

Assessment of Material Resource Utilization Practices and Its Challenges: The Case of Wollega University

Debela Tezera^{1*} and Dewitt Yadesa²

¹College of Education and Behavioral Sciences, Wollega University, Nekemte, Ethiopia

²College of Business and Economics, Wollega University, Nekemte, Ethiopia

Abstract

The study was directed towards assessing material resource utilization practices and challenges in Wollega University. Descriptive research design was employed. Data were collected using sample of 88 academic staff and 121 administrative staff. Both academic and administrative staffs were selected by stratified sampling technique along with using simple random sampling method. A questionnaire and interview were used as tools for data collection. The data obtained through the questionnaires and interview were analyzed using descriptive analysis like, frequency and percentages. The result indicates that procurement process, storage, controlling mechanisms, and maintenance have a significant effect on material resource utilization in Wollega University. The study also revealed that the major challenges identified were poor procurement process, inadequate storage, tight controlling mechanisms, and poor maintenance activities. The disposal of obsolete material was found to be insignificant, which has invisible effect on material resource utilization. Moreover, it is recommended that specification of resources have to be identified, building permanent stores and storage of materials could have to be arranged, it is better to hire effective and sufficient maintenance professionals and organize separate maintenance center in the institution.

Keywords: Materials; Resource; Challenge; Practices

Introduction

The material management concept is based on the potential advantages to be obtained from controlling the flow of materials and goods from supplier through stores and production to dispatch. The overall control would thus embrace purchasing, stores, inventory control, production planning, and physical distribution [1]. According to Raymond [2], it is important to achieve organizational goal with acquisition and utilization of the right quality and quantity material resource used to deliver service.

Material resource management is common to all types of organization. It is basic, because no organization can operate or survive without it. Thus, the success or failure of any organization depends on the material resource management and utilization. Material resource management is said to be that, process of management, which coordinated, supervises and excites the tasks associated with the flow of materials to, through, and out of an organization in an integrated fashion [3].

As some studies show, managing material resource has a direct relationship with the success of the organization. For instance, a study conducted by Keitany, [4] revealed that materials management is a tool to optimize performance in meeting customer service requirements at the same time adding to profitability by minimizing costs and making the best use of available resources. However, in many institutions, material resource control is the least respected and most misunderstood department. Its reputation is related directly to the success of the systems it attempts to control. Attention usually is drawn to materials department then major issues arise with part shortages, excess freight, and physical inventory losses [5].

Many countries of our world were establishing a system for the management and utilization of material resources in different organizations to provide quality service and to optimize the profitability. For instance, USA, Sweden and Denmark have a decentralized system of material resource management [6]. According to the research conducted by James, [7] in Nigeria Bottling Company, there is a positive

significant relationship between efficient materials utilization and firm success. The implication of this is that through efficient management and utilization of materials, it is possible to increase a profitability of a firm.

In Ethiopia, material resource management has attention during early years. For instance, the research conducted by Defaru, [8] revealed that the utilization of educational material resource in Jimma, secondary Schools was poor and it needs improvement. Therefore, the need to conduct a search on this area also comes from the need for better management and utilization of material resources in an organization. Furthermore, according to the observation of a researcher, the utilization practice of materials resource in Wollega University needs improvement. This encourages the researcher to focus on this topic and conduct a research then recommend what should be done in the area of procurement and property Administration department in Wollega University, Nekemte campus.

Statement of the problem

Material resource management has a great role for the achievement of organizational goal by providing quality service and optimizing profitability through effective and efficient utilization of it. According to Edoze [9], effective and efficient materials functions contributes to the improvement of performance, leads to a significant reduction in the total materials cost, and helps to enhance the profitability

***Corresponding author:** Debela T, College of Education and Behavioral Sciences, Wollega University, Nekemte, Ethiopia, Tel: 251576617981; E-mail: tazara2009@yahoo.com

Received February 06, 2017; **Accepted** February 10, 2017; **Published** February 17, 2017

Citation: Tezera D, Yadesa D (2017) Assessment of Material Resource Utilization Practices and Its Challenges: The Case of Wollega University. J Hotel Bus Manage 6: 155. doi: [10.4172/2169-0286.1000155](https://doi.org/10.4172/2169-0286.1000155)

Copyright: © 2017 Tezera D, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

of organization. On the other hand, lack of funds, lack of accurate statistical data of the teaching resources, poor maintenance culture and the like were challenges to effective management and utilization of resources [10].

According to Annual Budget plan of Wollega University in (20015/16), [11] huge budget were allocated for purchasing of material resources. Like any other aspects of organizational activities, material resource utilization practices could be prone to a number of problems, since acquiring material resources is consuming substantially large amount of money. Its management and utilization requires considerable attention. So, having investing significant amount of money; Wollega University need to know if its material resource management and utilization practices are properly implemented or not.

