Informationization project approval in shanghai colleges and universities

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ABSTRACT

This research focused on the annual approval proceedings of informationization project in Shanghai colleges and universities. By analyzing the actual data from 2008 to 2013, the major cause for colleges and universities neglecting the approval tasks are proposed, and the deviation of the directors' understanding in municipal information departments about informatization construction in colleges and universities are interpreted comprehensively. Considering the pilot national project of education reform, Provincial Government Comprehensive Reform for Education Coordination, concrete proposals for promoting the approval work are given according to standards, coordination and data.　　© 2014 Trade Science Inc. - INDIA

KEYWORDS

Colleges and universities;
Government finance in shanghai;
Informationization project;
Rate of project approval;
coordination.

INTRODUCTION

Financial funds are part of currency form of the social products in order that governments at all levels can meet the need of financial functions and allocate according to the public power of government administration and management. It manifests that governments at all levels raise, allocate and use the currency and funds by free of charge and governmental credit[1]. Finance departments at all levels in our country have formed the management mode of financial fund combined with administration management and the review of professional skills one after another since 1999. The review function of financial funds has been strengthened in order to provide elaborate data for the management system reform of performance appraisal on departmental budget, government procurement and financial expenditure[2-4].

With the National Program for Medium and Long Term Educational Reform and Development Guidelines (2010-2020) definitely putting forward "Speeding Up the Course of Educational Informationization", and with the document "Information technology must be paid high attention because it has revolutionary impact on education development" being put emphasized, educational administrative departments, colleges and universities actively input funds into the developing process of education informationization so that all kinds of projects of education informationization will have a greater and greater

FULL PAPER

need of financial funds[5-6]. It reflects that the informationization project approval is increasingly arousing the public concern[7]. Shanghai Finance Bureau particularly published Shanghai Measure of Managing Appropriation Budget (Trial Edition) in order to formulate the appropriation budget management of municipal projects and to increase the use efficiency of municipal financial funds in November 2005. The appropriation budget management and financial funds of different kinds of projects in colleges and universities as the municipal budget unit must be carried out with the specification[8-10].

THE APPROVAL PRINCIPLE OF SHANGHAI INFORMATIONIZATION PROJECT

In order to regulate the funds using of Shanghai informationization construction, the former Shanghai Informatization Committee (now Shanghai Economy and Informatization Committee) takes the financial budget management of informatization construction project as the starting point. Effective exploration and innovation about the institution construction have been put forward[11]. The former Shanghai Informatization Committee has carried out special project review aiming at Shanghai informatization projects since 2005. The "Shanghai Measure of Managing Appropriation Budget (Trial Edition)" has been published by the former Shanghai Informatization Committee and Finance Bureau on May 13th, 2006. The long-term mechanism of appropriation budget and review approval in special project has been formed in the institutional construction area[12]. And then, the "Shanghai Appropriation Budget Establishment and Management Guidelines of Informatization Project" (Trial Edition) also has been published by the former Shanghai informatization committee and Finance Bureau so as to formulate appropriation budget establishment and relevant management when municipal budget units declare the informatization projects[4]. Therefore, Shanghai municipal colleges and universities have taken the approval of informatization projects as the common operation step according to the specification before using annual financial funds to construct educational informatization[9].

According to the establishment and management guidelines, the informatization project of Shanghai municipal colleges and universities includes project of constructing informatization system and operational maintenance projects of information system in colleges and universities. The project of constructing informatization system means the project of new information system or the project of upgrading the original information system within colleges and universities. The applying financial funds is mainly used for equipment procurement such as computer and network hardware, commercial software, application software developing, information security, system integration and supervision. The operational maintenance projects of information system in colleges and universities means the project of maintaining the primary information system. The applying financial funds is mainly used for computers, equipment maintenance cost of network hardware, communication service charge, software maintenance, service charge of information security, and it doesn't contain charges for water, electricity, traffic, training, meetings, daily work about maintaining the information system.

