



**KAZAKH UNIVERSITIES TO FOSTER QUALITY ASSURANCE PROCESSES IN  
TECHNOLOGY ENHANCED LEARNING**

Project № 598377-EPP-1-2018-1-IT-EPPKA2-CBHE-SP

## **KUTEL TRAINING CONCEPT**



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

The European Commission support for the production of this publication does not constitute endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

DELIVERABLE DESCRIPTION	
<b>Deliverable number and name</b>	D2.1 KUTEL Training Concept
<b>Due date</b>	25/8/2019
<b>Work Package</b>	WP2
<b>Authors</b>	Mariya Monova-Zheleva, BFU Evgeniya Nikolova, BFU Yanislav Zhelev, BFU
<b>Contributors:</b>	Monica Fasciani, USGM Sara Cella, USGM Matteo Martini, USGM
<b>Reviewers</b>	Monica Fasciani, USGM
<b>Approved by</b>	
<b>Dissemination level</b>	Public
<b>Version</b>	1.0

### Document history

Issue date	Version	Comments
20/8/2019	1.0	

## Disclaimer

This document contains the description of the KUTEL project work and products. Certain parts of it might be under partners' Intellectual Property Right (IPR) rules therefore, prior to its use please contact the consortium leader for approval.

In case you believe that this document harms in any way IPR held by you as a person or as a representative of an entity, please do notify us immediately.

The authors of this document have taken any available measure in order for its content to be accurate, consistent and lawful. However, neither the project consortium as a whole nor the individual partners that implicitly or explicitly participated in the creation and publication of this document hold any sort of responsibility that might occur as a result of using its content.



## Table of Contents

Abstract .....	7
Acronyms.....	10
1. METHODOLOGY AND WORKFLOW TO PRODUCE AND DELIVER TRAINING SOLUTION .	11
2. ANALYSIS .....	21
2.1. Analysis of the target audience.....	21
2.2. Needs for the training in TEL Quality Assurance.....	23
3. DESCRIPTION OF THE KUTEL TRAINING COURSE .....	26
3.1. The main aims of the training .....	26
3.2. Learning objectives of the KUTEL training course .....	26
3.3. Learning outcomes.....	27
3.4. Duration .....	27
3.5. Prerequisites .....	29
3.6. Flow Model of the KUTEL Training.....	30
3.7. INDICATIVE STRUCTURE OF THE KUTEL E-COURSE.....	31
3.7.1. Introductory Weeks – “Welcome to the KUTEL Course” Module .....	31
3.7.2. Module 1. External Quality Assurance - Standards and Guidelines .....	32
3.7.3. Module 2. Internal Quality Assurance and Organisational Culture.....	33
3.7.4. Module 3. Quality Assurance of Pedagogical Aspects of Technology-enhanced Learning Courses Development.....	34
3.7.5. Module 4. Technological Aspects and Quality Assurance .....	35
3.7.6. Module 5. TEL Quality Assessment and Evaluation.....	36
3.7.7. Closure of the training .....	37
4. COURSE DEVELOPMENT .....	38
4.1. Guidelines for Course Contents Developing .....	38
4.2. Principles for Content Development.....	39
4.3. Tips for Successful Content Development .....	40
4.4. Learning Objects .....	41
4.5. Contents development – main considerations.....	45
4.6. Course Prototyping – main steps .....	46

5.	THE DELIVERY METHOD AND TOOLS.....	49
5.1.	KUTEL virtual learning environment .....	49
5.2.	Main sections of the e-Course structure – main elements and components .....	49
5.3.	Webinars .....	50
5.4.	Face to Face Workshops .....	53
5.4.1.	Kick-off Workshop .....	53
5.4.2.	Workshops related to the course modules .....	53
5.4.3.	Closure Workshop .....	54
6.	KUTEL Course Development Timeline – Next Steps.....	55
7.	ANNEX 1 – QA criteria .....	58
7.1.	QA criteria for Learning Objects Development.....	58
7.1.1.	Quality criteria regarding the Lecture Notes.....	59
7.1.2.	Quality criteria regarding the PPTs (Slides Objects) .....	61
7.1.3.	Quality criteria regarding the Multimedia Lesson.....	62
8.	ANNEX 2 - Criteria for selection of participants .....	63
8.1.1.	Common criteria for selecting participants .....	64
8.1.2.	Criteria for selecting participants in DT .....	65
8.1.3.	Criteria for selecting participants in PT .....	66
8.1.4.	Criteria for selecting participants in PGL .....	67
9.	ANNEX 3 –Templates and Guidelines to Develop Learning Objects .....	68
9.1.	Template and Guidelines for LECTURE NOTES development .....	68
9.2.	Template and Guidelines for SLIDES development .....	68
9.3.	Template and Guidelines for STORYBOARDS development .....	68
9.4.	Template and Guidelines for Syllabus development .....	68
9.5.	Template and Guidelines for Test Question development.....	69
9.6.	Guidelines for the Reflection questions provision.....	69
9.7.	Template and Guidelines for Module Description.....	69
10.	ANNEX 3 Workshop Template.....	72
	References.....	73

## List of tables

Table 1 Development team – roles and responsibilities .....	15
Table 2 Indicative structure of the KUTEL Course - Introductory Weeks (Weeks 1-3) .....	31
Table 3 Indicative structure of the KUTEL Course - Module 1 (Weeks 4-5) .....	32
Table 4 Indicative structure of the KUTEL Course - Module 2 (Weeks 6-7) .....	33
Table 5 Indicative structure of the KUTEL Course - Module 3 (Weeks 8-9) .....	34
Table 6 Indicative structure of the KUTEL Course - Module 4 (Weeks 10-11) .....	35
Table 7 Indicative structure of the KUTEL Course - Module 5 (Weeks 12-13) .....	36
Table 8 Indicative structure of the KUTEL Course - Closure Week (Week 14) .....	37

## List of figures

Figure 1 ADDIE design model .....	11
Figure 2 Steps for setting up a learning solution.....	12
Figure 3 Areas of responsibility .....	16
Figure 4 KUTEL Training Flow Model.....	30
Figure 5 Content Structure Concept.....	38
Figure 6 Learnativity Content Model - main principles and paradigms .....	42
Figure 7 Learning content hierarchy and e-learning standards .....	43
Figure 8 Steps and deadlines of course prototyping.....	48

## Abstract

The global landscape of Higher Education is in a period of dramatic change. A significant driver of the changing landscape has been the dramatic rise in the use of technology and, through various modes of delivery, the extension of the traditional campus to more learners. The new concept and consequences of unbundling in the educational area are drivers as well. Hence, quality issues are more than ever on the educational agenda.

This document is addressed to the project consortium. It is drawn up by the P2 BFU in close collaboration with P1 USGM on the base of the results achieved in the research stage of KUTEL which are documented in the DEV 1.1 “State of the art of HE for TEL Quality Assurance Framework”. The document summarizes the State of the Art of HE related to the existing TEL Quality standards. It is a synthesis obtained from data collected from the European and Kazakh universities involved in the project. These data were gathered at institutional and national level in order to have more information possible for the construction of a final QA framework on TEL that corresponds to the real needs and gaps of the Kazakh universities and authorities responsible for the accreditation and evaluation in educational field through the combination of both European standards and models, and Kazakh experience.

This report defines the conceptual model of the KUTEL training addressed to the identified needs of the following target audience:

- Representatives of the authorities responsible for the accreditation and evaluation in educational field in Kazakhstan:
  - Representatives of Ministry of education and science of the Republic of Kazakhstan;
  - Representatives of the Independent Agency for Accreditation and Rating.
- Human resources of the Kazakh Universities distributed in the following sub-classes:
  - Academic personnel (tutors, researchers);
  - Administrative and technical personnel;
  - Managers.

As the concept quality is complex and with a variety of stakeholders, quality in e-learning can be reviewed from three levels (Ossiannilsson E., 2015), e.g. macro, meso and micro level. These levels in short be described as macro level meaning national general dimensions, meso level refers to institutional matters, and finally, micro level refers to the courses/modules as such. Taking into account all the above is clear that the target audience consists of experts operating at different levels of the HE quality assurance processes.

The selection of quality model or quality systems to use as well as the expertise, knowledge, skills, and competences of the involved trainees differ depending of the quality assurance level in which they are involved as well as of the specific context (developed infrastructure, QA principles, and the established system of QA) of the concrete organization.

The selection of appropriate training methods and strategies will be highly influenced by the heterogeneous character of the group of trainees which is also expressed in terms of the transversal competencies such as English language proficiency and the level of obtained so far digital skills and competences.

In order to deliver efficient training aiming at achieving the best results it is necessary a mix of appropriately selected training strategies to be used, e.g. blended or “hybrid learning” to be considered in order to reap the benefits from the combination of traditional with computer-based and online training methodologies.

In Section 1 of the document “Educational training path” are explained the methodology and workflow of the training design and delivery of the KUTEL e-course.

Section 2 is based on the research activities conducted during the first phase of the project. The main results from the analysis of the KUTEL training target audience as well as the needs for the training in quality assurance in technology-enhanced learning which are the main determinants regarding the development of the training concept are described.

Section 3 provides explanations and description of the main course elements and characteristics such as educational objectives to be reached, the educational model, the learning environment to be produced as well as the contents to be developed.

Section 4 is focused on the description of the indicative course structure described in modules and units (list of the units which will be covered in each course module).

Section 5 is dedicated to present the delivery methods and tools as well as the features, the requirements and the sections in open source (LMS) which will host the Learning Objects.

Section 6 Describes the KUTEL COURSE development timeline. The next steps for completing the development curriculum content and resources are briefly explained together with indicative deadlines.

Annex 1 provides information about quality criteria related to the development of the learning objects which will be integrated into the KUTEL courseware

Annex 2 specifies some criteria for the selection of participants in the different development and training activities.

Annex 3 provides the development kit necessary for producing the KUTEL training course - templates and guidelines for the development of the different types of learning objects.



The first draft of the deliverable was prepared from August to September 2019 (after the provision of WP1 Dev 1.1 results) and is expected to be improved with the close collaboration of the members the team responsible for the QA as well as the members of RET.

The document will be available in the project website private area.



## Acronyms

**ADDIE:** Analysis, Design, Develop, Implement, and Evaluate.

**BL:** Blended Learning

**DT:** Development Team

**ECTS:** European Credit Transfer and Accumulation System

**EU:** European Union

**HE:** Higher Education

**HEI:** HE Institution

**ID:** Instructional Designer

**IDG:** International Development group

**ISD:** Instructional Systems Design

**KZ:** Kazakh/Kazakhstan

**LMS:** Learning Management System

**LPG:** Local Pilot Group

**LPT:** Local Piloting Team

**LOs:** Learning objects

**OERs:** Open Educational Resources

**PT:** Piloting Team

**PGL:** Pilot Group of Learners

**REAP:** Re-engineering Assessment Practices

**RET:** Research and Educational Team

**SDE:** Subject domain expert

**TEL:** Technology Enhanced Learning

**QA:** Quality Assurance

**VLE:** Virtual Learning Environment

## 1. METHODOLOGY AND WORKFLOW TO PRODUCE AND DELIVER TRAINING SOLUTION

Technology is needed both to create interactive multimedia material and to make it accessible to geographically dispersed adult learners, busy with work or family commitments which do not allow them to attend courses on specific dates with a fixed schedule.

The building of effective training and performance support tools requires the usage of instructional design models to define the activities that will guide the development. Instructional design model allows the purpose and reason behind a strategy to be communicated. A framework gives the view of all the major components that have to be included in the course.

ADDIE (ADDIE, n.d.) is still one of the most broadly used design models. ADDIE stands for Analysis, Design, Develop, Implement, and Evaluate. Each phase of the model offers an opportunity for iterations and changes before moving to the next one. The ADDIE model adaptation used, is presented with the diagram below.



Figure 1 ADDIE design model

The next flowchart shows the different steps for setting up a learning project.

