



ColLab Intellectual Output II Report



COLLab



Erasmus+

Thematization of needs analysis drawing on the focus-group interview data from Collab partner universities

Purpose of the project

The objective the Collab project is to provide teachers and professors in Higher Education with an educational resource centre and a space where they can exchange knowledge and experiences and instructional technologies with their peers in various European countries in order to become better prepared to face the evolving teaching and learning environment in that sector. The Collab project has been initiated at a time in the evolution of higher education in Europe when a fresh focus on the approach to teaching in and around the classroom is called for at a political level (Paris Communiqué, 2018) and at the level of practical implementation in higher education institutions.

Participants

The universities responsible for the project include University of Aveiro (AV), University of Stavanger (STA), University of Trento (TRE), Kaunas University of Technology (KUT), and Hamburg University of Technology (TUHH). A voluntary group of 41 (AV- 8; TUHH – 6; KUT – 8; STA – 12; TRE - 7) university teachers from various departments participated in the study by the nomination of the department leaders. We purposefully wanted to include academics who actively use and integrate digital resources at different levels and who might be interested to contribute to our research project.

Data collection

The data was collected through online focus-group interviews from 5 partner universities including Aveiro, Stavanger, Hamburg, Kaunas, and Trento during March – April of 2020. We invited university teachers to the interviews, indicating that their participation would be voluntary, and their responses would be fully anonymized. We shared with them the information sheet including purpose of interview, privacy, and participation. We also secured their personal privacy explaining how we would store and use their personal data. The concept of CoP evolved to include three principle components: (i) mutual engagement, representing the members' passion and interest in the CoP's survival and continuity (common purpose); (ii) joint enterprise, referring to the unified goal towards which the practice of the community strives (entwined participation), and (iii) shared repertoire, involving the explicit and implicit norms, values, roles, routines and artefacts that guide the way in which members interact within the CoP (E. Wenger 1998). In a paper entitles Cultivating Communities of Practice: A Guide to Managing Knowledge, (E. Wenger, McDermott, and M.

Data analysis

After we collected the transcript of the online focus group interviews from the partner universities during March – April 2020, we started the data analysis adopting an iterative process of analysis (Patton, 2015). We analysed the data simultaneously as a group with a collective mode (Saldaña, 2013). We negotiated the emerging codes and elaborated on disagreements immediately as we had one, a process known as “coding qualitative data by committee” approach; (Saldaña, 2013, p. 35). Through this iterative process, we also had the opportunity to reveal the areas of focus and specific needs for practical implications. The filtered 32 emerging codes were then collapsed into 13 categories indicating the expectations and needs at an abstract level, a process introduced by Saldaña (2013) as axial coding. These categories emerged as 3 main themes addressing major needs (digital, pedagogical, and professional) at the selective coding stage as the coding committee agreed. The data coding lasted over a month with daily meetings where we had several changes involving interpreting and reinterpreting the emerging codes and their meanings. We ensured a prolonged engagement in the understanding and coding of the data to sufficiently delve into it. The committee approach strengthened the credibility of the analysis as an internally driven process. Apart from this, we had an online debriefing session with the external experts responsible for the work package from the university of Aveiro. This was to ensure any biases and assumptions be revealed and addressed regarding the categorization and codification conducted.

Needs Analysis Results - Major themes (Categories and Codes)

As a result of the analysis process described above, we induced the following themes subsuming the given categories and codes. The themes that emerged to characterise the needs reported by the participants included digital, pedagogical, and professional ones. While the themes referred to the actual needs, the categories detailed the concepts related to these themes. These concepts were then linked to the specific digital functions which were expected to be achieved in the platform.

