

The Ministry of Education of Azerbaijan Republic

**Calculation cost of service for education
Companies**

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Abstract

In this dissertation, I will give information about various methods of calculating cost. It includes Job order costing, ABC costing and process cost system. Then, I will show the best method of how applying all this on a company by one real example.

Firstly, I will give information about what cost is and why we need it. As we know there are different ways of how calculate the costs. Job order costing, ABC costing and process cost system, we will get detailed information about each of them. Later, we will talk about the possibility of finding each method to the service facilities. We'll look at each of these issues and compare which one is better. We will talk about calculation cost of service.

We'll discuss special sides of calculating process for service and special sides of calculation process for education. Then, we will discuss these calculation methods:

1. Job order costing method for education
2. Process costing for education

Then, we'll look at the new trends in order to find out which of the different versions written below is better:

1. New trends and perspectives for education
2. Apply to different services for education centers
3. ABC as a new approach for calculating process

At the end, we will calculate the costs of one company and try to make differences between its cost methods and check all of these, then try to calculate costs in a more effective way. At the end, we will compare appeared results.

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Introduction

Firstly, we'll talk about different calculation methods, then we will deal with practical issues on each one, and then we will check the cost of a company over the case and check how efficiently we need to calculate.

Health Resource Groups version 4 provides the current structure for reference costs. The current reference cost methodology requires providers to deduct their Multi-Professional Education and Training (MPET) income before they submit their costs. The DH Payment by Results (PbR) team bases the annual service tariffs on the average costs submitted. Therefore, the tariff doesn't cover education and training which is separately funded through the MPET budget.

It is widely believed that the current methodology (of netting off income rather than costs) leads to cross-subsidisation between service and education and training income. The level of cross-subsidisation is likely to vary between providers with those with the highest cross-subsidisation, and higher MPET incomes relative to activity, being most impacted by the introduction of tariffs.

In order to address this cross-subsidisation, and to minimise the impact of the introduction of education and training tariffs, it is proposed that the reference cost methodology be amended to identify the true cost of delivering clinical placements and service.

Theoretical base of calculation cost of service

Special sides of calculation process for service

I decided to write about calculating cost of service for Education Companies, because we have Education Companies with my partners and there are so many Education Companies that we need define which method is the best for calculation. So, firstly we have to know what cost is, what service is, what education companies are and which methods we have to use for calculation. And at the end we can find the best method.

Firstly about cost, what is cost and why we have needed to know about cost and calculation it. Direct costs and indirect costs, fixed costs and variable costs, also other costs classifications responsibility centers and cost units. Cost is the cash or as a chois cash-equivalent value sacrificed for property and services that is sometimes expected to bring a present or future profit to an organization. We frequently say cash equivalent because non-cash resources are able to be exchanged for the wanted goods or services. So,for instance, equipment may merchandise for materials which used mostly in production. Cost is able to be consider as a dollar quota of the resources which used to achieve a gain which is given. Minimizing the cost that needed to achieve the benefit intend that a firm is changed in more efficient one. However, costs have to managed strategically. For instance, managers should have an objective of providing the identical (or greater) clients value for a lower price than their competitors. So, the strategic situation the firm has is increased, and the competitive advantage created.

Managers should also understand a meaning of opportunity of cost . Opportunity cost means the benefit given up either sacrificed when alternatives are chosen over others. For example, the firm can invest \$100,000 in inventory during a year in reverse investing the capital in the productive investment that would produce a 12 percent rated

return. The opportunity cost that the capital tied up into inventory is \$12,000 (0.12 \$100,000) also is part of the price of carrying the contributory.

Costs are incurred to manufacture future benefits. In the profit-making firm, future profits commonly mean revenues. As prices are used up in a production of revenues, costs are said to expire. Ceased costs are called expenditures. In each span, known expenses are deducted out of revenues in the income report to determine the period's benefit. In order to remain in business, the incomes of the companies must constantly exceed expenditures; in addition, the income received must be great enough to gratify the owners of the organization. Therefore, the cost and price are related to the fact that the price must exceed the cost in order to obtain enough income. Moreover, decreasing prices grow customer value by lowering clients sacrifice, and the capability to lower prices is related to the ability toward to lower costs. So, managers need to be aware of the cost and trends in it. Usually, however, knowing cost really means knowing what something or some object costs. Assigning costs to determine the cost of this object is therefore critical in providing this information to managers. Sometimes, however, knowledge of value really means knowing what something or some object is worth. Therefore, assigning costs to define the value of this object is essential to providing that important information to the managers. The management accounting systems are structured to calculate and allocate costs for entities, named cost objects. The cost object is any elements, such as commodity, client, department, project, activity etc., for which costs are determined and assigned. For instance, if Blue Ribbon Baking wants to figure out the cost of adding a little amount of coffee cakes, then the object of cost is the mini coffee cake line. If a clinic wish to determine an operating department costs, then the object of cost is the operating department. If the toy manufacturer wish to define the cost from developing a new toy, then the object of cost is the new toy development project. In late years, activities have appeared as the important cost objects. The activities are the simple unit of work

performed within the organization, and it is able to be described as an important set of activities in an organization that is helpful to managers for planning, monitoring, and decision making. The activities we speak about is not only act as cost objects but also act an important role in appointing costs to other cost objects. Modeles of activities cover setting up machinery for production, moving equipments and goods, purchasing parts, billing clients, paying bills, maintaining materials, expediting orders, designing products, and examined products. Note that the action is describe by the action verb (for instance, payment and design) connected to the object (for instance the, bills and products) which receives an action. Also note that the verb describing an action and the object showing very specific goals. Blue Ribbon Baking's executive group sense that the packaging activity that used for mini-coffee cakes would be various - and would cost different amounts than packaging for individual cased pies.

As I mentioned before cost can be Direct and Indirect. What is direct cost? Direct cost is the cost which can be traced in full to the known product, service or department which is being costed.

Direct costs include:

1. Direct materials
2. Direct labor
3. Direct expenses
4. Total direct cost

The other is indirect cost:

Indirect costs include:

1. Indirect materials
2. Indirect labour
3. Indirect expenses
4. Administration overhead

5.Selling and distribution overhead

According theme of my dissertation after we know what is service, we need to research product for good understanding and finding the difference between product and service. People demand various services and products for satisfying different needs and wants. In this case, it can be seemed that the sellers play a central role in marketing of different products and services to the various targeted customers. However, a number of people often confuse twoterms that mention above and regularly use them interchangeably to mention one of thing but closer analysis between them demonstrate that they are different from one another. The main difference between two concepts is most of times that the product is tangible at the time that a service is intangible. More detailed information about the differences between a product and service are clearly described below.

Key Features of a product.

The main key feature of the product is that it's physical and it's tangible. This suggests that the product is able to be command, it is able to be seen, felt or smelled. As such, the purchase of the product may be a once off transaction. However, it ought to even be noted that a product is came back to the vendor for replacement or refund within the event that it's wrong or broken. Once the client isn't happy with the merchandise, he will return it to the vendor in exchange of the correct type of product desired.

The value of themerchandise is usually created and derived from the merchandise by the user. In different words, the user is aware of what precisely he or she really wishes from a product. It's the same client who is able to derive value from getting a product unlike the worth of the service that's created by the service supplier.

Another important aspect of the product is property. The product can belong to the buyer, since the property is transferred at the time of the transaction. The fact that the product is tangible allows to transfer goods as opposed to a service that you can only feel. Once the product has been purchased, it can easily separated from the supplier, since the customer can take it home for own use. Ownership of service can't transferred to user. The client care perspective of the product is limited compared to service. In a service, it is client care which attracts the buyers of the particular service while in the product, elements as branding and other good features that differentiate it from same products which attract the clients.

Key Features of a Service.

A service is work done by another person for an additional individual. As an example, an individual will visit a restaurant to get the specified services presented by others while they relax on their tables. Legal recommendation is another great example of a service rendered to a different person by skilled lawyers. In most cases, individuals are sometimes attracted by the standard of service they get from a specific organization rather than the merchandise itself. Quality service is satisfactory and individuals who are glad will continue doing business with the corporate. The asking method of a service is continuous in contrast to that of a product. For example, a service is able to be in the monthly subscriptions form where a service is rendered upon receipt of the subscription. Other noticable side about a service is that it can't be came back to the supplier since it's intangible. A service is the thing which can only be felt so can't be returned.

