Arab International University

Faculty: Pharmacy; Department: Pharmaceutics and pharmaceutical Technology

Pre-design of Introduction to Pharmacy Course

using Arena Blended Connected Learning Design (ABC LD) and information and communications technology (ICT)

Summary of the course:

Course Name: Introduction to Pharmacy (3 credit hours, theoretical: 2 hours. Practical (laboratory work): 2 hours.)

Category: Core; Faculty: Pharmacy; Level: 1

Detailed information about the course is in the Old Course Description Introduction to Pharmacy.pdf

Redesign the course:

1) Why (Aim and Objectives):

Introduction to pharmacy course needs to be redesigned because:
- It provides an introduction to the profession of pharmacy. Hence it is important to attract the student, who knows little about pharmacy, by using his five senses (Figure 1) to get his attention on learning the ABC of pharmacy.
- It provides an overview on drug discovery and new drug dosage forms development, which are the core concepts of pharmaceutical studies.

It is clear that this course must help the student understanding how the subjects that comprise the five-year pharmaceutical education combined to provide the knowledge and skills needed for general pharmacy practice in a very short time (less than four months).

Now it is done mainly by the theoretical section that uses 100% passive learning methods relying only on the imagination of student.
On the other hand, the laboratory work section does not address this problem effectively since it focuses on preparing medical prescriptions and the use of lab equipment also by passive learning where the student implements the teacher's instructions without a deep understanding, and it is limited by student's time in the laboratory with no pre- or post- discussion about the new subject which make it easier to forget shortly by the end of the course.

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2) How (Activities):

In Beirut [1], we used newly learned Arena Blended Connected Learning Design (ABC LD) [2] toolkit to spread different activities of Collaboration, Discussion, Investigation, Practice and Production throughout the weeks (Figure 2). Currently, we are working on the action plan.

Each activity will be implemented preferably using digital technology as shown in learning types and tools meta wheel-V2 2019 [3] (Figure 3).

3) Outcome /Output (Main Results):

During Covid-19 lockdown, we uploaded on the university learning management system (moodle) about 40% of current introduction to pharmacy lectures as videos. These videos especially their audio components will be used for more expressive presentations, and, learning communication and digital technologies. Currently, we are preparing drafts for:

- **Investigation activities:** 2 web search forums, 2 literature reviews and critiques, 2 field observations, 2 action research.
- **Acquisition activities:** 2 guided readings (library resources), 1 Q&A forum (where teachers answer student questions), 10 video lectures, 2 MCQs - formative with automatic feedback, 2 education games, 2 animated stories.
- **Practice activities:** remodeling the practical section (lab works) of the course using learning communication and digital technologies: 6 video lectures at least to be watched before their lab sessions and a discussion forum after their lab sessions, and, 2 case studies (forums).
- **Collaboration activities:** in general, a majority of the activities will be accomplished by groups of students. In addition, at least one project must be accomplished by the end of the course.
- **Discussion activities:** 1 skype or virtual classroom 'viva' with one of our abroad colleague, 1 webinar or conventional lecture by a member of pharmacy syndicate, 1 group discussion on a problem related to pharmacist role in society, and, 2 case studies (forum).
- **Production activities:** 1 video interview with a pharmacist, 1 concepts mapping, 1 create video of performance in a pharmacy, 1 make and give a presentation, 1 write a report.

4) Intended Outcome Learning (Expected Impact)

- Student will start understanding his role as a pharmacist in the society.
- Student critical thinking is focused on pharmaceutical knowledge.
- Student will be more confident and will accept the friendly guidance of his teacher.
- Discovering and developing new drug will be the passion of the student.

- Enhancing students' overall comprehension of the art and science of dosage forms preparation.
- Providing the students with the main skills needed for pharmacy practice, such as problem-solving, reading prescriptions, and using lab equipment.

5) The Outcome: the course description was redesigned please see the file 2- Course Description Introduction to Pharmacy -Digihealth redesigned.pdf

6) Participants: Dr. Mazen Rajab, Dr. Lena Dalal and Dr. Sara Bundouk.

