

2 Working in partnership



THIS SECTION AT A GLANCE

- we identify the need for learning space projects to involve a wide range of stakeholders from an early stage;
- we discuss a model for the type of engagement a project wants to achieve;
- we look at some techniques for gaining effective stakeholder participation.

Expectations from reading this section

Professionals charged with leading a learning space project may be required to work with a range of stakeholders across functional areas that are outside their day to day experience. This Toolkit has a focus on helping those with responsibility for the management of the university estate, IT infrastructure and audio visual support work effectively together but a successful project will need to involve a much wider range of stakeholders.

Each of these stakeholders may have very different perspectives on the project and understanding and reconciling these views takes time. A strong desire to meet deadlines and manage a tight budget may encourage project leaders to want to get on with the build and solve any outstanding issues later. This section is intended to highlight the importance of ensuring that stakeholder voices including academics, students and support staff are heard and acted upon from the beginning of the project if costly mistakes are to be avoided.

In particular we suggest that:

- project teams should be aiming for highly participatory approaches to stakeholder engagement rather than token information giving;
- designers should be looking to stimulate creative thinking if we are to go beyond simply creating new versions of what we already have;
- there are many simple approaches that can be used effectively to help stakeholders understand one another's viewpoints and work collectively to make better decisions.



We cannot design effective spaces for learning unless we recognize that many stakeholders hold a valuable piece of the puzzle - their input is essential. (Bickford and Wright 2006²⁹)

²⁹ Bickford, D. J., and Wright, D. J. (2006) *Community: The Hidden Context for Learning Spaces in Oblinger, D.G. (ed) Learning Spaces*. Washington DC: EDUCAUSE: www.educause.edu/research-and-publications/books/learning-spaces/

2.1 Getting the right people to the table

The stakeholders involved in a learning space project can be viewed as part of a university ecosystem. In broad terms the framework of this ecosystem looks something like this:

Strategy level	A learning spaces strategy founded on sound educational principles, linked to the learning and teaching strategy and preferably also embedded in the estate strategy. An academic lead who will champion each individual project.
Management level	The central professional services who will be responsible for delivering individual projects.
Practitioner level	Individual academics and students who participate in working groups etc. for individual projects and who are ultimately the end users of the space. Support staff who deliver services in or to the learning space.

Thinking in these terms is a starting point towards knowing who needs to be involved; although the simplified framework does not cover all stakeholders. An example list of stakeholders for a learning space project includes those who play a role in:

- studying, using the space, often over an extended day;
- academic leadership (this may be discipline specific or related to generic space);
- teaching, or some form of guided learning, in the space;
- managing the fabric of the buildings;
- managing the IT and electrical infrastructure;
- learning support including audio visual support;
- timetabling the space;
- providing learning resources;
- providing technical support in the space;
- providing other forms of student support in or related to the space;
- cleaning, setup and maintenance of the space;
- security of the space;
- health and safety in the space;
- financing the project and recurrent costs;
- supporting the project as an external specialist;
- events and conferences;
- student and academic services events (such as career fairs).

This initial list highlights a critical point: the complexity of learning space projects defies the ability of any one perspective to capture all of the necessary requirements and absorb enough information to make informed decisions. A learning space project demands a team approach and that means cross-functional working by academic and support services and the active participation of learners themselves. For many of the stakeholders it will be their first experience of this type of project (indeed a major new build or refurbishment is often a once in a career experience) and every project is unique. Effective engagement with all of these stakeholders is essential to the success of the project.

For the Loughborough Design School (with Burwell Deakins Architects), the vital principles for a collaborative project included: getting stakeholders on board who believed in progress; identifying project champions to promote the idea; creating a team that would actively engage and ensuring there was a fallback position or a *plan B*.

A number of contributors to this Toolkit felt that AV and IT people are often brought into projects too late in the day. Eleanor Magennis certainly thinks they need to be brought in earlier and the timing of their involvement will be affected by whether the project is refurbishment or new build: *“The best of them aren’t just delivering something; they are contributing to what is possible”*.

Not only is it vitally important to get the right people around the table, but also everyone needs to understand each other and not leave things to be misinterpreted or misunderstood. A common language is needed so that if a *flexible* space is being developed, then everyone has, and understands, the same definition of *flexibility* in this context.

