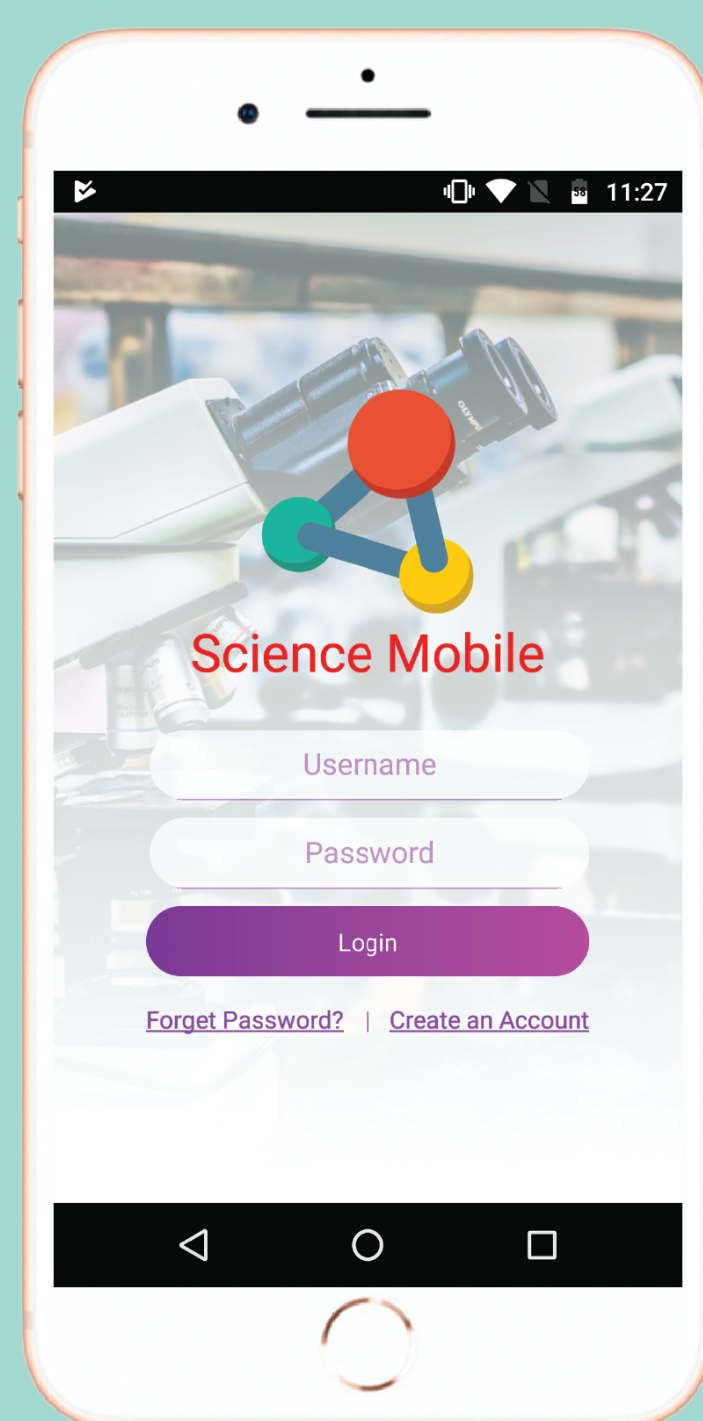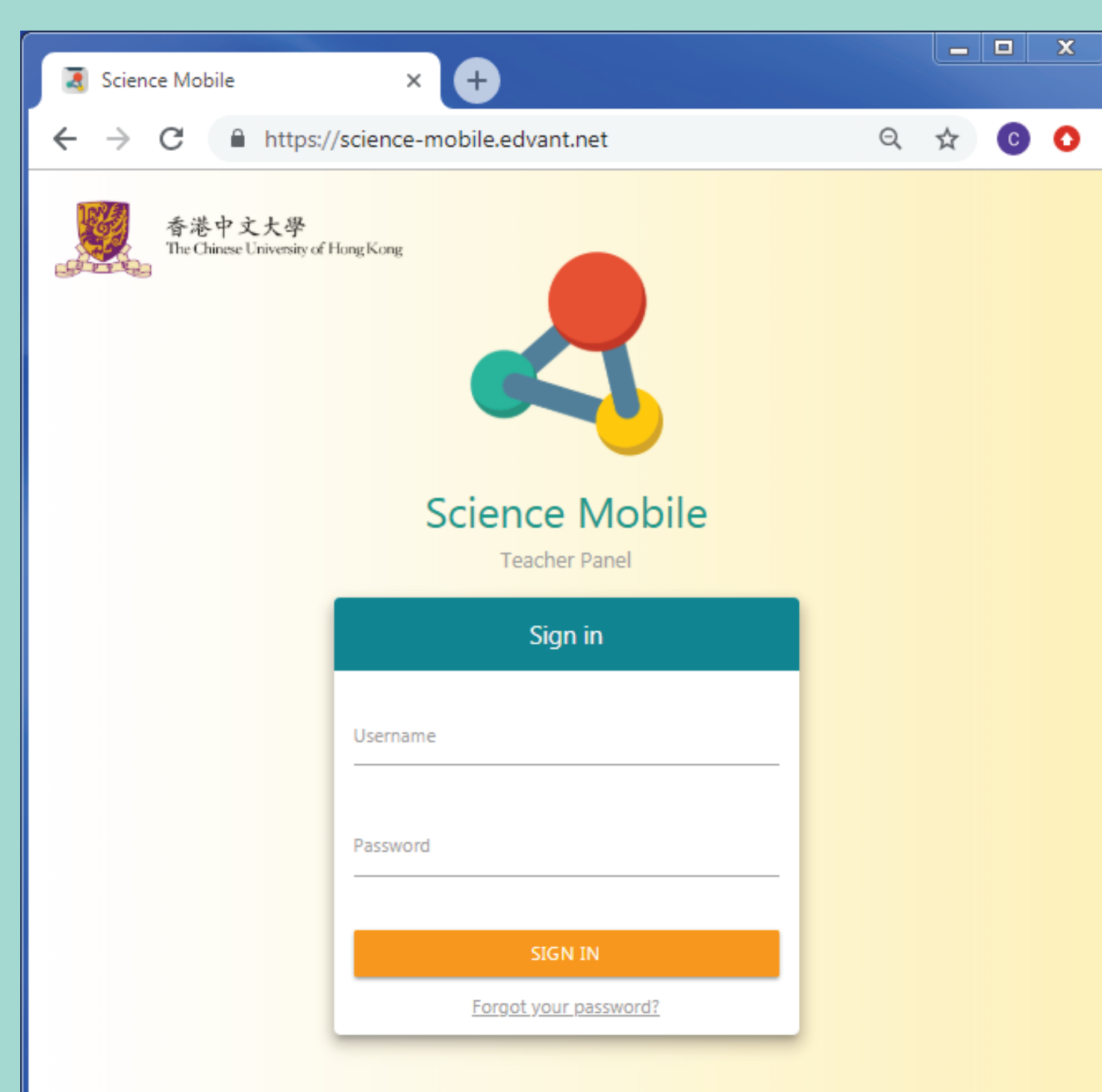