

ISPW 2016 Workshop

The Need for Competency-based Pharmacy Education as foundation for the ReFEEHS Project

Dušica Krajnović, Afonso Cavaco, Ljiljana Tasić, Jelena Parojčić, Marina
Odalović, Dragana Lakić
Aberdeen, 22nd July 2016

WS Agenda

10 min - **Introduction** (Lj Tasic)

ReFEEHS project related to EE

10 min - **Aims of WS and facilitation** (A Cavaco)

EE/EL models, stakeholders, strengths and weaknesses

30 min - **Split the participants** in groups to
discuss the EE/EL models and S/W

30 min - **Brief group report**

10 min - **Conclusions and messages to take home**



Co-funded by the
Erasmus+ Programme
of the European Union



ReFEEHS project related to EE

Reinforcement of the Framework for Experiential Education in
Healthcare in Serbia

ReFEEHS project objectives

1. **Reinforcement and modernization of experiential education (EE) (clinical experience, students' professional practice) curricula in health sciences, including medicine, dentistry, pharmacy and nursing.**
2. Introduction of interprofessional teaching and learning activities (IPE), including new joint interprofessional courses for all health science students.
3. Teaching Competencies Development (TCD) of academic staff and teacher practitioners, including introduction of Teaching Certificate study programme.



ReFEEHS project Work packages

WP 1: Experiential Education in Health Professions: **the Need for Change**

WP 2: Framework for Experiential Education Development

WP 3: Framework for Experiential Education Implementation

WP 4: Project Monitoring and Quality Assurance

WP 5: Dissemination and Exploitation

WP 6: Project Management

The term “experiential education” (EE) is herein used to denote a supervised structured or semi-structured teaching and learning activities that take place in a practice setting and involves real-life situations and inter-personal interactions with patients, caregivers, as well as between health professionals (it may also be referred as practice-based learning, clinical experience, or students professional practice experience as the terms used in literature and regulatory documents).



Recommendation of WHO, FIP

- *WHO Guidelines for Transforming and scaling up health professionals' education and training*, Geneva: World Health Organization, 2013
- *WHO Report: Evaluation of the organization and provision of primary care in Serbia*, 2010
- EU Directive 2013/55 on the recognition of professional qualifications

Recommendation of WHO, FIP

- *FIPEd* Global Competency Framework (GbCF) v1 | 2012
- *FIPEd* Global Education report | Academic Institutional Capacity | 2013
- Interprofessional Education in a Pharmacy Context: Global Report | 2015
- Quality Assurance of Pharmacy Education: the FIP Global Framework | 2nd Edition | 2014

Recommendation of WHO, FIP

- Practice experiences (also referred to as practice-based learning or experiential education) in the health care professions have been shown to promote competence by teaching students how to integrate and apply knowledge in practice settings, learn from positive role models and experience interprofessional team approaches to the provision of health care services.
- As a result of such experiences, students have demonstrated an increase in empathy towards people with illnesses, have greater self-confidence and professional identity, and have learned effectively from the knowledge, attitudes, values, behaviors, and judgments of experienced practitioners

WP 1: Experiential Education in Health Professions: the Need for Change

October 23-24, 2015

Kick-off Meeting & ReFEEHS Thematic Workshop 1: *From Professional Competencies to Educational Outcomes* No of Participants: 132

Survey on the RS students, teaching staff and practitioners attitudes related to Experiential Education, Inter-professional Education and Teaching Competences Development – 1508 respondents, valuable input for the EE, IPE and TCD Working Groups

Report : *Experiential Education in Health Professions: the Need for Change* serve as a resource and reference for further project activities <http://refeehs.com/results/>



„Thank you for submitting your case study to be included in the upcoming FIPeD report. It will be officially launch at the FIP Congress in Buenos Aires in early September.“

WP 2: Development of the Framework for Experiential Education

ReFEEHS Thematic Conference/Symposium 1 (*Kragujevac, April 1, 2016*)

Current practice and challenges in education within the health professions

No of Participants: 111

ReFEEHS Structured Study Visit 1 (*Sofia, June 8-10, 2016*)

Bulgarian legislation and practice in the field of experiential education of health care professionals

No of Participants: 56

Mobility – (7) individual study visits of the RS academic staff to EU partner institutions: teaching competencies development through **job shadowing (OSCE)** and participation in the relevant educational activities;

All activities to explore and discuss

- 1) **different approaches to experiential education in health sciences education;**
- 2) **quality assurance requirements related to EE;**
- 3) experiences related to development and delivery of interprofessional education;
- 4) models for teaching competencies development and evaluation.