These are some of the things Toolkit contributors told us about working together and wider stakeholder engagement:

- A challenge many stakeholders have is simply getting to the table.
- People often don’t consult students at all.
- Communication is always a big issue. It can be good at the start then fall away.
- You need to communicate several times even if you are saying the same thing over and over again.
- Concerns are often brought to the table too late when decisions have already been made.
- People deliberately exclude AV because they know it will be expensive but it actually costs more to get it right later.
- Project boards can be very large or very formal; people are often afraid to contribute in these circumstances.
- Project board meetings can often have quite an aggressive atmosphere.
- Students are valuable in that they will state the obvious whereas other people might be too concerned about their own jobs and roles.
- You need to take stakeholders through it many times and ask them to relay it back to you so that you are sure they understand.
- You need to keep in mind the most significant things that you need to deliver. A one page summary that you keep going back to can be useful to focus you on the core things.
- Academics explaining the space to other colleagues is much better than it coming from Estates.
- Meeting in the actual space when and where possible is always helpful when discussing a range of details.
- When meeting with construction teams, there needs to be a clear understanding of what has been agreed at every point before moving onto the next item.



“...the process was made smoother by a flexible and professional estates department working hard to deliver the pedagogic vision. Where elements of the vision were lost these were due to safety or budgetary reasons rather than intransigence or taking of easier options.” (Martin 2010³⁰)



“Even though all of the departments involved were on the project team, the information didn’t always filter down to the people who actually had to do the work.” Toolkit contributor

2.2 Managing participation

It is important to determine exactly what level of engagement the project is aiming to have with each of its stakeholder groups in order to design and implement an effective strategy for ensuring such engagement.

A useful starting point may be the concept of a *ladder of participation* which has been widely used and adapted in many contexts since it was first conceived by Arnstein³¹ in 1969. The simplified version shown below has been adapted from work at Birmingham City University³².

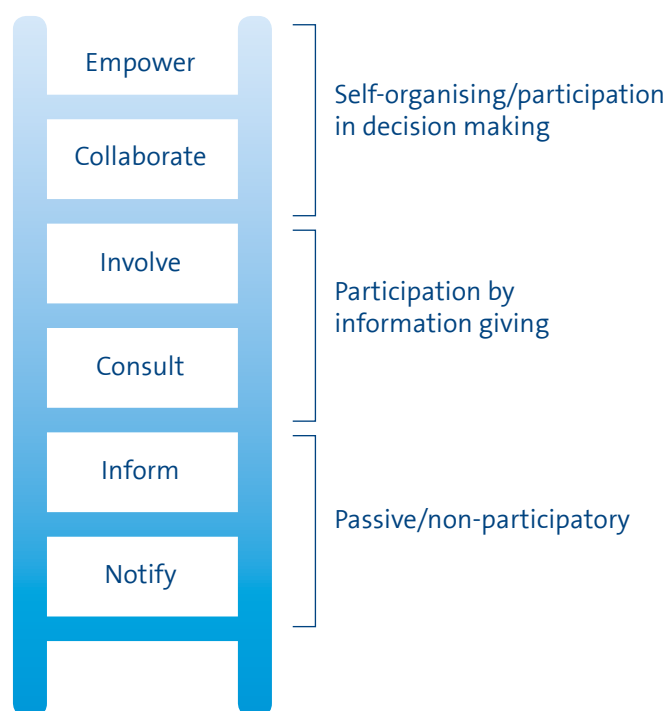


Figure 2: A representation of Birmingham City University's adaptation of Arnstein's (1969) Ladder of Participation.

Although the ladder is hierarchical, in as much as the degree of participation increases on each rung, it is not necessarily always appropriate or desirable to aim for the highest level of participation in every project. A learning space project requires a degree of central coordination which means it would be unrealistic to expect that stakeholders would take full ownership of the project and self-organise. On the other hand, stakeholder participation is vitally important to the success of the project and it is important to avoid tokenism where stakeholders are simply informed about decisions already taken or where the project team does not hear, and fully understand, a sufficiently wide range of views to make appropriate decisions. Learning space projects are therefore likely to operate at the upper end of the ladder.



"Inviting people with different perspectives to contribute to collective decision making can be time-consuming in the development phase but ultimately is less time-consuming than leaving them out." (Bickford and Wright 2006³³)

The table below looks in a little more detail at each of the approaches and the means that might be used to achieve this level of engagement. The project team also needs to be clear about whether it is aiming to achieve the same degree of participation from all stakeholders or whether there are distinctions to be made between various categories of stakeholder.

