



BECK

INTEGRATING EDUCATION WITH CONSUMER BEHAVIOUR RELEVANT TO ENERGY EFFICIENCY AND CLIMATE CHANGE AT THE UNIVERSITIES OF RUSSIA, SRI LANKA AND BANGLADESH



QUALITY EVALUATION OF ADAPTIVE MOOC MODULES

TalTech, SPbPU, UOM

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BECK MOOCs Evaluation

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Introduction

The stated objectives of the BECK project include upgrading curricula of BSc/specialists, MSc and PhD programmes in Russian, Sri Lanka and Bangladesh universities by adding 16 new multidisciplinary adaptive, recognised and certificated (Mass Open Online Course) MOOC modules on consumer behavior related to energy efficiency and climate change, to enhance the quality and relevance of education in PC and EU universities to global issues. The BECK project has exceeded expectations by adding 24 new MOOC modules. This report presents the methodology, findings and conclusions regarding the quality evaluation of these MOOC modules.

Methodology and Sampling

The MOOC quality evaluation exercise was carried out during the period March-June 2023 and comprised two complementary, online questionnaires - one questionnaire for students of all the MOOCs to complete and a second questionnaire for Teachers to complete. The questionnaires were collectively designed by the project team to ensure their relevance to all of the MOOC modules as well as to the project BECK objectives.

Copies of both quality evaluation questionnaires (for students and for teachers) are attached as Appendix 1 and Appendix 2 respectively.

Summary of Responses Received

Evaluation Questionnaire for Students

The online students' evaluation questionnaire received responses from 352 students. The distribution of student responses between modules varied widely as must be expected given that student audience sizes were different and modules were of different maturities at the time of the survey. However, all modules offered in partner institutions received at least 1 response and no specific module represented more than 23% (i.e. 80 responses) of the total number of responses. It is therefore considered that, while this sample must be accepted as skewed, it is still adequate to provide a reasonable indication of how students evaluated the quality of the MOOCs in general.

The responses received are summarised in Table 1 below.





Table 1 – Students Evaluation questionnaire - Summary of Responses

Criterion	Evaluation			
	(Res	ponses	per cate	gory)
	Ŋ	More No than Yes	More Yes than No	Yes
Was the overall organization of the Module (scheduling, calendar, agenda, etc.) acceptable to you?	3	12	54	283
Did the Module start at the scheduled time?	2	17	44	288
Was the online based study easy to access and user-friendly?	8	20	59	264
Were the teaching staff effectively contactable by email?	2	22	47	281
Were the administrative staff effectively contactable by email?	2	17	52	280
Did you find the services offered to participants by the University responsible for the Module (materials distribution, technical assistance, information about the Module, staff availability) to be adequate?	2	16	66	266
Was the amount of time dedicated to the Module sufficient?	4	18	67	263
Were the Module materials relevant to the module subject?	1	13	56	279
Were the materials clear?	6	19	54	272
Were the subjects covered in a comprehensive way?	1	19	64	266
Was the Module subject difficult?	110	76	58	104
Was the language used (English) during the Module of an acceptable standard?	16	33	56	243
Did the Module increase your previous knowledge?	1	14	57	276
Did the Module increase your level of interest in the subject?	1	27	63	257
Were you generally satisfied by the Module?	1	12	63	272
Further Comments (on next page)				