Table 1: Major themes, categories and codes

Themes	Categories	Codes
Digital needs	Multimodality	• Supporting content with digital tools
	Integration	• Linking the platform to external tools
	Usability	• Establishing easy navigation & simplicity
	Interactivity	• Featuring social networking • Facilitating communication • Featuring Chat • Monitoring communication
	Retrievability	• Designating repository • Searching with key words
Pedagogical needs	Colaboration	• Integrating game-based design • Opening space for research collaboration • Negotiating rules and roles in discussion
	Multiplicity	• Considering student presence • Sharing experiences and materials
	Formative evaluation	• Facilitating constructive assessment • Evaluating participation in discussions • Evaluating teaching and learning materials • Facilitating feedback exchange
	Orientation of discussion	• Discussing teaching practices
Professional needs	Community building	• Grouping as across disciplines • Grouping as specific disciplines
	Social Capital	• Securing intellectual property • Facilitating personal endorsement
	Certification	• Ensuring peer review • Legitimizing copyright • Providing sustainability • Setting links with industry • Offering authentication for promotion • Building a portfolio
	Ethical issues	• Ensuring transparency and privacy • Featuring social networking

Below we present the themes, categories and codes presented in table 1 where participants extracts are used as evidence for the analytical process of inductive coding. Each theme refers to the major need that we have induced, while categories (in blue) refer to the thematically aligned concepts for each theme. And the codes (in red) show the specific digital functions that the participants' extracts identify.

Theme I - Digital Needs

The major theme of the reported needs concerned the digital ones which subsumed critical concepts including multimodality, integration, usability, interactivity, and retrievability.

Multimodality

Multimodality emerged as a category as part of the reported needs for how to support content and its presentation through using various digital tools. The participants from Hamburg and Trento highlighted that in the platform there is need for access to different modalities when interacting, teaching, designing, and assessing learning.

Supporting content with digital tools

... you can create different kinds of especially for teaching, you can create different kinds of teaching scenarios (inaudible) group work or do you want to do like a self-study online course. The different ways, you can really flexibly put together whatever it is you want to do in your teaching. I think this flexibility of kind of a drag and drop system of just putting together whatever it is you need. Do you need a chat, do you need peer feedback, do you need, I don't know calendar, video chat, whatever (HAMBURG)

As professors we need short videos to show things so to have a space where thematic videos can be shared would be useful (TRENTO)

Integration

The second category that emerged in the digital needs was the integration of the platform to external tools which could facilitate the digital educational functions that the teachers can use. Participants from Kaunas, Stavanger, Trento, and Aveiro underscored this need to be automatically connected to and supported by its functional availability in the platform.

Linking the platform to external tools

If we speak about educational platform, the tools should be also related with the needs that we discussed right now, because the functions also are related with tools integrated into educational platform. (KAUNAS)

I've been working with musicians, uh, in Australia and in the United States, and we have been trying to play together and exchange ideas over Skype, consumer different platforms and record the demos (STAVANGER)

Some kind of short videos like a trailer or something, or include people interviews where they share their experiences, and they say that really enjoy in the platform and it is very useful it really helps them or something like this. (STAVANGER)

The other important issue, in my opinion, is that a platform should have tools that can interact with other platforms. (TRENTO)

...someone puts a message in the YAMER we receive an email notification, and it is helpful because we don't need to be on the platform every time. We get the notification, and we can go there, we have direct access from the email, it's quite easy to follow the discussions in this way so yes, it is a good feature. (AVEIRO)

Usability

The third category emerging under the reported digital needs is usability of the functions with a simple approach. The participants highlighted the simplicity of the system with complex functions that can help them communicate, present, interact and share with the minimum technical ability. The participants from Kaunas and Trento highlighted the key concept of simplicity in accessing and using functions.

