Perceptions on- Enhancement of learning skills

Title: Student perception on the use of team-based learning activities to enhance students' skills and knowledge

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Abstract

Team-based learning enhances collaborative learning among students and encourages the students to achieve higher levels of skills and educational outcomes. After lectures are conducted, a discussion class is organized every week for the course unit and students provide answer to the questions from the previous lectures in the discussion class, but it was highlighted that all the answers provided by the students are based on the lecture note and they have not incorporated any of the new details and information. Therefore, the aim of this study was to examine whether the student engagement in team-based activities could provide student-centered learning environment in the classroom enhancing new knowledge and skills. The Deefink's activity learning cycle and Bloom's Taxonomy were applied in designing and facilitating the team-based learning activity. The study population consisted of 27 second year students who followed the course unit of 'Population and Environment' (DMG 2127). After conducting a lecture on environmental issues, six teams were formed and provided with the reading materials related to the lesson. Subsequently, they were guided to read these materials, prepare and present their posters in the classroom. Outcomes were assessed by using student feedback and through teacher's observation on the poster presented by student teams. Based on student feedback and presented posters, it was realized that almost all the students had shown positive perception that the team-based activity enhance students' learning skills and new knowledge. Student feedback indicated that the activity helped them to develop their skills such as unity (81 per cent), creativity (52 per cent), enhancement of new knowledge (70 per cent), time management (48 per cent), critical thinking (63 per cent), presentation skills (41 per cent) and analytical skills (33 per cent). Findings suggest that team-based learning could be used as a method to encourage reading among the students and to improve student learning skills and new knowledge.

Purpose/ background

Team-based learning is one of the most important factors that students are required to develop as their initial skills (Zain et al. 2012). On the other hand, team-based learning increases student engagement in the lesson, develops teamwork and stimulates students in active learning (Fink, 2004). Most studies indicate that active learning improves student learning and performance (Freeman et al. 2007; Knight & Wood 2005; Tessier 2007). Team-based learning (TBL) is an empirically grounded instructional strategy that utilizes small groups with the goal of promoting active and effective learning (Michaelsen, 2004). Team-based learning helps students to achieve five main principle benefits such as respect for multiple perspectives, personal accountability, a willingness to share thoughts and opinions, teamwork skills, and interpersonal skill development (Quinn et al. 2011). Through team-based learning, students are required to think creatively, originally, and critically (Academic Development Center, 2013: pp5). Students can enhance their knowledge and initial skills by

engaging in team work in the practical context. As a more interesting and a worthwhile method, team based learning can be conducted in a learning environment (Fink, 2004). It requires students and lecturers to think, participate in and learn in a new way (Quinn et al, 2011).

One of the common criticisms about university education in social science is that many undergraduates depend on lecture notes and they are less likely to engage in referencing other reading materials. After lectures are conducted every week, a discussion class is organized every week for the course unit and students provide answer to the questions from the previous lectures in the discussion class, but it was highlighted that all the answers provided by the students are based on the lecture note and they have not incorporated any of the new details and information. Therefore, the aim of this study was to investigate whether the student engagement in team-based activities could provide student-centered learning environment in the classroom enhancing new knowledge and skills.

Methodology

The Deefink's activity learning cycle and Bloom's Taxonomy were applied in designing and facilitating the team-based learning activity. The summary of the methodology can be identified as shown in the Figure 1.