The other issue that service is its variability. Services vary according to who offer them, where, at what time and how. Usually, the standard of the service is principally determined by the service supplier whereas the client determines the value of the merchandise upon its purchase. The standard of the service depends on the

service supplier. The marketers of a service ought to have knowledge about what the purchasers want and specified their services to satisfy those wants. The marketers have to understand the options to sell to the purchasers.

Value perspective is an assessment of a service is suggested by the service a provider while the assessment of the product is imitative from practicing it by the customer. Assessment of a service can not be separated from the jobholder while the assessment of the product can is taken or created by a final user of the outputsuggested on the market.

Shelf line is a service has a lessened shelf line compared to the product. A output can be sold out at a later time if it fails to deceive on a given time. This is different with term to a service that become a short shelve fish and should be sold earlier. You can observe easily differences between a output and service.

- ✎ An output is tangible, this is physical and can become held, observed and movable, but the service is abstract, can merely be felt and not striked.
- ✎ Product value is generated by the customer, however value of service is suggested by the service supplier.
- ✎ Customer care of the output is limited, however customer care forms critical detail of marketing the service.
- ✎ An output can be stored for next use, however a service is temporary and cannot be lay up for later use or selling.
- ✎ An output can be owned, however a service can not be owned by the client once payment has been prepared.
- ✎ The feature of a output depends its nature, however feature of a set depends on the service supplier who shapes it.
- ✎ An output know returned to the seller, however a service can not be returned to the trader.

- ✎ The billing process of the service is a once off bargain Billing process can be incessant in the questionnaire of the subscriptions for services rendered.
- ✎ This is easy to confront quality of products, however it is difficult to confront the quality of services suggested.
- ✎ An output can be quantified numerically.

In conclusion though the terms output and service are frequently used interchangeably, this be able to observed that they significantly be notable. The major difference write down between the two is it a output is physical in nature life and it is palpable. On the other hand, this to be able to seen that the set is intangible and this can not be held therefore can not be removed from the provider. Feature of the output is determined by the client while the feature of a set is determined by the supplier. A product to be able to stored for next times use or sale and this to be able to returned to the purchaser if the need spring up. However, a set to be able to consumed the instant it is suggested and can not be lay up for next time use. A set can not be returned to the set supplier for any cause since this is jot palpable.

2.2. Special sides of calculation process for education

What are include Services:

- Transport
- Hotels
- Tourism
- Solicitors
- Education
- Retail distribution
- Financial services and others.

The account of cost distinguishes for every set a kind type, this to be able to change a kind type of set. So we speak basically the Education Company, What is the education and education company.

The value of knowledge acquired by individuals after learning special subject is matters or experiencing life lessons which leads to understanding of something. Education demands instruction of some sort of an individual and composed literature. The most accepted forms of education conclusion from years are schooling that incorporates studies of a variety of subjects. "Jamie knew the seriousness of education, so she chose to go to a four-year university when she graduated from high school." Under employment order price system, the corporate assigns prices to every job or to every batch of products. An example of employment is that the manufacture of a mainframe by IBM, the assembly of a film by film maker, or the creating of a fire truck by American LaFrance. An example of a batch is that the printing of 225 wedding invitations by a local print shop, or the printing of a weekly issue of Fortune magazine by an advanced printer like Quad Graphics. A very important feature of job order cost accounting is that every job or batch has its own distinctive characteristics. For

instance, every home is custom engineered, every consulting engagement by an accountant firm is exclusive, and every printing job is completely different. The target is to calculate the price per job. At every purpose in producing a product or providing a service, the corporate can establish the duty and its associated prices. Employment order price system measures prices for every completed job, instead of set time periods. Illustration 2-1 shows the recording of prices during a job order price system.

3. Calculation methods for cost of service in education: problems

3.1. Job order costing method for education

It is vital to know, however, that job order cost accounting is additionally ordinarily utilized by service corporations. While service corporations don't have inventory, the techniques of job order cost accounting area unit still quite helpful in several service-industry environments. Consider, as an example, the Mayo Clinic (health care), PriceWater HouseCoopers (accounting), and Goldman Sachs (investment banking). These corporations need to keep track of the price of jobs performed for specific customers to evaluate the profitability of medical treatments, audits, or investment banking engagements. Several service organizations bill their customers by using cost-plus contracts. Cost-plus contracts mean that the customer's bill is that the add of the prices incurred on the work, and a profit quantity that's calculated as a share of the prices incurred. So to reduce conflict with clients and reduce potential contract disputes, service corporations that use cost-plus contracts should maintain correct and up-to-date cost accounting records. Up-to-date price records make it easy for service company to urgently find out a client whose price overruns because of client requests for changes to the first set up or surprising complications. Timely recordkeeping permits the contractor and client to contemplate alternatives before it's too late.

A service community that uses a job form price system doesn't have stovktaking accounts. It does, however, use the account same as to Work in Process Inventory, referred to Service Contracts in Process, to note job costs prior to conclusion. To point up the journal entries of service company under the job order price system, consider the following actions for Frugal Interiors, the interior design company. The access to the record of the assignment of \$9,000 of supplies to projects (\$7,000 direct and \$2,000 indirect) is:

Service Contracts in Process 7,000 and Operating Overhead 2,000
Supplies 7,000+2,000= 9,000 (To assign the supplies to the projects)

The entry to the record the assignment of the service salaries and the pays of \$100,000 (\$84,000 direct and \$16,000 indirect) is:

Service Contracts in Process 84,000
Operating Overhead 16,000
Service Salaries and Wages 84,000 +16,000=100,000
(To assign personnel costs to the projects)

Frugal Interiors applies operational overhead at a rate of fifty percent of direct labor prices. The entry to record the applying of overhead (\$84,000 three 50%) supported on the direct labor prises is:

Service Contracts in Process 42,000
Operating Overhead 42,000
(To assign operating overhead to the projects)

Finally, upon completion, the job pric sheet of a style project for Sampson Corporation shows a complete price of \$34,000.The entry to the record of completion of this project is:

Cost of Completed Service Contracts 34,000

Service Contracts in Process 34,000 (To record completion of the Sampson project)

Job price sheets for a service company keep track of materials, labor and overhead used on a specific job like a manufacturer. Varieties of the exercises at the end of this chapter apply job order cost accounting to service corporations.

The advantage of calculating work orders is the more accurate allocation of project costs than in the costing. For instance, suppose that the construction company, Juan Company, builds ten individual houses per year for a total of \$ 2,000,000. One of the ways to determine the cost of housing is to divide the total cost of construction, produced during the year by the number of houses manufactured during the year. If taken as an example, Juan Company, an average cost of US \$ 200,000 is calculated (US \$ 2,000,000 / 10). If the houses are almost identical, then this approach is capable for determining the profit per each home. But if the houses differ in size, style and type of materials, the use of an average cost of \$ 200,000 to establish the profit at home is inappropriate. Rather, Juan Company needs to use a cost-of-work system to define the specific cost of building each house, and the amount of profit generated on each one. Thus, the calculation of the work order prices provide more useful information for figuring out the profitability of specific projects and estimating prices when preparing applications for future work. One of the disadvantages of calculating the order of work is that this requires a critical amount of data entry. It is much easier for Juan Company to simply monitor the total costs incurred during the year than to track the costs incurred in each work (home built).

The recording of this information takes a long time, and if the data is not entered correctly, the costs of the product are not accurate. In recent years, technological developments such as bar-coding devices for both labor costs and materials, have risen

accuracy and decreased the effort required to calculate costs for particular jobs. These innovations enhance the ability to apply work order costing to a wider range of business settings, which increases the ability of management to control costs and make more informed decisions. The general problem with all costing systems is how to allocate overhead costs for the final product. Overhead usually accounts for more than fifty percent of the value of the product, and this cost often hinders the significant value of the product. How, for instance, is the salary of the project manager set aside for different houses, which can differ in size, style and materials used, which it controls and so on. The accuracy of another system of costs for the execution of orders largely depends on the accuracy of the process of distributing allowances. Even if the company does really track the particular amounts of equipments and labor used at each job, if the overhead is not allocated to individual jobs in a meaningful way, information about the value of the product is not useful.

