Distributions of Nursing Student's Problems with Student Centered Learning Method

Megah Andriany[1]

Purpose: Student centered learning (SCL) method is a new approach in Indonesia in which students have to more proactive in achieving competencies. A nursing school in Semarang, Indonesia has applied this method since 2006. Many students' achievements were obtained from local, national, and regional level. However, several concerns also came up with this method. This study aims to identify students' problems with SCL methods from 1st to 4th year grades.
Methods: Research design was a descriptive quantitative by conducting survey based on the domains and categories from a qualitative study. The questionnaire has been tested the validity and reliability. The researcher kept the items do not valid since they are significant to explore those crucial problems. Univariate analysis was done to measure the problem percentage in each grade. The investigator described each category in quantitative analysis tables.
Results: The results showed that the problem percentages found in the early year almost similar with others.
Conclusion: This recommends that it needs learning system improvement from life skill competence arrangements, learning scenario design, and tutor's capacity enhancement.

Keywords: student centered learning, students' problem

[1] Lecturer, School of Nursing, Faculty of Medicine, Diponegoro University, Semarang, email: mandriany@yahoo.com

Introduction

The adoption of Problem Based Learning (PBL) in medicine, nursing, and health alliance professionals in US and Europe has been reached Asia Pacific, particularly in last ten years (Biley & Smith, 1998; Baker, 2000; Khoo, 2003 as cited in Hesson & Shad, 2007). PBL, Active Learning (AL) dan Student Centered Learning (SCL) were applied to indicate the change of emphazing on teachers to students as the core of learning process. *Greenwood Dictionary of Education* mentions that AL is a process to keep students active in learning psychologically a process to keep students active in learning psychologically and frequently physically in their learning process which engage them in collecting information, assuming, problem solving (Hrycaj, 2005; Collins & O'Brien, 2003 as cited in Hesson & Shad, 2007).

This activeness results in positive consequences during learning process both in academic and clinic. Constructivism supports nursing education in enhancing critical thinking skill and rapid adaptation to change in evidence-based practice. The skill development in gaining knowledge, analyzing the information critically, evaluating according to experience, and then creating a novel framework are the best strategies to graduate nurses with critical thinking skill (Candela et al., 2006). An active method in learning result in clinical grade means greater than lecturing one (Hoke & Robbin, 2009).

This strategy is also employed in a nursing school in Semarang, Indonesia since 2006. With this method, students are able to gain a plenty achievements in academic and competitions. However, this also has consequences in several problems. Many students expressed a lot of assignment complaints. Furthermore, there were reports that several students were absence because of health problems that might be caused by exhausted of a full learning schedule. Some of them communicated irregular eating pattern so the gastritis incidence also increase. Adaptation problem is the most frequent concern of first year students. Another complaint is lack of togetherness intensity with their families. It requires a further

study to explore these so it can be solved by nursing education institutions in Indonesia. This study aimed to identify the nursing students' problems during learning with SCL method particularly in each grade.

Methods

The investigator accomplished a survey to measure each problem frequency in students. The population in this study is nursing students in a nursing school in Semarang (450 students). The sampling technique is total sampling including all nursing students from 1st to 4th year students in the academic phase with active status in academic. The sample size in survey was 425 students.

The researcher fulfilled the subject's right including self determination, privacy and dignity, anonymity and confidentiality, justice, and protection from discomfort or harm (ANA, 1985 as cited in Macnee, 2004). These were required since the students can be involved with forced. The investigator guaranteed that those subject's right with informed consents and kept the subject's identity in this study.

The questionnaire was developed from a qualitative study that produced categories in the tool which was tested for validity in a nursing school in Kendal with consideration that this institution also applies the similar SCL method in the nursing school in Semarang. This tested in the 1st until 3rd year students. The validity test showed that several items were not valid (r<0.3). The researcher revised the invalid components and re-test in data collections. The validity retest showed that there were 31.90% statements with r<0.3. Because based on FGD result the item contents were important, so the investigator still kept all of them with a consideration that they will be useful in the future. The reliability test used Alpha Cronbach illustrated that questionnaire were reliable (α= 0.92). The researcher measured percentage of each category in every grade.

