

LTSHE

Learning and teaching space in higher education



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

KEY ACTION

Cooperation for innovation and the exchange of good practices

ACTION TYPE

Strategic Partnerships for higher education

WEB INFORMATION

<https://ec.europa.eu/programmes/erasmus-plus/projects/eplu-project-details/#project/2019-1-UK01-KA203-061968>
<https://www.evalag.de/ltshe>



Case Study of Experience: designing, developing and using learning and teaching spaces in higher education

Summary Report

Lessons learnt from the LTSHE project Intellectual
Output 2: case studies from Austria, Germany,
Kosovo, Poland, Portugal, Spain, and the United
Kingdom

**Maria João Rosa
Sofia Bruckmann
Vânia Carlos
Sandra Soares
Alexandra Queirós**

30th November 2022

For further information please contact:

Dr. James Williams
Project co-ordinator

Social Research and Evaluation Unit
Birmingham City University
B15 Bartholomew Row
Birmingham, United Kingdom
B5 5 JU

Tel: +441213315000 / +441213317602

james.williams@bcu.ac.uk

<https://www.bcu.ac.uk/social-sciences/about-us/staff/criminology-and-sociology/james-williams>

Table of contents

| | |
|--|----|
| 1. Introduction | 5 |
| 2. Methodology..... | 6 |
| 3. Main Findings and Recommendations | 8 |
| Appendix 1: Guidelines for stakeholders' interviews and focus groups.. | 12 |

1. Introduction

The aim of the LTSHE project is to develop a set of comprehensive design principles that institutions can draw on to inform the development of new (innovative) learning spaces. The project aim is intended to be achieved by addressing a number of objectives, including the identification and sharing of existing practice and principles in the design and development of learning and teaching (L&T) space across the partnership institutions. Also relevant for the project is to put spaces in perspective, highlighting their role in assuring and improving the quality of L&T. As such, the LTSHE Intellectual Output 2 was designed with the main goal of exploring, through a set of intensive case studies, the experience of designing, developing and using L&T spaces within individual universities, determining what works and what does not work and highlighting examples of practice that indicate attitudes and approaches to L&T space. A set of key-learning points from the partnership will then be drawn as a result of this intellectual output.

This report summarises the main findings and recommendations obtained by the seven LTSHE partners (Birmingham City University; Universidade de Aveiro; Universidad Publica De Navarra; Kolegji AAB; Wirtschaftsuniversitat Wien; Uniwersytet Jagiellonski; Stiftung Evaluationsagentur Baden-Wuerttemberg) when developing their *Case study of Experience: designing, developing and using learning and teaching spaces in higher education*, under the guidelines defined for the LTSHE intellectual output 2. These seven case studies of experience gather, analyse and interpret various stakeholders' perspectives (e.g. assessments, attitudes, approaches) on designing, developing and using L&T spaces. The cases are the following ones:

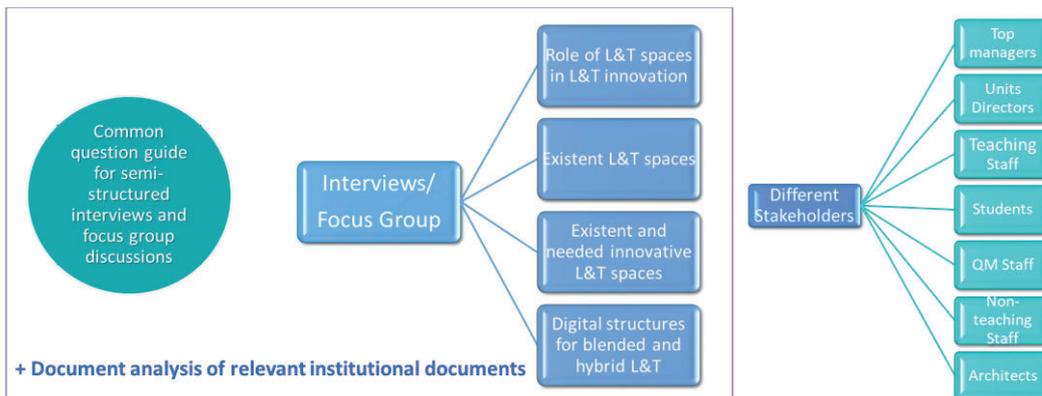
- The Case of Birmingham City University
- The Case of University of Aveiro
- The Case of Jagiellonian University in Kraków
- The Case of Stuttgart Media University
- The Case of Public University of Navarra
- The Case of Kolegji AAB, Pristina
- The Case of Vienna University of Economics and Business