3.2. Process costing for education

Companies utilize process cost of systems to employ costs to like an output that is mass-manufactured in the constant style. Ben & Jerry of utilize the process cost of system: Manufacture of an freezing, once this begins, go on until an freeszing emerges and processing is same for all run - with exactly same quantity of items, labour and an overhead. Every ended of freezing is indistinguishable from other. Company such as USX utilizes process of costing in industrial of a steel. Kellogg and General Mills utilize process of costing for forage manufacture, Exxon Mobil utilize process of costing for its an oildistillation. Sherwin Williams utilize the process costing for its dye an output. At the bottling company similar Coca-Cola, the industrial process begins with blending of the substance. After automated machinery removes bottles inside situtation and fills them. The manufacture process then caps, parcel and forwards to bottles to the ended output warehouse.

Often when we think of the service companies, we always think of particular, a nonroutine tasks, such as renewal an automobile motor, providing consulting of services on the business acquisition or working on the basis lawsuit. But, a lot of service of companies specialize in the performing routine, routine features of the special business. For instance, auto-care seller such as Jiffy Lube trick on routine features of the car service. H&R Block aspects on routine features of the main tax exercise and a lot of great law firms trick on regime legal set, such as an uncomplicated divorces. Service of companies that supply particular, nonroutine set will obviously advantages from utilizing in the job order cost system. These that the comply routine, repetitive set will obviously be better off with the process of cost system.

Similarities and differences between Job Order Cost and Process Cost Systems.

In the job order cost system, fellowship appoint costs to the each job. In the process cost system, fellowship track costs through the line of the related industrial processes or branch, rather than by personality jobs. Thereby, fellowshipes utilizes process cost of the systems when they manufacture the great capacity of uniform or comparatively homogeneous an output. Illustration 3-3 display themain influx of costs in the these two systems. Next analysis highlights the main similarities and differences between these two systems.

SIMILARITIES.

Job order cost and its process cost of systems are like in the three ways:

- 1) The industrial of cost elements. Both of costing systems trace the three industrial cost elements – immediate items, immediate labour and industrial overhead.
- 2) The assembling of costs of substance, worker and overhead. Both of costing systems debit a raw materials to the Raw Materials Inventory, industrial worker to the Factory Labor and production overhead costs to the Manufacturing Overhead.

3) The flow of the costs. As noted over, both of systems collect entire a manufacturing costs by debits to the Raw Materials Inventory, the Factory Labor, and the Manufacturing Overhead. Both of systems then appoint these costs to same report - Work in the Process, the Finished Goods Inventory and the Cost of Goods Sold. Ways of appointing costs, but be notable importantly. These distinctions are the explained and illustrated the later in the research.

DIFFERENCES.

The distinction among job order cost and process cost of system are follows.

- 1) The quality of work in process calculation utilized. Job order cost system utilizes sole one work in the process arithmetic. Process cost system utilizes a lot of work in process arithmetic
- 2) Documents utilized to the track costs. Job order cost of systems disapproval costs to the private jobs and generalize them in job cost sheet. The process cost of system generalize costs in the industry cost statement for every branch.
- 3) Point at which costs are the totaled. Job order cost of system entire costs when job is totalled. The process cost system sum costs at the end of the period of the time.
- 4) Unit the cost computations. In the job order cost of system, unit cost is entire cost every job branchy by portion manufacture. In the process cost of system, branchy cost is entire the manufacturing costs for time divided by parts manufacture within period.

It is the obviously unrealizable to define the exact cost of an output or service. But, in order to the attain upgrade management decisions, fellowships strive to the insure decision-makers with most exact cost evaluates they can. The most exact evalates of the output cost happen when costs are traceable straight to output manufactured or service provided. Direct substance and direct worker costs are easiest to the track directly to output through utilize of the items requisition forms and the payroll time sheets. The overhead costs, thus are indirect or the general cost that generally can not be the easily or

the directly traced to the private an output or services. For example, companies utilize evaluate to appoint overhead costs to the an output and services.

Frequently the most hard part of the computing exact part calculate costs is the determining proper quantity of the overhead cost to appoint to the every an output, set or job. That interest was called predetermined an overhead interest. For the job order costing, we appointed that direct woker cost was suitable operation main for determine entire an overhead costs to the jobs. For the process costing, we supposed that machinery hours was suitable operation main for determine entire overhead to process or branch. The utilise of directwoker as operation main made sense when the overhead cost systems were the first developed. At the time, a direct labor made up the large part of the sum industrial cost. Therefore, it was an widely accepted which there was a high ratio between direct woker and incurrence of the overhead cost. Conclusion, direct worker became most famous foundation for the allocating overhead.

Even in the today of more and more automated surroundings, direct labor is the sometimes suitable foundation for determine the overhead cost to the output. This is suitable to utilize a direct labor when

- a) direct labor constitutes an important portion of sum an output cost
- b) high comparison being between direct labor and changes in quantity of the overhead costs. Illustration 4-1 demonstrates simplified the traditional costing system relying on the direct labor to the appoint overhead.

The necessity for an New Approach

So that iIn recent years, factory owner and set supplier have proficient grown-up change. Superiority in computerized sturcture, technological novelty, global rivalry and an automation machine have changed the industrial climate drastically. Lastly, the quantity of immediate labour used in many manufactures has greatly reduce and common overhead prices resulting from depreciation on th valuable equipment and

machine, usefulness, maintenance and repairs has considerably extension. When there are not the comparison between immediate labour and overhead, this is inappropriate to use a plantwide predetermined overhead rate on immediate labour. Fellowship that use overhead interest valid on immediate labour when this comparison does not exist experiment valuable product-cost distortions.

To run away such distortions, a lot of fellowship now use machinery hours as the foundation which to determine overhead in the automatized industry surrounding. However even machinery hours maybe not important as the sole plantwide valid for appointment entire overhead. If the industry process is combined, then sole multiple appointment valid to be able to outcome in more precise output-cost calculation. In such conditions, director need to consider the overhead cost assignment way that utilizations multiple valid. That way is activity-based costing.

Activity-based costing is an adjoining for allocating overhead the costs. More valuable, ABC allocates the overhead to multiple action cost pond and this then assigns the action cost pond to output and services by aid of price drivers. To understand these more obviously, we need to appeal some new idea to the rather common-voiced words that cringe the definition: So in the activity-based costing, a action is any occasion, action, transaction or business sequence that undergo costs when producing the output or providing the service. The activity cost pond is the overhead cost assign to the distinct kind type of action (ordering substance or setting up mechanism). The cost driver is any parametr or activity that has the direct reason-impact connection with opportunity consumed. The reasoning beyond ABC cost assignment is easy: Output consume an actions and activities consume the resources. These determination of condition will become audible as we look more at a short distance that at how ABC works. The ABC allocates an overhead in a two-stage procedure. In the first phase determine overhead costs to action cost ponds. Instance of overhead cost ponds are ordering substance,

setting up machinery, assembling output and inspecting output. The second phase determine the overhead appoint to action cost ponds to output, utilise cost drivers. Cost drivers size the number of personality activities be reponsabe for or performed to manufacture output or provide set. For example are quantity of purchase orders, quantity of setups, labour hours and quantity of control. In this divisione prese, w nt an easly case instance that contrasts activity-based costing with the traditional costing. This illustrates how ABC abolish the distortion that can happen in traditional overhead cost the allocation. As you learn this instance, you should penetrate that ABC does not change an being job order or process cost of system. What ABC is to separate overhead inside different cost pools in an impact to ensure more exact cost knowledge. Conclusion, ABC additions - rather than change - these cost systems.

Suppose that MAP Company manufactures two output - the Eb Bench and the Eb Coaster abdominal trainers. The Eb Bench is the high-capacity substance completely 25,000 parts annually. The Eb Coaster is the low-capacity substance completely sole 5,000 units per year. The direct substance cost per parts is 40 dollar for an Eb Bench and 30 dollar for an Eb Coaster. In the direct labour cost is 12 dollar per part for every output. Every output demand one hour of direct the labour for complement. Therefore, completely yearly direct a labour hours are the 30,000 (25,000 + 5,000). Expected yearly industrial overhead costs are the 900,000 dollar. Thereby, a prearranged overhead interest underneath traditional costing, utilize direct the labour hours, is \$30 ($\$900,000 \div 30,000$) per direct labor hour. Since both outputs demand one direct a labor hour per part, both outputs are determine overhead costs of the 30 dollar per unit under traditional costing.

Let's now calculate unit value under ABC. Activity-based costing includes following four stage.

- 1) Identify and group an activities includes in the of partucular outputs and determine overhead to cost ponds.
- 2) Identify a cost driver that has powerful correlation to the costs collectedin the cost ponds.
- 3) Calculate an activity-based overhead interest for every cost driver.
- 4) Appoint overhead costs to output, utilize the overhead interest define for every cost pond in cost per driver.

