

Modification of Collaborative Online Learning

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Modification of Collaborative Online Learning For Scientific Writing Skills Enhancement Conference Paper · June 2013 DOI: 10.13140/2.1.2181.8881 CITATIONS 0 READS 33 2 authors, including: Dwi Sulisworo Ahmad Dahlan University 40 PUBLICATIONS 29 CITATIONS SEE PROFILE Some of the authors of this publication are also working on these related projects: Designing mobile application based on android platform to improve students' higher order of thinking View project Education model identification to enhance nationalism character at high school in the frontier area of Indonesia View project All content following this page was uploaded by Dwi Sulisworo on 13 October 2014. The user has requested enhancement of the downloaded file. MODIFICATION OF COLLABORATIVE, ONLINE LEARNING FOR SCIENTIFIC WRITING SKILLS ENHANCEMENT Du'i Sulisworo Dian Artha Kusumaningtyas Physical Education Department. Universitas Ahmad Dahlan Address: Jl. Kapas No. 9. Yogyakarta, Indonesia Email: drvi@tuad.ac.id ABSTRACT Internet becomes more effective to be useJ as a medium of learning, especially in the Web 2.0 as a tool to facilitate coillaboration in learning. Wiki technology is the most popular tools in the Web 2.0 that allows communication, cooperation, and information sharing. Wlki is characterized by simplicity, accessibility, and easiness inte,roperability. The purpose cf this class action research is to improve international physical education using a wiki. Blended learning ;models that scientific writing skills in the field of physics education for students with modiff the group work in rhe classroom with a r+'iki (collaborative online) can improve students' ability in w'riting scholarly works well. The result show'n on improving studerrts' skills in language and ideas generated. There are some nurturing positive outcomes of implementing learning strategies. It will give good impact to the deveiopment of students' altitude: the ability to communicate. rcspect for others, and c-reativity. Key';ord s : wiki, co ll atx:rative, o nl ine, learning, phys ics I. Introduction Over the last two decades. the learning environment has been changing so rapidly, driven by the develcpment of infcrnation and communication technology. The revoh:tion in this techrtology also produces an online learning technology that allows collabrlrative learning to take place, known as Web 2.0 technologies (Crampton et al. 2012; Chelliah and Clarke 2011; Sangra and Sanmamed 2010; Sirtongthawoni and irrairit 2006). It is a uew generation of learning that used in higher educarion institutions. With this technology can improve student learning and iniprove skills such as critical thinking and problem solving, collaboration, leadership, adaptability, and dirscing people as new skills in the current erg (Chelliah and Clarke 2011; Chu iind Kennedy 2011). On the other hand, the ENHANCINC INTERNA TI ON A t, COL LABORA| IVE RE S EAI(CH ON EDUCATION, SCIENCES, AND I{ UN,IANITIES culrent study used to be physical cducation teachers still tend tc-r not taking advantage of Web 2.0 technologies to thcilitate the leaming process. Today, the internet has been used extensively in the stud1,. Consequently, there will be a shifting on how students learn und communicate, and horv to improve the functionality ol'the technology (Chelliah and Clarke 2011; Chcn et irl. 2006). Internet becomes nrorc eff'ective to be u;:ed as a mediun'r of learning, r:specially in the Web 2.0 as a lool to facilitate collaboration in learning. Wikr tchnology' is the most popular tools in the web 2,0 that allows going communication, cooperation, and infbrmation sharing (Chu and Kennedy 2t)l l, Zywica et al. 2011; Hossain and Aydin 2011). Wiki is characterized by sinr rlicity, accessibility, and

easiness interoperability. Based on the background that has been discussed previously, the problem in this classroom action research is to improve scientific writing skills for students with international physical education using a wiki. The purpose of this class action research is to improve scientific writing skills in the field of physics education for students with international physical education using a wiki.

2. Theoretical Background

2.1. Characteristics of Web 2.0 and Wiki

Desilets et al. in Laughton (2011) defines a simple wiki for asynchronous activities, web-based system for collaborative work. A wiki is a web page or web site that one can directly change, renew, modify, or delete (Wang and Wei, 2011; attributed to the collaborative word processor which allows many users at Laughton 2011; Menkhoff et al., 2011; Frumkin 2005). Wikis can also be different locations to simultaneously collaborate in real-time (Liu et al. 2010; Frumkin 2005). Wiki allows users to create a space that brings knowledge together with instructional practices to exceed the limits of traditional learning (Chu and Kennedy 2011; Menkhoff et al. 2011; Sangra and Sanmamed 2010). Adopting wiki system there are three important characteristics to be able to form an exciting learning environment. This characteristic refers to what is described as follows (Mason 2008; Laughton 2011, 2009; Wang and Wei 2011; Keser et al. 2011):

- Authority openly collaboration (open editing), which refers to the permissibility of all people to easily and freely make improvements (editing) on the existing content on the wiki.
- Changes in control, which allows tracing all the changes that have been made and by whom done. The administrator can decide who can view, who can change the content of the wiki to ensure good quality.
- Linking and creating pages for structured knowledge, which allows clustering of web pages on the wiki containing different based on specific categories.

