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Objectively verifiable indicators and means of verification for all project work packages and their deliverables

Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
Project Overall		• Quality of project results • Satisfaction of labour market needs • Feedback from end-users • International cooperation among EU and PC HEIs in education and research • Knowledge assessment, employability of graduates • Implementation of energy efficiency and climate change mitigation measures	• Partnership agreements • Number of members involved in consortium • Number of upgraded study programmes in PC universities	• Work package progress reports • Annual self-evaluation reports • Independent evaluation reports • Project (interim and closure) reports
WP1	**Preparation for project activities**			
WP1 Overall		•	•	• Report on common capacity building methodology • University registers • Accreditation reports • Needs analysis reports • Project website • Meeting minutes • Work package progress reports
1.1	Workshop and focus groups to analyse needs, gaps and possibilities for common curricula development	• Feedback from participants at workshop and focus group events	• Number of workshop and focus group events • Number of participants at events • Time taken to finish the curricula development	
1.2	Reports and BECK capacity building framework	• Feedback from MQCC • Presentation on the appropriate meeting,	• Number of reports on needs analysis • Number of reports submitted on time	

Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	**Quantitative Indicators**	
		participants' feedback(opinion)	• Number of comments • Common BECK capacity building framework	• Annual self-evaluation reports • Independent evaluation reports • Project (interim and closure) reports
1.3	Guidelines and accreditation rules for the quality assurance of MOOCs	• Participants' (feedback) opinions • Acceptance of the guidelines	• Number of guidelines and rules developed for the quality assurance of MOOCs	
WP2	**Development of New Adaptive MOOC Modules on Consumer's Behaviour Related to Energy Efficiency and Climate Change**			
WP2 Overall		•	•	• Report for the common BECK curriculum • Framework report for the common curricular • Report on common grounds for teaching and learning • Registers of PC universities • Partners' websites • Meeting minutes • Work package progress reports • Annual self-evaluation reports • Independent evaluation
2.1	The framework report for the common curricular	•	• The framework report for the common BECK curriculum produced	
2.2	The report on common grounds for teaching and learning	•	• The report on common grounds for teaching and learning produced	
2.3	Training of teaching staff	• Participant feedback • Diversity of participants	• Number of teachers trained	
2.4	Adaptive MOOCs specifications and teaching (learning) materials	•	• Number of MOOCs developed	
2.5	Assessed, recognised and certificated adaptive MOOCs	• Official recognition of new adaptive MOOC modules and integration	• Number of upgraded study programmes in PC universities	

Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
	integrated to corresponding studies by universities in Russia, Bangladesh and Sri Lanka	into existing BSc/specialists, MSc, PhD study programmes	• Number of recognised and certificated MOOC modules available	reports • Project (interim and closure) reports
WP3	**Development and Exploitation of the Simulated Big Data Interuniversity Networked Affective Educational Centre**			
WP3 Overall		•	•	• Attendance lists of training courses • Training certificates • Survey of students and teachers - report • University registers • BECK Centre functionalty testing results • Registered users of the Centre • University registers, MOOCs available online, reports • Meeting minutes • Work package progress reports • Annual self-evaluation reports • Independent evaluation
3.1	Simulated Big Data Interuniversity Networked Affective Educational Centre (BECK Centre)	• User friendly BECK centre • Level of personalization • Level of interest and happiness of users • Feedback on using methodology and interface • Conformance of BECK centre to labour market needs	• BECK centre created • Number of participating universities / organisations • Number of Centre users	
3.2	Training and lecturing	• Results of evaluations by stakeholders and local experts • EU quality standards achieved • Feedback of stakeholders	• Number of courses • Number of retrained teachers in PC universities • Training certificates issued	
3.3	Education of students	• Student feedback • Student satisfaction	• Number of students • Types of students	