4. New trends and perspectives for calculation of cost of service in education

4.1. ABC as a new approach for calculation process for education centers

The essential adavantage of ABC is more exact output costing. Here is why:

- ABC leads to more cost ponds being utilize to appoint overhead costs to output. In place of one plantwide pond (this also call departmental ponds) and only cost driver, fellowship utilize many operation cost ponds with more appropriate cost drivers. Costs are appoint more staright on valid of the cost drivers used to industry every output.
- ABC leads to increase inspection over the overhead costs. Underneath ABC, fellowship can effect much overhead costs immediate to operations - permit adequate devous costs to be determinedas immediate costs. Thereby, managers have be more wll-informed of their amenability to inspection the operations that create these costs.
- ABC leads the better management resolutions. More exact output costing should indemnify to erection selling prices that this can help to attain beloved output remunerativeness levels. In enclosure, more exact cost data could be useful in resolve

whether to seize or buy an output piece or fraction and from time to time even whether to remove an output.

Activity - based costing do not make alteration a quantity of the overhead costs. What it does make is determine these an overhead costs in more exact rule. In addition, if account detention is more actual and more exact, directors should can better penetrate cost threathment and total profitableness.

Restritions of ABC though ABC systems many times secure better an output cost fact than traditional volume-valid systems, there are restritions:

1) ABC can be valuable to utilize. The raised cost of equate multiple operation and applying many cost drivers discourages a lot of companies from utilize ABC. Activity-based costing systems are the more composite than the traditional costing systems – from time to time importantly more composite. Thus some company must inquire, is cost of the implementation greater than the advantage of the greater exactness? At times it maybe. In some fellowship, there maybe no need to pay attention ABC an entire in order to their being system is enough. Whether the costs of the ABC an outweigh the adavantages, then a company should not perform ABC.

2) Some free reseurce resume. Even although more an overhead costs can be appoint straight to an output athrough ABC is many operation cost ponds, definite overhead costs stay to be appointed by resources of some free volume-valid cost driver such as a labour or machinery hours.

How do the companies know that when to utilize ABC? The avaliability one or more of following incentives would spot to its feasible utilize :

- 1) Product lines contradict greatly in capacity and industrial complexity.
- 2) Product lines are many number and various and they demand distinction degrees of backing set.
- 3) Overhead costs compose a important part of general costs.

- 4) The industry process or number of outputs have changed importantly – for instance, from labour-strenuous to capital- strenuous due to spread automation automation.
- 5) Manufacture or marketing directors are disregard information provided by being system and are alternative utilize “bootleg” costing data or an other possible alternative the data when evaluate or creation other output resolution.

The again design and installation of an output costing system is important decision making that demands considerable cost and the buoyant impact to perform. Consequently, financial managers need to much notification and intentional when initiating conjugation in the costing systems. The key factor that in implementing the fortunate ABC system is backing of the top management.

4.2. Applying overhead to different services for education centers

Calculating the Cost of Education and Training

I will give information about Costing methodology, activity data requirements (non-salaried programs), then, other activity data requirements (salaried programs). Here we write about completion of costing template areas where many students as well as trainees undertake placements. I also write about consideration of certain costs, cost components of salaried and non-salaried training programs, pre-placements, direct teaching, and training for teaching staff. Then the topic continued giving information about teaching while delivering patient care facilities, administration, central educations, overheads salaried training programs, checking trainees' work. Moreover, we will discuss about trainee courses and examinations, trainee staff costs, proportion of trainee time in training, cost of providing additional education activities outside of clinical placements. Then will be given information about options for

collecting costs 22 A, appendix A – salaried and non-salaried training programs 24 B, appendix B – model costing non-salaried template 29 C, appendix C – model costing salaried template 31.

1. Methodology

1/1/1. Health Resource Groups version 4 (HRG4) provides the present structure for remarked prices. The present reference price methodology wants providers to deduct their Multi-Professional Education and Training (MPET) earnings before they present their costs. The DH Payment by Results (PbR) groupbases the annual service rates on the normal average costs submitted. So, the rate doesn't cover education and training that is separately funded throughout the MPET budget.

1/1/2. It is believed that the present methodology (of netting off profit rather than prices) leads to cross-subsidizations between service, education and training wage. The level of cross is likely to vary between providers with those with the highest cross-subsidization, and higher MPET incomes which relative to action of being most impacted by the demonstration of tariffs.

1/1/3. In order to address all these cross-subsidizations, and to minimize the effect of the introduction of education as well as training tariffs, it is proposed that the reference cost of methodology will be amended to find out the correct cost of delivering clinical placements and service.

For the aim of costing clinical places, training programs have been categorized as salaried and non-salaried training.

2. Salaried and non-salaried trainings

2/1/3. Non-salaried training programs consist of programs such as undergraduate medical as well as dental, pre-registration nursing and also allied Health Professions.

2/1/4. Salaried training programs consist of programs like specialty medical training programs, pre-registration pharmacy and also STP healthcare scientist training.

2/1/5. Appendix A most of times provides a list of salaried and non-salaried training.

2/1/6. Non-salaried training programs will accept their clinical placements as they receive 100% of training and delivering 0% of service in all cohort years.

3. Who you will need to involve

3/1/1. It is crucial that the costing for education and training activity need to be approached jointly by the Finance and Education staff within your organization.

4. Related guidance

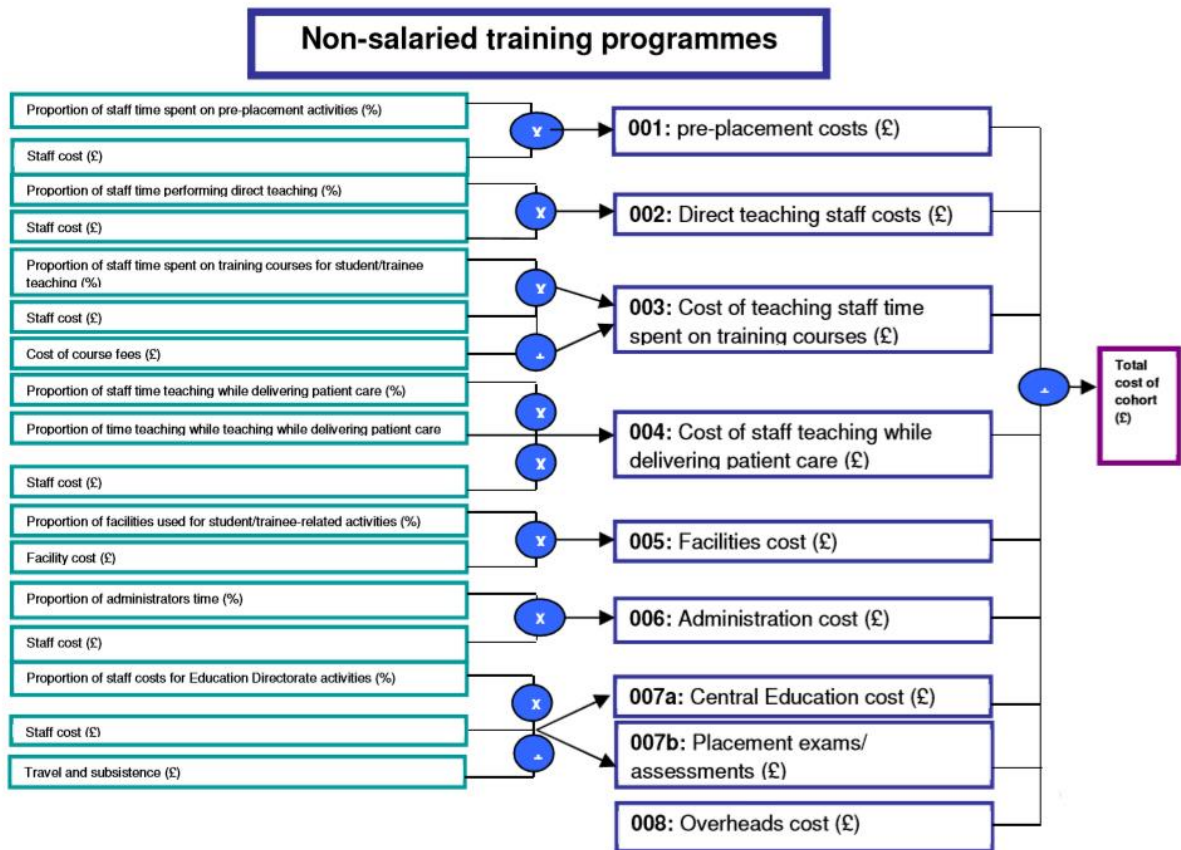
Guidance like a set out in the Department of Health (DH) Reference Cost Guidance and the Health Financial Management Association (HFMA) Clinical Costing Standards should be examined regarding to the treatment of special costs.

