripts/131488.pdf>
- [Why digital portfolio?](#)
- [Portfolios and learning journals, logs and diaries](#)
- [Thinking and Writing Reflectively](#)
- Woodward, H. (2004) [Digital portfolios: fact or fashion?](#)
- O’Keeffe, M. & Donnelly, R. (2013) [Exploration of ePortfolios for Adding Value and Deepening Student Learning in Contemporary Higher Education](#)

Faculty members will be exposed to number of application that may be used to create digital portfolios. The meaning and use of digital portfolios will be discussed. More advanced training will be provided for a selected application such as [infolio](#) or [Padlet](#) . Faculty will create a professional digital portfolio using the app and present it to their colleagues. They will be exposed to several ways of evaluating digital portfolios. Advantages, disadvantages and applications will be discussed during the workshop.

[PPP - See TeachEx ML- Activity IV - Digital Portfolio](#)

[Link to PPP](#)

| <b>Duration in minutes</b> | <b>Activity</b>  | <b>Materials and aids</b>   |
|----------------------------|--|---|
| Intro                      | Portfolio, definition and types  |   |
| 15 plenary                 | Opening a discussion:<br>Have you ever written a personal diary?<br>What did you gain from it?<br>Describe your experience<br>Have you ever presented your work in a portfolio?<br>Have you ever seen an artist portfolio? | <ul style="list-style-type: none"> <li>● <a href="#">ppt</a></li> <li>● Personal diary (not digital or blog diary)</li> <li>● Work portfolio (digital)</li> </ul> |

|             |   |  |
|-------------|---|--|
| 15 pairs    | Exploring: Divide into pairs, and explore three examples of digital portfolio.<br>Write what thinking skills were used by the writers of the portfolio? | <ul style="list-style-type: none"> <li>● Digital Portfolio:</li> <li>● infolio App,</li> <li>● Google Docs,</li> <li>● Padlet App</li> </ul> |
| 15 plenary  | Let's summarize the differences between a diary, a work portfolio and a process portfolio<br>What is the added value of a digital portfolio?            | Slides   |
| 15 activity | Participants will create a digital portfolio to which they will add different kinds of materials on a chosen subject.                                   | Tutorials  |
| 15 groups   | In groups, they will look at each other's portfolio and will determine criteria for its evaluation and assessment.                                      |  |
| 15 plenary  | Summing up and conclusions:<br>Presenting some rubrics for digital portfolio evaluation by comparing criteria articulated by the participants           | Rubrics  |
| 5           | Short survey concerning the idea and expected use of digital portfolios or learning diaries   | Digital survey   |

## **Sharing and Collaboration**

### **V. Getting to know each other with shared board**

1. **Subject:** Getting to know each other acquaintance
2. **Developers:** Mobile learning team
3. **Rationale:** Creating and sharing of digital content is a fundamental requirement for learning in the 21<sup>st</sup> century and is integral to the learning process. Acquiring these skills through the use of mobile devices has become easy and accessible. Many apps enable sharing digital content with peers and receiving feedback. This might enhance student understanding and engagement.
4. **Targets:** The workshop aims at familiarizing faculty members with the possibility of fostering students' ability to create and share content using their mobile devices.
5. **Module themes** (with relation to the 5 project domains): 1, 3, 5
6. **Learning outcomes:** Participants/faculty members will be able to
  - 1) Create shared spaces for their student audiences.
  - 2) Provide assignments fostering sharing and collaborating.
  - 3) Use shared materials to link to students' life and learned subjects.
7. **Target populations:** Faculty members
8. **Recommended venue/s for training:** Workshop
9. **Training schedule:** 2-hour meeting
10. **Training manual** (see table below)
11. **Training materials:** ppt
12. **Material evaluation methods and tools:** Short survey evaluating the workshop and expected use of the strategy and tool

- 13. Training evaluation methods and tools:** Short survey evaluating the workshop and expected use of the strategy and tool

Reading materials:

Carpenter, J. (2012) Sharing and Learning,

[https://www.researchgate.net/profile/Jeffrey\\_Carpenter2/publication/262091663\\_Sharing\\_the\\_learning/links/56a9022b08ae2df821650151.pdf](https://www.researchgate.net/profile/Jeffrey_Carpenter2/publication/262091663_Sharing_the_learning/links/56a9022b08ae2df821650151.pdf)

[PPP - See TeachEx ML- Activity V - Creating and sharing](#)

