

**STUDENT'S PERCEPTION
ABOUT PROBLEM-BASED LEARNING CURRICULUM
FACULTY OF MEDICINE UNIVERSITAS LAMPUNG**

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Abstract

Background. The curriculum is a set of plans and arrangements regarding graduate learning achievements, study materials, processes and assessments used as guidance in the organization of education. The curriculum is developed according to the character of students, resources, national or local policies, geographical conditions or local geographical conditions, politics, and advances in information technology and medical progress. This study aims to evaluate the implementation of Problem-Based Learning (PBL) of the Medical Education Study Program of Faculty of Medicine, University of Lampung from the student's perception.

Methods. This study was a qualitative research by investigating the perception of students to the curriculum of Medical Education Program Faculty of Medicine, University of Lampung. The total samples of 50 people consisting of 20 students of class of 2013, 10 students of class of 2014, 20 postgraduate are divided by Rumah Sakit Ahmad Yani (RSAY) and Rumah Sakit Abdoell Moeloek (RSAM). The data were collected with Focus Group Discussion (FGD). Then made the transcripts and coding then made categorization and conclusions.

Result. Overall PBL curriculum design was good enough but there were still lack. The PBL can motivate students to learn from the problem. PBL can improve lifelong learning skills. Helping students achieve the competence of being a doctor. There were few lecturers, frequent scheduling and curricula not fully spiral and integration curriculum.

Conclusion. There were good curriculum and there needs to be improvement from the number of lecturers and scheduling.

Keyword: curriculum, medical student, problem-based learning

Introduction

Education is a dynamic program as well as a curriculum. The curriculum should always be developed because every second there is always a development and innovation. There are many things to be considered in the preparation of the curriculum. The content appropriate with the course, the latest developments taking place in education, policy, technology, socio-demographics and developments in the world.

The curriculum is a set of plans and arrangements regarding graduate learning achievements, study materials, processes and assessments that are used as guidelines in the implementation of education. In the first curriculum development is the analysis of the development of science and technology, analysis of community needs and stakeholders, then develop learning outcome and formulate curriculum content and after that is the evaluation of the curriculum (Fish & Coles,

2005).¹ The content of the curriculum that has been running in the Study Program of medicine since 2008 was Kurikulum Berbasis Kompetensi (KBK) as based on Standar Kompetensi Dokter Indonesia (SKDI) 2006. Then in 2012 of Faculty of Medicine University of Lampung curriculum listed in SKDI 2012 until 2017. In 2017, SKDI will be revised and study program of Medicine Lampung University will follow the change. The curriculum content in the SKDI was only required 60-80% of all curriculum content. A total of 20% of curriculum content follows local content and other additional content deemed necessary.² Study program of medicine has a specialty in the field of agromedicine so that agromedicine content is also listed in the curriculum. The curriculum was carried out with integration, both spiral integration and horizontal and vertical integration. Spiral integration curriculum ranging from light material, basic first to complex content or in

medicine ranging from basic medical materials to disease management. Basic medical materials were given in the early years and then became increasingly complex. Study Program of medicine consists of two stages then the stage of the curriculum was also divided into two stages. At the undergraduate stage the students only learn concepts and applications to the patient. The students of clerkship have applications to patients and manage patients. Implementation of curriculum was applied with Problem-based learning (PBL). The implementation of the PBL curriculum was an integration where one problem was viewed from the point of various related sciences. In PBL students learn actively (active learning) and much emphasize self-directed learning.²⁻⁴ Problem-Based Learning is an effective learning method with small groups beginning with a problem or scenario. The term PBL is a confusing term especially in its application because of different concepts and different understandings. The role of lecturers in PBL differs from the role of lecturers in the conventional curriculum.³ Problem based learning is a curriculum approach that approaches learning based on problems. The advantages of PBL are improving deep learning, reducing students learning on the surface and improving student performance.⁵ PBL have many positive effects on communication skills, clinical reasoning, self-directed learning, problem solving, clinical skills.⁶

