Needs assessment

– a basis for the Climate University project material selection

14th May 2019 / by Mikko Äijälä,

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Summary

Climate University is a collaborative project of eleven Finnish universities and various other collaborators to advance and develop teaching of climate and sustainability topics. One of the main aims of the project is to produce new educational materials based on the needs of the Finnish higher education field. To support the decisions on selection of materials, a needs assessment was conducted. This short report briefly describes this assessment process, presents the results, and formulates some suggestions and recommendations for the project steering group.

Contents of this report:

1. Introduction

This short report describes the needs assessment process, aimed at selecting the education materials to be produced in the Climate University (CU) project. This selection of materials is ideally based on what materials are most needed in climate and sustainability education in Finnish universities.

2. Background

2.1 Project plan basis

The project plan states that

> *"[t]he project coordinators will investigate what educational need [university] teachers have and to which topics new materials are needed the most. Based on the needs assessment, the themes of workshops and topics and producers of new educational materials will be selected".*

On the size and number of the materials it further states:

> "*Based on the needs assessment, 2 entirely new 3-5 cr materials will be produced in multidisciplinary collaboration. Additionally, smaller (1-2 cr) multidisciplinary additions to the Climate.now –platform will be produced, leveraging on key expertise of the various [participating] universities*".

2.2 Summary of discussions from the kick-off workshop in Helsinki (27.-28. Nov. 2019)

The opening theme in the kick-off workshop was to examine the question of

> *"[w]hat kind of expertise (education) is needed in the near future, in order to answer the challenges of climate change and sustainability?"*

After an interactive urban orienteering –themed interview of experts from various branches of the Finnish society, the workshop participants had a lively discussion on what the relevant skills and areas of expertise would be. Summarised, the main areas considered crucial for future education in the discussion were:

- Multi-disciplinarity – crossing the traditional borders of natural (or technical, engineering) vs human (sociological) sciences is necessary
- Holistic understanding of the challenges is required and systems thinking is important. It is important to try to see the bigger picture and not look at the challenges from a single, narrow angle
- Impactful decisions are based on data and statistics, to but it is equally important to keep in mind the personal, human perspective (choices, values, ethics, principles) and create an emotional connection to the challenges, to bring about change in the society
- Values and ethics should be included in the discussion of climate change and sustainability.
- Science communication is key. Academic knowledge needs to be communicated to the decision makers, but academics equally need to understand political decision-making

- Including the private sector and markets in answering the challenges and considering finances and the economics is needed, and (green technology) business opportunities and innovations need to be recognized. However, focusing too much on innovations and technical solutions may hinder grasping the bigger picture of the challenges.
- Consumer perspective is important to consider – green choices need to be made easy. Sustainability education (in e.g. circular economy) in schools is necessary, to educate responsible citizens and customers of the future.

Specifically, when presented a sketch of a rough sketch of a needs assessment questionnaire, based on the classification of [1,2] we were urged not to fall for "silo mentality" or to classify materials of questionnaire themes by typical topical classifications. Therefore, the above listed themes were adopted as the basis for themes charted in the needs assessment questionnaire.

In the kick-off workshop, a session was organized to address the project goal of collaboration with schools ("Climate University goes to schools"). Resulting from the discussion therein, an initiative was launched to provide a comment to the Finnish National Agency of Education (Opetushallitus) on the new high school curriculum, under preparation in the Spring of 2019. A working group led by PhD Heta Heiskanen from Tampere University was established and a comment submitted in March 2019. The comment [3], signed by 165 people mainly from the academia and education sector, and including many high ranking academics, advocated for the inclusion of a climate themed course on the new high school curriculum and addition of climate and sustainability related themes in general. In the comment, the undersigning Climate University participants proposed they could provide such an online high school course within the framework of CU school collaboration. In the workshop and working group discussions, the potential inclusion of such a course in high schools was seen very much in line with the project goals of school collaboration.

