

Full Length Research Paper

Research on the cost calculation of distance education based on activity-based costing

Zheng Qinhua^{1*}, Chen Geng² and Chen Li³

¹Research Center of Distance Education, Beijing Normal University, Beijing, China.

²School of Distance Learning and Continuing Education, Beijing Jiaotong University, Beijing, China.

³Research Center of Distance Education, Beijing Normal University, Beijing, China.

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The analysis on the cost and efficiency of distance education has important meanings in both theory and practice. This paper tries to analyze the status of the school-running cost and efficiency of the pilot universities for modern distance education at present in China. On the basis of analyzing the major defects of current analysis on the cost and efficiency of distance education, activity-based costing has been used for the cost calculation and analysis of one case college. Research indicates that average school-running cost per student of the case college at three academic degrees in 2005 differs from one another, where the school-running cost per student of the undergraduate education starting from senior high school is 325.85 Yuan, of junior college education starting from senior high school, 312.96 Yuan, of undergraduate education upgrading from junior college, 308.00 Yuan. What is more, the research has established the cost function of the case college applying to the future cost budget and calculation, offering the decision-making support to the colleges in practice. The research has proved that the activity-based costing is favorable for survey of the cost information influenced by multiple factors, and can help the colleges adjust the school-running structure according to different cost efficiency and offer guidance and reference for making matching tuition price.

Key words: Activity-based costing, distance education, cost calculation.

INTRODUCTION

It is well-known that distance education has a very important position in national educational system of China. According to statistics, in 2006, the student population in junior and regular colleges of higher education reached 25,537,000, of whom the student population of distance higher education was 6,528,000, among whom the student population in online junior and regular colleges of higher education by way of modern distance education was 2,793,000, accounting for 10.9% of the national junior and regular college scale in higher education. With the expansion of demand for higher education in China and the increasing development of distance education, 68 pilot colleges of modern distance education over China have ushered in the unusual opportunity of very fast development with the enlarged increase of the economic benefit of school-running. However, the market of higher

education can never be the seller's market, with the development of school-running capacity of the general universities in China, due to the education-outgoing effect brought by the globalization of education, like traditional education, the distance education will eventually have to get into the time when the market is saturated and the supply of students is getting smaller and smaller. Meanwhile, because of rapid extension in distance higher education, the consequent decline of quality has been bothering plenty of educational institutions. Traditionally, the Chinese society has been doubting the quality of distance education, and today, this issue is more concerned, which has forced the school-running institutions involving in distance education pay more and more attention on quality and efficiency while the corresponding analysis on school-running cost and efficiency of distance education has become a hot spot in the fields of research and practice.

A great number of research papers have concerned about the subject of the cost and efficiency of distance

*Corresponding author. E-mail: Zhengqinhua@gmail.com.

education, most of which have taken a certain school-running institution as the case to calculate the school-running cost of distance education and to conduct related analysis on indexes such as the average school-running cost per student, control of enrollment and breakeven point (Zheng and Chen, 2004; Wu and Li, 2005; Gou, 2005). All these researches have made a very commendable attempt in the analysis on the cost and efficiency of distance education in China and have acquired a series of achievements. But these researches are by no means an isolated case to have the problem that the method of cost calculation determines the result of cost analysis can just interpret the school-running efficiency of distance education fuzzily, consequently, awkward to offer direct guidance to the concrete practice of the school-running institutions; at the root of the problem is that the cost calculated by traditional method is rather nebulous; superficially it is quite logical but in fact, it has covered the function incurred by the business flow of the jobs during the process of resource transferring into output, easily leading to distortion of cost measurement. For this purpose, the author thinks that the widely-applied activity-based costing in enterprise can be introduced into the analysis on the cost and efficiency of distance education for cost calculation so as to increase the cost accuracy and decrease cost distortion. Firstly, basic principles of activity-based costing will be enunciated in this paper, and then, case study on the cost calculation and analysis concerning a certain pilot online Education College of modern distance education by way of activity-based costing as follows.