According to the establishment and management guideline, Shanghai Economy Informatization Committee combined construction and maintenance of informatization project. Relevant personnel listened to the specific advice of experts and the leading group office of Shanghai Educational Informatization. On this condition, informatization construction projects, budget component of maintaining project, estimation method budget aggregates, condition, requirement and Material of budget declaration, principle, procedure, way, result, budget execution of municipal colleges and universities are uniformly formulated so as to realize closed-loop and institutionalized management of informatization construction project[13].

According to the establishment and guideline, whether Shanghai informatization projects pass the approval review needs to meet two principles.

Basic principle

The establishment of Shanghai informatization projects on city must meet the following requirements: according with relevant policy in this city and country;

according with the requirements of national economy, special project planning of social informatization and electronic government; according with public financial requirements and the supply range of financial funds; laying the firm implementation foundation and having better anticipated benefit; having a specific project goal, implementation plan, scientific and reasonable project budget which has feasibility researched and qualified to carry out.

Key principle

The key focus of Shanghai informatization projects (the project of constructing information system) is according with: relevant planning; requirements; the sufficiency of constructing project; urgency and benefit of constructing project; project security and risk assessment; information sharing and resource integration; stock resources of the project using and municipal public platform; the rationality of technical proposal and financial funds estimation, etc.

The key focus of Shanghai informatization projects (the project of maintaining information system) is according with: the operation of information system; the actual benefit achieved by the information system; the rationality of running maintaining system; the standardization of outsourcing service; the rationality of estimating financial funds, etc.

SUMMARY OF SHANGHAI INFORMATIONIZATION PROJECT AP-PROVAL

Former Shanghai Informatization Committee has reviewed the Informatization project since 2005, Shanghai municipal colleges and universities have taken an active part in it for ten years. Generally speaking, there are two problems when we review the project approval in 2008-2013.

Colleges and universities not emphasizing the informatization projects in general

Although Shanghai information committee has the specific requirements of process specification about informatization projects in colleges and universities constructed by using financial budget, the informatization project approval in colleges and universities TABLE 1 still have several problems such as randomness, dis-

continuity and less emphasis[14]. In addition, some colleges and universities still hold an idea of carrying out informatization projects from some other special projects.

First of all, there are only 9 municipal colleges or universities carrying out informatization projects steadily and completing the financial budget standard process according to the annual development requirements, which accounts for 40.1%, and 3 municipal colleges or universities still constructing informatization projects even they never carry out the standard processes of financial budget for the mean time.

Secondly, there are requirements that the budget unit must submit particular project construction proposal if their declared amount of updating project or the new project is greater than 1 million. However, 6 of 18 projects of updating project or the new project which is greater than 1 million in 2013 doesn't submit the particular project construction proposal so that the review conclusion is "suspending".

Finally, municipal colleges and universities didn't put emphasis on the informatization projects which has already gained financial funds. Some universities, such as Shanghai University, University of Shanghai for Science and Technology, did not list approved informatization project into relevant annual financial budget for years. Therefore, there are over 5 million financial funds of informatization projects being wasted.

The competent department of informatization having comprehending deviation in informatization projects of colleges and universities

As the competent department of municipal Informatization, the former Shanghai Informatization committee (now Shanghai Economy and Informatization Committee) reviewed the informatization project of municipal colleges and universities according to the national relevant informatization plan, policy, standard and regulation in Shanghai. However, there are still many large comprehending deviation between the real situation and develop priority existing in informatization construction in colleges and universities.

First, the informatization in educational field puts emphasis on deeper comprehensive integration of creating new education models, learning style, improving

FULL PAPER

TABLE 1 : Declaring quantity and approved quantity of informatization projects in colleges and universities on city in 2008-2013

