

The Construction of English Collaborative Learning Model Based on Sloodle

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Abstract—With the development of Distributed Virtual Learning Environment (MUVES). It brings an immersive world into educational environment, improves the perceptible and interactive for learners in online education, and especially provides a quite good opportunity for language learners to improve the quality of English teaching. This paper reviews the system of Sloodle, illustrates its educational function modules, and constructs a Sloodle-based English collaborative learning model which based on Sloodle and analyze its elements, explores the operation Process, aiming to give reference for further research in web-based English learning.

Keywords—MUVES; Sloodle ; Moodle; Second Life; Collaborative Learning; activity design; Evaluation;

I. INTRODUCTION

English teaching demands authentic language surroundings. Today's College English Class emphasize more and more on the four basic abilities: listening, speaking, reading, writing, to help students understand the culture of the language, vocabulary, grammatical, syntactic, and structural character, etc. However, by analyzing correlative literature, it is found that serious problems still exist in the actual effect of college English education, especially on the language skills training.[1] Hence, to solve the existing problems, to reform the traditional model of teaching and evaluation, and to develop the comprehensive usage ability of English, is becoming an urgent task to solve in English Classes of Higher Vocational Colleges. Sloodle combining the basic modules of both Moodle and Second Life (SL), provides a good platform for web-based English Teaching in Vocational College on Speaking, listening, writing, reading, translating. Based on this analysis, combining the immersion collaborative learning based on Sloodle with classroom teaching will be a perfect way for language learners to improve the English learning effects, especially with the three-dimension virtual interactive learning environment, which provides an authentic learning environment for learners to practice listening and speaking.

II. AN OVERVIEW OF THE SLOODLE

A. Introduction

Sloodle is a software package which integrates the Moodle web-based virtual learning environment and the 3D virtual world platform Second Life. Sloodle blends these two distinct platforms into a single blended 3D/web virtual learning environment Activities can be blended across both platforms: Moodle's mature web-based tools can be used to support virtual world classes and Second Life can be used to bring richer engagement and immersion into online Moodle courses activities. With Sloodle, Second Life can be used as an alternative 3D client for Moodle, replacing normal text-predominant WebPages. Sloodle allows tutors to use Moodle as a back-end database for virtual world courses. [2]

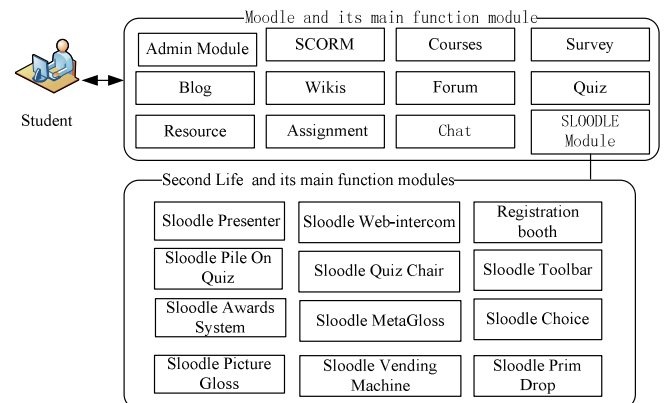


Figure 1. The main educational function modules of Sloodle

B. Function module

Sloodle, which extends the functions of the Moodle, combines the features of Moodle (Such as content management system, bulletin board, quiz, assignment, blog, wikis, forum, resource, etc) and the SL, and adds a number of extension functional modules, (Such as Web-intercom, Quiz chair (and Pile-on Quiz), Distributor, Multi-function Sloodle Toolbar, Choice tool, Presenter (See Fig.1). [3]Some of its key features see: www.Sloodle.org.

C. Typical Application

According to the reports from the literature, the studies of Sloodle application in college education and other projects are

as follows: Dubai-Korea Virtual Cultural Exchange, Scotland-Spain E-learning for All Project, E-learning Project in Korea, University of Nancy (FRANCE), University of Teacher Education Thurgau (Switzerland), Universidade Aberta (Portugal), National-Louis University (USA), etc. [4] Among them, the Dubai-Korea Virtual Cultural Exchange program, which took place in the spring of 2008, was a unique program utilizing a wide range of modern information and communications technologies to bring together learners from two distant nations. To support both student interactions and provide support for learning a wide range of technologies were used, such as Sloodle. Through literature review and analysis of the educational features, the teaching activities in SL could be divided into four categories: Role-plays and simulations, Groupwork and team building, Events and presentations, Constructive activities. For all of these, the VLE portion of the Sloodle systems might serve to frame the activity in pre and post reflective activities and during the activities by prompting the student with guiding questions or instructions that help him stay on task and heighten his attention [5].

