Introduction

We are a multidisciplinary team of educators presently involved in the new master track 'New Media Design' (NMD), hosted by the Department of Communication and Cognition, Tilburg School of Humanities and Digital Sciences at Tilburg University (NL). We are senior HCI researchers with extensive educational experience in a variety of institutional contexts, junior HCI researchers with industry experience and researchers in the field of cognitive psychology and communication sciences with a long-lasting interest in interactive media. Together, we are taking on the challenge of designing a balanced curriculum that is both solid in its coverage of HCI knowledge and relevant for students in the field of communication sciences. At present, we can report on insights gained during the first run of the Master program and from the planning of a BSc program now in the

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 HCI Education Beyond HCI Studies: Insights from the New Media Design Program

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1https://www.tilburguniversity.edu/education/masters-programmes/new-media-design/
The NMD program educates communication sciences graduates with a strong affinity with new media products and the processes involved in designing them. This multidisciplinary program is a strategic response to the present media landscape: A capacity to understand, analyze, evaluate and, potentially, create new media experiences will be a competitive advantage for communication sciences scholars and professionals. The NMD curriculum (cf. Sidebar) is a hybrid curriculum that combines HCI education with a humanities perspective. We provide a set of core courses on, among others, user-centered design, prototyping, usability testing, creativity, and media psychology, complemented by a selection of communication sciences-oriented electives, on e.g. visual communication, data & (mis)information and mobile media & society. Students conduct their master thesis work on topics embedded in ongoing research projects and/or ongoing partnerships with the local industry.

The NMD program manifests the increasing interest of non-engineering and non-computer science departments in HCI-oriented education. As HCI educators fascinated with our subject, we gladly align with this trend: Studying HCI topics from a multiplicity of perspectives, such as e.g. communication sciences, has always benefited our discipline while HCI literacy can undoubtedly be of relevance to various academic disciplines. However, catering for the needs of this evolving educational and academic landscape will have conceptual and practical implications for the living HCI curriculum platform.

Lessons from the work floor
NMD is a hybrid curriculum that requires sufficient depth in both HCI and communication sciences subjects. Unavoidably, its implementation has confronted us with a number of practical issues. Some, such as the delineation between technological domain. Given the impact of new media in the lives of individuals and communities, humanities scholars are rightfully shifting their focus to new media artifacts and technologically mediated human interactions. For these non-HCI scholars and professionals, HCI foundations are a prerequisite that will enable them to become informed and non-naive researchers of their new media subjects. At the same time, practice-based research methodologies are gaining a foothold in departments of purely empirical or purely theoretical academic cultures. Finally, HCI literacy is increasingly acknowledged as part of a wider skill set: A design thinking mindset and a user-centred orientation are valuable skills for contemporary professionals; the need for executive courses and workshops on design-oriented subjects is noticeably on the rise.

Will the living HCI curriculum be able to accommodate this evolving educational landscape? Previous workshop submissions [3] have highlighted the need for a dynamic, modular and configurable living HCI curriculum. We second these requirements and observe that a flexible and modular approach will not only respect the interdisciplinary nature of the field of HCI, in which several domains of knowledge compete for attention, but also cater for the needs of non-HCI studies with a valid interest in HCI education. Given the proper content and annotation, a modular architecture will enable different flavors of HCI curricula to emerge, including both introductory versions and specialized ones that emphasize a particular perspective or discipline (e.g. communication sciences-heavy ones).
Master, Pre-Master, and Bachelor courses or the accommodation of the diverse backgrounds of incoming students, are common challenges in curriculum development that were somewhat complicated by the practical skills usually required in a complete HCI-education. We were in the fortunate position to control and define the learning objectives and content of all core courses from scratch. Nonetheless, such alignment challenges remind us of the requirements for a clear demarcation and labeling of course material in the living HCI curriculum platform, in terms of both academic level and time requirements.