As some studies show, there are a number of problems related to material resource utilization practices, this leaves a room for organizations to question about their material resource management and utilization practices. For instance, a study conducted at public technical vocational education and training colleges of southern zone of Tigray revealed that the insufficient budget, most of the store men are less qualified, obsolete materials, not disposed, identified and coded, and inefficient utilization of resources was the problems of the colleges [12].

However, procurement process and controlling mechanisms of material resources in higher institutions were not assessed. According to the annual report of internal audit of Wollega University [13], the material resource utilization practice is poor. Therefore, the current study will fill this gap.

Like other institutions Wollega University is engaged in material resource management and utilization practice. Therefore, that procurement and material resource Administration department is responsible to purchase, deliver purchased items to the user and follow up its utilization to assist the organizational goals or objectives. Hence undertaking research in this area is very important to evaluate the status and make available a scientific finding for decision maker in the area. Even if a number of studies have been done internationally and nationally concerning Materials management, there is no research, which is conducted concerning this issue in Wollega University main Campus particularly. Hence, this study helps to assess and evaluate the material resource utilization practice and its challenges at Wollega University main Campus

Therefore, the researcher had interest to conduct this study on the area of the material resource utilization practice and related challenges of Wollega University.

Objective of the study

To address this issue, the following specific objectives were forwarded.

1. To assess the effect of procurement process on material resource utilization in Wollega University
2. To evaluate the sufficiency of storages of material resources in Wollega University
3. To evaluate the effect of controlling mechanism in Wollega University to manage Resource utilization.
4. To assess the effect of maintenance activities on materials resource utilization in Wollega University.

5. To assess the effect of disposal of material resource on material resource utilization in Wollega University

Methods and Materials

A research design is the way in which one can pass through to answer a research question. As a research design, this study adopts descriptive survey research design, which was used to assess and identify the challenges of material resource utilization practice in Wollega University main campus. The research design aids to check the state affairs as it exist at present or not [14]. Additionally, this design is considered appropriate for the type of objectives of this study to assess the material resource. Utilization practice and its challenges in WU. The research was designed to use mixed approach quantitative and qualitative techniques.

Target population

The population of this study was consisted both academic and supportive staff of Wollega University, Main Campus. Employees who are working in main campus and only the permanent and on-duty staff were considered for the study. The total numbers of population of academic staff are 679 and administrative supportive staffs are 973. Total population will be 1652.

Sample size determination

The research selects the samples from each stratum by stratified random sampling technique. The actual sample size for the study was determined using Watson Jeff [15] methods of sample size.

Sampling techniques

The sampling technique employed in this study is Random-sampling technique to select respondents of the study. From this stratified random sampling is used to select the target respondents. The rational for using the above sampling technique is, since the population does not constitute a homogeneous group, the population had been divided in to two groups (Academic and administrative support staff). The academic staff was stratified based on their respective colleges and Administrative supportive staff was stratified based on their units.

Source of data

The data was obtained from primary and secondary sources. The primary sources of this study were the users of material resources both administrative and academic staffs, and property administration staffs, store keepers, While the secondary sources were documents regarding material resource management and utilization practices.

Data collection instruments

In this research process, two instruments had been used. These were questionnaire and semi structured interview. The questionnaire was used to know the attitude of employees in the utilization of material resources. The interview was used to assess the questions, which need more explanations. Document analyses used to know deeply the experience of material resource utilization practice with regard to maintenance practice of resources and their management system, storage and disposal of it in Wollega University main campus.

Data analysis

The data had been summarized and analyzed using exploratory statistical methods. Moreover, information and opinion that were reported by respondents through close-ended questions questionnaires, structured interview and document analysis were considered in data

interpretation and analyzing by supplementing those data gained through questionnaires. The study used multivariate regression to analyze the effect of dependent variables stated by using the following regression [16].

Results and Discussions

Under these heading, the data collected through questionnaires, interview, and observation were presented and discussed after categorizing them according to their relationships and their relevance to the study.

Procurement process

Score value SDA (1), DA (2), N (3), A (4), SA (5) Source: survey data, 2016 As it is indicated in Table 1 item 1 above, majority of the respondents (67%) clarify that there is an existence of need assessment of material resources for purchase in Wollega University. Some of the respondents (28.3%) of them were denied that the existence of need assessment of material resource for purchase. And hence (4.8%) of the respondents were neither agreed nor disagreed regarding the question (Table 1).

Regarding the second item of Table 1 above, 68.9% of the respondents supported that there is a planning for purchase of material resource in their section. Some of the respondents, 24% of them denied the planning for purchase of material resource in their section. 7.2% of the respondents were neither agreed nor disagreed about the planning of material resource for purchase in their section.

