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Home > Archives > **Vol 1, No 1 (2014)**

Vol 1, No 1 (2014)

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Table of Contents

Articles

[Development of a 'Fish Tail' Rudder to Improve a Ship's Maneuverability in Seaway](#) [PDF](#)

Aries Sulistyono

[Maximum Peak-Gain Margin 2DOF-IMC Tuning for a 2DOF-PID Filter Set Point Controller Under Parametric Uncertainty](#) [PDF](#)

Nur Hidayah, Juwari Juwari, Renanto Handogo

[Design of Curriculum Matrix for Robotics Education Derived from Bloom's Taxonomy and Educational Curriculum of 2013](#) [PDF](#)

Eko Henfri Binugroho, Endah Suryawati Ningrum, Dwi Kurnia Basuki, Adnan Rachmat Anom Besari

[Viscous-Resistance Calculation and Verification of Remotely Operated Inspection Submarine](#) [PDF](#)

Ardi Nugroho Yulianto, I Ketut Suastika, Aries Sulistyono

[Bioremoval of Chromium, Copper and Cadmium by Bacillus cereus in Simulated Electroplating Wastewater](#) [PDF](#)

Yulinah Trihadiningrum

[An Investigation into Hybrid Catamaran Fishing Vessel: Combination of Diesel Engine, Sails and Solar Panels](#) [PDF](#)

Pramudya Imawan Santosa, I Ketut Arya Priya Utama

[Synthesis of UiO-66 Using Solvothermal Method at High Temperature](#) [PDF](#)

Ika Diah Rahmawati, Ratna Ediaty, Didik Prasetyoko

[On-line State Estimator for Three Phase Distribution Networks Displayed on Geographic Information System](#) [PDF](#)

Indri Suryawati, Ontoseno Penangsang, Adi Suprijanto, Dimas Fajar U. P., Mat Syaifin

[Impacts of River Groove Propagation on Irrigation Infrastructural Failures](#) [PDF](#)

Kuntjoro Kuntjoro, Choirul Anwar, Didik Harijanto

[Steering System Kinematic and Steady-State Cornering Analyses of the ITS Electric Car](#) [PDF](#)

Unggul Wasiwitono, Indra Sidarta, Agus Sigit Pramono, Sutikno Sutikno, Alief Wikarta

[The Rate of Turbulent Kinetic Energy Dissipation in a Turbulent Boundary layer on a Flat Plate](#) [PDF](#)

Sutardi Sutardi

[The Influence of Burning Temperature of MIRHA On Mechanical Properties of Foamed Concrete](#) [PDF](#)

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- [By Issue](#)
- [By Author](#)
- [By Title](#)
- [Other Journals](#)

FONT SIZE

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- [For Readers](#)
- [For Authors](#)
- [For Librarians](#)