3. Needs assessment survey

3.1 Formulation of survey questions

Based on the project plan and the kick-off workshop feedback, both described above, a survey form was drafted, and a short feedback round performed within the project coordination group. As described in the survey foreword, it was divided into 5 sections:

> "*This assessment query aims mainly at deciding the themes for these materials (part 1) and workshops (part 2), but also addresses the formation of a network for the Climate University community as well as online education platforms (part 3). Ideas and expectations for collaboration between universities and schools (part 4) as well as private sector (part 5) are additionally included.*"

Thus, the sections and their topics were:

1. Materials' themes. Here we charted the materials needs and expertise of the participants' (reflecting their organisations situations), on a scale of 1 to 5 plus freeform comments.
2. Workshop themes. This section included the possibility to comment (in freeform text) the proposed workshop themes. The workshop schedules and topics had had to be drafted already during initial project planning and coordination meetings.
3. CU Network and [technical] education platforms. Here we inquired the participants' interest to form a more formal a network for the CU community and asked about the respondents ideas for technical implementation of (1) such a network and (2) online educational platforms for the education materials.
4. Collaboration between universities and schools. A section for gathering ideas on how such collaboration would best be organized and specifically, on if the idea of a Climate.now type of material would be needed for secondary education.
5. Collaboration between universities and businesses. In the final section, similar to above for schools, ideas for collaboration with the private sector were collected, along with respondents' experiences and proposed best practices for such co-operation.

Where applicable, the survey also tried to include the possibility to offer additional ideas and topics outside of the immediate proposed topics. The survey questionnaire in its entirety is available as an attachment to this report (Attachment 1).

3.2 Survey implementation

The survey was implemented using the e-form service (e-lomake; https://elomake.helsinki.fi/) offered by of University of Helsinki. The survey was offered online for the respondents from 25. January to 8. March 2019.

The invitation to respond was relayed via the owner-climate-university@helsinki.fi email list, to which most of the project collaborators and previous workshop participants are subscribed. We additionally and specifically asked the local project coordinators from participating universities to relay the survey to the relevant persons in their institutions. A public invitation to answer the survey was also posted on the project blog site (https://blogs.helsinki.fi/climateuniversity/) where project news are posted. The survey was open, and in the foreword we invited respondents also to relay the invitation to their interested colleagues. While we did not collect information of all the outlets where invitation had been distributed.

The e-form service provides an MS Excel form report of the answers. The answers were compiled and analysed by the project coordinators in Helsinki (Mikko Äijälä and Laura Riuttanen).

4. Survey results

4.1 Respondents backgrounds

The survey received in total 49 responses. The respondents' organizational backgrounds were distributed rather evenly among the participating universities and the respondents generally represented more than one faculty or department at each university (Table 1). Despite representation of two organisations only by a single response, in general the collaborating institutes were rather equally and well represented.

TABLE 1. RESPONDENTS' BACKGROUND.

organisation		department
UEF	4	Education, Department of Applied Physics x3
U.Helsinki	5	Science, Theology, Environmental economics, Public law, INAR
U.Jyväskylä	6	Biology and Environmental Sciences x4, School of Business and Economics, F
U.Oulu	4	NANOMO/Luonnontieteet, Geography, Biology, Technology
U.Turku	4	Tulevaisuuden tutkimuskeskus x3, Geography
Aalto.U	7	Built Environment x2, Design, Electrical Engineering and Automation, Market energy
LUT	3+	Sustainability Science x3 (sis 1 ryhmävastaus samalta ryhmältä)
U.Tampere	1	TUT, Facultu of Engineering and Natural Sciences
Lahti UAS	3	Faculty of Technology x2, Energy and environmental technology
Metropolia UAS	1	School of Smart and Clean Solutions
Turku UAS	4	Environmental technology, RDI, Engineering and Business x2
School	1	Sammon keskuslukio
Company	2	Company/Management, Company/Energy efficiency
NGO	1	TEK/Societal Impact
other	2	Regional council of Central Finland, ELY/ Ympäristö ja luonnonvarat -vastuua
total	49	

4.2 Materials needs - themes

4.2.1. Statistical analysis

In the "Materials" section of the questionnaire we asked the respondents to evaluate (i) the levels of need for materials and (ii) the respective expertise in their potential production in their organisation. The question included a numeric answer on a scale of 1 to 5 to each of the seven themes selected (Section 3.1) as well as a freeform additional comment (optional). The distribution of answers by the themes is shown below in Figure 1.

