



EVALUATION OF MANAGEMENT OF LOGISTIC MATERIALS MANAGEMENT PRACTICE AS A DENTAL TECHNICIAN HEALTH SERVICE OFFICER 2018

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ABSTRACT

Dental Engineering Department has a very big role for the creation of competent graduates. In carrying out its role, the Dental Engineering Department must be able to manage education properly and correctly, one of them is logistical management of practicum materials. The purpose of this study was to find out in depth about the evaluation of logistics management in the form of input, process, output of the management of practicum materials at the Department of Dental Engineering, Poltekkes Tanjung Karang. The logistics management function of practicum materials includes identifying, planning procurement, distributing tools to developing an effective and efficient logistics management system. The method used in this study is qualitative with 9 informants. The place of research was carried out in the dental engineering department of Health Polytechnic Tanjung Karang. Data collection is done by direct interviews and observations. The results of this study in general the management of logistics in the Department of Dental Engineering Health Polytechnic Tanjung Karang is quite good but there are still some obstacles such as inadequate Human Resources, inconsistent procedures implemented, nonstandard storage facilities and the planning process of practicum material requirements that have not used the method raw. Therefore, an additional employee in the support unit is needed, repairs to the warehouse and using a standard method, the Activity Based Casting (ABC) method.

Keywords: human resources; logistic; procedure

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INTRODUCTION

The Department of Dental Engineering has a very big role for the creation of competent graduates. In carrying out its role, the Department of Dental Engineering must be able to manage education properly and correctly, one of which is managing the logistics of practicum materials. The function of logistics management for practical materials includes identifying, planning procurement, distributing tools to developing an effective and efficient logistics management system. Meanwhile, the logistics management at the Department of Dental Engineering at the Tanjung Karang Health Polytechnic still has shortcomings ranging from forecasting to distribution. This research is to find out in depth the evaluation of logistics management in the form of inputs, processes, and outputs of the management of practicum materials at the Department of Dental Engineering, Poltekkes Tanjung Karang. Logistics in general is a science or art as well as a process regarding planning and determining the need for procurement, storage, distribution and maintenance of materials or tools (Hendayani, 2011). Good management of logistics management is shown by making periodic accountability reports to the general manager which is then submitted to the superior

(Top Manager), so that it can be used as information to make decisions in relation to the main things in logistics management. The success of logistics management depends on the competence of the manager or person in charge of logistics. In general, the logistical management of practicum materials in the dental engineering department already has a Standard Operating Procedure (SOP) but in the field application the existing SOPs do not work well so things happen that are quite hindering the course of student practicums. These things include the process of requesting goods at the beginning of each semester, the warehousing management system, the recording process in taking materials is still not regular, and the place of deviation is still not well organized.

METHOD

The method used in this research is qualitative with 9 informants. The place of this research was carried out in the Department of Dental Engineering, Poltekkes Tanjung Karang. Data collection was done by direct interview and observation.

RESULTS

Input Elements

Human Resources

Based on the results of interviews and observations made by researchers when interviewing department managers consisting of department secretaries, supporting unit coordinators and laboratory instructors, in the structure of the Department of Dental Engineering, Tanjung Karang Health Polytechnic, the logistics activities for practicum materials amounted to 1 person, this is according to what was stated by informant 1, informant 2, and informant 3 in answering the researcher's questions about the number of human resources (human resources).

"In the dental engineering department there is only 1 officer in the support unit" (1)

"There is only 1 officer in the support unit" (2)

"there is only 1 person, there is actually no written help, but usually the instructor helps" (3)

The number of human resources that have not met the needs greatly affects performance, besides that, the burden on employees is added to other jobs, as stated by the informant in the interview quote

"The obstacle that has occurred so far is that we actually need to add supporting staff, only the procedure for adding our employees has to go through a proposal from the department to the health polytechnic, and we have done that many times but the response from the health polytechnic is that there is always no staff who can be placed in the dental engineering department. "(1)

"lack of human resources that hampers performance" (2)

"What I see is the lack of human resources, then the support unit does other work such as teaching." (3)