2.2. Collaborative Learning

Sometimes collaboration distinguished with cooperative learning. In cooperative learning, the activity is done by dividing into several activities with any person who is responsible for some part of the problem solving (Lai 2011; In ENHANCING INTERNATIONAL COLLABORATIVE RESEARCH ON EDUCATION, SCIENCES, AND HUMANITIES Sahin 2010; Wasonga 2007). Collaboration, on the other hand, involves the participants to work together on the same task, not in parallel on separate parts of the task. Collaboration is an engagement with the participants in a coordinated effort to solve a problem together. Through collaborative learning, learners have the opportunity to equip themselves with stronger analytical skills to interpret information and gain further knowledge (Farajollahi and Moenikia 2011; Hossain and Nydin 2011; Cebeci, et al. 2009; Wasonga 2007; Dabbagh 2007). In return, communities. Construction and sharing of knowledge is one of the processes they contribute to build and share knowledge with each other in their learning involved in knowledge management. meaning of words such as "online" and "collaborative computer supported" Challenges in online collaborative learning is a wide variation in the settings and in other studies is framed as a subgroup of the group of learning". In some online, research groups are sometimes gathered in face-to-face geographically distributed. Examination rare cases entirely online. Variations in socio-technical context is widely understood a material effect on the group experience, but consideration of effects glossed over a lot of work that examines the different constructions of "online group" (Persico and Pozzi Goggins et al. 2011; 2010). This challenge should be considered when group activities are used to improve the skills of new students.

3. Methods

This research was carried out by using the internet. Technology is the application used GoogleDocs, so that all students must have a gmail account first. Before entering the activity, it is required that the students were given an interact with participant or other students or with faculty learning companion. In introduction to the features of GoogleDocs as a medium to share information and this study, the model used in the classroom action research is Kemmis and Taggart model. With this model, action research carried out in 4 stages in each cycle that includes planning stages (plan), stage action (act), stage of observation (observe), and the phase of reflection (reflect). To see the passage of the activity on each cycle, measures employed to meet some of the following stages:

- a) Preparation session. Students prepared with some tools to be able to develop the ability to think critically and creatively. The techniques learned are
- mindmapping to increase creativity in thinking so it will be able to show up new ideas.
- Gap analysis to improve critical thinking skills in order to perform a systematic problem solving.
- write a narrative based on

mindmapping and gap analysis without standard constrained writing. The emphasis is to write as much as possible based on the idea found. This stage to improve the ability to brainstorming in writing, not as a text editor ' using the wiki on GoogleDocs to be able to share and collaborate in virtual activities. Any ideas which have subsequently written to ENHANCING INTERNATIONAL COLLABORATIVE RESEARCH ON EDUCATION, SCIENCES, AND HUMANITIES shared to all participants of the group and faculty through the sharing menu in GoogleDocs. b) group is fixed for a particular topic and can change the group to another in groups session. Students divide into small groups of 4-5 students' This particular topic. Each group is responsible for determining the file with the topic. This is done to ensure that every student can become an expert on a c) Writing session. Provided file no*. of the document that can be identified task of initiating and managing file access to group members' each group that opened access for all members.. At the appointed time together, all the participants do online on a file that has been specified' Each student writes his presentation on a particular topic on the file' Provision is for the idea of writing the same thoughts written in way to insert or a regulatory re-phrase that is on file that has been opened and not add or another section. Scheduling to arrange each group adapted to the capacity of teachers to be able to be observed during the online activities of d) Enrich writing session. Is not scheduled, each member of the group find students. Each student should not be the same as the other members. So it will be available for at least 16 references in each article. e) Editing and posting session. Using Indonesian language and writing handbooks, student edit and write on a scheduled. Each paper is divided into small parts according to the number of group members' Each student was assigned to edit it right on the part of each. Other members provide advice and comment on the work of other friends on the wall comments that the results obtained for the better. Obligations given advice is to do repairs. 0 Lay out preparing session. The session to prepare the lay out and upload' Layout contains the paper size, margins, fonts, spacing script structure, page number, and reference. Each group make sure that the posts are in a publication edition uploaded at a particular address' 3. t, Observation and Interpretation Critical issues that need to be observed in this classroom action research online, lecturers need to monitor and encourage all active students' Lecturers have to make sure each member to actively participate in the activities. When an article need to be fixed then the lecturer would provide a direction through the would comment on the comments wall during online together or individually. If in wall or directly on the text. At each session lecturers need to make the observation sheet which records the level of activity (number of posts, number of comments on other friends, the number of ideas written down, the number of proposed improvements script). Exposure based on the implementation of the action, the action cycle is critically Write, Enrich, Fix, Set, Sunrise shown in the following 1 () ENHANCING INTERNATIONAL COLLABORATIVE RESEARCH ON EDUCATION, SCIENCES, AND HUMANITIES figure. The success in this learning activity is depend on: a) Ability to collaborate seen in scientific texts as a result of the group, b) The active participation of students in the work seen on providing comments and suggestions to others, d) The ability to think critically, creatively that is seen in mindmapping c) IT skills especially in operating features wiki on GoogleDocs, made, and e) Ability to search another learning sources. 4. Results and Discussion 4.1. Observations Prior Research At the beginning of the study is the first meeting of the research methodology course, the students mapped to determine the level of understanding associated with the use of GoogleDocs, learning strategies in high school physics. This observation results showed that 15 students have been using GoogleDocs and 14 had never used. Twenty students have obtained the subject of learning strategies. Mapping of the two because it will GoogleDocs is an invaluable tool in the wiki online interaction and learning strategies related to understanding the types of research in physics education midwives. Results of mapping these two things will be the initial prediction success rate in preparing the research plan. From preliminary observations also known, Mahwa all students have never specifically learn some vital lessons to write scientific papers mainly for research. Table