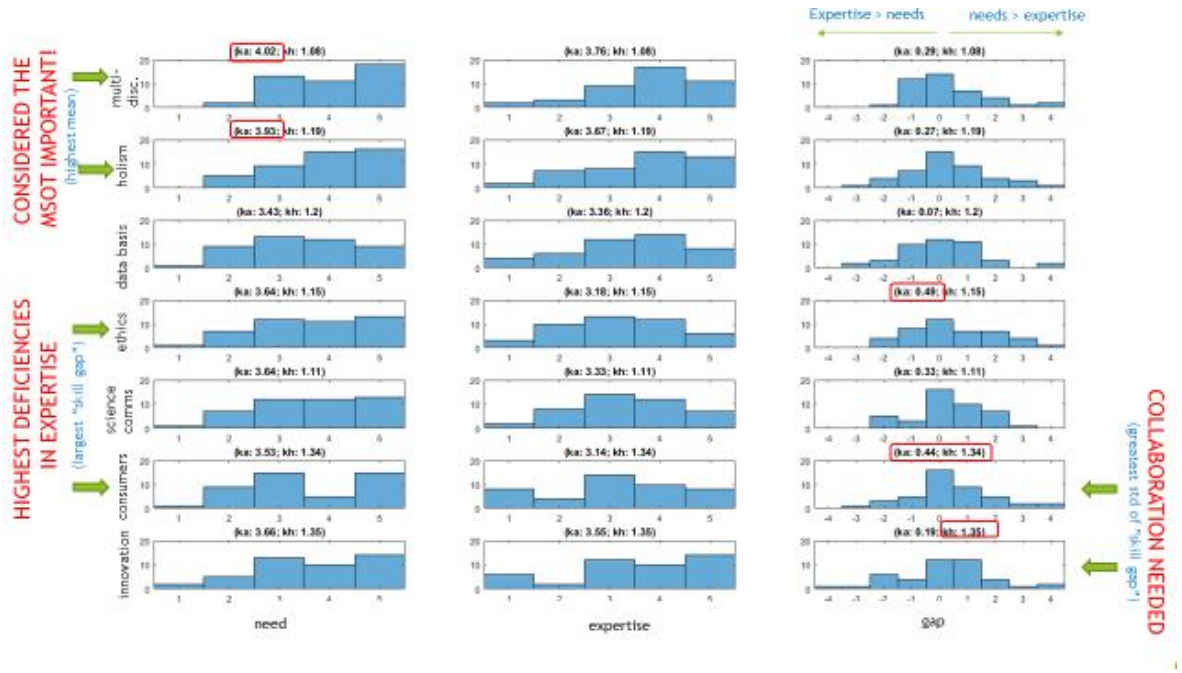

FIGURE 1. RESPONSES TO MATERIAL NEEDS AND AVAILABLE EXPERTISE.

In the statistical analysis of the numerical answers the only immediate results available are (1) the average values of needs and expertise and (2) the variability of answers (connected to distribution width), represented here numerically by standard deviations of the distributions. We additionally calculated the difference between the need and expertise reported by the participants. This difference, which we here labeled “skill gap” can be taken to represent the need of outside expertise (or similarly the capability to offer expertise to others, if expertise > need; i.e. skill gap is negative). Please note this calculation is not a robust scientific one, but rather arbitrary metric we derived to have at least some measure for the overall balance of needs and expertise, as well as a measure of need for collaboration between the various universities.

The same statistics can be presented also as a single figure (Figure 2), with needs on the y-axis and expertise on the x-axis.

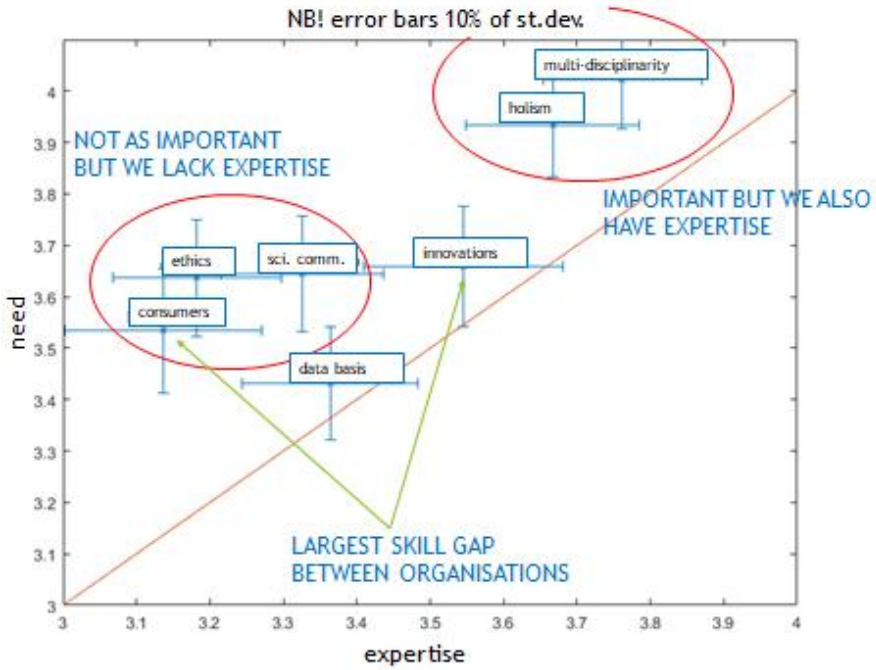

FIGURE 2. A SCATTERPLOT OF THE MATERIAL NEEDS VS EXPERTISE BY THEME.