[Link to PPP](#)

| <b>Duration in minutes</b> | <b>Activity</b>   | <b>Materials and aids</b>  |
|----------------------------|---|--|
| 15                         | Introduction:<br>Creating and sharing content and feedback  | Video / <a href="#">presentation</a>   |
| 15                         | Assignment:<br><ol style="list-style-type: none"> <li>1. Make a collage of images that represent you as a 21<sup>st</sup>-century lecturer</li> <li>2. Add the collage you created to the shared board and give it a title</li> </ol>                                 | <a href="#">Link to shared board</a>   |
| 15                         | Activity:<br>Look at the images that were uploaded to the shared board and try to find common features.<br><ol style="list-style-type: none"> <li>1. What can you say about it?</li> <li>2. Each group will present its findings during a short discussion</li> </ol> |  |
| 15                         | Presenting tools:<br><ol style="list-style-type: none"> <li>1. Padlet</li> <li>2. Linoit</li> </ol>   | Tutorials and videos<br><a href="#">Padlet tutorial</a><br><br><a href="#">Linoit tutorial</a> |
| 20                         | Process:  | Shared board for participant products  |

|    |   |   |
|----|---|---|
|    | <ol style="list-style-type: none"> <li>1. Individual or pairs of faculty create an assignment that uses a shared board for one of their courses</li> <li>2. Faculty share their board with the assignment with faculty members and upload a link to their board to a shared board or shared social environment such as Moodle or Facebook Group.</li> </ol> | <p>SeeSaw TeachEX classroom</p> <p><u><a href="#">TeachEX class on SeeSaw</a></u></p> |
| 10 | <p>Discussion and reflection:</p> <ol style="list-style-type: none"> <li>1. Why should we use such an activity?</li> <li>2. How can we use it?</li> <li>3. Talk about the implications of the fact that these boards are anonymous.</li> </ol>  |   |
| 5  | <p>Complete a short survey evaluating the workshop and expected use of the strategy and tool</p>  |   |

## **VI. Quizzes and Polls**

1. **Subject:** Quizzes and polls
2. **Developers:** Mobile learning developer group
3. **Rationale:** Quizzes and polls tools can provide teachers and students with immediate feedback and can also be used as an assessment tool. They can be used before, during or after class. They enable teachers to reach out and hear every single student, to engage students in a gamelike manner and to motivate them.
4. **Targets:** This activity's target is to incorporate a questionnaire/quiz/poll that faculty members can use in one or more of their coming lessons in order to "see" every student in class.
5. **Module themes** (with relation to the 5 project domains): 1, 5.
6. **Learning outcomes:** Participants/faculty members will be able to
  - 1) Identify pedagogical needs that the questionnaire/quiz/poll will meet.
  - 2) Use mobile technology to construct/develop different kinds of questions, quizzes and polls.
  - 3) Use mobile technology to collect students' answers to a teacher-developed questionnaire/quiz/poll.
  - 4) Use mobile technology to analyze the answers/results of the questionnaires/quizzes/polls completed by the students.
7. **Target populations:** Faculty members.
8. **Recommended venue/s for training:** Workshop
9. **Training schedule:** 4-hour meeting
10. **Training manual** (see table below)
11. **Training materials:** ppt, Socrative app
12. **Materials evaluation methods and tools:**

**13. Training evaluation methods and tools** (including the evaluation of the learning outcomes):

[PPP - See TeachEx ML- Activity VI- Quizzes and Polls](#)

[Link to PPP](#)

| <b>Duration in minutes</b> | <b>Activity</b>   | <b>Materials and aids</b> |
|----------------------------|---|---------------------------|
| 5                          | Opening: Presenting the workshop framework  | Slide 2                   |
| 25                         | Socratic student task: answering questions as students                                    | Slide 3                   |
| 30                         | Discussion: Reflective observation on task, pedagogical advantages and questions examples | Slides 4-6                |
| 15                         | Presenting an experiment from the literature and explaining the final task                | Slides 7-8                |
| 60                         | Workshop: Creating an activity with Socratic  | Slide 9                   |
| 30                         | Sharing the Socratic final product with others  |                           |
| 15                         | Conclusion and reflection   |                           |

