

Francisca A Tjakradidjaja, Yayi Suryo Prabandari, Titi Savitri Prihatiningsih, Harsono. (2016). The Role of Teacher in Medical Student Self-Directed Learning Process. *Journal of Education and Learning*. Vol. 10 (1) pp. 78-84.

## The Role of Teacher in Medical Student Self-Directed Learning Process

Francisca A Tjakradidjaja \*

Faculty of Medicine and Health Sciences, UIN Syarif Hidayatullah Jakarta, Jakarta, Indonesia

Yayi Suryo Prabandari \*\*

Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia

Titi Savitri Prihatiningsih \*\*\*

Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia

Harsono \*\*\*\*

Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia

### Abstract

Self-directed learning (SDL) is essential in medical education. The rapid development of medical science and the expansion of health problems need a physician who can meet that challenges. A physician must have lifelong learning ability. SDL is one of the important requirements for lifelong learning ability. In SDL, learners are the controller of learning and learners have the freedom to learn according to their needs. Therefore, it is necessary to explore the role of the teacher in the SDL process, particularly in medical education. This study used a qualitative exploratory design. Twelve teachers and 23 medical students were selected by purposive sampling. There were seven themes that emerged from the analysis. The role of teacher in the SDL process includes: (1) Competent; (2) Concern; (3) Creative; (4) Facilitator; (5) Motivator; (6) Partners; and (7) Role Model.

**Keywords:** *List a few (3-5) key words here*

---

\*Francisca A Tjakradidjaja, Faculty of Medicine and Health Sciences, UIN Syarif Hidayatullah Jakarta  
Jl. Kertamukti Pisangan Ciputat 15419.  
E-mail: [chika.tjakra73@gmail.com](mailto:chika.tjakra73@gmail.com)

\*\* Yayi Suryo Prabandari, Faculty of Medicine, Universitas Gadjah Mada, Department of Public Health,  
Gd IKM Baru Lt3. Jl Farmako, Sekip Utara, Yogyakarta.  
E-mail: [pyayisuryo@yahoo.com](mailto:pyayisuryo@yahoo.com)

\*\*\* Titi Savitri Prihatiningsih, Faculty of Medicine, Universitas Gadjah Mada, Department of Medical  
Education, Gd. Prof. Dres. Med. Radiopoetro, Lt.6 Sayap Barat. Jl Farmako, Sekip Utara, Yogyakarta.  
E-mail: [savitri66@yahoo.co.uk](mailto:savitri66@yahoo.co.uk)

\*\*\*\* Harsono, Faculty of Medicine, Universitas Gadjah Mada, Department of Medical Education, Gd.  
Prof. Dres. Med. Radiopoetro, Lt.6 Sayap Barat. Jl Farmako, Sekip Utara, Yogyakarta.  
E-mail: [harsono\\_jombor@yahoo.com](mailto:harsono_jombor@yahoo.com)

## Introduction

The development of medical science has been very rapid, includes the basic science of medicine, disease prevention, diagnosis or treatment. In line with that condition, health problems continue advance. The circumstances which formerly regarded as unimportant, this time can be important, or vice versa. A physician has an obligation to be able to meet the challenges of unpredictable and high speed scientific changes. Therefore, physicians need to have the lifelong learning ability to provide optimal health care for the patient safety.

The ability of lifelong learning is one of the competencies that must be owned by a physician (The Indonesian Medical Council, 2012). An important requirement for lifelong learning capability is the ability to be able to direct learning independently (self-directed learning/SDL). SDL is very important. It can be allow the physician to face the continuous changes in science. SDL can support and generate the lifelong learning ability (Bidokht and Assareh, 2011).