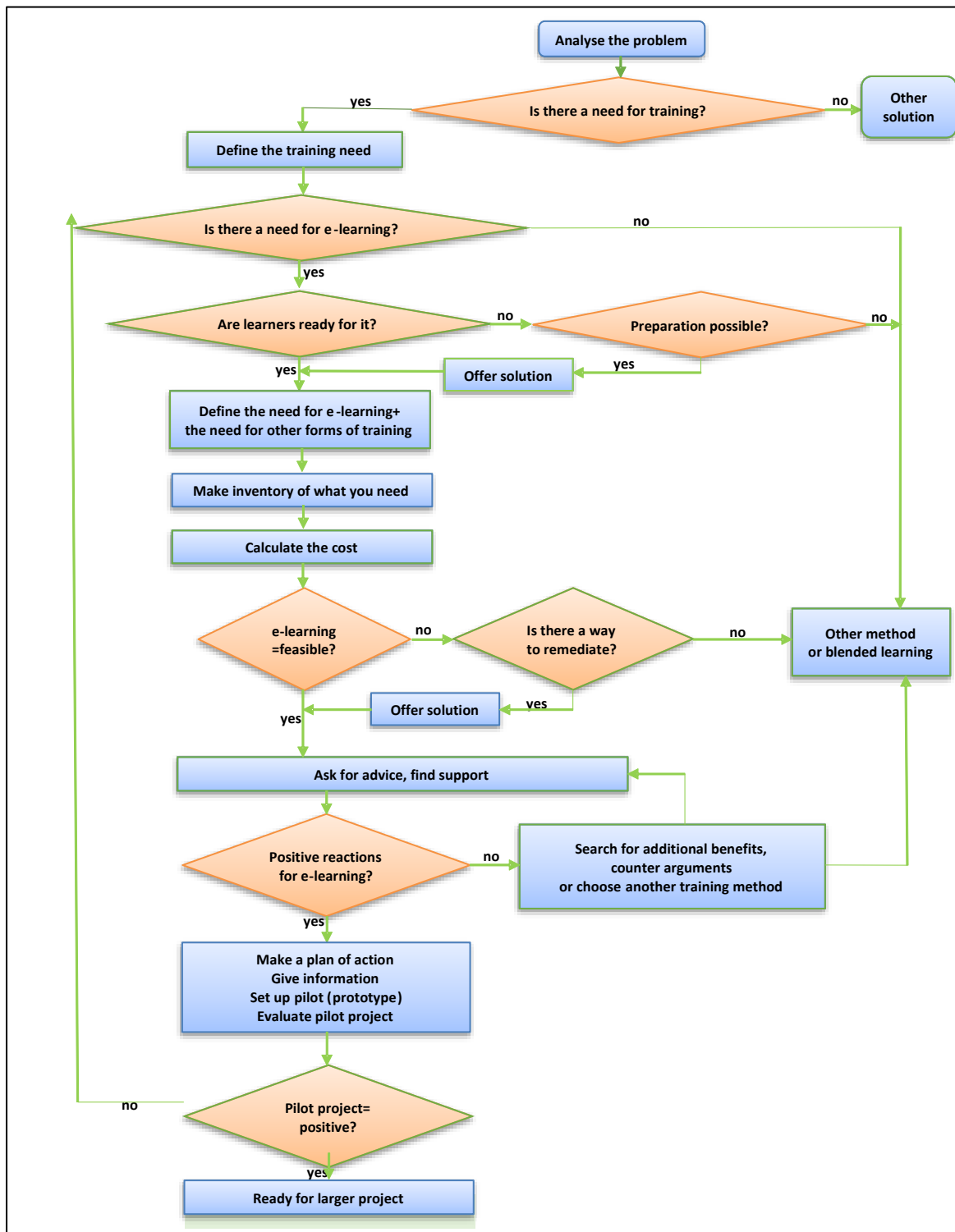


Figure 2 Steps for setting up a learning solution

The development of the training solutions should be done with special attention to the quality assurance and its enhancement. Below are listed some crucial factors in this regard:

- Learner-centred content: E-learning curricula should be relevant and specific to learners' needs, roles and responsibilities in professional life. Skills, knowledge and information should be provided to this end.
- Granularity: E-learning content should be segmented to facilitate assimilation of new knowledge and to allow flexible scheduling of time for learning.
- Engaging content: Instructional methods and techniques should be used creatively to develop an engaging and motivating learning experience.
- Interactivity: Frequent learner interaction is needed to sustain attention and promote learning.
- Personalization: Self-paced courses should be customizable to reflect learners' interests and needs; in instructor-led courses, tutors and facilitators should be able to follow the learners' progress and performance individually.

Moreover, e-learning is a convenient option for organizations in certain situations (e.g. when there is a need to reach many geographically dispersed learners).

In a self-paced e-learning course, learners can study course materials at any time they wish. This requires that learners have access to a set of interactive and self-contained materials. Facilitated or instructor-led e-learning takes place at a specific time and usually integrates self-study with collaborative activities such as discussions or team work.

Facilitated and instructor-led e-learning courses use communication tools which allow learners to communicate with facilitators and other participants in synchronous and / or asynchronous mode.

Both facilitated and self-paced e-learning activities and content should conform to a set of quality standards to ensure the effectiveness of the learning programme.

TEL (often commonly used instead of e-learning ) is defined as “teaching and learning- which may represent a part or the whole of the education model in which it is used – that makes use of electronic media and devices to facilitate access, promote evolution and improve the quality of education and training”<sup>1</sup>.

In a blended approach, e-learning sessions can be integrated with face-to-face (F2F) traditional activities making use of all main advantages of this type of training as follows (5 Advantages of Face-to-Face Training, 2015):

---

<sup>1</sup> <http://elconcept.uoc.edu/>

- Networking - Although e-learning courses do have networking potential via chat rooms, messages and emails it simply is not as effective as having a real-life human interaction with another person where you exchange conversation;
- Engagement and focus - during the F2F training, trainees are usually in a classroom with the tutor (facilitator) who is able to implement strategies to keep them involved and engaged as much as possible, which will retain their attention and will encourage better results.
- Adaptability - courses that operate face-to-face have the amazing option to be adapted to the learner’s needs when needed whereas e-learning simply just offers set options.
- Discussion and reflection – during the detailed F2F discussions and debates regarding subject topics the participants may even learn from other people and take in viewpoints that they haven’t considered yet.
- Instant feedback and problem solving - if a problem arises when trainees are in a face-to-face training session, they can simply ask the tutor (facilitator) to explain it better.

***The Development and Implementation Team – roles and responsibilities***

The following roles are generally required at different stages of the process: development leader; instructional designer (ID); subject domain expert (SDE); online administrator; e-tutor/facilitator; web developer; media editor; technical support specialists. Some of the roles described in the table below could be combined into a single job profile.

Role	Responsibility
<b>Development leader/s</b>	Coordination of all activities and roles in the different stages of the process and evaluation of the degree of transfer on the job and the results. HR and course development management.
<b>IDs</b>	Responsible for the overall instructional strategy. They work with the leader/s regarding the training goal specification and communication.  Collaborate with SDEs to define which skills and knowledge need to be covered in the course, choose the appropriate instructional strategy and support the team in defining delivery and evaluation strategies.
<b>SDEs</b>	SDEs are responsible for the course content development providing the knowledge and

	<p>information required. They work in collaboration with IDs and IT staff to design and create LOs and define evaluation strategy.</p> <p>They can act as instructors and facilitators supporting on - and offline classroom activities.</p> <p>They can prepare and present learning material, assign tasks to the trainees and answer their questions.</p>
<b>Web developers and media designers</b>	<p>Web developers and media designer assemble course elements, develop media components, create the courseware, adapt the interface of a learning platform and install the courseware on a Web server.</p>
<b>Course administrator(s)</b>	<p>Manage learners' subscriptions and all activities related to the administration of the course.</p>
<b>Tutor / facilitator</b>	<p>Support participants' learning activities and motivate learners during the course;</p> <p>Create an environment that inspires participants' confidence in the learning process;</p> <p>Assure the flow of information among the different stakeholders.</p> <p>Motivate participation and facilitate and mediate participants' exchanges.</p>
<b>Technical support specialists</b>	<p>Technical support specialists are required to assist all participants in the training process (producers and users) at every stage of the process.</p>

Table 1 Development team – roles and responsibilities

On the next figure are presented the areas of responsibility of the roles involved in the development process' stages.

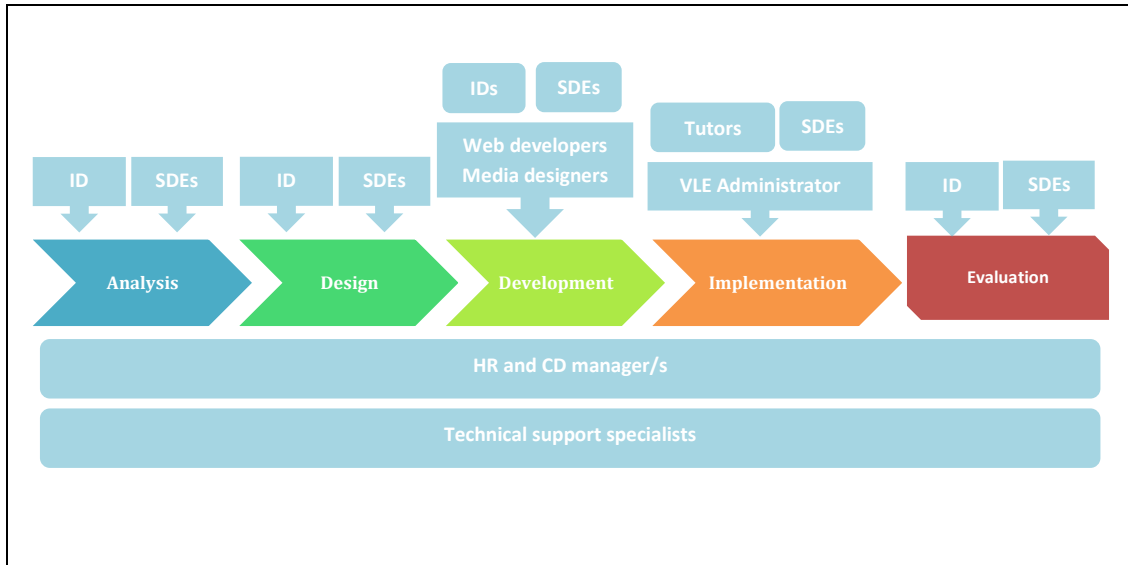


Figure 3 Areas of responsibility

All participants in the training as well as the members of the development team come from all countries involved in the KUTEL project consortium (a total of 14 organisations from Bulgaria, Greece, Italy, Finland and Kazakhstan), from different organisations which have their context and internal specifics.

Ensuring homogeneity and a high level of efficiency and quality with respect to the development and delivery of KUTEL training necessitates the need for KUTEL team members (developers, SDEs, technical staff, trainers and facilitators, etc.) to improve and/or develop some psychomotor skills including the acquisition of practical perceptions and mastery in:

- the use of appropriate authoring systems to create interactive multimedia educational content (interactive multimedia lessons)
- effective use of the functionality and tools addressed to the trainers integrated into the VLE, specifically designed to deliver e-learning KUTEL sessions.

#### **Preliminary training of the development team members**

The internal training of the course developers will be implemented in form of face-to-face workshops in parallel with the partnership meetings (meeting in Burgas – March 2020, and meeting in Kokshetau – September 2020) in order the most efficiency to be achieved regarding the level of interaction and collaboration, teamwork effectiveness, saving of time, finances and other resources.

In the table below is presented the instruction sheet related to this workshop.



F2F Workshop: How to use Adobe Presenter Software		
<p><b>Overall description:</b> During the event, participants will get to know each other. Introductions will help establish a group identity and give everyone a chance to state their training needs and expectations. The workshop will be led by representative of P1(USGM). The instructor will present to the participants the authoring system Adobe Presenter 11.1 and will demonstrate how to use its functionality. Participants will participate in practical session for creating multimedia lessons facilitated by the instructor. During an open discussion the instructor will provide explanations and answers of all questions raised during the practice.</p>		
<b>Duration</b>	4 hours	
<b>Target audience</b>	In this workshop will take part technical support specialists (from all partner organisations – 1 person per organisation) who will be responsible for the technical issues related to the multimedia lessons development.	
<b>Prerequisites</b>	<p>The participants are IT specialists with English language proficiency (level B).</p> <p>The participants already have reviewed the Adobe Presenter User Guide (<a href="https://helpx.adobe.com/presenter/user-guide.html">https://helpx.adobe.com/presenter/user-guide.html</a>)</p>	
<b>Materials</b>	<p>Training room with 15-20 places; Internet connection; multimedia projector;</p> <p>Every participant has laptop with installed licensed version of the Adobe Presenter 11.1 software</p>	
<b>Learning objectives</b>	<p>Help participants get to know each other and develop trust.</p> <p>Increase participants' knowledge about the Adobe Presenter functionality</p> <p>Increase participants' competences in the development of multimedia lessons through Adobe Presenter.</p>	
<b>Learning outcomes</b>	<p>After the training participants have comprehensive knowledge</p> <ul style="list-style-type: none"> <li>• about the Adobe Presenter functionality;</li> <li>• system requirements;</li> <li>• accessibility and 508-compliance issues;</li> </ul> <p>Participants will be able to:</p> <ul style="list-style-type: none"> <li>• create and design Adobe Presenter presentations;</li> <li>• set audio recording quality,</li> <li>• record audio files and add them to the presentations;</li> <li>• publish and view presentations; edit presentations.</li> </ul>	
<b>Activities</b>		
<b>Time</b>	<b>Activity</b>	<b>Focus</b>
<b>20 min</b>	Introduction	<p>Introduction of the instructor;</p> <p>Presentation of learning objectives;</p> <p>Introduction of the trainees</p>

40 min	Lecture	Adobe Presenter functionality overview
30 min	Post-lecture discussion	Questions and answers session
40 min	Demonstration	Practical demonstration of how to use Adobe Presenter: <ul style="list-style-type: none"> <li>• Work with presentations;</li> <li>• Import files to presentation;</li> <li>• Record audio;</li> <li>• Publish presentations</li> </ul>
20 min	Discussion	Questions and answers session
60 min	Practice	Instructor supported practical activities
30 min	Finalisation	Summary, final considerations, and closure

During the stage of the training implementation all the trainees should take part in an Introductory workshop where the representatives of the local piloting teams will introduce the trainees from their organisation with the course, training schedule, the evaluation system and completion criteria for the course as well as with the functionality, facilities and services of the KUTEL VLE where e-learning contents and self-paced learning activities will take place (communication tools, progress tracking tools, navigation system and so on).

### F2F Workshop: How to use KUTEL e-Platform

#### Overall description:

During the event, participants will get to know each other. Introductions will help establish a group identity and give everyone a chance to state their training needs and expectations. The workshop will be led by representative of P2(BFU). The instructors will present to the participants the developed KUTEL e-Platform - facilities and services integrated into the learning and communication spaces. The participants' will be demonstrated how to use the platform, how to navigate the learning contents, how to track the progress and achieved results, and how to communicate with other participants. During the instructor supported practical session, participants will be able to apply in practice what they have learned. All questions raised during the training will be answered immediately (if appropriate) or during special questions and answers sessions.