BASIC PRINCIPLES OF ACTIVITY-BASED COSTING

Activity-based costing was first interpreted clearly by Robin Cooper, Robert and S. Kaplan in 1999. According to this method, to solve the problem of cost calculation and distribution, the most elementary objective of cost calculation should be the activity, which refers to the jobs to consume resource conducted for a certain aim within an organization, and stands for organized and implemented work and is the link between resource and cost objective. In short, activity-based costing is the method for cost calculation and management to keep dynamic track of all the working motions (activity), to measure the cost of a certain job (activity) and the cost objective and to evaluate the performance of a certain job (activity) and the utilization of resource. The activity-based costing contains four basic key elements resource, activity and activity center, cost objective and cost driver.

Resource: In activity-based costing, resource actually refers to the cost to support the activity and the source of expenditure, and various cost or expenditure items occurred to produce the products or to offer service during a certain period or the expense required to be spent during the activity enforcement process, for exam-

ple, the educational resource includes capital cost, labor cost, site use fee, equipment cost and other cost.

Activity and activity center: Activity refers to the links, obligations or the tasks conducted based on a certain goal within an organization so as to offer the products with added value though consuming the resource. Activity center refers to the working assembly with serials of mutual connections, which can fulfill a certain specified function.

Cost objective: The object with cost to be measured in the organization, according as the organization needs it.

Cost driver: Refers to the driving force hidden behind the cost, or refers to the factors to cause the occurrence of cost, generally called distribution base. The activity cost driver is the standard to distribute the cost from activity center into the products or the personnel service and also is the medium to communicate the resource consumption with the final output. Commonly, the cost driver can be divided into resource driver and activity driver. The former refers to the way and cause of resource consumption, reflecting the resumption of indirect resource from the activity center, is the standard to distribute the indirect resource into the activity center. The latter reflects the activity consumption from final products, and is the standard to distribute the cost from activity center into the final products (Li, 2000).

Generally, activity-based cost calculation is conducted as the following procedures:

Firstly, confirm resource items and resource drivers. Confirm resource items consumed during the production process and the quantity of the resource, where the resource is often presented in the form of cash and the confirmation of resource can offer the basis for the resource to be distributed into each activity-based costing base.

Secondly, confirm major activity and activity center. The confirmation of major activity refers to the classification of the activities relating to the indirect expense occurred in the organization. When similar activities are gathered together, activity center is formed. The major purpose to establish activity center is to classify and collect each cost of activity and to simplify the calculation of activity cost.

Thirdly, establish the accumulated expenses of the activity-based costing base. Establish activity-based costing base according to the activity center specified by activity analysis and classify and collect expenses according to activity-based costing base to calculate the activity cost in each activity-based costing base. Each item of resource should be distributed into the each activity-based costing base according to resource drivers item by item. The analysis on activity-based costing base can disclose which resource has been reduced and which is needed to be re-distributed and finally to determine how to improve and reduce activity cost.

Fourthly, select the drivers of activity –based cost. The distribution of activity cost into the product should accord with the correlativity. When a certain activity cost is directly related to the product yield, the yield can be regarded as the driver between activity cost and the product; when a certain activity cost is directly related to the product consumption, time can be selected as the driver between activity cost and the product.

Finally, the distribution rate of each driver of activity cost and the unit cost of each product can be calculated. Each activity cost divided by the estimated number of units of cost driver is the distribution per driver unit and distribution per driver unit times the cost driver consumed by each product is the assigning cost of each product or labor service.

The following are the representation of activity cost calculation and analysis conducted by case college on the basis of working flow of activity-based costing.

