Erasmus + Project No 618089-EPP-1-2020-1-BA-EPPKA2-CBHE-JP
Innovating quality assessment tools for pharmacy studies in Bosnia and Herzegovina/IQPharm

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Contents

1   INTRODUCTION

IQPharm project is a mixed-methods collaborative project aimed at raising the quality and modernization of pharmacy studies at public universities in Bosnia and Herzegovina (BiH). Moreover, project activities include the reinforcement of semi-structured experiential education (EE) in compliance with European Union (EU) standards and regulations of higher education for regulated professions.

The IQPharm objectives are:

1. Development of academic staff professional and pedagogical competencies for a more interactive and practical approach to delivery/teaching and assessment of the existing pharmacy curricula through the exchange of best practices between partner and programme institutions and active involvement of major stakeholders in the real sector.

2. Improvement of course delivery through the introduction of assessment tests–Knowledge Retention Evaluation Framework (KREF) and Objective Structured Clinical Examination (OSCE) for pharmacy students.

3. Improvements in experiential education (EE) educators' (pharmaceutical professionals) training and development of E-platform for EE management and administration.

The introduction of new tools for the quality assessment of study programs (KREF) will enable the development of evidence-based recommendations for changes, modifications, and innovations of the existing methods of knowledge transfer, teachers' didactic approaches, and syllabi.

The implementation of a new system of knowledge assessment gained through the EE course (OSCE) will establish equal standards at the national level for the learning outcomes of pharmacy graduates.

The E-platform will ensure the modernization of EE monitoring. Intensive cooperation with EU partner institutions and mobilization of all relevant stakeholders in BiH is anticipated to explore potentially new models and approaches to innovative teaching, learning, and assessment methods, achieving high standards of the educational process and learning outcomes in accordance with the labor market demands.

1.1   AIM OF THE PROJECT

Three main pillars of the IQPHARM project are:

A) Development of academic staff professional and pedagogical competencies for a more interactive and practical approach to delivery/teaching and assessment of the existing pharmacy curricula through the exchange of best practices between partner and programme institutions and active involvement of major stakeholders in real sector.

B) Improvement of course delivery through the introduction of assessment tests – KREF and OSCE for pharmacy students.

C) Improvements in EE educators' (pharmaceutical professionals) training and development of E-platform for EE management and administration.

Additionally, in order to establish compliance with the relevant EU practice and raise graduate competencies and employability in the real sector, the BiH universities will develop propositions for the additional free modules to their curricula in cooperation with programme countries' universities and major real sector stakeholders.

1.2 PROJECT ACTIVITIES AND DELIVERABLES

The project deliverables are organised in a form of tangible deliverables (eg. reports, publications, manuals, methodology, plans, printed and electronically available promotional material), as well as intangible deliverables in the form of organized events (training, symposia, open days, etc.).

The objectives given in the previous section, therefore, are to be achieved through five Work packages:

2. WP1- Preparation - *Quality of pharmacy studies: Identification of Required Changes and Improvements*

Within this Work package, the Kick-Off Meeting will be held in Sarajevo at the very beginning of the project (22.01.2021.) to set up a management structure and prepare initial documents and manuals.

The Required Changes and Improvements Analysis will be performed to explore the present situation in BiH and EU with regards to teaching competencies development teaching and learning process quality assessment tools, experiential education (EE), and education of pharmaceutical professional educators.

Survey questionnaires will be employed to identify the BiH teaching staff and practitioners' attitudes

related to EE and teaching competencies development; The results obtained will be used to benchmark existing activities against the current best practices in Program countries and identify the needs for improvement.

In order to introduce the Consortium and the Project objectives and activities to a wider audience, IQPharm Introductory Symposium will be organized in Sarajevo in Month 6 of the Project life-span. Academic partners (2-3 representatives from each HEI) will gather to present and discuss their respective academic staff professional and pedagogical competencies, and the quality of pharmacy studies on public universities in BiH including experiential education and employability of pharmacy graduates.

Program countries will contribute through presentations of their respective academic staff professional and pedagogical competencies, quality of pharmacy studies including experiential education and employability of pharmacy graduates and current regulations for State professional exams and discussion of various models for improvement.