Ad 1) **Common Framework for pharmacy students professional practice placements in Serbia**



Serbia - Framework for pharmacy students professional practice placements (draft 1)

The content

- **Aim - Implement and improve the knowledge and skills that the student has acquired during their studies. Build personal and professional attitude, behavior and responsibility.**
- The main criteria for students and their obligations and responsibilities
- The main criteria for preceptors and their obligations and responsibilities
- The main criteria for community and hospital pharmacies
- Plan of practices
- Required knowledge and skills which students should have before referral to practice
- Outcomes
- The necessary knowledge and skills that students should acquire during practice



Serbia- Framework for pharmacy students professional practice placements (draft 1)

- **main criteria for students and their obligations and responsibilities ...**
...preparation of reports "*The Diary of Student professional practice.*"
- **The necessary knowledge and skills that students should acquire during practice**
 - ... to develop the ability to connect theoretical and practical knowledge of **medicines** and other products for health care that are delivered at the pharmacy (rational pharmacotherapy, efficacy and safety of drugs, drug interactions, drug preparation and dispensing of medicines and cosmetic products, storage of medicines, medical devices and other health care products in the pharmacy)
 - ... to develop the ability to connect theoretical and practical knowledge the **patient** (rational pharmacotherapy, pharmaceutical care)
 - ... to develop the ability to connect theoretical and practical knowledge and professional roles, **responsibilities and obligations of pharmacists** (pharmacy practice, pharmaceutical administration, legislation and professional regulations).



U
LISBOA
UNIVERSIDADE
DE LISBOA



Co-funded by the
Erasmus+ Programme
of the European Union



Education and Experiential Learning

ISPW 2016 Workshop

The Need for Competency-based Pharmacy Education as foundation for the ReFEEHS Project

Dušica Krajnović, Afonso Cavaco, Ljiljana Tasić, Jelena Parojčić,
Marina Odalović, Dragana Lakić
Aberdeen, 22nd July 2016

Experiential learning: what to be understood?



Co-funded by the
Erasmus+ Programme
of the European Union



- Experiential learning (EL)
 - The process of learning through experience, where as learning occurs through reflection on doing
 - Different from “hands-on” learning
 - A form of experiential learning that not necessarily involve students reflecting on their action
 - Distinct from rote or didactic learning, where learner plays a comparatively passive role
 - Although related, it is not equal to other forms of active learning
 - E.g. action learning, adventure learning, free choice learning, cooperative learning, service learning, etc.

Experiential learning: what to be understood?



Co-funded by the
Erasmus+ Programme
of the European Union



- Experiential learning
 - Different also from Experiential Education (EE)
 - Experiential education is a broader philosophy of education, while experiential learning considers the individual learning process
- Experiential learning is concerned with the concrete issues related to the learner and the learning context
 - Not so new: Aristotle (~350 BC) wrote “for the things we have to learn before we can do them, we learn by doing them”
 - As an articulated educational approach: (early 1970s) modern theory of experiential learning by David A. Kolb