COST CALCULATION BASED ON ACTIVITY-BASED COSTING

Determination of resource item and resource driver

On 28, June, 2005, the National Development and Reform Commission of China issued Measures on Supervision over Education and Training Cost of Institutions of Higher Learning (pilot edition), of which Article 5 has given very specific instructions on the structure and resource items of the education and training cost of institutions of higher learning: the education and training cost of institutions of higher learning is comprised of personnel expense, public spending, subsidy expense for individuals and families and depreciation of fixed assets. Hereinto, personnel expense includes staff basic pay, subsidy, bonus, social security payment, other personnel expense; public spending includes office expenses, printing expense, water and electricity fee, heating bills, postage and telegram fee, car fare, travel expense, convention expense, training fee, welfare expense, service charge, entertainment charges, lease charge, realty management expense, maintenance cost, special material fee and other public expenses; subsidy expense for individuals and families includes pension, smart money and subsistence allowance, medical expenses, stipend, housing allowance and other expenses; depreciation of fixed assets includes building construction depreciation and equipment depreciation.² Hereby, detailed investigations have been further dealt with inside the case college and the operating resource items of the case college for distance education has been finalized as staff basic pay, office expenses, printing expense, water and electricity fee, heating bills, postage and telegram fee, car fare, travel expense, convention expense, training fee, service charge, entertainment charges, lease charge, maintenance cost, material fee original equipment cost, scholarship and other public expenses.

After definition of activity resource, the next step is to distribute resource into related activities according to the correlativity of resource by activity-based costing, which is the process to confirm resource driver. Resource driver is the basis of resource consumed by activity distribution. Each resource assigned into activity will become one cost element of this activity cost and the sum of all the cost elements relating to each activity will form activity cost base. When confirming resource drivers, mainly analyze the causes that each resource occurred and assign the resources into each activity center based on causality as far as possible. Concretely speaking, three principles should be followed: when certain resource consumption can be intuitively determined to be consumed by a specific product, it should be accounted directly into the cost of such specific product; when certain resource consumption can be differentiated to be consumed by each activity from the sphere of production, it should be accounted directly into each activity cost base; when certain resource is considered to be consumed in a mixed state at the initial consumption, proper quantification basis should be selected to be decomposed into each activity. According to the above principles, we can determine the resource drivers corresponding to 16 resource items (Table 1).

Identification of activity and activity center

Further investigation and identification on the major activities and activity centers of the case college have been conducted. By reference to the theory partitioned by four sub-systems of distance education, the identification has been firstly dealt with in the survey and structures of the major work done by each functionalized organization, on this basis, we have make the main school-running flow of the case college clear to identify the activity and collect different activity into 9 activity centers according to the classification of activity cost driver as follows.

As for functionalized organizations, the case college mainly includes comprehensive administrative management departments, technical or resource departments, student recruit department, teaching and exam departments, educational administration and student management departments and R and D department. With separate analysis on the working flow and path, we can sum up the working activity concerning distance education school-running of the case college.

To begin with the construction of school-running environment, in the practice of school-running of the college, this job involves in so many departments, such as office, technical department, teaching department with the main work including purchasing and leasing office or teaching-involved asserts, facilities, equipment, computers and the peripheral equipment such as hardware, network wiring, network platform for teaching and management and the public asserts of satellites and communication system, all kinds of software tools, public

Table 1. Analysis sheet for resource driver.

Resource item	Resource driver	Resource item	Resource driver
Wage	number of staff	Office expense	Number in office
Printing fee	Reduced amount	Water and electric fee	Dedicated activity
Postage	Reduced amount	Heating fee	Dedicated activity
Car fare	Reduced mileage	Travel expense	Reduced mileage
Convention expense	Reduced amount	Training fee	Dedicated activity
Entertainment charges	Reduced amount	Service charge	Reduced number
Lease fee	Reduced amount	maintenance cost	Dedicated activity
material expenses	Dedicated activity	facility charge	Dedicated activity

resources and physical or technical conditions.

In the next place, the office including comprehensive administrative departments mainly conducts daily office operation, high-level decision-making and external liaison concerning publicity, treatment, conference, human resource and finance together with the logistic work such as water and electricity, public security and maintenance.