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Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
			• % of students completing courses • Number of trained executives working in built-environment organizations • Number of trained administrators/specialists working in construction and environment ministries	reports • Project (interim and closure) reports
3.4	Feedback and quality improvement of MOOCs	• Feedback of stakeholders • Benchmarking on improved MOOCs • Internal and external evaluations	• Number of improved MOOCs	
WP4	**Quality assurance**			
WP4 Overall		• Quality assurance requirements do not impose unreasonable administrative burden on partners • Project performance improves as a result of quality assurance activities • Achievement of quality objectives	• Monitoring and Quality Control Committee established	• Meeting minutes • Quality plan • Annual self-evaluation reports • Work package progress reports • Annual self-evaluation reports • Independent evaluation reports

Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
		• Project compliance with quality assurance best practice		
4.1	Development of quality plan	• All partners participate in the formulation of suitable indicators • Quality plan agreed by all partners • Quality plan approved by the steering committee • Feedback from the independent evaluator • Performance indicators developed and agreed by all partners • Work package progress reporting template developed	• Quality plan produced	
4.2	Internal monitoring of BECK results	• Self-evaluation exercise takes place at scheduled time • Self-evaluation results are used to improve project delivery	• Number of participants represented in the self-evaluation exercise • Number of partner organisations represented in the self-evaluation exercise	
4.3	External monitoring of BECK results	• Independent evaluators are appropriately qualified	• Independent evaluator selected • Independent evaluation takes place at scheduled time	

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Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	**Quantitative Indicators**	
			• Independent evaluation reports produced on time	
WP5	**Dissemination and exploitation**			
WP5 Overall		•	• Number of peer reviewed conference articles • Number of international peer reviewed journal articles • Number of joint conference and journal articles	• Dissemination and exploitation plan • Work package progress reports • Event participation registers • Participant evaluations of events • Dissemination activities report • Publications in scientific journals and proceedings • Summary books • Project website • Partners' websites • Media reports • Multilingual e-newsletters • Project brochure • Summary books • Sustainability plan
5.1	Dissemination and exploitation plan	• Consensus in dissemination and exploitation planning • Diversity of activities • Adequacy of schedule • Geographical scope	• Dissemination and exploitation plan • Number of activities • Number of stakeholders involved	
5.2	Dissemination through branch organizations	• Verification from organisations	• Number of events • Number of participants • Number of organisations • Local/national radio/TV programs with information on project results	
5.3	Dissemination through websites	• Usability • Visibility	• Project website	

Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
		• Content quality	• Links from partners' websites • Number of visits to website • Number of multilingual e-newsletters • Project informative brochure available (online)	
5.4	Printed dissemination material	• National and local language content • Content quality • Compliance with rules	• Number of types of materials • Number of copies distributed • Number of project informative brochures (printed) • Number of summary books produced	
	Scientific publications	• number of publications in scientific journals and proceedings	• level of publications / journals (for examle index in Scopus etc...)	
5.5	Conduction of dissemination events	• Participants' diversity: geographical, cultural, educational, disciplinary • Media involvement • Public participation	• Number of international events that are (co)organised by partners • Number of participants • Number of events	
5.6	Sustainability plan	•	• Sustainability plan developed	
WP6	Management			

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Work Package / Deliverable Ref	Description	Verifiable quality indicators		Means of Verification
		Qualitative Indicators	Quantitative Indicators	
WP6 Overall		• Achievement of planned (qualitative) outputs • Activity progress (qualitative assessment) • Financial management meets European Commission requirements	• Achievement of planned (quantitative) outputs • Activity progress (physical progress)	• Project (interim and closure) reports • Annual self-evaluation reports • Independent evaluation reports • Work Package progress reports
6.1	A kick-off and coordination meetings	• Feedback from participants • Actions arising from previous meeting minutes fulfilled	• Number of steering committee meetings held • Number of meeting attendees	• Meeting agendas • Meeting minutes • Participant registers • Participant evaluations of meetings
6.2	Official and internal reports on project progress	• Feedback from Commission on interim report	• Number of official and internal project progress reports • Reports produced on time	