University Name	2008	2009	2010	2011	2012	2013	sum
University of Shanghai for Science and Technology	2-1	3-1	5-3	2-2	5-2	3-1	20-10
Shanghai Maritime University						2-1	2-1
Shanghai Conservatory of Music		2-1	1-1	2-2	1-1		6-5
Shanghai Theatre Academy	3-2	1-0	3-2	2-2	4-3	1-0	14-9
Shanghai University of Sport							
East China University of Political Science and Law	6-3	7-3	6-3	5-2	4-1	2-1	30-13
Shanghai Ocean University		1-0		2-1	3-2	7-2	13-5
Shanghai University Of Electric Power							
Shanghai University	12-3	13-10	22-9	9-7	9-3	5-2	70-34
Shanghai University of Traditional Chinese Medicine							
Shanghai Normal University	16-9	9-6	7-3	12-6	6-4	11-4	61-32
Shanghai University of International Business and Economics		2-1	1-1				3-2
Shanghai University of Engineering Science	2-1	2-1	1-0	5-3	4-3	14-5	28-13
Shanghai Institute of Technology	3-1	5-2	3-2	3-1	3-1	5-2	22-9
Shanghai Finance University	6-5		3-2	2-2	7-0	4-1	22-10
Shanghai Lixin University of Commerce	2-1	5-2	5-1	5-4	2-1	3-2	22-11
Shanghai Second Polytechnic University	10-3	12-5	7-4	4-4	6-4	9-3	48-23
Shanghai Medical Instrumentation College				1-1	3-2	4-0	8-3
Shanghai Publishing and Printing College	1-0	1-1	1-0				3-1
Shanghai Institute of Tourism				1-1		8-0	9-1
Shanghai Institute of Health Sciences	1-0		1-0	2-2		1-0	5-2
Shanghai Distance Education Group (Shanghai Open University)	9-5	5-4	6-1	1-0		2-1	23-11
Declaring quantity-Approved quantity	73-34	68-37	73-33	60-41	54-25	81-25	409-195

superior educational resources, and environment construction of informatization learning, promoting information technology and educational teaching so that colleges and universities associated with education and teaching tightly. However, the competent department of informatization only understands educational informatization from electronic government perspective so that many specific educational informatization projects (such as network teaching resource database system, long-distance teaching system, etc.) are denied because of lacking judging basis, and then the normal development of educational informatization is seriously delayed.

Secondly, according to the statements of ten-year development plan of educational informatization, it is an important informatization project that advanced network information technology, integrated resources and advanced efficient practical educational information fundamental facilities are utilized. However, the passing rate of infrastructure of colleges and univer-

sities reviewed by municipal informatization competent department is quite low. Even there is no any project being approved in some year so that the informatization development of basic environment in colleges and universities seriously fall behind.

In addition, Ten-year Development Plan of Educational Informatization (2011-2020) definitely proposed the requirement that electronic records system of all students must be established and the growth record and comprehensive quality assessment must be recorded. However, the suspending conclusion of the informatization construction about student management or student service reviewed by the municipal informatization competent department make the improvement of the student management or service informatization vanish like soap bubbles. Taking the alumni management as example, the informatization competent department only approved of Alumni Information Comprehensive Management System in Shang-

hai University for ¥100,000 and Alumni Comprehensive Management and Service Management in Shanghai Institute of Technology for ¥200,000.

Finally, all the colleges and universities actively respond to the Shanghai Action Plan for Improving Constructing Smart City in 2011-2013 which definitely proposed constructing the multilevel wide coverage multiple hot spots wireless broadband network. Shanghai Education Committee, Shanghai Economy and Informatization Committee particularly printed and distributed Guidance about improving constructing municipal information network infrastructures to guide the construction of WLAN. However, the informatization competent department only approved of The First Phase of WLAN in Shanghai Medical Instrumentation College for ¥692,000 in 2011 and WLAN in Shanghai University for ¥2,556,210 in 2013.

THE PROPOSAL ABOUT THE INFORMATIZATION PROJECT APPROVAL

Although Shanghai Financial and Informatization Committee and Shanghai Finance Bureau issued Shanghai Management Measure of Appropriation Budget and Shanghai Management Measure of Appropriation Budget (Trial Edition) according to the informatization project to formulate the declaration and special project reviewing of appropriation budget about informatization project. However, it is one of important problem for Shanghai Education Committee and Shanghai Financial and Informatization Committee that the approval standard of informatization project of colleges and universities should be studied carefully and should be guided actively because of the specificity of educational informatization (especially the educational informatization in higher education)[15].