III. THE COLLABORATIVE LEARNING MODEL BASED ON SLOODLE AND ITS ELEMENTS

The immersive virtual learning environment based on Sloodle is concordant to the relevant people-centered learning theory (such as constructivist learning theory, situated cognition theory, activity theory, distributed cognition theory and some) and some learning model (collaborative learning, situated cognition and situated learning, distributed learning, learning community). These theories all can be realized into practice with Sloodle; and the learning environment based on Sloodle also has the nature of construction, immersion, openness, interaction and situation. The collaborative learning model based on Sloodle and its elements could be analyzed as follows:

A. The collaborative learning model based on Sloodle

Collaborative learning mode is defined by a set of processes which use collaborative learning organization to help students cooperate with each other in order to accomplish some certain goals or develop some products which is usually content specific. Analyzing the relationship between the educational function features of Sloodle which support learning and the five basic elements of collaborative learning, this paper reduce the basis for collaborative learning based on Sloodle (see table 1). The collaborative learning, discusses in this paper mean to the web-based collaborative learning. After reference to Dr. Jianhua Zhao's 4-Elements of Web-based Collaborative Learning, this paper Put forward the 6-elements of web-based CL: Learners, groups, teacher, the environment for supporting collaborative learning (included learning resources, collaborate learning environment, organizational environment for collaborative learning, tools for supporting collaborative learning, Activities for Supporting Collaborative Learning), Collaborative learning, evaluation of Collaborative learning. Based on above, this paper constructs a collaborative learning model based on Sloodle (See Figure 2).

TABLE I. FIVE ELEMENTS OF COLLABORATIVE LEARNING (JOHOSONS, 1999) AND THE FUNCTION MODULE OF SLOODLE

Elements of collaborative learning	Corresponding functional modules in Sloodle
Positive Interdependence	Groups in SL and Moodle; Polling activities, Workshop
Face-to-Face Promotive Interaction	Web-intercom, Communicate module in SL
Individual Group Accountability	Webquest, PBL activities module which assign task to each learners.
Interpersonal and Small Group Skills	Instant message, using avatar to communicate each other (text or voice) in SL, Forum module, chat module, Podcasting, storytelling,, Multi-function Sloodle Toolbar
Group Processing	Forum, Report, wiki

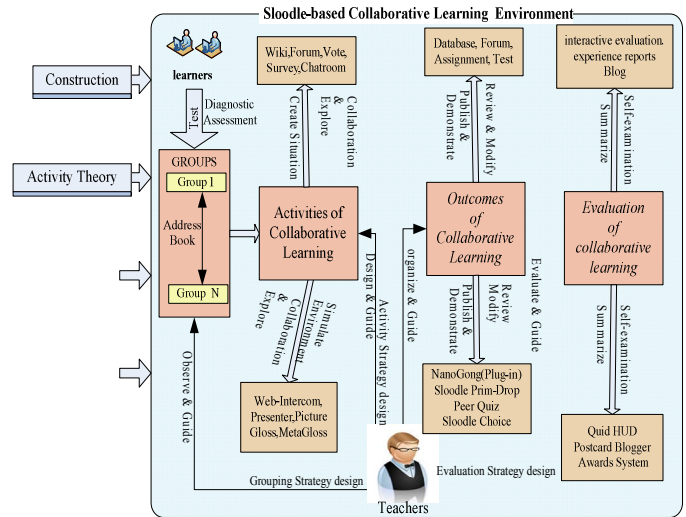


Figure 2. Collaborative Learning Model Based on Sloodle

B. Analysis of the elements

1) Individual learners

Learner who assigned to each groups according to certain strategy, is the essential unit of collaborate learning groups. The effective operation of collaborate learning groups depend on the learners performance. Among them, learners' intelligence and non-intelligence factors play an important role in the process of learning. Each student as individual needs autonomous learning, role playing, and accomplishes some tasks. Also, as a member of the group, the learner will solve problem through the collaborate learning through dialogue, discussion and debates. The module of Moodle in Sloodle provides function of customizing learners' avatar, make the identity management from non-real time to real time, visualization (using 3D representation of things) instead of condition prompts. The feature of customizing learners' avatar, makes the identity management from non-real time to real time, visualization (Using 3D representation of things) instead of condition prompt, enhances the learners' social presence in these environment. Meanwhile, Sloodle provides several tools for learners to interact with each other, such as forum, wiki, chatrooms and so on. It also provides supporting tools for learning and self-thinking, such as Blog, chat log, report and so on.