Majority of the respondents (86.6% of them) regarding item 3 of Table 1 above where did not know the efficiency of the specification of material resource that requested for purchase in their section. 8.7% of the respondents support the efficiency of the specification of material resource that requested for purchase in their section. A little of them (4.8%) were responded as they have no any suggestion about the efficiency of the specification of material resource for purchase in their section.

Item 4 of Table 1 depicts that, 88.5% of the respondents justified that they did not support the selection of suppliers with regard to quickness and reliability of them. 6.7% of the respondents were support the selection of suppliers. 4.8% of them were neither support nor reject the selection of the suppliers.

Item	Response	Response rates	
		Frequency	Percentage
1.1 There is the Need assessment for material resources in your organization.	Strongly Disagree	25	12.0
	Disagree	34	16.3
	Neutral	10	4.8
	Agree	85	40.7
	Strongly Agree	55	26.3
	Total	209	100.0
1.2 There is Planning of purchasing material resources in your section.	Strongly Disagree	25	12.0
	Disagree	25	12.0
	Neutral	15	7.2
	Agree	85	40.7
	Strongly Agree	59	28.2
	Total	209	100.0
1.3 Efficient specification requesting for purchase material resource for your department is there.	Strongly Disagree	71	34.0
	Disagree	110	52.6
	Neutral	10	4.8
	Agree	16	7.7
	Strongly Agree	2	1.0
	Total	209	100.0
1.4 The suppliers selection with regard to Quick and reliable is there.	Strongly Disagree	65	31.1
	Disagree	120	57.4
	Neutral	10	4.8
	Agree	12	5.7
	Strongly Agree	2	1.0
	Total	209	100.0
1.5 Fast delivery of purchased material resources is there.	Strongly Disagree	75	35.9
	Disagree	125	59.8
	Neutral	6	2.9
	Agree	2	1.0
	Strongly Agree	1	.5
	Total	209	100.0
1.6 The assessment of post purchase (satisfaction check up) is done.	Strongly Disagree	60	28.7
	Disagree	110	52.6
	Neutral	20	9.6
	Agree	10	4.8
	Strongly Agree	9	4.3
	Total	209	100.0

Table 1: Procurement process.

As it is indicated above in Table 1, item 5, about 95.7% of the respondents assured that there is a delay in delivery of purchased material resources in the organization. About 2.9% of the respondents were neither support nor reject the question. 1.5% of the respondents were support the fast delivery of purchased materials in the institution.

Regarding the sixth item of Table 1 above 81.3% of the respondents were replied that there is no post purchase satisfaction check up there. 9.6% of the respondents were neither agreed nor disagreed about the question. 9.1% of the respondents were support the existence of post purchase satisfaction check up of purchased material resources.

Storage of material resources

Score value SDA (1), DA (2), N (3), A (4), SA (5) Source: survey data, 2016. According to Table 2 item 1 above majority of the respondents (68%) replied that materials were not identified and stored based on their items. Some of them (29.7%) were support that the storage of materials were identified based on their items. 2.4% of the respondents were neither agreed nor disagreed regarding the question (Table 2).

As indicated in Table 2 item number 2 above majority of the respondents (69.4%) replied that KAIZEN principles were not implemented in stores. Some of the respondents (22.5%) supported that stores were managed based on KAIZENs principles. The rest

respondents (8.1%) were refrained from telling whether there is KAIZENs principles implementation in stores or not.

Table 2 item number 3 shows that, concerning the sufficiency of permanent stores in the organization majority of respondents (91.4%) were denied. 5.8% of the respondents were supported the existence of sufficient permanent stores in Wollega University. 2.9% of the respondents replied that they did not know whether sufficient permanent stores were exist or not in the institution.

As indicated in Table 2 item number 4, majority of the respondents (94.7%) replied that sufficient material resources were not available in stores. 2.9% of the respondents neither agreed nor disagreed on the existence of sufficient material resources in stores. The rest respondents 2.4% of them were support the availability of sufficient material resource in stores.

Based on Table 2 item number 5, majority of the respondents (89.4%) replied as the materials are not distributed based on FIFO principles from the store. 7.2% of the respondents did not know whether materials were distributed based on FIFO principles or not. 3.3% of the respondents were supported that the distribution of material resources were done based on FIFO principles.