From the statistics, we proposed three conclusions could be drawn:

1. The overall demand is highest (mean of 'need') for the two themes as of *multi-disciplinarity* and *holistic understanding*.
2. For the themes of *ethics and values* and *consumer perspective*, the discrepancy between estimated need and expertise (mean skill gap) is the highest, indicating an overall lack of expertise on these topics among the participating organisations.
3. The *consumer perspective* and *private sector and markets* themes feature the widest distributions (highest standard deviation) of 'skill gap', which we propose could be taken as a sign that co-operation between the organisations would be especially beneficial in these topics.

4.2.1. Freeform text comments on material needs

In addition to the numerical answers, the needs for materials on the various themes could be further specified by the participants in open text fields. Materials related propositions from the freeform feedback or suggestions question in the end of the questionnaire were also combined here.

Of the themes offered, *multi-disciplinarity* and *holistic understanding* gathered the largest amount of supporting comments and propositions, e.g.:

> *"Especially in the technical areas, we need to be exposed to a view of the whole and how our endeavours fit in to healing the human condition and the planet!"*
>
> *"I think we could make use of more material/cases on the holistic understanding of reasons behind climate change"*
>
> *"ilmastonmuutos systeemiajattelun valossa"*

The themes of consumer perspective, science communication private sector and markets also well represented among the comments:

> *"How to cooperate with companies and other organisations on climate issues: project work module" (Private sector and markets)*
>
> *"New technological innovations emerging from the need to cut down carbon emissions - dealing with energy production, mobility solutions and businesses" (Private sector and markets)*
>
> *"Not very much integrated to present curriculum? Is of great importance." (Science communication)*
>
> *"Miten nostaa ilmastoaihe vakavaan keskusteluun monialaisessa ja kiireen vaivaamassa organisaatiossa? Miten puhutellaan johtoa tehokkaasti? Miten saadaan organisaatiosta irti parhaat tehot ilmastokysymyksessä?" (Science communication)*
>
> *"reasoned discussion on how encouraging indiv. choices might spill over into demands on better regulation - instead of mutual stand-still & wait" (Consumer perspective)*
>
> *"Yes, this is important but why do we still want to talk about customers and consumers? People are becoming producers, and individuals' role should be rethought." (Consumer perspective)*

Outside of the pre-selected themes presented in Section 2.2, multiple respondents suggested in the freeform comments that a basic course on sustainability would be needed:

> *"Basics of sustainability e.g. based on planetary boundary and donut approaches. Explanations on each of the themes presented in both approaches."*
>
> *"Introduction to Sustainability: We propose an on-line course "Introduction to Sustainability" to provide comprehensive basic/starting knowledge and skills for master students with various backgrounds."*
>
> *"On behalf of research group LUT/School of Energy Systems/Sustainability Science: Digital course "Introduction to Sustainability" to provide an overview of the variety of sustainability issues related to natural resources, technologies, sustainable and profitable business models, climate changes, food and water, systemic thinking etc."*

4.3 Highlights and take-home messages on themes and topics needs in educational materials, from the survey results

Themes that were considered most important were inter-disciplinarity and holistic understanding.

Sustainability (introductionary) course was strongly supported in the freeform requests.

Topics that got several mentions and align well with project goals of school and working life collaboration would be (i) climate-now style course for high schools and (ii) project course for business collaboration.

Other potential materials would include science communication, which raised many supportive comments as well as e.g. climate change in Arctic/ Nordic areas, ethics & values", consumer perspective, data basis, climate anxiety and philosophy, nexus of SDGs.

4.4 Other questions of the survey

The other questions asked provided a lot of data that can be used in further development of the CU project. However, this additional data is not fully analysed at the time of writing of this report. Some of the material relevant data that we consider essential to include related to e.g. the form and level of materials wished for:

- Level of materials
  - Primary school 6%, Secondary school 12 %, Bachelor 72 %, Master 80%, Licentiate / doctoral 50 %
- Language of materials
  - Finnish 76 %, English 88 %, Swedish 12 %
- Collaboration / types of materials
  - Join courses held by others 52 %, course modules for teachers to integrate 72 % indiv. Materials 44%, joint study modules 26 %
- CU network was strongly supported (74 % yes, 18 % with some reservation, 8 % no)

The freeform text comments on network, platform, and school and industry collaboration were not analysed for this report, but will be delivered to the relevant working groups to consider.