Establishing easy navigation & simplicity

Then there could be different tracks of topics, and someone should moderate how it is going, so that too many different topics do not stay at the same role, because it is getting overcrowded and probably some opportunities to have private chat as well so you cannot communicate only with a teacher with a format of the forum. I do not know what kind of communication you are thinking about but something like this. But also, I would really appreciate if there are some kind of more complicated things integrated into the platform, that there was a kindly-tiny thing. (KAUNAS)

In my opinion, it's important that the platform is easy to use and intuitive and compatible, not cumbersome. A key point is the compatibility and above all the usability. In short, simplicity of use facilitates sharing. So, I think it is important to clearly define what the objectives and environments within which a certain platform operates. Sometimes also be a bit selective and not think that a certain community of practice should have too many functions. I think this focus on the objectives is important, both from the point of view of the design of the platform and from the point of view of the communication, or how they communicate. (TRENTO)

Interactivity

The fourth digital category that was induced was interactivity which was reported as one of the most mentioned needs with a variety of sub-functions. The participants from Aveiro, Trento, Stavanger, and Kaunas expressed the need to have various embedded functions that enable them to experience social networking, to initiate, sustain, and monitor communication through chat.

Featuring social networking

...to combine the blog bidirectional features to in-live real time sessions. So, for instance, now I'm looking at the University of Minho platform. They have a combination of a blog with the information, exactly the same that we have on Campus Altice, but they combine this with real time online and inline sessions every Wednesday at half past six, for instance. (AVEIRO)

Facilitating communication

We used Meet for the Focus [Groups] to share a bit of the experiences and we used Excel on [Google] Drive to share the innovative teaching elements that we incorporated into our respective teaching methods to see what everyone else was doing. But it's very limited because there are two different platforms, and they don't communicate with each other. You don't have the visual part with the interactive part. (TRENTO)

...automated email "I see that you don't access the platform in one week, is this ok? Can we be of any other assistance to you? Did you notice the latest news? Did you know we have a live this afternoon?" and so on. So... either by artificial intelligence or with the real meeting, this can provide a community sense. Not only a platform for keeping the information but also to create the family, the community flavour. (AVEIRO)

Featuring Chat

Stop on the separate channels and he could also divide the students in chat groups to chat with them, not through the channels so everybody could see but establish some chat groups if he liked. So I think it worked quite well (STAVANGER)

Monitoring communication

When it comes to the content, I think I would also really appreciate if such platform had a section that would contain kind of short blogs or posts or messages about the tool of the day, the exercise of the day or something like this. Where you could see what other teachers post, or other people who are running the platform they could share one exercise or one message a game or something like this. (KAUNAS)

Retrievability

The final category within the digital theme was the function of retrievability which could allow them to re-access archives, search for key words, and locate the previous sources including written, verbal, and media. The participants from Kaunas and Trento highlighted the need to a repository which (new) members can access and learn from without re-discussing similar pedagogical topics which had already been examined in depth.

Designating repository

You just need to find a good repository. It is out there. You do not need to reinvent bicycle or reinvent wheel. There is a lot of things out there. I mean video record; I mean repository where the open resources should be stored and shared as well. We also should speak about the possibility to close or open all our courses or open resources. This possibility should have two different ways open and close parts of the educational platform. (KAUNAS)

Searching with key words

A search engine that at least lets you find information. In my opinion that's why often people simply get on YouTube and type in the key word, or they get on Google video and type in the key word, to share and find [information]. The success of these big platform is that they have powerful search engines, or that there is a very structured system, that I realize is complex to maintain because these systems evolve, and it becomes difficult to maintain a structured system which at the same time is very collaborative. (TRENTO)

Theme 2 - Pedagogical Needs

The second theme that emerged in the data was the pedagogical needs for functions that help them to learn and develop together with other members using possible digital functions. The participants highlighted the categories including collaboration, multiplicity, formative evaluation, and orientation of discussion as the key pedagogical needs that the ColLab platform needs to offer.

Collaboration

The first pedagogical category of needs is collaboration. For example, one participant in Kaunas like some others highlighted the need for the platform to enable game-based collaboration among the members, while another from Hamburg added to this need that the platform could specifically include a digital space for supporting collaboration to discuss research projects. In addition, another participant from Kaunas also underlined that the platform could facilitate the negotiation of rules and roles within collaborative groups.

