

A Critical Analysis on Enhancing Procurement Process in Public Sector Technical and University Education in Bangladesh

Dissertation submitted in partial fulfillment of the requirements for the Degree of Masters in Procurement and Supply Management

Submitted

By

Engr. S. M. Wazed Ali MCIPS

Student ID: 15182012

Approved by

Dr. Rizwan Khair

Supervisor

&

Director, BPATC

**Masters in Procurement and Supply Management
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**BRAC Institute of Governance and Development
BRAC University**

Dedicated

To

**My wife and children whose sacrifice
inspires me to handle the assignment**

Declaration

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Engr. S. M. Wazed Ali MCIPS

Student ID: 15182012

BIGD, BRAC University, Dhaka

PREFACE

This research has been carried out during the period of January, 2015 to July, 2015 in order to fulfill my requirement to complete my requirement for awarding 'Masters in Procurement and Supply Management'

My background knowledge in procurement especially in education sector inspires me to carry out the research work. Currently, I have been working as a 'Procurement Specialist' in Skills and Training Enhancement Project (STEP) – a donor aided project in Technical Education Sector. Prior to that, I worked in University Grants Commission of Bangladesh (January, 2005 to September, 2014) – the apex body of Higher Education Institutes. My working experience in education sector has inspired me to accomplish the thesis and furthermore, it has saved me considerable amount of time and effort.

In general, government officials have their limitations to share information publicly. In that sense, collecting data was the biggest challenge of this thesis. Keeping this into consideration questionnaire was so developed that it would not embarrass anyone and at the same time it would fulfill the objective of the thesis.

Hopefully, findings of this research work will help the policy maker to formulate future procurement management policy especially in project management pasture and will act as a tool for further research.

Engr. S. M. Wazed Ali MCIPS

BIGD, BRAC University

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Engr. S. M. Wazed Ali MCIPS

BIGD, BRAC University

ABSTRACT

The focus of this research is to identify weaknesses of present procurement process in Technical and University Education Sector for enhancing the process and to assess the requirement of external support in each step of Procurement Life Cycle.

This research has been conducted among the Principals of the Polytechnic Institutes and Technical Training Centers throughout Bangladesh and among the Subprojects Managers of the Higher Education Quality Enhancement Project (HEQEP) –who are mainly the senior university professors.

The study shows that there are lack of experience and knowledge along with organizational weaknesses which has resulted inefficiencies in procurement process. The mean requirement of external support is as high as more than fifty percent in Technical Education Sector and it is almost twenty-five percent in University Education Sector. However, requirement of external support varies from institute to institute.

From the findings of the study, we recommend a Central Procurement Support Service Unit for the Technical Education Sector for enhancing procurement process. On the contrary, we recommend that Planning and/or Engineering Division of every university can be developed to support procurement process within the university. We also recommend necessity of piloting Establishment of Procurement Support Service Unit.

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List of Abbreviations

AASCU	American Association of State Colleges and Universities
BBS	Bangladesh Bureau of Statistics
CFO	Chief Financial Officers
CIPS	Chartered Institute of Procurement (Purchasing) and Supply
CLAN	Center Led Action Network
CPTU	Central Procurement Technical Unit
CPAR	Country Assessment Procurement Report
DTE	Directorate of Technical Education
EED	Education Engineering Department
GNWT	Government of the Northwest Territories
HEQEP	University education Quality Enhancement Project
IBS	Integrated Business Services
IMA	Institute of Management Accounts
IMED	Internal Monitoring and Evaluation Division
LCC	Life Cycle Costing
LGED	Local Government Engineering Department
LGV	Local Government Victoria
NAEP	National Association of Educational Procurement
PI	Polytechnic Institutes
PLC	Procurement Life Cycle
PMU	Project Management Unit
PPOA	Public Procurement Oversight Authority
PPA	Public Procurement Act
PPR	Public Procurement Regulation

PSSU	Procurement Support Service Unit
PWD	Public Works Department
RFP	Request for proposal
SPM	Sub-project Manager
SSC	Shared Service Center
SSU	Shared Service Unit
STEP	Skills and Training Enhancement Project
TCO	Total Cost of Ownership
TTC	Technical Training Center
VAGO	Victorian Auditor-General's Office

CHAPTER-1: Introduction

1.1 Introduction

Procurement is imperative of every organization whether it is a public or private sector. In industrial sector success of an organization depends mostly on the efficiency and effectiveness of procurement. In government sector, where the organizations are providing services to the people and are involving in development of various social and economic indicators, transparency in procurement is more important in addition to efficiency and effectiveness.

In education sector, particularly in developing countries like Bangladesh where infrastructural and skill development is utmost important, need for efficient procurement is a major indicator of organizational success along with good governance. In this sector, as major thrust is on education, senior managers are mostly inexperienced in procurement. On the other hand, teachers are mostly involved in teaching-learning and in university education sector teaching-learning and research.

Unlike other sectors in Bangladesh education sector demands a different system of procurement process following same procurement rules and regulation of the country as procurement is not the primary responsibility of the teachers and researchers.

1.2 Background

Although purchasing has its long history, professionalism developing in procurement is very recent in Bangladesh. Educational institutes are far behind the race. Major procurement for educational institutes were in infrastructure development and which were performed (and currently performing) by Local Government Engineering Department (LGED) and/or Education Engineering Department (EED) and in few cases Public Works Department (PWD) for primary, secondary and technical education sector. Again, almost all the public universities have their own Engineering Department and main responsibility of procurement has imposed upon them. But, this engineering unit of the most of the universities is not well organized and again they are mostly involved in infrastructural development such as academic building, administrative building and related equipment.

It is to be noted that failure of timely procurement is very frequent in education sector and this results in excessive delays in completion of development projects. Furthermore, public procurement demands transparency, efficiency and effectiveness of procurement simultaneously that could not be achieved without professionalism.

Very recently (within last ten years) the education system of Bangladesh has been concentrating on: (i) to create skilled and trained manpower in various sector so that they can able to coup with the local as well as global demand; and (ii) to build a good number of highly educated people who will involve in research so that their innovation will boost up the development of various sector of Bangladesh. In order to achieve these, the Government has taken various quality enhancement initiatives such as training programs, research projects, development of web-based information management system etc. The country, on its journey, is taking grant and loan from various development partners in various projects. Notable of which are “University education Quality Enhancement Project (HEQEP)” in university education sector, and “Skills and Training Enhancement Project (STEP)” in technical education sector. There are also some other aided projects in primary and secondary education sector. All these activities demands huge involvement of teachers and academic managers into the procurement process.

If we want to make the teachers and academic managers efficient in procurement, the primary objective of teaching-learning and research may be hampered. Their attention may be diverted from education to procurement management by destroying their devotion in research, which may be an acute problem especially in university education sector and true enhancement of quality in university education will not be speedier as with the developed countries. Therefore, it is essential to introduce a special system of procurement in education sector which will ensure effective and efficient procurement in education sector without any adverse effect on teaching-learning.

Perhaps, no notable research has conducted about the development of procurement system of educational institutes in Bangladesh. Therefore a study is essential to **identify the problems/weaknesses of procurement system of the educational institutes and to find out a system of procurement that will reduce the administrative workload of teachers and researchers relating to procurement so that they can spend more time on research or institutional administration.**

1.3 Aims/Broad objective

The aim of the present study is to identify the weaknesses of procurement process in public sector technical and university education with a special emphasis on project management scenario.

1.4 Specific objectives

In this context, the specific objectives of this study are:

- Identify the weaknesses of present procurement process in public sector technical and university education institutes; and
- Propose ways to make the procurement system in public sector technical and university education institutes more efficient and effective.

1.5 Research Questions

- What are the problems/weaknesses in present procurement process in public sector Technical and University education in Bangladesh?
- Is there any need of external support in procurement process both in Technical and University education?
- How can the procurement process be made more effective?

1.6 Rationale of the study

Public procurement is considered as one of the major functions of the government. Every organization, government entities, policy makers and public procurement professionals have paid a great deal of attention to procurement process. The government has established CPTU (Central Procurement Technical Unit) for reformation and continuous updating of procurement process. But, public procurement has been treated as a neglected area of academic education and research. Till now, there is no department on public procurement in any public educational institute in Bangladesh. In this regard, procurement could have been treated as one of the potential area of research.

However, CPTU's initiative on reformation and updating of public procurement process is entirely on national level and in a more generalized form. Requirements of procurement process vary from organization to organization as expertise and efficiency in procurement are different. Due to lack of experience, educational institutes are more vulnerable to procurement. Therefore, a specialized system of procurement management which is different from the traditional system could have been beneficial to enhancing procurement process in education sector. Without detailed investigation/study on the requirement of education sector for procurement process, introducing any new system might yield negative results.

This study therefore focuses to find out the weakness of procurement process in educational institutes, in particular technical and university education and suggesting a better system for procurement process. Hopefully, this study could have been helpful for the policy makers to introduce an efficient and effective system of procurement process in education sector.

1.7 Research Methodology

“Research methodology is a way to study the various steps that are generally adopted by a researcher in studying his research problems systematically along with the logic, assumptions and rationale behind them” (Islam, 2008).

So far, there is no literature or research available on procurement process in education sector of Bangladesh, although there is plenty of literature available in context of other countries on various system of procurement in public sector. Procurement Shared Service Unit – a form of centralized support on procurement is becoming popular day by day across the globe. Therefore, literature review will be focused on the how the procurement system is addressed by other countries especially in their education sector. However, the research methodology will be combination of quantitative data analysis and qualitative concepts.

The quantitative research is the systematic investigation of quantitative properties and phenomena and their interrelationships. Its objective is to develop and employ mathematical models. It emphasizes the measurement and analysis of causal relationships between variables, not processes. Qualitative research is a field of inquiry that crosscuts discipline and subject matter which emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured [if measured at all] in terms of quantity, amount, intensity, or frequency. Qualitative researcher aims at gathering in-depth understanding of the human behavior and the reasons that govern human behavior. Qualitative research seeks the root cause behind various aspects of behavior. In qualitative research method the researcher typically concentrates on four methods of data collection: (i) participation in the setting; (ii) direct observation; (iii) in-depth interviews; and (iv) documents and material analysis (Islam, 2008).

In order to identify the weakness of present system and institution level need, a preliminary survey was conducted among the subproject managers of University Education Quality Enhancement Project (HEQEP) and Principal/Head of the polytechnic institutes and technical training centers. Among subprojects of HEQEP, 12 sub-projects were planned to taken for data collection within the public universities in Bangladesh.

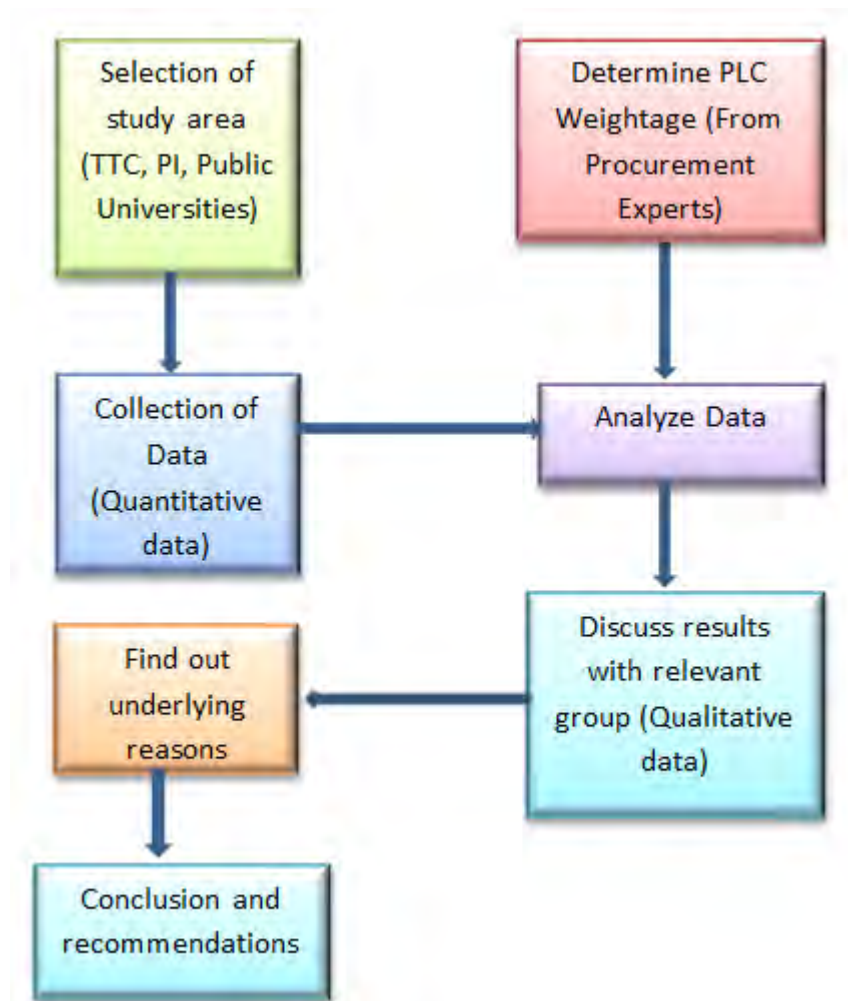
Among the Principals/ Heads of Polytechnic Institutes (PI) and Technical Training Center (TTC), considering the limitations of time, a sample size of 25 (twenty-five) were planned to be taken under survey.

Side by side, considering the volume, complexity and technicality of task, weightage of each stage of Public Procurement Life Cycle (PLC) was determined from averaging the weightage of 07(seven) procurement experts from various organizations.

Again, receiving the result of data, a discussion was made with the relevant group to determine the underline causes of results.

An overview of research methodology is presented through following flowchart:

Figure 1.1: Flow chart of Methodology



1.8 Sampling Method

The main objective of sampling method is to get actual field level scenario that reflect real weakness and necessity of procurement process in technical and university education sector in Bangladesh. Considering the constraints of the study, sample was selected on random basis all over the country and at the same time frequency of procurement was taken under consideration.

1.9 Data collection instrument

Apart from literature review, a self-administered questionnaire was developed to collect relevant data and information to verify the actual institutional scenario and the underlying assumptions for establishment of PSSU. Keeping the resource and time constraints under consideration, email and face to face communication both were applied for collecting data.

1.10 Limitations

Introducing of any new policy/system demands extensive study in various like to like organization and project. But, due to time and resource constraint we have taken only two World Bank funded project under study: (i) 'Higher Education Quality Enhancement Project (HEQEP)' in University Education Sector; and (ii) 'Skills and Training Enhancement Project (STEP)' in Technical Education Sector. If we could take more projects under study it might have yielded better results. However, it is assumed that these two projects would reflect the actual need of the procurement system of the institutes.

Again, a handsome number of samples are always better than a limited number of samples – which is again not possible with the scope of the study. In spite of these, it is expected that the findings of the present study will give a true picture of institutional need with an acceptable level of accuracy.

However, several limitations were faced during the research which justifies further research in this area especially in University education Institutes and Secondary Education Sector. The limitations were as follows:

- The Secondary Education Sector and University Colleges are not taken under the study – which may be a very potential area of further research;
- Initially it was expected that a good number of participants will respond to email. But, that has not happened actually and as result we have to constrict the sample size to 12 from HEQEP and 25 from STEP;
- Initially it was expected that the face to face interview will be conducted with some personnel at policy making level which actually was not possible because of time constraint;

- Only few months were taken for data collection but it needs at least one and half year for extensive data collection, which is actually beyond the scope of the study;
- Sample size was smaller. A larger sample size could have yielded better results; and
- Fraud and corruption issues are ignored under the study. If it had been considered, it could have added additional dimension to the study.

1.11 Outline of the study

The first chapter gives the overall introduction and objectives of the study. The second chapter gives the review of existing literature pertaining to the study area. The third chapter gives an overview of procurement scenario of technical and university education sector and the responsibilities of procurement professionals in the procurement lifecycle. The chapter-4 contains analysis of data and results and finally chapter-5 describes the findings of research questions recommendation and conclusion.

CHAPTER-2: Literature Review

2.1 Introduction

There are a good number of literatures on public procurement and shared services in procurement, but very few of them reflect the education sector and perhaps none of them are on education sector in Bangladesh. Here, the strategy of literature review is to find out the literature which might be contributed to enhance procurement process in education sector of Bangladesh.

2.2 A brief view of importance of public procurement

Public procurement refers to the process of acquisition by government and public entities of goods, works and services that are necessary to fulfill their mandate in provision of services and facilities to the general public (ITC-ILO, 2007). Overall development of a country relates with spending on procurement. "Purchasing is an important lever for public sector performance improvement, because, the spending base is quite large' (Husted and Reinecke, 2009).

In general, public procurement is driven not by profit motive but by service to the society at large and is influence by socio-political indicators. A number of principles should guide how public procurement should carried out: (i) value for money; (ii) open and fair competition; (iii) risk management; (iii) transparency; (iv) probity; (v) accountability; and (vi) ethical behavior (VAGO, 2007). Public procurement always focuses on the tangible and intangible benefit of the wider community. Therefore, public procurement should not only be efficient as the same time it should be effective.

The impact of the public procurement sector is not merely economic. Increasingly in recent years, public procurement has played a broader social and political role, notably through the emergence of sustainable procurement. Governments can use their purchasing power to promote social, industrial, and environmental policies and to catalyze more inclusive growth. For example, public procurement policy makers can influence business practices by requiring that goods or services procured meet specific environmental standards (e.g., the use of renewable energy or recycled materials) or respond to social concerns (such as gender equality or non-discrimination against minority groups in the workplace) (World Bank Group, 2015).