This will be an opportunity to discuss the present situation (including the result of the analysis) with all the relevant stakeholders in BiH, since it is planned for the Introductory Symposium to be an open event for the pharmaceutical community from different sectors and students to exchange opinions and ideas. Relevant speakers from non-consortium countries will also be invited to share their experiences on the subjects of quality in pharmacy education.

IQPharm Introductory Symposium will be widely publicized to gain as wide an audience as possible.

The Required Changes and Improvements (including SWOT analysis) will be compiled and published. It will serve as a resource and reference for further project activities.

The procurement procedure will be carried out for the necessary equipment to ensure timely project carry out.

3. **WP2-Development** - *Improvement of courses delivery and pharmacy graduate competencies and employability in real sector*

This work package is central for the development of assessment tools for teaching and learning processes of pharmacy studies, i.e. KREF and OSCE, and validation of the outcomes-based assessment methodology. A number of interconnected activities are envisioned, which are aimed at human resources

and technical capacity development for administration and quality assurance of KREF and OSCE as well as the use of these tests as quality assurance tools of pharmacy programs at BiH universities.

BiH and EU teaching staff will work collaboratively to design a sufficient number of case studies and questions (items) databases, of adequate quality and relevance, which will be uploaded to the Case studies virtual library as a part of E-platform. Outcomes-based assessment tools developed will be validated on an appropriate student sample. After test validation, and necessary iterations, the assessment tools developed will be available for pilot programs implementation.

Administration of both large-scale knowledge retention testing and objective structured clinical examination requires a sufficient number of technical staff, adequate office space, as well as the necessary equipment. In order to develop technical capacities at the participating BiH universities, specific IT equipment purchases will be conducted in Project Year 1.

Results and experience gained through pilot programs administration and data evaluations will be employed to create recommendations for further KREF and OSCE improvement. In addition, we will identify the ways in which outputs obtained through KREF and OSCE testing may be used for curriculum mapping and continuous quality improvement in pharmaceutical professions education.

Development of relevant supporting rules and regulations necessary for the successful institutionalization of KREF and OSCE will be initiated at the individual faculty level based on draft documents produced by the IQPharm consortium.

Project activities will be also conducted through:

● involvement of the EU and BiH project team members in the collaborative activities of the project working groups responsible for experiential education development and quality assurance, development of relevant educational resources and quality documents;

● engagement of the EU academic staff in teaching activities in the updated experiential education;

● contribution of the EU project team members in meetings and Open Day events which will be organized at each of the BiH HEIs;

● structured study visits of the key BiH project team members to each EU partner HEIs and their practical placement sites (2 visits in the first, and 2 visits in the second project year) to explore and

discuss different approaches to experiential education in pharmacy education; quality assurance requirements related to EE, experiences related to its development and delivery and models for teaching competencies development and evaluation. Programmes of the structured study visits and relevant reports will be prepared by the host institution project team and approved by the Project Steering Committee. Relevant presentations and reports will be issued and published on the project website;

● *Individual study visits of the BiH academic staff to EU partner institutions aimed at teaching competencies development through job shadowing and participation in relevant educational activities;*

● *Intensive collaboration between the BiH HEIs and associated partner institutions as well as other relevant stakeholders from different sectors across the workforce in order to develop and implement necessary improvements of pharmacy graduate competencies and employability in the workforce through the proposal of free modules (round tables/panel discussion on the selected topics will be organized).*

● *Following the pilot application of a well-designed examination including OSCE in evaluating professional competencies of pharmacy students at the end of the study, a relevant Evaluation Report will be issued which will provide input for the preparation of OSCE-based recommendations on advancing current professional examination and transforming licensing examination.*

4. WP3- Quality Plan- *Project Monitoring and Quality Assurance*

The quality of project activities and outputs will be assured by continuous monitoring and evaluation of the performance indicators proposed. This should ensure that the project will meet the specific objectives, within the anticipated time and the allocated budget.

The project Quality Assurance Team will be established to define the internal Quality Plan and review project's progress. The project Quality Plan will be prepared and agreed upon all partners in the early phase of the project. Periodical Quality Reports will be issued bi-annually and submitted to Project Steering Committee; University of Sarajevo International Relations Office; National Erasmus+ Office;

An External Expert will be appointed to review the quality of project activities and outcomes in line with the project workplan and relevant EU practices and policies. Feedback from all stakeholders, periodical project quality reports, as well as timely documentation of each activity are foreseen as indicators of project quality.

