

**EXPLORING DETERMINANTS INFLUENCING LEARNING
PROCESS AND LONG DISTANCE LEARNING PROGRAM OF
NURSING DEPARTMENT OF HEALTH POLYTECHNIC OF
MINISTRY OF HEALTH
IN EAST FLORES DISTRICT, INDONESIA**

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ABSTRACT

The aim of the study was to identify determinants influencing students' Learning Process (LP) or the implementation of Long Distance Learning Program (LDLP) of Nursing Department of Health Polytechnic of Ministry of Health, in East Flores, Indonesia. A quantitative inquiry based on analytic descriptive design using questionnaire method was employed to collect data from the respondents (n=39). Excel program was used to analyse and process the collected data. The study results indicated that LDLP was properly implemented and learning process of LDLP students went well. Physical condition, attention, interest and capability were the identified internal determinants supportive of LP of LDLP students. Physical and social environment, software and hardware were the external supporting factors for the successful LP of LDLP students. The study indicates the needs for the improvements of several aspects including availability of modules, books, teleconference tools, learning management system, laboratory equipments, stable internet connection, and comfortable classrooms.

Key words : Determinants, learning process, long distance learning program, Health Polytechnic of Ministry of Health, Kupang, Indonesia

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INTRODUCTION

Quality of health services provided for communities is largely determined by education level and professionalism of health professionals including nurses and midwives [1, 2]. The current national data indicate that there are approximately 116,000 nurses and midwives in Indonesia who serve in community clinics, community health centres, hospitals and other health service facilities have not had the minimum standard of education level as stipulated in regulation No. 1464/Ministry of Health/per/x/2010 [1]. This regulation entails that the minimum standard of education level for a qualified nurse and midwife should be at the same level as diploma III (DIII). Long Distance Learning Program (LPDP) provided by Health Polytechnic of Ministry of Health, Kupang, Indonesia aims to enhance the education level and the quality of health professionals including nurses and midwives in East Nusa Tenggara especially in terms of knowledge, attitude and skills which could help them to provide nursing services professionally [3].

This program is designed to cover students from different places in East Nusa Tenggara province and provide them with opportunities to study independently while working. Long distance learning system is different to regular or conventional learning system. It emphasises on independent study and provides students with facilities, technology and freedom to study or learn based on their conditions and situations. It also provides students with guided learning, face-to-face tutorials and online tutorials to help them in learning theories and conducting laboratory practices [3]. Guided learning is provided to help students understand topics being studied and have the skills required for delivering health services. It is done through case study, problem solving, demonstration and regular in-depth discussions at long distance learning source unit or at other places determined by this unit. Guided practices are carried out in laboratories, community health centres, hospitals or clinics where the students are working with the aim to guide them to experience and gain skills needed to delivery

health services [4]. This long distance learning is also supported by communication and information technology provided by a unit known as long distance study source unit. Printed and digital modules including books, pdf references, power points, presentation audio, VCD, DVD or CD, video, animation, games/simulations can be accessed through official long distance education website.

Interaction between students with tutors is scheduled and taken place regularly through communication features provided by learning management system. They include chatting, group discussion, information board, online assignment, and e-mail. Such interaction can also be done through phone and short message service. Interaction or communication between students and lecturers or tutors is required as it provides opportunities for students to ask for in-depth explanation of both theoretical and practical topics they do not comprehend. This contributes to the successful implementation of LDLP and LP of LDLP students. Learning process is a communication process where information delivery from the source of information (teachers, instructress, tutors, etc) to the receivers (students) takes place [5]. This process is intended to ensure that the message (a certain topic or subject) can be understood by the students. Therefore, the successful learning process is determined by both internal factors including physical health and psychosocial conditions of students, and external factors such as physical environment, social and cultural factors, and availability of facilities like books and software [6]. This study aimed to identify determinants influencing LP of LDLP students or the implementation of LDLP provided by Health Polytechnic of Ministry of Health in East Flores District, Indonesia.

