Eny Winaryati The Role of Theacer-Lecturer Collaboraion in Learning MEthod Development

by Bu Eny Winaryati

The Role of Teacher-Lecturer Collaboration In Learning Method Development

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Abstract. The theme of this article is collaborative learning.. The purposes of this article were: (1) to identify the extent to which the collaborative role of teacher-lecturer can improve the quality of learning, and (2) to find out how the process of learning method development is carried out. This research methodology: the teacher-lecturer collaboration in the development of learning methods was carried out in the High Schools of SMA Negeri 15 and SMA Muhammadiyah 1 Semarang in the subject of Chemistry. The research method developed was qualitative with qualitative-descriptive analysis technique. The data collection technique used interviews and discussions, documentation and field notes, and Data Triangulation approach. The conclusion are: (1) The Teacher-Lecturer Collaboration was carried out in the planning; learning in each class as both teachers and observers; and conducting reflexion together. This collaboration had provided many benefits that led to the improvement of learning quality. (2) The process of learning method development was carried out in several stages. The R&D stages consisted of: (a) Analysis, (b) Design, (c) Demonstration, and (d) Implementation. These activities resulted in an activity analysis used as the basis for compiling and establishing learning methods and trying them before they were implemented.

Keywords: the role, collaboration, development, learning method

1 Introduction

The success of learning is a series of activity stages consisting of a learning plan, implementation, and evaluation. For an educator, the above stages must be passed. The learning quality planning stage will be better when arranged, implemented and evaluated jointly by a learning team. This is the reason for teacher-lecturer collaboration. Through collaboration, learning processes complement each other and reinforce so that the academic atmosphere is formed. The learning process and teaching/ learning are well-implemented in which all components are involved and experience behavioral changes.

Collaborative learning occurred together in learning content, instruction, and how students solved the problems and reached understanding to improve learning in the classroom. Collaborating would develop learning, through what was said during the learning process, and what they saw to understand in-depth how students learn. Collaborative learning provided a deep

understanding of the study of subjects which could lead to positive changes in the professional development of teachers and the teaching and learning process, [1].

Teaching-learning provides an interpretation that learning is a process that never stops (long live education) so that it has an impact on behavioral changes of teachers, students, lecturers, and school leaders. Through teacher-lecturer collaboration, there will be a process of knowledge, skill, and attitude transformations. Behavioral changes will be obtained when various information mutually reinforces and settles information to produce mutually agreed decisions/ commitments.

The ultimate goal in classroom learning is to answer the needs of students in dealing with the dynamics of the problems at hand. Given the teachers as the people who meet students every day, the teacher's role becomes very strategic. Continuously, teachers must make changes in learning with a variety of innovations including the choice of learning methods.

The spearhead of learning activities is a change in student behavior, so a teacher must have creativity and innovation in the selection of learning strategies including the methods. The hope is that learning will be more meaningful. Through teacher-lecturer collaboration, there will be an increase in the development of more varied learning methods to improve the quality of learning. The purposes of this article were: (1) to identify the extent to which the collaborative role of teacher-lecturer can improve the quality of learning, and (2) to find out how the process of learning method development is carried out.

2 Method

2.1 Data Source

The authors used primary data source from the teacher-lecturer collaboration in the development of learning methods was carried out in Senior High School 15 Semarang and Senior High School Muhammadiyah 1 Semarang in the subject of Chemistry.

Data obtained from the discussion of the percentage of learning analysis conducted by the teacher so far, and the needs of the teacher. Interviews regarding teacher responses after planning and collaborative learning. Primary data obtained through documentation every step of the learning activities, and observation. The type of data is qualitative data consisting of answers from interviews, documentation, and observation. Analysis related to the method to be developed.

2.2 Data Collection

Preliminary data collected from the results of an open interview with the chemistry teacher about HIdrocarbon material that has been conducted so far is related to future needs, and analysis of material from various literatures, is used to prepare learning plans. Emphasis of analysis related to the method developed. Data at the learning process stage, obtained through documentation (video), observation, and analysis of the suitability of planning and implementation of learning. Video data activities emphasize more student behavior, especially how the planned design method is applied. Data on reflection activities (post-learning) were obtained from the response of the model teacher and lecturer, as well as teacher-lecturer discussions related to findings of student behavior that occurred during the learning process.