Yuan's et al⁷, the curriculum has an impact on increasing student's critical thinking. Spalding & Killet⁸ study on PBL evaluation of the Occupational therapy curriculum in the UK found that PBL affects students' self-confidence. Reynold, Hancock's⁹ study that PBL have a positive impact on problem-solving skills and learning processes. Another study by Frambach et al¹⁰ challenges in PBL is a cultural problem, hierarchy is a major factor affecting PBL. There are many who applied the PBL to the approach of learning in medicine. PBL is an issue that is still complex in education. The PBL curriculum has not been considered a better curriculum than the conventional curriculum or the best among other curriculum models. Problem-Based Learning basically aims to develop students' knowledge and skills. Students will build their own knowledge based

on problems then explore the problem based on pre-existing knowledge and integrated it with new learning or knowledge. The development of the intended abilities is the general ability (transferable skill) required as a doctor and social life in the future. These are communication, cooperation, information seeking, critical and creative thinking, problem solving, decision making, self-awareness, self-assessment (strengths and weaknesses), ethics, reflection and accountability. PBL is a tool for acquiring lifelong learning skills and developing self-directed learning. Self-Directed Learning (SDL) is an effort to involve students as active learners and encourage the development of learning in (deep learning). Problem-Based Learning and Task-Based Learning is one of the learning strategies that can improve to the SDL concept, by placing students as adult learner.² Based on the above description formulated the purpose of research was to investigated the student's perception of the curriculum in study program of medicine especially to PBL.

Methods

This research was a qualitative research by investigate of the perception of students toward the Problem-Based Learning curriculum of Medical Education Study Program of Faculty of Medicine, University of Lampung. The study used qualitative research design. Qualitative research methods used to explore an object, opinion, or feelings with researchers plunge directly into it. Qualitative research is suitable if researchers want to understand the meaning behind the look and if researchers want to understand in depth a situation and social interaction and meaning.¹¹ Creswell¹² states that the qualitative approach is exploratory, we can use to reveal a concept / phenomenon that we need to understand. The study was conducted at the Faculty of Medicine, University of Lampung. The study population were students who carry out the clerkship and preclinical students. The samples in this study were 20 students of the third year, divided into 2 groups of Focus Group Discussion (FGD), 20 students of Clerkship were divided by 2 groups of FGD of RSAY and RSAM Clerkship, 10 students and 10 students of Class of 2014. Inclusion criteria: the students willing to participate in the research, students who attended the study.

Second, third and fourth years students and clerkship. Exclusion criteria are students who aware unwilling and present in the study. Data analysis was done by transcript data. Then did the coding next triangulation of coding results. After that done categorization and the theme of coding results obtained. Qualitative data were analyzed with content analysis techniques.¹²

Results

The study has been conducted since March until November 2016 with 10 samples of students who were clerkship at Rumah Sakit Ahmad Yantias that there were consisting of 10 students batch 2012 and 2011, 10 students clerkship at Rumah Sakit Abdoel Moleloek Bandar Lampung, 20 students of class of 2013 and 10 students of class of 2014.

Table 1 The characteristic of respondent

No	Respondent	Female	Male
1	Clerkship at RSAY	5 Students	5 Students
2	Clerkship at RSAM	6 Students	4 Students
3	Batch 2013	12 students	8 Students
4	Batch 2014	6 Students	4 Students
	Total	29 Students	21 Students

1. Curriculum Design

a. Adequate

According to students the overall curriculum design is good enough but there are some shortcomings. Like the unordered blocks, students expect the final block to be an integrated block of previous lessons from the first year to the third year.

T3.1 "I think the curriculum is good enough but it needs change some block that over repeats the previously learned material".

T4.3 "The curriculum is good but it is still lacking in practice".

b. The arrangement of the tropical infection block is given in the year above

Students are expected that the block grants of the upper year constitute an integrated block.

T4.3. "Blocks involving the organ system eg TID in the final year or above, the research block in the fourth semester".

c. The research block is given earlier

The research block should be provided early so that students can learn the methodology and the writing of scientific papers.

T3.3. There is block that should be given in the fourth semester as a research block so students early get material to make scientific work".

d. Schedule changes frequently

According to the students, the curriculum have been good enough but in the implementation of the schedule often change until the sixth week, there were still lectures were postponed.

T3.1. "Teaching schedules often were not same in the block book".

e. The curriculum should be repeat the material of previous blocks

According to the students, the block material has not been integrated because if they move to next blocks, they forget the blocks has learned.

T3.2 "We recommend that as in Unand, my friend at Unand was more in control of the material in detail that the previous material has be learned".

