

## Do Learners Design?

Students of higher education are handling a multitude of learning material both in digital and in paper form: handwritten scripts, copied readers, books, electronic documents, many of these printed out on paper etc. The practices of obtaining, organizing, storing, producing and especially editing this material require a significant amount of time. As these activities are first and foremost homework and therefore not in reach of the instructors they are often overlooked—and astoundingly are also played down by students themselves.

Though constructivist learning theorists assume creativity in the learners' knowledge production they prefer to propagate "active learning" which equals behavioural activity. They neglect work with "passive" material as an activity (cf. [1]). By profession, designers should be interested in material traces of learners. But is this output worth a research? What should design learn from learners? The outcome of a more systematic knowledge of the learners' document ecosystem could be relevant for the design of future e-learning systems. Even design itself could gain useful insights in everyday design issues of those non-designers.

Of course, research does not start by zero. HCI psychologists already cavort in nearby fields. Classic are observations of peoples' workspaces done by [2]. Then there is research on personal information management (PIM) of learners [3]. Those ethnographic studies are conducted with explorative interviews and participatory observation in the field [4].

To assess the very design issues of learners, it is necessary to identify the places of their material activity. Figure 1 shows places, which as a whole form the learners' document workflow.

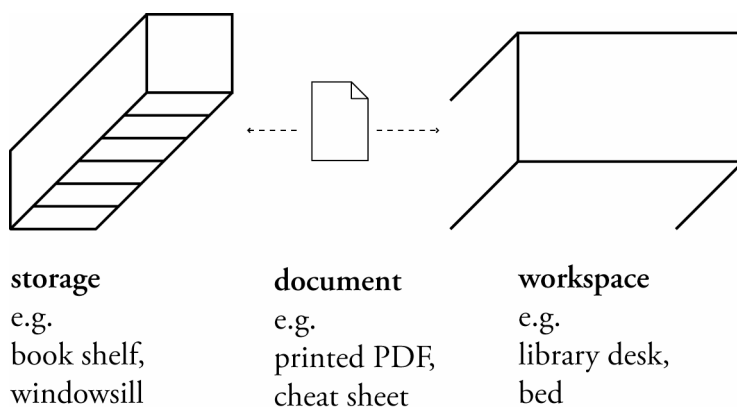


Figure 1

This model covers various venues where learners work: at home, in the library, at the university etc. The document itself is understood here as a space where action takes place.

Table 1 lists some “design” actions related to these venues.

<b>Storage</b>	<b>Document</b>	<b>Workspace</b>
<i>Determining a storage place</i>		<i>Determining a workspace</i>
<i>Making documents accessible</i> <ul style="list-style-type: none"> <li>– Marking a document</li> <li>– Adding s. th. to a document</li> <li>– Creating inventories</li> </ul>	<i>Editing given documents</i> <ul style="list-style-type: none"> <li>– Marking</li> <li>– Annotating</li> <li>– Sketching</li> <li>– Scribbling</li> </ul>	<i>Setting up of workspace</i> <ul style="list-style-type: none"> <li>– Arranging documents, tools and miscellaneous objects</li> <li>– Creating to-do piles</li> </ul>
<i>Retrieving documents</i> <ul style="list-style-type: none"> <li>– Arranging documents for an overview</li> <li>– Selecting parts of piles</li> </ul>	<i>Producing new documents</i> <ul style="list-style-type: none"> <li>– notes</li> <li>– lists, graphics as an overview</li> <li>– cheat sheets</li> </ul>	

Table 1

At this analytical level there is no differentiation between electronic and paper documents. In fact, paper still is the most important surface when it comes to working with learning contents [5].

Learners seem to have a “natural” way of acting in these places. They often state that they do as everybody does. Their limited means regarding tools, materials and skills lead to some kind of “bricolage” [6]. It therefore seems appropriate to call learners “unselfconscious designers” [7]. Some reflections on storage, documents and workspaces that are based on my observations should exemplify this assumption.

- a) *Storage.* We found out that learners can reinterpret any object as a storage place. Due to limited availability of space in the students home the windowsill often becomes a repository. It is primarily a permanent holder for less important bureaucratic or scrap papers.
- b) *Documents.* Almost every interviewed student marks printed texts with a pencil or a special text-marker while reading. While not all of this marking seems useful – some learners say that they “paint” almost everything – it is nonetheless the first step to appropriate the material: unfamiliar texts become private.
- c) *Workplaces.* Reading activity at home may take place anywhere: on the floor, on a couch, on the bed. Whilst the learning material may be obligatory the environment where it is read is not. Learners design the space around and their reading position.

Trough my ongoing survey about learners designing activity I will consolidate these reflections. For now I hope that there are some interesting questions and hypotheses.

## References

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