METHODS

This quantitative inquiry employed cross sectional study design to identify determinants influencing LP of LDLP students or the implementation of LDLP held by Health Polytechnic

of Ministry of Health in East Flores District, Indonesia [7]. The study populations were LDLP students in East Flores district. Study samples were 39 LDLP students. Data were collected using questionnaire with Likert scale from 1 to 4. For internal factor variables, learning process, and learning variables, positive statement with the answers: Always was scored 4; Often was scored 3; Sometimes was scored 2; and Never was scored 1. For external factors, positive statement: Strongly Agree was scored 4; Agree was scored 3; disagree was scored 2; and strongly disagree was scored 1. Data were analysed descriptively, and every score was divided by maximal score and timed 100% [8]. The result was categorised as Good if the score was >75%; Sufficient if the score was 56-75%; and Insufficient if the score was <56% [9]. The result of the analysis is presented in graphics and tables.

RESULTS

Study Setting

LDLP in Larantuka, East Flores is an education program held by Nursing Department of Health Polytechnic of Ministry of Health, Kupang, Indonesia. This program started in September 2014 and has 40 participants or students. The lecturers are nursing experts from Health Polytechnic of Ministry of Health, Kupang. They teach nursing topics and handle online tutorials, while face-to-face tutorials are held by trained tutors from the district and who have a bachelor in nursing. This long distance learning program also provides tests as a means of evaluation on the progress of the students. The tests cover both theoretical and practical/laboratory tests and are held twice: middle semester and final semester.

Profile of Participants

The general characteristics of the participants are presented in table 1, which demonstrates that the majority of LDLP students in East Flores were at the group age of 36 to 55 years old (71.6%) and female (67%).

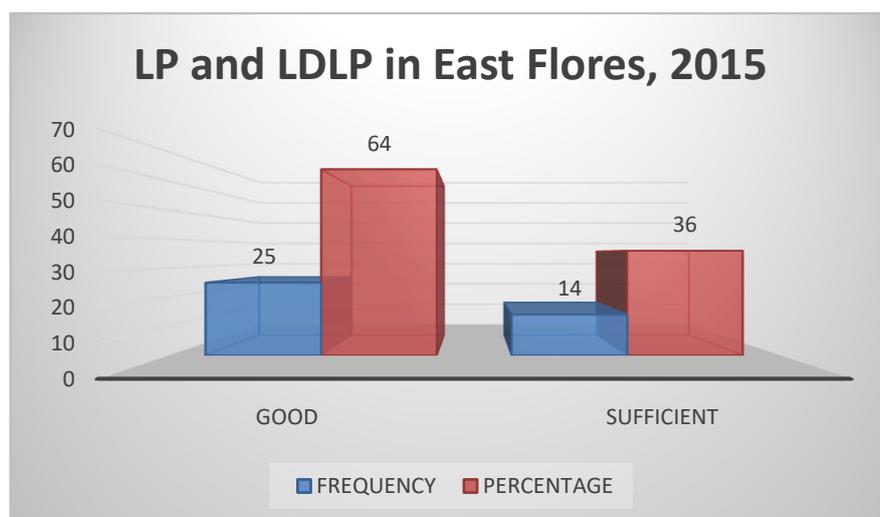
Table 1: Socio-demographic profile of study participants

Characteristics	No. of Respondents N = 39 (%)
<i>Age</i>	
22 - 25	1 (2.7)
26 - 35	10 (25.7)
36 - 45	13(33.3)
46 - 55	15 (38.3)
<i>Sex</i>	
Female	33 (67)
Male	13 (33)

General Evaluation of Students on LP and LDLP

The evaluation of the study participants on the LP and LDLP held in East Flores district is presented in diagram 1. Responses from the majority of the study participants indicated that LP and LDLP activities were going well or well implemented (64%).

Diagram 1: LP and DLP in East Flores



The above evaluation was based on several aspects of LP and LDLP implemented in East Flores including independent learning, face-to-face tutorials and online tutorials. Most of the students participated in this study provided positive feedback on the three aspects as presented in table 2.