**Duration** 4 hours

**Target audience** In this workshop will take part tutors (from all partner organisations – 1 or 2 persons per organisation) who will be responsible for the

	implementation of the F2F local workshops related to the modules of the KUTEL course.	
<b>Prerequisites</b>	The participants are Subject domain experts with English language proficiency (level B) and basic IT competencies The participants already have reviewed the KUTEL e-Platform User Guide which will be developed by P2 (BFU)	
<b>Materials</b>	Training room with 15-20 workstations with Internet connection, multimedia projector;	
<b>Learning objectives</b>	Help participants get to know each other and develop trust. Increase participants' knowledge about the developed KUTEL VLE features and how to use it from the point of teacher and student. Increase participants' competences how to use KUTEL VLE in order to create powerful, flexible, and engaging online learning experiences.	
<b>Learning outcomes</b>	After the training participants will know about the KUTEL VLE functionality and integrated tools and activities. Participants will be able to: <ul style="list-style-type: none"> <li>• edit their profiles;</li> <li>• work in the environment in the role of teacher and in the role of student</li> <li>• use the collaboration tools;</li> <li>• use the use grading tools;</li> <li>• track the students' progress;</li> <li>• customize the environment according their preferences.</li> </ul>	
<b>Activities</b>		
<b>Time</b>	<b>Activity</b>	<b>Focus</b>
<b>20 min</b>	Introduction	Introduction of the instructors; Presentation of learning objectives; Introduction of the trainees
<b>40 min</b>	Lecture	KUTEL VLE – main features
<b>30 min</b>	Post-lecture discussion	Questions and answers session
<b>40 min</b>	Demonstration	Practical demonstration of how to use KUTEL VLE functionality
<b>20 min</b>	Discussion	Questions and answers session
<b>60 min</b>	Practice	Instructor supported practical activities: <ul style="list-style-type: none"> <li>• how to edit my profile;</li> <li>• how to work in the environment in the role of teacher and in the role of student</li> </ul>

		<ul style="list-style-type: none"> <li>• how to use the collaboration tools – forum, chat, messaging;</li> <li>• how to revise grades and how to use the grading tools;</li> <li>• how to track the students' progress;</li> <li>• customize the environment according their preferences.</li> </ul>
<b>30 min</b>	Finalisation	Summary, final considerations, and closure

## 2. ANALYSIS

The analysis covers two complementary parts: analysis of the target audience and analysis of the training needs

### 2.1. Analysis of the target audience

The analysis of the target group helps the most efficient training paradigms to be selected.

The KUTEL pilot training is addressed to participants from Kazakhstan involved in the three levels of the TEL QA processes in HE. Each level has its complexity, dimensions, principles etc.

The trainees who are going to attend the KUTEL training are adult learners, who already possess the knowledge, skills, and abilities to work in their current occupations – Ministry of education and science of the Republic of Kazakhstan, Universities, and Agency for accreditation and rating of HEIs.

Bearing in mind the above, the implementation of the university lecturers training should be based on the application of the modern principles of adult learning, i.e. Andragogy (Knowles, 1984). To best reach adult Learners, there are five key factors which should be carefully considered:

- The material presented should have immediate usefulness to the learners.
- The material presented should be relevant to adult learners' lives.
- The training environment should be welcoming so that all learners feel safe to participate.
- The training presentation should be engaging.
- The training should be presented in a respectful manner, where learners have an opportunity to share their experiences.

Regarding the KUTEL e-learning implementation the following principles are considered:

- Participants in the training learn because they want to. They learn best when they have decided they need to learn for a particular reason.
- Participants need to see that the subject matter and the methods are relevant to their activities and to what they want to learn.
- All participants should be encouraged to share their experiences and knowledge.

- Participants in the e-training learn more when they participate in the learning process – should be foreseen discussion forums, webinars, round tables where the trainees can actively participate expressing their opinions, sharing information and knowledge as well as to put under discussion “hot” topics.
- Adults learn best when new information is reinforced and repeated. There should be planned enough time so the learners to master new knowledge, skills, and attitudes.
- Adult learners learn better when information is presented in different ways – usage of different contents’ formats and variety of teaching techniques in order to meet the learners’ preferences regarding usage of different learning styles.
- Participants in the training need to know where they are heading. The course syllabus, the training schedule, trainees’ guide as well as presentation of the overall training with clear explanation of the learning objectives need to be at the trainees’ disposal.
- Participants need to "try-on" and practice what they are learning. They retain more information when they use and practice their knowledge and skills in their own teaching practice.
- Teaching and learning address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual trainees, i.e. it is personalized;
- The learning is proficiency-based, i.e. the students advance in their education when they demonstrate they have learned the knowledge and skills they are expected to learn;
- Students have the flexibility to learn “anytime and anywhere”;
- Students are given opportunities to make their flexible learning paths, i.e. they have choices about their own learning and contribute to the design of learning experiences.

There are several characteristics of the target group of learners that are crucial regarding the development of an efficient training solution.

E-learning is a good option because:

- there is a significant amount of content to be delivered to a large number of learners (5 countries, 14 organisations);
- learners come from geographically dispersed locations;
- learners have limited mobility (limited time and/or resources to travel);

- learners have limited daily time to devote to learning;
- learners are required to develop homogeneous background knowledge on how to assure TEL QA in HE topic.

In the development and implementation of the training solution should be taken into account that:

- Technology is required to produce and deliver e-learning. Their most important features include: a) learning content management: creation, storage, access to resources; b) curriculum mapping and planning: lesson planning, c) personalized learning paths, assessment; d) learner engagement and management: learner information, progress tracking; and e) tools and services: forums, messaging system, blogs, group discussions.
- Participants should have digital skills and competences;
- There could be difficulties with real-time communication (e.g. foreign language learners or very shy learners).
- Of great importance for the KUTEL training concept implementation is also the main principles of the holistic education (Loveless, 2019) and participatory training methods<sup>2</sup> (Introducing Participatory Approaches, Methods and Tools, n.d.) to be supported so the encouragement of the teamwork and group problem solving to be assured in the training piloting stages.

## 2.2. Needs for the training in TEL Quality Assurance

Developing an e-learning course that offers informative, well written content, and high-quality design elements are essential to any successful e-learning training. One of the most invaluable tasks is the e-learning training audience analysis. The six key questions for effectively analyse target audience are:

- What is the primary goal or objective of your audience?

The developers of the e-course will design courses that are aimed at helping trainees to delve into Quality Assurance processes in technology enhanced learning.

The proposed framework in KUTEL Deliverable 1.2 European TEL Roadmap for QA standard is based on ESG and on the conclusions drawn from KUTEL-Deliverable 1.1 State of the art of HE for TEL QA Framework, and follows four principles for quality assurance for TEL:

---

<sup>2</sup> Introducing Participatory Approaches, Methods and Tools;  
<http://www.fao.org/3/ad424e/ad424e03.htm>

- Higher education institutions have primary responsibility for the quality of their provision and its assurance.
- Quality assurance responds to the diversity of higher education systems, institutions, programmes and students.
- Quality assurance supports the development of a quality culture.
- Quality assurance takes into account the needs and expectations of students, all other stakeholders and society.

The structure of the offered e-course and the topics covered in it are based on the needs of the stakeholders: the learner, the lecturer, the manager, the organizational leader and the quality assurance body, especially in those sections related to the institutional strategy and curriculum selection.

- What are your learners' educational background and/or learning abilities?

Learners carry their own educational background, as well as their own set of learning prerequisites or abilities. The target audience consists of adult learners from different fields with different levels of competence, working in different infrastructures of different organizations: academics, administrative / technical personnel, managers and external stakeholders. The study (KUTEL Deliverable1.1) shows that the vast majority of respondents is aware that there are dedicated Q&A personnel in their organization and most of them (66%) have experience related to Quality Assurance. 69% of respondents have TEL related experience. The results indicate that Neutral respondents are about 1/3 of the sample and most experience respondents come from the academic staff category.

- When and where will the learners be learning?

Determining how the learner will access the information is as essential as pinpointing what content will be included. The course will be organized in such a way that representatives from each project partner will participate in face-to-face and electronic training and will train as a trainer in their organization.

- What information and skill-sets will the learner need to acquire?

One of the most vital elements of analysing audiences is determining which skill-sets or information must be acquired during the e-learning course. The results of the study presented in KUTEL-Deliverable 1.1 State of the art of HE for TEL QA Framework show that according to the respondents the necessary skills for contribute to Q&A TEL processes:

- for academic staff are non - verbal communication (confidence, expression, listening);
- in the cooperation skills category are conflict management, professionalism and willingness to learn;
- in the category of digital skills - email use, on-line collaboration tools use and numeracy;
- in the analytical skills category - problem solving and critical thinking



- in the transversal skills - the ability to work independently.  
This means that the training course will have to further develop both hard and soft skills.
- What are your audiences' technical requirements (or limitations)?

When designing e-learning courses, it is also important to think about how the learners will be accessing the content. The learning content will be made up of multimedia lessons, which are recorded by an expert, and be accompanied by screens explaining the content. This is an innovative type of lesson, in which are used state-of-the-art technological tools, capable of presenting content in an effective and complete way, through the use of synchronised screens, sound effects, video animations, educational software for interactive and multimedia reproduction, etc.

In this context, the existence of a well-developed technological infrastructure, internet connectivity, and highly qualified personnel following strictly defined QA procedures and standards are of great importance.

The results of a combined survey, presented in D1.1, show that to solve problems in the technologization of education in KZ HEIs, investments are made at various levels, at the state level, at the level of economically interested partners, by the institutions themselves.

- What are your audiences' learning preferences?

Determining the learning preferences of e-learning course audience is crucial to the overall success of e-learning course design. It will allow to customise the modules to meet the audience needs, so that they achieve the best possible outcome. In the results of the research (KUTEL Deliverable 1.1) as the important Q&A training topics are outlined: the evaluation of learners, Quality assessment, the evaluation of educational processes and the evaluation of educational content. As far as the importance of specific TEL training topics, the results are as follows: learner assessment, internal Q&A processes and ethics.

### 3. DESCRIPTION OF THE KUTEL TRAINING COURSE

#### 3.1. The main aims of the training

The aim of KUTEL training is to improve the capacity of the practitioners, involved at all levels of the HE quality assurance processes in Kazakhstan, in developing strong systems of quality assurance and monitoring them; and in performing control activities based on the principles of the quality movement through mainstreaming of the quality standards, principles, concepts, and best EU practices related to TEL as a key strategy for the modernization and assurance of a credible and effective HE system in the country.

A number of various capacity building activities will be organised for representatives of the authorities responsible for the accreditation and evaluation in educational field in Kazakhstan and for faculty members from partner universities. They will have the opportunity to learn about EU standards, approaches and models related to TEL QA, share experiences and exchange and update information, disseminate good practices.

Last but not least the participants in the training will be able to facilitate continuous improvement and innovation of HE in Kazakhstan fostering quality assurance processes in TEL in the context of their activities.

The achievement of these aims will contribute to the process of modernization, reshaping and transforming the HE in Republic of Kazakhstan in the context of more flexibility, openness and online provision of world-class education.

Actually, the lecturers involved in the training will be equipped with transversal and key competences and skills necessary for their active participation in the process of the development of a global digital HE space.

To achieve these aims, the KUTEL training course will comprise an introductory and 5 compulsory modules that will be implemented based on the country-specific needs identified during the Research stage of the KUTEL Project.

#### 3.2. Learning objectives of the KUTEL training course

The learning objectives of the proposed training course could be summarized as follows:

- To equip learners with comprehensive, specialized and theoretical knowledge within the field of Higher Education quality assurance with a special focus on technology enhanced learning.
- To enhance the awareness of the trainees about the HE QA standards, frameworks, principles, processes as well as the best European practices.

- To improve the skills of the trainees to design quality management processes at their levels and in their scope of action mainstreaming TEL quality assurance principles, concepts and models according to the nationally determined activity areas considering the best EU practices and HE quality standards
- To Improve the learners' competences regarding the efficient implementation of the quality management system, monitoring and evaluation of the TEL QA processes as well as the continuous improvement of the QA systems and processes considering the quality movement principle.

### 3.3. Learning outcomes

Upon completion of the training course the participants are expected to:

- have a good understanding of quality culture and the different stages of QA related processes as well as the specific roles of the members involved in each of them;
- be able to distinguish the different TEL quality management frameworks and know their differences and specifics;
- be able to identify the main QA processes at their levels and in their scope of action and improve the existing QA systems via mainstreaming TEL quality assurance principles, concepts and models according to the nationally determined activity areas considering the best EU practices and HE quality standards;
- design TEL quality management processes at their levels and in their scope of action;
- implement a TEL quality management system at their levels and in their scope of action;
- monitor and evaluate processes related to the QA of TEL;
- improve the systems related to quality assurance according to principles of the quality movement.

### 3.4. Duration

The whole training course will last 14 weeks and it will be divided into as follow:

- 46 e-hours - a self-paced online learning course where trainees have to review all multimedia lessons and all lecture notes which provide more detailed explanations of the lessons' content in textual form. The equivalent of these e-hours in standard learning hours is 69.

Given that multimedia lessons are audiovisual materials where audio narrations in English are included, but for learners, this is not their first language, the review time must be multiplied by two (which means at least two lesson reviews). Similarly, lecture notes will be

provided in English (which is a foreign language for the target audience) which means that the reading time could be longer.

Taking the above into consideration usually, the e-hours is equivalised to standard learning hours through multiplication by 1,5.

- 5 hours dedicated to testing and assessment (1 hour per each full module)
- 2 + 2 hours online facilitated learning (webinars)
- 18 hours - F2F tutor facilitated learning activities.

This means that the total duration of the training is 96 hours.

This means that the involved trainees will be able to spend 6-6,5 hours per week to attend the KUTEL training.

