

USING FIVE STAGE MODEL TO DESIGN OF COLLABORATIVE LEARNING ENVIRONMENTS IN SECOND LIFE

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ABSTRACT

Specifically Second Life (SL) among virtual worlds draws attention of researchers to form collaborative learning environments (Sutcliffe&Alrayes, 2012) since it could be used as a rich platform to simulate a real environment containing many collaborative learning characteristics and interaction tools within itself. Five Stage Model (FSM) developed by Salmon, Nie and Edirisingha (2010) is an application development model supporting educators to design collaborative environments in SL to promote learning and group studies of learners. The educators may benefit from FSM to test and design collaborative learning tasks in SL to support group studies of learners. Form this point of view, in this study; we planned a collaborative learning environment design in SL by using FSM. In this context, the research is important to form an example in the literature in the matter of designing collaborative learning environments in SL based on FSM.

KEYWORDS

Five stage model, collaborative learning environment, Second Life.

1. INTRODUCTION

Wang (2009) emphasizes two distinct characteristics of a collaborative learning environment related with each other as individual responsibility and favorable dependency. For the effective application of collaborative learning techniques, it is vital that each learner takes a role actively in the process for the first characteristic, and makes contribution by shares they make to the group study. In addition, contribution of each learner to the second characteristic makes up the basis of the success of the group as a whole and of the individual success, in other words, contribution of each individual is regarded as the success of group study.

Specifically Second Life (SL) among virtual worlds draws attention of researchers and Salmon to form collaborative learning environments (Sutcliffe&Alrayes, 2012). Because, SL which could be used as a rich platform to simulate a real environment contains many collaborative learning characteristics and interaction tools within itself. Those who learn in SL can be interacted with others who learn three-dimensional objects and environment by means of their avatars. As well as they can establish to groups assign roles to be represented in the group with the outfits of avatars, and may use multi communication channels such as voiced and written message and avatar mimics. In addition, learners who learn this way can be enabled to access environment and learning content through various representations such as audio, written and visual media and to take a role actively in SL (Andreas, Tsiatsos, Terzidou&Pomportsis, 2010). Educators can develop an SL environment supporting collaborative learning by using these tools, and form discussion groups, and organize virtual seminars or conferences (Çukurbaşı, 2012). For carrying out these activities, more than one education methods and techniques such as simultaneous brain storm and taking role can be utilized in SL environment (Burgess, Slate, Rojas-LeBouef & LaPairire, 2010). In addition to methods and techniques to carry out collaborative learning activities, educators can benefit from an application-development model such as Salmon's five-stage model [FSM] (Çukurbaşı, 2012).

During the 1990s Salmon designed and tested FSM made of five stages as an application development model for learning and teaching by means of online learning. She also designed learning tasks for groups at each stage of the model. At the same time, this model being effective for mixed learning environment was published in Salmon's study (2000) as online learning and teaching model for the first time (Figure 1).

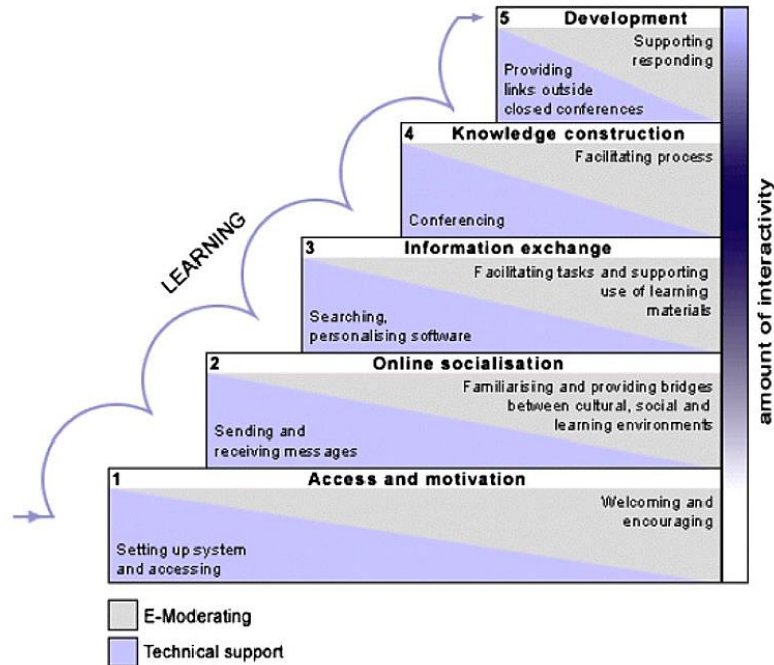


Figure 1. Five-stage model (Salmon, 2000).