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Very good course. This is one of the most valuable, well organized and useful online research course, I have ever done and I thank to all of lectures and coordinating committee to organize like this course for us. Satisfied with all sessions. This module given us to very extensive knowledge and also it will be help to increase our knowledge. Thank you so much for giving this valuable opportunity for us. I think this course is very useful for my knowledge. This course is clearly understand and I satisfied about it. This is a valuble opportunity. We wish if we can have some physical classes or guest lectures in future even though the course is over. The course was well structured but also thinking of having some physical classes and filed trips to get an broad idea through the course. And also hoping to have a certificate ceremony too. Thank you. It is very easy to understand because of videos. Adding video of the steps is very usefull to follow. This is very useful path. Thank you for all who helped to success our course. Let's make it every year and increase subjects. Thank you for the course. Hope that it will be available to the students next year. Adding videos were very useful to follow the yoga poses. Assessment were conduct in very interesting way. I like if the course continue with another level since it is very useful and interesting. Waiting for the next programme of the project. Adding videos is very useful to understand. Really interested and appreciate the great effort. Thank you indeed. Highly recommended. I highly recommend this course for others also, not only for student, even any people can go through this course and clearly understand, this will really much more better for our day today life. We can apply this principle in our daily habitually. Thank you BECK project team. I am so satisfied with this modules. Because i like sustainable and sustainable related subjects . Thank you BECK project so giving us such a kind of opportunities . I most appreciate about the new modules. Please lend me the information about all new courses throug the BECK project. Thank you again for all these opportunities. Thank you for beck team. Please give proper certificate with high quality and verification. Includes with practical video. Some test questions contain either wrong answers or the meaning of these questions was not entirely clear. The module is well constructed and structured. The quizzes after each section allow you to consolidate the material. Vocabulary is enriched with new words, thus increasing competence. Unfortunately, some of the questions in the test were not clear, even with the use of innovative translation software, so that there were mistakes in the answers, leading to repeated passes. Improve according to assessment. Hope there're more seminars about the module. I recommend presenting the information in the form of lists, tables, graphs and other things. Sometimes there was a lot of text. Module is perfect. This module system is well organised & helpfull for the students for easily understable & students can study easily at home. It is very helpfull. I'm satisfied for this module. Thank you sir. This module can help us to gather a lot of knowledge. This project and module good enough for knowledge. This project and modules are good enough to knowledge of land use and Energy. Never studied something like this module. This module contains major Knowledgement about land use and energy. Completely satisfied. These modules are effective but we can not easily understand for the online course if we could learn face to face of our course teacher, then we can easily understand this course. It is important to us to increase our knowledge about land use and energy. This module is great. The copy of this module should increase in every library. With due respect Sir, I think it would be more helpful for us, if the way you speak in the module is a little slower. This module very effective for land use. We can gather knowledge from this module very easily. Yes this module is very effective for land use. Very initiative course to increase knowledge & save earth energy & best management land use.our course teacher have wonderful to teaching us & they provide us prospectus to simply dedicated course summary. Yes, this modules is helpful near the students. This modules helps acquire knowledge to the students. Helpful for knowledge. I don't understand your (sir) language in video because your speech is so fast. It is very imitative course to increase our knowledge about land use and energy. Helpfull for knowledge. This module may be discussed more easily. The module was questioning. The complete online delivery method was very effective. The course is really knowledgeable. The course is really good. The course is really interesting. The course is very existing and interesting. The course is really exciting. The course is very interesting. The course really knowledgeable. The subject is very interesting, thanks for adding this course in my credit. The course is very effective. The course is very interesting. The course is very exciting and interesting. The course is very interesting. The course is really knowledgeable. The course is really knowledgeable. for me. The course is very helpful for us. The module is very knowledgeable. It's a great course to learn. This subject is exciting. Its helpful for us. This course is very interesting and knowledgeable. The course is really knowledgeable. The course is really enjoyable. It's a very interesting and knowledge learning for us. The entire course was easy to learn and interesting. The course is really good. Just what I needed. Very helpful. The teacher have created a favorable learning environment where sharing takes place and a lot of discussion. This was usable, concrete and applicable to teaching. Thanks, it was valuable and provides a wealth of practical strategies/methods. The materials provides a depth of understanding and was informative, useful and important





Evaluation Questionnaire for Teachers

The online teachers' evaluation questionnaire received responses from 47 teachers. The distribution of teacher responses between modules varied somewhat due to the differences in numbers of teaching staff involved with each module as well as differing response rates in different institutions. However, the number of responses received from all partner country institutions was equal to or exceeded the number of modules offered in those institutions and no specific institution represented more than 24% (i.e. 11 responses) of the total number of responses. Thus, as per the students' evaluation questionnaire, this sample is considered skewed but still adequate to provide a reasonable indication of how teachers evaluated the quality of the MOOCs in general.

The responses received are summarised in Table 2 below.





Table 2 – Teachers Evaluation questionnaire - Summary of Responses

Criterion		Evalu	ation			
	(Res	ponses	per cate	gory)		
	No	More No than Yes	More Yes than No	Yes		
Was the overall organization of the Module (scheduling, calendar, agenda, etc.) acceptable to you?	0	0	7	40		
Did the Module start at the scheduled time?	0	1	11	34		
Were you (the teacher) informed in good time about the timetable for lectures?	0	0	8	39		
Did you find the services offered to participants by the University responsible for the Module (materials distribution, technical assistance, information about the Module, staff availability) to be adequate?	0	0	10	36		
Was the University Administration cooperative, punctual and effective in providing all the information and support to successfully hold the module?	0	1	10	36		
Did the students demonstrate an active interest for the lecture subject?	0	0	12	34		
Did the students interact with the teachers?	0	1	12	33		
Did the students demonstrate that they were sufficiently proficient in the (English) language of the Module for effective learning?	0	2	12	32		
Were you generally satisfied by the Module?	0	0	5	42		
Further Comments						
The module is very suitable and timely important, since we have been experienced many climate change related natural calamities and scenarios. During the course, good indicators of student engagement have been obtained, active work is underway to interact with students and answer questions that arise. The certificate course was well organized. The Module was delivered at both TalTech and St Petersburg State Technical University (SPBSTU) - I was responsible for teaching it at SPBSTU and we experienced some communication difficulties with the SPBSTU administrators as this was our first interaction with them. This is well organized module and I really enjoyed teaching in this module. Time to time improvements are needed. Improvements should be done with time. Thanks to the project activities, several innovative tools were introduced in the module, e.g. the Adaptive Examination System, Big Data Mining, Affective Video Tutoring System and many more. Thanks to the innovative Educational Centre with adaptive tools the module could be reached diverse target groups for all participating institutions and further stakeholders. Need to be more need-based and participatory. More videos should include as learning materials so students will be more interested. Overall module was good. due to COVID 19 situation in the country, was not able to start the module on time.						

