**Calculating The Unit Cost Of Education Using Activity Based Costing (ABC) Model For Vocational High School In Yogyakarta Special Province**

Sri Sumardiningsih

*Fakultas Ekonomi, Universitas Negeri Yogyakarta*

Moch Alip

*Fakultas Teknik, Universitas Negeri Yogyakarta*

Aula Ahmad Hafidh Saiful Fikri

*Fakultas Ekonomi, Universitas Negeri Yogyakarta*

ABSTRACT

After successfully in the compulsory education program of nine years, the government started to continue a mandatory program to study the level of secondary education, high school, vocational and the equivalent in 2013. A mandatory program of 12 years bring all population of secondary education is going to have access to get secondary education. Standard financing in Permen no 9 years 2009 until now has never adapted, it is very important to financing these program. Especially with the implementation of the new curriculum 2013 activities education also changed, so standard the cost is needed to reformulated with a financing model based on the activity. The purpose in this research is to reach are to know the cost of a unit of vocational education in the yogyakarta special province which factual issued by of each unit education (vocational). The ultimate goal of this research is it sets the amount of the cost of a unit of conforming to standards of to support the establishment of the quality of education in vocational high schools. The calculation of the unit cost in SMK done on the model of activity based costing. activity based costing (ABC) helps reduce the distortions caused by the allocation of the cost of previous traditional. Vocational high school or often called with the term SMK is vocational school that program have different skill or majors varies in the whole country, because SMK developed according to potential or available resources in their regions. Each school having the nature of each of which affects the profile of funding.

*Key Words:* Activity Based Costing, SMK, cost of education

**INTRODUCTION**

After successfully of compulsory education 9 years, the government started in 2013 continue compulsory into the education of high school, vocational school (SMK ) and equivalent, so as to be compulsory twelve years (Kemendikbud, 2012). A 12 years old, all the age of secondary education will have access to secondary education (high school, vocational schools, and equivalent). Financing standards in Permen no 9 years 2009 until now has never been adjusted, hence this study is very important in order to prepare the funding for reasonable 12 years program. Let alone by the enactment of new curriculum 2013 activities also changed their education cost, so that standards need to be formulated with the model based on financing activities (*activity based costing*). The government needs immediately plan tuition fees for high school and equivalent resources supply secondary education a unit of education and educational assistance for learners from poor bringing implication cost. All the medical continued should calculated that it is estimated fund need to run reasonable 12 years programs. To all of us are needed detailed information about the cost of a unit of secondary education good for the units (education), middle school and equivalent to allow students from poor go to school in secondary education.

To plan cost of education, the state requires factual information relating to the cost of education each school and every student called for a unit of education (unit cost). The cost of analysis is extremely important for education planner. This is because analysing the cost of the unit is the efficient use of fund sources at school, advantage of investment education and equity spending the community and the government to education. In addition, it can also are healthy how alternative policies in an effort to improve or increase in education system. Gasskov (2000) suggested that in general vocational education funding mechanism must reflect the principle that education or training is a service and participants education or the training must carry the cost of the education system. The skills expected education or vocational training is to produce personal benefits (private return) and socially (social return) positive. Personal benefits can be seen from the impact of (outcome) the school graduates after getting work and income larger than the less educated or training. While social benefits of education or vocational training will be felt by other members of the community relating to the acquisition of knowledge and skill graduates in society.

In line with this, the study is done to count and also aware of the cost of a unit of vocational education in technological school. According to Gill (2008) the average unit cost of vocational school (SMK) is 40 % higher than public secondary school. Based on the data, average operating costs of non personnel vocational school (the course technical expertise building) is larger 49,10%. (Permendiknas no. 69 tahun 2009). From both statement appears that the financing of vocational education need large fund. Hence the use of education funds in SMK technology need planned carefully and systematic based on learning activities in accordance with the demand the formation of student ideal competency and quality. Funding the education system in SMK especially in the fields of expertise technology and industry needs to be done to get effective and efficient funding. Analysis of the costs education in this report is written with micro approach that bases bill calculation the allocation expenditureeach component of education used by students. Variable in this research is focused on cost components a unit of education covered the cost investment (personnel investment and non personnel), operational costs (personnel and nonpersonalia), and the cost of personnel tuition.

In PP No. 19 Tahun 2005 on national education standards explained that the school planning should be based on the minimum service standard (SPM) and national education standards (SNP) are that development access for the quality improvement of secondary education met the target expected so besides the cost of a unit of in general, researchers also tried to account and analyze the cost of a unit of education based on these minimum service standard and national education standards. Of analysis of the costs with the activity based costing is expected to cost of can be included the cost of vocational education in the province of DIY. Research on financing always important because relating to the obligation of community for education to his family and obligations the government budget for education. The regarding the cost of education is expected to the government has a criterion (under) to determine assistance in the education in that next government period role as the education according to the constitution 1945 can be done and compulsory can be increased to 12 years.