PLEASE NOTE THIS: Guaranteed that the data submitted as correct as possible it is also vitally important as these figures will finally be used to count the average hourly and placement of the week rate on which the tariff will be based. For these initial data collections, the figures that will be used to inform mainly how activities are grouped for the aim of tariff-setting and to get a rough concept of the costs involved.

5. Costing methodology

The costing methodology in table one sets out the high-level of cost components that will be used to calculate the entire cost of providing placements for the specific cohort of the students or the trainees.

You can see costing methodology for the non-salaried and salaried training programs:



Salaried training programs:

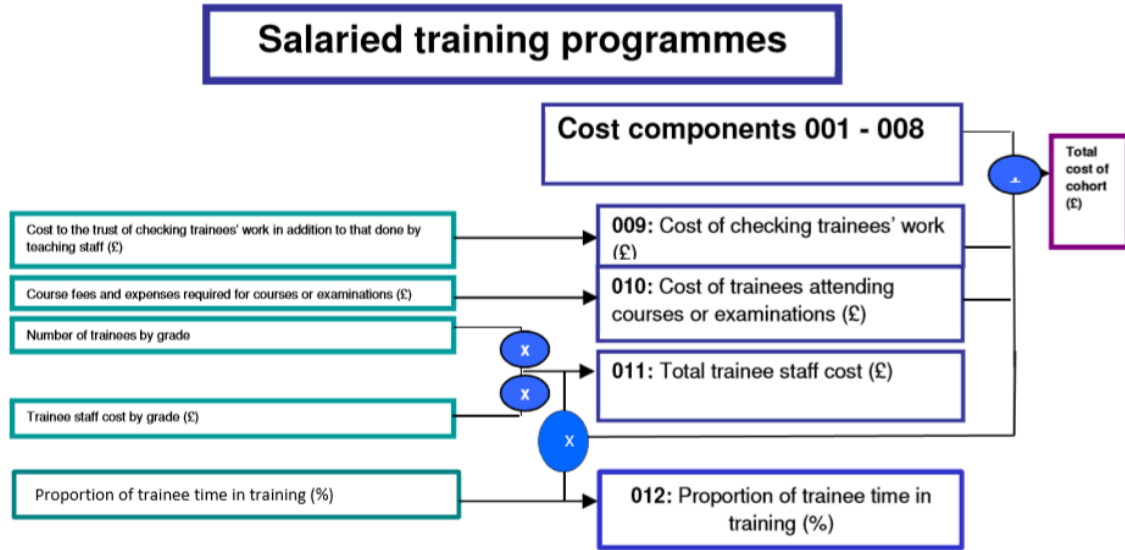


Table 1: costing methodology for non-salaried and salaried training programmes

5/1. Total costs of cohort

5/1/1. The total cost of calculating, i.e. the total cost of all the elements which make up a clinical placement for the particular cohort within the professional group, e.g. Year one of an undergraduate medical degree, usually should be the cost for the year of all the students and trainees within that group.

5/2. Activity data requirements (non-salaried programs)

5/2/1. The first collection of the data concerns the activity of a particular cohort and includes:

- The number of rare students as well as trainees that undertake a clinical placement for the particular cohort for the year
- the number of placement weeks you contribute for the cohort
- the approximant number of hours in a placement week

5/2/2. For example, if:

- You have four blocks of placements within the year;
- each placement block is ten weeks
- there are twenty rare students in each block;
- fifty percent of students are on placement for 37.5 hours a week
- fifty percent of students are on placement for 20 hours a week

5/2/3. The results would be:

- Number of students = four (number of blocks)*twenty (number of students in each block) = eighty
- total number of placement weeks = four (number of blocks)*twenty (number of students in each block)*ten (number of weeks that each student undertakes) = eight hundred
- Average number of hours in a week = $((37.5*10) + (20*10))/20 = 28.75$

PLEASE NOTE: Ensuring that the activity submitted are as accurate as possible is vitally important, given impact on the overall cost.

5/3/ Activity data requirements (salaried programmes)

5/3/1 Please ensure each FTE number is made up of the 52 weeks x 37.5 hours, which will give total of 1950 hours.

5/3/2 For example if you have 5000 hours of the activity, this would be calculated as 5000 hours / 1950 hours giving an FTE figure of 2.56 FTEs

5/4 Completion of the costing template

5/4/1/ Validation rules have been incorporated into template to support providers in its completion.

5/4/2/ Appendix B and C ensure examples of how the costing template should be completed.

5/5/ Area where students/trainees undertake the placements

5/5/1/Although not required for this exercise, it may be beneficial to you as provider to understand the areas where students/trainees undertake clinical placement.

5/5/2/ For example, if students/trainees rotate through general medicine, paediatrics, and intensive care, the costs related with having students/trainees on placement in the each of these areas may be different.

These differing costs will need to be taken into account when the costing your service activity, as a cost of education and training should be netted off from the area where it takes place, and will consequently has an impact on the cost of providing service.

6/ Consideration of certain costs

This division sets out the areas you will need to consider when calculating costs for the clinical placements.

Each sub-section relates back to the cost components within costing methodology in Table 1.

6/1/ Direct, Indirect and Overhead costs

6/1/1/ The DH Costing Manual and HFMA Clinical Costing Standards (Standards 1 and 3) provide guidance on the arrangement and allocation of direct, indirect and overhead costs.

6/1/2/ The same adjoining needs to be taken for the costing education and training activity as is taken for costing service activity.

6/2/The Staff costs

6/2/1/ Please provide actual the staff costs – in terms of annual salary.

6/3/ Treatment of salary support

6/3/1/ If a member of the staff is seconded onto training course, e.g. a healthcare assistant onto a nursing course, their staff cost should not be comprise as a cost. It is only the cost of the clinical placements they undertake whilst training as a nurse.

6/4/The Allocation of costs to specific cohorts

6/4/1/ For some costing elements, it may be necessary to dispense the costs between different cohorts.

6/4/2/ For example, if a member of staff attends a training course (the cost component 003) which would be applicable to the teaching of all years of the medical undergraduate students as well as Foundation doctors, you might wish to consider:

6/4/3/ Apportioning the costs between the cohorts based on the time spent with each cohort.

6/4/4/ E.g. if a member of the staff spends 35% of their time teaching year 1 undergraduate medical students, 40% of their time teaching year 3 undergraduate medical students and 25% teaching F1 doctors, then

Version 2/0/9 of the training course could be apportioned to each cohort in the same way.

6/4/5/ Apportioning costs valid on the activity to which it relates.

E.g., if the training course is special to direct teaching (cost component 002), you may wish to apportion a cost of the training course to this specific element rather than apportioning the cost to the specific training programme or year of training.

7/ Cost components

Salaried and non-salaried training programmes

This division sets out a cost components that are relevant to the costing of both non-salaried and salaried placements.

7/1/ 001: The Pre-placement costs

Proportion of staff time involved in the pre-placement activities x staff cost

7/1/1/ This section is concerned with the cost of staff involved in the pre-placement actions, and can be considered the direct cost for education and training.

7/1/2/ Generally, this would be the teaching staff, or those staff within Education department, but please include any other staff that are involved in your organisation.

7/1/3/ This could include:

The Staff costs (direct)

- Induction of students at the beginning of their clinical placements

7/1/4/ This would not include:

- a) The cost of the staff participating in centrally organised/national recruitment

- b) The costs of administration staff involved in pre-placement activities (this will be captured in the cost component 006)
- c) The cost of the facilities required for pre-placement activities (this will be captured in cost component 005)

7/2/ 002: The Direct teaching staff costs

The Proportion of staff time performing direct teaching x staff cost

7/2/1/ This section is concerned with the cost of teaching the staff involved in the direct teaching of students/trainees whilst on clinical placements, i.e. teaching that is not delivered in the conjunction with delivering patient care.

