Planning

- **General:** Consider if this is the best delivery method and whether it will be able to fulfill the intended learning purpose. Identify long-term strategies: Once worked on small scale, it’s easier to expand the learning by adding more lessons, chapters or even subjects. Bear in mind that you might need to design content specifically for the mobile learning or in case the content is already established you might need to adapt it to the device you have in mind for mobile learning.

- **Audience:** Mobile learning needs to be used appropriately, according to the groups of students involved. You need to know who the audience is and what kind of technology they are more familiar with. Should consider using a pilot group before dissemination to a wider audience.

- **Technology:** Make sure the technology will support the content you plan to implement.

- **Strategy:** Develop a plan that takes into consideration all the main points and how changes, for instance in software, will affect the learning. Establish goals, deliverables and consider what will be measured in order to determine the impact of the learning. Allow for a technical support strategy as well.

- **Budget:** Consider the budget available before starting to develop the content and choosing the platform that will be used. Establish whether you would like to develop a custom application (more expensive) or whether you will develop the content for browser-based delivery (cheaper option).
Development and Implementation

- **Keep it short:** Considering the mobile learners will probably be moving, it is better to keep individual modules up to 5-10 minutes maximum. It might also be a good idea to allow the learner to continue where he left off, as for instance using an automated bookmarking technique that tracks the users’ actions.

- **Keep it simple:** Considering the screen size is smaller, there should be restrictions on the number of options and interactions to a minimum. It is recommended to have no more than 1-2 options at any one time available to the user.

- **Make the most of media:** Even though media can be useful for supporting learning objectives, attention needs to be paid to associated downloading costs.

- **Use the features:** Most devices also allow for features like geo location, photos, audio, text, upload information, so the trainers and the learners should take advantage of this.

- **Include Elements of Collaboration:** It might be a good idea to use it as a part of a blended program and to facilitate interaction between peers, experts, mentors.

- **Get support with content design:** If relevant, learners could support with this practice by providing some ideas, as it encourages the learning to be open and collaborative and ensures it meets their needs.

Benefits of Mobile Learning:

**General**

- Conveys smaller pieces of information which might enhance retention as there is less chance of cognitive overload.
- It could be utilized as part of a blended learning approach.
- It can be a useful add-on tool for students with special needs, depending on the learners’ disabilities.

**Device**

- The user is able to double-tap into a paragraph or piece of information and it will become full-screen, focusing the user’s attention on that item.
- Mobile devices can be used anywhere, at anytime.
- This kind of learning allows for more light weight devices in comparison to books and PCs. It is also much easier to accommodate mobile devices than desktop computers in a classroom.
As the devices used are already being used by them for other purposes, the learners do not have to adapt to it and can start the learning process straight away.

**IT**

- Location specific opportunities to access information including use of QR codes (which is a kind of matrix barcode to store text information such as URL’s, phone numbers or messages)
- New technology would be a good way to keep the learner interested and motivated.

**Challenges of Mobile Learning:**

**General**

- There are some issues with cheating and making sure it is the learner that is using the application.
- If using this approach in a classroom, it is necessary to have enough devices.
- It might be difficult to measure learning in a mobile learning environment, the same way it might be difficult to track results and do follow-up.
- There might be some cost issues, despite these kind of devices being cheaper than a personal computer.
- There might be a need to adapt the existing e-Learning materials or even create new content for mobile platforms.

**Device**

- There might be issues with security, in terms of the device being lost or stolen and also security related issues with the software of the device.
- Connectivity and battery life of the mobile device should also be considered as they can limit access.
- The device might not be able to support the format of the content of the mobile learning.
- The size of the screen and keyboard could interfere with certain activities, as there should be some restriction on the number of options and interactions on the screen for usability.
- There might be difficulties to meet required bandwidth streaming.

**IT**

- Technology is usually being updated and there are frequent changes in device models and functionalities.
- In case the learner needs IT support, there will be an issue of how this can be provided.
- There might some issues with regards to access to and use of the technology in developing countries.