

DEVELOPING AN INTELLIGENT SYSTEM TO ACQUIRE MEETING KNOWLEDGE IN PROBLEM-BASED LEARNING ENVIRONMENTS

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ABSTRACT. MALESAbraint[1-3] is an intelligent algorithm which originally is designed for problem-based learning (PBL) environment. Similarly, the algorithm proposed in MALESAbraint can be used to deal the problem of conducting a meeting among learners to solve problems. This project adapts the original MALESAbraint definitions and algorithm to create an intelligent learning tool; then testing the tool in a students' meeting to discuss "To build up programming skills for computer science students, do you agree JAVA is a proper language in the first year foundation course for computer science students"? Consequently, this paper concludes that MALESAbraint is a new methodology for meeting, which (1) reduces the unnecessary human intervention and (2) changes a meeting atmosphere from debate to problem-based learning for the knowledge acquisition.

Keywords: Problem-based learning (PBL), Knowledge acquisition, MALESAbraint, Artificial knowledge cell (AK-cell)

1. Introduction. In solving real world problems which are complex and uncertain, sound decisions are often made collectively by groups of people who possess different expertise rather than just a single individual [4-6]. Once decisions have been made and entered into the execution phase, new factors may arise and affect the execution of the task. The executive (who may be a single individual) may need to make some on-the-spot decisions but s/he still needs to continuously seek support from the group to ensure mutual understanding and agreement. This is considered the key factor in determining the success of the meeting decisions [7-9].

In the realm of group-based decision making, there is evidence to support the superiority of computer-mediated group decision making over traditional face-to-face group decision making [7, 8] but the converse is also true in some cases [9, 10]. The advantages gained in using a computer-mediated tool over face-to-face discussion are not always obvious and the outcome is often highly related to context. Therefore, it is safe to claim that there is