7/2/2/This could include:

The Staff costs (direct)

- a) Classroom-based teaching
- b) The Preparation and follow-up time for direct teaching
- c) The Lectures/ Seminars
- d) One to one or group tutorials
- e) Teaching of clinical skills in a simulated environment (for example, this could be lab-based, or within simulated the environment that included “patients”).

This could also be delivered on the site other than the trust, for example at the HEI. Please note: You should be clear that direct teaching delivered off-site is part of the clinical placement, and not teaching that is delivered on behalf of the HEI, e.g. as part of a student’s academic learning. Other costs (indirect)

- a) Expenses paid to “patients” for participating in teaching tasks

7/2/3. It would not include:

- a) Any educating that happens outside of clinical placements. For example, if your staff deliver lectures or seminars on the side of the HEI (See section 6)
- b) Cost of staff involved in passing examinations related to clinical placements (it will be captured in cost component 007)
- c) The administration costs associated with passing direct teaching (that will be captured in price component 006)
- d) The facilities or equipment costs associated with delivering direct teaching (that will be captured in cost component 005)

7/3/ 003: Cost of teaching staff time spent on training courses

Ratio of staff time spent on training courses for student/trainee teaching X staff cost +

Cost of course fees

That section is concerned with the cost teaching staff attending training courses as part of their role in transporting education and training.

7/3/1. This could include:

Staff costs (direct) for attending specific training courses

- a. Training required by cadre in order to deliver teaching, for example mentoring training for nurses
- b. Routine “refresher” or “update” training required for cadre delivering teaching
- c. Internal or external training courses Other costs (indirect)

- d. Travel and subsistence paid to staff for visiting external training courses
- e. Course fees

7/3/2. PLEASE NOTE: the cost of course fees for internal teaching courses could be considered as the cost of the staff that provide the training course.

7/3/3. That would not include:

- a) The cost of the training course if the provider does not incur the worth, e.g. if the course is funded by the Local Education and Training Board (LETB)
- b) The worth of back-fill for a member of staff attending training courses, unless staff are required to back-fill an teaching role
- c) The administration cost associated with delivering internal training courses or arranging for staff to attend external programs(that will be captured in cost component 006)
- d) The facilities cost associated with delivering internal training courses (that will be captured in cost component 005)

7/4/ 004: Cost of staff teaching while delivering patient care

Proportion of staff time educating while delivering patient care x Proportion of staff time teaching while teaching while delivering patient care x cadre cost

7/4/1. This section is concerned with the cost of teaching staff teaching while passing patient care, and can be considered a direct cost to education and training.

7/4/2. The worth of teaching while delivering patient care is the additional cost of time it takes for teaching staff to transferring patient care while having learner /trainees with them.

7/4/3. For example, if appointments for unhealthies in an out-patient clinic are 30 minutes when a consultant does not have learners/trainees with him/her, but it takes 45 minutes per patient if s/he does, then the time that people spend teaching while delivering patient care would be the cost of the additional 15 minutes per appointment.

7/4/4. It would mean that one third of the staff cost for providing that clinic would be attributed to teaching and training, with the other two thirds attributed to service.

7/4/5 Example: 7/4/6. If a mentor – or another member of the team – with staff costs of £100,000, spends 5% of their total working time combining educating with delivering patient care (i.e. they only have students/trainees with them for 5% of their time), and they spend 33% of this time teaching, then we would count $5\% \times 33\% \times £100,000 = £1,650$ for this element.

7/4/7. Looking at the calculation:

7/4/7/ 1. 5% = “proportion of staff time educating while delivering patient care”, e.g. how many clinics students/trainees are present
7/4/7/2. 33% = “proportion of cadre time teaching while teaching while delivering patient care”, e.g. the additional time that takes to complete an activity as a result of having students there
7/4/7/3. £100,000 = “staff cost”

7/4/8. The same computing should be considered for all staff involved in teaching while delivering patient care. E.g. all the team involved in delivering an out-patient clinic.

7/5/ 005: Facilities cost

Proportion of facilities used for learner/trainee-related activities x facility cost

7/5/1. This section is concerned with the facilities used in providing teaching of learners/trainees, or the cost of other facilities incurred by having the students/trainees on site.

7/5/2. It could include, as a percentage of time/space used for each cohort:

Facilities cost (indirect)

- a. Lecture theatres
- b. Teaching rooms
- c. Libraries and education centres
- d. Other dedicated education and training rooms, e.g. clinical skills centres
- e. Offices/rooms used by Training Department
- f. Equipment specific to education and training activities
- g. Proportion of clinic/theatre space used when teaching while sending patient care (method of calculation to be developed further)

7/5/3. Example: If a lecture theatre is used to transport direct teaching, and costs £500 a week, used for 52 weeks of the year, then the total value would be:

a. $£500 * 52 = £26,000$

If the lecture theatre is then used by Year 3 freshman nurses for 20 weeks, Year 4 undergraduate medical students for 15 weeks and ST3 emergency medicine learner for 17 weeks, the cost to each cohort would be:

b. Year 3 learner nurses = £10,000

c. Year 4 undergraduate medics = £7,500

d. ST3 emergency medicine trainees = £8,500

7/5/4. The same method of computing could apply for other facilities. **Administration cost.**

Proportion of the administrators time x staff cost

7/6/1 In that division is concerned with staff costs for administering student location, as well as administration of processes that students/coach may undertake while on the placement.

7/6/2 This could comprise:

Staff cost «indirect»

a) administration concerning an induction of the students, comprised ratio

b) administration concerning an organisation and delivery of the firsthand teaching

c) administration concerning an organisation and delivery of the teaching while delivering the patient care

d) administration concerning an organisation and delivery of the training courses for teaching personnel (comprise both of internal and external training)

e) administration concerning central education operation (see cost element 007a)

f) any other administration operation linked to the education and training

7/6/3 This would not comprise:

a) Training and follow-up operation necessary by teaching personnel when undertaking direct training (see cost element 002)

7/7/007 Central education costs

Proportion of the personnel costs for Education Directorate operations x staff cost *plus* travel and livelihood.

7/7/1 This division is concerned with cost of the personnel that undertake central education operations that are required to deliver placements to students/coach.

7/7/2 On the whole, this would be training personnel or those personnel inside the Education department, however please comprise any other personnel that are involved in the your organisation (expectation administration personnel).

7/7/3 There are two division to the this cost component:

«007a:» Central education costs incurred as part of providing clinical placements

«007b:» Cost of delivering an exams or valuations required as the part of clinical placements

7/7/4/007a could comprise:

Staff costs «indirect»

a) Cost of staff inside the library/ education centres

b) Cost of staff required to attend assemblies with HEI companion to the agree placements

- c) Cost of staff required for the QA of placements, including Deanery, HEI, LETB or governor visits, training and follow-up
- c) Cost of staff for valuation of coach to provide skills are up to fact (not including cost of the personnel that might deliver in-house teaching courses for teaching staff - see cost element 003)
- d) Cost of staff for the liaison with HEIs
- e) Costs of staff of the delivering data inputting for positioning and data returns to HEI
- f) Cost of staff needful for organisation of rotations inside the supplier
- g) Cost of staff time to spent on extra operations for students on the clinical placement and mock interviews, views of applications and so on
- h) Cost of staff undertaking the pastoral care role for the students/coaches
- q) Cost of extra personnel time spent supporting become insolvent students *Other costs «indirect»*
- r) Travel and subsistence expenditures for students/coaches on placements, accommodation provided to the students/coaches free of charge
- o) Travel and subsistence expenditures paid to personnel for attending external education-linked meetings

7/7/5/007b could comprise :

Staff costs «indirect»

- a) Cost of the staff responsible for organisation and invigilation of the exams or valuation that are required as portion of clinical placements
- b) Cost of the hosting exams or valuation behalf of other suppliers that are required as portion of clinical placements

7/7/6 Neither division would comprise:

- a) Cost of administration of the central education operations / examinations and valuation (see cost element 006)
- b) Cost of the rooms and furniture required for central education operation and/or examinations and valuation (see cost element 005)
- c) Cost of the delivering academic exams or valuations on behalf of HEI or the other education partner (see division 6)

7/8/008: Overheads

7/8/1. The method of account and apportionment of overheads an attributable to the education and training is present time being tested and further data will be made ready in due course.