Knowles (1975, in Fisher et al, 2001) described self-directed learning (SDL) as a process by which individuals take the initiative, with our without the assistance of others, in diagnosing their learning needs, formulating learning goals, identify human and material resources for learning, choosing and implement appropriate learning strategies, and evaluating learning outcomes. SDL is the core of adult education, characterized by student-centered learning. The student has the main control in study and the student have the freedom to learn according to their needs (Fisher et al., 2001). If the student already has the control of the learning process, it is necessary to explore the role of the teacher during the process. In general, in 1991, Grow propose a model that will provide direction for the teacher to support student in doing SDL. There are four stages of interaction between teacher and student, namely: dependent-authority coach, interested-motivator guide, involved-facilitator, self-directed-consultant delegator. The teachers have a role to direct the development of the SDL ability. Their roles meet to the stage of students SDL's ability. Dornan (2005) in his study found that students still need the assistance of the teachers in the SDL. This indicates that the student cannot be removed completely in the learning process. Intervention of the teacher can make learning approach prone to shift back towards the teacher-centered leaning. According to a systematic review conducted by Murad (2010), the teacher act more as a facilitator than as a scientific resource. There are a few researches that explore thoroughly the role of the teacher in the medical students SDL process. Existing research only discuss certain roles. Based on the background that mention before, this study aims to explore the role of the teacher in the SDL process, especially in medical education.

## Methods

This study was an exploratory qualitative research. The informants were the teachers and students at Faculty of Medicine and Health Sciences, UIN Syarif Hidayatullah Jakarta. The criteria for teacher was active in leaching program, engage in learning activities, and have teaching experience at least two years. The criteria for the student were an active student in learning activities. Informants are taken by purposive sampling. Qualitative data collection techniques in this study derived from primary data by in-depth semi-structured interviews on teacher and students, as well as the observations on the teacher. Data collection stopped if there has been a saturation of data, occurs if there were no additional information. Data analysis was performed based on the content analysis method with an inductive approach (Elo & Kyngas, 2007). Data analysis was performed by Atlas Ti software. Results of the analysis carried out member checking on informants. This study has ethical approval from Faculty of Medicine, Universitas Gadjah Mada Research Ethics Committee and Faculty of Medicine and Health Sciences, UIN Syarif Hidayatullah Jakarta Research Ethics Committee. Permission was also sought from all authorities where the study was conducted. All informants were assured that confidentiality would be maintained. Informants were fully informed about the research. They have signed the informed consent.

## Finding and Discussion

The informants consisted of 12 teachers and 23 students. The teachers consist of eight women and four men. The average age of the teacher was 42 years and the average length of teaching experience was seven years. The number of teacher from preclinical and clinical stages was same. Educational backgrounds S1, S2, S3 are respectively one, ten, one. There were 12 men and 11 women student informant. The average age student informant was 21 years.

Seven themes emerged from the data analysis. The role of teacher in the SDL process includes: (1) Competent; (2) Concern; (3) Creative; (4) Facilitator; (5) Motivator; (6) Partners; and (7) Role Model.

### **Competent**

The role of the teacher as a learning resource is still needed in the SDL process. The teacher must be a qualified and competent in accordance with their major. *"The student must attend to the expert meeting to get same understanding"* (WSP.11). In the SDL process, the students do not learn on their own without anyone else. Otherwise, the important thing is that they can identify the learning resources. One of the resource material is asking the questions or discussion with the teacher who have qualified in their field of science. *"We asked to the teacher for confirmation of something what we learn. So we can know which are the material that we read, true or not. The teacher can explain it, and they do not make us confuse"* (WMH.10). Some criteria as a learning resource are the quality of the material include the correct information, the latest issue, logical thinking, appropriate and not excessive topics, and applicable. Relating to the information transfer, the teacher should use scientific language, use easy word to understand, and use interesting method (Todorescu, et al., 2015).

### **Concern**

Concern means give the guidance, care and protect. The teacher has to take care the student not only to teach them but also to educate them.

*"I will ask to the student, What kind of guidance that they want? What's problem that they faced"* (WSP.04).

*"We need to know the details of the student learning process, especially in the troubled students. I'll call they friends at their boarding house, asking what do they do at home, and then cross check with their self".* (WSP.10).

The teacher serves as guidance for the students, creates a feeling of safety, comfort, serene, and to be fair to all students. Attention to the student will build the student confidence. The teacher act as well as parents to their children. Students do not like to feel neglected, they require the teacher attention so their motivation of learning may arise. According to the student, there is still a teacher who do not care about the students.