First a brief overview of the general methodology adopted for the LTSHE intellectual output 2 will be presented, followed by a section with the main findings and recommendations derived from the seven cases of experience. Detailed information on each case of experience can be found in the individual reports developed by each partner, available in the project's website: <https://www.evalag.de/en/research/ltshe/experience-case-studies-of-lt-spaces>.

2. Methodology

Bearing in mind the main goals and function of the LTSHE intellectual output 2, namely the elaboration of seven intensive case studies of experience about designing, developing and using L&T spaces in higher education, it was decided from the outset to follow a methodological approach involving multiple sorts of data collection, treatment and analysis for the development of these case studies of experience (see Figure 1).

Figure 1 | Methodological approach used for the LTSHE intellectual output 2



For each case, relevant institutional strategic documents have been compiled and content analysed, following the same approach undertaken for the development of the partners contribution for the LTSHE intellectual output 1 - *Exploration of policy and practice: learning and teaching spaces in higher education*. More specifically, these documents have been analysed in order to find structured information on each case's (university) concerns and strategies on L&T spaces and their contribution to the enhancement of innovative L&T strategies and environments. Typically a search per keyword was performed to the documents focused on the following items (or a subset of them, depending on the case study): area; digital transformation; digitalisation in higher education; digitalisation of L&T formats; higher education funding programmes; higher education law; infrastructure; innovative; L&T in higher education; L&T spaces; pedagogic innovation; quality assurance of digital(ised) L&T; quality assurance of L&T spaces; room; self-directed learning; space; space design; spatial flexibility; structure; teaching; university L&T strategy; time flexibility; university didactics; university organisation; university strategy.

Secondly a set of semi-structured interviews and guided focus group discussions were conducted with individuals and stakeholders' groups representatives, with the aim of gathering, analysing and interpret various stakeholders' perspectives on designing, developing and using L&T spaces at the different case studies of experience. The number of interviews and focus group discussions varied according to the specific situation of each case, but generically included institutional top managers; organisational units' directors (e.g. faculties, schools, departments, depending on the organisational structure of the university); teachers; students; non-teaching staff; quality management staff; and architects.

Guidelines have been developed for each interview and focus group discussion (see appendix 1), organised along a number of pre-determined topics/questions that were flexibly used and applied by the interviewers in the seven case studies as appropriate to experience the interviewees' opinions and assessments and ensure a dialogue.

The main insights and ideas taken from the treatment and analysis of all the information and data gathered allowed to derive a set of recommendations for the design, implementation and use of L&T spaces in higher education. These are meant to be used to compose a guidelines for the design, implementation and use of L&T spaces in higher education (LTSHE intellectual output 4: *Principles, Politics and Practice of the Design, Implementation and Use of Learning and Teaching Spaces in Higher Education. Lessons learnt from the LTSHE project including higher education case studies from Austria, Germany, Kosovo, Poland, Portugal, Spain, and the United Kingdom*).

3. Main Findings and Recommendations

In this section of the report, the **main findings** from the seven case studies of experience will be pinpointed, as well as a range of **recommendations** on the design, use and implementation of L&T spaces meant to inform the next stages of the LTSHE project.

3.1 Main findings

Overall, it was found that for many years there hasn't been that much discussion on L&T spaces, nor on their potential for improving the quality of L&T. In the majority of the case studies, reference has been made to the lack of specific national regulations on how to design and implement L&T spaces. Moreover, despite the fact that institutions and study programmes are under accreditation and/or evaluation processes, L&T spaces seem to be only marginally approached within such exercises, even if spaces is where L&T takes place. At institutional level, however, the case studies refer that institutional strategic documents are starting to explicitly refer to concerns with L&T spaces, in their relation with L&T and pedagogical innovation. This is of course more evident in some cases than in others, as explicitly referred to in each individual report.