According to Table 2 item number 6, majority of the respondents

Item	Response	Response rates	
		Frequency	Percentage
2.1 Materials are identified and stored based on their items.	Strongly Disagree	90	43.1
	Disagree	52	24.9
	Neutral	5	2.4
	Agree	60	28.7
	Strongly Agree	2	1.0
	Total	209	100.0
2.2 Stores are managed based on KAIZEN principles.	Strongly Disagree	50	23.9
	Disagree	95	45.5
	Neutral	17	8.1
	Agree	45	21.5
	Strongly Agree	2	1.0
	Total	209	100.0
2.3 Sufficient permanent stores are built in the organization.	Strongly Disagree	76	36.4
	Disagree	115	55.0
	Neutral	6	2.9
	Agree	10	4.8
	Strongly Agree	2	1.0
	Total	209	100.0
2.4 Sufficient material resources were stored.	Strongly Disagree	68	32.5
	Disagree	130	62.2
	Neutral	6	2.9
	Agree	5	2.4
	Strongly Agree	0	0.0
	Total	209	100.0
2.5 Materials are distributed based on FIFO principles.	Strongly Disagree	82	39.2
	Disagree	105	50.2
	Neutral	15	7.2
	Agree	7	3.3
	Strongly Agree	0	0.0
	Total	209	100.0
2.6 Stores are secured enough.	Strongly Disagree	77	36.8
	Disagree	105	50.2
	Neutral	12	5.7
	Agree	10	4.8
	Strongly Agree	5	2.4
	Total	209	100.0

Table 2: Storage.

(87%) revealed that stores of material resources were not secured enough. 7.2% of the respondents were confident on the security of stores in the institutions. 5.7% of the respondents were neither agreed nor disagreed from responding the question.

Controlling mechanisms of material resources

Score value SDA (1), DA (2), N (3), A (4), SA (5). As indicated above in Table 3 item 1 majority of respondents (55%) replied that material resources in their office were registered in their section as well as centrally. Some of the respondents (41.2%) were denied that the registration of material resources in their office in their section as well as centrally. 3.8% of them were neither agreed nor disagreed of the question. According to Table 3 item 2 above majority of the respondents (58.4%) admitted that material resources in their office were annually audited. Some of them (36.4%) denied that the annual audit of material resources in their office. 5.3% of them were respond that they did not either there is annual audit of material resources or not [17] (Table 3).

Based on question item number 3 of Table 3 above, majority of the respondents (87.1%) of them were replied that there is no immediate report of any theft, loss and damage of material resources. 8.1% of them were assured that there is immediate report of any theft, loss and damage of material resource when it occurred. 4.8% of the respondents were neither agreed nor disagreed of the question.

Depending on item number 4 of Table 3 above, majority of the respondents (91.9%) replied that there was no follow up material resources done quarterly, semi annually and annually by property administration department. 5.3% of the respondents supported that there was Follow up of material resource is done quarterly, semi annually and annually by property administration department. 2.9% of the respondents were neither agreed nor disagreed of the question.

Maintenance of materials resources

Score value: SDA (1), DA (2), N (3), A (4), SA (5). As mentioned in Table 4 item 1 above, majority of the respondents replied that (86.1%) there was no identification of the level of damaged and depreciated materials by the maintenance exports. Some respondents (7.7%) supported that there was an identification of the level of damage and depreciation of each material. 6.2% of the respondents were refrained from telling any answer.

According to item number 2 of Table 4 above, majority of respondents (88%) were assured that there was no separated storage for damaged/depreciated materials.7.2% of the respondents were neither agreed nor disagreed with the question.4.3% of the respondents were supported with the availability of the separated storage damaged/depreciated materials [18].

Based on item number 3 of Table 4 above majority of the respondents (86.1) were replied that any detected or damaged materials were not immediately maintained.7.2% of the respondents were neither agreed nor disagreed with the question.6.7% of the respondents were admitted that any detected or damaged materials were immediately maintained.

As indicated in Table 4 item 4 above majorities of the respondents (87.5%) were replied that there adequate budget was not allocated for maintenance of material resources. 7.2% of the respondents were neither agreed nor disagreed with the question.5.3% of the respondents replied that there was adequate budget Allocated for maintenance.

As mentioned above in Table 4 item number 5, majority of the respondents (87.6%) were denied the use of qualified personnel for maintenance of material resources.7.2% of the respondents were quite from responding the question.5.3% of the respondents were replied that qualified personnel were used for maintenance of material resources.

Item	Response	Response rates	
		Frequency	Percentage
3.1 Registration of material resource in your section as well as centrally.	Strongly Disagree	70	33.5
	Disagree	16	7.7
	Neutral	8	3.8
	Agree	55	26.3
	Strongly Agree	60	28.7
	Total	209	100.0
3.2 The material resource in your office have audited annually.	Strongly Disagree	70	33.5
	Disagree	6	2.9
	Neutral	11	5.3
	Agree	75	35.9
	Strongly Agree	47	22.5
	Total	209	100.0
3.3 There is immediate report of any theft, loss and damage.	Strongly Disagree	70	33.5
	Disagree	112	53.6
	Neutral	10	4.8
	Agree	12	5.7
	Strongly Agree	5	2.4
	Total	209	100.0
3.4 Follow up of material resource is done quarterly, semi annually and annually by property administration department.	Strongly Disagree	75	35.9
	Disagree	117	56.0
	Neutral	6	2.9
	Agree	10	4.8
	Strongly Agree	1	.5
	Total	209	100.0

Table 3: Controlling mechanisms.