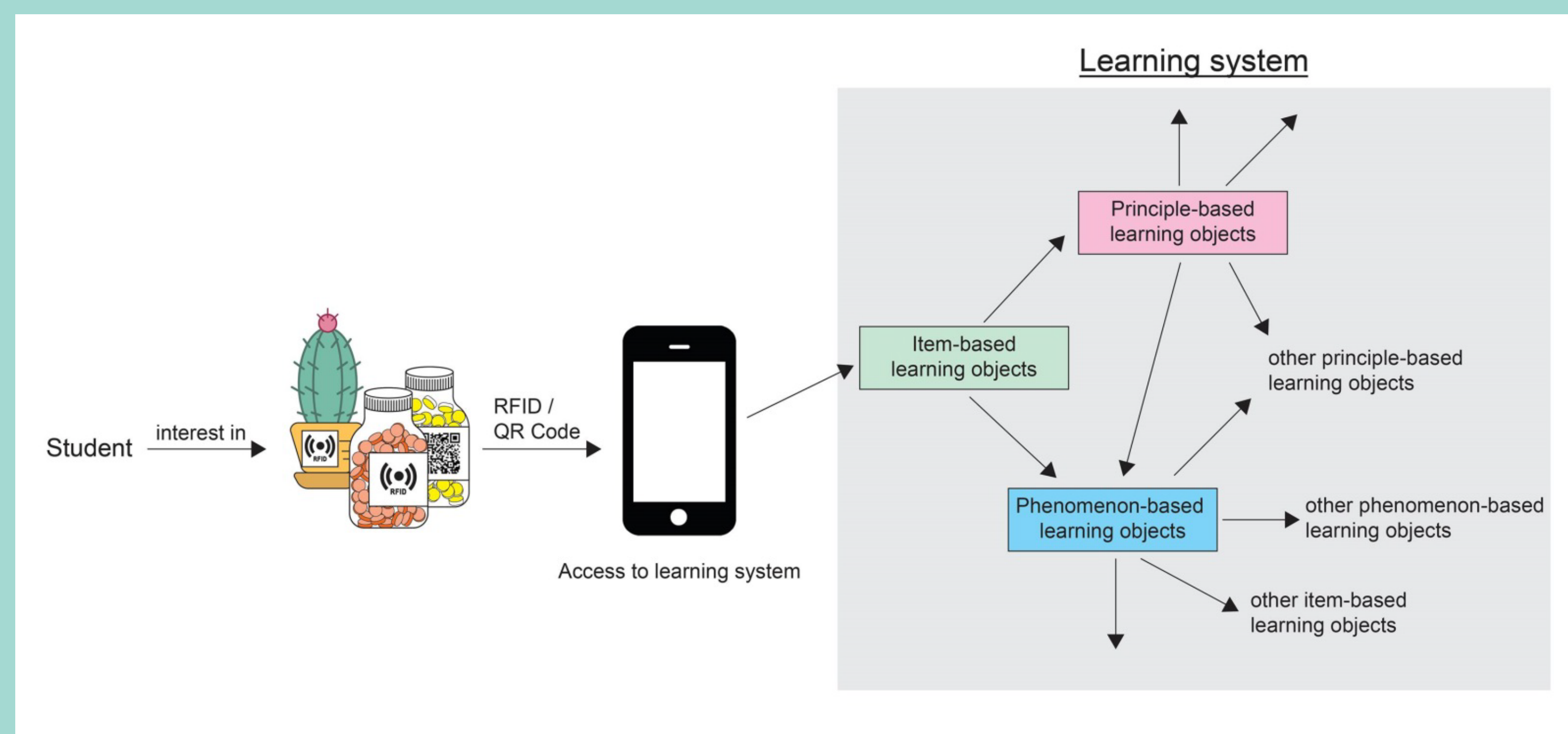# "Science Mobile" - Learing Science Ubiquitously with a Smartphone