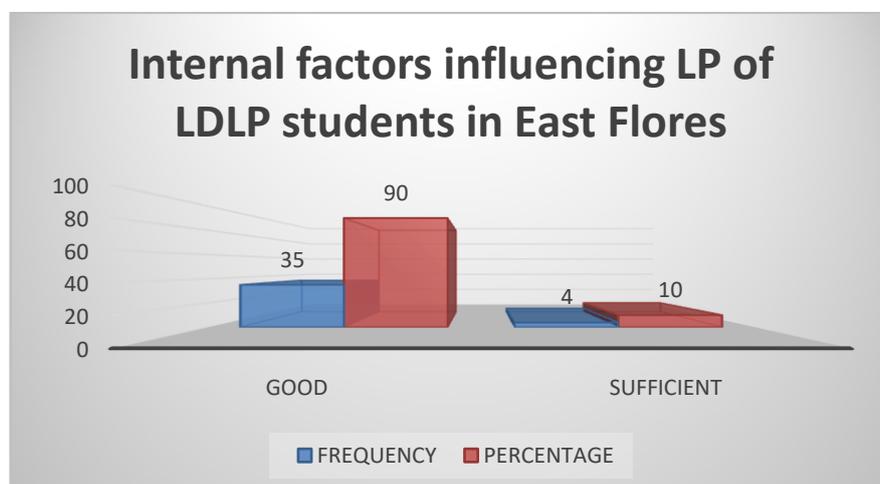
Table 2: Independent learning process (ILP), face-to-face tutorials, and online tutorials

ILP	GOOD		SUFFICIENT		INSUFFICIENT	
	NO	%	NO	%	NO	%
Independent Learning	25	64	8	21	6	15
Face-to-face tutorials	27	69	12	31		
Online tutorials	26	67	12	31	1	2

Internal Determinants Influencing LP of LDLP Students in East Flores

Data from the fieldwork indicated that LP of LDLP students or the implementation of LDLP was influenced by several internal determinants including physical condition, attention, interest and capability of the students. The majority of the participants responded that these factors have positive contributions (90%) to LP of LDLP students or the implementation of LDLP in East Flores (see diagram 2).

Diagram 2: General evaluation on the internal determinants influencing LP of LDLP students



The evaluation of the participants on the influence of each of the above aspects on LP of LDLP students or the implementation of LDLP in East Flores is presented in table 3. This findings of this study showed that these aspects had positive contributions to students' learning process or the implementation of LDLP. Only 13 participants indicated insufficient contribution of physical conditions to students' LP or the implementation of LDLP.

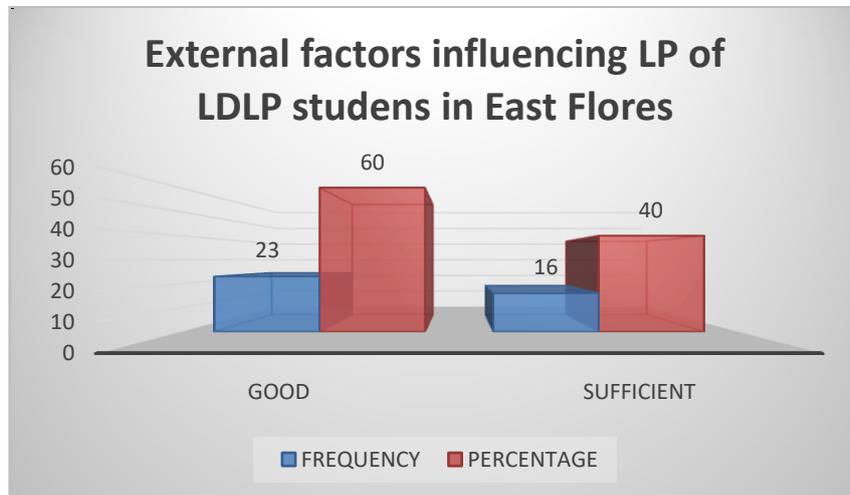
Table 3: Physical condition, attention, interest and capability supportive of LP of LDLP students in East Flores.

INTERNAL FACTORS	GOOD		SUFFICIENT		INSUFFICIENT	
	No	%	No	%	No	%
Physical Condition	24	61	10	26	5	13
Attention	32	82	7	18		
Interest	32	82	7	18		
Capability	30	77	9	23		

External Determinants Influencing Students' LP or the Implementation of LDLP in East Flores

The current study found several external determinants playing a part in students' learning process or the implementation of the program. They included physical and social environments, software and hardware. Data showed that in general these factors have positive contributions to LP of LDLP students or the implementation of LDLP in East Flores as presented in diagram 3.

Diagram 3: General evaluation on external factors supportive of students' LP or the implementation of LDLP



The evaluation of the study participants on the contributions of each of the external factors to their learning process seemed different. Socio-environmental and software factors were seen by the majority of the participants as the main factors supportive of their learning process in this long distance learning program. Physical environment and hardware were reported to have sufficient contributions to their LP. However, there were a number of participants who indicated that physical environment and hardware have insufficient contribution to their learning process (see table 4).