<i>Ridho Bayuaji</i> System Application of Genetic Algorithm for Scheduling Optimization Study Using Java (Case Study : Department of Computer System UNTAN)	PDF
<i>Fatma Agus Setyaningsih</i> Simulation of Direct Digital Synthesizer with LabView	PDF
<i>Elan Djaelani Suardja</i> Technology Development of Kupang Processing with Dryer Machine Base on Expert System	PDF
<i>Dedin F Rosida, Dedid Cahya Happyanto</i> Kinetics of Hg and Pb Removal in Aqueous Solution Using Coal Fly Ash Adsorbent	PDF
<i>Eko Prasetyo Kuncoro, Mochammad Zakki Fahmi</i> Microstructures Behavior in Biomedical Co-Cr-Mo-C-Si-Mn Alloys Containing Nitrogen	PDF
<i>Alfirano Alfirano</i> New Concept of PQR-Coordinate on Power Transformation for Harmonics Reducing	PDF
<i>Indriarto Yudiantoro, Rudy Setiabudy, Ridwan Gunawan</i> The Effect of High Switching Frequency on Inverter Against Measurements of kWh-Meter	PDF
<i>Isdawimah Isdawimah, Rudy Setiabudy, Ridwan Gunawan</i> Analysis of Buttering Method on Mechanical Properties Welded Material Low Carbon Steel	PDF
<i>Gathot Dwi Winarto, Rivai Wardhani, Irsyadus Syarif</i> Vibration and Cylinder Chamber Pressure Characteristics of an Air Reciprocating Compressor	PDF
<i>Bambang Daryanto Wonoyudo, David A. Siregar</i> The Effect of Chemical Substance and Immersion Time to Tensile Strength of Bamboo Betung (Dendrocalamus asper) as Chemical Preservation Treatment	PDF
<i>Afif Rizqi Fattah, Ken Ninez Nurpramesti Prinindya, Hosta Ardhyananta</i> Optimal Location of a Capacitor Bank in a Primary Feeder to Load up Linearly	PDF
<i>Hermagasantos Zein, Erwin Dermawan</i> Power of Regenerative Braking with Kinetic Energy Recovery System	PDF
<i>Mochamad Edward Ramadhan, Harus Laksana Guntur</i> The Art and Sustainable Aspects of Natural Dyeing in KANAWIDA Hand Drawn Batik (Green Batik)	PDF
<i>July Hidayat, Fatmahwaty Fatmahwaty</i> Novel Hybrid Orthogonal Large Set Code Sequence for High Density Wireless Networks	PDF
<i>Nyoman Pramaita, P. L. Johnson</i> Novel Centralized Control Battery Operation, on Microgrids to Supply The Load Priority	PDF
<i>Hartono Budi Santoso, Wike Handini, Rudy Setiabudy, Budiyanto Budiyanto</i> Learning based on Virtual Class using combination of Second Life and Learning Managment System	PDF
<i>Firli Irfhamni, Indah Agustien Siradjuddin, Arik Kurniawati, Ari Kusumaningsih, Rima Triwahyuningrum</i> Physic Simulation Experiments using Augmented Reality	PDF
<i>Surya Sumpeno, Christyowidiasmoro Christyowidiasmoro</i> Performance of Anaerobic Reactor in Attached and Suspended Growth Mechanisms for the Removal of Tofu Wastewater	PDF
<i>Rosvita Tri Jullyanti, H. Purnobasuki, T. Nurharyati, F. N. Rachman, N. I. Oktavetri</i> Analysis Characteristic of Province Travelling Intercity of AKDP Makassar-Parepare Route, South Sulawesi	PDF
<i>St. Maryam Haftram, Herman Parung, Tri Harianto, Muh. Isran Ramli</i> Investigation of Flow and Heat Transfer Characteristics in Two-Phase Flow Through Evaporator of Diffusion Absorption Refrigerator (DAR)	PDF
<i>Siti Masita Rakhmawati</i> Detection of Critical Situation of Longitudinal Vehicle	PDF

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Home > No 1 (2014) > Irhamni

Learning based on Virtual Class using combination of Second Life and Learning Management System

Firli Irhamni, Indah Agustien Siradjuddin, Arik Kurniawati, Ari Kusumaningsih, Rima Triwahyuningrum

Abstract

Learning is the most important aspect for increasing the quality of youth generation in a nation. Therefore many learning methods are developed in order to make the youth more qualified. Virtual class based on the second life learning method is proposed in this research. The objective of this learning method is to make learning process more organize and interesting for the youth. There are four stages to build virtual class based on the second life. First, create course material for the learning process. Second, make the virtual class scenario, i.e. student registration, evaluation, and the graduation. Third, design the avatar and the classroom hence the student can get in touch with each other and understand the course material easily. Fourth, build the virtual class based on second life and the scenarios. In this research second life is combined with moodle for learning hence the learning process more interesting and more understandable to the youth

Keywords

learning; second life; virtual class; moodle

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Learning based on Virtual Class using combination of Second Life and Learning Managment System