Item	Response	Response rates	
		Frequency	Percentage
4.1 Identify the level of damage and depreciation of each material.	Strongly Disagree	80	38.3
	Disagree	100	47.8
	Neutral	13	6.2
	Agree	11	5.3
	Strongly Agree	5	2.4
	Total	209	100.0
4.2 Separated storage for damaged/depreciated materials.	Strongly Disagree	70	33.5
	Disagree	115	55.0
	Neutral	15	7.2
	Agree	6	2.9
	Strongly Agree	3	1.4
	Total	209	100.0
4.3 Any detected or damaged materials are immediately maintained	Strongly Disagree	70	33.5
	Disagree	110	52.6
	Neutral	15	7.2
	Agree	14	6.7
	Total	209	100.0
4.4 Allocate adequate budget for maintenance.	Strongly Disagree	83	39.7
	Disagree	100	47.8
	Neutral	15	7.2
	Agree	10	4.8
	Strongly Agree	1	.5
	Total	209	100.0
4.5 Use of qualified personnel for maintenance.	Strongly Disagree	65	31.1
	Disagree	118	56.5
	Neutral	15	7.2
	Agree	5	2.4
	Strongly Agree	6	2.9
	Total	209	100.0
4.6 Redistribution of the maintained materials.	Strongly Disagree	60	28.7
	Disagree	120	57.4
	Neutral	20	9.6
	Agree	8	3.8
	Strongly Agree	1	.5
	Total	209	100.0

Table 4: Maintenance activities.

According to Table 4 item number 6 above, majorities of the respondents (86.1%) were replied that there was no redistribution of maintained material resources. Some of them (9.6%) of them were neither agreed nor disagreed the redistribution of maintained material resources.4.3% of the respondents were replied that there was a redistribution of maintained material resources.

Disposal of obsolete material resources

Score value SDA (1), DA (2), N (3), A (4), SA (5). As it is indicated above in Table 5 item 1, majority of the respondents (91.4%) were replied that there was no regular and efficient Identification of Obsolete material resources. Some of them (4.8%) were neither agreed nor disagreed of the question. The rest of them (3.8%) were supported the existence of regular and efficient Identification of Obsolete material resources.

As mentioned in Table 5 item 2 above, majority of the respondents (76.5%) replied that there was no disposal committee established for totally damaged material resources.20.6% of the respondents were supported the establishment of disposal committee for totally damaged material resources.2.9% of the respondents were neither agreed nor disagreed the question.

According to Table 5 item 3 above, majority of the respondents

(90.4%) were not support the availability of continues follow up and motivation of all units to immediately report materials to be disposed. 4.8% of the respondents were admitted the availability of continues follow up and motivation of all units to immediately report materials to be disposed.4.8% of the respondents were neither agreed nor disagreed the availability of continues follow up and motivation of all units to immediately report materials to be disposed.

Based on Table 5 item number 4 above, majority of the respondents (91.9%) were replied that there was no different and appropriate disposal for different obsolete material resources. Some of them (4.8%) were replied that there was different and appropriate disposal for different obsolete material resources.3.3% of the respondents neither agreed nor disagreed the existence of different and appropriate disposal for different obsolete material resources.

Material resource utilization practice

Score value SDA (1), DA (2), N (3), A (4), SA (5). According to Table 6 item number 1 above, majority of the respondents (88.5%) of them replied that the resources in their office were not always functional. Some of them 8.6% were neither agreed nor disagreed the functionality of material resources in their office. 2.9% of them were supported that material resource in their office was always functional.

Item	Response	Response rates	
		Frequency	Percentage
5.1 Regular and efficient Identification of Obsolete materials.	Strongly Disagree	95	45.5
	Disagree	96	45.9
	Neutral	10	4.8
	Agree	5	2.4
	Strongly Agree	3	1.4
	Total	209	100.0
5.2 There is disposal committee established for totally damaged material.	Strongly Disagree	50	23.9
	Disagree	110	52.6
	Neutral	6	2.9
	Agree	37	17.7
	Strongly Agree	6	2.9
	Total	209	100.0
5.3 Continues follow up and motivation of all units to immediately report materials to be disposed.	Strongly Disagree	75	35.9
	Disagree	114	54.5
	Neutral	10	4.8
	Agree	5	2.4
	Strongly Agree	5	2.4
	Total	209	100.0
5.4 Different and appropriate disposal for different obsolete materials.	Strongly Disagree	80	38.3
	Disagree	112	53.6
	Neutral	7	3.3
	Agree	5	2.4
	Strongly Agree	5	2.4
	Total	209	100.0

Table 5: Disposal of obsolete resources.