2. The curriculum can motivate the students

a. The curriculum can motivate the students

Curriculum that it was being undertaken, according to the student can motivate the student with the discussion of PBL. Students can be encouraged to learn if there was no discussion PBL, the students did not learn.

T2. "I learned and motivated to learn if there was a tutorial. I did not agree if the tutorial discussion is reduced".

b. Students were not ready with pure PBL system

Some students were not ready yet with the pure PBL system because the curriculum was not pure with PBL and there were still get lecture and other learning activities.

T3.1. Some students have been motivated to PBL because some still rely on lectures and student were not ready to learn independently even though there was a learning goal in the block book but they were not want to learn".

c. Students are motivated when there was feedback from the facilitator

Students were motivated if there was feedback from lecturers as illustrated from the statement below.

T3.1. I was more motivated if the tutor gives an evaluation at the end of the tutorial let alone give feedback one-on-one to the students“.

d. Motivated from the problem

Many cases can be discussed by students because according to they became aware of various cases as seen in the following quotation..

T3.1. A lot of cases were not boring and can encourage me to learn“.

3. The curriculum can improve the lifelong learning skills

a. Critical thinking

With the PBL curriculum can develop the student’s critical thinking. This can be seen from the following student statements.

T1."it can, we can learn in step two by identifying the question“.

T2."If the case was interesting, it can encourage me to search for resources and learn again“.

b. Communication

Students can develop communication skills that the discussion forces students to talk so they can practice communication skills.

T3. At the time of the tutorial, we must speak in front of friends, it can improve communication and public speaking“.

c. Literature searching

According to students with the PBL can improve literature searching and use information. Literature searching skill must be owned as a doctor later.

T4. We were setting goal in step 5th and step 6th to look for learning objectives or learning objectives from various sources “.

d. Leadership

PBL students were trained to become leaders in small groups. This can be seen from the revelation of students below.

T4."Each of our discussions was always chaired by a chairman who was appointed and he/she should be able to turn to chairman“.

e. Interpersonal skills

According to students, interpersonal skills can be developed by the PBL, students can understand and tolerance among members.

T3."Hmmm I think we can tolerance to friends, such as friends who can not convey the opinion, other students did not laugh his friend“.

4. The curriculum can improve the basic science of medicine

a. Partly

According to students with PBL curriculum the knowledge of students about basic science has been obtained in the curriculum but only part of the first year and the second year.

T3."The first year and the second year there was basic science, in the clinical and lecturers teach more specialistic and incomprehensible“.

b. Lack of lecturer

Institution has lack of facilitator and the number of discussions was reduced to every week so the students are lazy to learn.

T3."Lately there were often some groups that have no fasilitator so we wereinstructed by the employee to continue discussion continues without fasilitator“.

c. The lecturers' perception about PBL discussion were not same

Students feel that PBL discussion between lecturers and other lecturers were not the same. This can be seen from the student statement below.

T3."Tutorials between different lecturers, sometimes a lecturer prefer step three that etiology, pathophysiology, symptoms, investigation, sometime not, so we are confused“.

5. The curriculum has assisted students to achieve the competence of doctors

a. Assist the student

According to student, the curriculum of study program of medicine can help student to achieve the competence of doctors.

T1. "I think it can be, because there was a block book sometimes that we will use until the clerkship".

b. Forget the theory

Students feel with the PBL curriculum they were more recalling the case than the basic theory.

T4. "I better remember the case, when the theory should be read again but We have not time to read again".

T3. "I asked a friend who studied at Unand I see they mastered the basic theory and I kept asking why could it turn out those block material which was repeated again in the final year".

c. Clinical skills should be taught by a specialist

According to students, for clinical skills should be taught by a specialist.

T4. "it should be taught by a specialist for CSL".

Discussion

According to student, the curriculum of study program of medicine was good enough where the composition of curriculum already follow the block system. But there were drawbacks that the Tropical Infection block should be in the upper year because it was a integration of several systems and integration of multiple systems. Then for the medical research block should be given in earlier and this was related to the students who did research early.