Table 4: External determinants influencing LP of LDLP students

EXTERNAL FACTORS	GOOD		SUFFICIENT		INSUFFICIENT	
	No	%	No	%	No	%
Physical Environment	17	44	21	54	1	2
Social Environment	32	85	7	15		
Hardware	13	33	24	61	2	6
Software	21	54	18	46		

DISCUSSION

This study aimed to identify determinants influencing students' learning process or the implementation of LDLP in East Flores. Responses from the majority of the study participants show that students' LP went well and LDLP was well implemented (64%). This positive evaluation was based on their experience indicating that several methods designed to help the learning process of the students or the implementation of the program were followed and well performed by both the students and lecturers or tutors. The methods or strategies included independent learning, face-to-face and online tutorials. This finding is in line with the results of a previous study [5], suggesting that successful learning process or successful implementation of an education program is mainly determined by its strategies designed to facilitate its implementation and how well the program is carried out as planned.

LDLP is designed to facilitate independent learning and supported with other facilities including learning modules, and communication and information technology such as video conference and Skype [10]. What is meant by independent learning is that the students are required to independently prepare materials for discussion, face-to-face and online tutorials and assignments. This program is also supported by guided learning, face-to-face and online tutorials. The use of independent and guided learning strategies or methods is an indication that the program was well designed by Health Polytechnic of the Ministry of Health of Indonesia. The design of the program and strategies are made to support learning process of the students. However, the results of this study show that several students especially the ones aged 46 to 55 years old were still struggling with the use of technology and time management. This was because they spent most of their time on work as civil servants, and on home activities.

Supporting the results of previous studies reported elsewhere [6, 11], the findings of this study also suggest that learning process of the LDLP students was supported by internal factors including students' physical condition, attention, interest and capability. The majority of the study participants (61%) pointed out physical or health condition as the major supporting factor for their learning process. Consistent with the findings of previous studies by Kuswiandi [6] and Pasha [12], the results of the current study confirm that attention played a significant role in helping learning process of the students. Most of the participants (82%) put attention as one of the main factors that can support or influence successful learning process.

In line with the results of earlier studies [6, 13], the present study suggests that interest of LDLP students in the topics being studied influenced their learning process and the successful implementation of LDLP. Interest is seen as a tendency to pay attention to and remember several activities [2]. If an activity is interesting to students then it is highly likely for them to participate and pay full attention. The current results also report aptitude or capability as another internal factor that supported learning process of LDLP students. Aptitude is also known as ability to learn. Aptitude helps learning process if the materials or topics being studied are interesting to students [14].

Supporting the findings of other studies [3, 6], this study suggests that external factors including physical and social environment, software and hardware played roles in supporting and influencing learning process of LDLP students. Social environment was reported to be the main supporting factor for successful learning process of LDLP students. The majority of them (85%) indicated that social environment including parents, children and colleagues was supportive of their learning process. This is in line with the results of a previous study [15],

reporting that social environment of friends and families facilitates students to learn and discuss topics being studied.

However, the findings of the current study suggest that physical environment negatively influenced learning process of LDLP students. This was due to overloaded work as civil servants and uncomfortable classrooms used for tutorials. Classrooms were small and hot making them feel uncomfortable if they were in the classrooms for the whole day tutorials. Consistent with the previous studies' results [6, 16], this study's findings show that LDLP had limited availability of hardware including books, comfortable classrooms, chairs, tables, computers, modules, video conference facilities, laboratory equipments, stable internet connection, library and laboratory, which influenced learning process of LDLP students. Likewise, limited availability of software such as teaching methods and teaching equipments influenced learning process of the students [15].

CONCLUSION

This study reports that implementation of LDLP held by Health Polytechnic of Ministry of Health as well as leaning process of LDLP students through independent learning, face-to-face and online tutorials has been well carried out. It also suggests that learning process of LDLP students is supported by several internal factors including physical condition, attention, interest and aptitude of the students. Physical and social environment, hardware and software are the identified external determinants supporting the implementation of LDLP and students' learning process. Findings of this study suggest the needs for the improvements of physical environment including classrooms, internet connections, availability of modules, and laboratory equipments to facilitate learning process of LDLP students.

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