2) Collaborative Learning Groups

Collaborative learning groups are a basic factor of collaborative learning model. One factor that determines the efficiency of collaborative learning is the composition of the group. This factor is defined by several variables: the age and levels of participants, the size of the group, the difference between group members, etc. Thus, testing and survey are necessary as to know the differences between students while group up.

The questionnaire and Feedback Modules in Moodle provide the function for teachers to investigate the students' attitude on learning by the built-in questionnaire or questionnaire developed by teachers. In addition, Quiz chair in SL also has the function of investigation. The survey results provide a reference for their grouping. the groups should be classified in order to the level of difficulty. There are

Three group modes in Moodle module: Separate groups, No groups, Visible groups. The group feature allows a teacher to assign teachers and students to one or more groups. Using groups on the course or activity level will allow the teacher to: Completely isolate groups of students by sight and activity from each other, partially separate groups, where one group can see other groups and each group's activity, but not interact with the other group(s). Identify each group with an icon. Furthermore, the group module in SL also provides the function of member management.

3) Teachers

Teachers in CL are essential. With the guidance of teacher, the organization of CL, the efficiency of learning object and the effectiveness of CL can be guaranteed. Meanwhile, with the coming of emphasizing on the design of learning activities, learning strategies and learning evaluation, teachers are being put into a higher level. Sloodle allows for user accounts and roles, to give each user (with a given role) access to different authority and functions. Sloodle roles facilitate controlling what a user can and cannot do within a course. The role in Sloodle includes teacher, student, librarian, assistant (limited Grade Access & No Grade Access). Teachers in SL figured as a customized avatar can strengthen the supervision and administration of the individual learners' learning process. To some extent, the experience learning environment provides a possibility for teacher to instruct students as class education.

4) The environment of Collaborative Learning

Collaborative Learning is processed in a special environment which includes organization environment, space environment, hardware environment and resources environment of Collaborative Learning (CL). In this paper, CL means collaborative learning in web-based environment, which mainly refers to the Virtual Learning Environment (VLE) of immersion in Sloodle. Therefore, we design the environment from elements of learning environment (the VLE of Web 3D generally is composed by 5 elements which include resources of learning, environment of learning, support tools, learning community, and activities of learning). In this paper, we classify learning community yet which is needed in CL environment and group of CL as similar,

because of 4 elements of CL. Following are the analysis of elements of VLE based Sloodle:

Resources of learning: various formats of presence are provided for resources, such as text, WebPages, animation, graphics, images, video, and audio etc. All of these resources can be added as resources either these belong to the module Moodle or of SL. Learners can also collect learning resources with the function of "Glossary" and "upload", which can be co-constructing learning resources by teachers and students.

Environment of learning: To take construction of VLE of immersion in Spoken Language Drill for example. On one hand, teacher can supply VLE of immersion to promote the sense construction to bring off students by creating a real immersive learning environment (or close to reality) for students with the help of avatars, virtual scenes, and virtual events, on the other hand, learners also can learn with "Language Study Groups on SL" which is the special community of language learning.

Support tools: Sloodle provides multiple tools for supporting learners' learning of English, supports distributed collaboration, promotes expression and make tacit knowledge explicit, not only the testing tools, survey tools, Glossary of Moodle elements which based two dimension, but also the Web-Intercom, MetaGloss, Choicer, Translator of SL elements in three-dimensional virtual environment. For example, utilizing record plug-in named NanoGong; teachers can assign homework of spoken language, build speech record of students, make students correct their mistakenness of speech and grammar by themselves, and improve students' speech. With the using of Reader plug-in, teachers can build resources for training of hierarchical read, check quantity of students' reading, and examine students' degree of reading.

Activities of learning: In order to achieve the learning objectives, teacher will design the process of learning, work out rules for learning activities, and support corresponding assignment books or scaffolds. Learners collect many kinds of information by many ways, analyze, synthesize, and evaluate the information, present their own or group's work, and exchange result of CL.

The module of Moodle in Sloodle provides function of setting rule of activity such as rules of activities regulatory, rules of roles and responsibilities, and the process of student learning can be controlled effectively with the function of opening time setting which is a module in Moodle.