31 Arnstein, S.R. (1969): A Ladder Of Citizen Participation, *Journal of the American Institute of Planners*, 35:4, 216: www.tandfonline.com/doi/abs/10.1080/01944366908977225

32 <http://jiscdesignstudio.pbworks.com/w/page/27046505/T-SPARC%20Stakeholder%20Engagement%20Model>

33 Bickford, D. J., and Wright, D. J. (2006) *Community: The Hidden Context for Learning Spaces* in Oblinger, D.G. (ed) *Learning Spaces*. Washington DC: EDUCAUSE: www.educause.edu/research-and-publications/books/learning-spaces/

Level of engagement	Characteristics of approach	Means of engagement
6. Empower	Stakeholders set the agenda for change and self-organise/manage	Not generally applicable for this type of project
5. Collaborate	Decisions taken in partnership with stakeholders	Stakeholder-led consultation. Stakeholders on Steering Group
4. Involve	Joint working to ensure views are heard and understood. Decision making still largely in hands of project team	Jointly led workshops/focus groups/voting
3. Consult	Agenda largely framed by project team. Stakeholder views actively solicited	Workshops/focus groups/interviews/surveys led by project team
2. Inform	Stakeholders are regularly provided with contextualised information and made aware of means of participating in the project. Dialogue is implicitly welcomed	Blog with comment facility/ mailing list/use of Twitter
1. Notify	Stakeholders are passive recipients of (largely un-contextualised) information	Static web pages/minutes made available/untargeted publicity

2.3 Creative thinking for a different future

One of the most difficult aspects for many stakeholders in a learning space project is being able to envisage spaces that are very different from where they were taught and where they have spent much of their working lives. It is easy to imagine existing spaces that are brighter and better furnished but less so to develop a blueprint for a radically different type of learning experience. This can apply equally to architects whose experience of higher education may have been a relatively traditional one: they can design architecturally stimulating buildings but they will need a lot of input from your staff and students to make them work as learning spaces for the 21st century. Bruce Rodger, Head of Infrastructure, University of Strathclyde, emphasises the need for your institution to think about its own vision and what it wants to achieve before it employs external advisors: *“Sometimes architects get involved slightly too early in the process. We need to think carefully about the fundamental uses of the space before design concepts get cast in stone”*.

The good news is that creative thinking is a skill that can be developed, and there are many techniques to aid this, such as the Learning Space Canvas³⁴:

³⁴ This graphic-free version of *The Learning Space Canvas* is reproduced by kind permission of Prof Robert Fitzgerald, INSPIRE Centre, University of Canberra. The original can be found here: <http://bit.ly/learningspacecanvas>

Learning Space Canvas

Step 1 - WHAT

Context

A designed approach to prototyping learning environments that work for teachers and students.

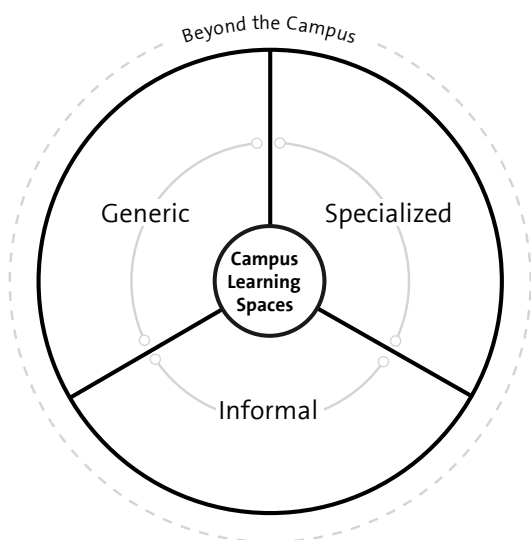
Aim

Develop a new or retro-fitted learning environment suitable for the next five years (2015-20).

- Apply a design thinking approach to mapping and prototyping existing, new and imagined learning environments.
- Conduct a gap analysis to examine spaces from multiple perspectives.
- Develop a value proposition based on the SOLO taxonomy work of Biggs (1982, 2007).
- Actively explore how to evolve your institution's learning environments to support student outcomes.
- Compete for the Grand Prize!

Let's get started. Build a campus environment map

- List your existing campus facilities (use post-it notes and the framework provided).
- Think 'beyond the campus' and list spaces where students might be involved with curriculum specific learning (use the outer circle).