2.3 Procurement in Education Sector

Development in education sector especially in developing countries to a greater extent depends on the transparency, efficiency and effectiveness of procurement. Therefore, separate procurement policies have been developed in many countries and many researches have been conducted in various countries, both in developed and developing. Although, a very few of them matches with our context, they give us an indication that a

specialized model of procurement is essential for procurement process in education sector. Lutzer (May, 2015) has mentioned that “the financial leadership at university and colleges is increasingly seeking an innovative organizational model of procurement that can drive reduction in cost while maintaining high internal customer satisfaction. The hybrid model of center-led model has caught attention of Chief Financial Officers (CFOs) at academic institutions”. Institutions of higher education would be well served to be thought of in another category, separate from traditional agencies (AASCU & NAEP, 2010).

In 2009, Public Procurement Oversight Authority (PPOA) in Kenya has developed a “Public Procurement Manual for School and Colleges”, where they outlined eight strategies for public procurement. For procurement process three notable strategies are: (i) there should be continuous improvement of procurement processes by procuring entities to ensure simplicity, efficiency and cost effectiveness; (ii) procurement should be planned to enable prudent management of budgets and value optimization; and (iii) procuring entities should keep abreast of best practices for procurement of educational goods, works and services through benchmarking with similar entities to facilitate continuous improvement of the procedures.

In a research paper, Perry (2011) highlighted an apparent uneven and fragmented distribution of procurement services across the schools estate and recommended the establishment of a single infrastructure procurement service to ensure best value for money and to support quality assurance.

2.4 Major Initiatives to Enhance Public Procurement in Bangladesh

Following the recommendations of the Country Assessment Procurement Report (CPAR), 2002 the Government of the People’s Republic of enacted Public Procurement Act (PPA), 2006 and later on Public Procurement Regulations (PPR), 2008 to enhance procurement process in Bangladesh. Central Procurement Technical Unit (CPTU) under the Internal Monitoring and Evaluation Division (IMED) has assigned with the responsibility of policy planning and formulation. In addition to that, CPTU has taken a series of training on procurement to make the government officials conversant in procurement process. This proves very effective to enhance procurement process but not enough to educate all level people on procurement.

2.5 Shared Service Unit/Center and its application in various public sector

In general, a Shared Service Unit (SSU) is a central support unit for providing service in a specific area that abates wastages and inefficiencies through the reuse of resources.

Shared Services is a way of organizing administrative functions to optimize the delivery of cost-effective, flexible, reliable services to all “customers” (Administrative Services Transformation, University of Michigan, 2014).

A **shared services center** – a center for shared services in an organization – is the entity responsible for the execution and the handling of specific operational tasks, such

as accounting, human resources, payroll, IT, legal, compliance, purchasing, security. (Wikipedia, the Free Encyclopedia).

Shared service centers are deployed for a variety of reasons:

- to reduce costs of decentralization, to increase the quality and professionalism of support processes for the business;
- to increase cost flexibility for supporting services; and
- to create a higher degree of strategic flexibility.

(Janssen and Joha, 2006)

Very recently, the Chartered Institute of Procurement and Supply (CIPS) [previous name: Chartered Institute of Purchasing and Supply] has published a guideline under the title “Shared Services – CIPS Insight Guide” (CIPS Knowledge 2013) where the institute outlines the various dimension of Shared Service Unit including its benefits and risks. In the guide it is mentioned that Shared Services as a business model began to appear in the mid 1980’s as organizations strived to increase efficiency, by trying to reduce administrative costs while enhancing their effectiveness.

Shared Services provide an opportunity to reduce waste and increase efficiency through reorganizing resources and sharing investments between business units (CIPS: Shared Services).

Institute of Management Accounts, USA highlighted several benefit of shared services. ‘Proponents of shared services centers believe that the organizational efficiencies, cost reductions, and consolidated accountability that come with the centralization far outweigh the disadvantages. By consolidating services and data, organizations have the opportunity to achieve economies of scale and virtually eliminate redundancies....An additional benefit is the synergy and knowledge transfer that occurs when experts come together in the SSC with a common goal’ (IMA, 2000).

In this context, there is a growing demand for shared services in the public sector. The number of organizations commencing projects is increasing as well as the range of services being considered for shared services. Those taking the plunge and commencing such projects are moving closer to adopting standard products, joining user groups and are making headway on establishing the right governance structures (CIPS Knowledge, 2013).

2.6 Application of shared services concept in procurement

'Shared Services' has become a prominent operating model for business support services during the past two decades. Many large companies have implemented some form of shared services (Campagna et.al., 2013).

"Procurement Shared Services is the GNWT's (Government of the Northwest Territories, Canada) main procurement hub which assists departments, boards and agencies in managing their procurement needs. The shared services approach operates a centralized tender desk that receives most GNWT tenders and RFPs and aims to maximize procurement efficiencies and best practices in a consistent and transparent way" (Public Works and Services, Government of the Northwest Territories, 2014).

Along with extensive use of private sector, there are empirical evidences of use of share services concept in public sector. A research manager Gorham (2014) mentioned, "More recently, the shared services approach has become common in the public sector and services are increasingly being shared not just between departments but across different organizations (for example different local authorities sharing payroll or waste services). A survey in 2011 found that 89% of English local authority organizations now share back office functions, front line services or a combination of the two with other local authorities or public bodies. Where services are shared between public sector organizations, there are a number of options in terms of how the shared services can be delivered, and who by for example, organizations could simply collaborate to share parts of a particular service such as procurement; one of the organizations could take on responsibility for the services of another; services could be jointly managed between organizations; or a new and separate organization could be created to take full responsibility for the delivery of services.

"More than 35 Victorian councils have successfully participated in Collaborative Procurement and Shared Services projects with Local Government Victoria (LGV) since 2012. With an emphasis on 'collaborative effort', participating councils have been able to broaden the range of projects beyond that of traditional procurement activities." (Department of Transport, Planning and Local Infrastructure, State Government, Victoria, Australia)

In general the varieties of organizational structures in public procurement operations would include the following forms: shared service, decentralized and hybrid structures (Trautmann et.al, 2009).

In an International Public Procurement Conference Proceedings (21-23 September, 2006) it was opined that *the role of procurement as a shared service between different organizations has had little attention. Indeed procurement is generally concerned with centralization/ decentralization within the same organization* (Murray, Rentell and Geere, 2006).

2.7 Summary

There are plenty of literary evidences of Shared Services in Public Sector along with public procurement. Because, it is a contemporary and emergent concept in procurement and benefit of this has been proved and acknowledged by many organizations, although it is still virgin in many other organizations. Furthermore, through literary evidences, it is discernable that 'Procurement Shared Services' model maximizes procurement efficiencies and best practices in a consistent and transparent way. This also enhances 'collaborative effect' within the organization through sharing of knowledge and experience.

However, literary evidences attributed to: (i) continuous improvement of procurement processes through ensuring simplicity, efficiency and cost effectiveness; and (ii) innovative organizational model of procurement that can drive reduction in cost while maintaining high internal stakeholder's satisfaction. Therefore, our next task will be to analyze our environment whether the shared services concept could have been used in technical and higher education sector in Bangladesh.

CHAPTER-3: Scenario of Procurement in Public Sector Educational Institutes in Bangladesh

3.1 Introduction

There are 37 public universities, 49 public polytechnics and 66 technical training centers in Bangladesh. There are also 260 government colleges and a good number of government vocational institutes in Bangladesh (BBS, 2015). However, colleges and vocational institutes are beyond our study area. Most of the universities have their Engineering and/or Planning Division which lies with the responsibility of procurement. But, they are not capable enough to support all sorts of procurement. In particular, there is lack of experience in donor aided project's procurement in the universities. On the other hand, no polytechnic institute or no technical training center has their own procurement unit and lacks of experience in them are more prominent.

Higher Education Quality Enhancement Project (HEQEP) is the biggest among all government and aided projects in higher education sector which covers all public universities and few private universities. The project has been started in 2009 and will end in 2019. Side by side, Skills and Training Enhancement Project (STEP) is the biggest project in technical education sector which covers all polytechnics, technical training centers and few selected vocational institutes. STEP started in 2010 and is expected to be completed in 2019. Among several quality enhancement projects in education sector, these are two important projects for enhancing quality and generating skilled manpower. Procurement activities of both the projects are much diversified. Lesson –learning from current procurement system of these two projects will be helpful to identify strengths and weaknesses of prevailing procurement procedure and suggest a better procurement management support system ensuring simplicity of implementation.

3.2 University education Quality Enhancement Project (HEQEP) and its Procurement System: At a glance

The overall objective of HEQEP is *to improve the quality and relevance of the teaching-learning and research environment in university education institutions through encouraging innovation within universities and by enhancing the technical and institutional capacity of the university education sector* (Revised Development Project Proposal, Higher Education Quality Enhancement Project, September 2013). It is a very handy project for creating teaching-learning environment in University education Sector. Overall management of the project lying with Project Management Unit (PMU) located in Dhaka.

Higher Education Quality Enhancement Project has five major components of which Academic Innovation Fund (AIF) component is the biggest one. Except this component,

procurement of all other components is centralized. AIF has around three hundred sub-projects and a good number of which are research projects and managed by the university-teachers. Another promising objective of these research-projects is innovation in such areas that output/outcome of the researches gives immediate benefit to the industrial and agricultural sector. Therefore, collaboration and co-ordination with the industries has become another essential task for the university-teachers and accordingly HEQEP has introduced a new Window (*Window – 4: Innovation and University-Industry Collaboration*) in its revised project document (*Revised Development Project Proposal, Higher education Quality Enhancement Project, September 2013*).

To support procurement process of subprojects and central procurement there are five procurement specialists working in the project. The specialists are involved heavily in entire procurement process in case of central procurement which is directly managed by Project Management Unit (PMU). But, in case of sub-project, SPMs (Sub Project Manager) are mainly performing procurement activities where procurement specialist are only verifying the tender documents, bid evaluation report etc. instead of playing major roles in procurement.

Sub-project procurement has imposed extra workload to university-teachers who are mostly inexperienced in procurement. The PMU has provided training on procurement to them so that proper utilization of fund becomes possible. From procurement point of view, it gives excellent results. But, in context of ultimate objective of the project it is not conclusive. Again, as the teachers are mostly inexperienced in procurement, one/two short training is insufficient to give them full confidence in procurement. Therefore, in one way or other way they have to spend a considerable time in procurement resulting in less concentration in research and consequently output/outcome of research does not reach the desired level.

Recently, a limited centralized support service system has been established at HEQEP to support e-GP and a consulting firm deployed to make the system operational. The consulting firm will provide hands-on training on e-GP system to the sub-project managers. They will also train a group of interested potential bidders about the system. In reality, the system will enhance the e-procurement process, but will not trim down the workload on procurement of sub-project managers.

3.3 Skills and Training Enhancement Project (STEP) and its Procurement System: At a glance

The overall objective of STEP is *strengthening selected public and private training institutions to improve training quality, and employability of trainees, including those from disadvantaged socio-economic backgrounds* (Development Project Proposal, Skills and Training Enhancement Project, June 2010). This project is very effective for attenuation of unemployment by creating a good number of skilled manpower.

STEP has many packages for procurement in the public and some private polytechnic institutes and technical training centers which are managed by the principal/head of the

institutes. Project Management Unit (PMU) located in Dhaka holds the responsibility of managing such projects.

Major procurement at STEP is centralized. In spite of these, there are a large number of small packages at institutional level. Although, principals/heads of the institutes are not engaged in research; they are policy planners in technical education sector and are mostly involved in teacher and student administration giving less concentration in procurement. Linking with the industries is another emerging and challenging task for the principals/heads and this is very crucial: (i) to ensure job for students and trained manpower; and (ii) to provide a need-based education and training. In fact, there is a reciprocal relationship in designing training module and industrial needs. Again, development of industrial linkages with the institutions is one of the major objectives of the project.

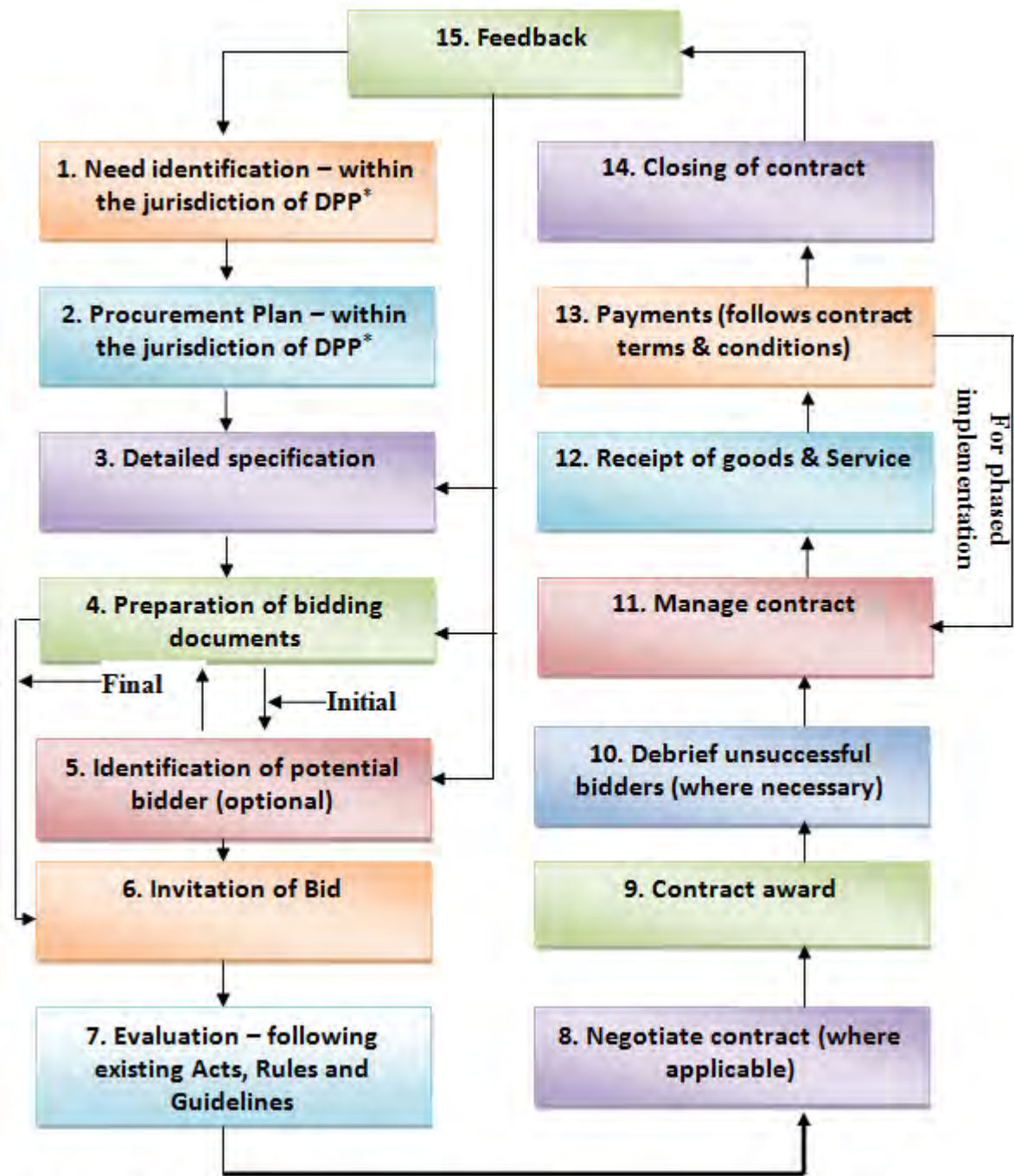
In this context, STEP has provided training on procurement to the principals/heads of the institutes. In spite of this, as they are less experienced in procurement, they treat the assignment as secondary. As a result, they frequently sending faulty tender documents, faulty tender evaluation documents to the PMU, resulting in excessive delays in procurement. There are also some social reasons (such as collusive practice, corrupt practice) and in few institutes these problems are acute which make the principals/heads less interested in procurement. Again, delay in procurement retards the development of the institutes.

Addressing the problem mentioned above, STEP has hired three short term procurement consultants experimentally (in addition to two consultants for supporting procurement of PMU) to provide hands-on support to the principals and head of the institutes in preparing bidding documents along with whole bidding process and this is giving excellent results and which gives us a clear indication about the efficient and effective procurement management system in addressing the problem stated earlier. In spite of providing training to the institute heads, excluding central procurement field level cumulative procurement of STEP was only 21% in last three financial years, which has become more than double in last six months, after deployment of three procurement specialists to give hands on support to the institutes (Project Management Unit, STEP).

3.4 Procurement Life Cycle (PLC) in Public Sector and Contextual Responsibilities of procurement professional

As transparency of utilization of public money is a big issue, Procurement Life Cycle (PLC) of public sector procurement has to maintain more rigorous procedure than private sector procurement. The Chartered Institute of Purchasing and Supply (CIPS) of UK has described a ten- step procurement cycle for procurement of goods or services (Reynolds and Thompson, 2013) whereas, EU competition procurement cycle for goods and services has thirteen steps to complete procurement cycle (Baily P. et. al., 2008). The general public procurement life cycle of goods and services in Bangladesh can be presented through following diagram:

FIGURE 3.1: PUBLIC PROCUREMENT LIFE CYCLE



*approved Development Project Proposal (DPP)

Now, let us now discuss the responsibilities in each step of procurement life cycle.