For standard, strengthening the formulation and implementation of the campus informatization construction guidance

Ten-year Development Plan of Educational Informatization (2011-2020) makes four requests for improving the integration with information technology and higher education, including that improving the construction and applying of digital campus, pro-

moting innovation of personnel training mode, improving the academic level in colleges and universities, and improving social service and cultural inheritance. It is a basic position that higher education informatization is the effective way to promote higher education reforming and improving quality and the innovation edge of developing education informatization. However, the detail description of higher education informatization is not clear from the existing documents and data so that Shanghai Financial and Informatization Committee have no direct judgment basis when reviewing the informatization projects in Shanghai colleges and universities[16-17], and so that Shanghai Financial and Informatization Committee have to use the government informationization standard to review projects.

Although Shanghai Education Committee and Shanghai Economy and Informatization Committee print and distribute Guidance of Improving Constructing Municipal Information Network Infrastructure to formulate the infrastructure of Shanghai municipal informatization. However, the guidance just involves part of constructing campus informatization, and can't cover all the campus informatization area. On the other hand, the guidance can't aim at the education specificity and the informatization competent department didn't review the informatization projects according to the guidance spirit completely. The research group of "Informatization Project review in colleges and universities" has been set up to aim at constructing Shanghai campus informatization and to improve this segment during the course that Shanghai Financial and Informatization improves comprehensive reform of provincial government education since September 2013.

The guidance of Shanghai campus informatization construction mainly maintains the construction principle of solid foundation, deep service, abundant application and valid management. Four aspects, about infrastructure, application system, standard system and government support, are development connotation and basic task so that the municipal campus informatization can be definitely carried out.

For coordination, giving the harmony and coordination of competent department

It is a main target of formulating appropriation bud-

FULL PAPER

get of informatization projects that "Expenses of informatization projects should be reasonably controlled and arranged as a whole when possible". However, we can hardly see the living example that expense budget of informatization projects in colleges and universities achieve the basic goal.

For many years, the concrete implement of informatization projects are seriously impacted because the declaration review rate of informatization project expense budget (the rate of approved funds in declaration funds) is quite low. Therefore, the expense budget of informatization projects in colleges and universities have a fluke mind and gradually become the vicious circle which is "declaring without thinking", "carrying out after approving" and "applying for funds from other way when meeting deficiency". Some colleges or universities directly invest capital from the education system and never declare municipal budget no matter how many projects have been approved.

As shown in TABLE 2, the fund reviewing rate of informatization projects in colleges and universities is almost 60% in 2011 because Shanghai Education Committee, Shanghai Economy and informatization Committee proactive actively take the coordination responsibility, and both sides and municipal colleges and universities talk faced to face. Therefore, the declaring projects can't reflect the urgent requirements of declaring unit but also can achieve the expense budget requirements of informatization project.

Hence, the project group "Provincial Government Education Comprehensive Reform" started the task in June, 2014. The harmony and coordination about expense budget declaration of informatization project in colleges and universities are improved by relevant department such as Shanghai Education Committee and Shanghai Economy and informatization Committee. The informatization management system forming in colleges and universities are encouraged to form a whole set of reasonable coordinating system of Shanghai education information system[18].

TABLE 2 : Fund reviewing rate of informatization projects in colleges and universities on city in 2008-2013