Different levels of analysis have been considered in the seven case studies of experience when discussing their L&T spaces. In fact, L&T spaces are not only classroom spaces and should be considered under a more broad approach that considers four scales of analysis: i) the university and the city; ii) the campus; iii) the buildings; iv) the classrooms. Although these four scales have only been explicitly addressed in one report (Public University of Navarra), the analysis conducted in all of them implicitly focus the four. In fact, both the analysed strategic documents and the interviews/focus groups address not only classrooms as formal spaces for L&T, but also the buildings in which these classrooms are and the informal spaces they contain (or their absence), the way the buildings are put together to form a campus (or its absence), and the multiple forms of interaction (or their absence) between the university and the city where it is located.

Most of the different groups of stakeholders interviewed under the LTSHE project seem to be aware that L&T is affected by physical spaces. For most stakeholders, spaces do matter and have an impact on learning effectiveness and students satisfaction. Active-based pedagogic methodologies do benefit from the existence of flexible, well-equipped spaces, both in terms of furniture and technology. However, there seems also to be a certain lack of knowledge and experience on how to deal with the effects of space in L&T in practice. Teachers training seems then to be fundamental for an adequate use of available and future innovative spaces.

All the case studies of experience refer they have sufficient and adequate L&T spaces to accommodate their different degree programmes and offer a quality education to their students. Also, examples of innovative L&T spaces are put forward in the seven case studies, although the number and characteristics of such spaces differ considerably among the cases. It is also a fact that in most of the case studies, there is still a significant number of L&T spaces somehow outdated to allow a sustained change from a teacher-centred to a student-centred

approach. In fact, problems are identified regarding classrooms, which tend to be considered most of the times not well-equipped to allow for the development of innovative pedagogic methodologies. For example, their furniture is too heavy to allow for the reconfiguration of layouts during classes or even between classes. They also do not always have the needed electrical sockets to allow students use their digital devices (tablets; computers). Of course, this is more evident in some cases than in others.

Examples of common informal spaces for autonomous and/or collaborative work by students have been referred to in the seven case studies. However, the final impression is that these spaces are still not the norm and that the existent ones should be multiplied in each institution. Mention was made to the need for these spaces to have comfortable furniture, Wi-Fi connection and electrical sockets.

In the different case studies, the library emerged as a hallmark of a significant L&T space, highly visible mainly in the cases of the universities organised as a campus.

The case studies' outdoor spaces were also subject of analysis. The overall conclusion is that despite their beautifulness and attractiveness, especially in the cases of the universities organised as a campus, both due to buildings and open areas, their full potential as spaces for informal but also formal L&T has not yet been fully accomplished. The need for urban furniture was referred to as a way to improve the use of these spaces by all the academic community.

As referred in all the reports, the COVID-19 pandemic changed the way technology is used and how different stakeholders view space and how it is used. Moreover, the pandemic gave a very significant boost to the digitalisation of L&T, allowing to implement virtual L&T spaces, as well as to rethink existent physical spaces in order for them to allow hybrid formats of L&T. This momentum, brought by the pandemic, should continue in the future, enabling seamless learning and connecting physical and virtual spaces. However, it must be acknowledged that seamless learning brings opportunities but also a number of challenges, including not only the need to rethink how spaces are used in L&T, both physical and virtual, but also the need to reconceptualise L&T.

To summarise, it is fair to say that not all case studies are in exact the same situation regarding their L&T spaces and the concerns expressed at institutional level with their design, implementation and use. However, all of them agree that there is room for improvement and that improvements are needed in terms of a comprehensive and transparent strategy for the design and implementation of physical L&T spaces and the digitalisation of L&T spaces. That is why in all of the cases recommendations have been put forward, the more common and relevant being synthesized in the following section of this report.

3.2 Recommendations

- A comprehensive and transparent strategy for the design and implementation of L&T spaces and digitalisation should be developed, both at national and institutional levels.