Procedure

Procedures or commonly called Standard Operating Procedures (SOP) in the Department of Dental Engineering, including:

- a. SOP for Material Request
- b. Material Receipt SOP
- c. SOP

"There must be, because the logistics must be recorded regularly in relation to audits, how many goods come in, how many goods come out, how much stock, it must be correct, so there must be a clear SOP" (1)

"yes there is an SOP in carrying out the task"(2)
 "yes if the SOP has been set"(3)

Means

In logistical planning activities for practicum materials, adequate and supportive advice and infrastructure are needed for the smooth running of activities, in general the facilities and infrastructure available in the dental engineering department are as follows:

Tabel 1.
 Facilities and infrastructure in the practicum material warehouse

No	Name of goods	Total
1	Wardrobe shelf	2
2	Material box	1
3	Iron Filing cabinet	2
4	Safe	2

Based on in-depth interviews and observation results, the facilities in the dental engineering department can be said to be quite adequate, such as interview quotes

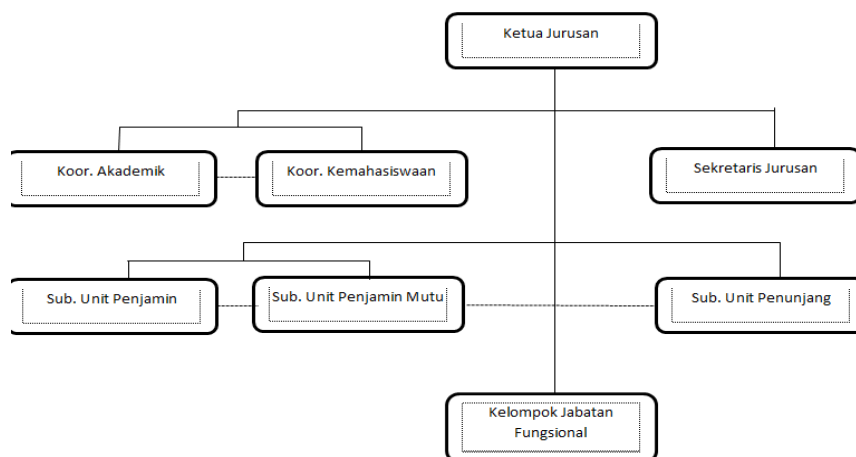
"If the facilities for the student learning process/practice are already available, but there are still limited facilities that are urgent/important first, considering our ability to procure facilities because the cost of our practice materials is very expensive, " (1)

"Not up to standard, especially warehouse"(2)

"not according to standards, first the warehouse is very narrow not in accordance with the amount of material, the storage area for materials not according to the type is still stored in one place"(3)

Organizational Structure

The Department of Dental Engineering has the following organizational structure or structure:



Gambar 1. Organizational Structure of the Department of Dental Engineering, Poltekkes Tanjung Karang

From the organizational structure contained in the dental engineering department, practicum materials are the work area of the coordinator of the support unit who is responsible to the secretary of the department. Based on the results of in-depth interviews, the following are excerpts from interviews with informants:

"If those involved in structural logistics management are the secretary of the department then to the supporting sub-units"(1)

"Support unit, department secretary, and instructor"(2)

"For those who manage the unit, it is the support and secretary of the department, but the instructor is involved because he often takes materials"(3)

Based on the results of interviews with informants in terms of planning logistics materials, it is the work area of the support unit.

Fund

The source of funds used for planning practical logistics materials in the dental engineering department comes from BLU or student fees, such as interview quotes

"Logistics funds in the dental engineering department come from BLU, the fees are from students"(1)

"Logistics funds are obtained from the Poltekkes Dipa budget"(2)

"Logistics funds for meeting the needs of practicum materials, as far as I know, from Poltekkes, the treasurer of the expenditure, the funds will be obtained from the BLU funds, then they will be given to the department"(3)

Process Elements

Forecasting

Forecasting practicum materials in the Department of Dental Engineering, Poltekkes Tanjung Karang is carried out by the head of the supporting unit coordinator. Planning for practicum materials uses the basics of planning by adjusting the available budget. The following are statements of informants 1,2, and 3 in answering the forecasting of practical material needs