3 Discussion

The discussion of the article entitled "The Role of Teacher-Lecturer Collaboration in the Development of Learning Methods" consisted of two objectives. The discussion was conducted by answering these two objectives, i.e.: (1) the extent to which the collaborative role of teacher-lecturer can improve the quality of learning, (2) how the process of learning method development is carried out.

3.1 The role of teacher-lecturer collaboration in improving the learning quality

The 21st-century learning has provided an understanding of the world of education to make more dynamic and progressive changes. There are 4 (four) characters of knowledge and skills that must be owned by teachers and students, i.e.: (1). Critical Thinking and Problem-Solving; (2) Creativity and Innovation; (3) Communication; (4) Collaboration. The four characters above give each other the reinforcement to realize the learning in which students and teachers have the readiness to face the dynamics and problems of the 21st century, [2].

Through teacher-lecturer collaboration, more diverse communication will be established. The transformation of information occurs from a variety of knowledge and experience which impacts on behavioral changes. Collaborative activities include the stages of a learning plan, implementation, and evaluation.

The learning process includes learning and teaching indicating that learning will develop curiosity, and teaching requires higher understanding and mastery of students and teachers/ lecturers. As a result, creativity and innovation will be possessed, and various knowledge and skills will be formed. The hope is that teachers can improve their students to have Critical Thinking and be able to solve various current and future problems.

Knowledge and behavioral changes will occur in students and teachers. The following figure illustrates that the changes in one's knowledge and behavior cannot be separated from the knowledge they understand and the experience they have as well as the experiences that others have. They are strengthened by the environment that surrounds them and the length of time they settle in a person. The experiences include social, emotional, skill, knowledge, and ability fields, which have an impact on increasing potential, and as a result, they will have the motivation to improve performance.
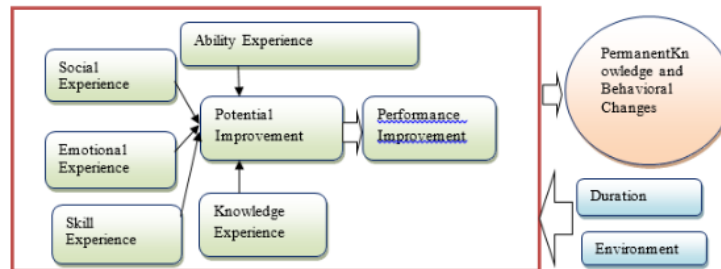

Fig. 1. The Direction of Knowledge and Behavioural Changes in Learning

Learning will be formed through a process of information transformation in both input and reflection processes. Through the teacher-lecturer collaboration, a variety of information is produced. Internationalization of knowledge and skills will be formed when there is an accumulation of the mixture of what has been experienced and changing w11 is known and awakened based on what is done. The definition of learning above is based on the book *The New Social Learning* by Tony Bingham and Marcia Conner, [3].
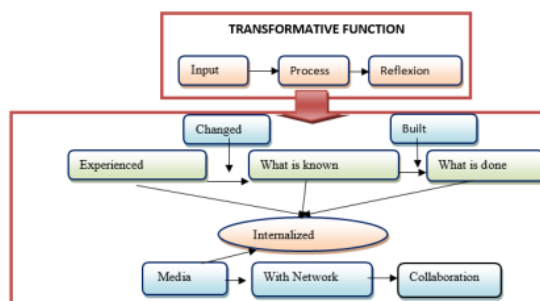

Fig. 2. Learning Transformation Process

The learning quality will be improved when students as learning participants get adequate knowledge, attitudes, and skills to deal with an increasingly complex life. Through the collaboration of teacher-lecturer, there will be a lot of transformation of information and experiences. Teachers will have a variety of information transferred to students. It was the basis for the collaboration of Chemistry Subject Teachers at the High School of SMA N 15 with the teacher model of Mrs. Dwi Anggraeni Ristanti, S.Pd, and at the High School of SMA Muhammadiyah 1 Semarang with the teacher model of Mr. Drs. Bambang Hermanto, with the 10 urers of Chemistry Education, University of Muhammadiyah Semarang (UNIMUS) named Dr. Eny Winaryati, M.Pd and Fitria Fatichatul Hidayah, M.Pd, and observatory ; Eko Andi Purnomo, M.Pd and Muhimatul Ifadah, M.Pd.