7/8/2. Current options for calculating quantum of overheads for the education and teaching are:

7/8/2/1. Method as described in HFMA standards 7/8/2/2 .Paybill -cost of personnel involved in teaching 7/8/2/3. Proportion of personnel involved in teaching contract with service 7/8/2/4. Proportion of firsthand costs for teaching contrast with service

7/8/3. Present time options for apportioning overheads across the education and training operation are:

7/8/3/1. Activity, placement weeks 7/8/3/2. Direct costs across programmes

7/8/4. Present field that are being considered as the overheads for education and teaching are listed in downhill

Overheads attributed to the education and training:

- Area
- Hospital operations
- CNST premium (clinical unconcern insurance)
- Estates
- Building insurance
- Building maintenance
- Capital charges - equipment
- Capital charges -buildings
- Cleaning
- Energy/utilities
- Rates
- Depreciation
- Corporate
- Finance
- Payroll
- Human resources
- Information management\information technology
- Clinical governance
- Board expenses

- Chief executive
- Organisation development
- Strategic planning overheads attributed to education and training
- Salaried training programmes

In this division is concerned with equate costs that are appropriate to salaried the only training programmes.

7/9/009: .Cost of checking trainees' work

Cost of checking trainees' work in supplement to that done by training staff.

7/9/1. In this division is concerned with the supplement time spent on the checking a trainees' work which is not done by training staff or those personnel responsible for their firsthand supervision.

7/9/2. For instance, if trainee writes the prescription, the personnel cost in Pharmacy Department for the confirming prescription with trainees / their supervisor (if they required) should be comprise in this cost element.

7/9/3. The same way could be used for checking of diagnostic experiment orders, for instance.

7/9/4. In supplement to this, if trainee is treating the patient and orders the series of blood experiment that are not properly required, the cost of experiment and staff cost for time it would take to the process those supplementtrail would be cost of having the trainee there and should be compriseinside this cost of component.

7/9/5. What should not be comprise in this cost element.

7/9/6. Provided trainee is running the clinic with consultant control and time it takes to see every patient is a longer than if consultant was running clinic, cost of that extra time would be costed underneath cost component 004 (training while the delivering patient care).

7/10/ 010: Course fees and the expenses for courses and the examinations. Cost of the trainees attending courses or examinations.

7/10/1. This division is concerned with training of courses that trainees will be attend as portion of their overall training.

7/10/2. This division could comprise:

Indirect costs

a) Course fees

b) Travel and livelihood whilst on course

c) Travel and livelihood for meeting examinations or valuations that are not held inside the supplier, however are required as portion of their training.

7/10/3. This would not comprise :

a) Staff costs for a trainee whilst the course. This will be captured in trainee staff cost elements 011

b) Cost of training courses linked to Continuing Professional Development or forced training (Health and Safety so on.) -these course which are not openly linked to the trainees' training programme.

c) Cost of training courses for purposes of the openly teaching of students or a junior staff (this element is captured in cost the component 003 for cohort of the student whom is being taught).

d) Staff costs for preparation and implementation of an in-house assessments or examinations required as portion of training programme. Annual Review of Competence Progression , clinical\educational supervisor is the end of placement\annual reports, Team Assessment of the Behaviour. These will be captured in the cost component 007b.

e) Facilities and equipment the costs for training of course or examinations\assessments provided in-house, this will be captured in the cost component 005 (Facilities costs)

f) Administration cost for organisation of the trainees attending an external courses or examinations\assessments or the organisation of the courses or examinations\assessments delivered an in-house, this will be captured in the cost component 006 (administration costs)

g) Cost of Royal College examinations.

7/11/ 011: Total trainee staff cost

Number of the trainees by grade x a trainee cost by personnel grade.

7/11/1. This division is concerned with capturing entire cost associated with salaried a trainee, which comprise both a service and the training by grade.

7/11/2. It is in the next division, division 7/12, where percentage of the training time is determined and from that calculations of the training a cost can be made.

7/12/ 012: Proportion of the trainee time in training (percentage)

7/12/1. This deviation is concerned with capturing proportion of time an trainee spends the training versus delivering to service.

7/12/2. We are committed to the allowing providers to determine proportion of time a trainees spend in the training inside their anorganisation rather than imposing the national percentage for a particular training programmes. But, guidance on the what might be considered a service and what might was considered training is necessary.

7/12/3. Some instance of when a trainees to be able to considered in the training are:

Staff costs (direct)

a) Amount of the time trainees spend on the training courses

b) Amount of the time trainees spend in the direct teaching in lectures, training and so on.

c) Amount of the time trainees spend undertaking an examinations or assessments

d) Amount of the time trainees spend on the developing and updating their the Eportfolio.

e) Amount of the time trainees spend in the meetings with their supervisors.

7/12/4. This would not comprise:

- Amount of the time trainees spend the training other trainees. This cost would be captured in the cost component 002 or 004 for cohort that is existing trained.

7/12/5. In supplement to above, there is consideration concerning what a proportion of the time are trainees in the teaching when they are treating patients.

7/12/6. An instance of how it might be accounted is for supplier to consider what to grade of the personnel they would need to the carry out same service unless they did not have trainee there.

8. Cost of providing extra education operation outside of clinical placements.

8/1/1. In this devition is concerned with additional the costs incurred by your an organisation delivering activities linked to education which are on the outside of that demand for clinical placements and for it you are not reimbursed by Higher Education Institution or other organisation.

8/1/2. Although this of costs are not those to incurred as portion of the clinical placement, it might be beneficial to yourorganisation if you can identify these costs to the ensurean appropriate agreements are in the place for their delivery.

8/1/3. These activitycould comprise however are not limited to:

- direct teaching in the forms of lectures, seminars, tutorials etc. on behalf of the HEI or other education partners
- formal positions within a HEI, e.g. assistant/sub dean
- hosting academic examinations on behalf of the HEI or other education partners

8/1/4 PLEASE NOTE: This section would include the costs of all cost components – staff costs, facilities, administration etc.

8/1/5/This would not include:

- Education activities for which income are received, e.g. from the HEI

9/ Options for collecting costs

There are a number of options for how you might desire to collect costing information. Some examples are set out below, but method you choose should be the best appropriate one for your organisation.

9/1/Pre-placements costs (001):

- Online\paper questionnaires to relevant staff who participate in preplacement activities.

9/2/ Immediate teaching (002), teaching while delivering patient care (004), and teaching staff on training courses (003):

a) Discussions with relevant staff – e.g. consultants, junior doctors, tutor’s personal assistants, administration staff in Education Department etc.

b) Online\paper questionnaires to sample of teaching staff or all membership involved in teaching, e.g. tutor, junior doctors, nurses, lab staff etc.

c) Job plans\diaries of teaching staff, e.g. forward\backward look for delegate time period to assess time spent on education actions and use to calculate for full year costs, or collection of information for full year if able.

9/3/Administration time spent (006)

- Discussions with relevant staff, e.g. administration staff in the Education Department, tutor’s personal assistants.

9/4/ Facilities costs (005):

a) Library usage figures

b) Floor area analysis

c) Analysis of sample of teaching activities to assess use of equipment during teaching

9/5/ Central Education Costs (007)

- a) Job plans/diaries of non-administration staff involved in central education actions – forward/backward look for representative time period to assess time spent on the central education actions, and use to calculate for full year costs, or collection of information for full year if able
- b) Workplace-based assessment documents of postgraduate probationers by assessors, for e.g. CbD, Mini-CEX, DOPS.
- c) Online\paper questionnaires to sample or all relevant staff

A/ Appendix A

A/1/ This section provides list of non-salaried and salaried training programmes that should be costed within an organisation.