*"For example, there are teachers who do not care, do not consider our presence, keep silent. So it makes us confused. We considered as the shadow. There are many like that. We joined their activities in outpatient service, wards, patient visit, but they just did not say anything or did not ask* (WMH. 4).

For the students, as social creature, the recognition of their existence is important. Inconveniences will arise when the student there but their existence is not considered by the teacher.

### **Creative**

The ability of high creativity must be owned by the teacher. *"Usually when I have to teach at noon for two hours, I tried to stimulus them to be more active. I try to attempt the spirit even though the material is ordinary. I attempt to draw so it's running well."* (WSP.01).

*"I assign them a home visit to the patient, five or four student for one patient. The goal is they know that study for drug abuse is not only learn about the medical aspect, but also psychosocial and spiritual aspect. At the patient house, they will meet the patient family, know patient job, and later they knows that it's a criminal or not. So they handle the patient with comprehensive approach* (WSP.02).

The teacher has been trying to modify teaching methods to make it more attractive to students. Creativity can be manifested in designing methods of learning, and also creative in growing motivation to learn, and foster the students creativity to built an effective SDL process. Eg linking learning method used with the students interest, adjust the materials and methods of learning that appropriate to the student level of experience and student ability. Use a variety of learning models can also be done, for example, discussions, group work, home visiting patients, a challenging assignment, demonstration, and use a variety of learning media such as videos, and other teaching aids. Students will be discouraged if

there are more creative activities from the teacher in the learning process. *"If the teacher just sit and read the slides, it will not made us focus. They also look does not want to know. We better get to sleep because it can read it by myself at home, and It makes us sleepy."*(WMH.20).

In the study was conducted by Davies et al (2014), found that teacher can be creative in building positive relationships, giving examples of creative behavior, curriculum planning, keeping the balance between freedom and structure of learning, providing the use of flexible space, understanding the student needs and learning styles, creating opportunities for collaboration and assessment with other colleagues, and using effective resources. The teachers need to have a positive attitude towards creativity and have the confidence of the basic skills that they have. Teacher creativity can be hampered by the high workload, time constraints, limited facilities, and lack of support from institutions or colleagues.

### **Facilitator**

Role as a facilitator is shown by directing the student's learning process. This role is clearly visible in the tutorial group discussion and basic clinical skills laboratory. *"I find a little difficult to stimulate the student. I asked a question, Is there any question? Or with a challenging question"* (WSP.03).

*"Usually, I like to ask open-ended questions, questioning the settlement possibility of other issues, so their minds will open. Asking their opinion whether there is enough topic, attempting them to explore more things that lacking"* (WSP.11).

The teacher has been trying to be a good facilitator, with more to enable students in the learning process. In line with the research that conducted by Murad (2010), which stated that the role of the teacher in the SDL process is primarily as a facilitator, not just as sources of material science. The teacher assist the students in learning how to learn. Skills as a facilitator are allowing students to organize their own learning process, helping them to identify the learning needs, giving a direction to think critically and creative, helping the students to evaluating the learning processes and learning outcomes. The facilitator should also a master in the science of learning materials so they can lead the student either they should. The teacher has a responsibility to ensure that students have the SDL ability. These skills can be applied in the world of work when they graduate (O'shea, 2003). Students will feel motivated when the teacher can direct the learning process.

*"There is no feedback. I want there is a feedback, we didn't only do the job. The teacher ask we to tell more about scabies. And then later they ask, where did you read about it? So the clarify the sources. That is from the old book, you should try to read from other resources That's will make us motivated"* (WMH. 7).

The teacher act as instructors in the learning process, not just as an expert in the field related to the material. They also must understand the learning process in a person, have the ability to motivate and encourage students to learn, and able to provide constructive feedback to students. Students need guidance to better understand for the material and feel confident to mastery the material. Students will also be actively involved in the learning process. Teacher and students are able to discuss in deciding matters related to the learning process.

### **Motivator**

Motivator is someone who gives motivation or encouragement to another individual with the aim to improve morale and quality of life. The teacher needs to motivate students to learn because the learning control is on the student.

*"I try to compare the student to the other student from other universities. You must try to improve the learning process. If the other read two sheets of book so you have to read more, three or four sheets. So they have desire to move forward"* (WSP.02).