Analysis of Results

Evaluation Questionnaire for Students

Table 1 refers. The responses to questions received were generally positive with median responses for all questions being "yes" with the exception of the one question: "Was the Module subject difficult?" - for this question, the responses were well-balanced from "No" through "Yes" indicating an appropriate range. I.e., that the modules tackled subjects that spanned from not difficult to difficult as would be fitting for university level courses.





The further comments received reinforce the positive evaluations received and also indicate a few, specific issues with one or two of the modules (both positively and negatively).

Evaluation Questionnaire for Teachers

Table 2 refers. The received responses indicate a generally positive evaluation of the modules - for all questions, the median responses were "yes" and the further comments reinforce the positive evaluation of the modules as well as indicating a few module-specific points (both positive and negative).

Conclusions

The BECK project has upgraded curricula of BSc/specialists, MSc and PhD programmes in Russian, Sri Lanka and Bangladesh universities by adding 24 new multidisciplinary adaptive, recognised and certificated (Mass Open Online Course) MOOC modules on consumer behavior related to energy efficiency and climate change, to enhance the quality and relevance of education in PC and EU universities to global issues. An evaluation of these MOOC modules was conducted using online questionnaires distributed to students and teachers in March - June 2022 in order to elicit feedback on their quality.

342 students and 47 teachers responded to their respective online questionnaires. Responses were received from all of the partner country institutions and with respect to all the MOOC modules delivered in those institutions. It should be noted that response rates differed significantly between institutions and with respect to different modules, however, the evaluation samples are considered to be adequate in order to provide a general sense of how the MOOC modules were received by students and teachers.

Analysis of the responses shows that the students and teachers generally evaluated the MOOC modules positively and the comments received provide further confirmation of this.





Appendix 1 - Evaluation Questionnaire for Students





BECK Module - Participant Evaluation -Students

This evaluation form aims to determine the extent to which the BECK Modules have satisfied their intended quality criteria.

For each performance criterion, please evaluate its achievement by checking the appropriate radio button and / or providing further comments.

* Required

- 1. Please give the name of the Module you participated in as a student: *
- 2. Please give the name of the University responsible for the Module you participated in as a student:
- Please give the name(s) of the Teacher(s) responsible for the Module you * participated in as a student:





4. Please indicate your answers to the following questions by selecting the most appropriate answer.

Mark only one oval per row.

	No	More No than Yes	More Yes than No	Yes
Was the overall organization of the Module (scheduling, calendar, agenda, etc.) acceptable to you?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did the Module start at the scheduled time?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Was the online based study easy to access and user-friendly?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were the teaching staff effectively contactable by email?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were the administrative staff effectively contactable by email?	\bigcirc	\bigcirc	\bigcirc	0
Did you find the services offered to participants by the University responsible for the Module (materials distribution, technical assistance, information about the Module, staff availability) to be adequate?	0	\bigcirc	\bigcirc	0
Was the amount of time dedicated to the Module sufficient?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were the Module materials relevant to the module subject?	\bigcirc	\bigcirc	\bigcirc	\bigcirc





Were the materials clear?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were the subjects covered in a comprehensive way?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Was the Module subject difficult?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Was the language used (English) during the Module of an acceptable standard?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did the Module increase your previous knowledge?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did the Module increase your level of interest in the subject?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were you generally satisfied by the Module?	\bigcirc	\bigcirc	\bigcirc	\bigcirc

5. Do you have any further comments about the Module?

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Appendix 2 - Evaluation Questionnaire for Teachers





BECK Module - Participant Evaluation - Teachers

This evaluation form aims to determine the extent to which the BECK Modules have satisfied their intended quality criteria.

For each performance criterion, please evaluate its achievement by checking the appropriate radio button and / or providing further comments.

- 1. Please give the name of the Module you participated in as a teacher:
- 2. Please give the name of the University responsible for the Module you participated in as a teacher:





3. Please indicate your answers to the following questions by selecting the most appropriate answer.

Mark only one oval per row.

	No	More No than Yes	More Yes than No	Yes
Was the overall organization of the Module (scheduling, calendar, agenda, etc.) acceptable to you?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did the Module start at the scheduled time?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were you (the teacher) informed in good time about the timetable for lectures?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did you find the services offered to participants by the University responsible for the Module (materials distribution, technical assistance, information about the Module, staff availability) to be adequate?	\bigcirc	\bigcirc	\bigcirc	0
Was the University Administration cooperative, punctual and effective in providing all the information and support to successfully hold the module?	\bigcirc	\bigcirc	\bigcirc	0
Did the students demonstrate an active interest for the lecture subject?	\bigcirc	\bigcirc	\bigcirc	\bigcirc





Did the students interact with the teachers?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Did the students demonstrate that they were sufficiently proficient in the (English) language of the Module for effective learning?	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Were you generally satisfied by the Module?	\bigcirc	\bigcirc	\bigcirc	\bigcirc

4. Do you have any further comments about the Module?

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