Integrating game-based design

If such platform had a section that would contain kind of short blogs or posts or messages about the tool of the day, the exercise of the day or something like this. Where you could see what other teachers post, or other people who are running the platform they could share one exercise or one message a game or something like this. That could be suitable for different kinds of disciplines. Not only for people who teach languages or only for people who teach chemistry or engineering. (KAUNAS)

Opening space for research collaboration

I hope that in the future maybe I will be able to also use the platform more to find new research partner for example for projects, that I'm working on and also to find other researchers, who maybe need my help or support in something. I have another example, but I don't know if it really counts as a collaborate platform. (inaudible). Where you can do some brainstorming like small text fields and you have a survey, short, very short surveys. Lot Brainstorming design out of the box stuff (HAMBURG)

Negotiating rules and roles in discussion

But in our cases, when we speak about higher education, it is important, of course, to have authentication, authorization services in the platform. So, these functional requirements for educational platform like authentication, different authorization levels depend on the roles of users, like students, administration, and academic staff as well. Different functions of audit tracking as well, it is very important and maybe reporting requirements also could be useful when we speak about educational platform functionality. And also, different external interfaces and certification, we now speak a lot, of recognition for external users not only students of higher education. There is not good and ingenious way that we have to monitor, is a bad word, how to maybe facilitate or to guide where communication or collaboration is going, because it gets overloaded with different things overwhelm you and you just give up at the end. (KAUNAS)

Multiplicity

The second category within the pedagogical needs is the multiplicity in the participation which allows for multiple members from different levels to be present including students.

Considering student presence

Being present on the platform. So actually, student attendance and synchronizing the student attendance is important. They will attend more if they get the feedback, but then you cannot give the feedback if they're not present at all. So they kind of chicken and egg problem. We see that if we can take part of it and give individual feedback to groups or individual students, then the learning process. Uh, is performing quite a lot better, but it's a difficult thing to Get it and take it apart and understand what is going on and then give feedback. If you cannot see the students. (STAVANGER)

Considering student presence

... I would like the platform to help me improve, above all with student engagement and interaction on a platform, especially this semester which is a completely different way of teaching and understanding effectively how to manage student involvement. A platform that helps me incentivize, support, promote interactions with students for me would be very important. (TRENTO)

Considering student presence

I am interested in how other students from other universities are serving these case studies or perhaps this challenge-based learning also. So, I think that could be big part of this platform to see what kind of solutions other students from other universities. I think there is missing a word but yeah. At the technical university where we are working and we are teaching management courses technically on a master's level, but that is probably what business schools teach on a bachelor level. So, in order to kind of fill that gap, it is very useful to have more information on where the students come from and if it is a bachelor or master level of course and stuff like that. (HAMBURG)

Sharing experiences and materials

Now, I would say I agree with this sharing of innovative teaching methods. We've just started a new master's course largely based on innovative teaching and we've done an exercise sharing our experiences using existing platforms. A platform that permits increased and lets you share materials would be very useful. But I'd also like to introduce another theme that may be interesting (TRENTO)

Formative evaluation

The third category under pedagogical needs concerns with potential feedback the teaching professionals would seek in the community. The participants, for example, from Kaunas, Hamburg and Tronto, envisaged the community to be a scientific environment where knowledge and practice can be tested and contested.

Facilitating constructive assessment

Teachers could share their practical experience what they do in a real life. Starting from planning, then from implementation of their teaching practices, and then assessment practices. I think this one section could be practical teaching ideas of what's happening in real universities, in real subjects. And second thing, I think an obvious it is very important having a kind of theoretical inputs, insights or theoretical updates. I think these theoretical inputs, like short inputs on various aspects, it is also very valuable. (KAUNAS)

Evaluating participation in discussions

I need to give something back if I experience this material was not good for me, for my situation so I can of course share. But I wouldn't go with the intention to this kind of platform to say, oh your research is very good I just want to give you some I don't know feedback. I also want something for myself of course (HAMBURG)