The collaboration was carried out in the planning; composing the Lesson and Chapter Designs; learning in each classroom as both teachers and observers, and joint reflection.

1) Learning Plan Activities

After the results of the interviews and discussions with the teachers were reduced, the data formulation resulted as follows: (1) an increasingly complete understanding and broader range of topics, (2) established togetherness, sincerity and enthusiasm to compile, (3) the development of learning strategies with various complementary learning methods; (4) engrossing and familiarizing due to new things that will add to the treasures of understanding, (5) no barriers between teachers and lecturers in a joint learning.

The results of the notes in the field obtained an illustration that all were involved in preparing the plan through lesson and chapter designs. The dialogue was directed at increasing the understanding of each individual. The teachers gave input based on the reality of the field they

experienced, and the lecturers tried to convey their experiences and mastery of theories. The discussion became dynamic in the same goal to improve learning. All gave feedback, conveyed the problems they faced, and collectively found solutions. The purpose of this joint activity was to make changes in students' behavior. The teachers felt the new experience in preparing learning plans through lesson and chapter designs. Through collaborative learning planning, social constructivism would appear and build [4].

In social constructivism, knowledge was developed through cognitive activities that occurred during the discussion of experiences with others. Social interaction was needed for cognitive, organizational, or reorganization interpretations would occur. The feedback process also occurred. Constructivism was students developing (or building) their knowledge through the examination of their experiences, that was by making meaning from their world [5, 6, 7].

2) Learning Process

The learning process was carried out in the classrooms and laboratories. When the teacher taught, the lecturer became an observer, *vice versa*. The following are the documentation of photos and video recordings during the learning. The observation focus was on students' behavior. This is relevant to the definition of learning that learning is an occurrence of better behavioral change. There were several things as the objects of observation which were related to the affective and psychomotor domains. Meanwhile, the cognitive assessment could be held in formative and summative after the subject matter had been delivered. The formative assessment was carried out through questions and answers, and the questions were answered and resolved in discussion activities.

Fig. 3. Learning Activities

During the learning process, professional collaboration occurred when teachers and lecturers, with different levels of experience, work together in teaching practices. Social constructivism stated that knowledge acquisition was an adaptive function designed to regulate one's experience. Through collaborative learning, more teaching experience was produced,[4]. Social constructivism was identified as a common theme for cognitive studies in sociology and psychology. Social constructivism was the principle that social structures and cognitive structures were arranged and

they were in interactions between people,[8]. Both teachers and students would truly develop when there was no gap between them. All class components had the opportunity to share and receive the same information. Emotional intelligence (IE) would be formed, as a result of various emotional adjustment processes and interpersonal relationships, [9, 10]. Learners would experience increased confidence when involved in the learning experience. The teacher was involved in the process of change both to himself and his students, [7, 4]. If all class components were involved in learning, there were no gaps that ultimately impact on trust. Each individual had a role and function to express opinions and be involved in the process, [11]. There was no gap because all students were allowed to express their opinions, [12].

The benefits of collaboration were also generated when working on tasks in groups. Leung, K. And Chu, S. [13] researched with the subject being undergraduate students in a knowledge management course undertaken by 4 groups. They used Wiki media as a communication collaboration platform to work on group projects. The findings result in [14] understanding more related to the users of the wiki in collaborative group project completion. Students were reported to improve understanding and performanc, [14, 15, 16]. Teachers were reported to be more motivated, to experience decreased workload, a positive impact on teacher morale, greater efficiency, increased communication, improved technological skills, reduced personal isolation; next to advantages such as the conclusion that instruction strategies became more student-centred and alignment between the real and hidden curriculum increased, [17, 14, 18].

