Design and Implementation of an Agent Society Based On-line Learning and Testing System – For English of Elementary

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ABSTRACT

The web-based learning system becomes an important part in the instruction and learning environment. The purpose of this research is to design and implement an on-line teaching and assessing system based on the agent society and Internet. This is an adequate learning environment for each individual learner. Five agents in the agent society are able to finish the assigned jobs through cooperation. Such as the student-agent that identifies the student and suggests the suitable learning activities, the curriculum-agent that establishes the curriculum content for each individual learner, the learning-agent that uses this curriculum to perform the teaching activities, the test-paper-agent that arranges the suitable test content, the test-agent that assists the learner with the on-line test activities. This research applies the PASSI methodology during the system analysis and design. The results of this research are： (1) An English on-line learning and assessing system based on the agent society is proposed. (2) The SCORM curriculum articles are easier to achieve the goal of teaching resource sharing and reuse. (3) According to the feedback analysis of learning procedures and testing results, the five agents provide each learner with a suitable English curriculum and test. (4) The system addresses on the learner ’ s unfamiliar curriculum content and provides optimal remedial instruction automatically. Finally, the technique of the agent society applies to the on-line learning system not only compensate the teacher ’ s ability shortage but also reduce the teacher ’ s load. It also provides the adequate teaching environment for individual learner efficiently and assists students with the on-line learning. In Summary, it realizes the ideal of adequate teaching for the needs of each individual learner.

Keywords : agent society, on-line learning, PASSI, SCORM

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