Evaluating teaching and learning materials

Many of use Jove, a peer-reviewed scientific video journal, which I imagine you are familiar with, where there are many quality scientific videos. So, sharing high quality material, but that there is also [that] when platforms expand with more users there is the risk is finding incorrect and poor-quality information and if you're not truly an expert on that subject then sometimes you use incorrect material. So, I would say the quality of the platform, with a system of peer [review] to evaluate what is put on the platform in a strategic manner because otherwise it fills up with so many things and you can't find anything, and above nothing of any quality. (TRENTO)

Facilitating feedback exchange

...platform like this should work, everyone should contribute so. But first of all, when I use a platform, I use it for myself, because I am looking for information or material or whatever connections, network etc. But of course, I need to give something back if I experience this material was not good for me, for my situation so I can of course share. But what is interesting, is to get some input from others maybe if you display a case for example, then you can get feedback on the concept and other people can also try out what you have been teaching and you can right that learn from each other. (HAMBURG)

Orientation of discussion

The participants expressed the use of this platform as a place to interact with peers to foster learning and information sharing. It was interesting to see that the colleagues mentioned opportunities arising to reflect on own teaching and others' teaching practices and eventually collaboration, also learning from peers as examples.

Discussing teaching practices

So it would be nice, so one aspect, would come to my mind when I was talking of combining teaching and research and it would be cool in the future if there would be more collaboration, for example on this teaching cases. If I put something online and maybe I write a review or an introduction, I reflect myself, I reflect my teaching, I reflect my material. Something like this maybe. (HAMBURG)

Discussing teaching practices

In my opinion, I believe strongly in examples. So if could see other techniques that other professors use, either Italians or foreigners, how they teach an interactive class which technique, tools, to facilitate interaction. I would like, more than theoretical, I would like something practical. Also, a video of a lesson on the Internet with little tips from professors that develop these techniques. I learn best by seeing examples. (TRENTO)

Theme 3 - Professional Needs

Community building

Forums such as this one can offer a convenient community of sharing pedagogical techniques and strategies. The participants agreed that the platform can target a large number of people and encourage free flow of information, but they expressed varying thoughts of organizing areas according to similar disciplines or letting people from different fields to interact freely through discussion of interest.

Grouping as across disciplines

...we travel a lot but at the same time we also tried to have a platform for sharing the ideas for the didactic courses, for the didactic methods which we can use. All of us were from chemistry and technology departments, so it was very interesting to see what others are using for the laboratory works or practical tasks. That could be suitable for different kinds of disciplines. Not only for people who teach languages or only for people who teach chemistry or engineering. Methods and content, those are kind of different things, and we can apply different methods despite the discipline (KAUNAS)

Grouping as specific disciplines

... I think it is very important to be able to separate the collaboration between different interests, because the interest of lectures and interest of the teachers are quite different in education. Ones who do education in sciences, and ones who do education in humanities is also have quite different needs. (KAUNAS)

The second is more of a question, or rather an affirmation that contains a question. Is it probable that at certain levels the platform should be organized by academic areas or thematic areas? And so, a search similar to the one Participant B proposed for example, when searching for information or videos, etc, etc, probably finds a more effective response if the community of practice is able to specialize in a certain didactic area. From a disciplinary perspective, for a generalist community of practice it is probably more difficult to adopt quality-control mechanisms in all areas. (TRENTO)

Social Capital

Collaboration between colleagues in an online platform is more than instructional development. The participants expressed that it is important to be part of the platform, and to be perceived according to their association. The status on the platform may be increased in the same way as when one receives endorsements on LinkedIn. To be endorsed is associated with integration, recognition, and social status.