"So we have a meeting, so each person in charge of the course together with the team calculates the material needs for how many cases, adjusted for the number of students, then to the supporting unit and then to the supporting unit"(1)

"Each PJ or team in the course will calculate the case or recruitment that he will work on in one semester or one year later it will be recapitulated and the total amount needed is obtained in one year"(2)

"Usually it is calculated based on the practical needs of each course. Then it is proposed how much funding is needed and then the treasurer of Poltekkes expenses pays with BLU funds"(3)

Request

Requests for practicum materials are carried out every time when the materials are about to run out, based on a tender system, which is once per semester and direct purchases, which are based on needs, as stated by the informant as follows

"If the person in charge of the course submits it to the support unit, from the new support unit to the health polytechnic. If it's from students, the request is through the lab instructor and then to the support unit"(1)

"PJ or the course team represented by the instructor will adjust to the plan that has been prepared then can be requested on a case-by-case or recruitment basis"(2)

"Usually the instructor fills out the form, first the PJ of the course has planned the amount of material from the beginning of the semester to the next practical exam if the material is already in the warehouse, the instructor fills out the request form"(3)

Meanwhile, students who use requests mostly have the same answer regarding the time to make requests for materials

"Counting the number of students and then reporting to the instructor and then dividing into several groups and registering to get materials"(4)

"Sipen sees or counts the number of students who need practical materials, writes a notebook for borrowing tools and materials, submits the notebook to the instructor and then is given the equipment and materials by the instructor" (5)

Lead Time

The length or time of re-fulfillment from the time the goods are ordered until the goods are received.

"In my previous experience, the longest was 2 months, sometimes it was fast depending on the material and the availability of the material at the supplier"(1)

"depending on the type of goods ordered, some are a week, some are a month, and some are up to two months"(2)

"The length of time for the goods to arrive depends on the availability of the goods in the store, if they are available, we ask for them today, today they can also be available. However, if the goods are not available in the store, it can take up to a month to order because sometimes we have to order outside Lampung"(3)

Safety Stock

Safety stock in the event of a surge in logistics demand,

"So actually it is calculated that we have to add more than all our needs for that year, for example, 100% we add 20% of the total."(1)

"20% of the total need for goods in each case is a college gem"(2)

"Usually from the total amount of material that has been planned we add 20% of the number of existing students"(3)

Reorder Point

The point of reordering the logistics of practicum materials if in implementation occurs if there is a shortage of praktik materials. Based on the results of interviews with informants regarding the reorder point mechanism as follows:

"The reorder point mechanism is always possible if we want to order the material back unless some ingredients are empty, so sometimes we have to wait first or we can order elsewhere"(1)

Output Element

The logistical planning of practicum materials is required to be as needed, so that practicum activities run smoothly. As the informant statement as follows

"The picture so far is that the availability has been adequate, even though the procurement efforts have been carried out in various ways. For the performance of the supporting units, their responsibilities are good, the logistical reports are regular, because the Poltekkes has made a program regularly, so every month there is a monthly report, 3 semesters, 6 months and 1 year. including stock is also reported, so everything uses an application, so everything straddles between planning, BMN, stock."(1)

DISCUSSION

Input Elements

Human Resources

Based on the results of research at the Department of Dental Engineering, Tanjung Karang Health Polytechnic, it shows that there is only one employee in the department, especially the coordinator of the support unit. The lack of human resources causes many obstacles to occur in carrying out work activities, based on the statement of the informant in addition to having a position in the support unit responsible for practicum materials, he also has a duty as a laboratory instructor who guides student practicum activities. This stacking of tasks has an impact on performance. Human resources greatly affect the achievement or failure of a job, whether or not employees are sufficient is based on an analysis of the position and the existing organizational structure. Although in the job analysis, only quality requirements are

set and not quantity, but with job analysis it is possible to determine the exact number of employees needed (Handoko, 2012). This research is reinforced by Aditama (2004) lack of manpower can make the workload increase, so that ultimately the quality of work decreases.