The involvement of all components would bring high motivation. The motivation was formed influenced by 4 factors, namely: (1) social learning; (2) assignments; (3) project work; (4) strengthening; and (5) social pressure. There was no social pressure, recognition of the project work generated, mutual recognition between them, mutual respect so that social learning is formed, and bring together in completing tasks. More productive work was produced, and able to solve complex problems, [19]. All results a significant relationship between motivation and collaborative learning, [20].

Collaborative learning gave an impact on forms of commitment, motivation oriented, and integrated skills were produced. Students develop better, have goals in developing student autonomy, foster professionalism, [21]. Zhan, H. [22] research results, collaborative learning was very effective in online learning..

3)   Reflexion

The reflection activities were carried out after the learning was complete. The input was directed at increasing the behavioral change in the students. The discussions discussed the input for the planning and implementation for the next meeting. Although the students' behavior was the object of the observation, it affected the behavioral changes of the teachers/lecturers to change their learning strategies to be better. The teachers evaluated the methods, the media, and the teaching materials used and the assignments given. The point was that the modifications at the meeting afterward were formulated based on mutual agreement.

 From the results of research by maximizing the feedback function could improve the learning process. Good feedback was widely recognized as the core of the learning process, [23]. This meant that reflection activities could overcome problems and effective follow-up from planning activities and learning processes.

Reflection demands that the people involved consciously contemplate checking events that had occurred and as a consequence adding and increasing a meaning. If past events were not good, it would be a commitment to not repeat them [24]. Reflection encourages **exploration** of thoughts and feelings, seeks insights and maximizes awareness that binds the process of identity formation, [25]. 2

However, if task support is good and team support is poor the project is likely to fail and, this time, the blame is likely to be apportioned within the team. For example, team members may perceive issues of poor team working and power discrepancies being caused by individuals. In this case, the team might see the project being inadvertently, or consciously, sabotaged by other team members. The task support may have allowed some work to be completed, further increasing the feeling of frustration when the project eventually fails, [26].

3.2 Process of Learning Development Method in Improving Learning Quality

The process of learning method development was carried out in several stages. The stages were the modification of R & D stages consisting of: (1) Analysis, (2) Design, (3) Demonstration, and (4) Implementation, [27, 28].

(1) Analysis: it was the activity of the findings related to the observations of the students' behaviors. The analyzed data included: analyzing the behaviours occurred during learning, what behaviour that should appear, planning what method changes that must be carried out at the subsequent meetings, what needs that the student must have, and whether the learning objectives had been achieved or not.

(2) Define: it was the information collected on the students' behavior, learning needs, expected results, methods to be developed, and the method design to do was compiled and determined as the solution.

(3) Demonstration: it was a practice of the method design agreed to be chosen. The teachers/lecturers explained the plan for implementing the method to be carried out through a simulation or providing an explanation. The teachers/ lecturers also prepared the supporting facilities and infrastructure needed, the media used, and the teaching materials/ worksheets used.

(4) Implementation: it was the implementation of the method choices in the classrooms. The observer observed the implementation techniques by the teacher/ lecturer models.

4. Conclusion

a. The collaboration between teacher-lecturer is carried out when planning: developing Lesson Design and Chapter Design; learning in class both in each as a teacher and observer, and together when doing a reflection. Collaboration builds good social relations, encourages a high willingness to learn, motivation will be formed, knowledge and skills develop, teacher professionalism increases, which leads to an increase in the quality of learning. At the planning stage, all the teams together compile the lesson design and design chapters, in the learning process complete with observations that were made, and the reflection stage results in evaluations that have taken place and improvements in planning for the next activity.

b.   The learning method is carried out in several stages. The stages of R&D carried out consist of (1) Analysis (2) Design (3) Demonstration (4) implementation. This activity produces, analyzes activities, which are used as a basis for developing and defining learning methods, try them before they are implemented.

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