Apart from that in all involved partner organisations the local piloting teams (1-2 tutors and 1 technical expert) should organise a F2F kick-off workshop (4 hours) in order to make the trainees familiar with the course credentials such as syllabus, organization of the training, course schedule, evaluation system etc. Next important task of these kick-off workshops will be the trainees to be introduced and trained how to use the functionality and services integrated into the KUTEL VLE.

Apart from that as a pre-class activity will be organized a webinar session aiming to improve the awareness of the audience about the benefits and impact of the implementation of a QA culture within HEIs.

During the training period, at the end of each course module (every two weeks) the trainees will spend 2 hours in order to take part in the modules' related F2F workshops organized, implemented and documented by the members of the local piloting teams.

In the end of the training the local piloting teams will organise a closure F2F Workshop (4 hours) to provide overview of the training process at local level as well as to collect feedback from the trainees regarding their satisfaction from the course. The local data collected by the LPT in KZ will be summarized and presented together with a recapitulation of the training during the final closure webinar realised by the Project Coordinator P1 (USGM) and P11 (IAAR).

It is very important to keep into account that one hour of traditional face-to-face lesson is equivalent to one hour and a half of e-learning lesson, because in the calculation of the duration of one e-learning lesson you need to include the time which the trainees will spend to re-listen the lesson and to read the slides.

The e-course is organized into an Introductory module and 5 full modules and every trainee involved will have at his/her disposal two weeks to complete the module which will be devoted to a specific them.

After the end of Module 5 (the last course module), the local piloting teams will organise a closure workshop where the trainees will be presented an overview of the whole training and the results achieved at the local level will be discussed. Moreover, during the open discussion participants will share their overall impressions from the training. Another important task will be the members of the LPT to collect feedback regarding the trainees' satisfaction from the training via e-questionnaire. Last but not least, the data necessary for the development of Certificates of Completion also will be collected and afterward sent to the Coordinator for the documents' issuing purposes.

The last step of the training will be the organization of a closure webinar. During this event, organised by P1 (USGM) and P11 (IAAR), all involved parties will be presented a summary and recapitulation of the training and the achieved results. On the base of presented statistical data and training analytics, the overall progress will be outlined.

Finally, the KUTEL training start will be 19 October 2020 and the end – 19 February 2021.

### 3.5. Prerequisites

The e-course will be in English. For this reason, the pre-requisite for the participation is the knowledge level of English acceptable to benefit with the e-course at least at B level.

Other pre-requisites are digital competences for information resources development, online collaboration and knowledge sharing via functions and tools integrated into virtual learning environment based on the open source platform Moodle.

### 3.6. Flow Model of the KUTEL Training

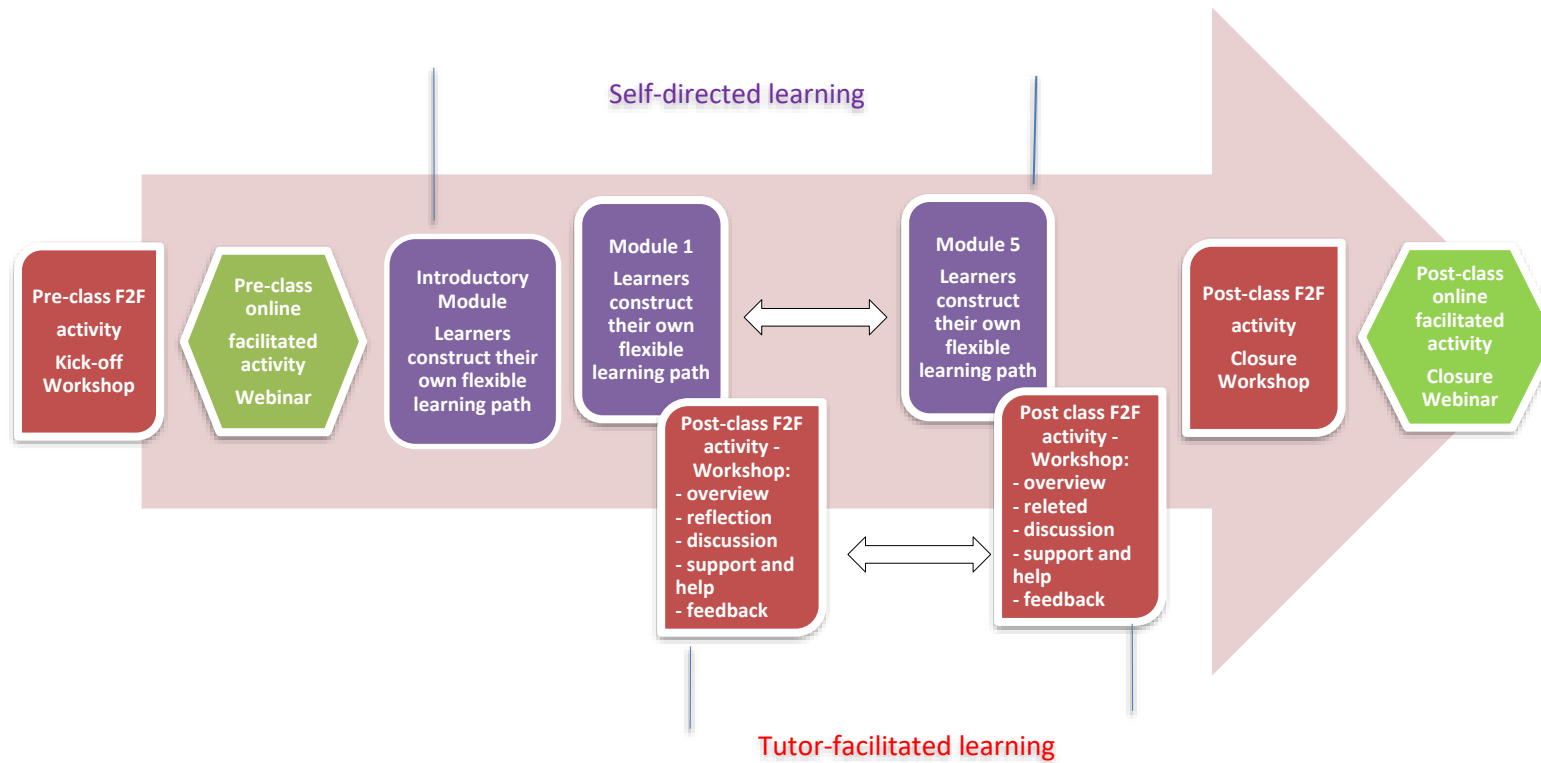


Figure 4 KUTEL Training Flow Model

### 3.7. INDICATIVE STRUCTURE OF THE KUTEL E-COURSE

#### 3.7.1. Introductory Weeks – “Welcome to the KUTEL Course” Module

Main knowledge areas	Module	Units
Introduction to the training	F2F Group Activities at Local Level	<b>Kick-off F2F Workshop:</b> Initial F2F event organized by the Local Pilot Teams (LPT) and held at the established KUTEL Laboratory set up by the partner organization. The main goals of the event are:
	Week 1	1) <i>The local pilot group (LPG) of trainees to be familiar with the course documentation, the syllabus, the method of delivery and the timetable of the training, the assessment scheme and the criteria for successful completion of the training and</i> 2) <i>Learners to be trained on how to use the functionality and services of the virtual learning environment</i> 3) <i>Pre-class Agenda distribution and instructions for participation</i>
	Webinar	Introducing the target audience with the quality culture concept.
	Week 2	Presentation of the state of the art and challenges regarding the quality assurance in HE in Kazakhstan - realised by P1 (USGM) and P10 (MES RK)
	Welcome to the KUTEL e-Course	1. Course presentation
Week 3	2. Syllabus	
		3. Course Schedule
		4. Guidelines and recommendations for the trainees
		5. Assessment methods and rules

Table 2 Indicative structure of the KUTEL Course - Introductory Weeks (Weeks 1-3)

3.7.2. Module 1. External Quality Assurance - Standards and Guidelines

Main knowledge areas	Module	Units
<b>External QA (meso level)</b>	External QA - Standards and Guidelines	<b>1.</b> Quality assurance as a central thrust in the process of the HE change
		<b>2.</b> Quality assurance in HE - the European perspective and basic principles
		<b>3.</b> Mainstreaming TEL quality criteria and principles in the Quality Framework for HE - challenges and barriers
		<b>4.</b> Accreditation as a mechanism to ensure quality in HE
		<b>5.</b> Defining and designing external quality assurance procedure as a driver for organisational development and cultural change
Out of class activities	Reading and reflection: Course Slides & Lecture Notes & Additional materials Self-assessment and evaluation: Test 1	
F2F Group Activities at Local Level	Overview of the module and progress; group discussion based on the reflection questions; team work; provision of feedback regarding the training module via questionnaire.	

Table 3 Indicative structure of the KUTEL Course - Module 1 (Weeks 4-5)



*3.7.3. Module 2. Internal Quality Assurance and Organisational Culture*

Main knowledge areas	Module	Units
<b>Internal QA (macro level)</b>	Internal QA and Organisational Culture	<b>1.</b> Governance and structures
		<b>2.</b> Internal QA standards: policies and guidelines
		<b>3.</b> Stakeholders involvement
		<b>4.</b> QA of student services
		<b>5.</b> QA of technological resources
	Out of class activities	Reading and reflection: Course Slides & Lecture Notes & Additional materials Self-assessment and evaluation: Test 2
F2F Group Activities at Local Level	Overview of the module and progress; group discussion based on the reflection questions; team work; provision of feedback regarding the training module via questionnaire.	

Table 4 Indicative structure of the KUTEL Course - Module 2 (Weeks 6-7)

3.7.4. *Module 3. Quality Assurance of Pedagogical Aspects of Technology-enhanced Learning Courses Development*

Main knowledge areas	Module	Units
<b>TEL course design (micro level)</b>	QA of Pedagogical Aspects of TEL courses development	<b>1.</b> Course Design
		<b>2.</b> QA of TEL material
		<b>3.</b> Student-student and student-teacher interactions
		<b>4.</b> Syllabus (course contents and description, workload etc.)
		<b>5.</b> Tutoring
Out of class activities	Reading and reflection: Course Slides & Lecture Notes & Additional materials Self-assessment and evaluation: Test 3	
<b>F2F Group Activities at Local Level</b>	<b>Overview of the module and progress; group discussion based on the reflection questions; team work; provision of feedback regarding the training module via questionnaire.</b>	

Table 5 Indicative structure of the KUTEL Course - Module 3 (Weeks 8-9)

*3.7.5. Module 4. Technological Aspects and Quality Assurance*

Main knowledge areas	Module	Units
<b>TEL course development and implementation (micro level)</b>	Technological Aspects and QA	<b>1.</b> Learning Management System (LMS) quality evaluation framework
		<b>2.</b> QA of multimedia products (specific focus on special needs students)
		<b>3.</b> Collaborative Virtual Environments (CVEs)
		<b>4.</b> Technical support (how much technical support you can provide to students etc.)
	Out of class activities	Reading and reflection: Course Slides & Lecture Notes & Additional materials Self-assessment and evaluation: Test 4
	<b>F2F Group Activities at Local Level</b>	<b>Overview of the module and progress; group discussion based on the reflection questions; team work; provision of feedback regarding the training module via questionnaire.</b>

Table 6 Indicative structure of the KUTEL Course - Module 4 (Weeks 10-11)

*3.7.6. Module 5. TEL Quality Assessment and Evaluation*

Main knowledge areas	Module	Units
<b>Evaluation of TEL (macro and micro levels)</b>	TEL Quality Assessment and Evaluation	<b>1.</b> Policy for quality assurance of e-assessment
		<b>2.</b> Assessment and evaluation of participants' expectations and perceptions
		<b>3.</b> Teaching and learning strategies' assessment and analytics
		<b>4.</b> Evaluation and assessment of Learning resources and environments
		<b>5.</b> Assessment and evaluation of the logistic and support
Out of class activities	Reading and reflection: Course Slides & Lecture Notes & Additional materials Self-assessment and evaluation: Test 5	
F2F Group Activities at Local Level	Overview of the module and progress; group discussion based on the reflection questions; team work; provision of feedback regarding the training module via questionnaire.	

Table 7 Indicative structure of the KUTEL Course - Module 5 (Weeks 12-13)

### 3.7.7. Closure of the training

Main areas	Activities	Units
Closure of the training and collecting feedback from the trainees	F2F Group Activities at Local Level	1) Overview of the training and results achieved at local level. 2) Collecting feedback regarding the trainees' satisfaction via e-questionnaire. 3) Collecting data necessary for the development of Certificates of Completion 4) Post-class closure Webinar Agenda distribution
	Closure Webinar	Summary and recapitulation of the training/results/progress. Provision of statistical data and training analytics to the involved parties - realised by P1 (USGM) and P11 (IAAR)

Table 8 Indicative structure of the KUTEL Course - Closure Week (Week 14)



## 4. COURSE DEVELOPMENT

### 4.1. Guidelines for Course Contents Developing

When creating learning content, irrespective of the resource format (i.e. PowerPoint, video, audio, worksheet, case study, etc.) the following structure should be adhered to:

- **Step 1 – Introduction, Aims, and Objectives**
- **Step 2 – Key Learning Content**
- **Step 3 – Conclusion - Reflection & Transfer**
- **Step 4 – Assessment & Outlook**

This structure is based on common approaches used in teaching settings and is informed by didactical principles and learning theory. Following this structure will ensure that the curriculum content developed for the KUTEL Curriculum will be concise, relevant and focused to ensure the value of the learning content in developing key knowledge, skills and competences in TEL QA domain.

With all partners following this structure, this also helps to keep a high standard of quality, consistency and relevance throughout the entire Curriculum; delivering focused learning content which is based on specific learning outcomes and which requires the content creator (i.e. project partner) to really think and plan the content of their module so that the outcomes are achieved.

