COOPERATIVE LEARNING DESIGN IN WEB MEDIA: CONCEPTUAL REVIEW

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Author’s Biography

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RESEARCH HIGHLIGHTS

This paper proposes the conceptual feasibility of designing cooperative learning on web media. Web-based cooperative learning is done by incorporating elements of cooperative learning on the web. Various cooperative learning studies are used as a basis for building cooperative learning steps designed. Preparation before implementing cooperative learning on a website plays an important role. The initial process of preparing cooperative learning on the web: 1) Preparing data about students, 2) Developing an activity plan including objectives, 3) Determining teaching materials, 4) Organizing groups of students, 5) Planning weight values, 6) Determining action instruments (observation sheets, learning outcomes test, questionnaire about learning responses).

The results of the study formulate cooperative learning steps on the web using forum chat facilities: 1) Present goals and instruction sets; 2) Arrange students to become learning teams; 3) Helping team work and learning; 4) Test material; 5) Give recognition.

Keyword: Cooperative Learning, Web Media

RESEARCH OBJECTIVES

Learning design will produce a conceptual framework in expressing the ideas of learning methods chosen according to the learning objectives and the media used. The conceptual design in Koehler's (2006) study explains that to develop effective learning through three main components of learning, namely: content, pedagogic and technology (1). Component content is teaching the material. Pedagogic components are cooperative learning strategies, and the technological component is the use of web media.

The conceptual framework is relevant to the formulation of teaching arrangements in small groups, heterogeneous students who work together to achieve learning goals (2), (3). Cooperative learning can be applied to web media. Web users can interact through verbal language, messages, opinions and more. This activity can be done virtually and face to face. Working in a virtual group can be as effective as a real group. Students can discuss with their virtual groups both synchronously and asynchronously.

The purpose of this study is to: 1) Find a conceptual framework in designing cooperative learning and 2) Explain the operational steps of cooperative learning in web media.

MATERIALS AND METHODS

This paper reviews the conceptual framework of cooperative learning carried out on the web. Conceptual studies can be accounted for if they are based on clear theoretical and procedural studies. The framework of the design concept is an activity to design a combination of cooperative learning and learning on the web. Broadly speaking, a small group distribution consisting of 4-5 people, determine the roles and tasks of each group member, conduct discussions and make reports for the material as a whole. After dividing the group then arrange to learn on the web. Learning material created for discussion is uploaded on the web Johnson (1999) in Fortner states is the use of small group learning so students can learn from each other (4). The aim is to develop the ability of students to work collaboratively with others (5). Slavin in Tran stated that the method that regulates students into small groups who then work together to help each other in learning academic material (6).

Deutsch (1949, 1962) in Johnson & Johnson (2009) that there are three important components in cooperative learning, namely: interdependence, interaction patterns and results (7). There are five components of cooperative learning, namely: positive interdependence,
individual accountability, promotive interaction, use of social skills and group processing (8). To implement it, it is conducted dialogically which is explored from the interaction of educators and students to exchange information, explore problems, integrate ideas and solve problems in a collaborative environment (9).

**RESULTS**
The conceptual framework in designing cooperative learning is obtained through analysis of the theory and practice of cooperative learning through the adaptation of the Johnson & Johnson concept. Before cooperative learning is implemented, students get learning instructions, web usage instructions, group determination (4-5 people) with their respective duties and responsibilities.

The operational steps of cooperative learning on the web use forum chat facilities, namely:

**Phase 1: Present goal and set instruction.**
Participants are asked to log in to the web using their respective accounts. The goal is to record all individual learning activities determining the evaluation of learning outcomes. 5 minute activity time.

**Phase 2: Organize student into a learning team.**
Participants were asked to discuss through facilities/chat menus with group members to determine the division of tasks and strategies used by the group in completing learning. The discussion was given 10 minutes, enough to prepare team members in determining effective discussions and the division of roles and responsibilities of each group member so that the group succeeded.

**Phase 3: Assist teamwork and study.**
After a small group is formed, all participants are asked for discussion in accordance with the material provided on the web. Discussions are provided with chat facilities. When the discussion was given 45 minutes, it was enough to study the material through small group discussions.

**Phase 4: Test on the material.**
After the discussion in the small group was finished, they were asked to return to discussions with the class and given 45 minutes. The activity is carried out by conveying the results of small group discussions. Then each group made a report on the results of the discussion which covered all the discussion material.

**Phase 5. Provide recognition.**
Then the participants were asked to answer a quiz aimed at measuring the level of success of the discussion process and understanding of participants. The time is 15 minutes.

**FINDINGS**
Cooperative learning carried out with the web must be carefully prepared. Determining the time at the stage of cooperative learning is considered proportionally especially during synchronous virtual learning. Instructions for using the web are delivered before learning on the web about facilities/chat menus for discussion forums, the menu of teaching materials and quizzes and assignments. Cooperative learning on the web is considered through virtual communication facilities both synchronous and asynchronous in accordance with learning needs. The role of the teacher in creating interaction and cooperation in learning on the web functions as a facilitator and motivator and provides direction so students share their roles to
achieve common goals. Monitoring learning activities through the web are carried out in an orderly and fast manner especially if using asynchronous (by email) as a means of delivering learning outcomes.

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