Procedure

The SOP in the Department of Dental Engineering, Tanjung Karang Health Polytechnic already cover all processes involved in the logistics management of practicum materials, such as SOP's for planning practicum materials, SOP's for ordering practicum materials, SOP's for receiving from suppliers to SOP's for taking materials from the warehouse for practicum needs. The results of research conducted by Ratih et al (2014) show that there is a positive and significant effect between standard operating procedures (SOP) and supervision on the performance of sales assistants partially, there is a positive and significant effect between standard operating procedures (SOP) and combined supervision on the salesperson performance. In general, the SOP's at the Department of Dental Engineering at the Tanjung Karang Health Polytechnic are already known by all elements of the academic community and have been running quite well, but improvements are needed, especially the re-activation of the practicum material control card in the warehouse, because so far the material control card has been issued but in its application when material out of the officer/instructor does not record, making it difficult at the time of calculating the material (stock) of materials. Then it is necessary to increase supervision at each distribution point so that everything has data / recorded then to ensure the warehouse is sterile it is necessary to make written rules or in the form of a letter of assignment from superiors for the person in charge who accesses (in and out) the warehouse only.

Means

Based on the results of interviews and observations made by researchers at the Department of Dental Engineering Health Polytechnic Tanjung Karang, it is known that there are already computer facilities and are equipped with the internet and are equipped with IT systems that support logistics planning in the support unit section. This research is in line with research conducted by (Bekti 2005) which shows that there is a positive influence on the level of education, infrastructure and work environment on teacher performance at SMA N I Karangdowo.



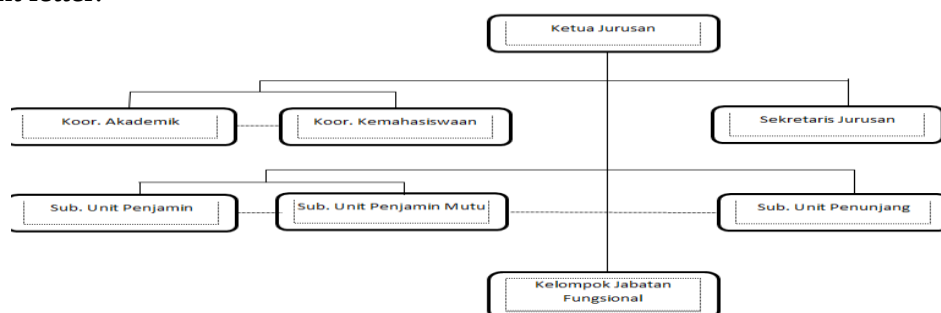
Gambar 2. Practical Material Logistics Warehouse

In addition to the unrepresentative location of the warehouse, the area of the storage warehouse for practicum materials is also not sufficient when compared to the number of practicum materials that must be stored, the lighting in the warehouse is also lacking because it still looks dim, the storage warehouse is also good and needs more attention in terms of cleanliness and air circulation, the layout of the addition of storage cabinets/shelves and the good practice of the logistics warehouse for practicum materials must be separated from the storage of damaged equipment.

Organizational Structure

Based on the results of interviews and observations, employees who are involved in the logistics management of practicum materials in addition to working as coordinators of supporting units also double as educational laboratory institutions (PLP) so that they have

obstacles in carrying out their duties while these employees do not have staff written in the assignment letter.



Gambar 3. Organizational Structure of the Department of Dental Engineering

Based on the results of the study and strengthened by the organizational structure in the Department of Dental Engineering, Poltekkes Tanjung Karang. Based on the duties and functions of the supporting units in charge of libraries, laboratories, classrooms and IT. Regarding practicum materials, the supporting unit must also carry out a coordination pattern with the lecturer in charge of the practicum and laboratory instructors to plan the use of practicum materials in each practicum activity.