A/2/ Please note : these lists are in progress and will be updated in due course

Non-salaried programmes

- Chiropodist/podiatrist
- Dietitian
- Orthoptist
- Physiotherapist
- Orthotist/prosthetist
- Occupational therapist Speech and language therapist
- Diagnostic radiographer
- Therapeutic radiographer
- Paramedics
- Arts therapists
- Nursing and Midwifery
- Adult nursing Children's nursing Mental health nursing
- Learning disability nursing

- Occupational health nurse
- Community psychiatric nurse
- Midwifery
- Pharmacy
- Pharmacist – if placements during university course (not pre-registration year)
- Healthcare Scientists – Modernising Scientific Careers
- PTP - Nuclear medicine
- PTP - Radiotherapy physics
- PTP - Radiation physics PTP - Blood sciences
- PTP - Infection sciences
- PTP - Tissue and cellular diagnostics
- PTP - Genetics
- PTP - Audiology
- PTP - Neurophysiology
- PTP - Ophthalmic and vision science
- PTP - Medical engineering

- PTP - Radiation engineering
- PTP - Renal technology
- PTP - Rehabilitation engineering
- PTP - Cardiac physiology
- PTP - Respiratory & sleep physiology
- PTP – Anatomical pathology
- Professions complimentary to dentistry
- Dental hygienist
- Dental therapist
- Dental nurse
- Other
- Operating
- Department
- Practitioner
- Medicine
- Undergraduate medical placements
- Dentistry
- Undergraduate dental placements

Salaried programmes

- Pharmacy Pharmacist – pre-registration year (or sandwich year on placement)
Pharmacy technicians
- Healthcare Scientists – Modernising Scientific Careers
- STP - General microbiology
- STP - Mycology
- STP - Virology
- STP - Bacteriology & parasitology
- STP - Clinical biochemistry
- STP - Haematology/transfusion science
- STP - Immunology STP - Genetics (blood sciences)
- STP - Histopathology
- STP - Cytopathology
- STP - Reproductive science
- STP - Genetics (cellular sciences)
- STP - Audiological science
- STP - Neurophysiological science
- STP - Ophthalmic & vision science
- STP - Cardiac science
- STP - Respiratory & sleep science
- STP - Vascular science
- STP - Gastrointestinal physiology & urodynamics
- STP - Rehabilitation engineering
- STP - Clinical measurement & development
- STP - Device risk management & governance
- STP - Radiation physics
- STP - Imaging (ionising radiation)
- STP - Imaging (non-ionising radiation)
- STP - Radiotherapy physics HSST - Higher Specialist Scientific Training

B/ Appendix B

B/1/ Below is model example of completed costing template for non-salaried training programme.

B/2/ Please note: the figure included is for example purposes only

B/3/It is possible that cost will not be incurred for all cost components, and is dependent on how training is delivered. However, we would expect every placement to incur facilities (005), administration (006), and central education costs (007a).

B/4/ If you do not have trainees on the placement in particular year, you should not include any costs

5. Practical cases

Case 1.

For example: service cost analysis in the service sector

This example shows how to calculate a rate per student.

Assume that, Educational Company has casual workers, teachers, equipments, car.

Loading	1 hour lesson loaded
Labour (casual)	200 AZN per week
Labour(teacher)*	8, 10, 12, 20 AZN per hour
Equipment depreciation	50 AZN per week
Supervision	300 AZN per week
Driver's wages-FIXED	100 AZN per week
Petrol	0.1 AZN per kilometre
Repairs	0.05 AZN per kilometer
Deprecion	50 AZN per week per vehicle
Supervision	150 AZN per week
Other general expenses	500 AZN per week

During a loose week, only 2 trips were made.

Journey	One way distance of journey kilometers
1	400
2	250

Lesson	Hours per week	AZN per hour
Ielts	25	10
ACCA	15	25
CFA	15	20

General English	20	10
Excel	10	12
1C	15	10

Assume that we have 100hours lessons in week Calculatecost per hour:

Lesson	Hours per week	AZN per hour	AZN cost per week
Ielts	30	25	750
ACCA	20	25	500
CFA	15	20	300
General English	40	10	400
Excel	10	12	120
1C	15	10	150
Total	130 hours		2220 AZN

Loading	1 hour lesson loaded	AZN
Labour (casual)	200 AZN per week	200
Labour(teacher)	10,15,25,20 AZN per hour	2220
Equipment depreciation	50 AZN per week	50
Supervision	300 AZN per week	300
Driver's wages-FIXED	100 AZN per week	100
Petrol	0.1 AZN per kilometer	65
Repairs	0.05 AZN per kilometer	33
Deprection	50 AZN per week per vehicle	100
Supervision	150 AZN per week	150
Other general expenses	250 AZN per week	500
Total		3718

Our total cost is AZN 3718, Total hours 130.

Cost per hour is Total cost/ total hours per week= 3718AZN/ 130 HOURS=28.6 AZN

Case 2.

Upper education LLC operates more one service so IELTS, ACCA, MICROSOFT OFFICE Programs.

Our task contain of sharing profit or loss to these services .

A) During year 20X7, costs equal 400000 AZN. Calculate profit or loss relating to serices.

	IELTS	ACCA	MICROSOFT OFFICES PROGRAMS	General English
Selling price per student	350 AZN	500 AZN	100 AZN	100 AZN
Number of students	500	300	200	500

B) During year 20X8, costs equal 410000 AZN. Calculate profit or loss relating to serices.

	IELTS	ACCA	MICROSOFT OFFICES PROGRAMS	General English

Selling price per student	300 AZN	450 AZN	100 AZN	100 AZN
Number of students	600	500	250	400

Calculate A and B.

Solution A

Year 20x7	IELTS	ACCA	MICROSOFT OFFICES PROGRAMS	General English
Selling price per student	350 AZN	500 AZN	100 AZN	100 AZN
Number of students	500	300	200	500
Total=395000	175000	150000	20000	50000

$$\text{Profit/LOSS} = \text{Revenue} - \text{costs} = 395000 - 400000 = (5000)$$

Year 20x7 we have loss 5000 and share it to services

IELTS	ACCA	MC OFFICE	GENERAL ENGLISH
$5000 * 175000 / 395000$ 0 =(2215)	$5000 * 150000 / 395000$ 0 =(1900)	$5000 * 20000 / 395000$ 0 =(250)	$5000 * 50000 / 395000$ 0 =635

Solution B

Year 20X8	IELTS	ACCA	MICROSOFT OFFICES PROGRAMS	General English
Selling price per student	300 AZN	450 AZN	100 AZN	100 AZN
Number of students	600	500	250	400

Total =470000	180000	225000	25000	40000
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At year end 20x8, our company made profit so Profit= 470000-410000=60000 AZN

IELTS	ACCA	MC OFFICE	GENERAL ENGLISH
60000*180000/470000 =22970	60000*225000/470000 =28720	60000*25000/470000 =3190	60000*40000/470000 =5120

Result of above, we see that our company made progress, increase sales and profits, sustainability of company, effectiveness and efficiencies of company.

Case 3.

QUESTION

The UNEC annual cost of AZN 13.5 million has the following students.

Classification	Number	Attendance weeks per annum	Hours per week
3 year	3500	32	27
4 year	1800	28	31
Sandwich	2500	25	30

We must start with setting up an expense unit at the university. Since there are three different categories of students, we can not use the "student" as an expense unit.

Participation watches appear to be the most efficient unit. The next step is to calculate the unit number.

Number of students	Weeks*hours	Total hours per annum
3500	32 *27	3024000
1800	28*31	1562400
2500	25*30	1875000
		6461400

One unit cost will be as following:

Cost per student=Total cost/number of student=AZN(13.500/6461.4)=AZN 2.10

So, we see that , in our example UNEC spend AZN 2.10 for one hour in order to one student.

6.Conclusion

So, we looked at examples of how to calculate cost by various methods, and we've learned how to calculate cost by solving both theoretical and various issues.

As we can see from the dissertation, there are different ways to calculate costs, and these methods are not always the same, and each of these methods varies according to different calculations. This can be the method used whenever there is a different order, and may be the method used when rendering the same service to more clients. Usually each cost has a special place of use and varies depending on usage. For example, even if the work done by any particular user's taste is always offered at different prices, there is a need which occurred for a more general calculation when the same service is delivered to more customers.

The task that we write as an example for job order costing showed when this method can be used and showed the convenience of calculation it.

The issues we wrote in other methods have shown that each method has the best results when we use them where appropriate. In general, we have explained the way how we can do and how we need to calculate the costs of a single entity when we need it on the example of a company at the end.

As it can be seen from the example, service companies also have direct and indirect costs, and it is more effective to calculate them apart and divide them into action. If we are doing this for a large number of students, it is more effective to collect each cost per student, so we can evaluate the cost per student. When we know the cost we pay for each student, we can calculate our earnings and losses from the arrival and departure of each student. Setting these make us to take into consideration a long-term which helps to prepare price strategy. As in the example, we first prepare and evaluate costing methodology. Then, look at cost components.

It applies here:

1. Costs for salaried and non-salaried training programs.
2. We evaluate and calculate them on variable and fixed costs.

After separating and calculating all these costs, we know all the expenses and we have the ability to know calculate both the total cost and the cost of each student after sharing them by person.

If the long-term expenditure is included here, the result is changed, and some of the more variable costs are taken into account when calculating staff costs, and calculating the profitability and degree of effectiveness of the investment for a long-term period.

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