According to Salmon, interaction and learning level between the learners gradually increases for passing to an upper step in the stages of the model. In this context, the model stages can be summarized as follows (Salmon, Nie&Edirisingha, 2010: 171):

- (i). *Access and motivation*: That is to provide basic preconditions for effective participation of individuals. In this stage, system access and system use skills should be earned and learners should be encouraged for achieving learning by benefiting from a remote group study.
- (ii). *Online socialization*: That is the formation of personal identities of learners in online environment, and finding other learners to form communication. In this stage, educators should guide to enable connection between learners.
- (iii). *Information exchange*: Learners share beneficial information and thoughts related to learning content and tasks with other learners and exchange information. In this stage, each learner should establish collaboration by means of the support of other learners for the task of each learner.
- (iv). *Knowledge construction*: Learners can undertake more complex tasks and form discussions. Interactions start to contain more collaboration in this stage.
- (v). *Development*: Learners seek means to benefit more from the system, and wish to get assistance to achieve their learning tasks, to apply and transfer experiences they lived and the things they learned in online environment.

Salmon (2002) designed learning tasks within the group for each stages of FSM which was developed by Salmon (2000). As well as, this model was adopted for training in SL by Salmon and others (2010). The model was tested, carrying out three different case studies (Figure 2) with archeology, digital photography, media and communication students. It was found that each stage provides a separate learning opportunity. This model has been adopted and adapted to different contexts by online teachers, academics and trainers. Therefore we may benefit from FSM tested and developed for designing collaborative learning tasks in SL to support group studies of learners. In this study, it was aimed to design an example of collaborative learning environment in SL using FSM. In this context, the research is important to form an example in the literature in the matter of designing collaborative learning environments in SL based on FSM.

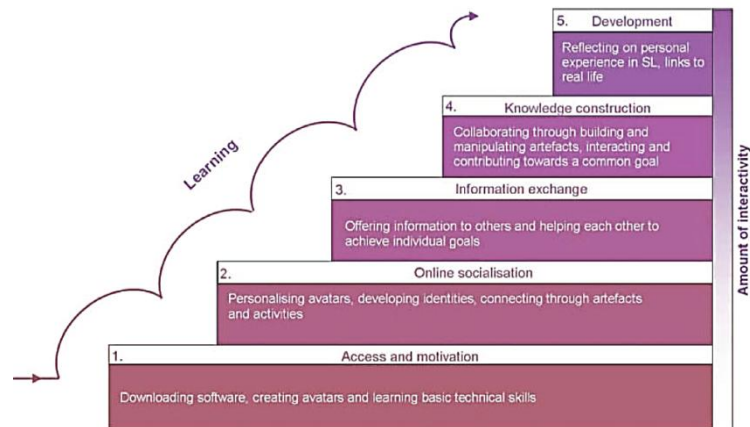


Figure 2. Five-stage model of teaching and learning in Second Life (Salmon et al., 2010, p.181)

2. METHODOLOGY

In this study, an example of collaborative learning environment was designed through FSM. The participants will complete collaborative learning tasks based on FSM both individually and in groups. These groups will be determined by the participants. Each group can determine a design topic such as library, entertainment places, and conference areas in order to show that how should be a virtual campus. They can make expeditions individually and take screen screenshots in SL for this purpose. The groups can prepare individual or collaborative products from their screenshots in SL. The individual products can be exhibited in a presentation; the collaborative products can be exhibited in a virtual cube. Finally all products displayed by the participants in SL will be evaluated and rewarded. In that way, the participants' motivation is attempted to be improved.