Find the Gap

- Tag/mark the post-it notes with how you might use the space (use the colour from the verbs below)
- Identify any gaps/opportunities

Single Point	Multiple Point	Logically Related	Unanticipated Extension
Choose Identify Label Listen Match Name Note Quote Recall Recognise Review Select State Tell Transmit	Arrange Clarify Define Describe Duplicate Examine Explain Extend Interpret List Order Rearrange Revise Rework Schedule Separate Solve Symbolise	Analyse Apply Appraise Categorise Classify Combine Contrast Demonstrate Design Discuss Distinguish Evaluate Illustrate Inquire Map Observe Outline Perform Plan Predict Relate Summarise	Appreciate / deep understanding Articulate Assess Create Debate Develop Elaborate Generate / develop Hypothesise Imagine Infer Initiate Judge Originate Reflect Synthesise Theorise Validate Value / judge Visualise

Step 2 - SO WHAT

Significance

Dig deeper

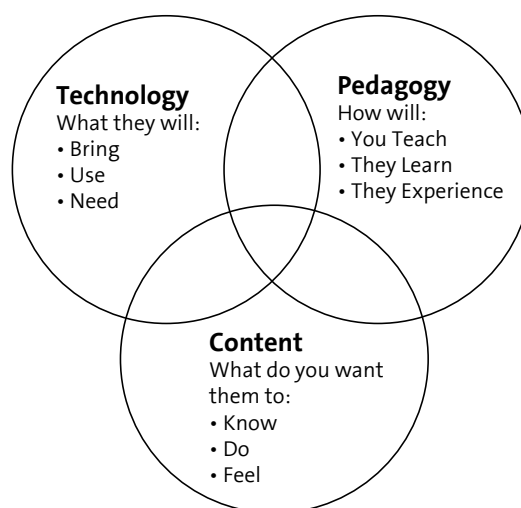
Summarize your proposed space

- Name
- Purpose
- Key tech
- Audience

TPACK Health Check

Consider your potential space and make a few notes against each question below (Technology, Pedagogy & Content Knowledge)

Remember we are looking for a balance in the TPACK framework.



Review

On the scales below describe the attributes of your space. (Add more if required)

Questions	Scale
Group size	small <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> large
Boundary control	none (open plan) <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> total (walled/closed)
Technology provision	basic (wifi, power) <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> advanced (kitchen sink)
Ability to reconfigure space	fixed <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> flexible
Ambience	formal <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> informal
Light	bright <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> dark
Sound	noisy <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> quiet
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Figure 3: The Learning Space Canvas (graphic-free version)