University Name	2008	2009	2010	2011	2012	2013	sum
University of Shanghai for Science and Technology	26.62%	7.93%	29.29%	100.00%	23.36%	10.34%	21.00%
Shanghai Maritime University						68.04%	68.04%
Shanghai Conservatory of Music		23.25%	66.52%	98.04%	100.00%		56.59%
Shanghai Theatre Academy	71.49%	0.00%	36.58%	100.00%	18.89%	0.00%	35.58%
Shanghai University of Sport							
East China University of Political Science and Law	40.61%	36.49%	47.80%	62.68%	2.63%	63.09%	31.09%
Shanghai Ocean University		0.00%		26.87%	32.65%	32.06%	29.40%
Shanghai University Of Electric Power							
Shanghai University	26.18%	64.69%	24.52%	74.19%	29.44%	52.52%	39.59%
Shanghai University of Traditional Chinese Medicine							
Shanghai Normal University	62.02%	53.14%	21.27%	62.52%	65.63%	19.94%	49.32%
Shanghai University of International Business and Economics		44.44%	100.00%				62.96%
Shanghai University of Engineering Science	14.39%	29.48%	0.00%	60.33%	47.07%	12.13%	22.11%
Shanghai Institute of Technology	26.15%	27.17%	70.25%	44.60%	34.67%	36.71%	34.60%
Shanghai Finance University	48.86%		51.13%	81.49%	0.00%	10.83%	29.24%
Shanghai Lixin University of Commerce	19.68%	29.35%	7.66%	65.14%	54.08%	21.86%	32.31%
Shanghai Second Polytechnic University	16.66%	17.20%	32.41%	76.97%	44.52%	13.50%	30.76%
Shanghai Medical Instrumentation College			36.65%	52.92%		0.00%	32.73%
Shanghai Publishing and Printing College	0.00%	54.75%	0.00%				20.22%
Shanghai Institute of Tourism				45.97%		0.00%	13.84%
Shanghai Institute of Health Sciences	0.00%		0.00%	73.80%		0.00%	28.94%
Shanghai Distance Education Group (Shanghai Open University)	38.35%	48.84%	1.53%	0.00%		13.70%	20.35%
Fund Reviewing Rate	34.21%	34.42%	19.13%	59.79%	24.16%	22.27%	30.32%

Full Paper

For data, making sure of the historical continuity and malleability of constructing colleges and universities

Viktor Mayer-Schönberger and Kenneth Cukier, the authors of "Big Data: A Revolution That Will Transform How We Live, Work and Think", pointed out that relative to governmental hysteretic data, Google Flu Trends is more useful timely flu indicator, and that prediction well explain the important enlightening role given by massive data to people[19]. It is same that accumulated historical data can be important enlightening role for declaring informatization projects in colleges and universities.

Primary Shanghai informatization Committee has started the special project approval review of informatization projects in colleges and universities since 2005, the relevant competent departments of informatization projects in colleges and universities are mainly at standstill, and the accumulated historical data are never analyzed or arranged. Although relevant competent department set up the research group of informatization projects in colleges and universities in September, 2013, and the corresponding historical data are hardly acquired or summarized. The official data in 2005-2007 cannot be gained so far so that there is great regret existing in the basic data field about the current research. In addition, the project detail description still lacks the support of corresponding project declaration. Only the basic content of declaration can hardly support the data analysis.

Tightly following the theme of the project, Provincial Government Comprehensive Reform for Education Coordination, the relevant functional department of Shanghai Education Committee and Shanghai Economy and Informatization Committee used education informatization project management method proceeding in Guangzhou[20] and informatization project management mode in postal field for reference[21]. All the declaring information of informatization projects in colleges and universities each year have been saved step by step, and the declaring units have fulfilled annual budget since 2013. The basic information such as the stats of executing project and checking have been saved so that important information can be supported for declaring updating projects and maintaining projects in the future to make sure of the historical continuity and ductility

of informatization projects in colleges and universities.

CONCLUSION

With the implement of the project, Provincial Government Comprehensive Reform for Education Coordination, the problem in review about relevant functional departments of Shanghai Education Committee and Shanghai Economy and Informatization Committee is become more and more important. Especially with improvement of national financial and information technology, the requirements of constructing education informatization will be significantly increased, and the construction will be a growing part that the financial funds are used for education informatization. With the social attention increased year by year, whether due social efficiency and applying efficiency can come into being will be one of the important research content.

Through combing with the formulation of constructing Shanghai municipal campus informatization, coordinating competent department informatization projects and some measures such as saving historical declaring information, there exist possibility and operability of completely solving the problem, informatization project approval in colleges and universities. In addition, the project, Provincial Government Comprehensive Reform for Education Coordination, will be enriched with novel connotation and energy.

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