

## Building Learning Community to Enhance Staff's Capability in Basic Science Learning for non- Science Students.

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**Abstract**— The aim of the research is to enhance Staff's Capability in Basic Science Learning for non-Science Students. Moreover, the study was also done to examine its impact in enhancing students' critical skills of non-science student through thematic basic science teaching-learning. The method used was class action research under lesson study activity design and community building strategy, involving 4 basic science staffs, 92 accounting students, and 94 English prospective teacher students as the subject of the research. The research reveals that through the two cycles of activities along one semester, Staff's Capability increased, and this gave implication to the increasing of mastery of concepts and critical thinking of students in both programs. This also favorably affects the establishment of a conducive academic atmosphere among faculty staff in the team.

**Index Terms**— learning community, science education, critical thinking, academic atmosphere building.

### 1. INTRODUCTION

Basic Sciences (BS) is one of the main compulsory subjects for non-science students in universities, both public and private (DGHE-Indonesia, 2006). Coverage of BS course are content, context, process, affective and meta-science. The further meaning is that BS course is dedicated to understanding the science through context encountered in everyday life (Hidayat, 1999). Through science, it is also expected to develop personality, thinking skills, scientific attitude, and life ethics. Scientific processes those are used along learning science can develop students' thinking ability (Carin and Sund, 1980). Through learning science, people would recognize the regularities in nature, limitations of science, and understand that the discovery and development of science must be accompanied by scientific ethics. By understanding the scientific ethics, the possibility of crimes that can result from a scientific experiment can be avoided (Csermely and Lederman, 2003).

The preliminary study on the implementation of basic

science curriculum in some college showed the un-synchronous between desired and implemented curriculum. As a result, the achievement of the vision, mission and objectives of the curriculum was less in line with expectations. Some of the contributing factors include (1) lack of understanding of pedagogical content knowledge because most of them were not from educational background, (2) too many materials in BS lectures, forcing the lecturers merely to achieve the target to complete materials, and (3) the lectures were arranged partially and un-integrated as a science because of the limited of faculty expertise (for example if he is from physics, he teaches deeply in physics but less in other materials). It is also revealed from the student questionnaires, the lecture gives less benefit to the students, so they thought they did not need to take the course. It is not surprising that some colleges (mainly private colleges) then omitted this course from the curriculum, but the omission of the course is no longer allowed because basically a non-science students should