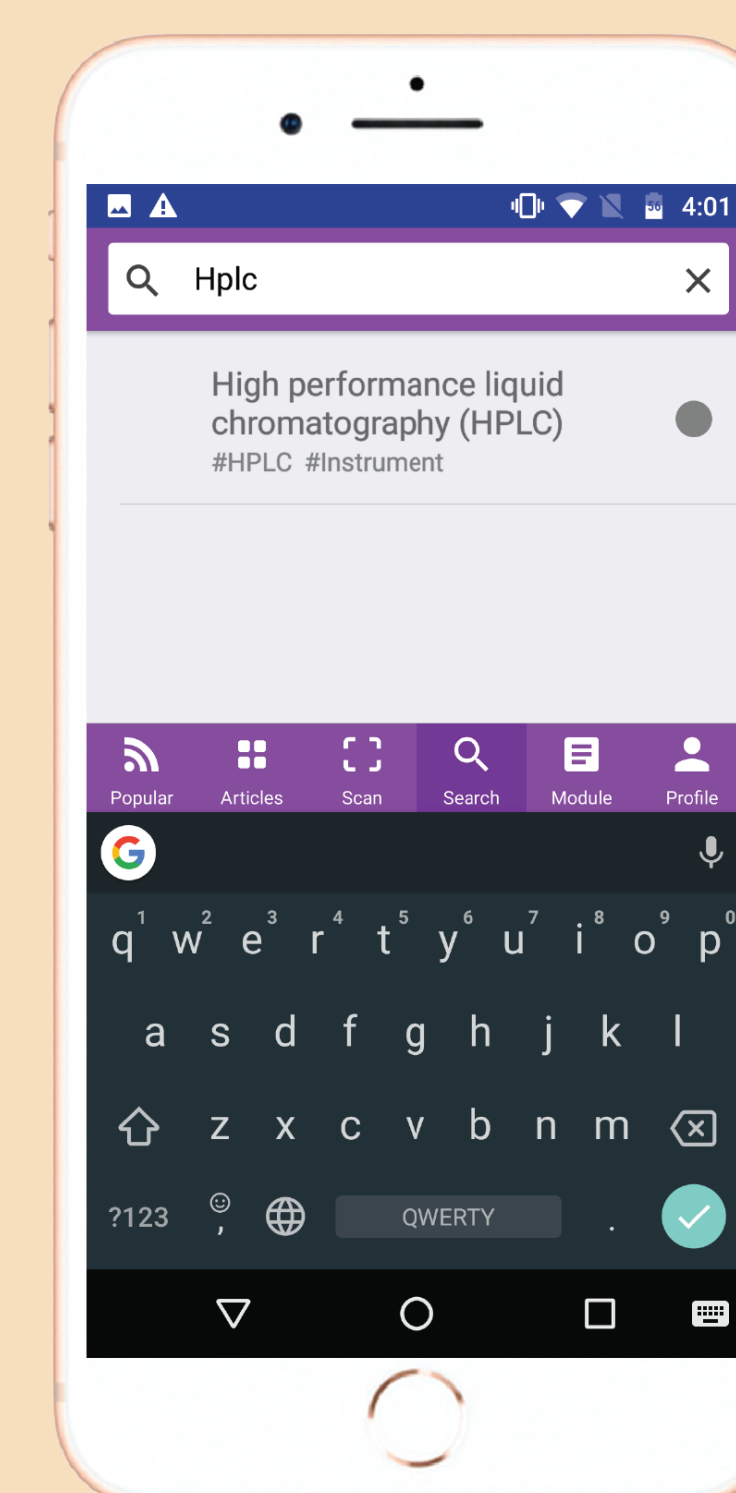## Dr. Kendrew Mak*, Dr. Cherry CHOW#

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"Science Mobile" is developed as a portable learning platform to facilitate students learning science concepts across different science disciplines in real life. The learning materials are hosted in a Learning Management System which also allow teachers and students to track their learning progresses. Physical items related to those learning materials are selected from teaching facilitates and daily-life situations. QR code and RFID (radio-frequency identification) tags readable by mobile device are put on these objects to let students accessing the relevant information instantly.

Construction of a portable learning platform

- Students can access the learning objects by
  - scanning barcodes;
  - scanning QR codes;
  - scanning RFID; or
  - searching with relevant keywords.
- Learning objects are sorted into different themes so that students can reach the objects by their interests.
- Videos, images and textual description of the learning objects are produced.
- Assessments and learning modules will be available for students to test their understanding on the topics and explore more about the objects.

Students can access the learning objects in Science Mobile.

Students can search the learning objects by keywords.

User guide

① Looking for QR codes on the learning objects

② Scanning the QR code in Science Mobile

③ Displaying information in the app

Construction of web-based learning management system

- Teachers can upload the learning materials and the related assessment items through the teacher panels, and keeping track on students' performance in their learning.