Experiential learning – learning through individual experience



Co-funded by the
Erasmus+ Programme
of the European Union

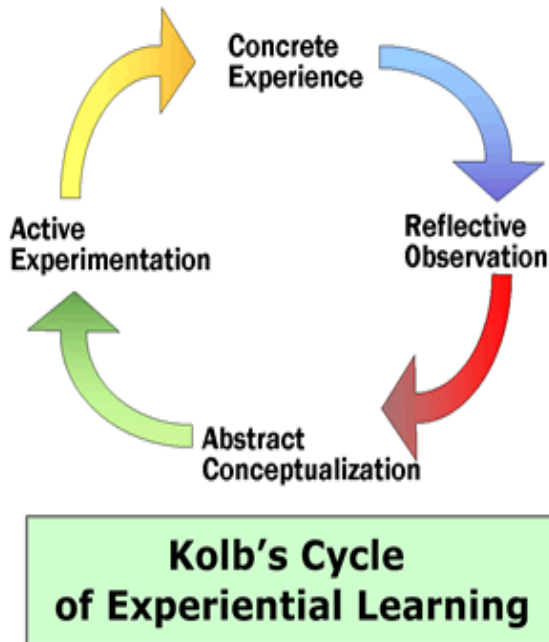


image by Karin Kirk

- One example of the ELM: learning how to ride a bike
 - Concrete Experience is when the learner physically experiences the bike
 - The experience forms the basis for Observation and Reflection i.e. the opportunity to consider what is working or failing
 - Afterwards, the learner thinks about ways to improve on the next attempt made at riding i.e. Abstract Conceptualization
 - Every new attempt to ride is informed by a cyclical pattern of previous experience, thought and reflection i.e. Active Experimentation

Kolb's ELT & learning styles



Co-funded by the
Erasmus+ Programme
of the European Union

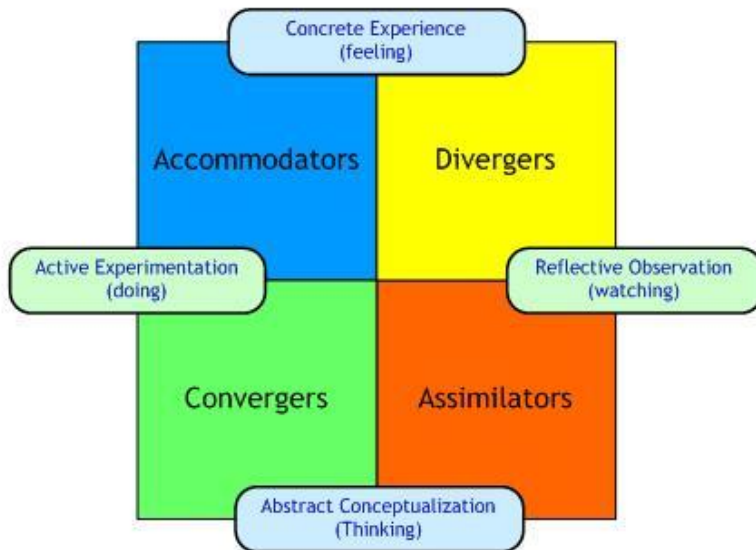


- As individuals attempt to use all four approaches, so they tend to develop strengths in
 - Experience-grasping approach
 - Experience-transforming approach
- This means a preference on one of the following four learning styles
 - Accommodator = Concrete Experience + Active Experiment: strong in "hands-on" practical doing (e.g. physical therapists)
 - Converger = Abstract Conceptualization + Active Experiment: strong in practical "hands-on" application of theories (e.g. engineers)
 - Diverger = Concrete Experience + Reflective Observation: strong in imaginative ability and discussion (e.g. social workers)
 - Assimilator = Abstract Conceptualization + Reflective Observation: strong in inductive reasoning and creation of theories (e.g. philosophers)

ELT learning styles – always through individual experience



Co-funded by the
Erasmus+ Programme
of the European Union



- Anyway, EL relates solely to the meaning-making process of the individual's direct experience
- EL requires the learner to
 1. Be actively involved in the experience
 2. Be able to reflect on the experience
 3. Possess and use analytical skills to conceptualize the experience
 4. Possess decision making skills in order to use the new ideas gained from the experience

Kolb's ELT main criticisms



Co-funded by the
Erasmus+ Programme
of the European Union



- Learning stages does not work to most people's reality
 - A number of processes can occur at once and stages can be jumped or missed out
- It doesn't sufficiently address the fact of different cultural conditions and experiences
 - Based on weak empirical evidence
- The relationship between learning processes and knowledge is more complex than Kolb draws it
- Claims about the four learning styles maybe considered extravagant
- ...