Secondly, the coming together of HCI educators and communication sciences scholars introduces new planning complications at both the program and the course level. To put it simply, it was not enough to replicate successful lesson plans or material of the past. Firstly, an alignment of vocabularies and methodologies was due: Traditional HCI theory needed to be re-framed given the vocabulary and concepts of media psychology. Usability testing needed to be positioned vis-à-vis the experimental research tradition of the communication sciences. And how do we best orchestrate our courses and program when all involved disciplines have something to say? In NMD, we opted for 1) dedicated method courses that emphasize the relevance of HCI research methods regardless of one’s domain of expertise 2) media psychology courses that comply with the academic culture of the department and 3) project-oriented HCI courses where students execute and reflect upon the design process. Next, some level of localization was needed: Teaching material needed to be drawn from the local context, including relevant examples, initiatives from the industry or in-house guest lecturers. Given also that the program is hosted in a non-engineering department, course ideas had to be adjusted to the available equipment and space limitations. Such specificities remind us that the living HCI curriculum platform will need to capture and distribute proven and trusted educational solutions in a manner that affords tailoring, customization and localization to institutional circumstances.

The HCI education initiatives [2, 1] have set the tone for a user-centered development of the platform. We welcome this process and are eager to contribute with our own professional expertise. Furthermore, we hope that these principles will become an integral part of both the platform and our teaching. As educators, we often question whether the development of our courses is true to our user-centred principles: Do we improve our courses in an iterative manner? Do we involve our students in co-creating our courses? As a first step, we envision a platform that enables a low-threshold, continuous sharing of knowledge and experiences, both in the form of course evaluations and in the form of personal insights gained upon implementation of a course or resource. This will greatly benefit our HCI community of practice by ensuring both quality of content and personal skill development or informal mentoring. In a similar manner, we note that the way we deploy our material in the living HCI curriculum platform should support easy ways to update content and flexible ways to freely manage these updates, potentially in a manner comparable to version control systems.

A practical example: The prototyping toolkit
We further explicate practical implications for the living HCI curriculum platform by reflecting upon a teaching artifact developed for the NMD course Rapid Prototyping. Rapid prototyping is a 3 ECTS practical course dedicated to prototyping methods. As such, it acknowledges prototyping as a valuable research skill on its own accord while allowing us to off-load content and workload from theory-laden courses in the curriculum. To normalize terminology across
students, instructors and resources, we developed a prototyping toolkit, i.e. a short visual guide to various prototyping methods. The resource was inspired by existing online method repositories such as the UCDToolbox\(^2\) or the IDEO Design kit \(^3\); while we have extensively used similar resources, none of them provided us with the level of detail required in a dedicated prototyping course. In our toolkit, each method is described in 1-page entry followed by a 1-page list of resources. The toolkit was created in presentation software and distributed as a pdf document.

As a quick reference guide and a means to unify terminology, the resource was valuable to both instructors and students. We have re-used this resource as a reference material across the NMD curriculum. We have happily provided access to the pdf under a Creative Commons license to other colleagues and we will be similarly happy to disseminate this material to the HCI education community. Nevertheless, despite providing valuable and well-curated content, this resource is painstakingly static when it comes to distribution, maintenance or collaboration. Its current format clearly fails to facilitate any form of co-creation or collaboration: We miss the capacity to compile a list of resources collectively and to update our visual guide with more/new visual instances of a method, including examples of work produced by the students. Plans to port the toolkit online are under discussion and we hope that, eventually, the toolkit will become a module that safeguards high-quality core knowledge while allowing for tailoring and customization in the examples or resources provided. A similar balance between curated and customized content may be of relevance to the way teaching material is made available in the living HCI curriculum platform.

Our contribution

In conclusion: We are a team of educators with extensive experience in HCI education, in general, and with specialized expertise in teaching HCI topics from a communication sciences perspective. The NMD curriculum is an example of thoughtfully balancing HCI expertise with a communication sciences context to deliver a hybrid but balanced curriculum in the area of HCI and communication sciences education. As such, the NMD context provides both an interesting use case and a useful source of input for the living HCI curriculum platform. In terms of concrete content contributions, we are happy to contribute our own course plans, tested teaching methods, and course material. We are also particularly motivated to study the platform itself as an interactive artifact; the development of the HCI living curriculum would be an excellent case study for our NMD master students whose communication sciences-savvy approach can be put to good and relevant work.

REFERENCES


\(^{2}\)http://ucdtoolbox.com/browse-methods/
\(^{3}\)http://www.designkit.org/methods