5 Major columns of the learning management system.

5 Major columns of the learning management system.

Summary of deliverables:

Until November 2018, the interface of the e-learning management system and the portable platform had already been constructed, with most 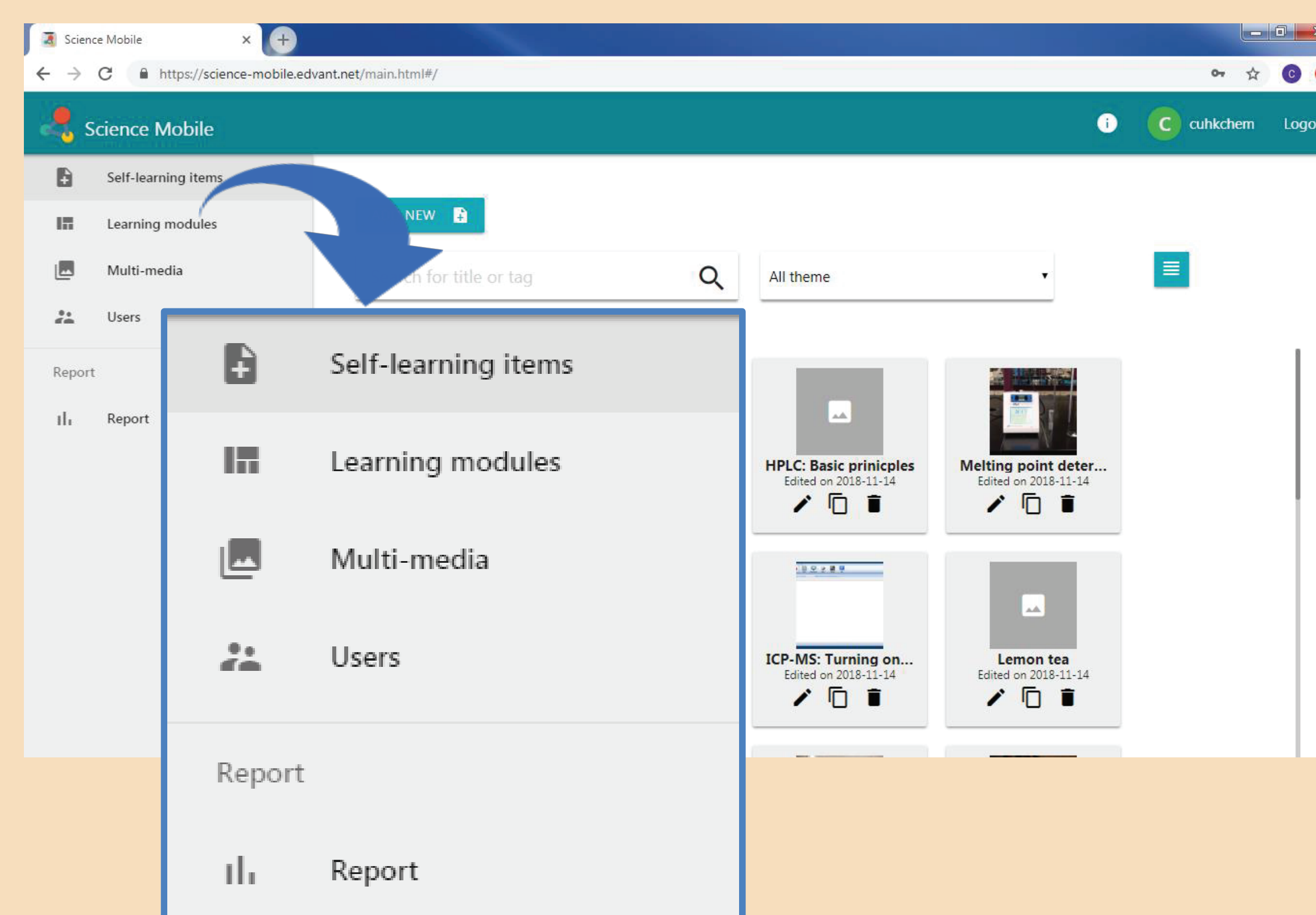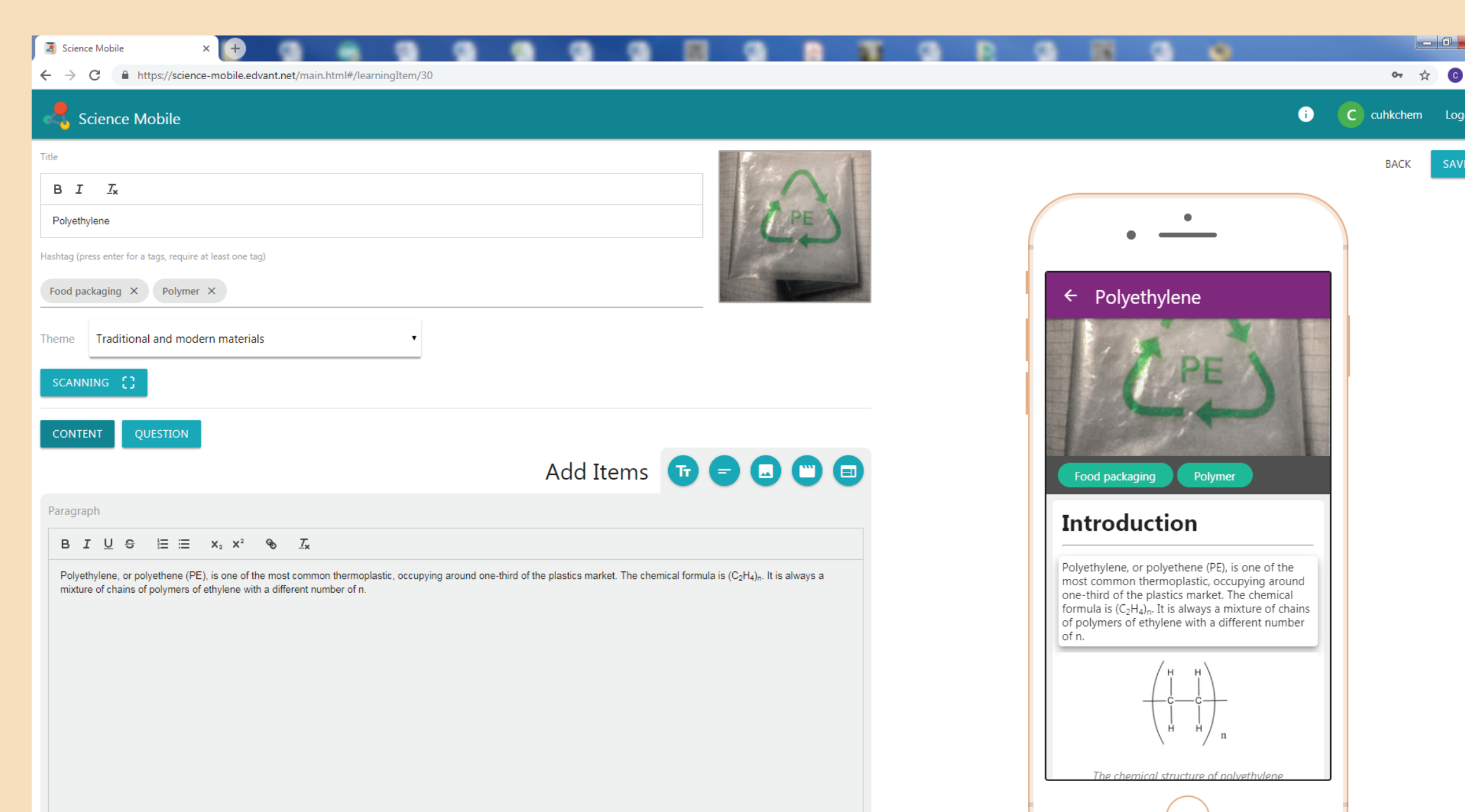of the essential functions incorporated into the system.