The first step of PLC is identification of needs which is purely an organizational or institutional activity which generally emerges from organizational need and therefore procurement professional need not to provide much attention in this step.

The second step is the procurement plan. Without a realistic procurement plan, it is almost impossible to perform procurement activities within planned time and budget. *Good planning before undertaking a procurement process (and documentation of these planning efforts) is a key contributor to project success* (Andrea Deme, 2009). *Significant procurement planning and development of sound procurement strategies lead to consistently better value for money; higher quality project and service delivery; improved opportunities for sustainable procurement; and reduced risks to the agency* (Procurement Transformation Division, Queensland Government, April 2014). Moreover, it is not possible to produce a realistic procurement plan without adequate experience in procurement. As the sub-project managers, principals/heads have little experience in procurement; procurement professionals have to provide hands-on support to prepare procurement plan or they have to prepare the procurement plan by themselves.

The third step 'specification' is very crucial and it will actually reflect the performance of goods or service, which should be matched with resource constraints. The right specification is that specification which reflects the organizational need and resource constraint. Writing specification is the primary responsibility of the unit of the organization from where demand has been generated. But, it requires lot of support from the procurement professionals. Eley (2007) views, "the successful drafting of specifications is one of the most important responsibilities of a professional purchasing officer". For procurement of goods, there two common types of specification: conformance specification and performance specification. Although institutes are normally used to writing conformance specification that frequently incur excess cost in fulfilling organizational purpose. In a simple word, performance specification is that specification which says what can be done by the equipment, rather than what the equipment contains. Life expectancy is of course a big consideration here. However, in writing specification whether performance or conformance, it needs a lot of market information. Here, procurement professional has to provide market information, considerations needed for performance specification etc.

Preparation of bidding documents is a burdensome process and it actually laid the foundation of 'five rights' of procurement. The aim of procuring entity is to obtain goods/ services of the right quality, in the right quantity, at the right place, at right time, and right prices (CIPS, 2010). Selection of right supplier, for example supplier should free from any ineligible criteria arising due to regulatory or political reason is also very important. A bidding document should address all the issues.

A bidding document should be transparent, clear, meaningful and free from any ambiguity and biasness. Contract management policy guideline should be incorporated in bidding document and this requires high level of professionalism in procurement. Sometimes, especially for critical goods or services, identification of potential bidder or short-listing of bidder becomes evident before floating of bids. Procurement professionals have the sole responsibility to accomplish these activities on behalf of the institutes. Sometimes,

institutes/projects arrange a pre-bid meeting where the procuring entity extensively discusses the purpose of the bid/assignment; seeking opinion from the potential bidders; and finally the entity makes some modifications on their requirements. Here again, procurement professional should be the key player.

Another important consideration in preparing bidding document is setting evaluation criteria. It is frequently observed that some of the goods with low initial cost has high maintenance cost and conversely those with high initial cost has low maintenance costs. For example, a car with low purchasing value might have high fuel requirement and high expenditure against spare parts than that with high purchasing cost resulting in higher cost during its lifetime. For this reason, Life Cycle Costing (LCC) or Total Cost of Ownership (TCO) is becoming popular day by day. Inclusion of LCC as an evaluation criteria will provide an excellent tool for making a selection among the competing contractors; useful in reducing the total cost (Dillon, 2013). However, life cycle costing or other criteria for evaluation should be incorporated in the bidding document and should be matched with the specification included the bidding documents. All these activities demands high level of proficiency in procurement.

The sixth step of procurement cycle is invitation of bid. This essentially a part of bidding document and procurement professional has to prepare this document on behalf of the procuring entity.

In public procurement, there is an evaluation committee which performs evaluation of bids. There is a very little scope to show elegance in evaluation process. The smart evaluation is that evaluation which conforms all terms and conditions as outlined in the bidding documents and also within the legal framework under which the organization operates. However, in principle, the evaluation process should include not only the analysis of the potential supplier's response to the main subject matter of the requirement set out in the ITT, such as price, delivery, quality, methodology, for example but also, most importantly, the quality of the bidder's offer (Else, 2007). Preparation of evaluation report requires high level of expertise following confidentiality of the process.

In general, negotiation is prohibited by law in public procurement for supply of goods. But, in service sector it is evident. Negotiation is an art, and it demands extensive knowledge on procurement environment which is generally not sufficient at institutional level. Even well-intentioned negotiators can make three crucial mistakes: failing to negotiate when they should, or negotiating when they should not, or negotiating when they should but choosing an inappropriate strategy (Lewicki et. al., 2007). It has been observed that institutes in Bangladesh do not have such level of proficiency.

Awarding contract and debriefing are very straight forward steps and needs very little effort and expertise.

Contract management is a crucial stage for successful implementation of work, delivery of goods or completion of assignment. In public sector, contract management demands judgmental relationship among the parties involved in the contract. Adversarial relationship between procuring entity and the supplier or the service provider is frequently observed in public procurement, which might downgraded the quality of goods, works or services. However, contract management in public sector is generally guided by the terms & conditions outlined in the contract documents. This again reminds us the necessity of a good bidding document – a crucial task of procurement experts.

Receiving goods/services and payment to the bidder/service provider should be accomplished in accordance with terms and conditions that have settled in contract agreement and procurement professional has the responsibility to remind the terms and conditions of receiving goods that will ensure quality of supply. It may be mentioned here that main responsibility of receipt of goods and/or services lies with the person(s) assigned by the organization, and finance unit has the responsibility for payments.

Closing of contract is a very straight forward step and normally done by the organization. However, procurement professional can gather some lessons from all steps and provide constructive feedbacks to the organization.

Therefore, it requires high level of proficiency and experience is essential in many areas of the procurement life cycle

CHAPTER-4: Analysis of Survey Results

4.1 Introduction

This chapter analyzes the result based on field survey questionnaires. For the sake of ease of understanding, results are presented both in graphical and/or tabular form. The interpretation of results has also been presented. For details see the tables of results of the survey in Annexure- II of this study.

4.2 Nature of field level study

Throughout chapter-3 we have discussed briefly the scenario of public procurement and requirement of proficiency in the procurement lifecycle. Our next job is to find out level of proficiency available at institute level. Therefore, we developed a questionnaire for field level survey to get the views of institutional managers and institutional proficiency. Questionnaires for field survey is attached in **Annexure-I**.

As mentioned earlier, our aim is to identify the weakness and strength of the institutes in procurement and propose an enhancing procurement process. In this context, the questionnaire was developed in such a way that it will provide sufficient information on strengths and weaknesses of the institutional managers and it also reflect their views on requirements. In some cases, managers might be unwilling to express their weakness directly and keeping this in mind, the questionnaire has been developed to capture the facts as far as possible. The questions 1-9 in the questionnaire (for details, please see Annexure-I) reflect the institutional strengths and weaknesses, and question 10 reflects the institutional demand of external support in procurement. Question 11 is an open- ended question to express the opinion of the respondents.

However, a separate survey regarding determination of weightage in each stage of procurement cycle has been conducted among 07 (seven) procurement experts of several organizations. The results of this survey have been shown in Table: 4.2 later on.

4.3 Core responsibility of the Principals and SPMs

This survey has been conducted to determine the area of major responsibilities of the target group. Result shows that core responsibilities of the respondents confined into three areas. In technical education sector only 24 percent of the respondents mentioned procurement as their core responsibility along with academic management and administration. On the other hand, none of the respondent mentioned procurement as their core responsibility in the universities. The details are depicted in the figures below:

Figure 4.1.1: Core responsibility of Principals

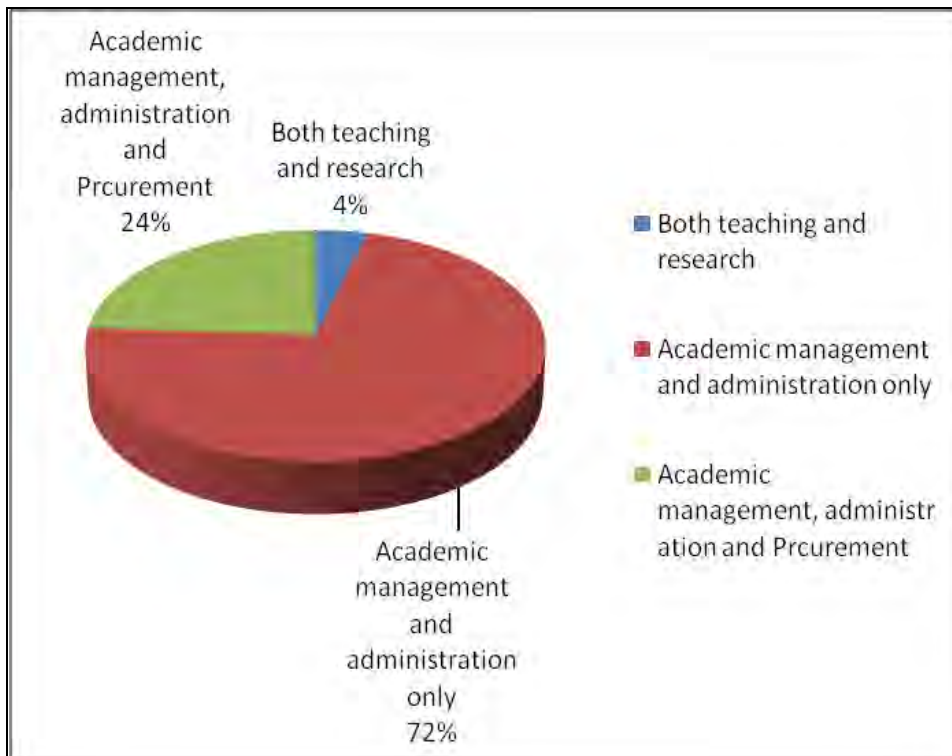
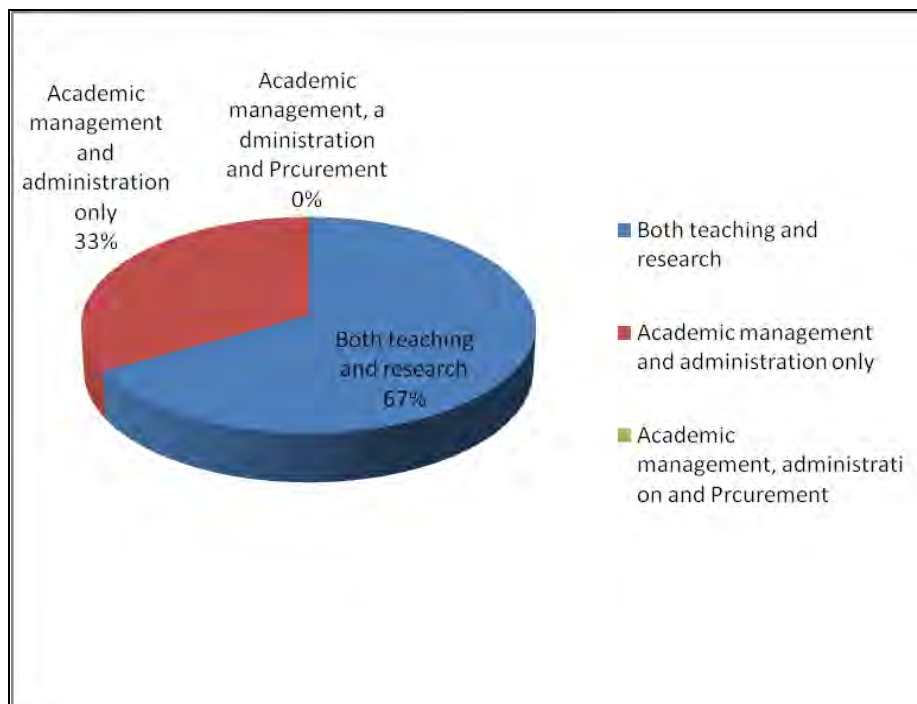


Figure 4.1.2: Core responsibility of SPMs



4.4 Experience in procurement with respect to overall professional experience

Table 4.1: Average Experience Record

Average Experience	Technical Education Sector	Public University Sector
Overall experience	22 years	22 years
Experience in procurement	05 years	04 years
Ratio of Experience in Procurement/Overall experience	0.23	0.18

Interestingly, average overall experience in both the sector is same, but experience in procurement in technical education sector is relatively higher than public university sector, although both is very low compared to overall professional experience.

4.5 Principals and SPMs feeling on procurement process

Figure 4.2.1: Principals feeling on procurement process

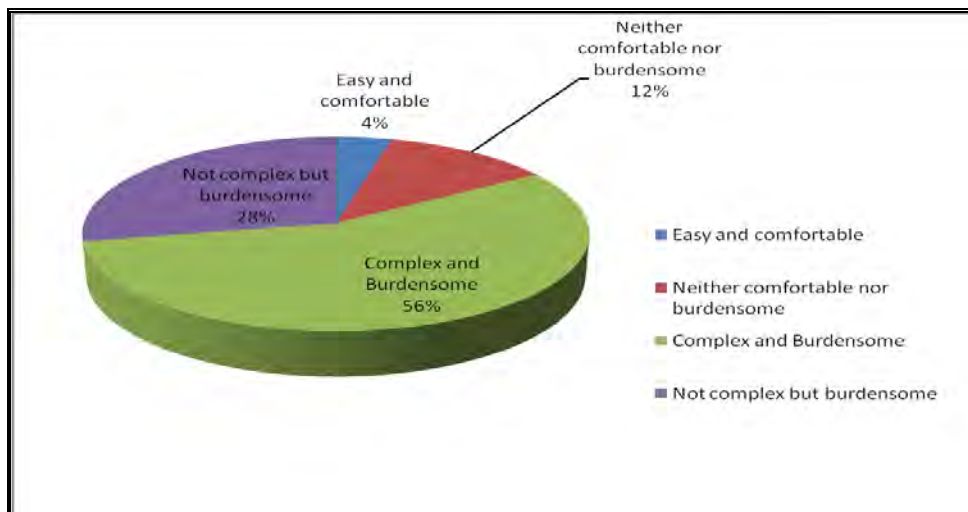
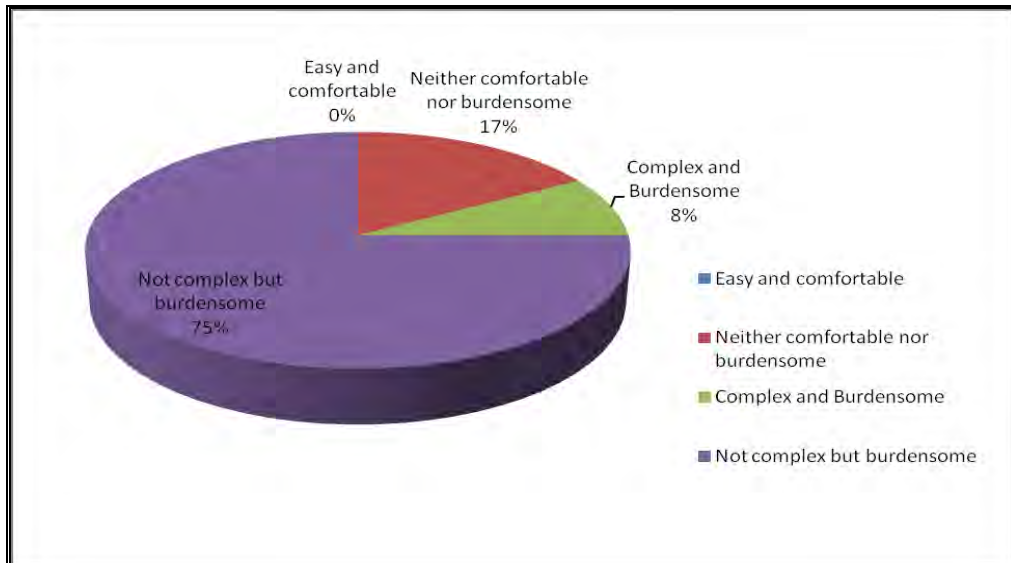


Figure 4.2.2: SPMs feeling on procurement process



From the collected data it has been observed that 84 percent (56% +28%) of the respondents among the principals feels procurement as a burdensome process, where percent feels procurement as both complex and burdensome. Almost same percentage (83% [75% + 8%]) of SPMs in public universities feels the process as burdensome, but only percent of which feels the process as complex.