- A campus management model should be defined, and should include the buildings and the outdoor spaces, while also accounting for the possibilities of the campus expansion/contraction.
- Universities and the cities where they are located should undertake joint actions planning in order to optimise the existing resources of both parts. Measures should be taken to promote the integration of the campus and city life.
- Knowledge about L&T spaces in higher education, namely their impact on L&T is still limited; as such, an investment in research in this area is recommended to establish evidences able to support decision making at this level.
- The renovation and/or construction of L&T spaces should be made in consultation with the groups of stakeholders that will use them, namely the staff (teaching and non-teaching) about their offices, teachers and students about classrooms and other types of formal L&T spaces, and students and teachers about common informal L&T spaces, both indoor and outdoor.
- Spaces design should take into consideration the innovative methodologies of L&T that will be applied in them; spaces should be designed according to their future use and the way L&T will be conducted within them. Moreover, they should be designed to enable and support different types of active learning, encouraging collaborative work rather than a focus on the lecturer.
- Spaces should answer to the diversity of its users, namely the social, cultural abilities and ages of users.
- Special attention should be given to spaces' physical comfort (e.g. acoustics, light, temperature), flexibility, the existence of multiple sources of electrical sockets, and a good Wi-Fi connection.
- The renovation and/or construction of L&T spaces should consider that different types of spaces coexisting in higher education nowadays: physical, virtual and hybrid. Classrooms and lecture halls should be designed in such a way to allow for hybrid L&T, spaces for autonomous and collaborative work should be equipped with Wi-Fi, comfortable furniture and electrical sockets, and the universities should have spaces for students to attend online courses, if needed, without having to go home. These changes should nevertheless be accompanied by a rethinking about the added value of on-campus L&T and to strategically pursue the concept of seamless learning beyond technological and procedural implications.
- Universities' spaces should be cosy and pleasant so that students and teachers want to spend their time there. In particular, attention should be put in the design of spaces for students autonomous and collaborative work, as well as in the design of informal spaces, namely outdoor ones. This enables the creation of residency, which may potentially contribute to better academic performance.
- The possibilities brought by the COVID-19 pandemic regarding the use of online platforms to support L&T, should be cherished and reinforced, due to their potential for

innovating L&T, improving its quality. However, attention should also be paid to the risks entailed by the use of virtual L&T spaces.

- Spaces need to be well identified, so it becomes easy for each user to find the space he/she wants to go to. Special attention should be given to provide adequate information on spaces to people with disabilities.
- Special care should be given to the access to L&T spaces of people with disabilities (e.g. visually impaired or otherwise handicapped people).
- Information should be given to all stakeholders, but foremost to students on the different available spaces for them to use, including for autonomous and collaborative work, but also for socialising.
- Professional training should be provided to teachers on innovative L&T methodologies, which should also include how to use and take the highest possible advantage of innovative L&T spaces. The existence of a support unit dedicated to pedagogical innovation in the universities could be a good approach to support teachers in this respect.
- Spaces use and their effectiveness in promoting better quality L&T should continuously be monitored and evaluated.

Appendix 1: Guidelines for stakeholders' interviews and focus groups

1.1 Outline for the institutional top managers semi-structured interviews

Introduction

This interview takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education** that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design, implementation and use of L&T spaces at the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the university
2. Future/intended learning and teaching spaces at the university

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of ...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching spaces.

1. Could you briefly describe the policy and strategy of your institution for learning and teaching?

[discussion]

2. Could you briefly describe the policy and strategy of your institution for the design and implementation of learning and teaching spaces (physical, virtual, hybrid)? Who suggests/decides what and on what basis?

[discussion]

3. What is your opinion on the role of learning and teaching spaces (physical, virtual, hybrid) in supporting and/or promoting new approaches to learning and teaching at your institution?

[discussion]

4. How would you describe the existent learning and teaching spaces (physical, virtual, hybrid) and their relevance and usefulness for the development of an adequate and quality learning and teaching process at your institution?

[discussion]

5. Does your institution have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. (strategic) What reasons led to the creation of new learning and teaching spaces at your institution? For what purposes?
- b. (operational level) What kinds of spaces are they? What type of furniture/design was selected for them and why? What resources and/or technologies are available in the spaces, and to serve what pedagogical models? (if adequate)

- c. (micro-level) How are the spaces used? Who uses them? What assessment is made on the impact of using the new spaces for the improvement of learning and teaching in the institution?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

6. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your institution needs? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

7. What kind of support do you think is needed for the use of these new learning and teaching spaces, taking advantage of their potential in pedagogical terms?

[discussion]

8. What type of digital structures are needed both for blended and hybrid learning and teaching?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this interview.

1.2 Outline for the Directors of Schools/Departments Units guided focus group discussion

Note: The focus group should include Directors from organic units with new (innovative) learning spaces and from organic units that do not have such spaces.