Securing intellectual property

So that you can have some privacy issues. I share this only with my friends, or with the persons I know and this I share with the community, so with everybody who is now moving on the platform or who is part of the platform. (HAMBURG)

Facilitating personal endorsement

We can share our experience and then we can endorse our skills in that and also, they can add 'some new wishes. Maybe wish list like they want to learn more about any other stuff. In teaching aspect something it is different. It would be useful to have liked a feedback. But in the type of recommendation function like on LinkedIn where people can endorse your skills. (HAMBURG)

Certification

Certification was found to be a good incentive to attract colleagues to join the platform. People who contribute on the platform deserve to be recognized based on their abilities to peer review and share valuable resources. The platform should make use of the analytics to provide members with individual records of participation.

Ensuring peer review

...to use those hours for professional development. They are not being "Like" tracked whatever they are doing it or not, but they are getting paid for this. This is motivating to at least spend some hours into discussing in those forums, looking for new methods, looking for new ways to do something better. (KAUNAS)

Legitimizing copyright

But that would be good, if you can also, if you could add people's content. Of course, giving them credit and all that but kind of really living that "we are" concept. (HAMBURG)

Providing sustainability

And also, it very important data analytics, looking to sustainability and looking to the improvements, looking to the assurance of quality of study process. Analytics is also important to follow and to make changes and conclusions for our study process. (KAUNAS)

Setting links with industry

...they are getting connected with some friends who are working in the industry and they say you are not getting done knowledge about this kind of information and your teacher should also add more information on certain topic.... The student will endorse your skills more. The teacher is capable to give the new information that is relevant to the industries. (HAMBURG)

Offering authentication for promotion

It is very important to find a kind of system among these universities and they can give a kind of promotion or motivation for these teachers to develop. (KAUNAS)

Building a portfolio

it would be great if you could create a portfolio, like I'm thinking of the domains of once (inaudible) where you can kind of curate all that you do and also may be connected to the OKID project. That you can combine what you do in teaching, what you do in research because there is not really a platform that you can use to kind of display the teaching that you do. (HAMBURG)

Ethical issues

Some participants were in favour of the idea of linking the platform with major social networking sites, which may allow for easier collaboration. It is a place, however, where people can share initial thoughts and work in progress, risks for using these sites should be examined.

Ensuring transparency and privacy

If you wanna display your research or teaching, it should be an open platform and you should be able to react to other people. But when you really want to collaborate. I would like it more if we have more kind of the private space or something, where you need actually register like for example on LinkedIn (HAMBURG)

Legitimizing copyright

But that would be good, if you can also, if you could add people's content. Of course, giving them credit and all that but kind of really living that "we are" concept. (HAMBURG)

Featuring social networking

This is one way of collaborating people who are interested in your research. It is less personal than other meanings of communicating, because you usually follow the researchers that are interesting to you and do not interact with them directly but observe what they are doing, see their work in progress, share your work in progress and get a feedback from people who are interested in your work, exchange relevant papers in such a way or irrelevant papers are being shared. In this platform the communication itself is very limited, just basically exchange information. For this digitalization we need more practice to that. ...We also created a platform where they can write their blogs during this week, where they can share their ideas what they have got. So, it was mainly like this. (KAUNAS)

Inducing pedagogically functional spaces

From the analysis above we suggested the following three main functional spaces which COLLAB platform can be built on. These spaces show how Collab participants can engage in the platform for initiating reflection, participating in discussions, and interacting with other academics on their pedagogical issues, questions, and projects. The following figure provides the functions that emerged as key expectations and needs from the data.

Emerging overall communicative functions for Collab platform can be designed as follows:

Socializing space	Discussing space	Disseminating space
<ol style="list-style-type: none"> 1. get to know each other 2. develop network 3. form discussion groups 	<ol style="list-style-type: none"> 1. reflect on pedagogical issues 2. reflect on teaching materials 3. discuss recent research in higher education 	<ol style="list-style-type: none"> 1. share reports from completed discussions 2. share miscellaneous announcements 3. form discussion groups

References

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- Saldaña, J. (2013). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.