Based on the Table 6 item number 2 above, majority of the respondents (84.7%) were supported that the specification of material resources in their office were not as per they requested. 8.1% of the respondents were neither agreed nor disagreed of the question. 7.2% of the respondents were supported that the material resource in their office were as per their specification.

As indicated above in Table 6 item number 3, majority of the respondents (83.2%) were denied that the quality of purchased resources were not as they requested.9.6% of the respondents were neither agreed nor disagreed the quality of the material resources in their office was as they requested.7.2% of the respondents were supported that the quality of the purchased resource was as requested. As mentioned above in Table 6 item number 4, majority of the respondents (88%) were replied that even if there was damage of materials fast maintenance and replacement was not there [19]. Some of them 7.2% of them were neither agreed nor disagreed with the question. 4.8% of the respondents were supported that even if there was damage of materials fast maintenance and replacement was there.

From Table 4, item 6 number 5 above, majority of the respondents (84.7%) were replied that they had not been trained regarding the utilization of resources. 7.7% of the respondents were neither agreed nor disagreed with the question. 7.7% of the respondents were supported that they had been trained regarding the utilization of resources.

According to Table 6 item number 6 above, majorities of the respondents (79%) were replied that they were not familiar with the operation of their office materials. 12.9% of the respondents were neither agreed nor disagreed with the question. 8.2% were replied that they were familiar with the operation of materials in their office.

Regression analysis on the material resource utilization practice and its challenges

Predictors: (Constant), Disposal, Procurement, Maintenance,

Controlling mechanisms, Storage. The model summary revealed that the degree of association between Material resource utilization and its challenges indicated by R which is 0.969 indicating high relationship. R Square value of 0.939 and adjusted R square of 0.938 shows that 93.9% of the relationship in Material resource utilization explained by the five explanatory variables (Table 7).

According to the model above the independent variables have high effect on material resource utilization practice. All independent variables procurement, storage, controlling mechanisms, maintenance activities and disposal have 93.8% effect on material resource utilization practice (Table 8).

The unstandardized regression coefficients between independent variables and the dependent variable are explained in the form of the regression equation. Predicted Material resource utilization= $-0.139 + 0.148$ (Procurement) + 0.444 (Storage) + -0.234 (Controlling mechanisms) + 0.727 (Maintenance) + 0.016 (Disposal).

From the five independent variables, maintenance, storage, controlling mechanisms and procurement has a significant effect on material resource utilization practice. The effect of explanatory variables on material resource utilization practice has been presented in their order of importance along with beta value [20].

Maintenance activity with a Beta value of 0.676 with the significance level of (0.00) is the best predictor of Material resource utilization practice which is followed by storage with a Beta value of 0.419 with the significance level of (0.00) and Controlling mechanisms carry a negative Beta weight, which may explain as an inverse relationship has significance level of (0.00). Procurement process with a beta value of 0.159 has a significance level of (0.012) which is significant with material resource utilization. On the other hand disposal of obsolete material with a Beta value of 0.016 and significance level (0.819) is the poorest predictor and has no significance with material resource

Item	Response	Response rates	
		Frequency	Percentage
6.1 All resources in our office are always functional.	Strongly Disagree	60	28.7
	Disagree	125	59.8
	Neutral	18	8.6
	Agree	5	2.4
	Strongly Agree	1	.5
	Total	209	100.0
6.2 Your office materials are all as per your specification.	Strongly Disagree	60	28.7
	Disagree	117	56.0
	Neutral	17	8.1
	Agree	10	4.8
	Strongly Agree	5	2.4
	Total	209	100.0
6.3 The quality of the purchased resource is as requested.	Strongly Disagree	69	33.0
	Disagree	105	50.2
	Neutral	20	9.6
	Agree	10	4.8
	Strongly Agree	5	2.4
	Total	209	100.0
6.4 Even if there is damage of materials fast maintenance and replacement is there.	Strongly Disagree	69	33.0
	Disagree	115	55.0
	Neutral	15	7.2
	Agree	5	2.4
	Strongly Agree	5	2.4
	Total	209	100.0
6.5 You have been trained regarding the utilization of resources.	Strongly Disagree	65	31.1
	Disagree	112	53.6
	Neutral	16	7.7
	Agree	11	5.3
	Strongly Agree	5	2.4
	Total	209	100.0
6.6 Office materials are familiar for operation.	Strongly Disagree	70	33.5
	Disagree	95	45.5
	Neutral	27	12.9
	Agree	16	7.7
	Strongly Agree	1	.5
	Total	209	100.0

Table 6: Material resource utilization practice.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.969 ^a	0.939	0.938	0.223

Table 7: Regression analysis on the material resource utilization practice and its challenges.

utilization practice when it is compared with the other explanatory variables under study.

