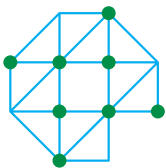Blend your education

Identification and selection tool for learning spaces

Instruction

Acceleration plan
Educational innovation with ICT

Facilitating professional development of lecturers

Identification and selection tool for educational spaces

TARGET GROUP	Logistics services and lecturers
FORM	Tool
TIME NEEDED	30-60 minutes
LEVEL	Course, programme and institution

Background

A growing number of educational institutions are exploring how their learning spaces can best support learning processes. This results in greater flexibility in all kinds of learning spaces and the facilities available in these spaces. The SURF Special Interest Group for Learning Spaces[1] defines learning spaces as any physical place, with or without technology, that fosters learning processes. They use the term 'innovative learning spaces' to signify their alignment with educational innovation. Terms often used in relation to educational spaces are *formal* and *informal* spaces. Traditionally, a room in which classes are taught is considered a *formal* teaching space. An *informal* education space is, for example, a learning space where students can meet without any preconceived plan behind the space. In recent years, the boundaries between formal and informal learning spaces have become increasingly blurred. Moreover, there is a visible emergence of physical learning spaces as a separate domain of knowledge, which means lecturers already consider the design of the physical space in relation to the designed learning activities during the design process. It is therefore important to gain insight into an institution's learning spaces.

Method

The toolkit in this product is designed to identify the learning spaces in an institution, after which it can be used for selection. It therefore serves multiple target groups, such as schedule managers and lecturers, and can support better alignment of the intended education and its delivery in a learning space.

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[1] More about Learning Spaces | SURF Communities

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Indeed, it is often not always immediately clear which learning activities are or are not well-suited to take place in certain learning spaces, let alone with which technology this can be supported.

First, it can be used as a tool to identify and gain insight, for example by a logistics department, into what is or is not possible in a learning space in relation to scheduling. But lecturers can also use it as an identification tool when designing education and want to know whether the intended activities are actually possible in the available learning spaces. When the tool is deployed in this way, it is advisable to first review the criteria relevant to the context and possibly add to or modify these criteria, as necessary. Conversely, it is also possible for lecturers to let schedule managers know what kind of facilities and rooms they need so that they can reserve more appropriate learning spaces.

The product can also be used as a selection tool for lecturers who have already elaborated a particular educational design and need to find a suitable learning space based on the intended activity in the short term. See for instance TU Delft's tool. The lecturer can retrieve information about the space and, ideally, book it directly through a reservation system.

Explanation

Characterisation of learning spaces in this product is based on three criteria: capacity (how many people can fit in the space), learning activities (what activity can take place there) and technology (what activities can be supported with digital tools). These three criteria were chosen for reasons of simplicity and clarity and so that the choice could be reasoned from an educational perspective. The criteria are explained below.

1. Capacity

Capacity refers to the number of people who can be accommodated in the learning space. We use seven options to best assess whether a room is a good fit for the group size. The different options for this variable are:

- XXS (<10)
- XS (10-30)
- S (31-60)
- M (61-90)
- L (91-150)
- XL (150 -300)
- XXL (>300)

2. Learning activities

Learning activities prescribe the extent to which a certain type of activity is possible in a learning space. We use the *Conversational Framework* classification for this purpose. This classification consists of six types of learning activities, namely:

- **Acquiring knowledge**: students acquire knowledge by studying a provided source of information. This can be a video, a podcast, an article, a website, and so on. Students are thus passive recipients of knowledge, which often makes this activity the least activating in practice.
- **Research**: when researching a topic, students also acquire knowledge but do so through active, self-directed study, analysing, relating and comparing data and information. They look for sources themselves and in so doing gain new insights.
- **Collaboration**: students work together towards a specific tangible result, such as a paper, a video or a product. In this context, collaborating is both an end and a means.
- **Discussion**: students discuss ideas, ask questions, substantiate their thesis and engage in conversation. They collaboratively build knowledge during their interactions.
- **Practice**: students link theory to practice and work on the application of knowledge and skills in specific assignments. An important aspect of this is continuous feedback, which they get from the lecturer, peer students or from the assignment itself.
- **Production**: students produce a product that can be evaluated by the lecturer or peer students.

3. Technology

By technology we mean digital tools that can support a particular form of learning. We identify four types:

- **Presentation**: technology makes it possible to display a presentation, for example using a beamer or on a monitor. Displaying videos or other types of media can also be considered here.
- **Collaboration**: technology allows students to work together on an assignment in subgroups, for example because each group has its own projector or monitor.
- **Simulation**: the technology in this space is equipped for specific use in the context of a training course and therefore not suitable for generic use. This might be, for example, a practice room or a room with AV/VR/XR technology, depending on your institution.
- **Multi-location learning**: the room is sufficiently equipped to send audio, images and content to and receive them from participants at other locations. These may include groups of students on other campuses and individual students remotely.