On the figure below is presented the content structure concept.

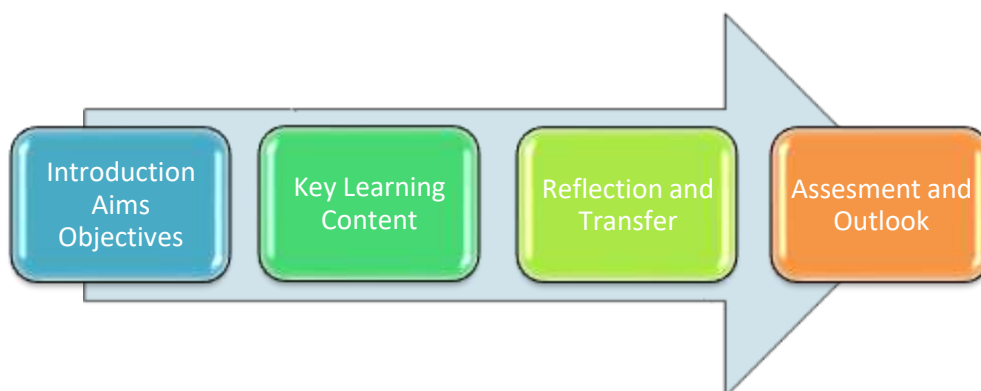


Figure 5 Content Structure Concept

- **Phase 1: Introduction & Aims**

The project partner should introduce the title of the unit/resource; provide a brief description of the unit/resource; state the learning outcomes and outline the main content areas of the unit/resource.

- **Phase 2: Key Learning Content**

The actual learning content that targets a very specific topic or thematic issue related to developing competences in trainees must be communicated in this phase. Therefore, this phase is the core element of the unit/resource and will be the longest and most extensive phase of the content.

- **Phase 3: Reflection and Transfer**

This phase should offer some questions or statements to help the learner reflect the content against the background of their own development. Contextualizing the content in this way will foster the learning transfer and reaffirm what the learner has learned and will help to develop their confidence in their roles. On this phase apart from the conclusions and examples, partners should provide 1-2 reflection questions which need to be further discussed during the F2F workshop dedicated to the respective course's module.

- **Phase 4: Assessment & Outlook**

In this section, the project partner should provide 2 assessment questions, specific to the unit's content of the respective module. These questions will be used for the construction of the module related final test addressed to the trainers.

## 4.2. Principles for Content Development

Regarding the general principles that need to be considered when designing a learning resource, we would like to outline the following aspects:

1. Partners should make sure that all content which is presented in a learning unit is accurate and that it is referenced, where necessary.
2. Content of the learning units must always follow clear learning objectives and goals, and should be linked to resources that complement the unit content.

From a didactical perspective, the following should be adhered to:

- **Problem-orientation:** Theoretic models and content should be contextualised in a real-world setting so as to ensure that learning content is practical and relevant to the needs of trainees completing the training. Practical and contextualised content will help the trained QA practitioners to understand the learning content and to apply it to their existing environment.

- **Learning Outcomes:** The project partner should be able to describe the learning outcomes or goals for a specific unit/resource. Use Blooms Taxonomy when defining learning outcomes.
- **Referenced:** It is necessary that acquired knowledge is not only reflected, but that it will be referenced, linked and extended by offering newly-trained QA practitioners a series of resources on similar topics which they can access as part of their self-directed learning to allow them to undertake further learning in a given topic if required. Quality standards should be applied to these additional resources to ensure pedagogic value.
- **Practice:** To ensure the development of the practical TEL QA skills in learners, examples and exercises provided through this curriculum should be contextualised to real-life, practical situations and scenarios. It is therefore recommended that partners integrate round tables and team activities into the F2F module related workshops so to facilitate the reflection and the development of a common vision. This will be also a good opportunity for learners to practice team-work and networking.

### 4.3. Tips for Successful Content Development

When developing the curriculum content under your assigned modules, please bear the following in mind at all times:

- Maximum length per module should be no more than 7-8 hours with 2 hours offered in face-to-face workshops, and 5-6 hours comprising self-directed and online content and resources.
- All participating partners should take responsibility for developing units for the specified curriculum modules.
- Avoid using abbreviations. If abbreviations have to be included, the terms should be written out in full on first use. Each module and its units will be developed by International Development Groups (IDGs) where will be involved EU and KZ partners. The distribution of the tasks and responsibilities related to the content development will be done taking into account the expertise and capacity of the organization as well as the budget dedicated to the activity.
- Avoid jargon. Where jargon is used, create a glossary for terms contained within the content.
- Pay careful attention to the logical sequence of the text.
- Ensure consistency of phraseology throughout the text.
- Remember: Quality over Quantity.



- Keep the target group in mind at all time – create your content as if you are talking directly to TEL QA practitioners.
- Ensure that your content specifically addresses the learning outcomes which have been described by you when developing your module.
- Please ensure clarity and conciseness in drafting the Curriculum Content
- Use short sentences and paragraphs in preference to long complex sentences and paragraphs.
- Reference all sources, data and figures at the end of the document using the APA referencing style. (Do not use Wikipedia as a reference).
- Use UK English and not American English in all content.

#### 4.4. Learning Objects

Regarding the learning content development - the usage of OERs and provision of contents in form of learning objects (LOs)<sup>3</sup>, i.e. computer-based instructional components (items, practice items, and assessment items) that are combined based on a single learning objective but could be used and reused independently or in sequences in different educational contexts is fundamental.

The developed LOs are with different levels of complexity, granularity, and reusability. Learnativity content model identifies the following learning object taxonomy:

- *Raw Media Elements* are the smallest level in this model: these elements reside at a pure data level. Examples include a single sentence or paragraph, illustration, animation, and the like.
- *Information Objects* are sets of raw media elements. Such objects could be based on the “information block” model developed by Horn (Horn, 1998)].
- Based on a single objective, information objects are then selected and assembled into the third level of *Application Specific Objects*.
- The fourth level refers to *Aggregate Assemblies* that deal with larger (terminal) objectives. This level corresponds with lessons or chapters, which can in turn be assembled into larger collections, like courses and whole curricula.
- Lessons or chapters can be assembled into larger collections, like courses and whole curricula. The fifth level refers to these Collections.

---

<sup>3</sup> Instructional use of Learning objects; <http://reusability.org/read/>

The smaller level of granularity in this taxonomy is essential, as repurposing can only be accommodated by explicitly identifying the information objects and the raw media elements, they contain (Yassin, 2005).

Learning objects from lower levels of the taxonomy are assembled into higher-order collections such as courses and curricula in accordance with the Learnativity Content Model shown on the next figure.

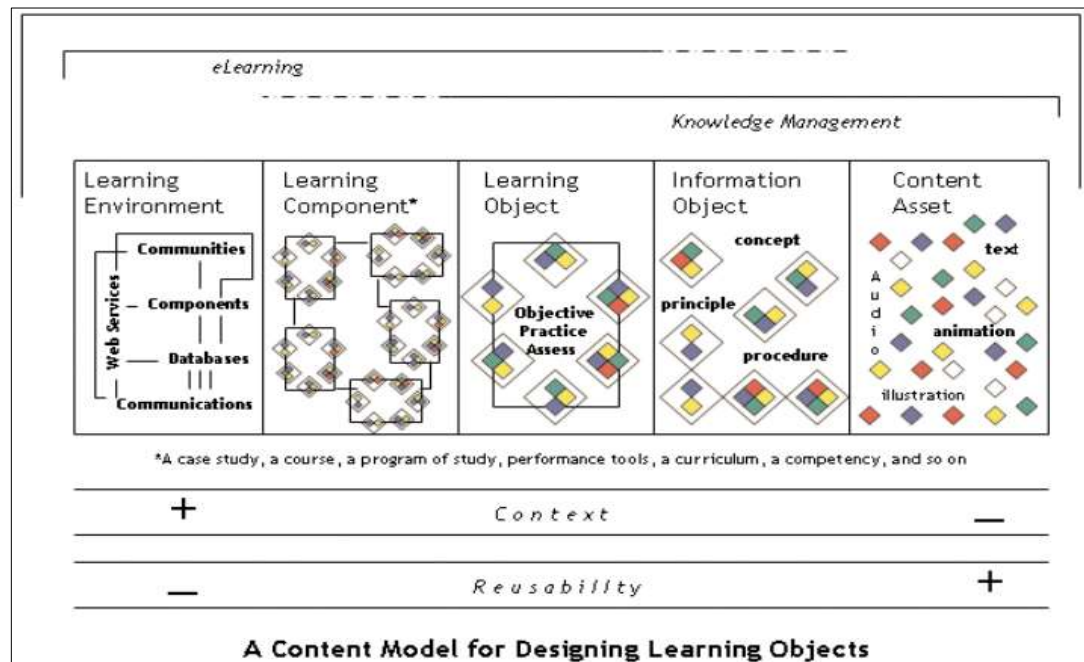


Figure 6 Learnativity Model - main principles and paradigms<sup>4</sup>

Clearly, information objects contain raw media elements. Learning objects contain information objects. Aggregate assemblies contain learning objects and other aggregate assemblies (Duval & Hodgins, 2003). The next figure presents the LOs taxonomy and e-learning standards related with the learning content development and management.

<sup>4</sup> <https://www.reusablelearning.org/about/Granularity.html>



Figure 7 Learning content hierarchy and e-learning standards<sup>5</sup>

The LOs Set of the KUTEL e-course include content assets such as illustrations (pictures, schemes and graphics), texts, animations, audio files, and etc. The following information objects will be developed through the proper assembling of the available assets:

- **Slides** - PowerPoint presentations developed by the SDEs where a concrete course module's topic is presented through high-quality illustrative materials and compact but highly informative textual components;
- **Lecture Notes** that are textual documents presenting in detail the topic (and /or different perspective of the contents already explained) of the course as a part of a defined modular structure.
- **Reflection questions** - Reflection questions (Stearns, 2018) often assess metacognitive skills, otherwise known as thinking about how we think and learn. Reflection questions are important for a number of different reasons.

The informal reflection process can be defined as examining one's own internal thoughts and feelings and reflecting on what they mean. The process can be focused on either one's current mental experience or mental experiences from the very recent past.

The formal experimental technique is a more objective and standardized version of this, in which people train themselves to carefully analyze the contents of their own thoughts in a

<sup>5</sup> R. Robson (2004) Next Generation Learning Content Management Eduworks Corporation:  
[https://images.slideplayer.com/20/6012851/slides/slide\\_43.jpg](https://images.slideplayer.com/20/6012851/slides/slide_43.jpg)

way that is as unbiased as possible. By encouraging students to reflect on their learning, these sorts of questions help students:

- Consolidate the knowledge and skills they have acquired in a lesson or unit
- Get to know themselves better as learners, thinkers, and community members
- Provide important feedback to their teachers and to their peers
- Generate questions and ideas to propel future learning experiences

There are a number of different ways to think about using reflection questions with the students. The main types of reflection questions are:

- process reflection questions
- product reflection questions
- feedback questions
- self-assessment question
- **Test questions** - These questions will be stored in the course Question Bank and will be used for the development of electronic quizzes related to the course's modules.

The developed test questions (information objects) will be stored in a special purpose DB (Question Bank) from where will be selected and assembled into the Quizzes (Application Specific Objects).

- **Quizzes** are used to evaluate student understanding of the material covered by the corresponding module of the course.
- **Storyboards** are LOs which combine the developed slides' elements with texts. The storyboards will be used for the development of higher complexity LOs named multimedia lessons. The textual part connected with a given PPT slide further will be recorded as audio narration in a separate audio file.

Multimedia lessons are aggregate assemblies where the developed PPT presentations (Slides) are integrated with the corresponding audio files developed in line with the provided storyboards.

- **Multimedia Lessons** – they will be video-audio lessons, in particular, the audio explanation will be synchronized with a slide presentation. They will be uploaded on a dedicated platform where the lesson can be navigated by learners everywhere and anytime.

The course modules are another kind of aggregate assemblies with more complex structure.

- **Course Modules** - The modules included in the KUTEL course will be developed by the international development groups (IDGs). Each module consists of the following components:

- *Module description* providing brief information about the module, its main goal learning outcomes, instructors' contact information;
- *Multimedia lessons*;
- *Lecture Notes*;
- *Slides*;
- *Assignment based on the provided reflection questions*
- *Test*.

The leader of the IDG is responsible to collect all required LOs necessary for producing of the courseware. After receiving the Los, they have to be inspected in line with the QA criteria (Please see the Annex 2, part "QA criteria for Learning Objects).

All the 5 developed course modules will be integrated in the e-course delivered to the geographically dispersed target audience through VLE.

#### 4.5. Contents development – main considerations

When developing the contents related to the implementation of online self-directed learning in a framework of their modules, partners should adhere to the following guidelines:

- Each module will contain 5 e-hours of self-directed learning. When designing this content, partners should make use of existing online and paper-based resources and handbooks as well as developing their own bespoke online resources.
- Each module will be developed by the subject domain experts, designers, and technicians from EU and KZ organisations. The tasks related to the LOs' development will be distributed among partners taking into account their experience and expertise in the subject area. Consequently 5 international development groups (IDG) will be consolidated. Each group will be led by one of the partners involved.
- The IDG leaders are responsible for conducting the initial revision and testing of the developed outcomes together with QA team members.
- The leaders are also obliged to ensure that the work schedule and deadlines are respected from all partners in their group and to inform the coordinator and the leader of the package in a timely manner of any difficulties or risks that the plan has not complied with.
- For the self-directed learning content, partners should identify useful tools and resources which are applicable to their learning module(s). Partners will develop the content based on the selected and their own resources in form of learning objects using the templates provided in Annex 3 of this document.
- Open source resources which are repurposed for use with the KUTEL Curriculum should adhere to the following standards:

1. Check the license - Make sure the Open Educational Resource has a Creative Commons licence which states that it is free to use, modify and re-purpose for non-commercial education.
  2. Quality of Information – Ensure that the content of the resource is factual and that it is from a reliable source.
  3. Align it with your learning objectives – Make sure the resources you use, modify or re-purpose contribute to achieving your specific learning objectives.
  4. Presentation of Information – Make sure the resources you pick will help to clarify concepts and make the content more easily understood. Ensure it will not cause ‘cognitive overload’ in the participants.
  5. Visual Presentation – When searching online for resources, make sure they are well designed and coherent and consistent in their layout. Find resources which feature high-quality writing and graphics if possible.
- For developing self-directed or online content, please follow the guidelines as presented below – Guidelines for Developing Content.
  - Where possible, partners should include useful templates which trainers could use in the foreseen F2F course activities (workshops) and in their regular work.