4.5 Preliminary selection - discussions in the Jyväskylä workshop, 28.-29.3.2019

In the second Climate University workshop, held at the University of Jyväskylä 28.-29. March 2019, the results so far from the questionnaire were presented to the wider Climate University community. As a basis for discussion, the following chart (Figure 3) was presented, with current courses (e.g. Climate.now, Circular.now) and potential new courses (intro to sustainable development, systems thinking, working life collaboration course, (high)school collaboration course), as well as some of the propositions for smaller materials (e.g. ethics and religion, consumer perspective).

Also we encouraged discussion on if a hierarchy of courses of some sort would be needed, or if a common study module (e.g. 25 cr) would be something to strive for.

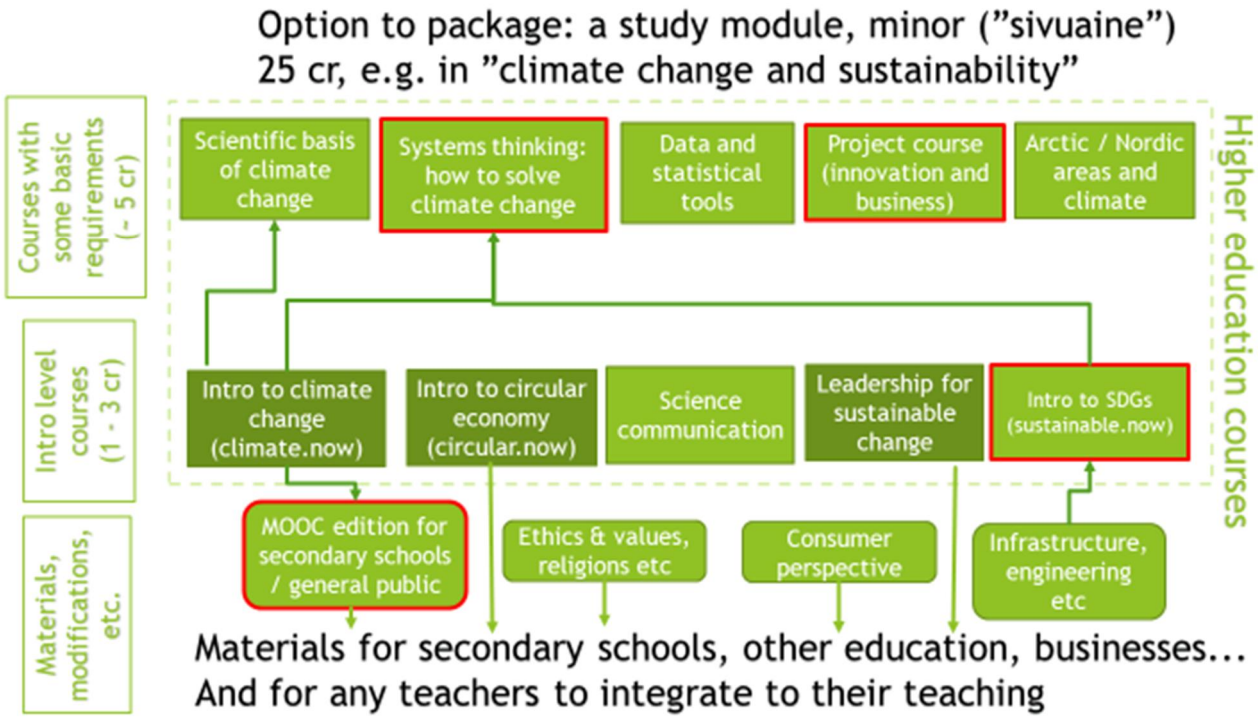

FIGURE 3. PRELIMINARY SUGGESTIONS FOR MATERIALS AND THEIR POSITIONING IN COURSE MATERIAL HIERARCHY

In the Jyväskylä workshop, the themes were discussed in smaller working groups in one session, and preliminary ideas discussed for what the courses could contain.

5. Recommendation for materials to further developed

Based on the survey result, the most prominent themes seemed to relate to inter-disciplinarity and holistic understanding. In the comments and workshop discussion the theme of systems thinking was often mentioned. Thus, a course providing concrete, systems thinking tools for holistic, Earth system level understanding, would likely be very desirable. Devising such a course would be a very ambitious undertaking, but one that could be realised with the resources and expertise available within the project.