Results

The investigator described nursing student's problems during learning with SCL method in several domains including learning achievement, family, group, facilitator, learning process, material, presentation, financial, timing, technology and information, evaluation, psychological, physical, daily life, and social concerns. Each category will be described in tables as below:

Table 1 *Learning Achievement* (n=425)

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Learning achievement was not satisfied	77.86	75.17	65.75	59.70
2.	Knowledge obtained was limited	61.43	64.14	68.49	65.67
3.	Lack of learning achievement deep understanding	76.43	88.97	79.45	80.60
4.	Forget with information gained after learning process*)	67.14	74.48	82.19	74.63
5.	Could not grasp the assignment conducted	43.57	25.52	31.51	14.93
6.	Could not understand learning contents well	65.71	56.55	60.27	53.73
7.	Did not confidence with the learning result	72.14	71.03	71.23	65.67
8.	Confuse with learning contents	56.43	59.31	58.90	50.75
9.	Only recognize own presentation contents	53.57	6.00	64.38	65.67
10.	Did not gain knowledge as own desire	60.00	69.66	73.97	71.64
11.	Felt no additional knowledge and skill	17.86	18.62	9.59	19.40
12.	Did not know own carrier in the future	9.29	16.55	16.44	14.93
13.	Limitation and deepness of learning objectives were not clear	63.57	68.28	64.38	64.18
14.	Recognize learning content after examination	45.00	37.93	41.10	52.24
15.	Information after learning process differed with lecturers/facilitators*)	55.71	45.52	54.79	53.73
16.	Learning emphasized only on assignments and presentations	82.86	86.90	90.41	82.09
17.	Perfunctory assignment submission	25.00	17.93	20.55	7.46
18.	Depended on prior knowledge	37.14	33.10	28.77	26.87
19.	Assignment unfinished well*)	45.00	30.34	30.14	19.40
20.	Initial learning objectives unachieved	55.00	43.45	50.68	47.76

*) r<0.3

Table 2 *Family Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Lack togetherness time with family*)	89.29	75.17	68.49	67.16
2.	Misunderstanding in family because the household did not understand SCL method *)	20.71	20.69	16.44	19.40
3.	Family members disturbed while doing assignment in home*)	12.86	6.21	6.85	8.96
4.	Felt ignoring family	42.14	28.28	28.77	25.37
5.	Family conflict because of SCL method*)	7.14	8.28	8.22	8.96

*) r<0.3

Table 3 *Group Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Did not make a same perception with other group members	41.43	45.52	56,16	50,75
2.	There was a dominant group member	71.43	66.90	84,93	80,60
3.	There were group members who only gave instruction without any contribution in group	44.29	44.14	57,53	49,25
4.	There were group members that only wanted to present without any contribution in group work before presentation	40.71	59.31	63,01	67,16
5.	Time conflicted in group work	72.86	70.34	89.04	85.07
6.	There were group members who have to do others' job who did not contribute in group work	50.00	64.83	76.71	77.61
7.	There were group members who felt the most correct person	49.29	43.45	50.68	59.70
8.	There were group members who did not belief with their own group member's work	55.00	60.69	60.27	56.72
9.	There were group members who were difficult to be compromised in doing assignments[*]	54.29	73.10	71.23	64.18
10.	There was unfinished conflict in argument[*]	40.00	40.69	46.58	46.27
11.	There was unfinished conflict in group process	31.43	42.76	42.47	32.84
12.	There was misunderstanding in group	30.00	42.07	56.16	40.30
13.	There were passive group members[*]	56.43	57.93	71.23	62.69
14.	There were perfectionist group members who inhibit group work process[*]	42.14	42.07	45.21	43.28
15.	Group members were indecisive toward other group member who did not contribute in group process[*]	66.43	64.83	69.86	58.21
16.	Group members only chit-chatted during group process	48.57	42.07	56.16	44.78
17.	Felt uncomforted in group[*]	15.00	22.76	13.70	19.40
18.	The number of group member is too many to make an effective group work[*]	23.57	17.24	50.68	26.87
19.	Could not adapt with other group members	7.86	9.66	12.33	11.94

[*] $r < 0.3$

Table 4 *Tutor Related Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Tutors did not clarify learning achievements by the end of learning process[*]	65.00	55.17	58.90	70.15
2.	Lack of instruction	55.71	55.17	43.84	70.15
3.	Tutors could not explain learning contents adequately	35.71	42.76	49.32	52.24
4.	Tutors were not understood content adequately[*]	7.86	11.03	17.81	11.94
5.	Tutors compared learning results with other class	20.00	36.55	49.32	32.84
6.	Tutors seemed not care	30.00	34.48	21.92	35.82
7.	Tutors were inconsistent in providing suggestion	21.43	23.45	28.77	28.36
8.	Tutors were lack of empathy	38.57	47.59	41.10	46.27
9.	Tutors provided different instruction with the similar learning method	32.86	40.00	49.32	40.30
10.	Tutors felt the most correct person	22.14	32.41	24.66	16.42
11.	Tutors could not share similar attention to all groups	50.71	62.76	58.90	70.15