#### 4.6. Course Prototyping – main steps

The process related to the development of a courseware prototype has the following phases:

1. Development of less complexity LOs, KUTEL Labs, and VLE design - after distribution of the tasks related to the development of the course topics according to the approved structure:
  - Each partner search and/or create raw media elements and information objects related to the concrete topics and using them develop the topics’ related Lecture Notes, Slides, 2 multiple choice questions, and 2 reflection questions related to each of their topics according the templates provided in Annex 3.
  - Establishment of the KUTEL labs in the Kazakh organisations.
  - P2 (BFU) is responsible to develop the demo design of the VLE intended for the e-learning contents delivery and to register the team members in the e-course prototype.
2. Internal revision, improvements and approval:

- The developed Lecture Notes, Slides, multiple choice questions, and reflection questions are revised internally by the IDGs' leaders and by the members of the KUTEL QA team. If necessary, the authors improve the developed LOs.
  - The leaders of international development groups provide modules' descriptions according the provided template.
  - All developed learning objects and descriptions should be uploaded in the collaborative working space of the project.
  - The developed VLE demo also is internally tested by the IDGs' leaders and by the members of the KUTEL QA team. The VLE will be improved in line with the suggestions received.
3. Partners develop Storyboard objects on the base of the approved Lecture Notes and provide them to the IDG leaders for revision.
  4. IDGs' leaders revise the Storyboards and after approval publish them into the collaborative space of the project.
  5. P1 (USGM) is responsible for the coordination of the LOs development process. P2 (BFU) is responsible to integrate all approved LOs into the e-course published on the e-platform and also to develop Question bank and Quizzes on the base of the provided test questions.
  6. Partners develop topics' related Multimedia Lessons on the base of the already approved Slides and Storyboards using the Adobe Presenter authoring software.
  7. P2 (BFU) is responsible to extend the courseware with the integration into its structure the developed Multimedia Lessons.
  8. Internal testing, improvement (if needed), and approval of the current prototype version.
  9. Leaders of IDG have to provide brief and uniform Modules' description following the provided templates and guidelines (please see Annex 3, section "Guidelines and Template for Module Description").
  10. The provided descriptions are integrated into the courseware.
  11. All partners internally check the developed courseware and ONLY in case that testing results show that the products have the quality expected the training could be started.

Please, see the **ANNEX 3 – Templates and Guidelines to Develop Learning Objects**

The process is also presented together with the deadlines on the next figure:

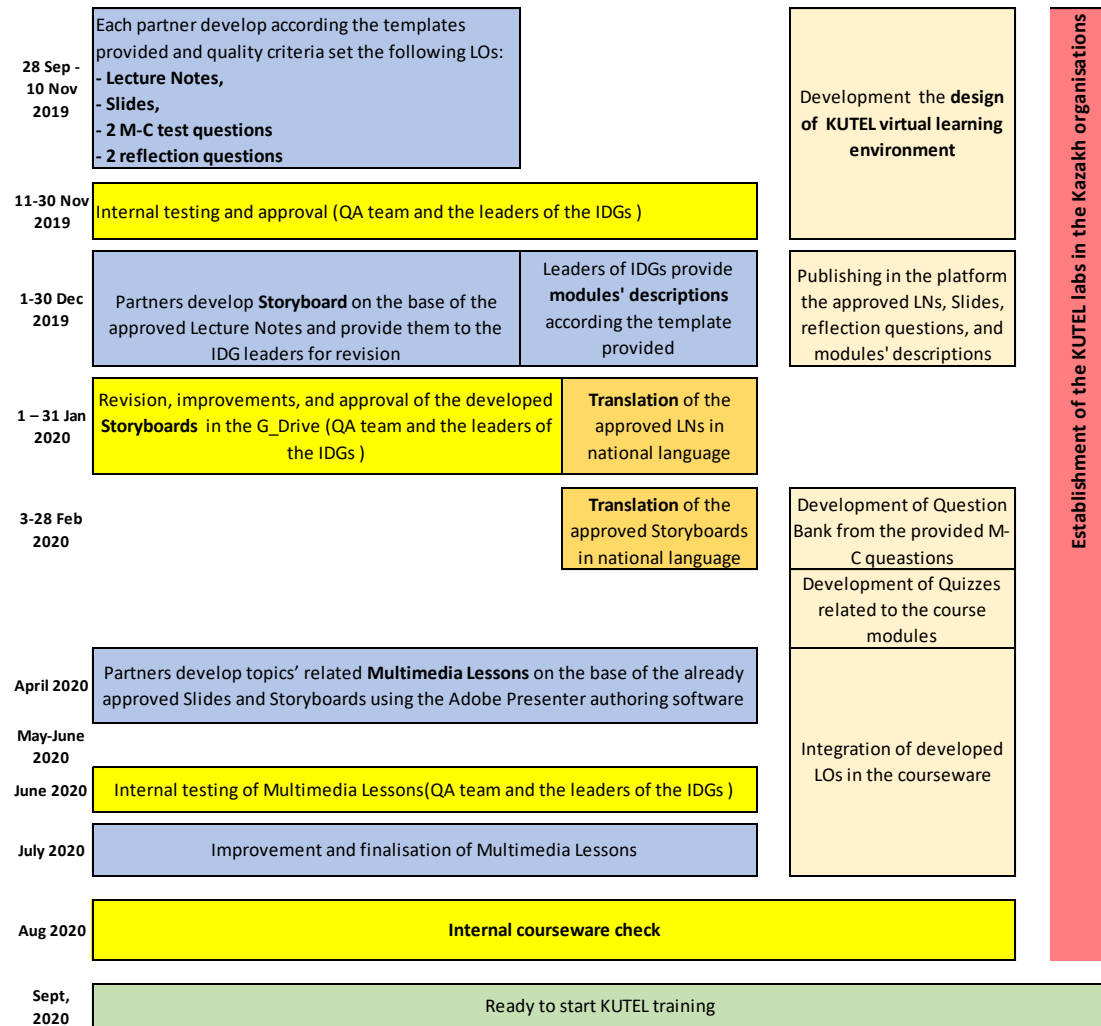


Figure 8 Steps and deadlines of course prototyping



## 5. THE DELIVERY METHOD AND TOOLS

The KUTEL e-course consisting of five modules plus one introductory module. The learning objects included in the course's modules will be delivered to the geographically dispersed target audience through a virtual learning environment (VLE) - software that simulates traditional face-to-face classroom activities and facilitate teaching and learning with a strong collaborative component.

### 5.1. KUTEL virtual learning environment

VLEs are increasingly being adopted as LMS replacements. Software platforms like Moodle Claroline, OLAT, Sacai are now widely used by the education institutions for online and blended solutions delivery.

Software platforms are two main types - proprietary software or open source. Benefits of open-source software packages include:

- free distribution and licensing to unlimited users;
- modification and derived works are allowed;
- users worldwide are engaged in their development (i.e. community participation);
- ability to run on multiple platforms; and
- better and easier communication with other open-source languages, platforms and databases.

Taking into consideration that 60% of organizations involved in the partnership are familiar with the Moodle platform and 50% of them use Moodle based training provisioning solutions, it was decided the KUTEL virtual learning environment will be developed based on the open source software platform Moodle. KUTEL VLE will be designed to provide a single robust, secure and integrated system where the e-learning in QA of TEL to be implemented with the possibility for all participants in the training processes to be able to establish their flexible and personalized learning paths. Moreover, the KUTEL VLE will play a role of a central hub providing the social area with wide range of opportunities for collaboration and communication among all users (project team members and all other participants in the training) via integrated forums and messaging system.

### 5.2. Main sections of the e-Course structure – main elements and components

- **Welcome to the course:** welcome message and course data structured as follows:

- **Read Me First:** How to navigate the course, how to use the services and tools integrated, how to communicate with the other participants, and etc.
- **Course Presentation** – what is the course about, prerequisites, learning objectives, learning outcomes, i.e. the knowledge and skills that students are expected to demonstrate upon completion of a course
- **Syllabus:** The primary function of a syllabus is to provide the learner with details about the learning objectives and associated assessments for the course.
- **Evaluation System:** Criteria for determining student grades; the number of exams and the weights assigned to each; how the final grading will be done.
- **Training chart**
- **Module Screens (content and assignments):** This is the area that holds the core content. Each section can have its own overview, instructions, content, assessment, and summary.
  - **Intro to the module** – brief description of the scope of the module and learning objectives
  - **Topic area:**
    - **Multimedia Lessons** – SCORM LOs presenting the topics covered by the module
    - **Lecture notes** – textual documents presenting the topic
    - **Slides** – PPT presentation of the topic
  - **Additional resources:**
    - **Online information resources** – related to the topic articles, blogs, books, and etc.
    - **Translated Lecture Notes;**
    - **Translated Storyboards;**
    - **Bibliography**
  - **Reflection:** reflection questions related to the module. These questions will be discussed during the local F2F workshop. The summary of the discussion will be documented by the representatives of the LPT according the template provided. All workshop reports will be uploaded on the platform.
  - **Assessment** – consisting 10 multiple-choice questions; 2 attempts allowed; the max. grade is taken into consideration.
- **Resources:** Additional content and resources that augment the course and support ongoing learning.

The e-learning will be supported also by F2F tutoring activities.

### 5.3. Webinars

Webinars are ideal for allowing two-way communication between the instructor and the audience. The content in a webinar can be recorded and shared or repurposed in a variety of formats. Webinars also give audience members direct access to the instructor, which is both an enticing reason to attend and a way to build trust.

In the KUTEL training flow are foreseen two webinars – one in the period of introductory weeks and the second after the last course module end. The kick-off webinar will be organized by P1 (USGM) together with P10 (MES RK). The closure webinar will be organized by P1 (USGM) together with P11 (IAAR).

During the webinar the instructors will present the content to a group of participants who are connected to the platform at the same time. The participants in the event can interact with the instructor, ask questions and receive feedback using video conference and chat.

Moreover, the webinar session will be recorded and published on the YouTube channel of the project by P1 (USGM) in order to be available to these KUTEL participants who have not been able to participate during the event as well as to the broader audience.

The webinar can include video of the presenter talking, slideshows, or other visual elements.

- **Know your attendees** – knowing who your attendees are will ensure that you plan for a high-value and successful webinar;
- **Webinar planning and preparation** - Start promoting at least 7 days in advance, inform the potential audience with the workshop agenda and distribute the link to the event (if it's possible);
- **Consider time zones** – it is very important to think when to best schedule the event;
- **Choose the Right Speakers** - webinars need to be hosted by skilled, knowledgeable experts in their field.
- **Pick the Right Webinar Format** – Before to start creating the slides, it is important to be decided on the right format for the chosen topic. Is the webinar going to be hosted by a single presenter? Will it be an interview Q&A-style webinar with two speakers? A panel discussion with numerous guests and a moderator? The complexity of the chosen subject, and the availability of suitably qualified speakers, should inform your choice of format.
- **Write clear, directional slides** - the better organized your presentation, the more your audience will be captivated and inspired. Slides are great for visual cues and breaking down concepts visually. Use data visualizations rather than creating lists to iterate statistics.
- **Write a Strong Script** - Even the most skilled webinar producers and hosts rely on scripts, because talking for up to an hour, even about something you're passionate and knowledgeable about, is hard work.

Below is provided a list of tools to create and run a webinar:

- **Choose the Right Webinar Platform** - There are several webinar platforms to choose from, each of which has its pros and cons.

- **Preparation of the Studio Space** - if the webinar is run from the office, find a quiet room with a door where you won't be disturbed. Keep the studio space free of clutter, and turn off your computer notifications, cell phone and anything else that could distract you or your audience during the webinar.
- **A computer (or mobile):** this can be a laptop, a desktop, a Mac or PC. Not everyone who views the webinar will do so on a desktop computer. When it comes to the actual webinar video, make sure you increase the size of the text and visuals in your slides and annotations. This will ensure a comfortable level of viewability despite the smaller displays in mobile devices.
  - **A webcam:** This is usually built into your laptop or desktop monitor.
  - A webinar software:
- Delivering **good audio quality** is crucial issue. e's what you need for good audio quality:
  - **A professional microphone** -using an external microphone when running your webinars is highly recommended. High quality audio is essential to a great webinar. Any external microphone is better than using the built-in microphone on your computer.
- A strong internet connection - webinar like the host's audio going in and out, or being choppy, or, in a worst-case scenario, dropping out entirely. Make sure your connection gives you at least a 2–3 MB upload speed, and connect your computer to your modem directly via an Ethernet cable if possible.
  - **An adequate voice** - speak clearly and know your material — so you sound confident.
- **Run a Test Webinar** - do at least one run-through several days before the live event to make sure that everyone knows what they're doing, and that all your gear is functioning correctly.
- Don't forget to hit record! - You can always send the recording to people who can't make the event live.
- **Track** the webinar results. Below are presented some metrics that the tracking could include:
  - How many people registered?
  - What were the top sources of registrations?
  - How many people actually attended?
  - How much time did they spend watching the webinar?