*"Then I give you an idea about the job description to be a physician that the physician is required to learn at any time"* (WSP.10). Students need encouragement guidance from the teacher. *"The teacher does not only ask and teach, but also opens our mind so we know what it's supposed to be a physician"* (WMH. 7). Student need assistance during the transition of education stage, in burnout

condition, or have a problem, even when there is no problem, teacher should continue to motivate students. At the end of the interest and motivation of students will continue to rise. The way that can be motivate students are giving some advice, creating a pleasant atmosphere while learning, providing a reasonable assessment or praise (feedback), and creating a cooperation and fair competition. The ability to motivate students skills need to be developed, for example by studying the material motivation or training. Motivation should avoid in negative ways such as threats and punishment.

### Partners

Corresponding to the teacher statement that sometimes the teacher was still have some distance the relationship between the teacher and students. *"They are very formal, seems reluctant. Some people are afraid. Some people told me that i am sternly. I still feel ordinary. Students feel there is a distance between us"* (WSP.04). In the other hand, there was also the teacher that close to students. *"They could be closer to the students so students feel unfear. They can put themself as a friend or a senior"* (WSP.08). Students were comfortable with the teachers who open up and have equal relations with students. *"I feel comfortable with the teacher who so communicative, open up, act as place to ask"* (WMH.05). Student like the teacher that was not rigid in communicating with students. Students were motivated to learn when dealing with teacher who does not make the distance between them. Equal relations make the situation comfortable and not stiff (formal), as well as make easier communication.

In Eastern cultures, the teacher is considered as a highly respected and admired. Usually the teacher's position superior to the students and tend to be authoritarian, but the results of this study indicate that students feel comfortable if the relationship with the teaching staff are equivalent. Students no longer should always be obedient to follow things that are commanded by the teacher. The atmosphere became more democratic and learning can be fun. They will be easier to ask questions and to make a discussion. This condition will eventually support the SDL process. A relationship that is no longer paternalistic, making the relationship between teacher and students is collegial or partnership. They get mutually benefit from the relationship. Teachers and students alike can learn. Equality makes the relationship becomes closer, the teacher can know the student further, and bonding ties more easily formed. The teacher that launching the not excessive joke can expel the student boredome, give a new atmosphere before restarting the learning process, and make the atmosphere became more pleasant and relaxed.

### Role Model

Teachers are role models for the students. Students will learn through a process of observation and follow the example of the teacher who became their role models. The teachers realizes that they became a role model for students *"He appreciates us, I want that to be a teacher like him. It will inspire us"* (WSP.07). *"The teachers gave the motivation that they are figure, well later next 20 years, I want more success like them. So suddenly appears the motivation"* (WMH.16). Students do not learn from things that are spoken by faculty but they can learn from the teacher behaviour and knowledge that emerging from the teacher. The modelling process can sharpen student SDL process. Students actively determine teacher role models and behavior to be emulated. The phenomenon of modelling that imitating the other person act is a learning process proposed by Bandura. Learners can do the abstraction of a number information that obtained from observing the others behavior and make decisions about the behavior to be adopted or ignored. Observation and decision making is a key mechanism in the acquisition behavior. Cognitive function includes activities that have the purpose of accessing and processing information to select, construct, and evaluate an action. Environmental and individual factors can control the learning. Individuals develop cognitive abilities with through self-motivated action on the environment (Gredler, 2009; Kaufman and Mann, 2010). Cognitive processes that occur and decisions will actively strengthen the SDL process.

Harden and Crosby (2000) have been proposed the 12 roles of medical teacher. The roles are condensed into six roles: (1) information provider (lecturer and clinical / practical teacher), (2) role model (on-the-job role model and teaching role model), (3) facilitator (mentor and learning facilitator), (4) assessor (student assessor and curriculum evaluator), (5) planner (curriculum planner and course organizer), and (6) resource developer (study guide producer and material resource creator). Those roles are based on three sources, namely: analysis by the author, research on the student, and literature review. There are some similarities and differences between the six roles proposed by Harden and Crosby (2000) and the results of this study. The similar role is as role model and as facilitator. The others four roles are close identical. The teaching staff must be competent as an information provider. To carry out the role as assessor, planner, and developer resource, the teacher should have the good creativity. Role as motivator in this study are similar to the part role as facilitator who encourages

students to learn on their own. The role as partner and concern complement the existing six roles. Role as a partner can encompass all of the roles. Partnership with the students will create a conditions that facilitate the others role in order to be held. Concern is not explicitly included in the six roles of Harden and Crosby (2000).