Technical or resource department mainly take charge of curriculum development and curriculum transferring, including six phrases of curriculum relating to preparation, analysis, design, development, implementation and evaluation. The first three phrases mainly accomplish the design and planning of the curriculum, comprising of establishment of curriculum objectives, analysis on the demands and resources of the learners, collection of raw data, development of teaching strategy, choice of teaching medium and planning supporting scheme; the development phrase contains editing, making and integrating the curriculum resources; the phrase for implementation of curriculum consists of commercialization of curriculum resources and curriculum transferring; and the evaluation of curriculum aims mainly at testing and appraisal, modification and upgrading after curriculum implementation.

The major tasks for student-recruit department involves in enrolling publicity, market development and organization of entrance examinations. And teaching and exam departments mainly offer all kinds of academic supporting services for the students, where the activity contains retaining leading teachers and guiding teachers, who will offer course explanation, question-and-answer period and assignment assessment for the students of distance education in the form of online or face-to-face teaching; meanwhile, arrange the teachers to assist the students to do experiments or exercitation; at the time of schoolwork ending, the exam department also needs to arrange the exam appointment, proposition, exam organization, invigilation and correcting papers as well as the arrangement of graduation project guidance and defense work when the students are ready for application of graduation.

The educational administration and student affairs departments mainly offer all kinds of non-academic supporting services for the students, including compilation of scheme, roll management, arrangement of student's acti-

vities, providing scholarship or student grant and other non-academic consultancy. The R and D and teaching departments will take charge of supervision of quality guarantee of the college, science and research and teacher training to increase the school-running quality and to promote development.

Based on the above analysis, we combine the working activities of the case college into activity center according to certain principles. Generally speaking, assignment of activity center mainly depends on homogeneous activity cost drivers, namely, incorporating the activities with the same cost drivers to form homogeneous activity centers. During this investigation, based on the assignment theory of distance education sub-system, on the basis of surveying the activities in this college, we collect the activities into 9 activity centers involving in environment construction, comprehensive management, curriculum design and development, commercialization of the curriculum and its transferring, curriculum assessment and modification, student-recruit service, academic student-support services, non-academic student-support services, quality guarantee, and research and development. And then, we assign the resource items of the case college in 2005 into each activity center of assignment is activity driver, which refers to the cause according to previous resource drivers to work out the activity cost base of each activity center (Table 2).

Select activity driver

As before, the final destination of activity-based costing is to make clear the cost status of different cost objectives; in order to achieve this destination, it's required that the cost base of the activity center acquired before should be assigned into different cost objectives and the basis of the activity occurred and also is the medium associating the consumption of activity resource with final outputs. The driver analysis on the identified 9 activity centers will be conducted as follows: The input for environment construction varies along with school-running scale and cost is allocated by the students who use it and the activity driver is the number of the students in school; the comprehensive administrative departments serve all the

students, and the activity driver is also the number of the students in school; curriculum design and development is worked out, taking curriculum as the unit, so we recognize the activity driver is the developed teaching period; in a similar way, the activity driver of curriculum assessment and modification is the revised teaching period by assessment; since curriculum products and transferring is for each student, the activity driver is the number of the students in school; the market operation of student = recruitment service and the entrance exam will be apportioned by the recruited students at the end, so the activity driver is the matriculated student number; both academic student-support services and non-academic student-support services are for all the students and the cost will be adjusted with the change of the student number, so the activity driver is the number of the students in school; quality guarantee and research and development serve the students to increase the education quality, the activity driver is the number of the students in school (Table 2).

Accounting the cost assignment of activity center into cost objective

During the activity cost research of the case college, different academic degrees have been selected as the cost calculation objectives and the distribution of activity cost has been accumulated in this investigation. The method is that the driver distribution rate has been computed by activity driver and the cost in each activity cost base is assigned into cost objectives. Based on the data offered by the case college, taking the educational training cost at three academic degrees of the undergraduate education started from senior high school, the undergraduate education started from junior college and the undergraduate education upgrading from junior college in the college in 2005 as the cost objectives, we have analyzed the consumed activities and calculated the driver rate and finally come at the calculation method and the result of the cost objectives at three academic degrees in this investigation.