The curriculum arrangement of medicine study program has followed the Standar Kompetensi Dokter Indonesia (SKDI) of 2012, the standard of approximately 80% and 20% was material from internal and elective. The block that runs from the first year was the block of learning skill and professionalism, the second block was Basic science 1, the third block Basic science 2 for the first semester plus the clinical skills 1, and the general course. The second semester were block of Medical Basic science 1, Medical Basic Science 2 and Medical Basic Science 3, clinical skills 2 and a general course. The third

semester were the EMN block, Tropical Infection Diseases (TID), special sense, clinical skills 3 and general courses. The four blocks that run were hematoimmunology blocks, obstetric and gynecological blocks, Genitourianaria system and perinatologi blocks, clinical skills 4 and general courses. The 5th semester were dermatomuskuloskeletal block, cardiorespiratory block, gastrointestinal block, clinical skills 5 and general courses. The 6th semester were medical research block, community medicine block, neuropsychiatry, clinical skills 6 and general courses. The 7th block were emergency blocks, agromedicine blocks, elective blocks of disaster medicine blocks, sports medicine blocks, molecular biology block, clinical skills 7, thesis and Kuliah Kerja Nyata (KKN).

The curriculum developed in the problem-based learning method should be integrated horizontally, vertically and spirally.⁴ The horizontally integrated curriculum means an integrated curriculum of the various science, the branch of science with each other was a branch of science that is horizontally equivalent or no science higher than others. For example, block of Basic Medical Science 1, this block learns material about basic medical material that is about anatomy, histology, physiology and biochemistry about digestive system. The vertically integrated curriculum is the integration which curriculum or material should be studied first and which curriculum should be studied for the top level. For example, hematoimmunology blocks, students must follow the block Medical Basic Science 3. The curriculum was arranged in a spiral meaning that the curriculum was arranged hook-linked which means between one block with other interrelated or science-related blocks and the repetition of the material in the previous year.

The purpose of the integration curriculum improve the retention of knowledge and the repetition of clinical skills. The basic theory of the integration curriculum is adult learning from Knowles, the meaningful learning theories of Kuffman and Man, as well as the theory of learning are willing to invest the topics of relevance.¹³ According to Brauer and Ferguson also said the most difficult in the integration curriculum is basic science to integrate with clinical problems or clinical scenarios.

According to students with this curriculum, students were forced to learn so they can motivate them. Students become passionate to learn especially at the sixth step in PBL discussion. Students feel less satisfied if PBL discussion is reduced by reason of lack of faculty who become facilitator. Liu's research found that there was an increased knowledge of pre-tests and post-tests after two weeks of study and high motivation as well as high grades of student test posts.¹⁴

Problem-based learning method can increase student motivation, this is because there are two reasons the first is PBL starting with a scenario or problem that used as trigger or trigger. The second is the self-learning environment or autonomous learning or student-centered learning. An increasingly attractive scenario for students will increase the motivation of students to be interested in learning. But there is also research conducted by Kizinger 1995 get PBL can motivate student or demotivation of student.¹⁵ This time the students also said that motivation can be increased in students who already have independent soul but they can become unmotivated whose learning style should be explained by others and lack confidence. The PBL curriculum or learning methods can enhance and practice lifelong learning skills, soft skill or transferable skills. From the Focus Group Discussion result, the students have benefited from the PBL although the implementation of the PBL discussion sometimes without the facilitator. The skills gained were leadership, communication, cooperation, interpersonal, critical thinking and problem solving. Birgili's¹⁶ research found that there were differences in critical thinking and creative thinking between problem-based learning methods and conventional methods. The Vernon and Blake¹⁷ study found that the PBL curriculum was superior to the conventional curriculum, the students were superior in terms of clinical knowledge. Schmidt's et al¹⁸ found that PBL systems can improve the interpersonal, cognitive, skills, problem solving, self-directed learning, information seeking, presentation, writing, helping colleagues, efficient and cooperation.

Conclusion

Students' perceptions of the curriculum design were mostly good but there

were some things that need to be fixed like an earlier research block of the fourth semester, the composition of the integration block should be put in the final year, the implementation of the block is considered. Curriculum with problem-based learning method can motivate students and also demotivation. Curriculum can improve the skills as long as that is self-directed learning, leadership, communication, critical thinking, problem solving, interpersonal and clinical reasoning. The curriculum of study program can improve the knowledge of basic medical science. The curriculum has been able to give competence to the students especially the competence as a doctor but for the undergraduate stage they still forgot the theory.

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