An “introduction to sustainability” type of course was seen by many a something missing from the curricula of most (if not all) of the participating Finnish universities. Such an oversight seems surprising, considering the importance of the topic to most higher education paths, but also highlights the importance if inclusion of such a course. Such material would also likely be suitable for technical universities as well as universities generally, and perhaps offer potential for a wider audience outside higher education.

In the CU project aims, advancing collaboration with schools and working life is deemed important. In order not to have these important aims empty words, concrete proposals of such collaboration would be necessary. Therefore, the proposed ideas of a project course for business collaboration and Climate.now type of online material for high schools (lukio) would both seem very beneficial.

Depending on the distribution of resources, there are several viable proposals for smaller materials. These could be standalone materials for teachers to integrate or even small courses. Based on this assessment, science communication was the most prominent of these candidates, but also other good options exist.

Thus, this assessment recommends further development of the following courses / materials:

Large, new online education materials (on themes most requested):

1. Systems thinking in global change challenges (5 cr)
   - an advanced, large, ambitious new course
   - master level
   - introduction to systems theory, methods, tools
   - introduction to systems: climate system, socio-economical system & ecological system, adding other components
   - identification of drivers in systems, tools for students for finding future solutions to climate change and sustainability challenges: how to identify system drivers etc.

2. Introduction to sustainability (”Sustainable.now”, 5 cr)
   - introduction level, no prerequisites
   - bachelor level
   - overview of sustainability concepts, the donut approach, UN SDGs, resilience

Smaller materials (important for achieving the aims of the Climate University):

3. Project course in working life collaboration (“Solutions.now”)
   - templates for co-operation
   - working life-relevant challenges from companies and other working-life collaborators
   - in line with working life focus

4. Lukio-level (or general audience level) modification of Climate.now
   - potential co-operation with software companies / other collaborators
   - in line with school focus and CU high school curriculum proposal

Depending on resources, considering also producing small materials / additions on

- Science communication
- Arctic / Nordic perspectives
- Scientific basis of climate change
- Values and ethics modules
- Statistical tools / data course
- Climate anxiety and philosophy
- Nexus of SDGs

6. Refinement of concepts, future steps

At the time of writing this report (May 2019), preliminary planning groups have been assigned to pursue the preparation and refinement of the four main options, and to additionally prepare a proposal for a Science communication material/course. It should be further noted that a statistical tool / data course is being planned by the University of Eastern Finland, and a Nexus of SDGs course by the University of Jyväskylä – both of these could potentially contribute to the course pool of Climate University, and their relation and (small scale) resourcing from the CU project is a matter for discussion. The final selection of

materials and courses to pursue will be confirmed by the CU steering group, convening in May/June of 2019.

References:

[1] Sihto-Nissilä, Sanna-Liisa (2014). Ilmastoalan yliopisto-opetus Suomessa - esiselvitys. Sitra. (ei julkaistu)

[2] Emma Liljeström ja Suvi Monni, (2015) Ilmastoalan yliopisto-opetuksen nykytila Suomessa. Sitra. Available online at: https://media.sitra.fi/2017/02/27175124/Ilmastoalan_yliopisto_opetuksen_nykytila_suomessa-2.pdf. Last viewed 14.4.2019.

[3] Climate University blog, April 2019, ”Climate University -julkilausuma lukion opetussuunnitelmasta: ehdotus valtakunnallisesta ja maksuttomasta ilmastonmuutos-verkkokurssista.” Available online at: https://blogs.helsinki.fi/climateuniversity/2019/04/05/climate-university-julkilausuma-lukion-opetussuunnitelmasta-ehdotus-valtakunnallisesta-ja-maksuttomasta-ilmastonmuutos-verkkokurssista/. Last viewed 14.4.2019

Attachments

Print of the E-form questionnaire (3 pages)

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

Needs Assessment for the Climate University project (2019 - 2020)

Climate University (official project name "Multidisciplinary digital learning in sustainability challenges ¨ flexible study paths to the working life ") is a joint project of 11 universities in Finland, in collaboration with the Ministry of Education and Culture, Finnish Innovation Fund Sitra, companies and schools, to foster climate change and sustainability education in higher education in Finland. Climate University will produce two open online courses (or learning materials) of 5 cr and additional, smaller (1-2 cr) extensions to existing materials. During 2019-2020 we have 8 more workshops. We also welcome other ideas in fostering climate change and sustainability education in higher education in Finland.