5. WP4- Dissemination and Exploitation - *IQPharm Dissemination & Exploitation*

Dissemination occurs through all stages of the project. The TG 4.1 will prepare the Dissemination and Exploitation Plan within the first year. This task group will be responsible to ensure timely and appropriate dissemination of the project objectives, progress, and results to consortium partners, including associate partners, and all the stakeholders.

Aim and objective of dissemination and exploitation

The main objective of dissemination activities is to communicate and share the knowledge and results acquired and obtained through the project and build a high-profile at a national level. Dissemination of project idea, as well as activities and achieved outcomes will create awareness among interested audience and provide wider recognition of all project partners and their institutions. Dissemination activities will be carried throughout the entire duration of the project by means of:

- *creation of high-profile project identity (logo, website, social networks profiles);*

- *development and regular update of the project website;*

- *design and distribution of appropriate promotional materials;*

- *publications and presentations of project activities and outcomes;*

- *organization of project Open-days;*

- *communication with the press and media;*

- *development of professional networks through social media.*

The progress towards accomplishment of project objectives will be timely and appropriately publicized, to inform and further engage consortium and non-consortium partners in project activities.

In line with the overall project objectives, the dissemination strategy will contribute to awareness of the advances in pharmacy education in the EU. Special attention will be given to the European dimension of

the project, convergence towards the EU practices and policies related to the promotion of active learning methodologies, functional knowledge retention, and challenges related to student progress testing, pharmacy licensure examination, and continuing professional development, as well as the support, received from the Erasmus+ Capacity Building in Higher Education Program.

The stated objectives will be reached through a range of activities, planned in line with the project timeline and budget available.

Dissemination and target groups

The project activities and outputs will be disseminated to all stakeholders, as well as the wider community. Target audience for dissemination of project results includes but is not limited to four major categories:

- Academic staff from different HEI with pharmacy studies in their programme and Pharmacy students from different HEI
- Real sector supervisors, i.e. teacher practitioners (pharmaceutical health professionals engaged in EE) and Employers of the pharmacy graduates (pharmacy, industry etc.)
- Pharmaceutical chambers and Professional associations
- Regulatory bodies - Ministries of Health and Education

Target groups of the IQPharm project are:

a) Academic staff from different HEI with pharmacy studies in their programme – will improve their competences and adopt new teaching methodologies. Web site and promotional material will ensure dissemination of project outcomes to wider academic community. HEI teachers are identified as beneficiary groups.

b) Pharmacy students from different HEI will benefit from valuable feedback on their progression, identification of potential knowledge gaps and areas for improvement. Also, they will be impacted by the improved curricula delivery, and innovative teaching and examination method. HEI students are identified as beneficiary groups.

c) Real sector supervisors, i.e. teacher practitioners (pharmaceutical health professionals engaged in EE) will benefit from the internet platform which will be used as an indispensable resource for

experiential education management and administration.

d) *Employers of the pharmacy graduates (pharmacy, industry etc.) will benefit from free modules tailored on their needs for professional expertise*

e) *Pharmaceutical chambers, Professional associations and Ministries of Health and Education will be introduced to proposal of the recommendations of legal changes of licensure procedures*

Dissemination activities and tools

Dissemination activities and tools are carried on within WP4 (IQPharm Dissemination and Exploitation). The WP4 consists of the following tasks:

4.1 Dissemination & Exploitation Plan development, implementation and evaluation

4.2 Project logo design and website design and maintenance

4.3 Organization of Project Open Days

4.4 Presentation and publications of project activities and outcomes

4.5 IQPharm Final Symposium planning and organization

5.1. Project Dissemination & Exploitation Plan (Tasks)

Task 4.1: Dissemination & Exploitation Plan development, implementation and evaluation
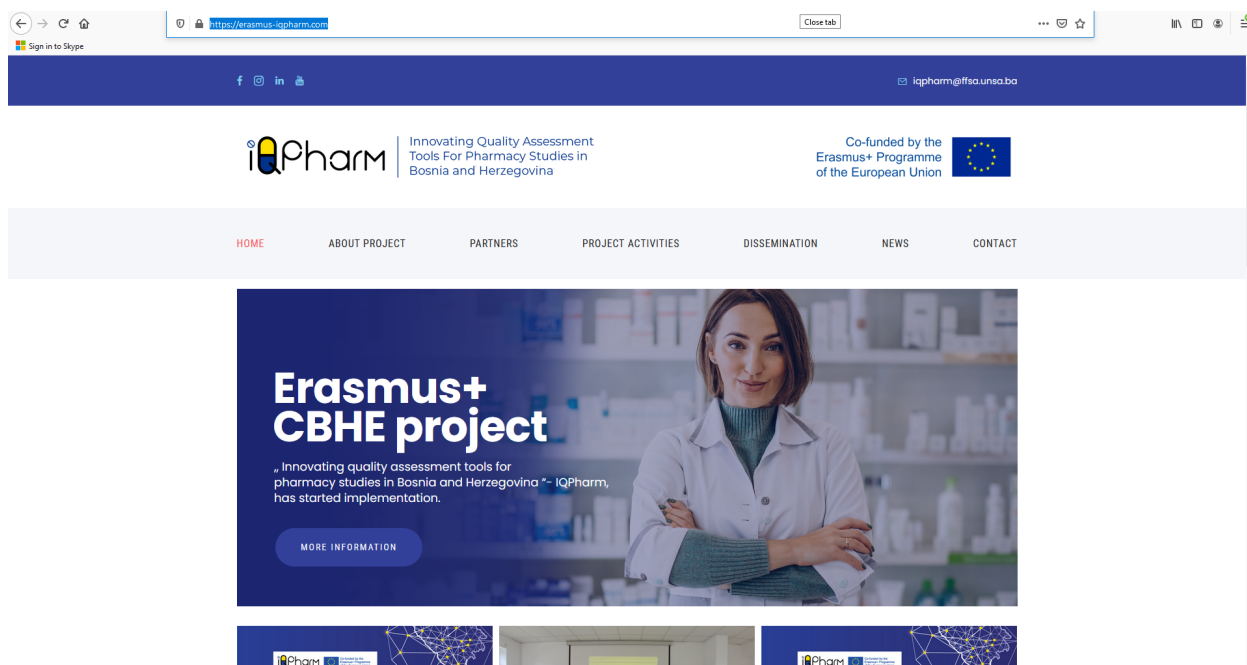
The dissemination & Exploitation Plan was developed to define the strategies and activities for dissemination of the project objectives, progress and results, as well as the relevant time frame. The main objective is to provide timely and relevant/appropriate information to all stakeholders in order to ensure their awareness of the project objectives and engage in project activities.

Task 4.2: Project logo design and website design and maintenance

IQPharm logo was created in the early phase. IQPharm logo and Erasmus+ Programme logo will be made clearly visible on the project website, as well as project presentations and publications in order to make the project recognizable and acknowledge the EU contribution.

A project website (available at https://erasmus-iqpharm.com/) was established in the early preparation phase and linked to the websites of each of the consortium partner institutions. It will be regularly updated to reflect the project activities and achievements.

All the project presentations, publications, video materials, and other documents will be posted on the

project website. It will serve as a repository of information for all the interested parties, and also as a communication and management platform for consortium partner institutions. Also, website will be used for presentation of implementation and further development of project outcomes after project's lifetime.

Tailored information will be made available on the project's Facebook and LinkedIn profiles

Task 4.3: Organization of Project Open Days

IQPharm Open-days will provide great opportunities to present project activities, progress, outputs, and achievements to students, teaching staff, health professionals, regulators and public . They are envisioned as interactive events for the exchange of information and ideas with all interested parties and individuals. Four IQPharm Open days will be organized and also adjacent to important national and regional health professionals and student association gatherings. Project events, external events and conferences will present additional opportunities for dissemination of the project progress and results, not only among the partner HEIs, but also among non-consortium partners who will have the opportunity to take part in these activities.

Task 4.4: Presentation and publications of project activities and outcomes

IQPharm promotional materials will be designed and distributed in order to make the information about the project objectives, progress, outputs, and achievements more visible and available. These materials will be distributed at the project meetings, IQPharm Open-days, and other dissemination events, including professional pharmaceutical conferences and symposia in which special sessions will be devoted to IQPharm.