Fund

Based on the results of the research in the form of interviews, as long as the management has an annual budget that comes from the DIPA (Daftar Isian Pelaksanaan Anggaran) Poltekkes Tanjung Karang. The results of the research related to the allocation of funds for the purchase of practicum materials at the Department of Dental Engineering, Poltekkes Tanjung Karang, have so far always been sufficient, but the obstacles in disbursing funds are often hampered because the completeness of documents that often occur is incomplete, nominal writing errors so that files are often returned for repair.

Process Elements

Forecasting

In the Department of Dental Engineering, Poltekkes Tanjung Karang, the process of forecasting practicum materials is carried out a month before the lecture activity starts. Usually the lecturer in charge of the practicum has started to think about the practicum case used for practicum activities in the next semester, after determining the case the lecturer in charge of the practicum communicates with the laboratory instructor to determine the amount of material to be used. This research is in line with research conducted by Ainy (2012) in its implementation, planning and determining logistics needs at the Harapan Kita Children's and Mother Hospitals are sometimes hampered by time problems. Sometimes the implementation of planning and determining needs exceeds the time limit that should be. This has an impact on the next process which is also postponed. In this study, although the Department of Dental Engineering at the Tanjung Karang Health Polytechnic has used the material requirements format to forecast the need for practicum materials, it seems to have gone quite well even though each year the practical cases are different and the number of students is also different, but the reference for calculating materials helps the work of the coordinator of the support unit in determine the amount of material needed.

Request

Based on the results of observations and in-depth interviews with the employees concerned, at the end of each semester the inventory of practicum materials in the warehouse is always

more and even leaves a lot. This is due to the expenditure of materials that are not in accordance with the number of requests, usually students ask for materials and those who know the amount to be given for student practicum needs are the instructors. So that instructors who are very careful have a perception of material savings and what happens at the end of the semester there is a lot of accumulation of practicum materials, excess inventory in the warehouse becomes uncontrollable. This is due to the fact that the estimation of the number of requests and the amount of safety stock still does not use the right control method and is based on accurate information, but only uses estimates. Procedurally request materials in the warehouse, each practicum activity is ready for practicum in certain subjects, write on the material request form, then it is signed by the laboratory instructor then the laboratory instructor issues materials as requested.

Lead time

Based on the results of observations and interviews with informants, the lead time for each logistics material for practicum materials is different, so it depends on the logistics of practicum materials, the type and amount of logistics to be ordered. This time is considered unsuitable for lead times for some types of practicum material logistics, normally it takes about 7 days, especially for logistics that require an ordering process, although for goods that have a direct or cash purchase process it may be fulfilled within that time limit. The fulfillment of dental engineering practicum materials can be said to be difficult, apart from the few suppliers, the practicum materials are quite rare, so it takes a long time, up to two weeks for certain practicum materials. According to Sofjan Assauri (2008) Lead time is the waiting period for the goods ordered, defined as the time between the time of ordering the order and the practicum materials to the logistics storage warehouse for practicum materials. This research is in line with that conducted by Arraniry (2012) which states the need for security supplies in the warehouse to deal with delays in the arrival of goods which can lead to production bottlenecks.

Safety Stock

The results of observations that occurred in the practical material warehouse the amount of safety stock available was actually very excessive, so that by not using the value of the safety stock, the waste of the investment value of the inventory could be smaller. Additional inventory held to protect or maintain the possibility of a shortage of inventory (Safety stock) Assauri 2008. Security inventory serves to protect or maintain the possibility of a shortage of goods. This is in line with research conducted by Arraniry (2012) which states that the amount of safety stock provided if it has a large difference by calculating the security inventory using existing calculation methods so that it can result in an increase or waste of procurement costs. According to the results of interviews and observations, the coordinator of the support unit lacks data on safety stock for the logistics of practicum materials. The method of calculating safety stock is still not in accordance with the calculation method that should be. For safety supplies, the supporting unit coordinator only adds 10% of the planned needs.