Your answers and opnions are extremely important, as this assessment query supports CU network in the decicion making on education materials (part 1) and workshops (part 2), but also addresses the formation of a network for the Climate University community as well as online education platforms (part 3). Ideas and expectations for collaboration between universities and schools (part 4) as well as private sector (part 5) are additionally included.

This survey is open until 8. March 2019 (extended for a week!).
You can also respond to the questions in Finnish, if you prefer.

In case of any questions, please contact Mikko (needs assessment) or Laura (project lead).
mikko.aijala@helsinki.fi
laura.riuttanen@helsinki.fi

BACKGROUND INFORMATION

Please fill in your background information! Due to new GDPR regulations, we will not collect identifying personal information, but for the needs assessment it is critical we get organisation-specific answers.

*Organisation	--Valitse t+st+--
Specify organisation (if needed)	
*Faculty, department, or area of expertise	
*Job or position in organisation	

PART 1 - MATERIAL NEEDS AND EXPERTISE

What are our most pressing needs for learning / education materials? Where could your organisation contribute?

The following cross-cutting themes (related to climate change and sustainability) were proposed at the Climate University kick-off workshop.

PLEASE RATE ON A SCALE OF 1 (NO EXPERTISE) TO 5 (EXCELLENT) THE ABILITY OF YOUR ORGANISATION TO CONTRIBUTE TO DEVELOPMENT OF MATERIAL TO THE

	1	2	3	4	5	Please specify / give practical examples
Combining natural (or technical, engineering, etc.) sciences and human (or social, pedagogical, psychological etc.) sciences.	O	O	O	O	O	
Holistic understanding of grand challenges and systems thinking	O	O	O	O	O	
Use of data and statistical analysis in education and answering the grand challenges	O	O	O	O	O	
The role of values and ethical principles in decision-making and as drivers of societal change	O	O	O	O	O	
Science communication, in informing citizens and political decision-making	O	O	O	O	O	
Study of consumer perspective, individual choices, customer and citizen responsibility	O	O	O	O	O	
The role of business, innovations, finance and, markets in future climate and sustainability education	O	O	O	O	O	

PLEASE RATE ON A SCALE OF 1 (NO NEED) TO 5 (URGENT NEED) THE NEEDS OF YOUR ORGANISATION FOR EDUCATIONAL MATERIAL ON THE FOLLOWING THEMES

	1	2	3	4	5	Please specify / give practical examples
Combining natural (or technical, engineering, etc.) sciences and human (or social, pedagogical, psychological etc.) sciences.	O	O	O	O	O	
Holistic understanding of grand challenges and systems thinking	O	O	O	O	O	
Use of data and statistical analysis in education and answering the grand challenges	O	O	O	O	O	
The role of values and ethical principles in decision-making and as drivers of societal change	O	O	O	O	O	
Science communication, in informing citizens and political decision-making	O	O	O	O	O	
Study of consumer perspective, individual choices, customer and citizen responsibility	O	O	O	O	O	
The role of business, innovations, finance and, markets in future climate and sustainability education	O	O	O	O	O	

You can additionally suggest other broader areas or themes, where your organisation has a pressing need for new online materials.

FOR WHICH LEVEL(S) OF STUDIES DOES YOUR ORGANISATION HAVE EDUCATIONA MATERIAL NEEDS?

- ☐ Elementary school (Peruskoulu)
- ☐ High School / Lyceum (Lukio)
- ☐ Bachelor level (Kandidaatti / AMK)
- ☐ Master level (Maisteri / YAMK)
- ☐ Licentiate or Doctoral level (Universities)

WHAT LANGUAGES(S) SHOULD THE MATERIALS BE IN?

- ☐ Finnish
- ☐ Swedish
- ☐ English

There exist currently several MOOCs (Massive open online courses on Climate University themes e.g. Climate.now, Circular.now, Leadership for Sustainable Change).

USE OF EXISTING MOOCS

How do the currently existing MOOCs serve the needs of your organisation?

How should the current MOOCs be modified / extended to better answer the needs of your organisation?

FORMAT OF NEW EDUCATION MATERIALS. WHICH ONE(S) WOULD YOU PREFER?

- ☐ Courses by other universities our students / personnel could attend
- ☐ Course modules (materials + exercises) that teachers could integrate to their courses
- ☐ Individual, specific education materials collected in a material bank
- ☐ Joint study module of for example 25 cr

Please specify, if needed

	yes	no	I don't know	Please specify, if needed
Would you need education material in textbook format (traditional or e-book)? If yes, please specify.	○	○	○	

PART 2 - WORKSHOPS

What themes and topics should the upcoming 8 workshops concentrate on?