12.	Tutors were difficult to be met for consultation	72.14	55.86	90.41	71.64
13.	Tutors came late[*)	41.43	39.31	53.42	40.30
14.	Tutors canceled appointments with students immediately	36.43	42.76	54.79	50.75
15.	Tutors did not respect student work result[*)	10.71	16.55	10.96	11.94

[*) $r<0.3$

Table 5 *Learning Process Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Discussion/learning process was not directed by tutors	40.71	34.48	35.62	55.22
2.	Learning instruction could not be recognized adequately	62.14	53.10	61.64	55.22
3.	Miscommunication with tutors	37.86	46.90	60.27	65.67
4.	Lack of learning method variation	57.86	64.83	65.75	71.64

[*) $r<0.3$

Table 6 *Financial Problem (n=425)*

No.	Problem	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Financial difficulty to finished learning targets[*)	35.71	31.03	28.77	20.90

[*) $r<0.3$

Table 7 *Learning Content Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Inappropriate with need/condition	37.14	35.86	39.73	46.27
2.	Incomprehensive	42.86	37.24	47.95	44.78
3.	Learning contents were different among groups[*)	72.14	62.76	87.67	73.13
4.	Tutors did not provide comparison materials to students.	70.71	73.79	72.60	76.12
5.	Discussion contents were too much	77.14	83.45	78.08	77.61
6.	Students did not have materials for examination closed to examination day	50.71	29.66	27.40	28.36
7.	The quantity of discussion contents for each group was not similar	60.71	64.83	75.34	61.19

[*) $r<0.3$

Table 8 *Presentation Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Students did not understand the contents[*)	42.86	39.31	20.55	22.39
2.	Doubt of presenter's understanding[*)	42.14	44.83	50.68	47.76
3.	Presenters could not well present	72.14	67.59	78.08	67.16
4.	Audience's focused only with their own presentation material that would be presented then[*)	83.57	82.76	84.93	85.07
5.	Presenter order was not various	57.14	55.17	52.05	49.25
6.	Sleepy while discussion/presentation[*)	53.57	44.83	56.16	61.19
7.	Only presenters who were understand the discussion contents	57.86	57.24	61.64	61.19
8.	Presenters just did their presentation	57.86	62.07	50.68	38.81

*) r<0.3

Table 9 *Timing Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Lack of time to achieve learning objective	77.86	71.03	61.64	73.13
2.	Timing did not match with syllabus.	32.14	37.93	46.58	41.79
3.	Lack of time to discuss with tutors*)	84.29	84.14	83.56	98.51
4.	Meeting duration was not match with contract.	55.00	49.66	57.53	65.67

*) r<0.3

Table 10 *Planning Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Did not receive syllabus in the beginning of learning*)	6.43	0.69	12.33	5.97
2.	A lot of assignments in the same time	86.43	88.28	83.56	73.13
3.	Assignments were not equal to course credit (to many)	60.71	55.17	63.01	61.19
4.	One students could be involved in several groups	52.14	55.86	86.30	74.63
5.	The seven jump method was wasting time in each step	47.14	57.93	76.71	73.13
6.	Students did not understand the benefits of each SCL method	57.86	48.97	39.73	41.79

*) r<0.3

Table 11 *Technology and Information Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Could not operate computer*)	8.57	2.76	1.37	2.99
2.	Students' computers were infected by virus*)	46.43	46.21	42.47	35.82
3.	Limitation in understanding English text*)	67.14	66.21	52.05	50.75
4.	Internet signal was trouble*)	75.00	83.45	80.82	64.18

*) r<0.3

Table 12 *Evaluation Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
A.	From tutors				
1.	Did not evaluate student's all performance	56.43	50.34	54.79	67.16
2.	Evaluation was not according to criteria in handbook	22.14	26.21	26.03	22.39
3.	Overall learning result directly announced by the end of learning period*)	19.29	29.66	26.03	53.73
4.	Students' competencies were generalized to others*)	99.29	43.45	42.47	70.15
B.	*Peer evaluation*				
1.	Generalized	60.71	62.07	45.21	73.13
2.	Individual performance was based on group agreement	54.29	59.31	36.99	67.16
3.	Evaluation result did not represent student's performance	37.14	34.48	28.77	58.21
4.	Low grade was provided for non closed friends*)	15.00	19.31	17.81	14.93