4.6 The extent that procurement process hampers core responsibility

Figure 4.3.1: Extent of procurement process hampers core responsibility of principals

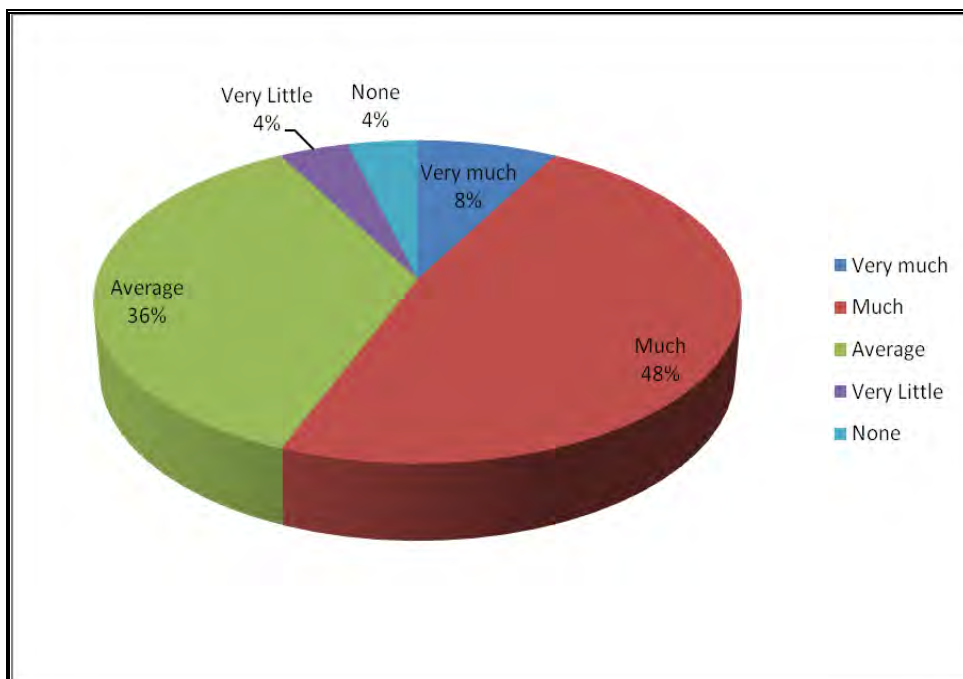
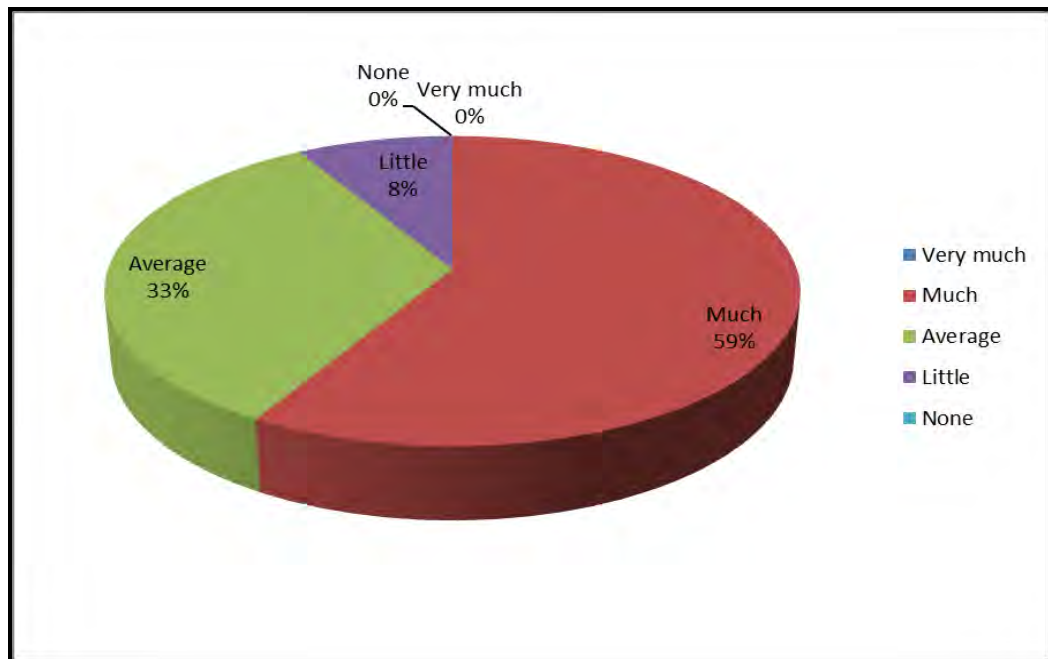


Figure 4.3.2: Extent of procurement process hampers core responsibility of SPMs



More than 50 percent (56% [48% +8%] of principals and 59% of SPMs) of the respondents in both groups opined that procurement process hampers their core responsibility considerably. About one third in both sector (33% of the principals and 36% of the SPMs) considered it as average.

4.7 Number of staff available for procurement

Figure 4.4.1: Number of trained staff available for procurement of Principals

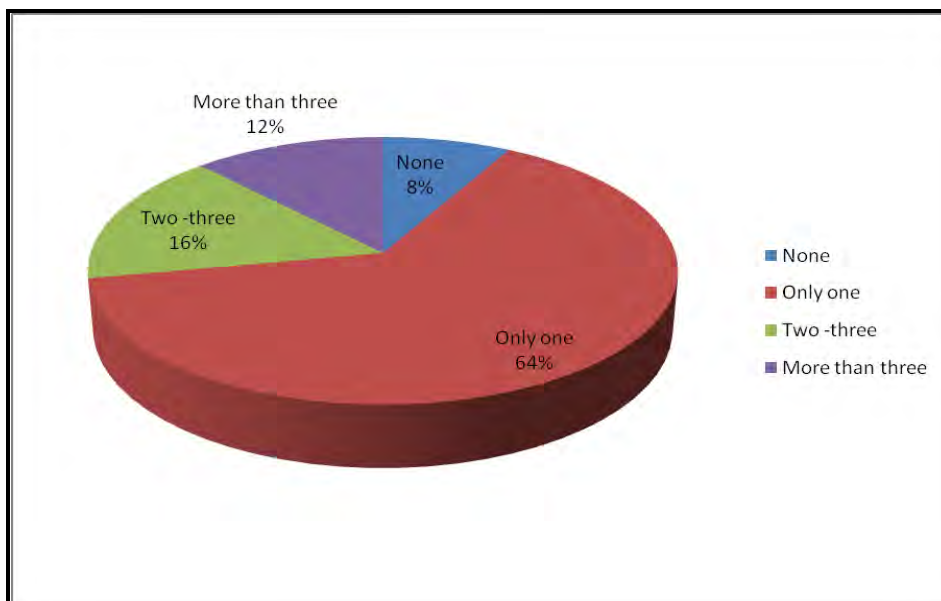
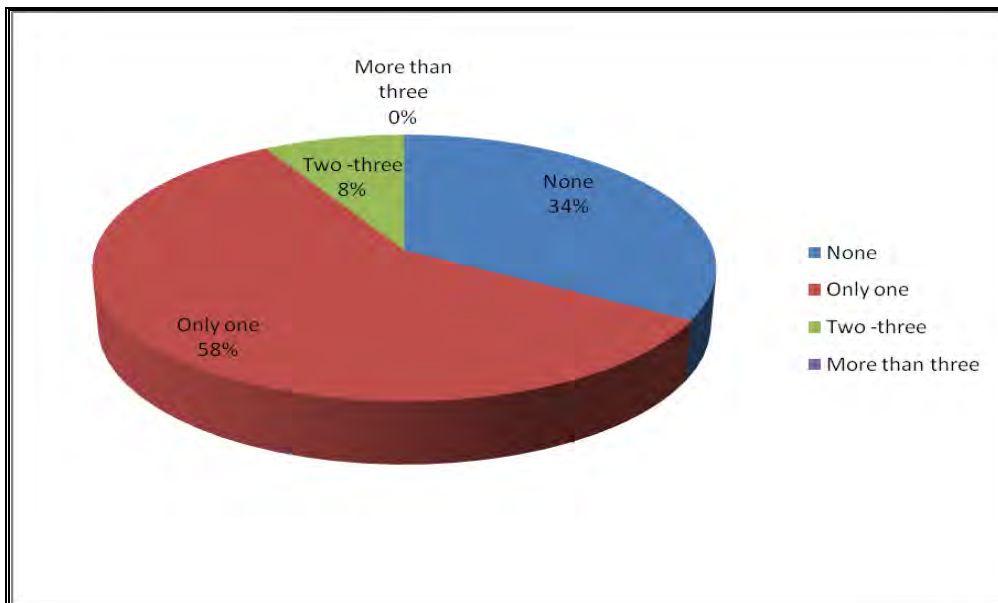


Figure 4.4.2: Number of trained staff available for procurement of SPMs



Only 8 percent respondents among the principals of institutes mentioned that they have no trained staff for procurement, whereas, 34 percent of the SPMs of public universities have no trained staff for procurement. Furthermore, 64 percent of the principals and 58 percent of SPMs have only one trained staff for procurement. Therefore, there is a strong crisis of regular trained procurement staff in both groups.

4.8 Capability of the staff/organization in procurement process

Figure 4.5.1: Capability of procurement of the Principals

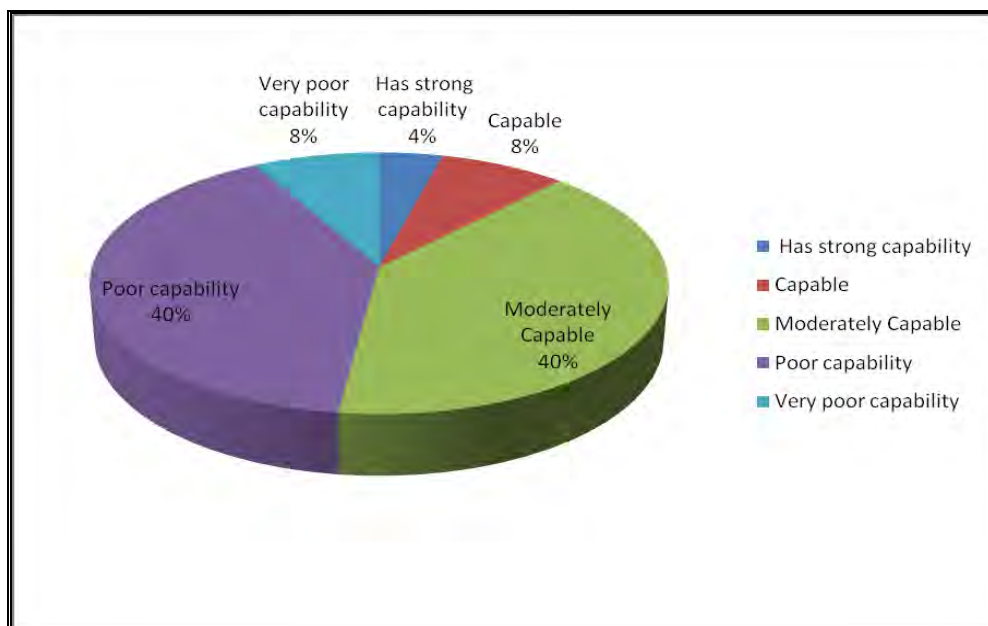
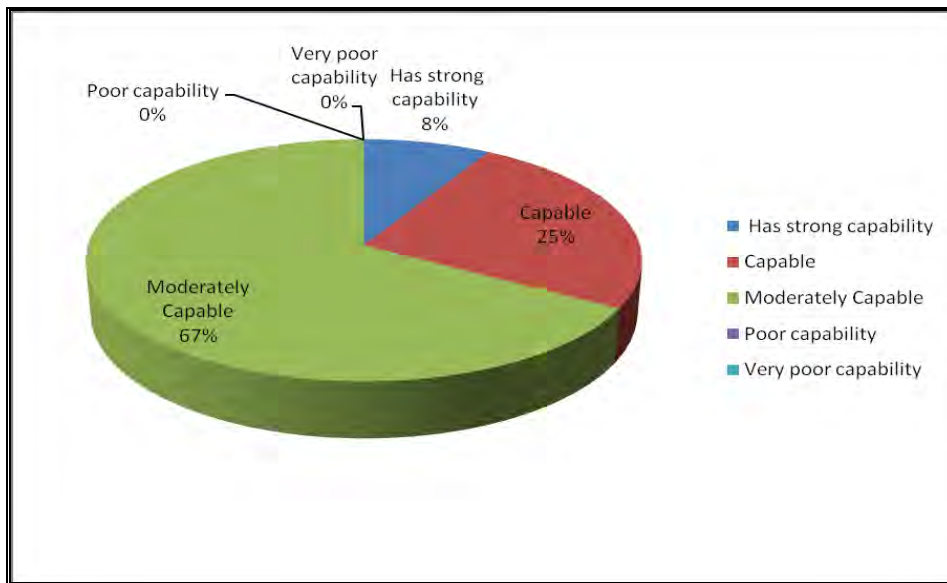


Figure 4.5.2: Capability of procurement of the SPMs



Interestingly, two different scenarios reflected from two groups. Forty-percent (40%) of the principals mentioned that they have poor capability in procurement and 8 percent of the same mentioned that they have very poor capability in procurement. On the contrary, none of the SPMs mentioned that they have poor capability in procurement.

4.9 Frequency of external support taken by Principals and SPMs in procurement process

Figure 4.6.1: Frequency of external support taken by the principals

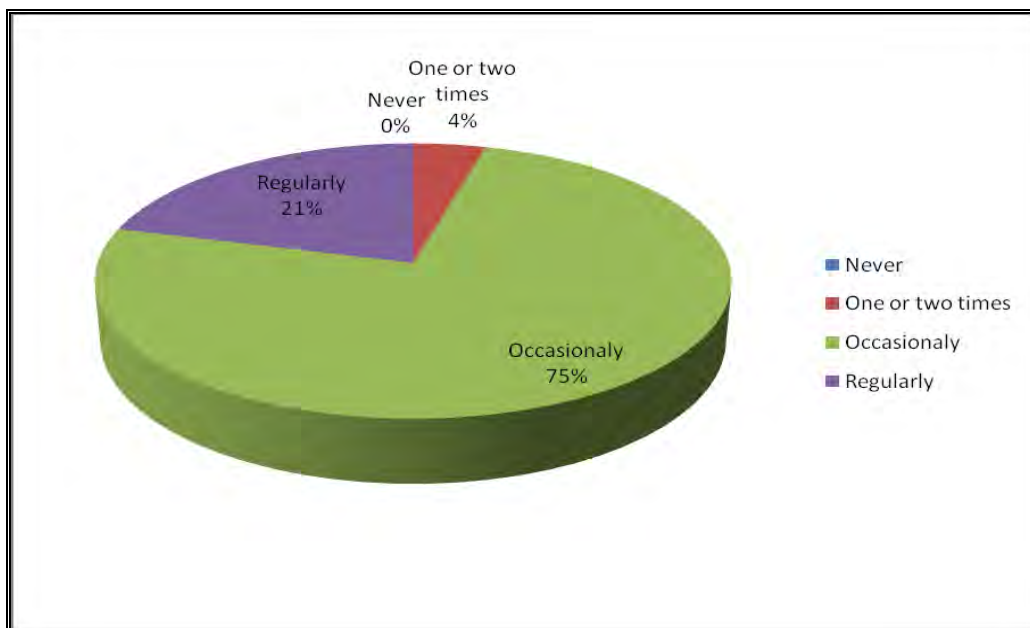
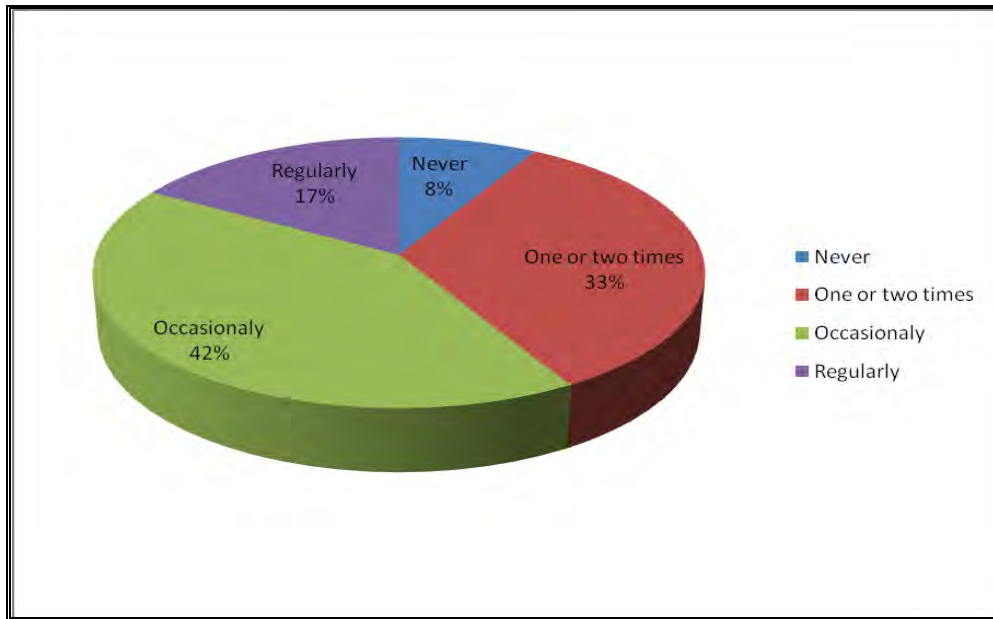


Figure 4.6.2: Frequency of external support taken by the SPMs



From the results, it is evident that majority of both group has taken external help in procurement process. Every principal has taken external support and only 8 percent of the SPMs have never taken external support in procurement process.