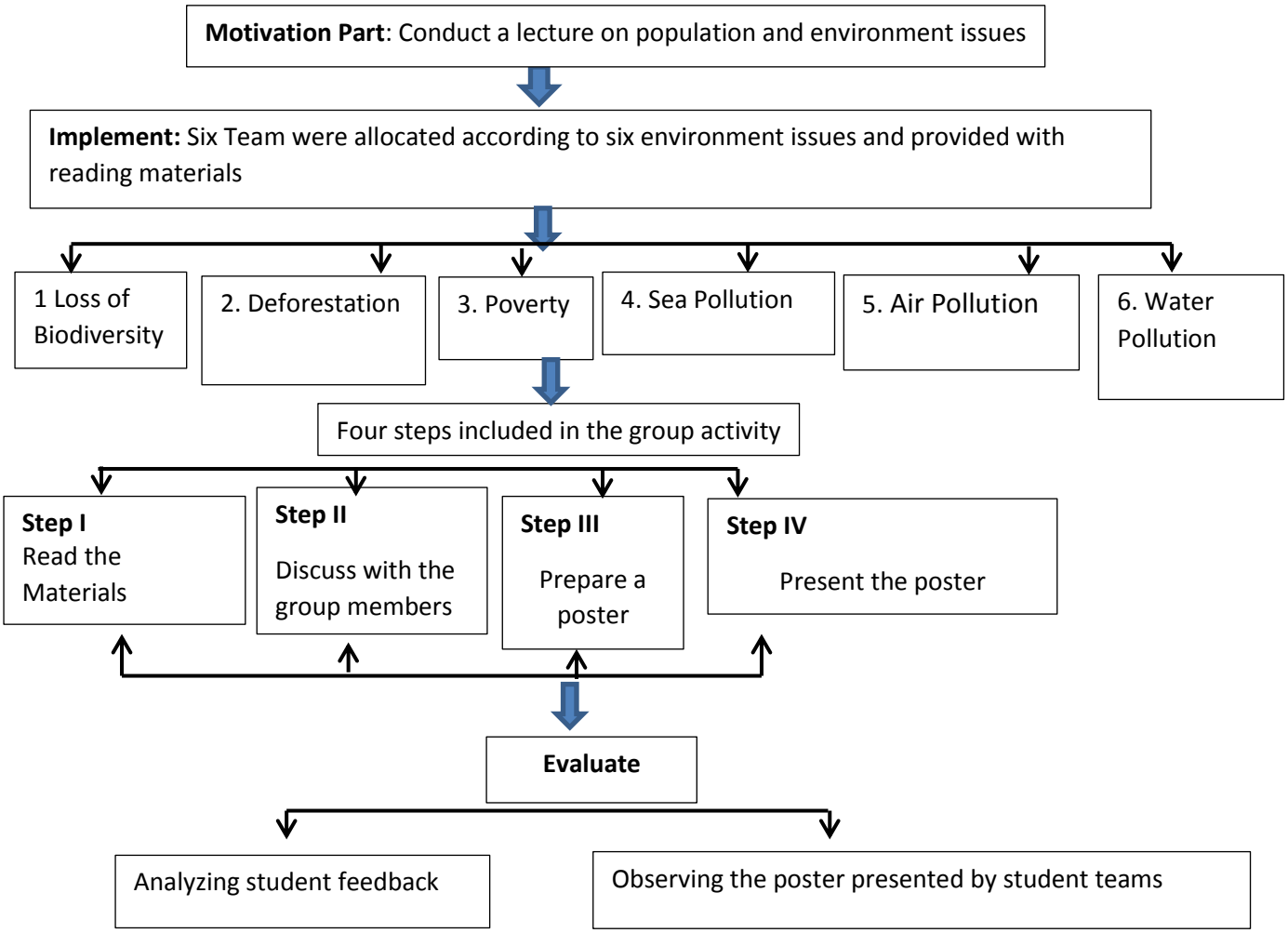

Figure 1: Research methodology of the team-based activity

Team-based research activity was implemented for second year students of the course unit "Population and Environment" in the three years degree programme. The study population consisted of 27 students. After explaining the lesson on Environment Issues in the world as a part of their lesson of the course, six teams were formed. After providing the reading materials to the groups that are relevant to the six of environment issues, they were provided with the instruction for the activity. First, the student teams were guided to read the reading materials, analyze the data through the discussions with the group members, prepare and present their posters. Outcomes of this activity were assessed using student feedback that prepared according to the 5 point Likert scale which was taken after the implementation of the activity and through teacher's observation on the posters presented by the student teams.

Results

Based on the poster presentation and student feedback which were taken after completing the activity, students have shown positive perception on the team-based activity to enhance their learning skills and new knowledge. According to student feedback, more than 70 per cent of the students rated "strongly agree" that team-based learning have facilitated to build up unity within the teams (Table 1), in this context this activity has stimulated the students to build up unity with others. During the activity, it was realized that all the students had an enjoyable time being engaged in the activity with group members through debating, creating the posters and getting ready to present the posters as shown in Figure 2.

Figure 2: Students engagement during team –based learning activity

In addition, 52 per cent of students felt that the team activity helped them to develop their creativity. Nearly 70 per cent of the students mentioned that through the activity they were able to enhance their knowledge. During the activity students had the opportunity to work with others who followed several subjects in the university (Geography, Economic, International relationship, Sociology, Political science and etc.). Students were able to improve their knowledge by having friendly debates within the groups and it helped them to look at environment issues in several aspects such as how this environment issues affect the people and government harming the economy, how does the political influence affect environment and etc. Also in 2011 Quinn et al. mentioned that Teams complete in-class activities and projects and they debate and make decisions on difficult problems.

Table 1: *Student perception on their skill enhancement through team-based activity (Multiple Responses)*

Key areas of skill enhancement	Descriptive Statistics			Student feedback (%)				
Activity of team-based learning	Number	Mean	SD	Strongly disagree (%)	Disagree (%)	Somewhat agree (%)	Agree (%)	Strongly agree (%)
Made a genuine effort to build up unity in the team	27	4.56	0.80			18.5	7.5	74.0
Promoted creativity when designing the posters	27	3.89	0.93			48.0	15.0	37.0
Enhanced my new knowledge	27	4.07	0.92		3.7	25.9	29.7	40.7
Encouraged time management	27	3.74	1.02		7.4	44.4	14.9	33.3
Stimulated my critical thinking	27	4.07	0.92			37.0	18.6	44.4
Developed my presentation skills	27	3.67	0.96		3.7	55.5	11.2	29.6
Enhanced my analytical skills	27	3.52	0.80			66.6	14.9	18.5

The results from the feedback also showed that nearly 48 per cent of students developed time management skills through this activity. According to Johnson et al. (2000) mentioned that through the group work there can be several advantages that can be obtained such as project management, time management, conflict resolution and communication skills which are required for high performance. Further, the students were able to enhance their critical thinking (63 per cent), presentation skills (40.8 per cent) and analytical skills (33 per cent) by engaging in this activity. When the activity was conducted, only 30 minutes were allocated to one group, and during this time students happened to read the materials, summarize their information, prepare the poster and present the posters. In this context students mentioned that they trained to manage their time. When observed the poster presentation it highlighted their creativity, presentation ability and analytical skills (Table 1).

Discussion/ Conclusion

Findings suggest that student engagement in team-based activities facilitated the perception among students that it develops cooperative learning skills, initial skills such as critical thinking, analytical thinking, creative thinking and knowledge. After the poster presentation, students mentioned that as a result of team based activity they are encouraged to look at several aspects and they feel the thirst to find new knowledge. The results further suggest that the TBL had stimulated students to be active, interactive, and

become collaborative learners. It has also helped to improve skills on project management, time management, conflict resolution and communication through developing positive attitudes by working in a group. Further, through the study it is recommended to introduce team-based activity as a method of guiding the reference other reading materials not only depending on the lecture notes to enhance new knowledge, improve the skills of the undergraduates of social sciences faculties.

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