THE OPEN UNIVERSITY OF SRI LANKA
COMMONWEALTH EXECUTIVE MASTER OF BUSINESS/PUBLIC ADMINISTRATION
FINAL EXAMINATION – 2016
MCP 2698 – RESEARCH METHODOLOGY
DURATION: THREE (03) HOURS

Date: 24.07.2016	Time: 9.30 am – 12.30 pm

Answer Question Number ONE (01) in Part A and any THREE (03) Questions from Part B.

Part A

01. Read the following case and answer the questions given at the end.

Service Quality in Health Care Supply Chains

During her degree placement Samantha spent a year working in the Purchasing Services department of a local acute hospital National Health Service (NHS) Trust. During her time in the organization she saw at first hand the pressures faced by the organization as it strove to deliver the vision of The NHS Plan (Department of Health, 2000) of a health service that provided timely, high-quality, value-for-money and patient-centred care. Specifically, she witnessed the changes being introduced in relation to supply chain policy and practice as the Purchasing Services department responded to the challenge of delivering quality products and services that met the needs of the end patient and other service users. Embarking on her research project Samantha decided to focus on the topic of measuring service quality in health care supply chains. During the placement the Head of Purchasing Services had expressed an interest in the topic as being both important and timely and had offered to assist in facilitating the collecting of data. In addition, an initial review of the literature suggested that there was scope to make a worthwhile contribution to knowledge by researching the topic.

Having completed a review of the literature on supply chain management and service quality, Samantha established an overarching aim of her research project, which was to measure and compare perceptions of service quality in health care supply chains. Through her reading of the literature and having undertaken some initial exploratory interviews with Purchasing Services' staff she had developed the following objectives for the research:

- to establish how service quality is measured in health care supply chains;
- to investigate the factors that influence perceptions of service quality of different people/groups within health care supply chain chains;
- to establish how performance is reflected in the degree of alignment between measures and perceptions.

A major issue facing Samantha was deciding upon a unit of analysis. To do this she needed to understand how the supply chains worked. It soon became obvious that NHS supply chains are complex, spanning geographical locations and sectors, such

as acute hospitals, primary care organizations and health authorities; and encompassing diverse products and services, such as personnel, drugs and pharmaceuticals, medical equipment, information technology, transport and car parking. In order to be able to compare and contrast measures and perceptions she decided that she needed to select different types of services. Therefore she chose to investigate three services managed by the NHS Trust in which she had worked during her placement: personnel, transport and medical equipment. For each service she identified a supply chain comprising of four groups: Primary Care Trust (patients and general practitioners), Strategic Health Authority, the acute hospital NHS Trust, and a supplier to the hospital.

To meet the research's first objective of establishing how service quality is measured Samantha considered undertaking a survey using a previously validated instrument, such as SERVQUAL (Parasuraman et al., 1985). This presented Samantha with a dilemma. Whilst there were clear benefits in terms of establishing external validity, with such instruments having been shown through prior research to contain measures of service quality that are appropriate to a wide range of situations, other literature suggested that such generic instruments may not provide sufficient detail of the measures important in the health care context (for example: Robinson, 1999). Judging that the limitations of using a previously validated instrument outweighed the benefits, Samantha decided to undertake focus group meetings with each of the four groups in each of the three supply chains (twelve meetings in total), to obtain data about the attributes used to measure service quality. After the meetings, Samantha used content analysis to generate a number of measures of service quality. On comparing the measures she had extracted from the data with existing service quality constructs she was able to categorize them under headings similar to those used in SERVQUAL: Reliability, Assurance, Tangibles, Empathy and Responsiveness.

Her next two research objectives required:

- data to be collected on perceptions of service quality;
- a comparison of measures of service quality and perceptions;
- analysis of the factors that influenced differences between measures and perceptions.

In addition, Samantha recognized that the measures she had generated through her focus groups needed further validation by a larger sample of people in each of the supply chains. Samantha's initial thought was to carry out interviews to obtain a larger amount of data that would address the objectives and the issue of validity; however, she soon realized that this would be very costly and time consuming in practice, and would not necessarily give her the data in a form suitable for analysis. She therefore decided an appropriate approach for the remainder of the research would be to survey opinions and attitudes of people within the three supply chains using a questionnaire.

To ensure the data gained from her questionnaire would be suitable for analysis, Samantha utilized the Service Template process used in previous research (Williams et al., 1999). This allows the identification and measurement of different dimensions and perceptions of service quality, and so fitted well with Samantha's research

objectives. In line with the Service Template process, Samantha developed her questionnaire by first listing each measure of service quality identified through her focus groups as an item in the questionnaire. The importance of the item would be measured as an expectation, and the current performance against the item would be recorded as a perception. This would be recorded using a 10-point Likert scale, anchored by ideal and worst situation descriptors which Samantha could derive from her focus group meetings. This is illustrated in the following extract from Samantha's questionnaire:

For the Medical Equipment supply chain, please rate the following items on the scale below, with 10 representing the ideal situation and 1 the worst. For each item, use E to indicate your *expected* level of service, and P for your *perception* of actual performance.