Team Name: _____

Step 3 - WHAT NEXT

Action

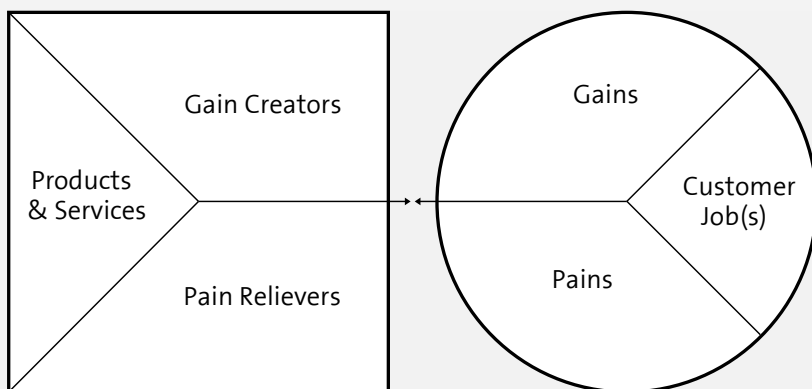
Develop your idea

Business Model Generation Canvas

<p>Key Partners</p> <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <p>motivations for partnerships: Optimization and economy Reduction of risk and uncertainty Acquisition of particular resources and activities</p>	<p>Key Activities</p> <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <p>categories Production Problem Solving Platform/Network</p>	<p>Value Propositions</p> <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <p>characteristics Newness Performance Customization "Getting the Job Done" Design Brand/Status Price Cost Reduction Risk Reduction Accessibility Convenience/Usability</p>	<p>Customer Relationships</p> <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p> <p>examples Personal assistance Dedicated Personal Assistance Self-service Automated Services Communities Co-creation</p>	<p>Customer Segments</p> <p>For whom are we creating value? Who are our most important customers?</p> <p><i>Mass Market Niche Market Segmented Diversified Multi-sided Platform</i></p>
	<p>Key Resources</p> <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</p> <p>types of resources Physical Intellectual (brand patents, copyrights, data) Human Financial</p>		<p>Channels</p> <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <p>channel phases:</p> <ol style="list-style-type: none"> Awareness <i>How do we raise awareness about our company's products and services?</i> Evaluation <i>How do we help customers evaluate our organization's Value Proposition?</i> Purchase <i>How do we allow customers to purchase specific products and services?</i> Delivery <i>How do we deliver a Value Proposition to customers?</i> After sales <i>How do we provide post-purchase customer support?</i> 	
<p>Cost Structure</p> <p>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</p> <p>is your business more: Cost Driven (leanest cost structure, low price value proposition, maximum automation, extensive outsourcing) Value Driven (focused on value creation, premium value proposition)</p> <p>sample characteristics: Fixed Costs (salaries, rents, utilities) Variable costs Economies of scale Economies of scope</p>		<p>Revenue Streams</p> <p>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenues?</p> <p>types: Asset sale Usage fee Subscription Fees Lending/Renting/Leasing Licensing Brokerage fees Advertising</p> <p>FIXED PRICING: List Price Product feature dependent Customer segment dependent Volume dependent</p> <p>dynamic pricing: Negotiation/bargaining Yield Management Real-time-Market</p>		

Resources
Business Model Generation - <http://www.businessmodelgeneration.com/canvas/bmc>

Value Proposition Canvas



Resources
Value Proposition Canvas - <http://www.businessmodelgeneration.com/canvas/vpc>
A full set of workshop resources are available at <http://www.inspire.edu.au/ngls>



The use of metaphor can be helpful in getting stakeholders to take an entirely fresh look at the idea of a learning space and the facilities, activities and relationships between them. At Glasgow Caledonian University the development of the Saltire Centre used metaphors such as the ground floor being a city and market place, the first floor, which has three entrances and exits being an airport departure lounge, and other quieter floors using domestic garden and living room metaphors. At the University of Birmingham the metaphor of a tree growing through a building was used to stimulate ideas about taking the inside out and bringing the outside in. At Loughborough University the consultation process for the Design School lecture theatre included a workshop where the participants including the Pro-Vice Chancellor (Teaching) used Play-Doh to create a metaphor.

This example of using a metaphor has been loosely adapted from the work of Martin (2010)³⁵ on creativity:

Invite your stakeholders to think about a suitable metaphor for the learning space and list the kinds of activities this brings to mind. For example they might choose a garden and list the kinds of things you can do with a garden such as:

- watch it and see what happens;
- dig it all up and start afresh;
- explore it, weed it a bit, tidy up;
- add things, remove things, replace things;
- build walls and fences;
- make paths;
- re-organise, make new groups, move things around;
- grow a variety of flowers, vegetables, fruit;
- listen to the birds and bees;
- lie back in the sun and contemplate;
- have a barbecue;
- frame the view, modify the view.

Next invite them to apply the metaphor to the real situation and *force fit* the garden ideas to a learning space. What are the implications for the space? Some examples might include:

- Dig it all up and start afresh. Do we risk taking away a valuable habitat or important part of the ecosystem? What kind of unwanted weeds will spring up again if we do not do enough maintenance?
- Build walls and fences. Is it useful to have walls and fences around areas of learning? Is this essential zoning or a barrier to connected learning? Can we remove the fences or avoid them if we want to? Do we need gates, doors, openings?
- Make paths. Connect things; put in stepping stones. Think about how the direction of the paths affects the view and ease of carrying out jobs at different times of the year.
- Grow a variety of flowers, vegetables and fruit. How do we make the ground fertile for different types of learning?

There are all sorts of further possibilities for the initial idea of a garden, such as: make a pond, encourage trees, build a sandpit, put up a swing... No two groups will ever come up with the same response to this type of question but it can be very valuable in looking at things in a different way that is not constrained by our particular professional perspectives.