Firli Irhamni¹, Indah Agustien Siradjuddin¹, Arik Kurniawati¹, Ari Kusumaningsih¹, and Rima Triwahyuningrum¹

Abstract—Learning is the most important aspect for increasing the quality of youth generation in a nation. Therefore many learning methods are developed in order to make the youth more qualified. Virtual class based on the second life learning method is proposed in this research. The objective of this learning method is to make learning process more organize and interesting for the youth. There are four stages to build virtual class based on the second life. First, create course material for the learning process. Second, make the virtual class scenario, i.e. student registration, evaluation, and the graduation. Third, design the avatar and the classroom hence the student can get in touch with each other and understand the course material easily. Fourth, build the virtual class based on second life and the scenarios. In this research second life is combined with moodle for learning hence the learning process more interesting and more understandable to the youth.

Keywords—learning, second life, virtual class, moodle.

I. INTRODUCTION

Learning based on virtual class is an alternative learning method for student to understand their learning topics. In the conventional learning method, the students and teacher must be in the same room, and the teacher explains about the topic to the students. The conventional learning process will have difficulty since this process need the presence of the teacher. The other disadvantage of this conventional process is lack of illustration of the topics.

The alternative method uses virtual class for the learning process is proposed for an alternative learning method in this research because of the advantages. There are five advantages of virtual class for the learning process, i.e., distance learning, simple, interactive, individual, social [1].

The first advantage of the virtual class for learning is the capability of distance learning. It means that, with virtual class, the students and the teacher should not in the same room, the virtual class is accessible for everyone and from everywhere, the students do not have to travel to certain place to study the topics, and etc. The second advantage is simple. To access virtual class, it is only need common ICT equipment such as internet connection, computer, and a headset. To access the virtual class the students should learn also the skill of entering and using virtual class in second life.

The third advantage of using the virtual class for the learning process is interactive, engaging, social, and playful. The student is able to discuss the topic using the chat facility, the virtual class provide games and interactive objects, the student is able to go to interesting virtual places such as museum, white house, eifel tower, and etc. The Fourth advantage is the fact that the students are able to access the virtual class in their

mobiles, therefore the virtual class is individual. The nerds student can study at their own room, the auditiv students are able to learn while listening their playlist, and etc. The final advantage is social, the participants of the topics are engaged with the virtual class, hence they can interact each other.

II. METHOD

Computer with Graphic and high internet connectivity supported is required to implement learning based on virtual class. Certain softwares are also needed in order to use this virtual class, they are Moodle, Second Live Viewer, and Sloodle. There are three main stages to create learning based on virtual class, i.e. joining second life, setting up and preparing the moodle and sloodle.

Second life is virtual environment which there are avatars that represent the user, 3D building with its environment such as water, land, furniture, house, and etc. The avatar can visit another place in second life, communicate with another avatar, do the transaction process, or another social activity. To join the second life environment, id user must be created first then install the second life viewer as shown in Fig 1.

- To set up and prepare the moodle, this research use the moodle version 9.1 since this moodle is able to integrate with last version of sloodle. Seven steps are needed to install and prepare the moodle, i.e.:
 - Download required version of moodle at <http://download.moodle.org>
 - Download XAMP or WAMP server to access the created virtual class
 - Extract the moodle into certain folder (the folder for the localhost), which is `.\xampp\htdocs`. Run the xamp server, and access the temporaly downloaded moodle by opening the browser and type the url <http://localhost>.
 - Create folder "moodledata" at `.\xampp`. Change the access right of the folder with Full Control access
 - Edit file `config.php` which is at the directory `.\xampp\htdocs\moodle\` with this following changing


```
i. $CFG->dbtype = 'mysql'; // mysql
or postgres7 (for now)
```