Introduction

This focus group takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education**, that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design, implementation and use of L&T spaces at the organic unit/university level in the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the organic unit/university level
2. Future/intended learning and teaching spaces at the organic unit/university level

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the organic unit/university level at the University of ...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching spaces.

1. What is your opinion on the policy and strategy of your institution for learning and teaching?

[discussion]

2. What is your opinion on the policy and strategy of your institution for the design and implementation of learning and teaching spaces (physical, virtual, hybrid)?

[discussion]

3. What is your opinion on the role of learning and teaching spaces (physical, virtual, hybrid) in supporting and/or promoting new approaches to learning and teaching at your institution?

[discussion]

4. How would you describe the existent learning and teaching spaces (physical, virtual, hybrid) and their relevance and usefulness for the development of an adequate and quality learning and teaching process at your institution?

[discussion]

5. In particular, does your organic unit have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. (strategic) What reasons led to the creation of new learning and teaching spaces at your organic unit? For what purposes?
- b. (operational level) What kind of spaces are they? What type of furniture/design was selected for them and why? What resources and/or technologies are available in the spaces, and to serve what pedagogical models? (if adequate)
- c. (micro-level) How are the spaces used? Who uses them? What assessment is made on the impact of using the new spaces on improving learning and teaching in the organic unit?

[discussion]

Part II – Future/intended learning and teaching spaces at the organic unit/university level at the University of ...

6. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your organic unit/university needs? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

7. What kind of support do you think is needed for the use of these new learning and teaching spaces, to take advantage of their potential in pedagogical terms?

[discussion]

8. What type of digital structures are needed both for blended and hybrid learning and teaching?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.

1.3 Outline for the Teachers guided focus group discussion

Introduction

This focus group takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education** that aims to develop a comprehensive set of design and

implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design and implementation of L&T spaces at the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the university
2. Future/intended learning and teaching spaces at the university

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of ...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching spaces.

1. What is your opinion on the role of learning and teaching spaces (physical, virtual, hybrid) in supporting and/or promoting new approaches to learning and teaching at your institution?

[discussion]

2. How would you describe the existent learning and teaching spaces (physical, virtual, hybrid) and their relevance and usefulness for the development of an adequate and quality learning and teaching process at your institution?

[discussion]

3. Does your institution have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. What were the reasons behind their design and implementation?
- b. Have you ever used any of those spaces?
- c. If yes, for what purposes?
- d. Again, if yes, what is the benefit of using those spaces? How do you describe the impact of using the new spaces in terms of learning and teaching? And how did you assess it?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

4. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your institution needs? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

5. What kind of support do you think is needed for the use of these new learning and teaching spaces, to take advantage of their full potential in pedagogical terms?

[discussion]

6. What type of digital structures are needed both for blended and hybrid learning and teaching?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.

1.4 Outline for the Students guided focus group discussion

Introduction

This focus group takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education** that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design, implementation and use of L&T spaces at the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the university
2. Future/intended learning and teaching spaces at the university

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of ...

1. Do you consider that the learning spaces at your university correspond to the needs of a student in higher education? Consider classes, collaborative work, autonomous work and please comment on this.

[discussion]

2. In your opinion, do these spaces influence your learning? How do you consider them to be relevant and useful in regard to teaching at your institution?

[discussion]

3. Does your institution have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. Have you ever used any of those spaces?
- b. If yes, for what purposes?
- c. Again, if yes, what is the benefit of using those spaces? How do you describe the impact of using the new spaces in terms of learning?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

4. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your institution needs? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

5. What type of digital structures or technologies would support you in your learning?

[discussion]

6. What kind of support do you think is needed for the use of this new learning and teaching spaces, to take advantage of its full potential in terms of learning? (In terms of technical staff, resources, teaching competences,...)

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.

1.5 Outline for the QM staff/Pedagogy guided focus group discussion

Introduction

This focus group takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education** that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design and implementation of L&T spaces at the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the university
2. Future/intended learning and teaching spaces at the university

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of ...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching spaces.

1. What is your opinion on the role of learning and teaching spaces (physical, virtual, hybrid) in supporting and/or promoting new approaches to learning and teaching at your institution?