Discussion on interview questions

Here under summarized interview questions that needs further explanation on materials management. According to the interview undertaken with the property administration head on (April, 20/2016), the controlling mandate that used to control material resources in the institution was primarily given to the departments and for the users of material resources. So that they are responsible to control the resources. Centrally the controlling system of the material resources was under taken through inventory twice in a year. On the other hand, the respondents justified that there is no sufficient labor for maintenance of material resources. There is separate maintenance center in the institution. There was a good management of material resources

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	- 0.139	0.049	-	0.005
Procurement	0.148	0.058	0.159	0.012
Storage	0.444	0.092	0.419	0.000
Controlling mechanisms	-0.234	0.053	-0.296	0.000
Maintenance	0.727	0.063	0.676	0.000
Disposal	0.016	0.068	0.016	0.819

Table 8: Dependent variable: Material resource utilization practice.

documentation manually. However, there was no automated software that used to record materials to manage. Regarding the disposal of obsolete materials, centrally disposal committee was established but not effectively functional. Storages of materials were identified according to the difference of items. However, majority of stores were temporary.

Conclusions and Recommendation

Based on the analysis and interpretation of the data, it is possible to come up with the following major findings in relation to the basic research questions:

1. The need assessment for purchasing material resources by procurement department and planning to purchase material resources by the users departments are there. But, identifying the specification of materials requested for purchase is too difficult. Additionally supplier's selection with regard to fast delivery and reliability is poor and there is no post purchase satisfaction check up is there. So that, the procurement process has a significant effect on material resource utilization practice.

2. Storages of material resources were not identified and not arranged based on KAIZEN principles. They are not sufficient. On the other way, some materials in storages were not distributed based on their sequence of entrance in to the stores. Majority of needed resources are not stored in storages. Storage of material resources was not sufficient.

3. Registration of material resources and annual audit of material resources were implemented in the institution. But there was no immediate report of any theft, loss, and damage of material resources and sustainable follow up were not there. Controlling mechanisms has a significant effect on material resource utilization.

4. Identifying the level of damaged and depreciated materials was poor. No sufficient professionals of maintenance of material resources are there. There is no separated storage for damaged/depreciated materials. Because of the above-mentioned reasons, no immediate maintenance activity is there. Finally, no redistribution maintained material resources. Therefore, that maintenance activities of material resources has a significant effect on material resource utilization practice.

5. There was no regular identification of obsolete material resources. The follow up and motivation of all units to immediately report those materials to be disposed was poor. Disposal committee was not actively functioning. There was no appropriate disposal of obsolete material resources.

6. The data obtained from the interviews made with the head property administration shows that lack of maintenance of material resource is the most major factors that affect materials resource utilization in Wollega University.

7. Some of the specification of material resources was not as per the request the users. The quality of purchased resources is not as per requested. There was poor maintenance activity and no replacement of damaged material resources. Majority of the material resources in office were not functional. Some operators those who are working on huge machines do not have sufficient training regarding the utilization of materials resources. Among the major finding of the study, the following challenges were identified. Poor Maintenance activities due to the lack of professionals. In adequate storage ,There is tight controlling mechanisms and Ineffective procurement process

Based on the findings of the study it is possible to derive the following conclusions.

1. There are need assessment to undertake purchase and planning is also there to purchase but there is problem of identifying the specification of material resources to be purchased. Reliable and fast selection of suppliers is poor. There is no post purchase check up of materials resources. The procurement process in Wollega University is not effective enough like in many public universities in the country.

2. Storages of materials resources are inadequate and insufficient. There is no permanent and sufficient storage. A number of temporary storages are there. Storage of needed material resources are

there. For instance, there is a shortage of personal computers. Stores are not managed well based on KAIZEN implementation.

3. The controlling mechanisms of material resources are in efficient. There is a tight controlling mechanism of material resources. This has a negative impact on material resource utilization.

4. It is concluded that damaged material resources did not immediately maintained. No sufficient and effective maintenance professionals. For instance, huge refrigerators that were purchased for the cafeteria service of the students and generators were not functional because of the lack of maintenance for more than eight months. There is no separated room for maintenance activities. Because of this, damaged resources were stored everywhere. Since there is no effective maintenance activity, no system established for redistribution of maintained resources. Maintenance activities of material resources are not efficient.