4.10 External support demanded by the Principals and SPMs

Figure 4.7.1: External support demanded by the principals

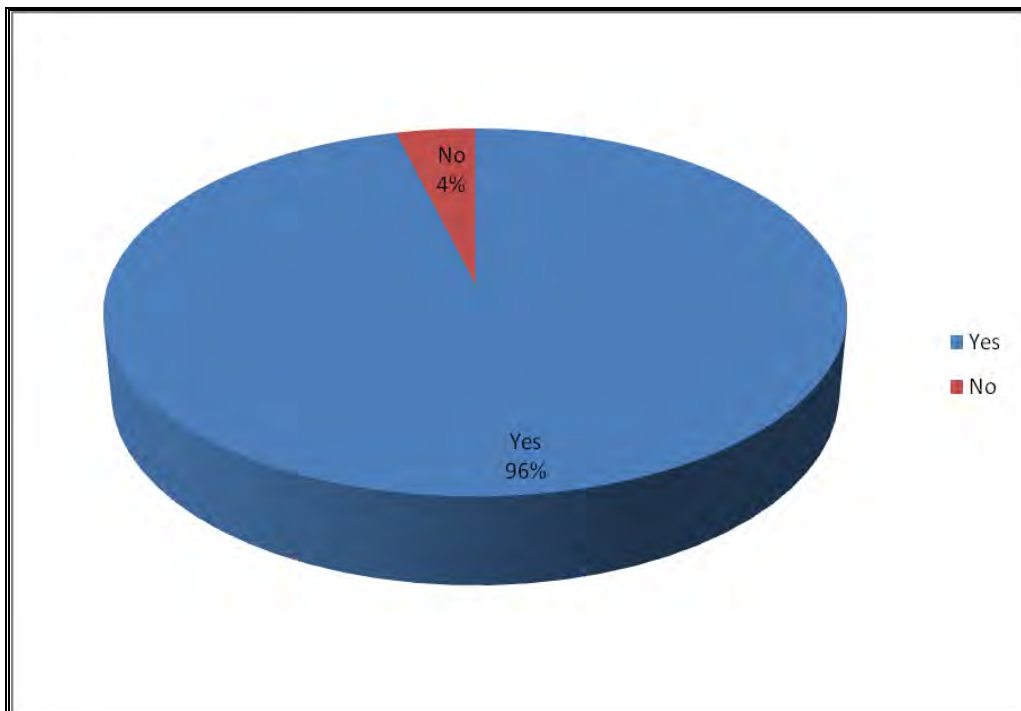
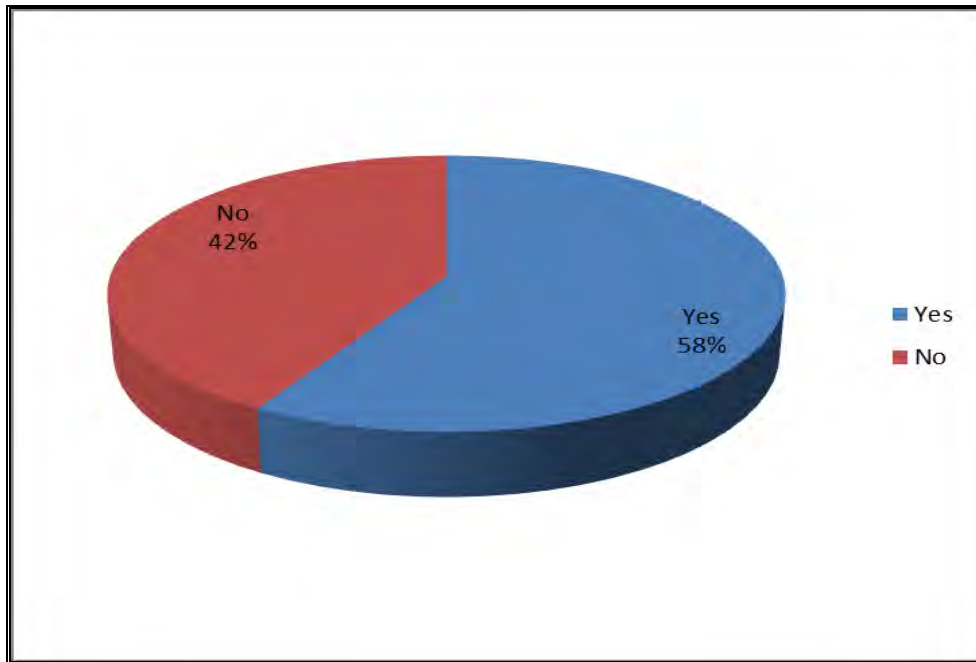


Figure 4.7.2: External support demanded by the SPMs



Therefore, there is a very high demand (96%) of external support in procurement process in technical education sector compared to 58 percent demand by the SPMs, although only 8 percent of the SPMs have never taken external help.

4.11 External support demanded by the Principals and SPMs in each step of Public Procurement Life Cycle

Figure 4.8.1: Percentage of Principals demands step wise external support

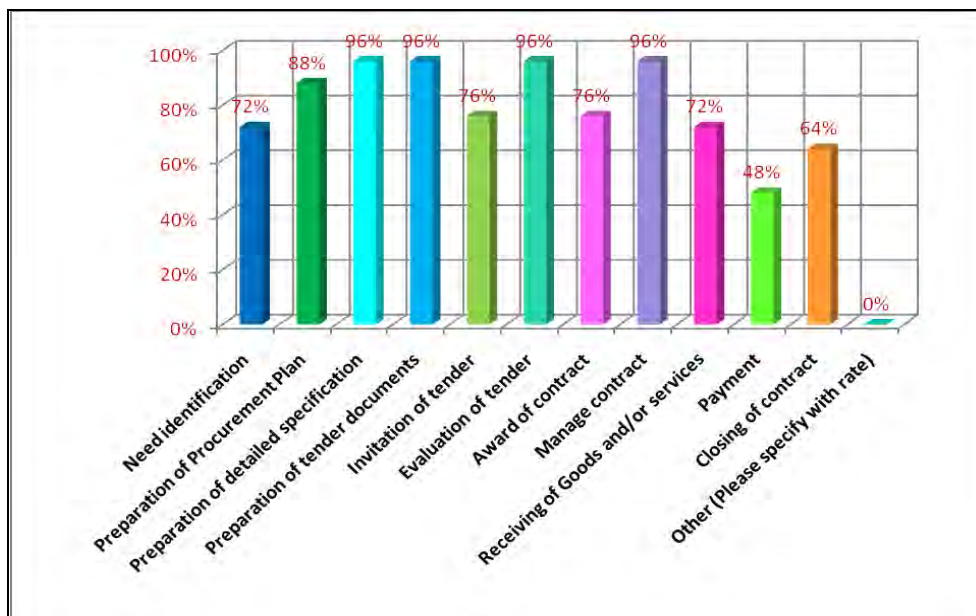
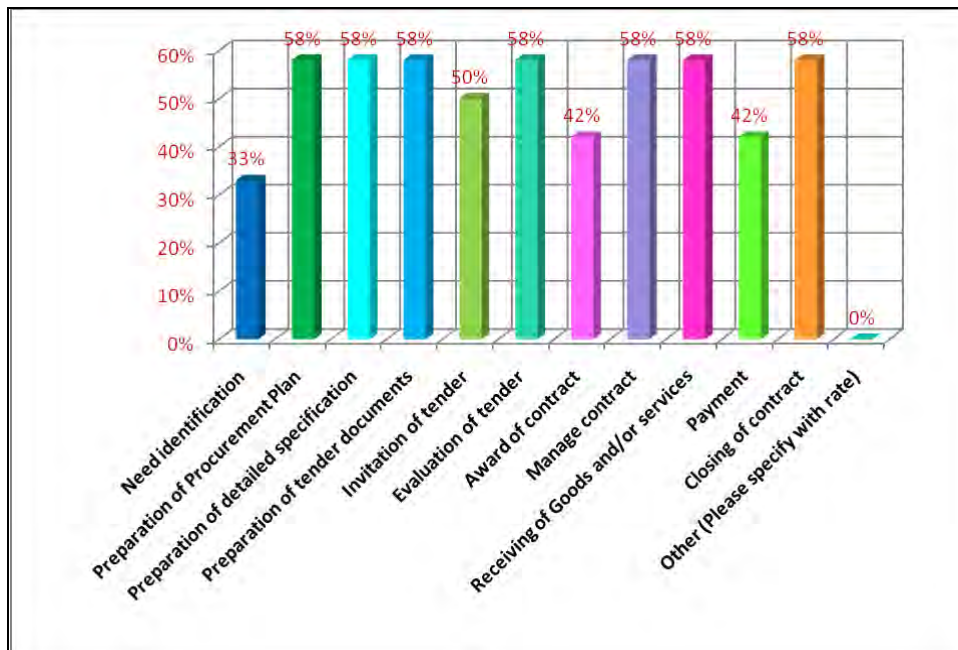


Figure 4.8.2: Percentage of SPMs demands step wise external support



The survey result shows that 96 percent of the principals need external support in different stages of procurement cycle. Highest requirement has been observed in preparation of detailed specification, tender documents, evaluation of tender and contract management. In contrast, maximum 58 percent of the SPM of universities need external support in one or more stages in the procurement cycle.

However, extent of support required in each step is not same. We have considered five ratings (0-4) for each step of PLC, where 0 – No support required; 1- Only suggestion through phone/email; 2 – Only cross-checking; 3 – Suggestion and cross-checking; and 4 – Full hand-on support. The following two figures reflect the extent of support required by the percentage of Principals and SPMs in the PLC:

Figure 4.9.1: Extent of support required by the percentage of Principals in each step of PLC

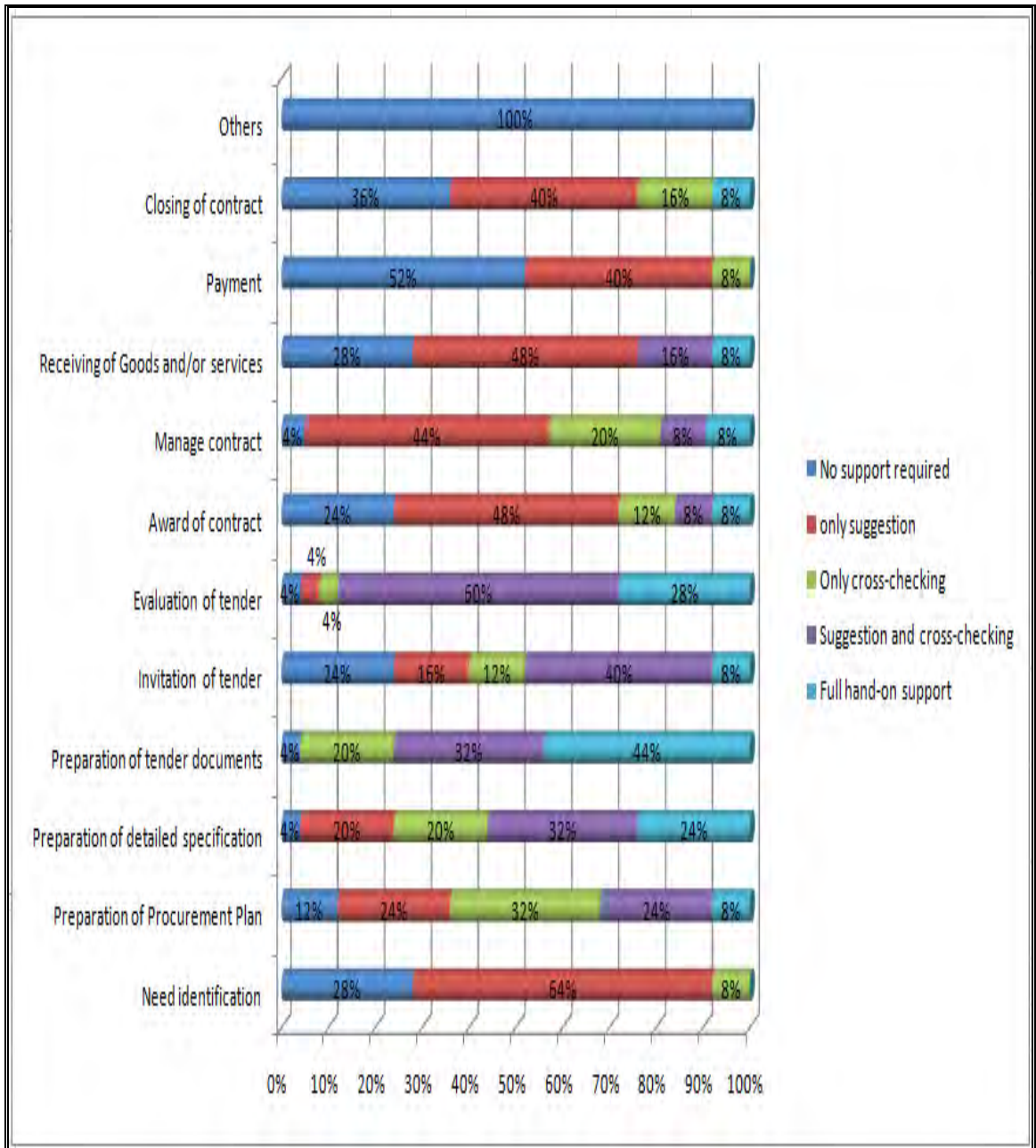
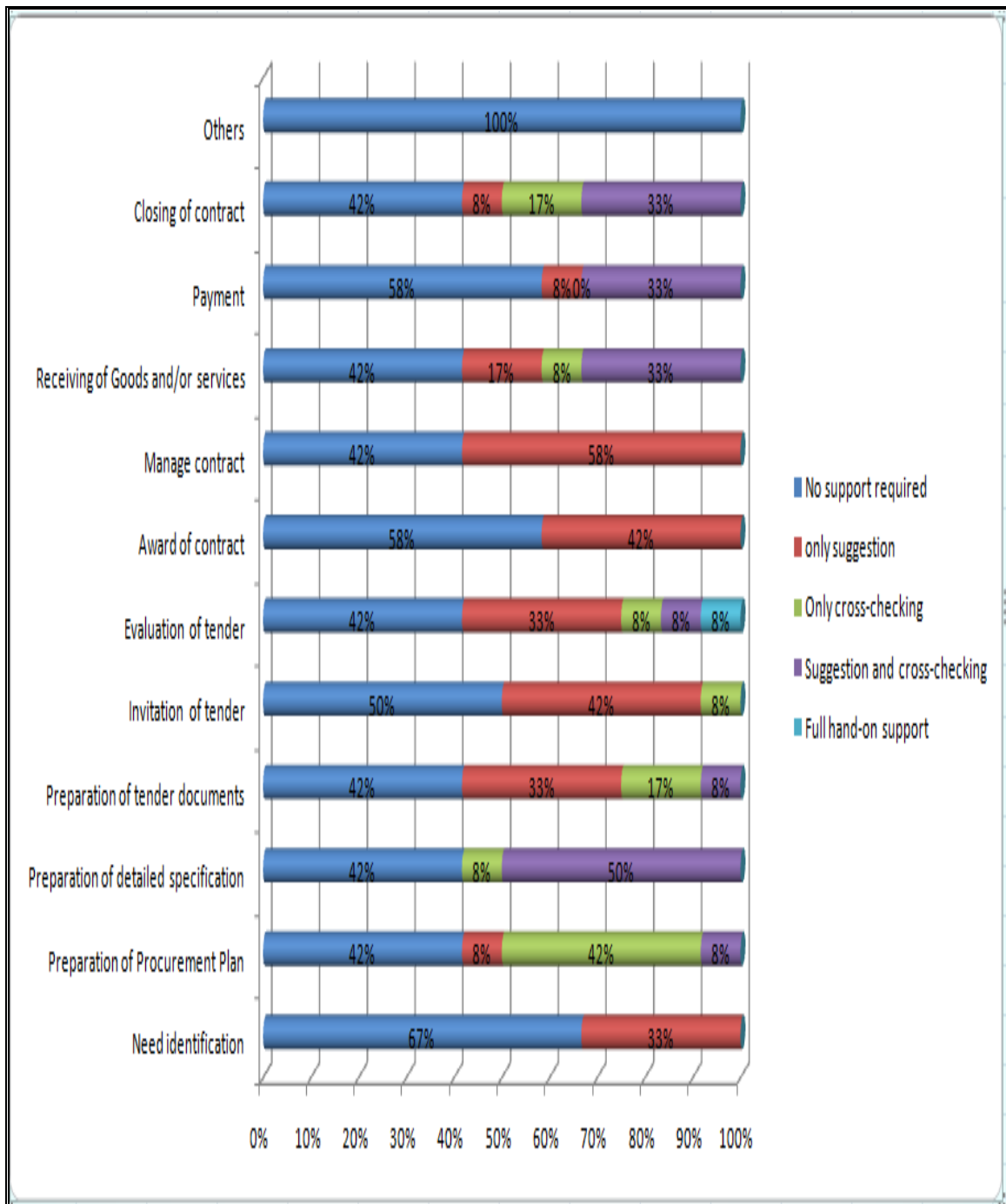


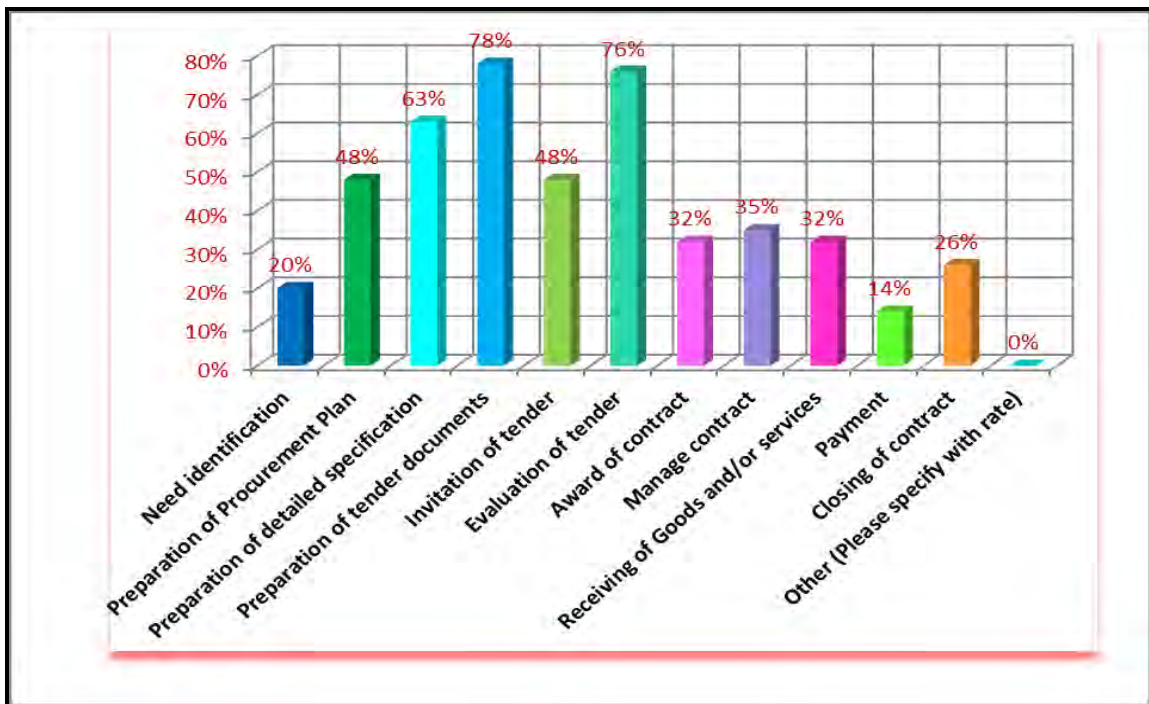
Figure 4.9.2: Extent of support required by the percentage of SPMs in each step of PLC



It is observed from the above two figure that extent of support required in each stage of procurement cycle varies greatly. In general, principals of the polytechnic institutes require greater extent of support that compared with the SPMs.