Item	Ideal	10	9	8	7	6	5	4	3	2	1	Worst
Information	Accessible		E				P					Nonexistent
Availability of support	Permanently there		P	E								Sporadic
Speed of service	Prompt											Slow

E – Expectation (measures of importance)
P – Perception of actual performance

In addition, she included a number of demographic questions relating to the respondent's position in the supply chain, role, age, sex and length of time in organization. These she placed at the end of her questionnaire. Including these questions would allow her to analyze patterns cross supply chains, to determine if any of these factors influence perceptions. For example, Samantha may discover that people under 25 have similar expectations of service across supply chains, and these may differ from those in an older age category.

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20 What is your main role? (*Tick one box only*)
  ☐ Purchasing ☐ Sales

21 Which of the following best describes your position in your organization?
(*Tick the nearest match to your job title*)
  ☐ Junior buyer/seller
  ☐ Senior buyer/seller
  ☐ Buyer/seller
  ☐ Buying/sales Manager
  ☐ Executive/CEO/board director
  ☐ Other (please state) _____
22 How long have you been in this role, and in your current organization? _____
23 What is your gender? ☐ Male ☐ Female
24 What is your age? _____

Samantha pilot tested her questionnaire on a sample of five people drawn from the focus groups. Some minor amendments were made based on the feedback from this pilot. Having designed and piloted the questionnaire, Samantha planned to mail it out via email to 1500 people: 500 per supply chain comprising 125 representatives for the four groups in each chain. Similar survey-based research in supply chains had reported response rates of about 20% (Larson and Poist, 2004) and, on this basis, Sam anticipated obtaining a data set of about 300 completed questionnaires: 100 per supply chain.

(Adopted from: Saunders, Lewis and Thornhill: Research Methods for Business Students, 6th edition, 2012)

Questions:

i. Do you think Samantha's decision to use focus groups as a tool for colleting primary data for her study is justifiable? Explain your answer.

ii. Identify the strengths and weaknesses of using focus groups to generate a list of service quality measures rather than relying on a pre-validated instrument such as SERVQUAL.

iii. What are the advantages and disadvantages of using a questionnaire to obtain data on the importance of the measures and perceptions of performance?

iv. Identify strategies Samantha can use to maximize the response rate to the survey and briefly explain.

v. The extracts of Samantha's questionnaire presented here do not include any of the amendments suggested by her pilot test. What amendments to these questions do you think Samantha made after the pilot testing?

(5 x 8 = 40 Marks)

Part B

02. The HR manager of ABC Company observes that job satisfaction of employees in her company is low. She thinks that if the working conditions and the pay scales of the employees are bettered, the job satisfaction of employee will improve. She also thinks that employees will be more satisfied with their current jobs if they see a path available to move up the ranks in the company and be given more responsibility and along with it higher compensation. However, she doubts that increasing the pay scales is going to raise the job satisfaction of all employees. Her guess is that those who have good alternative incomes will just not be 'turned on' by higher pay. However, those without alternative incomes will be happy with increased pay and their job satisfaction will improve.

(a) What might be the problem statement or problem definition for this situation? (03 Marks)

(b) List and label the variable in the above situation. (04 Marks)

(c) Diagram the relationships among the variables. Explain the relationships among the identified variables. (08 Marks)

(d) Formulate four different hypotheses and the alternative hypothesis for each null hypothesis. (05 Marks)

03. (a) What is a research problem? Using an example, explain the process of Formulating a research problem. (10 Marks)

(b) What is meant by measurement? Using an appropriate example, explain the different types of measurement scales (06 Marks)

(c) Provide most appropriate measurement scale for following data. Explain your answer
   i. Temperature measured on Kelvin scale
   ii. Number of passengers on airplane from Singapore to Sri Lanka
   iii. Stress level of employees working in large organization
   iv. Social class of voters in electorate (04 Marks)

04. (a) Define the following terms associated with the sample
   i   population   ii   Elements
   ii   sample   iii   Subject
   iv   Parameters   vi   Statistics   (06 Marks)

(b) "Sampling is the process of selecting a sufficient number of the right elements from the population..." Highlighting the major steps in the sampling process, explain the above statement. (04 Marks)

(c) A researcher wanted to find out eating habits of school going students and he selected the Western province in Sri Lanka for the study. He decides on his sample in the following manner; four schools will be selected from each of the three districts in the province. Ten students each will be selected from grade 10, 11, 12 and 13 from the schools.

   i.   What is the size of the sample the researcher is going to select?
   ii. What would be the most appropriate sampling method to answer this research question? Justify your answer.
   iii. Explain the advantages and disadvantages of the selected method. (10 Marks)

05. Write short notes on the following
   a) Study design
   b) Operationalization of a concept
   c) Role of hypotheses
   d) Anti-positivism

   (4 x 5 = 20 Marks)