Comoetences t\la Competences Ever Googledoc. i t s Never t4 Le:nirrx Strategy 20 4 Not to influence the perceptions of the research process, >tudents purposely not told that its activity would be recorded as an observational study. It is expected that stu<ient activity is more natural. The rcsearch was carried out during the implementation of the course for 2 credits. 4.2. Description of Implementation Researcht The research was conducted by irnpiementing blended learning strategy, where at each class session aka tone assignment to perform online activities, espec^ally using GoogleDocs. For his purpose, all students are required to have a gmail account. in this study cannot tre said that e'ery meeting is a cycle, becluse the characteristics of the different activities and always evolving according to the dlmamics that arise in learning. Instructors can customize the demanded more competency development needs oi ,tudents during lectures held in the case. Creai.ive instructors in faciitating students to be passionate are very imp.rrtant. 4.3. Data Analysis First cycle From the results of the implementation of the frst cycle, it was analyzed 1t ENHANCING IN'TE RN AI' ION A I. COT- L At]OIT A f IV E RES F,All'CI'I ON EDUCATION, SCIEN(ES, AN D)IUN'IANITIES by paired t test (betu,cttl intlividual activities altd group activities)' This rcsult cuasnendottoacstueaelywsheeththecr iphro.g-grersosupo't'sirradvctiid'iutiactlss hdairveectlay. pl-oloswiteivveer,irintpcaacnt ocnrnly tbhee achievement together. Valuei scen in the analysis is thc average value of the indivicual members of the group u'hile doing individual activities and valuc-group average when tloing grou; o.iiriti.r. The icsults of this analysis are shown irt Table 2 with a significance level of 5u/o' 'lable 2 Result of Paired T-test Paired Differences 95% Confidence Interval of the Difference sig. (2- tailed) TOTA L1 TOTA 1.23675 .62tJ7 LK From the above table it can bc seen that the results (language skills and ideas) for activity grorp were significantly higher compared with individual -casting activities. It means ,io, tt " group's=activities can improve work better than when the activity is done individually. Cycle Analysis of Results II by paired t test (betw".n group activities and individual activities). These results From the results of the itnpletntation of the second cycle was analyzed aiddreeevaeuslsoetphdirnognuo\$-nsteaernrawtitnhivdeemtshaeopr.ini,ii-gr,i.tiy,nLrstuhigletnrgiocrfoautnhptelyt.g*rVoauilp*u'pse.soacsvteeievintinieidnsivbtihdoeuthaalinnoadlytectsvoisemlioepsitnhigne average value group during group activities and the average value ot' the making the first chapter researh-propotoi The results of this analysis are shown individual members of the *r*p while performing activities of individuals in in'fable 3 with a significance level of 5o/o' From the above table it can be seen that the results (language skills- and rceassutlntsg oidfetahse) gtbroruinp'dsivaidctuivaitlieasc.tivMiteyanhassainncinretalisve'iddusaigltnoifigceatnbtlyttceormapftaerread.grvroituhpthoef students interacting in the next chapter construct a narrative for rcsearch I proposals. t2 I1 N H ANC I N C INTERNATIONAL COLLABO RA.TI V E R ES EARCH ON E DUCATION, SCIENCES, AND HUMANII-IES Table 3 Result of Paired T-test Paired Differences it Sig. (2- df tailed) Mean std. Deviatl on std. Error Mean 9s% Confidence Interval ofthe Difference Pair TOTA I LTOITA 2.96; .86531 .r606 5 8 LK Lower Uooer 3.294 2.636 18.45 2tt .000 7 4 5 Intproved. results of Individuals From the analysis of the first cycle and second cycie, there is an interesting note i.e. comparing ihe performance between groups and individuals. r*/ould also need to be viewed together to see how increasing an in<iividua!'s ability to write scientific papers (especially in Chapter I of the research proposal) at the beginning of the tcrn compared with thc results of Chapter I of writing a research proposal after the 5th meeting. Table 4 shows the results of paired T test for individual results beginning with the ttнал individual results. Logically, it is already known that from the first anti second c-v-cl" there is an irruresse€, so definitel-v benchmarking beginning and end there is also an increase in tnb overa!! activity. l'alr TUIA I LI TOTA LK Table 4 Result of Paired T-test Paired Differences 95% srd. std. Confidence Deviatl Error Intervai of the Mean on iviean Difference 3.585 .73277 2 .1 360 7 I Lower I Upper 3.8e0;IL.roi s Sic. (2- t df taited) I I 26.35 28 .000 5 In the implementation of this study, in general the lecture .went well. The existence of a fbw students who are not fully presence study led to the possihility of a lower optimum performan,-e. It j,..:st was not examined in this study are more in the absence of influence on the achievement of learning outcomes; were seen r3 E NHANCING INTETTNA'I' I O N A L C'O L L A B O R ATI VE RE S EARCH-I ON EDIJCATION, SCIENCES, AND HUN,IAN ITI ES tllo'e in the assessment or cotttparison bct*ccn input and