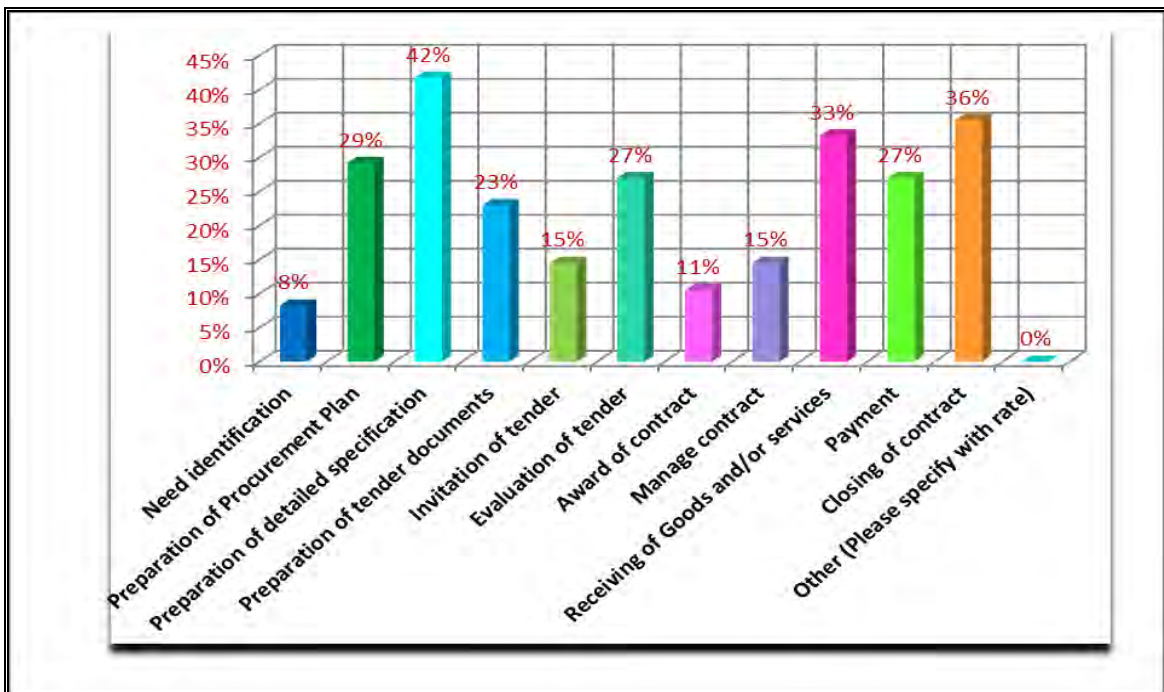
Considering average requirement of support per respondent in each step of PLC the results can be presented as follows:

Figure 4.10.1: Average % of hand on support required/Principal in each stage of PLC



This result is again shown in Column-11 of Table- 4.3 later on in this chapter.

Figure 4.10.2: Average % of hand on support required/SPM in each stage of PLC



This result is again shown in Column-11 of Table- 4.4 later on in this chapter.

Therefore, considering full hand-on support as 100 percent (rate 4 equivalent to 100%), the above two figures describe the average percentage of external hand on support required

per principal and per SPM. This result depicts the average requirement of external support in each step of PLC. For example, average extent of support required by per principal in need identification stage is 0.80 (Column -10, Table- 4.3) in a scale of 4 (full hands on support) which is equivalent to 20 percent. Observable that highest 78 percent of support has been required by the principals in preparation of tender documents. Furthermore, relatively lower extent of support required by the SPMs than the principals.

Furthermore, we have considered, from need identification to feedback in procurement cycle as a unique job (100%) which completes the procurement life cycle. We have also considered that different level of effort is required in different stage of procurement cycle. For example, preparing specification does not require same effort and time as preparation of tender document. Moreover, technicality of the task is different in different stages. For example, preparation of specification and tender document requires more technical consideration than contract management. Here, our objective is to determine the percentage of external support required in each step of procurement cycle. Unless, we do not put weightage in each stage of procurement cycle, all the stages will be treated equally. In this regard, we have made an attempt to determine weightage in procurement cycle.

Therefore, considering the volume, complexity and technicality of task, we have set weightage in each step of PLC. We have set this weightage by averaging the weightage taken from 7(seven) procurement expert from different organizations. These weightage will be used to determine actual extent and volume of external support required by the institutes.

The following figure shows the mean weightage of each step of PLC:

Figure 4.11: Mean weightage for each step of PLC

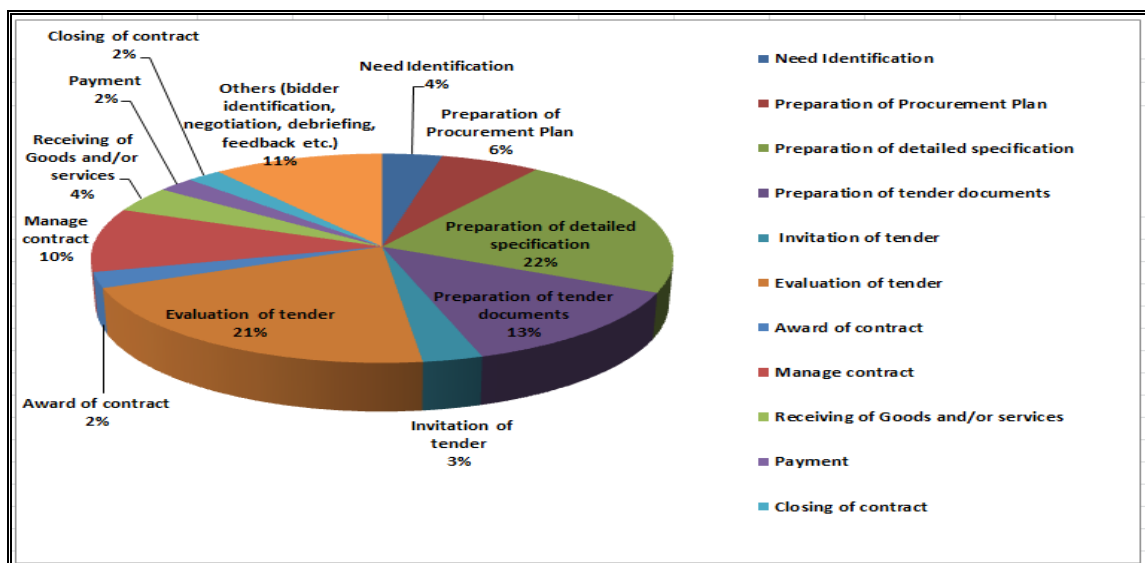
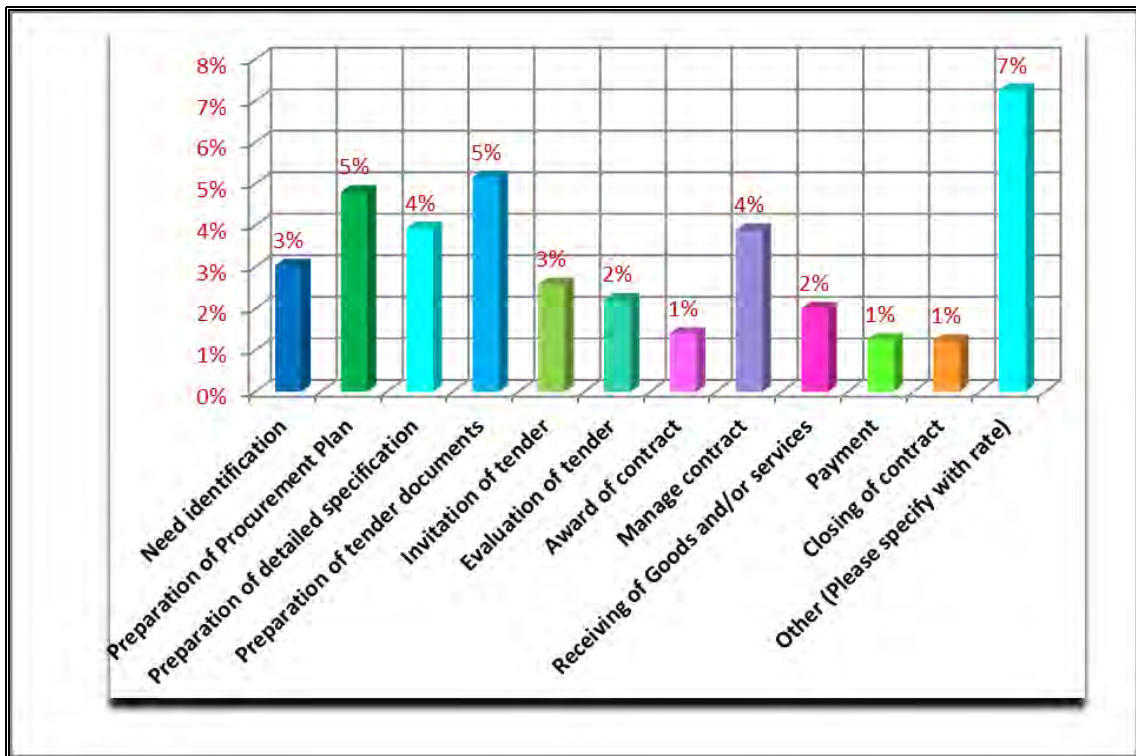


Figure 4.12: Standard deviation of mean weightage

The standard deviations of the means are shown in following bar chart:



Maximum standard deviation is only 7 percent and therefore, the weightage can be taken with 93 percent of the accuracy.

The weightage set by each expert and calculations result is shown in Table- 4.2 below.

Table 4.2: Calculation of Mean weightage for each step of PLC

SL No	Name of steps	Weightage given by procurement experts							Mean weightage	Standard deviation from average
		Expert1	Expert2	Expert3	Expert4	Expert5	Expert6	Expert7		
1	2	3	4	5	6	7	8	9	10	11
1	Need Identification	2.00%	10.00%	2.00%	1.00%	3.00%	3.00%	5.00%	3.71%	3.04%
2	Preparation of Procurement Plan	2.00%	13.00%	10.00%	1.00%	5.00%	2.00%	10.00%	6.14%	4.81%
3	Preparation of detailed specification	20.00%	25.00%	25.00%	20.00%	25.00%	15.00%	25.00%	22.14%	3.93%
4	Preparation of tender documents	18.00%	10.00%	13.00%	10.00%	20.00%	15.00%	5.00%	13.00%	5.16%
5	Invitation of tender	2.00%	5.00%	2.00%	1.00%	2.00%	8.00%	1.00%	3.00%	2.58%
6	Evaluation of tender	22.00%	20.00%	18.00%	20.00%	20.00%	20.00%	25.00%	20.71%	2.21%
7	Award of contract	3.00%	2.00%	3.00%	1.00%	2.00%	5.00%	1.00%	2.43%	1.40%
8	Manage contract	15.00%	5.00%	5.00%	10.00%	14.00%	10.00%	10.00%	9.86%	3.89%
9	Receiving of Goods and/or services	3.00%	3.00%	4.00%	8.00%	2.00%	5.00%	3.00%	4.00%	2.00%
10	Payment	2.00%	2.00%	2.00%	2.00%	1.00%	5.00%	2.00%	2.29%	1.25%
11	Closing of contract	1.00%	3.00%	4.00%	1.00%	1.00%	2.00%	3.00%	2.14%	1.21%
12	Others (bidder identification, negotiation, debriefing, feedback etc.)	10.00%	2.00%	12.00%	25.00%	5.00%	10.00%	10.00%	10.57%	7.25%
	Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	

Table 4.3: Details of weightage for PLC of the Principals

SL No	Name of steps	No of respondent	Extent of support desired by the number of respondent					Total rate	Average rate(per respondent)	Mean requirement of hand-on support (4 equivalent to 100))	Weightage	% of hands on external support
			No support required	only suggestion	Only cross-checking	Suggestion and cross-checking	Full hand-on support					
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Need identification	25	7	16	2	0	0	20	0.80	20.00%	3.71%	0.74%
2	Preparation of Procurement Plan	25	3	6	8	6	2	48	1.92	48.00%	6.14%	2.95%
3	Preparation of detailed specification	25	1	5	5	8	6	63	2.52	63.00%	22.14%	13.95%
4	Preparation of tender documents	25	1	0	5	8	11	78	3.12	78.00%	13.00%	10.14%
5	Invitation of tender	25	6	4	3	10	2	48	1.92	48.00%	3.00%	1.44%
6	Evaluation of tender	25	1	1	1	15	7	76	3.04	76.00%	20.71%	15.74%
7	Award of contract	25	6	12	3	2	2	32	1.28	32.00%	2.43%	0.78%
8	Manage contract	25	1	11	5	2	2	35	1.40	35.00%	9.86%	3.45%
9	Receiving of Goods and/or services	25	7	12	0	4	2	32	1.28	32.00%	4.00%	1.28%
10	Payment	25	13	10	2	0	0	14	0.56	14.00%	2.29%	0.32%
11	Closing of contract	25	9	10	4	0	2	26	1.04	26.00%	2.14%	0.56%
12	Other (Please specify with rate)	25	25	0	0	0	0	0	0.00	0.00%	10.57%	0.00%
Volume of work that needs external support as a total volume of work in the Procurement Life Cycle											100.00%	51.35%

Table 4.4: Details of weightage for PLC of the SPMs

SL No	Name of Steps	No of respondent	Extent of support desired by the number of respondent					Total rate	Average rate(per respondent)	Mean requirement of hand-on support (4 equivalent to 100)	Weightage	% of hands on external support
			No support required	only suggestion	Only cross-checking	Suggestion and cross-checking	Full hand-on support					
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Need identification	12	8	4	0	0	0	4	0.33	8.25%	3.71%	0.31%
2	Preparation of Procurement Plan	12	5	1	5	1	0	14	1.17	29.25%	6.14%	1.80%
3	Preparation of detailed specification	12	5	0	1	6	0	20	1.67	41.75%	22.14%	9.24%
4	Preparation of tender documents	12	5	4	2	1	0	11	0.92	23.00%	13.00%	2.99%
5	Invitation of tender	12	6	5	1	0	0	7	0.58	14.50%	3.00%	0.44%
6	Evaluation of tender	12	5	4	1	1	1	13	1.08	27.00%	20.71%	5.59%
7	Award of contract	12	7	5	0	0	0	5	0.42	10.50%	2.43%	0.26%
8	Manage contract	12	5	7	0	0	0	7	0.58	14.50%	9.86%	1.43%
9	Receiving of Goods and/or services	12	5	2	1	4	0	16	1.33	33.25%	4.00%	1.33%
10	Payment	12	7	1	0	4	0	13	1.08	27.00%	2.29%	0.62%
11	Closing of contract	12	5	1	2	4	0	17	1.42	35.50%	2.14%	0.76%
12	Other (Please specify with rate)	12	12	0	0	0	0	0	0.00	0.00%	10.57%	0.00%
Volume of work that needs external support as a total volume of work in the Procurement Life Cycle											100.00%	24.76%

4.12 Summary of findings

From the analysis of survey data the following findings are extracted

- Only 24 percent of principals in technical education opined procurement as their core responsibility along with academic management and administration and none from the universities tells procurement as their core responsibilities. Generally, people provide less effort on the activities which is not their core responsibility and therefore, this finding signifies the institutional weakness of the principals and SPMs.
- Core responsibility of most of the principals is academic management and administration (96% = 72%+24%) and only 4% involved in research activity; whereas, core responsibilities of 67 percent SPMs of universities have teaching and research activities. This signifies that if the principals and SPMs have concentrated more on procurement, their core responsibilities academic management, teaching and research will be hampered as we have perceived theoretically.
- Ratio of experience in procurement to overall experience of the principals is 0.23 and this ratio among the SPMs is 0.18. This low ratio in both sectors is a good indication of lack of experience in procurement in both sectors.
- A total 84 percent (56% +28%) of the principals treat procurement as a burdensome process and out of which 56 percent treat the process a both burdensome and complex. On the contrary, 83 percent (8% +75%) of the SPMs treat the process as burdensome – which is almost same in both sectors. But, only 8 percent of the SPMs treat the process as complex against 56% of the principals. Therefore, it is quite natural that the principals and SPMs will show less interest in procurement as they feel the process burdensome and/or complex. This signifies their weaknesses and justifies the need of external support.
- Among the principals 56 percent (very much 8% + much 48%) think that procurement hampers their core responsibility greatly and 36% of them think it average. In contrast, 59 percent of the SPMs think that procurement hampers much of their core responsibility and 33 percent of them think it as average. Therefore, perception is almost same in both sectors and this again justifies our previous observation and answers why the principals and SPMs think the procurement process as burdensome.
- 64 percent of the principals and 58 percent of SPMs have only one trained staff for procurement. But, only 8 percent of principals have no trained staff for procurement among the principals in comparison this 34 percent among the SPMs. It is to be noted here that through investigation it has been observed that actually there is no permanent staff for procurement in both scenario. Procurement staffs are

temporary where they are available. Therefore, there is a strong crisis of regular procurement staff in both areas. Now, it is evident that the principals and SPMs do not have sufficient organizational strength in procurement and this signifies the need of development of organizational capability, or need of external support.