One-on-one studies will conduct in laboratory with participants for two weeks, and connection will make to SL from where they are located during the other weeks. A closed group will be formed by the researcher in Facebook social network to inform the participants, provide communication other than study time and to collect data distantly, and it is enabled that participants become members of the group. Thus, the participants will keep up with the information by means of the group in Facebook, and continue to communicate with both the researcher and one another for the necessary processes in addition to the application. Moreover, the researcher will decide with the participants about the study times of the teams by used Facebook. Details of collaborative environment which we will design based on FSM are Table 1 and as follows.

Table 1. Details of the collaborative environment which we will design based on FSM

FSM stages	Process	Environment
Access and motivation	Information about SL, installing, membership, first entry, basic avatars movements	Lab.
Online Socialization	Socialization methods in SL, creating groups, participating to virtual conference	Lab.
Information Exchange	Determining group name, leader, design topic and doing task shared in group meetings	SL
Knowledge Construction	Completing individual tasks, creating individual product and brainstorm for common product	SL
Development	Creating common product, evaluation and rewarding	SL

2.1 Access and Motivation

In the first stage, the participants will meet face to face with researchers in the laboratory. The research will provide information about the environment and applications on installing SL, becoming free member, entry to the environment, interface information, basic avatar movements such as sitting, walking, running and flying, the waiting in the right location for reaching the area provided for them.

2.2 Online Socialization

In the second stage, the participants will meet face to face with researchers in the laboratory. The research will provide information about applications on adding friends, accepting friendship, seeing online avatars nearby, teleporting near avatars located in different places, joining groups, personalization of avatars, designing and transferring between avatars virtual objects. The participants will be divided into groups. In addition to these, the participants will participate to a virtual conference about various isles that could be visited in SL by given an educator conducting studies in SL. The conference announcements will be made through Facebook group.

2.3 Information Exchange

In the third stage, each group will meet in SL as online from the place they are located. The researcher can enter these meetings via SL. In these meetings each group will decide on a group name, a group leader and a design topic, they will do task sharing and they will help each other within the scope of the topic identified. The researcher informs the groups about getting screenshots, loading presentation in SL and their expeditions they will make. Also the researcher guides the participants about the scope of the topic they selected and group members help one another. Furthermore, the researcher shares documents such as locations, announcements of events and seminars in SL by means of the Facebook group.

2.4 Knowledge Construction

In the fourth stage, the groups will complete individually their expeditions and share screenshots that they took for their individual tasks as a presentation area determined to group in SL and in Facebook group. The groups will examine individual products within themselves and brainstorm about which screenshots are to be transferred to cube faces and try to design this cube which will be a common product in integrity to reflect the topic they determined. For this purpose, the researcher helps the participants when the presentations are loaded and informs the participants about cube design in SL and to transfer the screenshots onto the surfaces of the cube.

2.5 Development

In the fifth stage, the groups will complete group cube as common product in integrity to reflect the topic. Following, products exhibited by the participants in SL will be evaluated and rewarded. For this, individual products are evaluated by the research; common products are evaluated by educators conducting studies in SL. As the reward of the selected group product, we will pay the copyright of it for use in the virtual campus architecture. In this way, it is given to the group perception reflecting their experiences in SL to real life. Also the learners discover the environment for various opportunities such as education, friendship, getting occupation. It is important that the reward is meaningful to the participants. Thus for this reward, the participants must be informed about how to use the economy of SL in real life.

3. CONCLUSION

In this study, we planned a collaborative learning environment design in SL by using FSM. It may be advantageous to make use of SL for collaborative learning environment, because it supports participants from geographically different locations to study whit in groups by using various interaction tools such as immediate message, body language and mimic movements by means of avatars. But it is important that the collaborative learning environment must be designed in a planned way for this environment to turn into an advantage. Therefore, the successful progress of the implementation process can be provided by taking advantage of an application development model such as FSM which was tested and developed to support the learning within groups in SL. It is essential that the researcher should take place actively in SL in all stages, and guide participants. Also in the stages of the model, interaction and the learning level between learners gradually increase for passing to an upper step (Salmon et al., 2010). Therefore it will be important to the successful completion of each stage.

In future studies, we are planning to application collaborative learning environment designing in this study and examine the effectiveness and limitations of this environment. Similar studies which will be implemented with different study groups, themes and methods will create additional sources to literature. Also the future studies will revealed out advantages and limitations of FSM on the design of collaborative learning environment.

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