**LITERATURE STUDY**

A guide to the calculation of operational costs a unit of education (BOSP) and the formulation of policy in 2008 explained that the cost of education measured as a charge a unit of cost of education per year per student. According to Asrori Ardiansyah (2011), the cost of a unit of per student is size to describing how money allocated to school as effective for the benefit of students in seek the education. By as the costs a unit of is obtained by taking into account the number of students in each school, so size the cost of a unit of considered substandard or proper if it is compared between schools that with each other. Unit cost education is the average cost issued to implement cost per student per year.

A unit of the cost of this is a function of the size of the expenditure as well as many school school students. Thus, a unit of these expenses can be known to the path of dividing the entire amount of expenditure school every year by the number of students school in the year concerned. Andreas Senjaya (2011) stated that in the basic concept of education financing there are two important things that need to be examined or analyzed, namely the cost of education overall total cost and unit costs per student. Nanang Fattah (2004) said the cost of a unit at the school level is aggregat cost of education the school level either sourced from the government, parents and the society to effectuate education in one year lessons. Unit cost per student is a measure which describes how money allocated schools effectively to the interests of pupils in educated. Because of the cost of education obtained by taking into account the number of students on each unit of education, so the size of the cost of considered standards and comparable between a single education each other. Analyses of a unit of the cost of education in relation to other influence factor can be done by using a unit of education as a unit analysis. By analyzing the cost, allowing to know efficiency in the use sources of units education, advantage of investment education, and equity public expenditure, the government to education.

According to Akhmad Sudrajat (2008), accumulated or a sum total cost of the education system divided the number of students be known the cost of a unit of (unit cost). The unit cost meant here is units cost per student. The cost per student having four meaning. First, the cost per student seen from the recurring cost. Second, the cost per student seen from the capital cost. Third, the cost per student seen from accumulated or the sum of recurring cost with capital cost. Fourth, the cost per student seen from recurring cost, capital cost, and all cost directly by students need for education. Thus, a unit of per student who studied full of time student not difficult to calculated. The calculation done by adding all shopping or money spent by isntitution (total institution expenditures) in the implementation of the education duties divided by the number of regular students (full time student) in certain years, including they provided to his needed in own operating education. Abbas Ghozali (2012) said that when the cost of education per unit education charged per years, it all costs procurement resources education that benefits more than one the year put together years by means of divide by year use the resources. When the cost of education per unit education per year is divided by The number of students so called the cost of education per unit education per year or called cost per unit education students.

Vocational education is “learning how to work”, vocational education has been an effort to improve technical competence and to raise an individual’s position in society through mastering his environment with technology. Additionally, vocational education is geared to the needs of the job market and thus is often seen as contribution to national economic strength. While Gosskov (2000) define vocational as the mandate of vocational school and training manifold. The vocational education and training system should deliver both foundation and specialist skills to private individuals, enabling them to find employment or launch their own business, to work productively and adapt to different technologies, tasks and conditions.

**Activity Based Costing**

Activity based costing system is a accounting system a focused on activities performed to produce product/service. Activity based costing provide information regarding activities and resources needed to execute the activities. Activity is any an incident or transaction that is trigger a fee (cost the driver, act as the causes of in the expenditure a charge in organization). In the ABC system, the cost of find out to activity and then to a product. ABC system assumes that which is consume resources is not products, but their activities(Mulyadi, 2006).

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Sumber : Hansen dan Maryanne, 2005

Image 1 ABCs Concept

**METHODOLOGY**

The research is empirical policy by a quantitative approach through survey to analyze the cost of vocational education technology in Yogyakarta. This assessment uses the descriptive analytic. Description is the fact such as the school yard and surroundings. Description of schools and the environment could also seen as approach of multiple case studies. Both that point of view used in the outline in this assessment. While a tool analysis developed using the policy study, conceptual study and study of empirical.

***DEFINE***

***DESIGN***

***DEVELOP***

***DISSEMINATE***

Analyze the theory about *activity based ccosting* (ABC) model and data RKAS in SMK

Design Format of *Activity Based Costing* Model

Develop ABC model to calculate *Unit Cost*

Model Implementation

Expert Review

Model Revision

Revise

Analysis

Try out

Revise

Master Model

Diagram 1. Stage of Research

The population of the research is all vocational school (SMK) technology in Yogyakarta Special Region. Research who uses the survey usually the determination of sample clusters stratified purposive sampling, for this research consider of school status (standard, SSN, RSBI) both private and public. As for the sample determined by each districts about three SMK. In this research will use two types of data on, namely primary and secondary data. Data collection method used is: the questionnaire, documentation, and focus group discussion (FGD). FGD will be conducted in each district by involving elements: the education office, the principal school and the school committee by the total number of FGD participants about 12 people.