7) References:

1. Alastair Creelman. Introduction toABC Learning Design. Training workshop organized by the Beirut Arab University, within the framework of the Erasmus+ Capacity Building project "DIGIHEALTH". 4 March 2020.

2. Licensing

ABC Learning Design method by Clive Young and Nataša Perović, UCL (2015) is licensed under CC BY NC SA 4.0. Learning types, Laurillard, D. (2012). Download at abc-ld.org.
3. Clive Young and Nataša Perović. Presentation: ABC Learning Design, ABC to VLE Erasmus+ project. UCL Digital Education (2019). Download at abc-ld.org.

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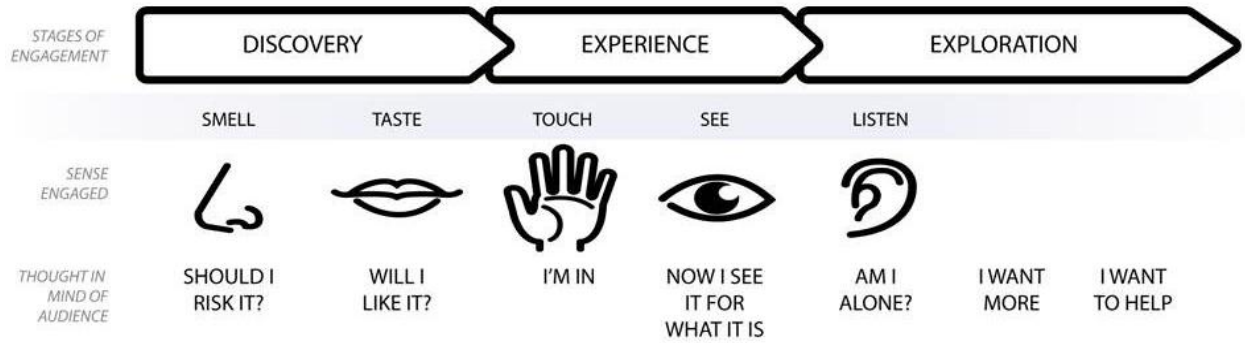Faculty: Pharmacy; Department: Pharmaceutics and pharmaceutical Technology
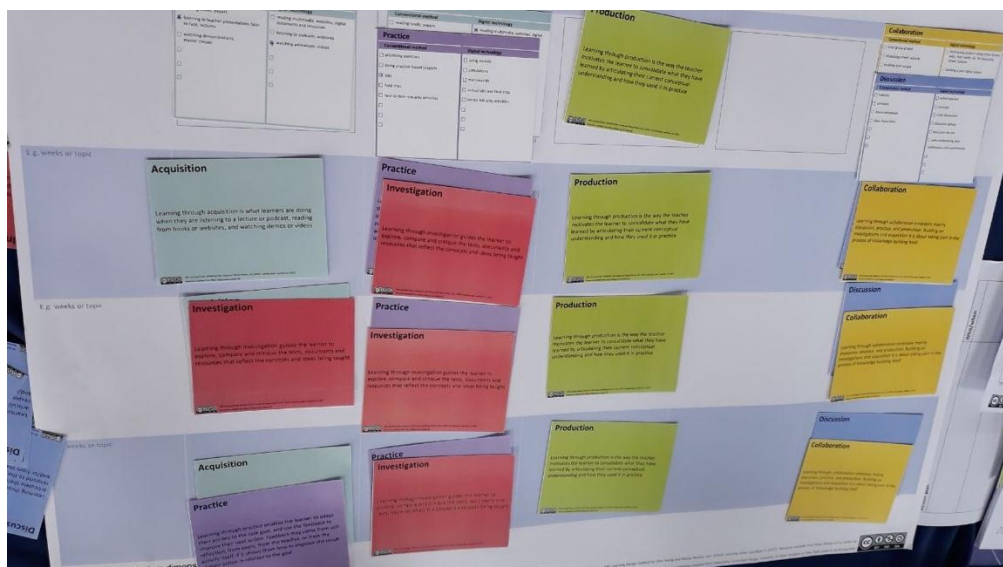
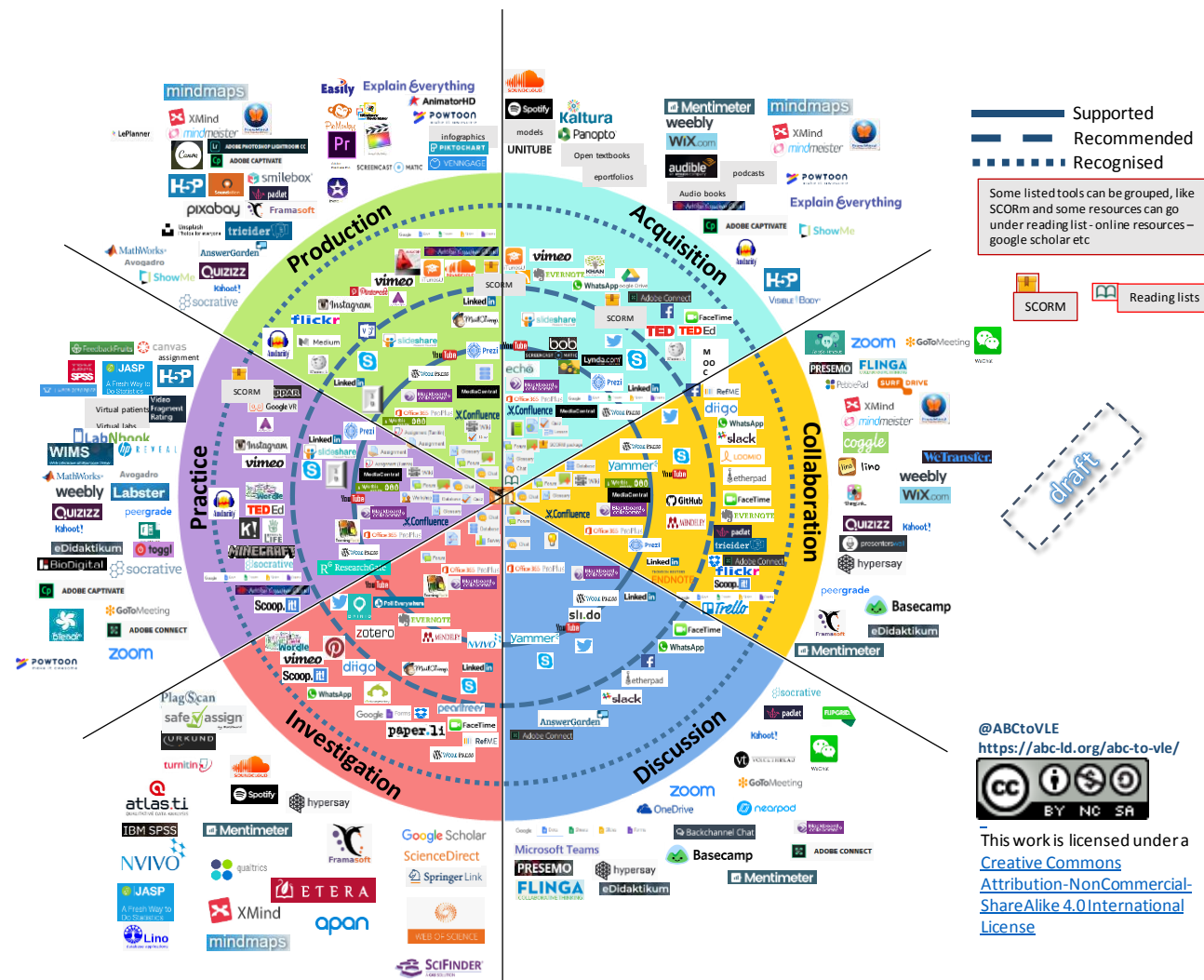**Figure 1. Five senses**

Figure 2. ABC LD board

Figure 3. Learning types and tools meta wheel-V2 2019.