

An Experience of use KM in Teaching at UTT

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Problem Based learning [1][2][3][6] is used currently as a technique of active learning in which students determine by themselves their learning environment: information, documents' search, solutions' evaluations, etc. In this type of learning, students work in group to solve problems close to real situations. Tutors guide students to discover principles and theories behind problem solving strategies. We use this technique in our university in order to teach knowledge engineering approaches. The theory behind this module is not easy for computer engineering students who usually develop solutions starting from needs. In knowledge engineering, the difficulty is to extract knowledge by interviewing experts who usually tells stories about their experience, and formalize stories in semantic networks.

In general, students have to repeat problem solving in order to understand strategies. In order to eliminate repetition, we use problem solving expertise to guide students in their activity. In fact, sheet guides [5] have been defined for this aim; In this sheets, besides indications and results expectations, the way of how the expert solve problems is also presented. This type of sheet shows the objectives behind problem solving, goals to satisfy in each step and finally help students to evaluate their results (Fig1.)

This type of learning is used in our university since five years. Results are more deeply explored then classic techniques, used before.

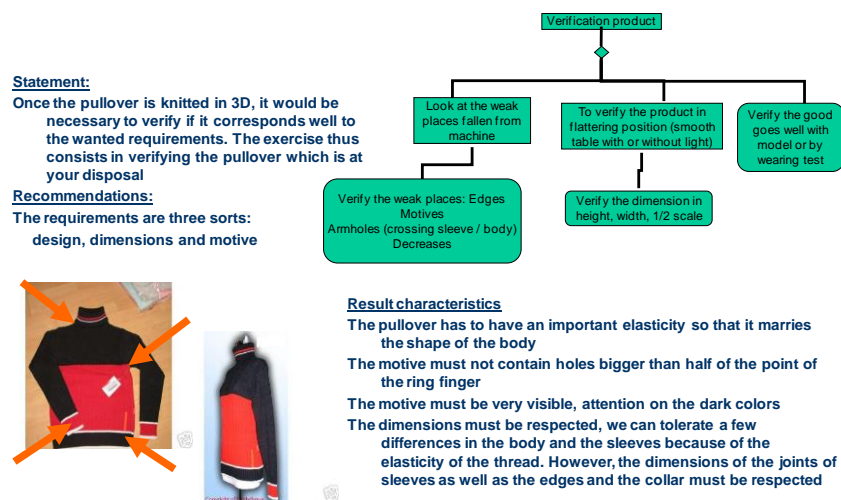


Fig 1. Memory Meeting : Tagging discussions.

Theoretical courses are presented as Moocs, Students have to apply theories in Moocs directly in their project guided by the corresponding sheet. Project deals with real problems or situation close to real problems. In this way, problem solving [6] and contextual [4] are applied as same as knowledge sharing techniques.

1 Reference

- [1] Azer A. (2012). "Introducing a problem-based learning program: 12 tips for success.". *Medical teacher* 33 (10): 808–13. PMID 21942480. Retrieved 16 November 2012.
- [2] Barrett T., Moore, S., *New Approaches to Problem-Based Learning. Revitalising your practice in higher education*, Routledge, 2011.
- [3] Barrows, H. & Tamblyn, R. (1980), *Problem-based learning: An approach to medical education*. New York: Springer.
- [4] Brown, J.S., Collins, A. et Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18 (1), 32-42.
- [5] CASTILLO-NAVETTY, O., et MATTA, N. A practical learning system for the French Textile and Apparel Institute. *GESTS International Transactions on Computer Science*, 1738-6438, December 2005, vol.24, n° 1, p. 8-20.
- [6] Kwan, A. (2009). Problem-based learning. *The Routledge International Handbook of Higher Education*, 91-107.