The following themes for workshops have been suggested, based on expertise available in member universities. Please (shortly) evaluate the proposed themes and suggest improvements and additional ideas and topics.
Specifically, how could the important, cross-cutting themes*mentioned at the kick-off be taken into account? *(e.g. Multidisciplinarity / Holistic understanding / Data and statistics / Values and ethics / Science communication and Politics / Consumer perspective / Innovation and economy)

WORKSHOP THEMES (AS CURRENTLY PROPOSED)

	Feedback, comments and suggestions for the organisers
Nexus of the sustainable development goals (University of Jyv±skyl±)	
Innovation pedagogy in collaboration between students and enterprises (Turku UAS)	
Project teaching in sustainable development, (University of Turku)	
Energy and circular economy (Lahti UAS, Lappeenranta University of Technology)	
Climate education and science communication (University of Oulu)	
Sustainable cities and communities (Metropolia UAS)	
Entrepreneurship and art (Aalto University)	
Climate change and law	
Technological solutions, circular economy, concluding the Climate University project (Tampere University of Technology)	

You can also put forward other suggestions for workshop themes for the participating organisations:

PART 3 - THE CLIMATE UNIVERSITY NETWORK AND EDUCATION PLATFORMS

What kind of a network do we need for Climate University? What kind of technical platforms should we use?

At the kick-off workshop it was proposed that we should construct a permanent network of Finnish universities, schools, businesses, non-governmental organisations and other stakeholders.

CLIMATE UNIVERSITY NETWORK

	Your comments:
Do you think such a network is needed?	
If yes, what are your need and expectations of such a network?	
What would the technical platform be?	

Do you have experience on online education platforms?

EDUCATION PLATFORMS

	Your comments:
Which ones? Please add a short description	
What were your experiences (positive / negative?)	
Would you recommend them to others?	

PART 4 - COLLABORATION BETWEEN UNIVERSITIES AND SCHOOLS

How can universities and schools co-operate on climate and sustainability education?

It was agreed that we as a community should try to promote addition of climate / sustainability topics to the new curriculum plan for the schools (lyceum level, lukio).

Please comment on the idea. Would you be interested in attending such a working group?

It was also proposed that the currently available MOOCs could be tailored / modified for use in schools (lukio). Please comment on the following:

TAILORING EXISTING MOOCS FOR USE IN SCHOOLS (LYCEUM / LUKIO LEVEL)?

	yes	no	I don't know	Your comments
Do you see this as a good choice for one of the `smaller, additional online materials / extensions_? Why?	○	○	○	
Should the students get credit / diploma at their schools for such courses?	○	○	○	
Should the students get university level credits for the courses?	○	○	○	
Should these types of courses serve as an alternative pathway (to entry exams) to universities? Why / how?	○	○	○	

What kind of other cooperation would you suggest between universities and schools?

PART 5 - COLLABORATION BETWEEN UNIVERSITIES AND BUSINESSES

How can universities and private sector come together to advance education?

In the Innovation workshop of the Climate University kick-off event, project work was proposed as a form of collaboration between universities and companies. Need for easy `templates_ for collaboration was emphasized. What kind of examples do you already have on ongoing collaboration. What would be the "best practices" on smooth collaboration of business and education?

COLLABORATION TEMPLATES FOR PROJECT WORK

	Your suggestions:
What kind of a pre-made model or a `template_ could be useful for outlining collaboration?	
Both company personnel and teachers are often busy. How to make collaboration low-threshold?	
How to arrive at genuine interaction and dedication to collaboration between students and company personnel?	
How to encourage both teachers/students and companies to collaborate?	

Please suggest other topics / methods for collaboration between universities and businesses that could (realistically) be developed within the Climate University project.

GENERAL COMMENTS AND SUGGESTIONS?

Do you have other suggestions on how Climate University could answer the needs of your organisation in advancing education in climate change and sustainability?

Other feedback / greetings to the Climate University coordinators / network

Thank you! We are very grateful for your time, ideas and feedback!

We will follow up on the answers of this survey during the Spring of 2019! The results will be presented and discussed in the next CU workshop in Jyv±skyl± (28.-29.3.2019)!

TIETOJEN L HETYS

Tallenna

Thank you for your time, ideas and feedback! We will follow up on the answers of this survey in Spring 2019!

Results will be presented and discussed in the next CU workshop in Jyv±skyl± (28.-29.3.2019)!

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