## 5.4. Face to Face Workshops

Apart from the online activities the participants in the training will participate in classroom activities (workshops) which will be organized in the beginning of and after the training end (kick-off and closure workshops) as well as after the end of each training module (module related workshops).

The workshops will be organized in all partner organisations from Kazakhstan by the local piloting teams (LPT). In the LPT will be involved technical experts as well as subject domain experts who to facilitate the training providing consultations, and support regarding subject domain and technical issues. The workshops will be on national language.

The workshops should be documented according the template provided in Annex 3 of this document.

### 5.4.1. Kick-off Workshop

During the *Kick-off Workshop*, the local piloting teams will introduce the local group of learners with:

- the KUTEL course – the structure of the course, the syllabus, timeframe, evaluation system, and etc.
- the KUTEL platform – how to access the course, how to navigate the course content, how to communicate with the other participants in the training using the integrated services, how to check their progress and achieved results.
- Every trainee receives from LPT his/her KUTEL course enrolment data (username and password) necessary to access the KUTEL e-course.
- Every trainee accesses the platform and enter the course.

### 5.4.2. Workshops related to the course modules

Each module will contain 2 hours of F2F workshop for reflection of the content, group discussion, practical team-based activities and provision of feedback regarding the training module. When planning these F2F sessions, partners should develop 2-hours plans to be delivered as practical and interactive workshops with KUTEL trainees.

During these workshops the LPT members will:

- present to the local group of trainees an overview of the training during the concrete module with analytics and summarization of the progress and achieved results;
- initiate discussion related to the reflection questions provided by the course content authors where the learners to share their opinions, experience, and ideas related to the topics of concern. The conducting of this highly interactive activity will contribute

to the contextualization of the lessons learned taking into consideration the local dimensions and specifics at the macro and micro level.

- Initiate feedback discussion so the learners to be able to share information about the difficulties during the training (if any) and to receive instant help and support from the other participants.
- Collect feedback from the trainees regarding the training module.

#### *5.4.3. Closure Workshop*

During the *Closure Workshop*, the local piloting teams will present to the local group of learners:

- Overview of the training and results achieved at local level.
- Collecting feedback regarding the trainees' satisfaction via e-questionnaire.
- Collecting data necessary for the development of Certificates of Completion.

For more information, please see Annex 3 of the document.

## 6. KUTEL Course Development Timeline – Next Steps

To progress the work of KUTEK Curriculum Development, BFU would like to propose the following timetable for completing the development curriculum content and resources:

Proposed Deadline	Activity
<b>27 September 2019</b>	Distribution of the tasks related to the development of the course topics according the approved structure:
<b>28 Sep -10 Nov 2019</b>	Each partner search and/or create raw media elements and information objects related to the concrete topics and using them develop the topics' related Lecture Notes, Slides, 2 multiple choice questions, and 2 reflection questions related to each of their topics according the templates provided in Annex 2 of the Dev. 2.1.
<b>28 Sep -10 Nov 2019</b>	P2 (BFU) is responsible to develop the demo design of the VLE intended for the e-learning contents delivery and to register the team members in the e-course prototype.
<b>11-30 Nov 2019</b>	Internal revision, improvements and approval: The developed Lecture Notes, Slides, multiple choice questions, and reflection questions are revised internally by the IDGs' leaders and by the members of the KUTEL QA team. If necessary, the authors improve the developed LOs. All developed objects should be uploaded in the collaborative working space of the project.
<b>11-30 Nov 2019</b>	The developed VLE demo also is internally tested by the IDGs' leaders and by the members of the KUTEL QA team. The VLE will be improved in line with the suggestions received.
<b>1-30 Dec 2019</b>	Partners develop Storyboard objects on the base of the approved Lecture Notes and provide them to the IDG leaders for revision.  Leaders of IDGs provide uniform descriptions of the modules following the provided template and guidelines (Annex 3, section "Template and Guidelines for Module Description").
<b>1 – 31 Jan 2020</b>	IDGs' leaders revise the Storyboards and after approval publish them into the collaborative space of the project.

<b>1 – 31 Jan 2020</b>	KZ partners translate the approved Lecture notes and Storyboards in national language
<b>3 - 28 Feb 2020</b>	P2 (BFU) is responsible to integrate all approved LOs as well as the translated Lecture Notes and Storyboards into the e-course published on the e-platform and also to develop: <ul style="list-style-type: none"> <li>- Question bank and Quizzes on the base of the provided test questions</li> <li>- Reflection (related to each of the modules) on the base of the provided reflection questions related to the course's modules</li> </ul>
<b>March 2020</b>	Training of the technical staff how to use Adobe Presenter
<b>April 2020</b>	Partners develop topics' related Multimedia Lessons on the base of the already approved Slides and Storyboards using the Adobe Presenter authoring software.
<b>May 2020</b>	Internal revision, improvements and approval: The developed Lecture Notes, Slides, multiple choice questions, and reflection questions are revised internally by the IDGs' leaders and by the members of the KUTEL QA team. If necessary, the authors improve the developed LOs.
<b>May-June 2020</b>	P2 (BFU) is responsible to extended the courseware with the integration into its structure the developed Multimedia Lessons.
<b>June 2020</b>	Partners inspect the integrated quizzes and assignments for correctness, compliance, and technical quality.
<b>July 2020</b>	All finalized LOs and descriptions are integrated into the course.  All Kazakh Universities finalize the establishment of the KUTEL Labs
<b>August 2020</b>	All partners internally check the developed courseware.  KUTEL Training curriculum should be finalized – P2 (BFU)  KUTEL Training Curriculum revision, improvement approval by all partners.  Consolidation of the International and Local Piloting Teams
<b>Mid-September 2020</b>	Selection of the trainees (at local level);  Selection of the KUTEL course trainees according the approved criteria where:



	<ul style="list-style-type: none"> <li>• <i>each Kazakh University (P5,6,7,8,9,13,14) should form a group of 15 trainees (managers, lecturers, technical experts, and administration);</i></li> <li>• <i>each non-University organization from Kazakhstan (P10, P11) should form a group of 10 trainees (managers, and experts responsible for QA and evaluation)</i></li> </ul> <p>Collecting data for registering the trainees from LPGs into the KUTEL VLE – <i>name (with Latin characters), surname (with Latin characters), and <u>correct</u> e-mail address;</i></p> <p>Provision the collected trainees’ data to P2 for registering.</p> <p>Internal check of the KUTEL Labs regarding readiness for the training to be started.</p> <p>F2F training of the tutors involved in the local piloting team (LPT)</p>
<b>End of September 2020</b>	Collecting data about trainees’ expectation from the training
<b>Beginning of October 2020</b>	Start of the KUTEL training
<b>Mid-January 2021</b>	End of the training

## 7. ANNEX 1 – QA criteria

### 7.1. QA criteria for Learning Objects Development

This section presents some important QA criteria regarding the development and approval of Learning Objects (LOs) which will be used for designing the KUTEL e-course.

There are considered three main types of LOs as follows:

- Lecture Notes – textual documents presenting the given topic from the course in-depth and providing different hypothesis, opinions theories and etc. as well as list of additional readings and resources. These LOs will be in the form of .pdf files which could be downloaded and used in off-line modality by the trainees;
- Standard PPT presentations – Slides Objects – which accompanied the Lecture Notes Object. The presentations will be in the form of .pdf files which could be downloaded and used in off-line modality by the trainees;
- Multimedia Lessons – Interactive objects consisting PPT accompanied with synchronized audio explanations. These objects will be delivered via VLE without the possibility for download.

### *7.1.1. Quality criteria regarding the Lecture Notes*

The lecture notes represent in depth studies to better detail one of the contents dealt with during the audio lesson or to provide students with a different perspective of the contents already explained.

A specific template is provided (Lecture\_notes\_template.doc), the Lecture Note should:

- be composed of about 15-20 pages and structured in chapters and paragraphs preceded by a coversheet, a table of contents and an introduction. It must be written using the specific form provided
- be written using the font, the color and the size of the template
- contain all information indicated for the cover page (e.g. title of module, title of lesson, name of the author etc.)
- respect intellectual property rights (sources are cited according the template citing format specified) as well as all pictures used should be created by the author or used according the reuse licenses' rules (in other cases the proper citing of the sources should be provided)
- be the equipped with .png, .jpg, .gif pictures for best quality
- include caption for pictures and diagrams
- easily understandable (revision of text made by a mother tongue is strongly recommended)

Each title of the chapter must be preceded by the number of the chapter (e.g. 1 Title) and each title of the paragraph must be preceded by the number of the paragraph (e.g. 1.1 Sub-Title).

The lecture note should also include footnotes which are used to give credit to sources of any material borrowed, summarized or paraphrased. They are intended to refer readers to the exact pages of the works listed in the Bibliography section.

The lecture note must close with a Bibliography (References) and links providing the references concerning books or articles used to draw up the text. It can present recommended books and links for further and in-depth studies. A specific format must be followed to insert the bibliographical references (please check the lecture notes format).

In order to ensure the respect of the criteria defined in the guidelines, the teachers should complete the following check grid which guides them to self-evaluate some features and format of the lecture notes.

<b>The lecture note consists of about 15-20 pages</b>	<input type="checkbox"/>
<b>The text has been written using “Calibri” font and respecting the size indicated in the template</b>	<input type="checkbox"/>
<b>The cover page includes the name of the course, the name and number of the module, the name and number of the lesson and the name of the teacher</b>	<input type="checkbox"/>
<b>The Table of contents is included and the number of pages of each chapter is correct</b>	<input type="checkbox"/>
<b>The title of each chapter is anticipated by the number of the chapter</b>	<input type="checkbox"/>
<b>The title of each paragraph is anticipated by the number of the paragraph</b>	<input type="checkbox"/>
<b>Each picture includes a caption to explain it</b>	<input type="checkbox"/>
<b>A chapter about conclusions has been included in the lecture note</b>	<input type="checkbox"/>
<b>References have been included in the lecture note and follow the specific format indicated in the template</b>	<input type="checkbox"/>

### 7.1.2. Quality criteria regarding the PPTs (Slides Objects)

The slides realized by the didactic experts for their Slides Objects will be converted into *.pdf*. Slides are printable documents allowing the users to take note while listening to the explanation. Thanks to the slides the user will write didactic expert's comments or memo and reminders. They will be useful to brush up the lesson in off-line modality.

<b>The Slides Object consists of 15/20 slides</b>	<input type="checkbox"/>
<b>The content is written using the slide background of the official template</b>	<input type="checkbox"/>
<b>All the slides have been written using font, size and colors indicated in the template</b>	<input type="checkbox"/>
<b>The first slide includes all information according to the template</b>	<input type="checkbox"/>
<b>A slide introducing the themes to be explained in the PPT is included (Overview)</b>	<input type="checkbox"/>
<b>One or more slides presenting some conclusions have been included in the PPT</b>	<input type="checkbox"/>
<b>The name of the expert(author) and organization are viewable and correct on the 1<sup>st</sup> slide of the PPT</b>	<input type="checkbox"/>
<b>The title of the lesson is viewable and correct in the PPT</b>	<input type="checkbox"/>
<b>The text is well balanced and readable</b>	<input type="checkbox"/>
<b>The citing's (if any) are presented in the end of PPT and are correct and according the adopted format</b>	<input type="checkbox"/>
<b>The usage of pictures/ diagrams and other illustrative objects is in line with the rules for respecting the intellectual property rights</b>	<input type="checkbox"/>

### 7.1.3. Quality criteria regarding the Multimedia Lesson

Once the slides are ready, the expert will proceed in setting his/her Multimedia Lesson by using Adobe Presenter capabilities, specifically:

- the title of the lesson should be evident on the top-right of the screen and it should correspond to the syllabus;
- the name of the author should be put on the top-right without any titles (such as Prof., Ing., etc.);
- the picture of the author should be inserted on the top-right side of the screen;
- a short biography should be prepared with titles, present occupation and degree achieved. It should be no more than 400 characters (spaces included);
- each item in the Overview should correspond to the title of each theme.

In order to ensure the respect of the criteria defined in the guidelines, the expert should complete the following check grid which guides them to self-evaluate some features and format of the multimedia lesson.

<b>The Multimedia Lesson consists of 15/20 slides</b>	<input type="checkbox"/>
<b>The content is written using the slide background of the official template</b>	<input type="checkbox"/>
<b>All the slides have been written using font, size and colors indicated in the template</b>	<input type="checkbox"/>
<b>The first slide includes all information according to the template</b>	<input type="checkbox"/>
<b>A slide introducing the themes to be explained in the Multimedia Lesson is included (Overview)</b>	<input type="checkbox"/>
<b>One or more slides presenting some conclusions have been included in the Multimedia Lesson</b>	<input type="checkbox"/>
<b>The picture of the teacher is viewable in the Multimedia Lesson interface (top-right side). Recommended weight for the picture: max 600 Kb</b>	<input type="checkbox"/>
<b>The name of the teacher is viewable and correct in all the slides of the Multimedia Lesson (top-right side)</b>	<input type="checkbox"/>
<b>The title of the lesson is viewable and correct in the Multimedia Lesson interface (top-right side)</b>	<input type="checkbox"/>
<b>The hypertextual index (right side of the Multimedia Lesson interface) includes the title of each slide - theme (and not the simple indication of the slide number)</b>	<input type="checkbox"/>
<b>Each topic includes an audio lesson of about 30/35 minutes</b>	<input type="checkbox"/>
<b>The speech is easily understandable (recording made by a mother tongue is strongly recommended, little noise or distortion, the speaker should speak slow and clearly)</b>	<input type="checkbox"/>

## 8. ANNEX 2 - Criteria for selection of participants

This section presents some important criteria for selection of participants in the all activities and stages of the WP2 Development of the KUTEL Project.