The University of Birmingham has also used Pinterest³⁶ as a means of supporting widespread stakeholder engagement. Pinterest is a virtual mood board and collaboration space that the university used in initial design meetings to help in creating the aspirational brief for a new academic building. Matt Sherlock, Assistant Director,

³⁵ Martin, P. (ed) 2010 *Making space for creativity*. University of Brighton: http://about.brighton.ac.uk/creativity/Library/UofB_msfc-ebook_FINAL.pdf

³⁶ <https://en.wikipedia.org/wiki/Pinterest>

Learning Environments, University of Birmingham, told us *“Sometimes you need to plaster stakeholders with out of the box ideas in order to stimulate interest”*. Matt found that it was quite easy to get people to engage with the ideas on Pinterest because people can choose whether to simply absorb the material passively or whether to participate and rate other contributions. The use of this tool provided the Estates department with new ways of viewing requirements in order to help them brief architects.

Many people find architects’ plans hard to understand and have difficulty visualising what the space may be like in reality. This means that having readily comprehensible visual representations is important from an early stage. Advances in digital technology mean that 3D visuals are now much easier for architects to produce earlier in the project.



VIEWPOINT

Simon Birkett, IT and Learning Manager, University of Staffordshire, has experience of managing learning space projects in a number of universities and views better learning space design as something of a personal quest.

In four years the University of Derby went from what Simon terms a *standing start* to £6 million investment in new classrooms, and key to this has been a partnership approach. Simon was the academic voice and worked closely with IT and Estates. At Derby any conversation about space now includes all of these three angles.

Simon’s other key message is around equipping staff and students with digital capabilities and pointing out the relevance to student employability. He is now using all of those principles at the University of Staffordshire to encourage innovation and enhance the learning and teaching experience across the institution.

Simon also told us that visiting other learning spaces is an excellent way to engage stakeholders and get them to think about what it is they really want to create. *“Only when you have been somewhere and can see how it works and feels do you really understand the space.”* For Simon this is one of the key benefits of belonging to a professional organisation that fosters this kind of networking amongst its members. *“In the early days only a few people had funding and buy in to do these kind of spaces and they seeded the experimental spaces for others”*.



VIEWPOINT

Bruce Rodger, Head of Infrastructure, Information Services, University of Strathclyde, has an IT networking background and looks after all of the University’s IT infrastructure services which includes audio visual support. Over the years he has seen the different professional services come into conflict over learning spaces projects. Being able to see the issues from both sides, Bruce has identified that AV and IT people can have quite different priorities and it is only a slight exaggeration to say that each one sees the other as *the enemy*. He told us *“Often, AV people see the network people as the people with the firewalls and the rules that stop their cool gizmos working, and networking see AV as having unmanaged devices with no authentication that break their security policies”*.

Bruce has a very simple message for different professions working together for the first time on a learning space project. *“We are all on the same side here and we can work together - we just need to talk to each other”*. At Strathclyde he has taken a range of steps to break down barriers and improve communication. AV staff and those responsible for supporting student desktops are now colocated which has improved dialogue and understanding. Two of his AV staff have undertaken networking qualifications and he has also taken on a modern apprentice as part of the AV team. He found there were few recognised apprenticeship schemes for AV, unlike multimedia and IT, so they had to take an IT qualification and modify and extend it to bring in more AV expertise. Bruce says that in learning space projects *“We need to get away from the idea that AV guys just come in at the end and screw projectors to the ceiling. We need to ensure that they are brought in earlier as specialists, fully involved as professionals in the design process”*.



VIEWPOINT

Paul Burt, Learning Spaces Service Owner, University College London (UCL), started his career in learning technology and came to the realisation that certain learning spaces were not conducive to the type of pedagogy people were trying to support through the use of new technologies. He realised the need for greater shared understanding across different professional services so that the implications of a decision made by one group of stakeholders can be considered in terms of the learning experience. He says this can be something as simple as changing the specification of a blind to one that lets in more light, which can impact the legibility of projections, or the decision to put a noisy waste bin outside the room instead of a plastic one.



VIEWPOINT

Eleanor Magennis, Head of Space Planning, University of Glasgow, told us that it has been very much the norm to engage students in learning space projects in all the places she has worked, but she is aware that not all universities adopt the same approach. She feels the argument that students are not really interested in long term projects, because their relationship with the institution is short term, is not a good one. Eleanor says *“Students become alumni and they like to think they have left a legacy by being involved in new buildings and projects so they are keen to participate. We don’t give them enough credit in that respect”*. She also advises that it can often make sense to use first year students who may see some of the smaller projects through to completion.



VIEWPOINT

James Rutherford, Learning Spaces Development Manager, University of Birmingham, emphasises the importance of listening to the student voice but also recognises that students can be quite conservative and they will not always know what they like until they see it. He says we need to recognise that students have a variety of needs at different times: individual working, group working, or for quiet and lively spaces and we need to think about zoning to provide variety. James feels that the idea of student *misuse* of space is a misnomer as this is students showing us by their behaviour what they actually want.