5) Collaborative Learning Outcomes

In this paper, Collaborative learning outcomes not only include the primary achievement during the process of learning, but also include the achievement which happened after learning activities are accomplished. The former results can be used as an important reference to evaluate both the groups and the individual learners' performance during the process. It also brings benefit to teachers for acquiring detailed knowledge of the groups' learning situation. The latter pays more attention to the final performance of learning-activity; it is a joint effort of each member in Collaborative Learning Groups. Moreover, it is taken as an important basis of group evaluation. Finally, learners can publish the learning outcomes

on the platform of Sloodle. The comprehensive conclusions were obtained by going through a stage of self-assessment, peer-assessment, and teacher-assessment. All of these are implemented in the environment of Sloodle.

6) *The Evaluation of collaborative learning*

Evaluation of collaborative learning is the assessment of the result of the acquisition of individual students and the Collaborative performance. This article builds a model, which including diagnostic assessment, formative assessment and summative evaluation, is a multi-agent approach of students self-assessment, peer-assessment and teacher assessment of student's evaluation. Sloodle provides supporting tools for these evaluations, such as personal blogs, interactive forum assessment and experience report. Meanwhile, Sloodle will be tracking all the operation of each student when they use Moodle, and video recording function can also be recorded on the learning activities throughout, which is preserved in the form of video(Data in SL can be stored in the Moodle platform), therefore, SL also has electronic portfolio features. Teachers can use the report feature to see learning activities students involved, learning time, the number of statements, the resources be submitted, and the exchange discussion posts, which can overcomes the shortcomings of teachers of the previous conventional foreign language teaching sites cannot monitor the students learning situation, hence, teachers can implement the process of evaluation to it. In the test or forum module, teachers can make a guide based on student feedback, or e-mail or post or three-dimensional virtual substitute, etc. Finally, Sloodle offers a variety of rating strategy and scale types. For example, teachers can use one of the "achievements" feature to set the proportion of each of the elements, and the final results generated automatically by the system. Teachers can also adjust rules at any time according to the performance and reflection of students. In short, teachers can play a strong role in the supervision and guidance throughout the learning process with this platform, from the initial creation of situations and issues released to students' records and concerns in the process of learning activities.

IV. THE OPERATION PROCESS OF MODE

In this mode, individual learners or teachers through Moodle own custom questionnaire survey carried out in the Moodle or SL level of learning styles and cognitive testing on the basis of heterogeneous grouping in free combination, the formation of collaborative learning groups, and the group culture. In this process, teachers provide guidance. Sloodle contains three group model to adapt to different teaching needs, one of the classes directory, forums, polling group characteristics, the communicate module of SL provides the tools to support team-building, which provide protection between individuals, within the group, class internally generated positive interdependence.

After the creating of groups, teachers and researchers design collaborative learning activities according to the teaching needs. They created environment to meet the students to explore collaboration in Moodle and SL mainly through the teaching objectives, learner characteristics, the activities of the

task, activity Environment and tools, activity flow, activity strategies, the design of the activities evaluation. In this process, collaborative learning groups complete the corresponding tasks to achieve teaching objective primarily through participation in collaborative learning collaborative group learning activities. They can also participate in the activities of design; teachers involve in the process of its guidance, and make changes and adjustments to the activities based on student performance on the changes and adjustments.

The collaborative groups participate in the collaborative learning activities designed by teachers; produce the learning stage and the final outcome of the results through the submission of Sloodle platform. Results of students in teacher organizations publish, display, self-assessment and peer assessment, and to comment, resulting in revisions, each group modified to produce the final learning outcomes. Sloodle platform play a great role by providing multiple forms of assignments, tests, forums, databases, interactive evaluation.

After the submission of results of collaborative learning, teachers and researchers to evaluate the entire collaborative learning, collaborative learning process mainly on the individual and team performance, collaboration strategies and skills to summarize and guide students to reflect. Teachers should also reflect on the design and implementation after each activity. Sloodle provides personal learning process records, study reports, interactive evaluation, experience reports, Blog, Wiki and other tools.

In the model, dialogue, exchange, discuss, collaborate, share, review and reflection throughout the teaching process, in order to achieve the full exchange and dialogue between teachers and students, students and students, and establish a new information environment, teacher-student relationship.

V. CONCLUSIONS

Sloodle platform provides a good environment for supporting students in collaborative learning of English, especially the provision of immersion context. It provides a powerful supplement classroom teaching, but this article only provides a theory in this study. The functions needed to achieve optimal teaching and appropriate learning activities design and strategies design need to be support, follow-up practice will be carried out to explore these areas.

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