From a clinical perspective – Miller's pyramid

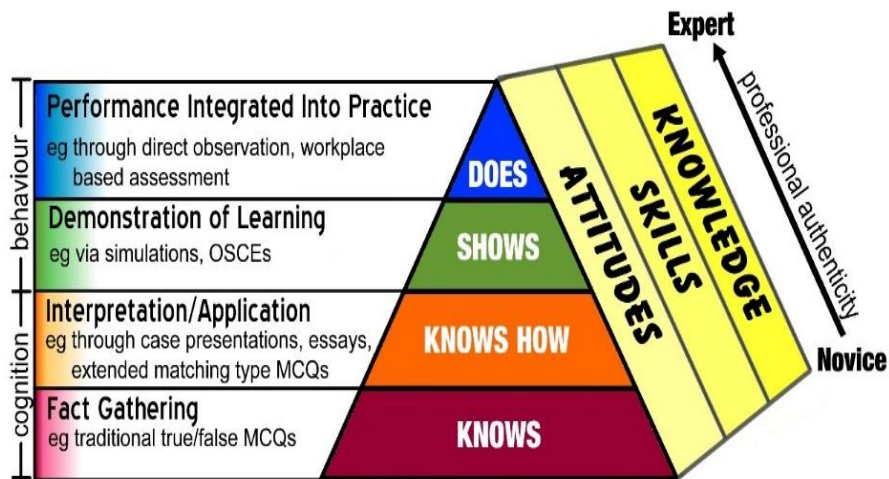


Co-funded by the Erasmus+ Programme of the European Union



MILLER'S PRISM OF CLINICAL COMPETENCE (aka Miller's Pyramid)

it is only in the "does" triangle that the doctor truly performs



Based on work by Miller GE, *The Assessment of Clinical Skills/Competence/Performance*; Acad. Med. 1990; 65(9): 63-67
Adapted by Drs. R. Mehay & R. Burns, UK (Jan 2009)

- Miller's approach to learning and EL
 - On the behavioural level, the learner can use EL to improve its knowledge, but also skills and attitudes
 - Examples of EL methods: simulations, OSCEs, job-shadowing, internship experiences
 - Overall common goals: moving from novice to expert, while achieving learning outcomes

Adding Moore's Outcomes Framework

Moore's Model of CME Outcomes



- Are (CME) educational activities leading to meaningful improvements in patient care?
 - Is education of healthcare professionals translating into better healthcare?
- Common concern for pre-grad education: the extent to which pharmacy undergrads are being prepared to serve patient and community health

Integrating Competencies and Outcomes

Methods for Measuring Outcomes

Moore's Expanded Outcomes Framework for Assessing Learners and Evaluating Instructional Activities

Outcomes Framework	Miller's Framework	Description	Sources of Data
LEVEL 1 Participation		Number of learners who participate in the educational activity	Attendance records On line tracking of action within an activity
LEVEL 2 Satisfaction		Degree to which expectations of participants were met regarding the setting and delivery of the educational activity	Questionnaires/surveys completed by attendees after an educational activity
LEVEL 3A Learning: Declarative Knowledge	Knows	The degree to which participants state what the educational activity intended them to know	Objective: Pre and post tests of knowledge Subjective: Self-reported of knowledge gain
LEVEL 3B Learning: Procedural Knowledge	Knows how	The degree to which participants state <i>how</i> to do what the educational activity intended them to know how to do	Objective: Pre and post tests of knowledge Subjective: Self reported gain in knowledge (e.g., reflective journal.)
LEVEL 4 Competence	Shows how	The degree to which participants show in an educational setting how to do what the educational activity intended them to be able to do	Objective: Observation in educational setting (e.g., checklists, online peer assessment and EHR chart stimulated recall.) Subjective: Self reported competence, intention to change
LEVEL 5 Performance	Does	The degree to which participants do what the educational activity intended them to be able to do in their practice	Objective: Observed performance in clinical setting, patient charts, administrative databases Subjective: Self-report of performance
LEVEL 6 Patient Health		The degree to which the health status of patients improves due to changes in practice behavior of participants	Objective: Health status measures recorded in patient charts or administrative databases Subjective: Patient self-report of health status
LEVEL 7 Community Health		The degree to which the health status of a community of patients changes due to changes in the practice behavior of participants	Objective: Epidemiological data and reports Subjective: Community self-report