To determine the suitability of a learning space, we consider the learning activities and technological functionalities based on a three-point scale: not suitable (●), somewhat suitable (● ●) and highly suitable (● ● ●). It is possible, for each criterion, to search according to the level the learning space must satisfy as a minimum. Institutions can of course adjust the above classification to their own preference, for instance by adding new criteria. Consider other variables such as:

- **Domain-specific versus generic**: to what extent can a learning space be used for only one particular context, such as a course. Think of a dissecting room for a Medicine course versus a generic lecture theatre, for example.
- **Flexibility**: to what extent can the furniture and layout of the learning space be rearranged flexibly to suit a specific purpose.
- **Assessment spaces**: describes whether certain teaching spaces are suitable for different forms of assessment.
- **Other models/characterisations from research**: there are many different types of models/characterisations for what you can do in a learning space. Some lecturers or teams of lecturers have made a specific choice, in which case it may make sense to include that model or characterisation in the table. Consider, for example, Thornburg's (2013) classification: Campfire (expert stories and sharing), Watering Hole (collaboration and discovery), Cave (concentrated work), Life (application in practice) and Mountaintop (showing).

By using the above criteria to identify the characteristics of learning spaces, a good match between educational needs and facility can then be easily found. Once filled in, the identification tool becomes a selection tool, potentially enhancing the exchange between education output and education logistics. Of particular importance is that lecturers can use search terms that relate to their own teaching practice and are relevant to the choice of a learning space. A good example is the TU Delft selection tool.

Example of an application

Let us consider a case study where a lecturer is looking for a suitable learning space for his teaching. In the system (see table on the next page), the lecturer can indicate:

- What minimum capacity the space should have.
- What types of learning activities should be supported.
- What kind of activities technology can be used for.

In this case, it is a course involving 30 students, and it is important that both knowledge acquisition and collaboration can take place in the learning space. This need not be supported by technology. The lecturer fills in these criteria and checks which rooms meet the criteria. In this case, one of the workgroup rooms seems promising. If the lecturer clicks on a room, he is taken to a page with more information, such as the exact capacity and facilities.

For a second lecturer, it is also important that collaboration and knowledge acquisition be possible in the learning space, but she has the additional criterion that students should also be able to participate online. She initially believed that the hybrid-function workgroup spaces would be suitable for this, but now sees that these spaces are not suitable for collaboration. Based on the criteria, she chooses the Virtual Classroom.

Space	Capacity	Learning activities:						Technology:			
		Acquiring knowledge	Research	Colla-boration	Discussion	Practising	Production	Presentation	Colla-boration	Simulation	Multi-location learning
Workgroup space new standard, Bolognalaan 101, room 0.202	XS (<30)	●●● (green)	●● (orange)	●●● (green)	●●● (green)	●● (orange)	●● (orange)	●● (orange)	● (red)	● (red)	●● (orange)
Workgroup space with hybrid function - Buys Ballotgebouw, room 017	S (30-60)	●●● (green)	●● (orange)	● (red)	●● (orange)	● (red)	● (red)	●● (orange)	● (red)	● (red)	●●● (green)
Computer lab, Buys Ballotgebouw, room 1.03	S (30-60)	●● (orange)	●● (orange)	● (red)	● (red)	●●● (green)	●●● (green)	●● (orange)	● (red)	●●● (green)	● (red)
Lecture hall, Bolognalaan 101, room 0.204	M (60-90)	●●● (green)	● (red)	● (red)	● (red)	● (red)	● (red)	●● (orange)	● (red)	● (red)	● (red)
Active Learning Classroom, Bolognalaan 101, room 2.049	S (30-60)	●● (orange)	●● (orange)	●●● (green)	●●● (green)	●● (orange)	●● (orange)	●● (orange)	●●● (green)	● (red)	● (red)
Virtual Classroom, Buys Ballotgebouw, room 3.25	S (30-60)	●●● (green)	● (red)	●● (orange)	●●● (green)	● (red)	● (red)	●●● (green)	●● (orange)	● (red)	●●● (green)

Table 1: Example of identification of learning spaces at Utrecht University.

Want to read more?
- TU Delft's 'Cookbook Education Spaces' takes a closer look at indexing learning spaces (in Dutch)
- This article sets out scheduling for learning spaces intended for blended learning (in Dutch)

Justification and sources

This product was created in collaboration with the SURF Special Interest Group Learning Spaces. This started with an attempt to create a characterisation for learning spaces, which eventually resulted in this approach as an identification and selection tool. The criteria adopted were not arbitrary, but carefully chosen; 'Size', 'Didactics' and 'Technology' were the guiding categories. The associated models can of course be adapted as desired.

Laurillard, D. (2002). *Rethinking university teaching: A conversational framework for the effective use of learning technologies.* Routledge.

Thornburg, D. (2013). *From the campfire to the holodeck: Creating engaging and power-ful 21st century learning environments.* John Wiley & Sons

The Acceleration Plan for Educational Innovation with ICT is a four-year programme focused on bringing initiatives, knowledge, and experiences for digitalisation together. The programme is an initiative of SURF, the Netherlands Association of Universities of Applied Sciences, and the Association of Universities, and is organised in eight acceleration zones. In the zone Facilitating professional development for lecturers, 16 institutions are working on improving the professional development of lecturers in Dutch higher education.

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