**Abstract**

This research is concerned with harnessing collaborative approaches for the authoring of Adaptive Educational Hypermedia (AEH) systems and involves the enhancement of Semantic Wikis with pedagogy aware features to this end. It addresses the issues raised in authoring AEH including the need of collaboration, authoring adaptation, the participation of subject experts and the utilization of existing collaborative authoring tools. The main contribution of this research will be a collaborative authoring model for domain related knowledge by extending the Semantic Wikis output. It will be reached by conducting a research approach that considers many aspects including educational, technological and social aspects. To prove the suitability of the model, a prototype of system will be established and several software testing will be conducted to test the functionality, the expressivity and the integrity of the system.

**Description of Proposed Research**

This PhD thesis will research the enhancement of Semantic Wikis to support collaborative authoring of Adaptive Educational Hypermedia (AEH). The objective of this research is to provide a model of organizing learning knowledge that can be adaptively reused and repurposed to support AEH systems.

**Research Questions**

- Are there barriers that prevent teachers from collaborating and agreeing pedagogical approaches for authoring AEH?
- How can the pedagogy related knowledge authoring process deal with the evolving domain related knowledge and content?
- How can such a system be compatible with current standards, like IMS Simple Sequencing or IMS Learning Design?
- From domain related knowledge and content given from a Semantic Wiki, how can pedagogy related knowledge be collaboratively defined by a group of teachers?
- Can such a system be compatible with current standards, like IMS Simple Sequencing or IMS Learning Design?

**State Of The Art**

- Past research on AEH's architectures implemented concept based domain.
- Past research on pedagogy authoring implemented learning model theories.
- Most of the work in academia and business was completed by groups of people.
- Collaborative work must consider social interaction including conflict, coercion, competition, conviviality, combat, coordination, caution and control.
- Social web and semantic web technologies are useful to develop systems based on large knowledge with many contributors.
- Wikis have been used for developing and maintaining learning content by large online communities.
- Semantic Wikis improve Wikis in managing a knowledge layer underlying documents.

**Conclusions**

The novelty of this research will be on the system’s capabilities to repurpose an existing Semantic Wiki for collaborative authoring of domain related knowledge and courseware for AEH system, and to enrich its output to establish pedagogy related knowledge. In addition, the participation of teachers, communities of practice, and general public is another novelty of this research.

**Main Reference**