Reorder Point

According to Assauri (2004) and Annisa (2008), the reorder point or ROP or commonly called the reorder point is a point or limit of the amount of inventory that exists at a time where orders must be held again. In determining this point we must pay attention to the amount of use as long as the ordered materials have not arrived and the stock is minimum. In planning for reordering, the lead time at the Department of Dental Engineering, Poltekkes Tanjung Karang, varies and tends to take a long time to arrive at the warehouse. Therefore, the lead time must also be considered. Another obstacle in reordering is the selection of

suppliers which is quite complicated and the process takes quite a long time, because dental technician practicum materials are still very rare and difficult. Safety stock data is not well documented so it is not known how much safety stock is each month and also does not use existing calculation methods

Output Elements

Logistics planning of practical materials according to needs

Planning in accordance with the number, type, size requested by the work unit by using budget funds as well as possible and the inventory in the storage warehouse is always available in sufficient quantities for the needs of the work unit for a certain period. According to Ismail (2006) that planning is the process of determining the use of available resources so that they can be utilized effectively and efficiently. The logistical planning of practicum materials in the Department of Dental Engineering has been using the consumption method, which is in accordance with the desired needs. the coordinator of the support unit is guided by looking at the remaining final stock in the warehouse and taking the hospitalization and data on the computer, then an estimate is made on the need for practicum materials for the coming semester. The support unit coordinator does not use standard calculation methods to forecast needs, safety stock, reorder point, so that inventory data regarding this is sometimes less accurate and inaccurate and also does not pay attention to the order grace period (lead time).). Although in general the practicum materials at the Department of Dental Engineering at the Tanjung Karang Health Polytechnic have always been met and sufficient for practicum use by students, what often happens at the end of the semester for practicum materials is accumulation of materials in the warehouse.

Evaluation of the management practical material logistics management

Based on the results of this study, the authors found several things that became important evaluations related to the management of practicum materials at the Department of Dental Engineering, Poltekkes Tanjung Karang, such as human resources or employees who were lacking this resulted in a workload that piled up. more qualified personnel and have extensive knowledge either about planning or about logistics management itself as a whole. This is in line with research conducted by Utami, et al. (2011). The results show that organizations implement logistics management but in the field they still lack human resources and too many functions of warehousing and office management. For this reason, it is necessary to empower human resources and improve the logistics model of the organization.

Supporting logistics facilities and infrastructure also need attention, in this case, storage warehouses in addition to locations that must be representative, warehouses must also be arranged for laying materials, lighting and air circulation must be maintained. In addition, designs are also made to control the warehouse such as making stock cards to find out what materials are leaving the warehouse. In addition, the manufacture of stock cards as a control over the position of the material so that the material is not placed carelessly. In addition, the stock card also functions as a match for material data with physical stock when stock taking is carried out. This is in line with research conducted by Benedictus (2017) which says a stock card is made for every *job* that runs at PT XYZ and contains a complete *list* of materials used to produce the product. The logistics system is a strategic management of the transfer and storage of goods, spare parts and finished goods from suppliers, between company facilities and to customers, which aims to deliver finished goods and various materials in the right quantities at the time they are needed in good condition. that can be used to the location where the item is needed. (Bowersox, 2006). The logistics system is composed of facilities connected to transportation services. This system discusses how a material is processed,

manufactured, stored, selected, and then sold or consumed. The discussion in this logistics system is a comprehensive discussion, including discussion of manufacturing and assembly processes, warehousing, distribution, transportation diversion points, transportation terminals, retail sales, goods and document sorting centers, crushing centers, and disposal of all industrial activities. (Ghani et al, 2004). Logistics management at the Department of Dental Engineering, Poltekkes Tanjung Karang must also discipline the activities of recording incoming and outgoing materials in addition to the material request form, the support unit must also make stock cards in the warehouse and material handover papers so that everything can be controlled and when calculations are carried out, There is a match between what is recorded and what is in the warehouse.

CONCLUSION

Provide training or seminars once a year on logistics management for employees assigned to manage the logistics of practicum materials. Adding employees in the supporting units so that the performance in the supporting units is at least 1 (one) employee with the qualifications of a Dental Engineering graduate so that they can be divided so that the logistics management of practicum materials is optimal. In forecasting, it is better to use a standard method, namely the Activity Based Casting (ABC) method based on the needs of the previous year.

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