VIEWPOINT

Toni Kelly, Associate Director, Learning Environments, University of Hong Kong, says learning spaces are where students experience the university, and the quality of the space they are provided with for both formal and informal learning not only informs their perception of the university, but also sends them a direct message about the institution’s intentions and aspirations for their teaching and learning experience.

Resources

There are many techniques that can be used to enable different stakeholders to have a meaningful dialogue and understand one another's perspectives. Generally the most effective techniques are those that are quite simple and visual, allowing everyone to get involved and breaking down the barriers that arise from different vocational perceptions and vocabularies.

Examples include:

- Diamond ranking activity: Newcastle University has used this technique to make clear connections between learning and teaching activities and the setting. The activity helps find out what kinds of learning and teaching staff and students value and generates discussion about the sorts of spaces that facilitate it. A practical guide is available³⁷.
- Rich pictures (see this animation from the Open University: a rich picture about rich pictures)³⁸.
- A good source of ideas for effective stakeholder engagement is the Jisc guide to planning a participatory workshop³⁹.
- The Inspire Centre, University of Canberra offers a set of guidance on Designing Hybrid Learning Spaces⁴⁰, including how to use the Learning Space Canvas⁴¹.
- This website from the University of Lincoln is a good example of communicating progress on a learning space project to the wider user base⁴².
- Guidance from the Learning Space Toolkit (produced by North Carolina State University (NCU) Libraries and its Distance Education and Learning Technology Applications (DELTA) in partnership with brightspot and AECOM) on running a workshop to creating personas in order to help you understand the needs and motivations of your target users⁴³.
- An article comparing visual techniques used in learning space design and evaluation in UK and Australian universities⁴⁴.
- An evaluation by the University of Brighton of its Creativity Centre contains much useful information both about the design of technology rich learning spaces and about creativity in higher education⁴⁵.

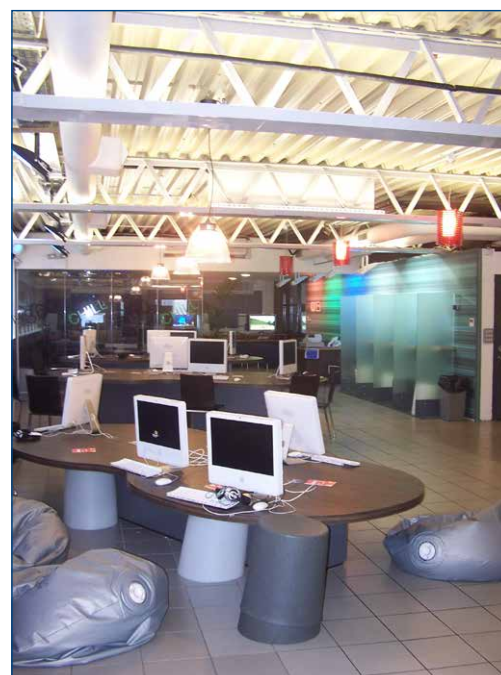


Photo 3: Work and play is the concept behind The Mezzanine informal study area at Dublin City University.

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37 Clark et al (2013) *Making Connections: Theory and Practice of Using Visual Methods to Aid Participation in Research*. Research Centre for Learning and Teaching, Newcastle University: www.ncl.ac.uk/cflat/news/documents/MakingConnections.pdf

38 <http://systems.open.ac.uk/materials/T552/>

39 Jisc (2012) *Planning a participatory workshop*: www.jisc.ac.uk/guides/planning-a-participatory-workshop

40 www.inspire.edu.au/ngls/

41 <http://bit.ly/learningspacecanvas>

42 <http://learninglandscapes.blogs.lincoln.ac.uk/capital-programme/archived-projects/mab-third-floor/>

43 <http://learningspacetoolkit.org/needs-assessment/working-with-data/creating-personas-workshop-tool/>

44 Lee, N. and Tan, S. (2013) *Traversing the design-language divide in the design and evaluation of physical learning environments: A trial of visual methods in focus groups*. *Journal of Learning Spaces*, 2(1): <http://libjournal.uncg.edu/jls/article/view/503/383>

45 http://about.brighton.ac.uk/creativity/Library/UofB_msfc-ebook_FINAL.pdf