[discussion]

2. How would you describe the existent learning and teaching spaces (physical, virtual, hybrid) and their relevance and usefulness for the development of an adequate and quality learning and teaching process at your institution?

[discussion]

3. Does your institution have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. What were the reasons behind their design and implementation?
- b. Have you ever used any of those spaces?
- c. If yes, for what purposes?
- d. Again, if yes, what is the benefit of using those spaces? How do you describe the impact of using the new spaces in terms of learning and teaching? And how did you assess it?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

4. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your institution needs? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

5. What kind of support do you think is needed for the use of these new learning and teaching spaces, to take advantage of their full potential in pedagogical terms?

[discussion]

6. What would you recommend for the design, implementation and use of these new learning and teaching spaces with respect to requirements of quality assurance and management and enhancement?

[discussion]

7. What type of digital structures are needed both for blended and hybrid learning and teaching?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.

1.6 Outline for the (directly involved) non-teaching staff guided focus group discussion

Note: This focus group should be conducted with non-teaching staff with a direct role in supporting learning and teaching and/or advising L&T strategic decision-making.

Introduction

This focus group takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education**, that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design and implementation and use of L&T spaces at the University of ...

The interview is composed of two parts:

1. Existing learning and teaching spaces at the university
2. Future/intended learning and teaching spaces at the university

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of ...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching L&T spaces.

1. What is your opinion on the role of learning and teaching spaces (physical, virtual, hybrid) in supporting and/or promoting new approaches to learning and teaching at your institution?

[discussion]

2. How would you describe the existent learning and teaching spaces (physical, virtual, hybrid) and their relevance and usefulness for learning and teaching at your institution?

[discussion]

3. Does your institution have new (innovative) learning and teaching spaces (physical, virtual, hybrid)?

If yes, ...

- a. What were the reasons behind their design and implementation?

- b. Are you involved in the support of any of those spaces?
- c. If yes, what are your main tasks? And why are they relevant?
- d. Again, if yes, what are the main difficulties you face in relation to your tasks related to those spaces?
- e. Who uses these spaces and for what purposes? Are they used regularly?
- f. What would you recommend to improve the spaces?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

- 4. What new (innovative) learning and teaching spaces (physical, virtual, hybrid) do you consider your institution needs? What should they contain, encompass, offer?

[discussion]

- 5. What kind of support do you think is needed for the use of these new learning and teaching spaces, to take advantage of their full potential in pedagogical terms? What do you see as your role in these new spaces?

[discussion]

- 6. What type of digital structures are needed both for blended and hybrid learning and teaching? What are your major concerns and suggestions?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.

1.7 Outline for the Architects structured/semi-structured interviews

Introduction

This interview takes place in the **context** of the Erasmus+ project **Learning and Teaching Spaces in Higher Education** that aims to develop a comprehensive set of design and implementation principles that institutions can draw on to inform the development of new learning and teaching spaces.

The **purpose** of this discussion is to collect your perceptions on the design, implementation and use of L&T spaces at the University of ...

The interview is composed of two parts:

- 1. Existing learning and teaching spaces at the university
- 2. Future/intended learning and teaching spaces at the university of...

I will ask the questions, and the participants may answer freely, engaging in the discussion with no predefined order. The expected duration is about 60 minutes.

Part I – Existing learning and teaching spaces at the University of...

Please discuss the following questions, considering: i) the digitalisation in higher education; ii) the importance and status of didactics, pedagogy, and curriculum design in higher education; and iii) the importance and status of physical, virtual, hybrid learning and teaching spaces.

- 1. Usually how do you implement the design process of new learning spaces? Do you include, for example meetings with teaching staff, technical staff?

[discussion]

2. How would you describe the state-of-the-art of design and implementation of learning and teaching spaces (physical, virtual, hybrid) at higher education institutions from the perspectives of architectural theory and practice?

[discussion]

Part II – Future/intended learning and teaching spaces at the University of ...

3. From the perspectives of architectural theory and practice, what new (innovative) learning and teaching spaces (physical, virtual, hybrid) would you suggest or recommend to design and implement at higher education institutions? And for whom or for what purposes? What should they contain, encompass, offer?

[discussion]

Thank you very much for your participation in this discussion! Please feel free to send us an email if you wish to be informed of the results of this focus group.