- 48 percent of the principals has mentioned that they have poor capability (very poor 8% + poor 8%), another 48 percent in a range of moderately capable to capable (moderately capable 40% + Capable 8%), where only 4 percent of which have mentioned they are highly capable. On the contrary, none of the SPMs has mentioned that they have poor capability. They are mostly in a range of moderately capable to capable (moderately capable 67%, capable 25%). The result is bit surprising!! The reason behind the result will be analyzed later. However, inadequate capability in procurement justifies the need for external support and/or development of internal strength.
- 100 percent of the principals have taken external support in procurement process, but majority of which (75%) has taken support occasionally and another 21 percent has taken support regularly. This result is quite consistent with our later findings where 96 percent of the principals have demanded external support.
- 42 percent of the SPMs have taken occasional external support and another 17 percent has taken regular support and only 8 percent of them have taken no external support at any stage of procurement cycle. This is again, conflicts with the previous findings where none of the SPMs has mentioned about their poor capability. The underlying reason behind this inconsistency will be discussed later.
- 96 percent of the principals have demanded external support, whereas, 58 percent of the SPMs has demanded external support. This justifies the provision of external support in both the sectors but in two different scales.
- Demand of external support is higher in technical education sector in each step of procurement cycle as compared to the demand by the SPMs (Ref: Figure 4.8.1 and Figure 4.8.2). This will help us to determine the magnitude of external support requires in each step of procurement cycle.
- Furthermore, demand of extent of external support in each step of procurement cycle is higher in technical education sector as compared to that of SPMs (Ref: Figure 4.9.1 and Figure 4.9.2). This will help us to determine the level of support requires in each step of procurement cycle.
- Converting the demand of external support as a percentage of respondent and their extent of requirement into equivalent hands on support we observed that there are requirement of 51.35 percent hands on support in technical education sector and 24.76 percent demand on university education sector (by the SPMs) (Ref: Table 4.3

and Table 4.4). Therefore, requirement of external hands on support is as much as twice in technical education sector as compared with university education sector.

However, the reason for high demand of technical education sector is because of its weakness in organizational structure for undertaking procurement process. Establishing a central unit to support procurement process might enhance the procurement process of the institutes.

Moreover, some of findings in higher education sector give the impression as conflicting. We have investigated into matter to determine the root causes of these results and following findings are observed:

- Some of the SPMs thinks the external support process as bureaucratic;
- Every University has its own Planning and Engineering unit and the SPMs are taking help from this wing and they treat it as their internal unit;
- Frequency of procurement is relatively less by the SPMs as compared to that by the principals ;
- In some cases ignorance about their inefficiency is another cause of low requirement of external support. For example, some of the respondents of the universities opined that because of following Public Procurement Regulations, they could not mention brand name and consequently they had to purchase low quality goods. But, in most cases this has happened because of inefficiency in writing specification; and
- Finally, need for external support in procurement varies from university to university. Observation shows that some of the universities have strong institutional framework in procurement (for example, BUET, Rajshahi University), while others have moderate capability in procurement process.

CHAPTER-5: Conclusion and Recommendations

5.1 Introduction

We have stated the study with the objective of find out the strengths and weaknesses of procurement process in technical institutes and universities in public sector so that we would be able to recommend a system that will enhance the procurement process and bring about efficiency and effectiveness in procurement for the institutions.

In Chapter-2, a good number of literatures relating to procurement process related with this study have been reviewed to know the current culture of procurement process at home and abroad. In Chapter- 3, we have discussed the organizational scenario in procurement and responsibilities of procurement professionals. In Chapter- 4 we have analyzed the data. In that chapter from the findings, we have observed that there are organizational weaknesses in both technical institutes and universities in procurement process and the problem is more acute in technical education institutes compared to universities. The institutes need hands-on external support but to a different extent. The requirement of external support in technical education happens to be more than twice (51.35%) compared to that of the universities (24.76%).

Thus, in this chapter we will provide recommendations and discuss a model of external support that might bring about efficiency and effectiveness in procurement process in public sector technical and university education.

5.2 Key findings of research questions

Regarding the first research question “What are the problems/weaknesses in present procurement process in public sector Technical and University education in Bangladesh?” the following weaknesses have been observed:

- Procurement is not the core responsibility of SPMs and majority of Principals. Only 24 percent of the principals in technical education treat it as core and none in the university treat it as core function;
- Experience in procurement of both Principals and SPMs are not adequate. Ratio of Experience in Procurement/Overall experience is only 0.23 in technical education and 0.18 in university education;
- Over 80 percent of the Principals and SPMs feel procurement as a burdensome process; and

- Both the Principals and SPMs have inadequate organizational capability in procurement;

Regarding the second research question “Is there any need of external support in procurement process both in Technical and University education?” it has been observed from the data analysis that there are requirements of external support for procurement process in both technical and university education sector, but the need is acute in technical education sector (**ref. section 4.9 and 4.10**). However, a good number of SPMs take help from Planning and/or Engineering division of the respective university for procuring their goods.

As findings of the third research question “How can the procurement process be made more effective?” it is evident that we need some form of external support to make the procurement process more effective in technical and higher education sector; but in two different forms in technical and university education sector. We will discuss these in the following sections. On basis of the findings of this study, we can make some recommendations.

5.3 Recommendations

Strengthening a large number of institutes is difficult than developing a central unit. Moreover, development of large number of institutes might results in under utilization of manpower. In view of the findings of this study, we would suggest that the following steps could be taken.

- ❖ For technical education sector a central support service unit need to be established preferably at Dhaka to provide extensive technical support in procurement process;
- ❖ For university education sector, the engineering and/or planning division(s) needs to be strengthened through providing manpower and training for procurement process so that it can provide full support to the university. This will in fact work as a central support service unit for procurement within the university; and
- ❖ Side by side, one or two dedicated staff needs to be deployed in each technical institute for procurement.

5.4 Expected model that support public procurement management

From our study, it is evident that we need a dedicated unit to support efficient, effective and transparent procurement, operated by a group of procurement expert considering the context of technical and university education sector. Earlier we have seen that there is a growing demand for shared services in the public sector. But, considering our environment and limited scope a wide ranging Procurement Shared Service Center that is capable to provide support for whole education sector may not be manageable. Rather, we can think of a support service unit for procurement in each project which is able to support efficient and

effective procurement within the organization framework without deploying separate establishment.

Therefore, we propose a special form of Shared Service Unit (SSU) as 'Procurement Support Service unit (PSSU)' within the framework of project or organization with some features different from Shared Service Center (SSC). Normally, face to face communication is absent in SSC system; but PSSU system will ensure both distant and face to face communication. This system is very similar to Center Led Action Network (CLAN) – which is introduced in many private sector organizations but with a less bureaucracy. The unit will provide extensive support throughout the Procurement Life Cycle (PLC) of the organization through sharing of accountability and responsibilities between the organization and its customers (e.g. sub-project managers, principals, head of the institutes, etc.). Again, this is clearly a different model from outsourcing of procurement, where the whole process of procurement is done by an independent third party through an agreement with the organization.

We would like to mention here that the public procurement in developing countries considers not only the quality aspects of suppliers, but also the social aspects – which may reduce the unemployment problems of the country. Therefore, in many cases organization has to concentrate on engaging more suppliers, rather than ensuring quality of supplier and this acknowledges the necessity of supplier development through providing training, advance payment, etc. On case by case basis, organizations or project can develop strategy; policy and procedure to develop suppliers and service providers with the assistance of PSSU so that they can not only ensure quality of supply/service, but also can engage as many supplier/service providers as possible.

5.5 The organizational framework of PSSU

Our survey and data analysis reflects the requirement of two different levels of external support in technical and university education. Furthermore, regulatory framework of public procurement demands high level transparency of the system. Therefore, our support system should be within our regulatory framework.

The design of PSSU should be such that it will fulfill the requirements to achieve the organizational goal. In public sector organization, the PSSU should essentially be a central unit administered by the organization or the project, containing a team of procurement experts with horizontal structure. It should so as the goal is the 'performance purpose' and the team players, the people, have a complementary contribution with mutual accountability. Commitment to team involves putting the team before individuals; however, teams require the right blend of unique individual strength (Emmett and Crocker, 2006).

PSSU for the technical education sector should not act as a procurement unit that procures goods or services on behalf of the organization, but as a unit that will act as a catalyst to expedite procurement process with quality, transparency and reliability. However, as the Planning and/or Engineering Division of the universities will act as PSSU, it will serve the

dual purpose: (i) procuring goods, services and works for the universities; and (ii) support other units/divisions in procurement process within the university.

A head who has expertise both in procurement and management can lead the team; as, a procurement manager should have sufficient procurement specific skills along with leadership and management skills to buy-in all internal and external stakeholders. Each member of the team should be assigned with defined responsibilities. Responsibilities can be assigned on the basis of volume of work or the type of work. For example, there are 33 polytechnic institutes under STEP and there are three procurement specialists to bolster their procurement. Each procurement specialist has the responsibility to shore up the procurement process of 11 polytechnic institutes.

Moreover, responsibilities can also be shared on the basis of type of work such as goods, works and services. For instance, STEP has two procurement specialists for central procurement – one has the major responsibility to provide hand-on support for procuring goods and the other has the responsibility with services.

The number of members in the team depends on the work volume of the organization. If the work volume is very large, then the task may be divided into few teams. The office of the team needs to be located at the project management office/ head office of the organization. But, the members of the team need to go to the field offices/ institutes on demand basis. There should be monthly and quarterly work plan for the team, institutes and the organization as a whole.

The PSSU in an organization should be established with a relatively flatter organizational structure. It should have 'horizontal' relationship within the team members of the PSSU, and all field level institutes/units of the organization. Again, it should have 'vertical' relationship with the project manager or the head of the organization. Establishment of PSSU is not a very big reformation within the organization and therefore introducing the unit within an organization will not be a very challenging task. However, 'hard' and 'soft' aspects of the organization should be considered during establishment of PSSU. This is because the soft quality management factors are generally relate to people aspects, while the hard quality management factors represent the quality tools and techniques, design activities, process control and management, and process measurement (Abdullah & Tarí, 2012).

PSSU in an organization can be established through hiring some procurement experts or it can be established through hiring a procurement support consulting firm. Many consulting firm have developed in various areas in Bangladesh e.g. audit firm, construction firm, design firm etc. Although many individual procurement experts have developed in Bangladesh and the number is increasing day by day; but procurement consulting firm yet to be developed. Under the guidance of The Chartered Institute of Purchasing and Supply (CIPS)-Bangladesh unit has already been formed. This institutional formation of procurement experts may also lead to develop procurement support consulting firm. However, in organization where

volume of procurement cannot be determined precisely before the deployment of experts, time-based individual experts are preferred over consulting firms.

5.6 Predicted barriers and disadvantages in establishing PSSU and mitigating measures

It is to be noted that a large capital outlay is often needed to establish a physical location, install telecommunications and data systems, and relocate employees to staff the center. There is also the cost of consolidating disparate data sources and converting the data to a common format for the central system (IMA, 2000). This finding of IMA was about Share Service Unit. But, such large cost involvement will not require in establishing PSSU. There is of course cost involvement for establishment PSSU, especially against highly paid procurement experts; but, there needs no additional data systems and relocation of employees.

We are already paying some resource against consultants relating procurement. But, as the predicted work volume of PSSU will be more than the prevailing system, spending against PSSU will be more than the existing system. Again, we are now spending considerable amount of money for training in procurement to sub-projects managers and principals or head of the institutes. If an effective PSSU can be established, a little amount of resource will be required for training in this area. Moreover as the PSSU will provide hands-on support to the institutes, the system will afford on-the-job training to the institute/sub-projects managers; and consequently, the system will ultimately save resources and enhance procurement skills along with other tangible and intangible benefits.

As face to face communication will be ensured in PSSU as much as possible, it will eliminates one of the major weaknesses of SSU. In 1998, Booz – Allen & Hamilton consultants published a viewpoint under the title- '*Shared Services: Management Fad or Real Value?*'. In their viewpoint they opined that "the Shared Services approach, if executed properly, combines the advantages of centralization and decentralization, without their disadvantages" (DeAnne Aguirre, Chris Disher, Vinay Couto, Gary Neilson, 1998).

Any new system in organization needs buy-in of all related stakeholders, particularly the internal stakeholders. This may be achieved through formal and informal discussion about the usefulness of PSSU. However, this will require some resources (money, time).

Another major challenge of the system is ensuring qualified manpower for PSSU. Procurement is one of the big vulnerable areas where there is enough scope of 'corrupt practice'. Number of qualified procurement professional is increasing rapidly in Bangladesh. Rigorous selection procedure through knowing their previous service background (both in qualification and ethical areas) will help to triumph over the challenges.

5.7 Scope of further study

There is huge scope of further study in establishing PSSU in various organizations. This study has been conducted with a limited sample size and discussions with experts and policy makers. An extensive study can be conducted in future to assess the execution of the system.

Only a part of higher education has been taken under this study; later on University Colleges can be included under a future study. Secondary education sector may be another potential area of this type of research. Apart, from that this type of research can be conducted for many organizations in addition to education sector.

5.8 Conclusion

Effective establishment of PSSU will save considerable time and effort of the institutions or field units of a project or an organization. Not only that, it will enhance procurement process through saving time of procurement, ensuring transparency of process, building team spirit, buy-in confidence of all stakeholders etc.

However, establishment of PSSU demands support from top management. CIPS stated that *when selecting a service to be remodeled into a shared service it is advisable to choose a service that has unanimous support from senior management. Where there is disagreement relating to the inclusion of a service it is advisable to leave them out and revisit later. It will be more beneficial to get the shared service centre operating effectively with full endorsement* (CIPS Knowledge, 2013). This is equally valid for establishing PSSU.

PSSU is a new concept and assessment of output/outcome of which requires pilot application of the concept. More research on this area may yield better results and update of the system. Various aided projects in Bangladesh can introduce the system experimentally.

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Annexure-I :Questionnaire

A Field Level Survey

for

A critical Analysis on Enhancing Procurement Process in Public Sector Technical and University education in Bangladesh

Dear respondent, a very good day to you. I have been doing a research titled '**A Critical Analysis on Enhancing Procurement Process in Public Sector Technical and University education in Bangladesh**'. This research is a part of requirement of 'M. Sc in Procurement' program under BRAC University.

The aim of this research is to find the strength and weaknesses in the present procurement process in University education Sector and Technical Education Sector and try to identify a better procurement process for these sectors. Your thoughtful opinion will be valuable to get a conclusion.

The information you provide will be used absolutely for academic purpose. Participation in this study is voluntary, and, you are free to withdraw at any stage. Furthermore, all information you provide is confidential, and, in no way will personally identifiable information be made available without your knowledge and consent. If you have any questions regarding this research, please contact by the under-mentioned mobile number.

For any question regarding the research please contract:

Mobile: +880-1714171915

Email: wazed@mail.com

Thank you for your participation

S.M. Wazed Ali

1. What is/are your core responsibility/responsibilities (Please write 'S' in the appropriate box/boxes)?

- Only teaching
- Only research
- Both teaching and research
- Academic management and administration
- Procurement
- Other (please specify): _____

2. Please state your overall professional experience in the text box.

Year

3. Please state your experience in procurement.

Year

4. How do you feel about procurement process (Please write 'S' in the appropriate box)?

- Easy and Comfortable
- Neither comfortable nor burdensome
- Complex and Burdensome
- Not complex but burdensome

5. Rate the extent that procurement process hampers your core responsibility, if procurement is not your core responsibility (Please write 'S' in the appropriate box).

- Very much
- Much
- Average
- Very little
- None

6. How many staff you have trained in PPA-2006 and PPR-2008? (Please write 'S' in the appropriate box).

- None
- Only one
- Two to three
- More than three

7. Rate the capability of your staff/organization in procurement process(Please write 'S' in the appropriate box).

- Has strong capability
- Capable
- Moderately capable
- Poor capability
- Very poor capability

8. Write the frequency you seek external support for procurement process (Please write 'S' in the appropriate box).

- Never
- One or two times
- Occasionally
- Regularly

9. Do you feel any external support on procurement would be effective for your procurement process? (Please write 'S' in the appropriate box).