The sets of criteria are specified on the base of the activities and quantitative indicators documented in the project proposal.

According the proposal the fulfillment of the activities, planned in the framework of WP2, is assigned to two main working teams (task forces) where the members of the project team to be involved taking into consideration their domains and professional expertise: Development Team (DT) and Piloting Team (PT).

Apart form that the experimentation (piloting) stage of the project will be conducted with close involvement of the target groups' representatives from Kazakhstan in the role of learners (trainees) in the KUTEL QA Training – Piloting Group of Learners (PGL).

Based on the profile of the participating Kazakhstan organizations involved in KUTEL, learners can be divided into two main categories as follows:

- Trainees from non-University Kazakhstan organizations (MES of RK and IAAR) - experts in QA of Education - 10 participants per each organization,
- Trainees from Kazakhstan Universities involved - management body representatives, TEL experienced lecturers, and representatives of the technical departments engaged with the development, support and maintenance of the University e-infrastructure – a total 15 participants from each Kazakh University.

The next sections of this document provide lists of criteria (common and specific) for selection of participants to be involved in DT, PT and PGL in order the successful fulfilment of the project tasks to be assured at the quality expected.

### *8.1.1. Common criteria for selecting participants*

Criterion set in line with the rules of the Programme:

- The participants in the activities are on a main contract in the respective organization.

Criterion related to the official language of the Project specified in the proposal:

The official language of the project as well as the language in which the training will be delivered to PGL is English. This impose a requirement the participants involved to have English proficiency at least B1.

- English proficiency – at the very minimum B1

In case of necessity the support (translation from and in English) to be assured by the corresponding partner organization.

All participants involved in the project should cover the criteria described in this section.



### 8.1.2. Criteria for selecting participants in DT

Members of the development team will be responsible for the development and internal testing of the KUTEL virtual learning environment and learning content (developed in form of learning objects following broadly adopted e-learning standards and formats).

For the selection of members are set specific criteria (left column) and points (described in the right column) relevant to these criteria.

The DT members will be selected on the basis of their total number of points where the minimum number of points per including in DT is specified under the table.

<b>Expertise in the corresponding TEL domain – Lecturer/PhD /Assoc. Prof. /Prof.</b>	<b>5/10/15/20</b>
<b>English proficiency B1 /B2 /C1 /C2</b>	<b>5/10/15/20</b>
<b>Expertise in e-content development (depending of the work experience and provided proofs/certificates/ awards/ and etc.)</b>	<b>10/15</b>
<b>Expertise in VLE development (depending of the work experience and provided proofs/certificates/ awards/ and etc.)</b>	<b>10/ 15</b>
<b>The applicant is a head of the team in his/her organization (multiplier effect)</b>	<b>5</b>

Minimum points: 45 points

### 8.1.3. Criteria for selecting participants in PT

Members of the piloting team will be responsible to support the piloting process locally. They should provide technical and methodological support of the local PGL and also will be responsible to facilitate and support the process of collecting data and elaboration of results – summarization, statistics, and all other information and communications required by the KUTEL WP Leaders and by the Coordinator.

For the selection of members are set specific criteria (left column) and points (described in the right column) relevant to these criteria.

The PT members will be selected on the basis of their total number of points where the minimum number of points per including in PT is specified under the table.

<b>Expertise in the corresponding QA of TEL domain – Lecturer/PhD /Assoc. Prof. /Prof.</b>	<b>5/10/15/20</b>
<b>English proficiency B1 /B2 /C1 /C2</b>	<b>5/10/15/20</b>
<b>Expertise in e-content usage and/or development (depending of the work experience and provided proofs/certificates/ awards/ and etc.)</b>	<b>5/10/15</b>
<b>Expertise in VLE usage and/or development (depending of the work experience and provided proofs/certificates/ awards/ and etc.)</b>	<b>5/10/15</b>
<b>The applicant is a head of the team in his/her organization (multiplier effect)</b>	<b>5</b>

Minimum number of points: 45points (60%)

#### 8.1.4. Criteria for selecting participants in PGL

The participants involved in the PGL are representatives of the main target groups of the project. Depending of the profiles of the Kazakhstan organizations there are two categories of learners considered to take part in the KUTEL piloting:

- Trainees from non-University Kazakhstan organizations (MES of RK and IAAR) - experts in QA of Education - 10 participants per each organization,
- Trainees from Kazakhstan Universities involved - management body representatives, TEL experienced lecturers, and representatives of the technical departments engaged with the development, support and maintenance of the University e-infrastructure – a total 15 participants from each Kazakh University.

Below in 2 separate tables are specified criteria for selecting the participants from these 2 categories.

Experts in QA of Education from non-University organisations

<b>Expertise in QA of Education - TEL domain</b>	<b>10</b>
<b>English proficiency B1 /B2 /C1 /C2</b>	<b>5/10/15/20</b>
<b>Digital competences – beginner-/advanced/expert</b>	<b>10/15/20</b>
<b>The applicant is a head of the team in his/her organization (multiplier effect)</b>	<b>10</b>

Minimum number of points: 35points

PGL participants from KZ Universities

<b>Expertise in QA of Education (TEL domain) – management level/lecturing/technical</b>	<b>10 per each</b>
<b>English proficiency B1 /B2 /C1 /C2</b>	<b>5/10/15/20</b>
<b>Digital competences – beginner-advanced-expert</b>	<b>10/15/20</b>
<b>The applicant is a head of the team in his/her organization (multiplier effect)</b>	<b>10</b>

Minimum number of points: 45points

## 9. ANNEX 3 –Templates and Guidelines to Develop Learning Objects

All the templates and guidelines are structured in so called Development Kit (DK). The DK is published in the consortium collaboration area in a special folder and could be downloaded from there.

The following parts of this section provide direct links to the developed specific templates related to different classes of learning objects in order to maximize the ease of developers in their work, while ensuring uniformity of processes as well as homogeneity and quality of products developed.

### 9.1. Template and Guidelines for LECTURE NOTES development

The template for the development of the Lecture Notes could be downloaded from:

[https://drive.google.com/file/d/1zVXCpcY\\_QT39bBjP2-Cj7RINQd7666LN/view?usp=sharing](https://drive.google.com/file/d/1zVXCpcY_QT39bBjP2-Cj7RINQd7666LN/view?usp=sharing)

### 9.2. Template and Guidelines for SLIDES development

The template for the development of the Slides could be downloaded from:

<https://drive.google.com/file/d/1kM05cPLqmgNpi6kCcyQ5XeuHdPPGEOOt/view?usp=sharing>

### 9.3. Template and Guidelines for STORYBOARDS development

The template for the development of the Storyboard could be downloaded from:

<https://drive.google.com/file/d/1PrKkfWhg18HXq9NBMy1rYhBa-UWjqC8d/view?usp=sharing>

*Note: The test questions should be formulated only after the approval of the already developed learning objects with low level of complexity: Lecture Notes and Slides. The approval should be received after detailed review by the members of the KUTEL team responsible for the quality assurance of the project.*

### 9.4. Template and Guidelines for Syllabus development

The template for the development of the Syllabus could be downloaded from:

[https://drive.google.com/file/d/1XZA-yJ\\_odrGBEkOaZQaXcbFRk6a\\_-Ye7/view?usp=sharing](https://drive.google.com/file/d/1XZA-yJ_odrGBEkOaZQaXcbFRk6a_-Ye7/view?usp=sharing)

### 9.5. Template and Guidelines for Test Question development

The Subject Domain Experts (SDE) involved in the development of a given course's unit are obliged to provide also **two multiple choice questions** related to the unit topic. The questions should have **only one correct answer** and **4 answer options a total**.

These questions will be stored in the course Question Bank and will be used for the development of electronic quizzes related to the course's modules. Quizzes are used to evaluate student understanding of the material covered by the corresponding module of the course.

The developed quizzes are comprised of a Quiz activity that contains one or more questions from the course's Question bank.

Question	Please describe the question here	Correct answer (please mark with YES)
Answer option 1		
Answer option 2		
Answer option 3		
Answer option 4		

*Note: The test questions should be formulated on the base of the Lecture Notes.*

### 9.6. Guidelines for the Reflection questions provision

The Subject Domain Experts (SDE) involved in the development of a given course's unit are obliged to provide also **one or two reflection questions** related to the topic covered by this unit.

A reflection question makes a student look back over what or how they have learned. Reflection questions often assess metacognitive skills, otherwise known as thinking about how we think and learn.

### 9.7. Template and Guidelines for Module Description

The modules included in the KUTEL course will be developed by the international development groups' (IDG) leaders.

The leader of the IDG is responsible to collect all required LOs necessary for the producing of the courseware. After receiving the LOs have to be inspected in line with the QA criteria (Please see the Annex 1, part "QA criteria for Learning Objects").

The process related to the development of a prototype of the training modules has the following phases:

- Development of prototype where are integrated LOs with low complexity – Lecture Notes and Slides.
- After successful internal testing of the developed LOs the IDGs develop the following LOs: a) test questions, b) reflection questions, and c) Storyboards. P2 (BFU) develop VLE and the courseware integrating all provided Lecture Notes and Slides into the KUTEL e-course structure.
- After successful testing of these components (VLE structure and functionality, and published LOs) IDGs develop Multimedia lessons on the base of the already approved Slides and Storyboards through usage of the Adobe Presenter. P2 (BFU) develop: a) Question bank and Quizzes on the base of the provided test questions and b) assignments (related to each of the modules) on the base of the provided reflection questions related to the course’s modules. The developed quizzes and assignment are published into the already developed modules of the e-learning course.
- Partners inspect the integrated quizzes and assignments for correctness, compliance, and technical quality.
- The courseware is extended with the integration into its structure the developed Multimedia Lessons.
- After the internal testing and approval of the prototype the leaders of IDG have to provide brief and uniform Modules’ description following the structure provided below:

<i>Module Description</i>
<p><b>Abstract:</b> Brief description of the module’s focus.</p> <p><b>Goal of this module is to enable participants to:</b></p> <ul style="list-style-type: none"> <li>– Goal1</li> <li>– Goal2</li> <li>– Goal3...</li> </ul> <p><b>To achieve these goals participants will learn ....</b></p> <p>Overview of content in detail:</p> <ul style="list-style-type: none"> <li>– Lesson 1</li> <li>– Lesson 2</li> <li>– ...</li> <li>– <b>Lesson 5</b></li> </ul> <p>Expected learning outcomes:</p> <ul style="list-style-type: none"> <li>– Outcome 1</li> <li>– Outcome 2</li> </ul>

- Outcome 3
- ...



## 10.ANEX 3 Workshop Template

The template for the development of the Workshop Outcomes Report could be downloaded from:

[https://drive.google.com/file/d/1Wkx0eAufVL3xcgAbXjESYPzgNAk\\_cbbt/view?usp=sharing](https://drive.google.com/file/d/1Wkx0eAufVL3xcgAbXjESYPzgNAk_cbbt/view?usp=sharing)

*Note: On the basis of this template, every Kazakh partner should prepare a report about conducted on local (institutional) level face-to-face workshops which are a very important part of the KUTEL training. All the trainees participated in a given workshop will receive their grades for this activity after the receiving of the Workshop Outcomes Report received by the members of the local experimentation team of the project.*



## References

- 5 *Advantages of Face-to-Face Training*. (2015). Retrieved from Your Training Edge:  
<https://www.yourtrainingedge.com/5-advantages-of-face-to-face-training/>
- ADDIE. (n.d.). *ADDIE Model*. Retrieved from  
<http://www.instructionaldesign.org/models/addie/>
- Duval, E., & Hodgins, W. (2003). *A LOM Research Agenda*. Retrieved from  
<http://www2003.org/cdrom/papers/alternate/P659/p659-duval-html.html>
- Horn, R. E. (1998). *Structured writing as a paradigm*. Retrieved from Instructional Development: State of the Art.:  
<http://www.stanford.edu/~rhorn/HornStWrAsParadigm.html>
- Introducing Participatory Approaches, Methods and Tools*. (n.d.). Retrieved from  
<http://www.fao.org/3/ad424e/ad424e03.htm>
- Knowles, M. (1984). *Andragogy in Action*. San Francisco: Jossey-Bass; ISBN-13: 978-0875896212.
- Loveless, B. (2019). *Holistic Education: A Comprehensive Guide*. Retrieved from Education corner: <https://www.educationcorner.com/holistic-education.html>
- Monova-Zheleva, M. (2005). Adaptive Learning in Web-based Educational Environments. *Journal Cybernetics and Information Technologies, Vol. 5 (1), ISSN 1311-9702*, pp. 44-55.
- Ossiannilsson E., W. K. (2015). *Quality models in online and open education around the globe. State of the art*. Retrieved from Oslo : International Council for Open and Distance Education 2015, 52 S.:  
[https://www.pedocs.de/volltexte/2015/10879/pdf/Ossiannilsson\\_et\\_al\\_2015\\_Qualitymodels.pdf](https://www.pedocs.de/volltexte/2015/10879/pdf/Ossiannilsson_et_al_2015_Qualitymodels.pdf)
- Stearns, C. (2018). *Reflection Questions: Definition and Examples*. Retrieved from <https://study.com/academy/lesson/reflection-questions-definition-and-examples.html>
- Yassin, N. (2005). *Learning Object Content Models: A Comparative Analysis*. Retrieved from Postgraduate Annual Research - Malaysia:  
<https://pdfs.semanticscholar.org/0424/82477e577a6bbadc1471a70a238fba300226.pdf>

