

Environments for Learning and Innovation

Short notes on designing spaces for Learning and Innovation.

Individual and Team Learning

- Accelerated forgetting is a fundamental characteristic of human memory
- Most people forget what is being taught (new) rather than what is known (old).
- Facilitation puts the individual at the centre of learning and change rather than the provision of content (new materials to teach)
- Group dynamics (the quality of interaction) has a greater impact on team learning than transactions (the quantity of interactions). Hence there may be limited value in creating work settings that encourage more interaction without necessarily encouraging collaboration.
- Team learning is initially focussed on "how to learn" by establishing work group protocols, norms etc and establishing other cues which encourage high quality interaction, dialogue and collaboration.

Work Practices

- Work processes enable work practices, not the converse.
- Work practices deliver results, not work processes.
- Technologies and workspace need to support work practices, not just work processes
- Different work practices require different support from technology and the physical environment.
- The stability and predictability of the physical environment can help organise the behaviour of individuals and groups. For certain work tasks, the physical environment can serve as a memory system which supports and builds intellectual capital (eg global workplaces, McDonalds restaurants)
- Individual and team based work are not naturally disjointed. The need for collaboration flows from the demands of individual work and in return, collaboration refocusses individual work.
- Groups will adapt their work practices to the space they are in.

Interaction, Collaboration and Productivity

- Modern working environments tend to be more flexible and can increase the quantity of interactions (through higher densities). They also can increase the number of interactions involving more people and the length of time for interaction, independent of work type. However more flexible space does not lengthen existing interactions, but enables longer interactions in addition
- Higher spatial densities in traditional space will also increase the quantity of interactions but not necessarily the level of collaboration.

Table 1: Impact of workspace type on Interactions - percentage of interactions /numbers of persons

Space Type	2 persons	3 persons	4 persons	5 persons	6 persons
Flexible Environment (high choice)	73%	19%	4.5%	2.1%	1.2%
Traditional Environment (low choice)	87%	10%	2%	0.6%	

In this above example, the time for interaction in the high choice space doubled, independent of work type.

Both spaces had a mix of individual and group work.

A more flexible working environment was defined as;

- One which can be adjusted to changes in work practices
 - Does not require extra space to do this
 - Supports individual as well as group/social aspects of work
 - Combines mobility with stability
 - Offers users more control over their working environment
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- Space that limits the range of interactions will be rated by users as limiting, *only in extreme cases*. Interaction will still take place but work productivity will suffer
 - Remote working, turns collaboration into a back and forth flow of information facilitated by technology. It is a communication of content, which at best plans for collaboration in the future.
 - More mobile work (hoteling, hot desking etc) can break the sense of attachment the individual has to the organisation culture and its complexity of values, replacing it with limiting experiences usually based around financial transactions. It provides decreased spatial support, because there is little the individual can "personalise". This can negatively impact on an individual's ability to perform complex intellectual work over time.

Sources:

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