*) r<0.3

Table 13 *Psychological Concern (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Inadequate learning time management*)	88.57	86.21	79.45	80.60
2.	Stressed because of learning process	68.57	73.79	64.38	67.16
3.	Lack of motivation	52.14	60.69	52.05	61.19
4.	Difficulty to adapt with learning process	51.43	48.28	31.51	37.31
5.	Could not enjoy SCL process	58.57	55.17	42.47	65.67
6.	Could not focus on learning because of family problem*)	17.86	16.55	23.29	19.40
7.	Bored	54.29	60.69	65.75	73.13
8.	Irritable	27.14	41.38	27.40	17.91
9.	Resentment because of friend's or tutor's intervention	20.00	40.69	24.66	20.90
10.	Lack of motivation to follow learning process because of friend's or tutor's intervention	20.00	100.00	30.14	16.42

*) r<0.3

Table 14 *Physical Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Exhausted	91.43	93.79	78.08	79.10
2.	Gastritis	2.86	38.62	43.84	44.78
3.	Hypertension	2.14	2.76	1.37	2.99
4.	Asthma	2.86	1.38	2.74	2.99
5.	Hemorrhoid	0.00	2.07	0.00	4.48
6.	Decrease in body weight	30.71	27.59	34.25	28.36
7.	Influenza	22.86	25.52	24.66	25.37
8.	Acne	29.29	22.76	21.92	40.30
9.	Diarrhea	13.57	14.48	16.44	17.91
10.	Fever	16.43	19.31	15.07	25.37
11.	Headache	53.57	50.34	46.58	74.63
12.	Syncope	2.14	0.69	0.00	0.00
13.	Nosebleed	2.14	7.59	4.11	0.00
14.	Skin problem	10.00	4,83	2.74	7.46
15.	Sleep pattern disturbance	60.71	59.31	57.53	61.19
16.	Throat Inflammation	12.14	1.38	4.11	13.43
17.	Typhoid	2.14	0.00	4.11	1.49
18.	Others	3.57	18.62	13.70	2.99

*) r<0.3

Others: teeth pain, hypotension, dyspnea, crick, nausea, urinary tract infection, tumor pain, chest pain, allergy, nightmare, and sleepy

Table 15 *Daily Life Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Decrease in frequency of take a bath*)	45.00	41.38	30.14	19.40
2.	Irregular eating time pattern*)	86.43	84.83	80.82	89.55
3.	Never have recreation*)	77.14	79.31	64.38	77.61

*) r<0.3

Table 16 *Social Problem (n=425)*

No.	Problems	1st Year (n=140)	2nd Year (n=145)	3rd Year (n=73)	4th Year (n=67)
1.	Had no time to interact[*]	61.43	62.76	54.79	61.19
2.	Became a friend from other faculty ridicule	30.00	53.10	36.99	38.81
3.	Could not active in organization	36.43	36.55	28.77	35.82
4.	Time conflict with other organization activity[*]	47.14	48.28	45.21	62.69

[*] $r<0.3$

Discussion

Problem percentage in 4th year students was not less than the 1st year students. This reflects that student still found stressor until 4th level. It can be related to student competency achievement in all of life skill competencies as below:

Figure 1 *Targeting life skill model (4-H Cooperative Curriculum System)*

Many problems occurred in students because of the competencies above were not accomplished. For example, concerns in group that were not finished until the end of learning period. This reflected team work, conflict resolution and leadership competencies that were not achieved. Several psychological and physical concerns happened as the result of high stressed can be associated with stress management competency which could not be well performed.

The study result show that most students conveyed unsatisfied in learning achievements. Moreover, students felt that they only focus on assignment submissions without understanding the competency achieved. Nursing competency learning should keep instruction that focus on students. Learning goals in instructional modules describe significance knowledge and skills as the indicator in which competencies assessed (Fay, 2005). Students will be difficult in achieving and understanding learning targets if tutors only focus on the process without providing feedback toward their learning result.