Presentation of project activities and outcomes at professional meetings will make project activities and achievements visible to health professionals at the national and regional levels. IQPharm Newsletters will be prepared and published bi-annually to shine-a-light on the project activities and outcomes achieved and distributed on the project website and by e-mail. Besides, it is anticipated that a number of publications will arise from the project, including relevant educational resources, reports, and guidelines/recommendations, as well as articles describing various project activities, progress made and outcomes accomplished. Targeted media are faculty newsletters, bulletins of professional chambers and associations, professional journals, and mass media, including social and professional networks.

Task 4.5: IQPharm Final Symposium planning and organization

IQPharm Final Symposium will be organized as a major dissemination event aimed to present the project achievements to the consortium and non-consortium partner institutions, including the wider community. This symposium will serve as a wrap-up meeting involving all consortium and non-consortium partner institutions. Plans for the sustainability of the project outputs and opportunities for further collaboration will be discussed and presented.

5.2 Exploitation plan

Results and outcomes will be sustained and used after project lifetime. More specifically, exploitation of project activities will be continuously performed through KREF and OSCE implementation and update, usage of EE platform as well as proposal and further development of the free modules. Students who will attend the improved teaching and assessment processes and meet the anticipated educational outcomes and upskilled teaching staff will be the best evidence of project results exploitation. Also, EE platform will be used as valuable tool for experiential education management and administration. This platform can also be adjusted according to needs of educational institutions which in their curricula have foreseen practical teaching related to regulated professions in accordance with EU directives. With modifications, it can be used by other partner or non-partner universities in order to improve cooperation between faculties and healthcare institutions and overall exchange of information. Additionally, free modules developed during project will raise the level of knowledge in accordance with the latest trends and needs of the labor market. These modules will continue to exist and develop after project lifetime with possibility of attendance for students and health professionals.

Development of the quality assessment tools, experiential education framework, and upskilled teaching staff, along with the developed proposals for regulatory changes will provide the foundation for further advancement and continuous improvement.

6. WP5- Management - *IQPharm Project Management*

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Effective project management will be secured through timely communication, common understanding, and shared responsibility of each partner institution based on the adopted Project Management Structure, Project Management Manual, Project Work Plan, and Partnership Agreements defined in line with the Project Grant Agreement and the Programme Guide.

- **IQPHARM WEBSITES AND OTHER ELECTRONIC TOOLS**

The IQPharm project foresees an immediate setup of a dedicated project website for dissemination purposes. This website will be developed and maintained by SUM.,However, it is expected from all the partners to effectively communicate the results of the project keeping the website data up to date.

A dedicated portal based on Google Drive is set up and maintained by the project coordinator, UNSA. It can be accessed by all partners depending on their assigned tasks and roles and represents a single point of reference for the project documentation and communication among partners.

All partners are asked to promote activities regarding the IQPharm project on their websites and other electronic tools (such as Facebook, Twitter and LinkedIn profiles/groups, newsletters, etc.) by providing a short description of the project, logo, and link to IQPharm website.

- **IQPHARM LOGO**

This **IQPHARM** logo serves to increase the visibility of the project. It has to be used for all the project deliverables and official project documents. Logo presented below is designed by the University of Mostar. The graphical standards are attached as Anex I.

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- **IQPHARM DISSEMINATION AND EXPLOITATION STRATEGY**

The dissemination and exploitation plan is developed in accordance with the Project consolidated work plan. Implementation of the dissemination plan will enable all interested institutions and organizations to follow development and progress of Project activities. In order to efficiently disseminate Project results, electronic media, e-mail communication, and social media will be widely used.

The University of Mostar will be responsible for the dissemination of information about project activities on the official IQ pharm website. Other participants are obligated to distribute relevant information regarding accomplished and planned project activities to colleagues from Mostar.

Current data from IQ pharm site will be distributed through social media as well as the official institution networks of participants. Also, in order to promote project activities IQ pharm Newsletter with relevant information and results will be distributed biannually.

Universities from Bosnia and Herzegovina will actively promote Project results and ongoing events through available mass media. In order to provide adequate interest to public regarding Project activities, careful planning of marketing activities will be provided. Also, in order to promote Project, accomplished results could be published in selected Journals relevant for academic staff.

7. ANEX I GRAPHICAL STANDARDS