output activity. Learning interaction can be much better than expected due to a good ICT literacy in students to apply a combination of face-to-face meetings and the use of technology for motivation in both individual and group work is influenced also by the spirit level besides of a positive response from students to engage in learning activities. Good optimum. Giving examples of real cases in the writing of scientific papers, thinking instructor in presenting the material and ensures each individual is working at its community will be very helpful to give a boost of motivation to work better. The importance of a good activity to another to another and learning in the Activities carried out by dividing the group randomly structured group5, namely: the first calculated the number of students that result divided by five, the participate in the beginning, there is the awkwardness because its members are not of 5 students. At the time of sharing in a group activity, "then" every student must recited student count from one to six in order to form 6 groups with a maximum necessarily from classmates / contemporary. To ensure the group runs smoothly, instructors around from one group to another in order to help provide an posts. It is important to prevent misbehavior in the classroom. alternative that is more developed in preparing students mind mapping and make In the online collaborative wiki activity, each group is required to monitor activity and provide comments on the wiki text box so that there is invite) instructor in the wiki. This is to provide an opportunity for instructors to interaction in the wiki. From the results of the first cycle there was already Sser, on activity going well. ICT literacy of students exert influence on the rate of topics in accordance with SAP (units lecture event), and also to be able to would be seen not only on the increase but also on the thoroughness of the lecture increase. However, it still needs to be observed in the second cycle because that compare the results of the individual before and after the whole activity. From the overall results, a strategy that combines mind mapping learning, students' ability in writing scholarly works well. Internal factors and external collaborative work both in the classroom with wiki-oriented products to enhance success of the learning process. As a classroom action research, this strategy can factors motivated students. The motivational instructor was also decisive in the be used in some other learning activity. Several other outcomes can be obtained as an outcome nurturing the ability to appreciate others, creativity, communication skills both oral and written.

5. Conclusions and Recommendations

5.1. Conclusion

Conclusion be drawn are as follows: Based on the results of research and discussion, the conclusions that can be drawn are as follows: 1. Blended learning models that modify the group work in the classroom scholarly works well. This is shown on improving students' skills in writing with a wiki (collaborative online) can improve students' ability in writing language and ideas concretely. 2- There are some nurturing positive outcomes of implementing learning strategies. That will give good impact to the development of students' learning attitude: the ability to communicate, respect for others, and creativity. This capability cannot be expected immediately on learning of research methodology courses, but it is important for students.

5.2. Suggestion

Some suggestions for improvement, which can be considered the results of the study, are as follows: 1. The role of the instructor (lecturer, teacher) in managing learning, especially to encourage learners (student, students) will determine the level of interaction with others in the group. 2. the students already have a good ICT literacy. Instructor becomes Use of online collaborative activities with the wiki will become effective if important to monitor the activity of the wiki. 3. Further research to structure these strategies into a model, which is verified with experimental studies, will be able to produce a good model. 4. Assertiveness instructors on students to make sure to avoid misbehavior in individual and group activities will determine the course of the learning process.

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