Competency achievements cannot be separated from group process in learning. The investigator found several concerns regarding this. Tipping, Freeman, and Rachlis (as cited in Hesson & Shad, 2007) purposed that learning process in students depends on group effectiveness. Although tutors are significant in the initial phase of study, however learning will depends on the effectiveness of small group process. This study showed that a small number or health professionals and students who are skilled in working in a group effectively. This is caused by traditional learning process from elementary school until higher education. As the consequence, students have to be independent by trial and error in working in a team. Student's habits in a group are various such as a student's dominancy result in passiveness of others and some of them are ramble while others seem to be shame for expressing their arguments (Hitchock & Anderson, 1997; Riderout, 1999 as cited in Hesson & Shad, 2007). Stinson and Milter (1996, as cited in Hesson & Shad, 2007) said that observer frequently found that students were work ineffectively, wasting time, repeating previous information or confrontation. Tutor's role is crucial in facilitation students in their team work or overall learning process.

Facilitator involvement in learning process becomes an attention in SCL method. Several of them are not more engaged in learning due to opinion that in this strategy, the students should more pro active (Turana, Elcina, Odabasi, Warda, & Sayek, 2009). This

situation must be an importance aspect since learning process is facilitator's responsibility. For instance, effective tutors in PBL are able to enhance discussion and be part of group (Goldie, Schwartz & Morrison, 2000). Some studies articulated a good tutor's characteristics including able to support critical thinking of student with problems (Das, Mpofu, Hasan & Stewart, 2002), facilitating discussion (Felder, 1996), eliminating conflicts (Hitchcock & Helen-Zoi, 2000), focusing on student's learning instruction (De Grave, Dolmans & van der Vleuten, 1999), enhancing learning process (Pinto, Rendas & Gamboa, 2001; Reznich & Werner, 2004), and acknowledging when and how intervening students (Maudsley, 2002; Haith-Cooper, 2000). Tutor's roles are significant according to Fay, Selz, and Johnson (2005) expressing that SCL strategy will be successful only if students in this approach adopt a new way and more vocal, organized, and confident.

Survey in this study used reliable questionnaire however several items are not valid (r<0.3). Setiaji (2004) suggested that an instrument item is valid if r value more than 0.3. However, the investigator kept these since this represent students' problems in detail so if it was not used those concerns will not be explored quantitatively.

Fay, Selz, and Johnson (2005) purposed a model in which one of the domains is oriented in nursing competencies. The skill built as learning result should be sustainable. Educator requires creating a learning strategy to fulfill a particular need as a professional reflection so students can comprehend theory and practice in learning process.

Nursing education institutions can develop competency based curriculum referring targeting life skill in which many life skill competency requirement are summarized in 4-H framework. The model purposed by 4-H Cooperative Curriculum System can support students in meeting basic need and developing importance capabilities in here and now and future life. 4-H focuses on skill development of health and productive life for students and their communities. The main dimensions are "head (managing and thinking), hand (giving and

working), heart (relating and caring), and health (living and being)". All components in this framework can represent student competencies to learn successfully so the problems can be solved with student's life skill achievement.

Hardie (2007) expressed there is a need to ensure that student can learn with appropriate and funny ways and learning experience becomes meaningful, attractive, and challenging and enhancing student's skills, competencies, and confidence. Moreover, the educator must guarantee that learning is relevant according to science context and the students are engage in theory and practice so they can integrate in their work successfully.

Those needs can be facilitated by tutors who should maintain cognitive activities such as create a relationship, providing suggestion, and helping students to control their own study. This reflects that tutorial requires particular skills besides teaching. Tutor's performance might be not like a teacher, but specific according to situation found (Dolmans, Gijselaers, Moust, De Grave, Wolfhagen & Vleuten, 2002).

Conclusions

This study resulted in 16 themes of nursing student's problems during learning with SCL method including learning achievement, family, group, facilitator, learning process, material, presentation, financial, timing, technology and information, evaluation, psychological, physical, daily life, and social concerns. Descriptions of each category in table expressed many specific problems in students with SCL method.

These conditions can be solved with designing learning process in detail in scenarios describing student's competency achievement process. This should include group forming and timing among courses so there is no time conflict for students to work in the similar team and method. For instance, in one week, a student should not engage in PBL in two subjects. This will be a burden for them in manage time and concentrate in competence achievement so they

will not only focus on process without concentrate on learning target.