## **Augmented Reality**

### **VII. Augmented Reality – Creating and using layered information: Osnat**

1. **Subject:** Augmented Reality (AR)
2. **Developers:** Mobile learning group
3. **Rationale:** AR enables the learner/faculty to add virtual and digital layers to the real world and actively construct their knowledge.
4. **Targets:**
  - 1) Introduce the AR capabilities for learning and teaching processes.
  - 2) Practice using AR in learning and teaching materials.
5. **Module themes** (with relation to the 5 project domains): 1,4,5
6. **Learning outcomes:**
  - 1) Faculty will understand AR capabilities and their contribution to learning and teaching processes.
  - 2) Faculty will know how to construct digital layers on a real world target.
  - 3) Faculty will apply, synthesize and use AR while developing curriculum materials.
7. **Target populations:** Faculty
8. **Recommended venues for training:** Workshop
9. **Training Schedule:** 4-hour meeting
10. **Training manual** (see table below)
11. **Training materials:** PPP, Aurasma channel, Socrative, Padlet
12. **Material evaluation methods and tools:**
13. **Training evaluation methods and tools** (including the evaluation of learning outcomes):

[PPP - See TeachEx ML- Activity VII - Augmented reality](#)

[link to PPT](#)

| Duration in minutes | Activity   | Materials and aids   |
|---------------------|--|--|
| 20                  | <ol style="list-style-type: none"> <li>1. The importance of Mobile learning</li> <li>2. Ask the question: What is Augmented Reality (AR)? With no reply.</li> <li>3. Show the movie.<br/><u>National Geographic Movie</u></li> <li>4. After watching the movie, conduct a short discussion on the question: What is AR?</li> <li>5. Did you experience AR before? Where? (Compare to QR code )</li> </ol>  | <p><u>National Geographic Movie</u></p> <p>Slides 1-4</p> <p>QR code is the physical target and it is one example of AR</p>  |
| 5                   | <p>Short explanation about AR.<br/>This term was coined by Tom Kaudel in 1992 when he worked in Boeing Labs. He developed an application that shows how to assemble electric wires to the airplane. The car industry has been using this technology for several years now to demonstrate the driving experience in a newly developed car.</p> <p>Two definitions:</p> <ul style="list-style-type: none"> <li>● Integration of virtual components and the environment in real time and with interactivity in order to augment the real world.</li> <li>● The audience sees the real world through a camera with added layers of information such as visual or audio.</li> </ul> | Slide 5  |
| 20                  | <p>Experiencing AR - workshop:</p> <p>In order to follow the AR activity you have to follow the instructions:</p> <ul style="list-style-type: none"> <li>● Download Aurasma app</li> <li>● Register: create username and password</li> <li>● Tap the magnifying glass icon and look for TeachexLogos channel</li> <li>● Notice: you will get the channel name as: TeachexLogos's Public Auras. Select it.</li> <li>● Tap follow</li> </ul> <p>The activity:</p>  | <p>(4-5 examples of AR related to diverse activities)</p> <p>Slides 6-7</p> <p>Note:<br/>The class code for the Socrative quiz activated through the Beit Berl College logo is: 607404</p> |

|    |  |              |
|----|--|--------------|
|    | <ul style="list-style-type: none"> <li>• Search for the following logos in the TeachEX home page:<br/><a href="http://www.teachex.eu/">http://www.teachex.eu/</a></li> <li>• Tap scan icon in the Aurasma app and hold your device ahead of the trigger.</li> </ul>  |              |
| 10 | <p>Activity summary:<br/>How can we use AR to enhance effective learning?<br/>We demonstrate different ways of using AR in class:</p> <ul style="list-style-type: none"> <li>• Website (Oranim)</li> <li>• Padlet canvas (BGU)</li> <li>• Clip (IDC and Gordon )</li> <li>• Socrative quiz (Beit Berl)</li> <li>• Roojom “path” (Bezalel)</li> </ul> <p>We use AR to obtain additional information for watching videos, raise questions and create collaborative work.</p> | Slide 8      |
| 10 | <p>AR in education – from the literature:</p> <ul style="list-style-type: none"> <li>• AR helps us teach subjects that students cannot experience in real world</li> <li>• AR contributes to cooperation between teachers and students</li> <li>• AR enhances motivation</li> <li>• AR enhances creativity and imagination</li> <li>• AR enables authentic and constructivist learning</li> </ul>  | Slides 9-10  |
| 10 | <p>Discussion: The contribution of AR to the learning/teaching process.</p> <p>How we can use AR to enhance effective learning?</p> <p>And how do you think you can use it in your teaching?</p>   |              |
| 75 | Creating AR  | Slides 11-13 |
| 30 | Sharing participant outcomes   |              |