5. Disposal of obsolete material resource is not effective. There is separate disposal committee is there to undertake the disposal. No identification of obsolete resources is there. No follow up and motivation of departments is there to report damaged/depreciated resources to dispose.

6. The model shows that there exists significant relationship between procurement, storage, controlling mechanisms, maintenance, and material resource utilization practice. From those maintenance activities, storage of materials and controlling mechanism are the best predictors and has a significant effect on material resource utilization. Procurement process is also significant for material resource utilization. Even though the disposal of obsolete material resource is not effective, it has invisible effect on material resource utilization practice. It is insignificant for material utilization.

Recommendation

The study has shown the level of material resource utilization practice and its challenges of Wollega University. Up on this the following recommendations are forwarded:

1. The procurement process was not effective. Knowingly identifying the specification of material resources and could be purchased based on the specification. It is better to lead the procurement activities through pre market investigation to know about suppliers. Post purchase check up could be used to evaluate and take appropriate actions.

2. Storage was one of the issues, which were inadequate and insufficient. On way of addressing, this issue is creating need-based storage and building permanent stores could be important. It is better to manage stores using KAIZEN implementation.

3. The controlling mechanisms on material resource utilization are tight. It has a negative impact on material resource utilization practice. Therefore, it is better to control the resources smoothly by encouraging and motivating the users to feel them responsibility.

The result of the study revealed that there was poor maintenance activity. Because of this, different material resources were not functional. The concerned body could have to give attention and allocate adequate beget for maintenance and have to hire sufficient and effective professionals. It is better to organize separated maintenance center.

References

1. Quayle M (2001) A study of supply chain management practice in UK industrial SMEs. *Supply Chain Management. An International Journal* 8: 79-86.

2. Raymond A (2003) *Basic Marketing Management*. MC Graw Hill. New York.
3. Datta (2004) *Materials management: procedures, text and cases*. Second edition, New Delhi.
4. Keitany JP, Daniel MW, Salome R (2014) Assessment of the role of materials management on organizational performance: a case of new Kenya cooperative creameries limited, Eldoret Kenya. *European Journal of Material Sciences* 1: 1-10.
5. MacDonald, Evans (2009) *Stores Management and Related Operation*. (2nd edn) MacDonald.
6. UNESCO (1984) *The Educational Administrator and Instructional Materials*. IRL Imprimeries. Paris.
7. James MU (2012) Materials Management for business success: the case of the Keitany. *JEMS* 1: 50-56.
8. Defaru, Mulatu (2014) The practice of educational materials management and utilization in secondary school of Jimma town. Jimma University.
9. Edoze ES (2010) Materials management and organizational effectiveness: A Study of Selected Telecommunication Firms in Delta State.
10. Uloma O (2011) Challenges of effective management and utilization of teaching resource in Nigerian schools. *Journal of Arts, Management, Education, Law and Social Science* 1: 118-127.
11. Annual Budget Plan (2015) Wollega University. Ethiopia.
12. Gashaw Teferi (2014) An assessment of training materials management practice in selected public technical vocational education and training, colleges of southern zone of Tigray, thesis, Addis Ababa: Addis Abeba University.
13. Annual report (2015) Annual internal audit report of Wollega University.
14. Kothari CR (2004) *Research Methodology: Methods and techniques*. New age international. New Delhi.
15. Jeff W (2001) How to determine sample size: tip sheet#60. University park.
16. Anderson (2011) *Statistics for Business and Economics* (11th edn) Australia: Joe Sabatino.
17. Annual internal Audit report (2015) Wollega University. Ethiopia.
18. Sadiwal CM (2007) *Materials and financial management*. New Age international. New Delhi.
19. Compton K, Jessop (1995) *Dictionary of purchasing & supply*. Easton. UK.
20. Nigerian Bottling company PLC. Per state cooperative extension.

Citation: Tezera D, Yadesa D (2017) Assessment of Material Resource Utilization Practices and Its Challenges: The Case of Wollega University. *J Hotel Bus Manage* 6: 155. doi: [10.4172/2169-0286.1000155](https://doi.org/10.4172/2169-0286.1000155)

OMICS International: Open Access Publication Benefits & Features

Unique features:

- Increased global visibility of articles through worldwide distribution and indexing
- Showcasing recent research output in a timely and updated manner
- Special issues on the current trends of scientific research

Special features:

- 700+ Open Access Journals
- 50,000+ editorial team
- Rapid review process
- Quality and quick editorial, review and publication processing
- Indexing at major indexing services
- Sharing Option: Social Networking Enabled
- Authors, Reviewers and Editors rewarded with online Scientific Credits
- Better discount for your subsequent articles

Submit your manuscript at: <http://www.omicsonline.org/submission>