Ki Hajar Dewantara (1937 in Dewantara, 1989) also proposed the role of teacher which is generally known by the motto *Ing Ngarsa Sung Tuladha, Ing Madya Mangun Karsa, Tut Wuri Handayani*. *Ing Ngarsa Sung Tuladha* means in the front, the teacher should be able to provide as role models or examples. This role is consistent with the results of this study, namely the emergence of the teacher role as a role model. *Ing Madya Mangun Karsa* means in the middle, teacher can create the intention, desire, ideas, and able to inspire the spirit. The results of this study are aligned with that motto. The teachers are required to be creative and the teachers are partners for students. Teachers and students actively participate together in the learning process, create meaning, and form the knowledge. *Tut Wuri Handayani* means from behind, teachers provide encouragement and guidance for the students. This role similar to the role as a motivator and facilitator in the results of this study. Concern role when paired with the concept of Ki Hajar Dewantara gives meaning that teacher do the teaching and education with affection like parenting. This is known as Among method.

## Conclusions

The teacher still plays a role in the process of SDL although the responsibility of learning is on student. It is important to assist the students, so that they can smoothly undergo transition from teacher-centered learning be student-centered learning. The role of teacher in the SDL process includes: (1) Competent; (2) Concern; (3) Creative; (4) Facilitator; (5) Motivator; (6) Partners; (7) Role Model. The abbreviation is 3CFMP. The results of this study could be used as a guide for teacher in teaching and learning, identify the teacher skills required, and to evaluate the performance of teacher. This seven roles can be performed simultaneously adjusted with the SDL process levels, the SDL process steps that performed by students, and SDL student ability level. Further research is needed to explore the role of teacher associated with student SDL process steps.

## References

- Bidokht, M.H. & Assareh, A. (2011). Life-long learners through problem-based and self directed learning. *Procedia Computer Science*, 1446-1453.
- Davies, D. et al. (2014). The roles and development needs of teachers to promote creativity: A systematic review of literature. *Teaching and Teacher Education*, 41: 34-41.
- Dewantara, B.S., 1989. *Ki hajar Dewantara Ayahku*. Jakarta: Pustaka Sinar Harapan.
- Dornan, T. Et al. (2005). How can medical students learn in a self-directed way in the clinical environment? Design-based research. *Medical Education*, 39: 356-364.
- Elo, S. & Kyngas, H. (2007). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1): 107-115.
- Fisher, M., King, J. & Tague, G. (2001). Development of a self-directed learning readiness scale for nursing education. *Nurse Education Today*, 21: 516-525.
- Gredler, M.E. (2009). *Learning and Instruction: Theory into practice*. Ohio: Pearson.
- Grow, G.O. (1991). Teaching learners to be self-directed. *Adult Education Quarterly*, 41(3): 125-149.
- Harden, R.M. & Crosby, J., 2000. AMEE Guide No 20: The good teacher is more than a lecturer the twelve roles of the teacher. *Medical Teacher*, 22(4).
- Kaufman, D. & Mann, K. (2010). Teaching and Learning in Medical Education: how theory can inform practise. Dalam: *Understanding Medical Education: Evidence, Rheory, and Practice*. London: Willey-Backwell, 18-20.

- Murad, M.H., Coto-Yglesias, F. & Varkey, P. (2010). The effectiveness of self-directed learning in health professions education: a systematic review. *Medical Education*, 44: 1057-1068.
- O'Shea, E. (2003). Self-directed learning in nurse education: a review of the literature. *Journal of Advanced Nursing*, 43(1): 67-70.
- The Indonesian Medical Council (2012). *Standar Kompetensi Dokter Indonesia*. Jakarta: The Indonesian Medical Council.