- Sources of data provides examples of EL methods e.g.
 - Observation in educational setting + Self reported competence and intention to change as
 - Observed performance in clinical setting + Self report of performance
- EL as an “internal” procedure to achieve patient and community care excellence

Methods and tools for EE/EL implementation



Co-funded by the
Erasmus+ Programme
of the European Union



- Reflection is a crucial part of the EL process
 - It can be independent or facilitated (mentor/tutor/coach)
- Essential tools for facilitating reflection
 - Feedback opportunities
 - Self-appraisal (video based *autoscopy*)
 - Peer and tutor accounts
 - Acknowledging the role of emotions and feelings in learning from experience
- How to actually facilitate reflection?
 - By asking the right questions and guiding a reflective conversation usually after an experience
 - The “5 Questions” model
 - Did you notice...?
 - Why did that happen?
 - Does that happen in healthcare?
 - Why does that happen?
 - How can you use that?

One example of EE/EL methods in pharmacy education



Co-funded by the
Erasmus+ Programme
of the European Union



- Student practice in two cycles (during 2 school years)
 - First cycle (2+2 weeks) – **professional role observations (PROs)**, which can be described as “sophisticated shadowing”
 - Second cycle (3+3 weeks) – **reflective portfolio** upon skills needed to provide pharmaceutical care e.g. critical thinking, communication, demonstrating responsibility, researching public health information, and ethical decision-making
- Both learning approaches require significant self-directed learning (depends on student performance)
 - Students are also assessed on professionalism

William R. Wuller. A Sequence of Introductory Pharmacy Practice Experiences to Address the New Standards for Experiential Learning. Am J Pharm Education 2008; 72 (4) Article 73.

Other example of EE/EL methods – a partnership in Canada



Co-funded by the
Erasmus+ Programme
of the European Union



- University + hospital practice – promoting practice with students while providing responsible pharmaceutical care i.e. accountable to the hospital and patients
- Learning method – **peer-assisted learning (PAL)**
 - Increased of student-preceptor ratio (6:1) in 6 weeks of practice
 - Incorporation of social interaction in learning i.e. “students would help each other to learn and to learn themselves by teaching”
 - Student activities similar to the traditional 1:1 student-preceptor model i.e. students worked independently and cared for individually assigned patients
 - Differences were in that students also critically reviewed the work of their peers (including care plans) and participated in patient care discussions as a group

Cheryl E. Cox and Adrienne J. Lindblad. A Collaborative Approach to Improving and Expanding an Experiential Education Program. Am J Pharma Education 2012; 76 (3): Article 53.

Practical prerequisites for EE/EL

1. Ways to assess students' performance
2. Having a quality assurance system (defining the indicators of structure, process and outcomes; monitoring and evaluation)
3. Clear organization of students practice/workload (including preceptors work hours)
4. Development/preparation of preceptors (as facilitators)
5. Since it is an innovative approach, use SMART (how specific, measurable, achievable, relevant, and timed)

Some ideas for your work...

- Learning from experience provides integration and better retention of explicit and implicit knowledge as well as achieving fitness to practice
 - Investment in knowledge and adequate competencies produces
 - For patients/general public – a better quality of service and an improved health status
 - For professionals – a higher expertise and professional performance
 - For employers – a more competitive and sustainable health care business
 - For governments – an healthier and more productive society

- EE/EL = profound way of learning translated into actual practice
 - Impact in society by contributing to thoughtful citizens
 - Improvement of the professional image and social relevance

Workshop aim and organization

- To discuss, using a SWOT-based analysis, EE/EL in 2 levels
 - Concrete EE/EL examples (students' professional practice) and personal experiences
 - Exploring and conceiving new ideas for EE/EL (students professional practice)

- Groups formed by educational aims (30 min)
 - Basic pharmaceutical education and practice
 - Advanced pharmaceutical education and practice
 - Hospital and clinical pharmacy
 - Industry and research training
 - ...

- Report back to the whole group (30 min)