The calculation procedure includes two aspects, at first, according to activity driver, count total quantity of activity and the activity consumption quantity assigned into each cost objective, the results are shown in Table 3.

Notes

1. Total quantity of activity: calculated by the total quantity of all the activity drivers of the case college in 2005, for example, the number of the students in school in 2005 is 41060.
2. Consumption quantity: refers to the consumption of the activity driver of the cost objectives, for example, the developed teaching period for junior college education started from high school in 2005 is 160 and the matricula-

lated student number of undergraduate education started from high school is 4366.

3. Measuring explanation on the consumption quantity of teaching period: in actual measurement, we have found that when taking the developed teaching period as the driver to assign the teaching period of undergraduate education upgrading from junior college and undergraduate education started from high school, these two academic degrees may cause superposition since some curriculum has been offered at the same time, these superposition teaching period has been re-assigned according the proportion of the student number at different degrees to avoid superposition of measurement. The consumption for the revised teaching period by assessment has been treated in the same way.

And then, calculate the distribution rate of activity driver according the calculated result of driver quantity and account the distribution of activity cost base into each cost objective based on activity consumption. (The result is in Table 4). The actual calculation has two steps:

1) Calculate the distribution rate of activity driver R_j , according the decided cost base, activity driver and total quantity of activity. The calculation formula for the distribution rate of activity driver is:

$$R_j = C_j / Q_j \quad (1)$$

In the equation, R_j refers to the rate of cost driver in activity center base C_j is the cost base data in j rate of activity driver Q_j refers to the total activity quantity to consume the activity cost driver in j activity cost base.

2) Count the activity quantity consumed by each cost objective, according the calculated the driver rate of activity cost and the consumed quantity, the cost of each cost objective in each activity center can be accounted. Accumulated further, the total cost of three cost objectives can be acquired.

The computation formula of total cost of the cost objectives is;

$$TC_i = \sum_{j=1}^n R_j \cdot q_{ij} \quad (i=1-m, j=1-n) \quad (2)$$

In the equation: TC_i refers to the total cost of i type cost objective; R_j refers to the cost driver rate in j activity cost base; q_{ij} refers to the quantity that i type cost objective consumes j activity, namely, activity consumption; n is the number of activity center, and m is the number of cost objectives

Average cost calculation for different cost objectives

Through the above calculation, we have successfully distributed the resource accounting data of the case college

Table 2. Identification of activity center and major activity.

Activity center	Major activity	Cost base (Yuan)	Activity driver
Environment construction	Environment construction for office, curriculum building and teaching	2,742,891.00	Number of the students in school
Comprehensive management	Daily operation and logistic guarantee	2,267,916.75	Number of the students in school
Curriculum design and development	Curriculum analysis and planning, Curriculum development and making	1,044,975.80	Developed teaching period
Commercialization of the curriculum and its transferring	Curriculum commercialization and curriculum transferring	484,390.00	Number of the students in school
Curriculum assessment and modification	Curriculum assessment and modification and upgrading	117,200.00	Revised teaching period by assessment
Student-recruit service	Enrolling market operation, entrance exam and admission	788,248.30	matriculated student number
Academic student-support services	School work instruction, experiment and exercitation, school work assessment, and cognizance	3,037,169.77	Number of the students in school
Non-academic student-support services	Educational administration, students affaires and other services	1,444,120.73	Number of the students in school
Quality guarantee, and research and development	Quality supervision, staff training, scientific research on special items, specialty development	884,498.33	Number of the students in school

Table 3. Analysis sheet for consumption quantity of activity driver.