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- ii. \$CFG->dbhost = 'localhost'; // e.g. localhost or db.isp.com
- iii. \$CFG->dbname = 'dbmoodle'; // database name, e.g. moodle
- iv. \$CFG->dbuser = 'root'; // your database username
- v. \$CFG->dbpass= ""; // your database password
- g. Open the web browser, type the url : <http://localhost/phpmyadmin/>, in the "Create new Database" menu, type 'dbmoodle' (as in the config.php file) and click "create" button
- h. Type the url at the web browser : <http://localhost/moodle/> to start the installation process

Since the moodle file must be created or installed at the public internet, then this research create the public website, and be able accessed on www.trunojoyolearning.com/virtualLearning

The last step for creating the learning based on virtual class is creating and preparing the sloodle. There are two parts of sloodle software, i.e. server side and moodle intregated. At the server side, the sloodle can be downloaded at slisapps.sjsu.edu/sl/index.php/Download_Sloodle and this sloodle software is installed in the moodle. The second part of sloodle is provided by the second life and can be downloaded at <http://maps.secondlife.com/secondlife/English%20Village/141/126/22>. Second life viewer is required to access this part of sloodle.

There are six steps for installing the sloodle software, i.e.:

- a. Back up installed moodle before installing sloodle software
- b. Access the installed moodle hence the moodle can be intregated with the sloodle using one of the following steps:
 - i. use FTP if the moodle is hosted in the public website
 - ii. use File Manager if the moodle is installed in the local computer
 - iii. use Webhost's tools if the moodle is web based version
- c. Unzip the downloaded sloodle software
- d. Copy sloodle folder into mod folder which is in the moodle folder
- e. Access the moodle as the administrator which is at the administrator page. In this research, the administrator page can be accessed at the <http://trunojoyolearning.com/virtualLearning/admin> meanwhile if the moodle is installed at the local server, then the administrator page can be accessed at the <http://localhost/moodle/admin>
- f. Finish the sloodle installation process, if the process is succeded then there will be a message 'tables have been set up correctly' as shown in Fig. 2.

Following are the steps to integrate sloodle with secondlife (Sloodle-in world tools):

- a. Open the secondlife viewer
- b. Avatar or user should enter the secondlife world at <http://maps.secondlife.com/secondlife/English%20Village/141/126/22> (English Village Sandbox) with their id that are created before. The objective of

avatar entering the english village is to get the sloodle-in world tools. This process is depicted in Fig. 3.

- c. Choose the Sloodle Set Version 1.2 as in Fig. 4
- d. Press '1' button at the dialog menu the will show after choosing the sloodle set
- e. Press 'keep' button at the showed dialog menu, and then this process make the sloodle set will be in the inventory

The last step to create learning based on virtual class is creating the environment (such as building, class room, water, and etc) of the second life using the tools from the inventory and integrate this second life the installed moodle and sloodle.

Many features that are provided by the second life for learning system, i.e.:

- a. *Presenter* is presentation media which can combine images, video, and web pages.
- b. *prim drop* is transaction log in the moodle database so the avatar can collect their assignment
- c. *quiz chair* is a quizzes for avatar that are provided at the moodle and can be accessed in the secondlife
- d. *quiz pile on* is a multiuser quizzes
- e. *Toolbar Given* is the information spot about blogging, classroom gestures, and etc.
- f. *Web Intercom* is the chat media (live) between moodle chat and second life.

III. RESULT AND DISCUSSION

The content of learning based on the virtual class are provided by the SDIT Al Uswah, Surabaya. The objective of this collaboration is the created virtual class can be accessed and implemented in real learning method in the junior school. The learning fields of this learning content is 'frog surgical'. The choice of this field is proposed by the school, since according to the school rules, 'frog surgical' is forbidden because it is considered as tourchering the life creatures hence it is haram based on islam rules. Therefore, the learning based on the virtual class is very usefull for students, since the can do the learning process without facing the real object, which is frog.

Design of the 'frog surgical' can be seen in Fig. 5 as follows, Created virtual class with 'frog surgical' learning content can be accessed at <http://TrunojoyoLearning.com/virtualLearning/>. Content of this site is the moodle learning management system. From the moodle, the teacher is able to upload the lecture notes and quizzes, and this moodle is supported also by the chat room, hence all the users of the system can interact at each other.

