

AN ONTOLOGICAL APPROACH FOR GENERATING ADAPTIVE CONTENT IN A CONTEXT-AWARE GAME-BASED INQUIRY LEARNING ENVIRONMENT



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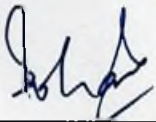
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Abstract

Context-aware game based inquiry learning is considered as one of the promising strategies for enhancing the learning process. Participants are encouraged to learn from their environment in the form of small tasks because they physically interact with the objects in their environment. With the advancement of ubiquitous technologies, visitors of any location or site can use their smartphones along with sensor devices to collect information from their environment and learn about the exhibits using context-aware inquiry learning strategy.

Information is always available in environment for the visitors but due to lack of interest or guidance, they are unable to learn and cash the available information. Therefore, we need a system that aims to provide assistance and guidance to the end user in learning process. Moreover, the system also aims to make the learning process more interesting for end user by using game based strategy. For this purpose, we developed MUSEON, an ontology and game based context-aware mobile learning approach. Thus, the aim of this research is to develop an intelligent context-aware mobile learning approach which retains the fun factor for the visitors by enhancing their learning performances. For demonstration and evaluation of the developed system museum environment is used.

For the evaluation purposes, an experiment with visitors of Pakistan Maritime Museum was conducted. The participants were divided into two groups i.e. experimental and controlled group. Experimental group learn with the guidance of MUSEON while controlled group learn by using conventional learning methods. The results proved that ontology-based context-aware game based inquiry learning has significant potential and influence on the learning performances of the visitors while comparing with the conventional learning methodologies.

Table of Contents

Chapter 1	Introduction	11
1.1	Background	11
1.2	Ontologies for learning	11
1.3	Context-aware learning	12
1.4	iBeacons	14
1.5	Game based inquiry learning	15
1.6	Problem statement	16
1.7	Research objectives	16
1.8	Motivation to use ontology	16
1.9	Thesis outline	17
Chapter 2	Literature Review	18
2.1	Ontologies in computer science	18
2.1.1	Components of ontologies	18
2.1.2	Use of ontologies in education	19
2.1.3	Question generation using ontologies	20
2.2	Context-aware mobile learning	24
2.2.1	Mobile learning	24
2.2.2	Context-aware and ubiquitous computing	26
2.2.3	Context-aware learning in museum	26
2.3	Game based inquiry learning	27
2.4	Related work	29
Chapter 3	Research Methodology	33
3.1	Design science research methodology (DSRM)	33
3.1.1	Problem identification and motivation	34
3.1.2	Define objectives of solution	34
3.1.3	Design and development	34
3.1.3.1	MUSEON an ontology application	35
3.1.3.2	Mobile application component	36
3.1.3.3	Webserver component	38
3.1.3.4	Ontology component	38
3.1.4	Demonstration	40
3.1.5	Evaluation	40
3.2	Question based learning	41
3.3	Question generation for adaptive learning	42
3.4	Benefits of using ontology	43
3.5	M3 evaluation framework	43
3.5.1	Micro level	44
3.5.2	Meso level	44
3.5.3	Macro level	45
Chapter 4	Experimental results and analysis	46
4.1	Participants	46
4.2	Learning environment configurations	46
4.3	Experimental procedure	47
4.4	Micro level evaluation	48
4.5	Meso level evaluation	50
Chapter 5	Conclusion, Limitations and Future Work	52

5.1	Conclusion.....	52
5.2	Limitations.....	52
5.3	Future work	53
References	54

1.1	Working principle of Hestons	13
1.2	BSM model using forward	23
1.3	Multi-CV system overview	30
1.4	BSM/CV model	34
1.5	Volatility learning with MLE/EM in SVD manner	38
1.6	Out graph for MLE/EM	39
1.7	Proposed architecture of MLE/EM	40
1.8	Quantile prediction flow diagram	42
1.9	Experiment scenarios	45
1.10	Bar chart for prediction error	46