Nursing education institution should develop curriculum that involve for life skill competencies including heart, hand, head, and health. These are significant so learning designers need to make them in operational descriptions. For example, in a problem solving competency, tutors should have skill to find problem solving strategy and apply this to evaluate for its effectiveness so the students can use this as a coping in the future.

Facilitator roles are very important in SCL method so it requires tutors who can support students in enjoying learning process and not to be additional stressor for students. Tutors should have skills in facilitating students to solve their problems such as counseling skill in identifying their concerns and finding out an effective solution.

The study limitation is not used a 100% valid questionnaire. It needs a next study to develop standard instruments to evaluate students' problem with SCL method. This tool will be helpful to assess problem developments in time series so this can be evaluation material towards learning process in each semester. Those concerns should be decrease in the next semester.

References

Candela, L. C., Dalley, K. D., & Benzel-Lindley, J. (2006). A case for learning-centered curricula. *Journal of Nursing Education*, 45(2), 59-66.

Das, M., Mpofu, D. J. S., Dunn, E., Lanphear, J. H. (1998). Self and tutor evaluation in problem-based learning tutorials: is there a relationship? *Medical Education*. 32: 411-418.

De Grave, W. S., Dolmans. D. H. J. M., van der Vleuten. C. P. M. (1999). Profiles of effective tutors in problem-based learning: scaffolding student learning. *Medical Education*. 33: 901-906.

Dolmans, D. H, Gijselaers, W. H., Moust, J. H., Wolfhagen, I. H., & van der Vleuten, C. P. Trends in research on the tutor in problem-based learning: Conclusions and implications for educational practice and research. *Medical Teacher*. 24(2), 173-80.

Fay, V. P., Selz, N., and Johnson, J. (2005). *Active learning in nursing education*. Retrieved from http://digitalcommons.library.tmc.edu/uthson_ceirpubs/1 on 2 November 2011

Felder, R. M. (1996). Navigating the bumpy road to student-centered. Instruction College Teaching. 44: 43-47.

Goldie, J., Schwartz. L., Morrison. J. (2000). A process evaluation of medical ethics education in the first year of a new medical curriculum. *Medical Education*. 34 (6), 468-463.

Haith-Cooper, M. (2000). Problem-based learning within health professional education. What

is the role of the lecturer? A review of the literature. *Nurse Education Today*. 20: 267-272.

Hardie, K. (2007). On trial: Teaching without talking – teacher as silent witness. Art, Design & Communication in Higher Education. 5 (3): 213-226.

4-H Cooperative Curriculum System. *Targeting life skills*. Retrieved from http://liferay.unl.edu/c/document_library/get_file?p_l_id=2528581&folderId=4226089& name=DLFE-30161.pdf on 30 March 2011.

Hesson, M. and Shad, K. F.. (2007). A student-centered learning model. *American Journal of Applied Sciences*. 4 (9): 628-636.

Hitchcock, M.A., Helen-Zoi, E.M. (2000). Teaching faculty to conduct problem-based learning. *Teaching and Learning in Medicine*. 12(1): 52-57.

Hoke, M. M. and Robbin, L. K. (2009). Teaching massage to nursing students of geriatrics through active learning. *Journal of Holistic Nursing.* 27: 51-56.

Macnee, C.L. (2004). *Understanding nursing research: reading and using research in Practice.* Philadephia: Lippincott William & Wilkins.

Maudsley, G. (2002). Making sense of trying not to teach: an interview study of tutors' ideas of problem-based learning. *Academic Medicine.* 77:162-172.

Pinto, P. R., Rendas, A., Gamboa, T. (2001). Tutor performance evaluation: a feedback tool for the PBL learning process. *Medical Teacher*. 23(3): 289-294.

Reznich, C. B., Werner, E. (2004). Facilitators' influence on student PBL small group session online information resource use: a survey. *BMC Medical Education*. 4: 9.

Setiaji, B. (2004). *Research guidance with qualitative approach.* Surakarta, Indonesia: Graduate School of Muhammadiyah University

Turana, S., Elcina, M., Odabasi, O., Warda, K. and Iskender, S. (2009). Evaluating the role of tutors in problem-based learning sessions. *Procedia Social and Behavioral Sciences* 1: 5–8.

Williams, B. (2006). Qualitative analysis of undergraduate paramedic students' perceptions of using case-based learning in an online learning environment. *Journal of Emergency Primary Health Care (JEPHC)*, 4 (3). Retrieved from http://www.jephc.com/full_article.cfm?content_id=378 on 30 March 2011.