Activity center	Cost base (Yuan)	Activity driver	Total quantity of activity	Consumption for undergraduate education started from high school	Consumption for junior college education started from high school	Consumption for undergraduate education from junior college	under-upgrading
Environment construction	2,742,891.00	Number of the students in school	41060	3849	19123	18088	
Comprehensive management	2,267,916.75	Number of the students in school	41060	3849	19123	18088	
Curriculum design and development	1,044,975.80	Developed teaching period	295	24	160	111	
Commercialization of the curriculum and its transferring	484,390.00	Number of the students in school	41060	3849	19123	18088	
Curriculum assessment and modification	117,200.00	Revised teaching period by assessment	293	51	0	242	
Student-recruit service	788,248.30	matriculated student number	10144	1688	4633	3823	

Table 3 contd.

Academic student-support services	3,037,169.77	Number of the students in school	41060	3849	19123	18088
Non-academic student-support services	1,444,120.73	Number of the students in school	41060	3849	19123	18088
Quality guarantee, and research and development	884,498.33	Number of the students in school	41060	3849	19123	18088

Table 4. Distribution sheet for cost driver.

Activity center	Cost base (Yuan)	Total activity quantity	Distribution rate for activity driver (Yuan)	Activity cost of undergraduate education started from high school (Yuan)	Activity cost of junior college education started from high school (Yuan)	Activity cost of undergraduate education upgrading from junior college (Yuan)
Environment construction	2,742,891.00	41060	66.80	257113.20	1277416.40	1208278.40
Comprehensive management	2,267,916.75	41060	55.23	212580.27	1056163.29	999000.24
Curriculum design and development	1,044,975.80	295	3542.29	85014.96	566766.40	393194.19
Commercialization of the curriculum and its transferring	484,390.00	41060	11.78	45341.22	225268.94	213076.64
Curriculum assessment and modification	117,200.00	293	400.00	20400.00	0.00	96800.00
Student-recruit service	788,248.30	10144	77.71	131174.48	360030.43	297085.33
Academic student-support services	3,037,169.77	41060	73.97	284710.53	1414528.31	1337969.36
Non-academic student-support services	1,444,120.73	41060	35.17	135369.33	672555.91	636154.96
Quality guarantee, and research and development	884,498.33	41060	21.54	82907.46	411909.42	389615.52
Total				1254211.45	5984639.10	5571174.64

of the case college in 2005 into each cost objective by activity-based costing. As Table 4 indicates, in the three cost objectives at three academic degrees in this research, in 2005, the school-running cost of the undergraduate education starting from senior high school was 1,254,200 Yuan, and that of junior college education starting from senior high school, 5,984,600 Yuan and that of undergraduate education upgrading from junior college, 5,571,200 Yuan. What is more, according to the student

number in school at three academic degrees, we have worked out the average cost per student at different academic degrees in 2005. Separately, the total cost sum of each cost objective divided by the number of student in school at each degree arrives at that in 2005, the cost per student of the case college for the undergraduate education starting from senior high school is 325.85 Yuan, for junior college education starting from senior high school, 312.96 Yuan, for undergraduate education upgrading from junior college, 308.00

Yuan.

CONSTRUCTION OF COST FUNCTION OF DISTANCE EDUCATION

As above-mentioned, the cost calculation and analysis have been conducted for the school-running operation in distance education of the case college in 2005 by activity-based costing. And then, we will use the results of the activity

cost analysis to establish cost function, offering decision-making support for the follow-up cost budget of the case college.

Previously in this article, we have already known the cost function model as;

$$TC = \sum_{j=1}^n R_j Q_j \quad (3)$$

where; TC refers to the total cost; R_j refers to the cost driver rate in j activity cost base; Q_j refers to the activity quantity that j activity cost base consumes, and n refers to number of activity center.

