

Students were very precise and honest in scoring their own development and gave valuable feedback about the course (in this case PD1) when a learning goal wasn't addressed by the activities within the course. Some remarks about the interface, like highlighting text when selected, were to be expected since the application was in an early stage of development. Nevertheless it helped us to work out the application in the right direction.

4. Discussion and conclusions

Because the results of the second test with the final version of the interface are not yet available, our conclusions are preliminary only. Offering students an online tool to monitor their competency development can help students to better manage their learning process. It increases their awareness of the initiatives they should take and acts as an effective communication means to keep the attention of both students and coaches on the learning goals of the courses. In order to arrive at a system that is easy and even fun to use, a balance had to be found between theoretical correctness and pragmatism. The longer the list of competencies the less accessible it will be to the students. On the other hand, a too pragmatic list would lack academic precision and would not challenge students to rise to a higher level of understanding, thinking and working. A point of attention is that the monitoring system must be an integral part of the courses themselves. In our case it will be mandatory for the students to reflect at the end of each course. This is quite strict, but we expect that otherwise many students will not reflect at all or only briefly, without depth.

The method used for developing the framework and the online tool was in fact a design method: defining the function and goals first, setting criteria and conceiving and testing alternatives. The procedure of inviting many colleagues and students to work with us on this monitoring system took a lot of time but resulted in a robust model that is expected to live long. We expect our students will better understand the learning lines in our curriculum and we are confident the competency framework and monitor will help to close the gap between theory and practice.

5. References

- [1] Roozenburg, N., van Breemen, E. and Mooy, S. (2008) A Competency-directed Curriculum for Industrial Design Engineering. In Proceedings International Conference on Engineering and Product Design Education, 4 & 5 September 2008, Universitat Politecnica de Catalunya, Barcelona, Spain, pp 423-428.
- [2] Meijers, A.W.M., van Overveld, C.W.A.M. en Perrenet, J.C. (2005) Criteria for Academic Bachelor's and Master's Curricula, ISBN: 90-386-2217-1, issued by TU Delft, TU/e and University of Twente, 2005. Online PDF available at: <http://w3.ieis.tue.nl/uploads/media/AC_ENG_web.pdf> [Accessed 15 May 2009].