**RESULT**

**Designing Activity Based Costing Model**

According to Marx model be defined as a procedure that is worn as a reference to continue empirical research who discusses an issue. In this research there are two ABC models developed for the calculation of unit cost of education in SMK. Of two models developed in this research phase years to be tried out in a limited manner in 9 SMK on a scale broad. With CIMOSA model (*Computer Integrated Manufacturing for Open System Architecture*) business process divide by 3 levels, as follow:

Table 1 Three Activity Levels in SMK

|  |  |  |
| --- | --- | --- |
| Scope | Description | Explaining |
| *Managerial Process* | Pertaining to implemented activities the management (POAC). | 1. the determination of vision the mission and the purpose of school
2. the preparation of strategy
3. monitoring and evaluation (MONEV)
 |
| *Core Process* | Pertaining to the main activity of which is of learning and teaching and student | 1. identified the needs and product development
2. transforming and meeting the needs of products
3. the process of its marketing
4. the additional process
 |
| *Support Process* | Pertaining to the activity of which is of supporting the main activity | 1. HR developing process
2. procurement processes infrastructure
3. the administrative process and financial
4. maintenance processes
 |

1. Identified Cost Object, Direct Labor Cost, Direct Material Cost, and Overhead Cost

Table 2 Cost Object, Direct Labor Cost, Direct Material Cost, and Overhead Cost

|  |  |  |
| --- | --- | --- |
| Scope | Description | Explaining  |
| *Cost Object* | The accumulated costs of the activities | Teacher  |
| *Direct Labor Cost* | Personnel who were directly involved in education. | Teacher and staff |
| *Direct Material Cost* | The cost of direct used consumed in education  | Supplier and tools |
|  *Overhead Cost* | The cost of indirect raw materials, indirect labor costs, and the other indirect cost. | The expense of maintaining infrastructure, the slight improvement infrastructure, and other costs that cannot be traced directly the effects on output |

1. Identification Expense Category, Cost Driver, and Cost Component

Tabel 3 Expense Category, Cost Driver, and Cost Component

|  |  |  |
| --- | --- | --- |
| Scope | Description | Explaining |
| *Expense Category* | That is spending for finance business activities vocational school that is ..Consists of fixed cost and variable cost  | Routine material: expenditure on medical supplies, subscriptions power services and other. Expenditure material development: provision of materials teaching, hr development, task of procuring practice on each package expertise and others |
| *Cost Driver* | Factors that cause change the cost of activities | The number of students , the total number of teachers, the frequency of activities, the frequency of maintenance and frequency of improvement  |
| *Cost Behaviour* | Namely pattern absorption cost influenced by the types of cost driver | Fixed cost, for example incentives, subscriptions resources services and others of variable cost for example medical supplies, lab work, stationery, the multiplication of examination questions and others |
| *Cost Component* | the components budget / fees absorbed by activities | Honorarium / incentives for teachers and staff , the test, the participants new students, basic training leadership, stationery and schools, subscriptions resources and services, workshop for curriculum and others |
| *Activity Centre* | a unit of entity organization by which the activity held | Each school |

1. The formation of ABC model to be applied in counting unit cost each expertise package

Based on a number of stages have been identified and were analysed can be described that activities has been described in the definition of routine expenditure and development expenditure depicted in the 3 levels of activity described in each cost drivers that has been set , can be described model encumbering activities the objects to cost.

*Manajerial Activities*

*Core Activities*

*Support Activities*

SMK

*Cost*

*Component*

*Cost*

*Driver*

*ACTIVITIESsS*

*EXPENDITURE*

*COST OBJECT*

*ABC Costing*

*Activity Centre*

*ABC Costing*

From observation and data collection obtained, the identification of expense category, cost driver, and cost component in table 4 as follow :

Tabel 4. *Expense Category, Cost Driver*, dan *Cost Component*

|  |  |  |
| --- | --- | --- |
| Scope | Description  | Explaining |
| *Expense Category* | Spending for finance business activities vocational school | The routine: shopping medical supplies, subscription services and other resources Spending development procurement material: material, hr development, equipment practice on every package expertise and others |
| *Cost Driver* | The cause change the cost of activity | The number of students, the number of teachers, the frequency of activities, the frequency of maintenance, and frequency improvement of facilities. |
| *Cost Behaviour* | The absorption of costs pattern that influenced by the type of cost driver .Consists of the cost of fixed and variable cost | Fixed cost, for example contract incentives, subscriptions power services and others variable cost. For example medical supplies lab work, stationery, doubling test and others |
| *Cost Component* | Components budget / fees absorbed by activities | Honorarium / incentives, the test, the participants new students, basic training leadership, stationery and schools , subscriptions resources and services , workshop for curriculum and others |
| *Activity Centre* | That is a unit of entity organization by which lasted activity | Certain SMK |

**CONCLUSION**

This research has developed two models of unit cost of the calculation of education in SMK in Yyogyakarta Special Province. From the results of the evaluation of experts on average for all the aspects regarded as two models developed in the category of very good and useful for implemented. In order to apply two models the calculation of unit cost with activity based costing, already produced peripherals, namely two a template to compute unit cost.

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