- Yes
- No

10. If answer of question 9 is 'yes', rate the stages(0-4) on the basis of extent of support in the text box (where, 0 – No support required; 1- Only suggestion through phone/email; 2 – Only cross-checking; 3 – Suggestion and cross-checking; 4 – Full hand-on support):

- Need identification
- Preparation of Procurement Plan
- Preparation of detailed specification
- Preparation of tender documents
- Invitation of tender
- Evaluation of tender
- Award of contract
- Manage contract

- Receiving of Goods and/or services
- Payment
- Closing of contract
- Other (Please specify with _____ rate)

11. If you need any external support write few sentences about the system of support that you think would be helpful for procurement process.

Annexure II: Results of the Survey

Annexure II (A): Technical Education Sector

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12	Ans13	Ans14
		Principal, PI, Feni Poly	Principal Chittagong Mohila Poly	Principal Chittagong Poly	Principal Kustia Poly	Instructor, Dinajpur Polytechnic	Bangladesh Polytechnic Institute	Principal, Rangpur TTC	Principal, Graphic Art Institute, Dhaka	Principal, TTTI	Principal, Chittagong TTC	Principal Jessore TTC	Principal, Bogra Polytechnic	Principal, Tangail Polytechnic	Principal, Kulna Polytechnic
1	Major Responsibility														
	Only teaching														
	Only research														
	Both teaching and research						Yes								
	Academic management and administration		Yes	Yes	Yes			Yes		Yes	Yes		Yes	Yes	Yes
	Academic management, Administration and Procurement					Yes			Yes			Yes			
	Other (please specify):														
2	Overall professional experience (year)	35	30	30	21	7	12	15	30	12	36	20	25	20	22
3	Experience in procurement (year)	12	10	2	3	2	3	7	5	6	5	2	4	4	3

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12	Ans13	Ans14
		Principal, PI, Feni Poly	Principal Chittagong Mohila Poly	Principal Chittagong Poly	Principal Kustia Poly	Instructor, Dinajpur Polytechnic	Bangladesh Polytechnic Institute	Principal, Rangpur TTC	Principal, Graphic Art Institute, Dhaka	Principal, TTTI	Principal, Chittagong TTC	Principal Jessore TTC	Principal, Bogra Polytechnic	Principal, Tangail Polytechnic	Principal, Kulna Polytechnic
4	Feeling on procurement														
	Easy and Comfortable		yes												
	Neither comfortable nor burdensome				yes		yes								
	Complex and Burdensome							yes	yes	yes		yes	yes		yes
	Not complex but	yes		yes		yes					yes			yes	
5	procurement process hampers														
	Very much							yes							
	Much	yes		yes						yes		yes		yes	yes
	Average				yes		yes		yes		yes		yes		
	Very little					yes									
	None		yes												
6	How many staff you have trained in PPA-2006 and PPR-2008														
	None											yes			
	Only one				yes			yes	yes	yes			yes	yes	yes
	Two to three		yes	yes		yes	yes								

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12	Ans13	Ans14
		Principal, PI, Feni Poly	Principal Chittagong Mohila Poly	Principal Chittagong Poly	Principal Kustia Poly	Instructor, Dinajpur Polytechnic	Bangladesh Polytechnic Institute	Principal, Rangpur TTC	Principal, Graphic Art Institute, Dhaka	Principal, TTTI	Principal, Chittagong TTC	Principal Jessore TTC	Principal, Bogra Polytechnic	Principal, Tangail Polytechnic	Principal, Kulna Polytechnic
	More than three	yes									yes				
7	Rate the capability of your staff/organization in procurement process														
	Has strong capability		yes												
	Capable	yes				yes									
	Moderately capable			yes			yes			yes	yes			yes	
	Poor capability				yes			yes	yes			yes	yes		
	Very poor capability														yes
8	Write the frequency you seek external support for procurement process														
	Never														
	One or two times						yes								
	Occasionally	yes		yes	yes	yes			yes	yes	yes	yes		yes	yes
	Regularly							yes					yes		
9	Do you feel any external support on procurement would be effective														
	Yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12	Ans13	Ans14
		Principal, PI, Feni Poly	Principal Chittagong Mohila Poly	Principal Chittagong Poly	Principal Kustia Poly	Instructor, Dinajpur Polytechnic	Bangladesh Polytechnic Institute	Principal, Rangpur TTC	Principal, Graphic Art Institute, Dhaka	Principal, TTTI	Principal, Chittagong TTC	Principal Jessore TTC	Principal, Bogra Polytechnic	Principal, Tangail Polytechnic	Principal, Kulna Polytechnic
	No		Yes												
10	If answer of question 9 is 'yes', rate the stages(0-4) on the basis of extent of														
	Need identification	0	0	0	1	0	1	1	0	1	2	1	1	1	1
	Preparation of Procurement Plan	2	0	2	2	1	2	1	1	3	4	0	3	2	2
	Preparation of detailed specification	3	0	2	3	2	2	3	2	4	1	1	4	3	3
	Preparation of tender documents	2	0	4	3	3	3	3	2	4	4	4	4	3	3
	Invitation of tender	0	0	0	2	0	3	1	0	3	1	4	3	3	2
	Evaluation of tender	3	0	4	3	2	3	1	3	3	4	4	3	3	4
	Award of contract	0	0	1	2	0	3	1	0	1	2	4	1	1	1
	Manage contract	1	0	1	2	1	3	1	2	1	2	4	1		
	Receiving of Goods and/or services	1	0	0	1	1	3	0	1	0	4	3	1	1	1
	Payment	0	0	0	1	0	2	0	0	0	0	1	1	1	1
	Closing of contract	0	0	1	1	0	2	1	0	0	2	4	1	1	1

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12	Ans13	Ans14
		Principal, PI, Feni Poly	Principal Chittagong Mohila Poly	Principal Chittagong Poly	Principal Kustia Poly	Instructor, Dinajpur Polytechnic	Bangladesh Polytechnic Institute	Principal, Rangpur TTC	Principal, Graphic Art Institute, Dhaka	Principal, TTTI	Principal, Chittagong TTC	Principal Jessore TTC	Principal, Bogra Polytechnic	Principal, Tangail Polytechnic	Principal, Kulna Polytechnic
	Other (Please specify with rate)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Comments														
Ans2	More requirement of training														
Ans3	Needs help of external experts														
Ans4	Needs help of external support regarding rules														
Ans7	Training, Updating procurement rules, requirement of procurement officer														
Ans11	Political reason														

Question No	Question Sub-title	Ans15	Ans16	Ans17	Ans18	Ans19	Ans20	Ans21	Ans22	Ans23	Ans24	Ans25
		Principal, Jessore Polytechnic	Principal, BKTTTC	Principal, Jamalpur TTC	Principal, Narshingdi, Polytechnic	Principal, Tangail TTC	Principal, Rajshahi Polytechnic	Principal, Rajshahi, TTC	Principal, Barisal Polytechnic	Principal, Barisal TTC	Principal, Hobiganj Polytechnic	Principal, Faridpur TTC
1	Major Responsibility											
	Only teaching											
	Only research											
	Both teaching and research											
	Academic management and administration	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
	Academic management, Administration and Procurement		Yes			Yes			Yes			
	Other (please specify):											
2	Overall professional experience (year)	26	24	15	15	30	12	36	20	25	20	22
3	Experience in procurement (year)	4	3	3	7	5	6	5	2	4	4	3
4	Feeling on procurement process											

Question No	Question Sub-title	Ans15	Ans16	Ans17	Ans18	Ans19	Ans20	Ans21	Ans22	Ans23	Ans24	Ans25
		Principal, Jessore Polytechnic	Principal, BKTTTC	Principal, Jamalpur TTC	Principal, Narshingdhi, Polytechnic	Principal, Tangail TTC	Principal, Rajshahi Polytechnic	Principal, Rajshahi, TTC	Principal, Barisal Polytechnic	Principal, Barisal TTC	Principal, Hobiganj Polytechnic	Principal, Faridpur TTC
	Easy and Comfortable											
	Neither comfortable nor burdensome			yes								
	Complex and Burdensome	yes	yes		yes	yes	yes		yes	yes		yes
	Not complex but burdensome							yes			yes	
5	procurement process hampers											
	Very much				yes							
	Much		yes	yes			yes		yes		yes	yes
	Average	yes				yes		yes		yes		
	Very little											
	None											
6	How many staff you have trained in PPA-2006 and PPR-2008											
	None								yes			
	Only one	yes	yes	yes	yes	yes	yes			yes	yes	yes
	Two to three											
	More than three							yes				

Question No	Question Sub-title	Ans15	Ans16	Ans17	Ans18	Ans19	Ans20	Ans21	Ans22	Ans23	Ans24	Ans25
		Principal, Jessore Polytechnic	Principal, BKTTTC	Principal, Jamalpur TTC	Principal, Narshingdhi, Polytechnic	Principal, Tangail TTC	Principal, Rajshahi Polytechnic	Principal, Rajshahi, TTC	Principal, Barisal Polytechnic	Principal, Barisal TTC	Principal, Hobiganj Polytechnic	Principal, Faridpur TTC
7	Rate the capability of your staff/organization in procurement											
	Has strong capability											
	Capable											
	Moderately capable		yes	yes			yes	yes			yes	
	Poor capability	yes			yes	yes			yes	yes		
	Very poor capability											yes
8	Write the frequency you seek external support for procurement process											
	Never											
	One or two times											
	Occasionally		yes	yes		yes	yes	yes	yes		yes	yes
	Regularly	yes			yes					yes		
9	Do you feel any external support on procurement would be effective											

Question No	Question Sub-title	Ans15	Ans16	Ans17	Ans18	Ans19	Ans20	Ans21	Ans22	Ans23	Ans24	Ans25
		Principal, Jessore Polytechnic	Principal, BKTTTC	Principal, Jamalpur TTC	Principal, Narshingdi, Polytechnic	Principal, Tangail TTC	Principal, Rajshahi Polytechnic	Principal, Rajshahi, TTC	Principal, Barisal Polytechnic	Principal, Barisal TTC	Principal, Hobiganj Polytechnic	Principal, Faridpur TTC
	Yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
	No											
10	If answer of question 9 is 'yes', rate the stages(0-4) on the basis of extent of support in the text box											
	Need identification	1	1	0	1	0	1	2	1	1	1	1
	Preparation of Procurement Plan	3	3	1	1	1	3	4	0	3	2	2
	Preparation of detailed specification	4	4	1	3	2	4	1	1	4	3	3
	Preparation of tender documents	4	4	2	2	2	4	4	4	4	3	3
	Invitation of tender	3	3	3	1	0	3	1	4	3	3	2
	Evaluation of tender	3	3	3	3	3	3	4	4	3	3	4
	Award of contract	1	1	3	0	0	1	2	4	1	1	1
	Manage contract	1	1	3	1	2	1	2	4	1		
	Receiving of Goods and/or services	1	0	3	0	1	0	4	3	1	1	1

Question No	Question Sub-title	Ans15	Ans16	Ans17	Ans18	Ans19	Ans20	Ans21	Ans22	Ans23	Ans24	Ans25
		Principal, Jessore Polytechnic	Principal, BKTTTC	Principal, Jamalpur TTC	Principal, Narshingdhi, Polytechnic	Principal, Tangail TTC	Principal, Rajshahi Polytechnic	Principal, Rajshahi, TTC	Principal, Barisal Polytechnic	Principal, Barisal TTC	Principal, Hobiganj Polytechnic	Principal, Faridpur TTC
	Payment	1	0	2	0	0	0	0	1	1	1	1
	Closing of contract	1	0	2	0	0	0	2	4	1	1	1
	Other (Please specify with rate)	0	0	0	0	0	0	0	0	0	0	0
11	Comments											

Annex-II (B): Results of University Education Sector

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12
		Prof. Mondal, SPM, RU	SPM, JKNIU	Director, JKNIU	Prof. Monir, CU	Prof. Ali Azam, JU	SPM1, BMSARU	SPM, BAU	SPM, HSTU	SPM, SUST	SPM, CVASU	SPM, SBAU	SPM, PSTU
1	Major Responsibility												
	Only teaching												
	Only research												
	Both teaching and research	Yes			Yes		Yes		Yes	Yes	Yes	Yes	Yes
	Academic management and administration		Yes	Yes		Yes		Yes					
	Academic management, Administration and Procurement												
	Other (please specify):												
2	Overall professional experience (year)	20	15	26	30	18	20	25	30	15	23	20	26
3	Experience in procurement (year)	10	3	12	1	3	3	5	2	3	4	3	4
4	Feeling on procurement process												
	Easy and Comfortable												
	Neither comfortable nor burdensome						Yes					Yes	
	Complex and Burdensome			Yes									
	Not complex but burdensome	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes		Yes
5	procurement process hampers												

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12
		Prof. Mondal, SPM, RU	SPM, JKKNIU	Director, JKKNIU	Prof. Monir, CU	Prof. Ali Azam, JU	SPM1, BMSARU	SPM, BAU	SPM, HSTU	SPM, SUST	SPM, CVASU	SPM, SBAU	SPM, PSTU
	Very much												
	Much				Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Average		Yes	Yes		Yes				Yes			
	Very little	Yes											
	None												
6	How many staff you have trained in PPA-2006 and PPR-2008												
	None				Yes				Yes		Yes		Yes
	Only one	Yes	Yes			Yes	Yes	Yes		Yes		Yes	
	Two to three			Yes									
	More than three												
7	Rate the capability of your staff/organization in procurement process												
	Has strong capability	Yes											
	Capable		Yes			Yes				Yes			
	Moderately capable			Yes	Yes		Yes	Yes	Yes		Yes	Yes	Yes
	Poor capability												
	Very poor capability												
8	Write the frequency you seek external support for procurement process												
	Never	Yes											
	One or two times		Yes			Yes		Yes		Yes			
	Occasionally			Yes	Yes				Yes		Yes		Yes

Question No	Question Sub-title	Ans1	Ans2	Ans3	Ans4	Ans5	Ans6	Ans7	Ans8	Ans9	Ans10	Ans11	Ans12
		Prof. Mondal, SPM, RU	SPM, JKKNIU	Director, JKKNIU	Prof. Monir, CU	Prof. Ali Azam, JU	SPM1, BMSARU	SPM, BAU	SPM, HSTU	SPM, SUST	SPM, CVASU	SPM, SBAU	SPM, PSTU
	Regularly						Yes					Yes	
9	Do you feel any external support on procurement would be effective												
	Yes				Yes		Yes	Yes	Yes		Yes	Yes	Yes
	No	Yes	Yes	Yes		Yes				Yes			
10	If answer of question 9 is 'yes', rate the stages(0-4) on the basis of extent of support in the text box												
	Need identification	0	0	0	1	0	0	0	1	0	1	0	1
	Preparation of Procurement Plan	0	0	0	2	0	3	1	2	0	2	3	2
	Preparation of detailed specification	0	0	0	3	0	2	3	3	0	3	2	3
	Preparation of tender documents	0	0	0	1	0	3	2	1	0	1	3	1
	Invitation of tender	0	0	0	1	0	2	0	1	0	1	2	1
	Evaluation of tender	0	0	0	1	0	4	2	1	0	1	4	1
	Award of contract	0	0	0	1	0	1	0	1	0	1	1	1
	Manage contract	0	0	0	1	0	1	1	1	0	1	1	1
	Receiving of Goods and/or services	0	0	0	3	0	1	2	3	0	3	1	3
	Payment	0	0	0	3	0	1	0	3	0	3	1	3
	Closing of contract	0	0	0	3	0	1	2	3	0	3	1	3
	Other (Please specify with rate)	0	0	0	0	0	0	0	0	0	0	0	0
11	Comments												

Annexure I(C): Question wise Summary of Results

Q 01.core responsibility/responsibilities

	No of respondent Technical Education Sector	No of respondent University Education Sector
Only teaching	0	0
Only research	0	0
Both teaching and research	1	8
Academic management and administration	18	4
Academic management, Administration and Procurement	6	0
Other (please specify):	0	0

Q 02. Overall Experience

	Technical Education Sector	University Education Sector
Total experience(Year)	560	268
No of Respondent	25	12
Average experience(Year)	22	22

Q 03. Experience in procurement

	Technical Education Sector	University Education Sector
Total experience(Year)	114	53
No of Respondent	25	12
Average experience(Year)	5	4

Q 04.Feeling on procurement process

	No of respondent Technical Education Sector	No of respondent University Education Sector
Easy and Comfortable	1	0
Neither comfortable nor burdensome	3	2
Complex and Burdensome	14	1
Not complex but burdensome	7	9

Q 05. Extent of procurement process hampers core responsibility

	No of respondent Technical Education Sector	No of respondent University Education Sector
Very much	2	0
Much	12	2
Average	9	1
Very little	1	9
None	1	0

Q 06. Number of trained procurement staff

	No of respondent Technical Education Sector	No of respondent University Education Sector
None	2	4
Only one	16	7
Two to three	4	1
More than three	3	0

Q 07. Capability of the staff/organization in procurement process

	No of respondent Technical Education Sector	No of respondent University Education Sector
Has strong capability	1	1
Capable	2	3
Moderately capable	10	8
Poor capability	10	0
Very poor capability	2	0

Q 08. Frequency of external support taken for procurement process

	No of respondent Technical Education Sector	No of respondent University Education Sector
Never	0	1
One or two times	1	4
Occasionally	18	5
Regularly	5	2

Note: In technical education sector, out of 25 respondents 24 answered this question

Q 09.Requirement of external support on procurement process

	No of respondent Technical Education Sector	No of respondent University Education Sector
Yes	24	7
No	1	5

Q 10.Extent of support required in each stage of procurement cycle

Results of this question are summarized in Table: 4.3 and Table: 4.4