In this investigation, was constructed 9 activity centers: environment construction, comprehensive management, curriculum design and development, commercialization of the curriculum and its transferring, curriculum assessment and modification, student-recruit service, academic student-support services, non-academic student-support services, quality guarantee, and research and development, and all these activity centers have their own activity cost drivers and the distribution rated of each cost driver has been calculated as above, (Table 4). As the distribution rate of the cost driver reflects the unit cost consumed by such activity during production, it may be promised that the driver rate can not change within a certain time scope; therefore, related cost budget function can be figured out: Say the student number in school as S , the matriculated student number as E , the developed teaching period as D , the revised teaching period by assessment as I , then, The total cost

$$\begin{aligned} &= 66.8S + 55.23S + 3542.29D + 11.78S + 400I + 77.71E \\ &+ 73.97 S + 35.17S + 21.54S \\ &= 264.49 S + 77.71E + 3542.29D + 400I \end{aligned} \quad (4)$$

It is obvious that this cost function can be used for cost calculation and budget for different cost objectives. For the sake of data, just four activity drivers have been reflected while three academic degrees have been selected as cost objectives to be studied in this investigation. In future cost calculation, it is only required to substitute the actual or the estimated consumption quantity concerning the four drivers of S , E , D , I of the cost objectives into the formula, then the total cost calculation or total cost budget of related cost objectives can be figured out. For instance, if the student number in school of the case college in 2008 is estimated to be 60,000, the newly matriculated student number of the same year to be 5,000, the developed teaching period to be 600 and the revised teaching period to be 400, the cost in 2008 can be budgeted by this cost function, substituting the figures of the four cost drivers into the formula to figure out the total cost of the same year to be 0.18543324 billion Yuan. It must be emphasized that this cost function

has been computed by reference to the results of activity cost calculation in the practice of the case college in 2005, if tracking study can be conducted into the school-running cost status of the case college for more years by the methods in this research, the accuracy of the data can be further improved.

SUMMARY

In this research, the activity-based costing has been entirely used to calculate and analyze the cost and efficiency status of the case college; we have clarified the major consumption and its cause occurred in school-running of the distance education through resource analysis; the major scope of business and operation flow of the college through identification of activity center; the causes of cost incurred and the measuring unit by means of analysis on the activity cost driver; and finally, through activity cost polls concerning each cost objective, we have obtained better and target-oriented cost data and have effectively differentiated the activity cost data relating to different cost objectives. Based on the cost calculation, activity cost function has been established in this research, which will be the reference for future cost budget of the case college.

It is observed that activity-based costing possesses remarkable superiority on cost calculation, compared with traditional cost calculation approaches. Glaring example is that traditional cost method assigns the resource directly into cost objectives to lead to contorted cost information and the failure of cost control. What is more, the main hypothesis of traditional cost method is that the total cost of school-running is always changing with the number of students; however, this hypothesis is not clearly tenable, because in actual school-running process, different cost objectives such as the cost input quantity for each activity link at different academic degrees and specialties differs from one another, for instance, the resources consumed by each cost objective in the work of student-recruit service, curriculum construction and supporting service are numerous, which can not be just distributed by the number of the students. As a consequence, the distortion caused by traditional cost calculation method in cost calculation can not accurately reflect the actual cost input.

In activity-based costing, analyzing various influencing factors leading to cost fluctuation, the accumulated activity cost is assigned into the cost objective on the basis of the above analysis, which can more objectively reflect the difference of various cost objectives in activity consumption, so that the total cost of various cost objectives influenced by many factors and the average cost with pertinence and discrepancy can be worked out more accurately. It is a particular favorite for learning about the cost and benefit of various education items in educational constitutions. Besides, the polytomized variable cost function derived from activity-based costing has solved

the issue that traditional cost method takes into account the total numbers of the students as the only factor to influence cost and is capable of affecting the school-running constitutions on the status that other factors may influence cost change, and will contribute to the instructions and references for the college to adjust school-running structures and work out various tuition prices according to different cost efficiency so as to have more activeness in control of cost and adjustment of school-running mode.

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