This moodle also provide the users to enter the virtual class using the second life world in tools. The built environment of virtual class can be seen at Fig. 6.

IV. CONCLUSION

Learning based on virtual class is modern alternative for learning process. With this virtual class, student will have new experiences in virtual life. And also, with the help of virtual class, the limitation of learning process is reduced, such as forbidden activity of tourchering life objects, visiting important place that are far away from

the student's location, interaction between student even students from another school in virtual life, and etc. Hopefully, with the alternative learning process the students will interested in the learning content and they will understand with the content.

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Figure 1. The Second life Viewer



Figure 4. Sloodle in World Tools

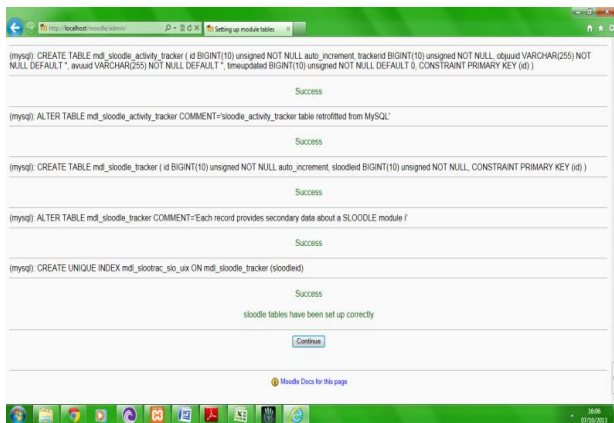


Figure 2. Success Installation of Sloodle at the Installed Moodle

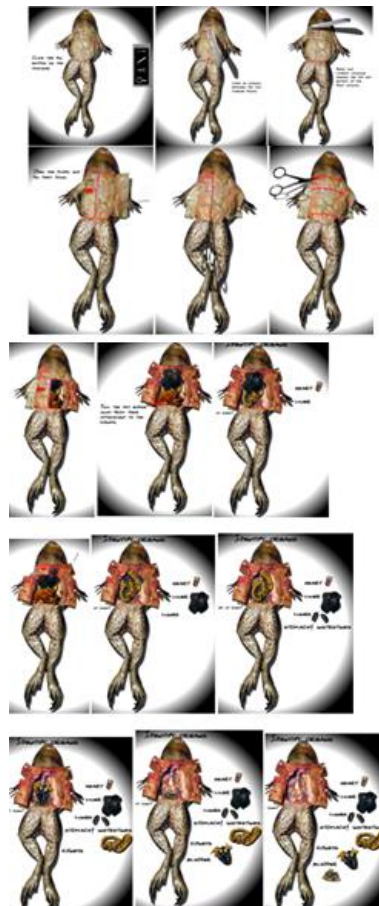


Figure 5. The Design of 'frog surgical'

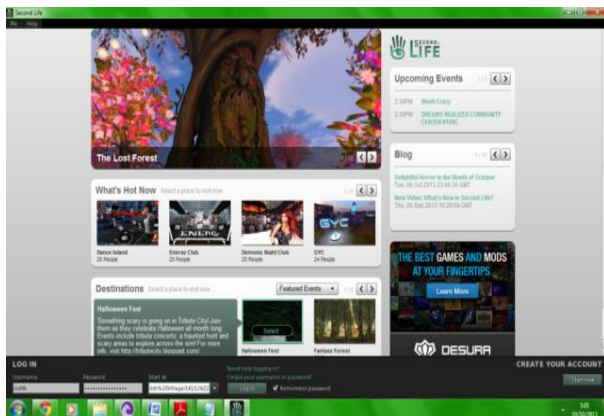


Figure 3. Teleport to English Village Sandbox in order to get the second life world of tools



Figure 6. Virtual class with Frog Surgical Content