

**OPERATIONS SCHEDULING AND SERVICE QUALITY AMONG ERRAND
SERVICE PROVIDERS IN KENYA**

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**A research project submitted in partial fulfillment of the requirement for the
award of degree of masters in business administration, department of business
administration**

University of Nairobi

October, 2013

DECLARATION

This research project is my original work and has not been presented for examination to any other university.

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ACKNOWLEDGEMENT

I would like to thank the almighty God through whom all things are possible.

I wish to thank my supervisor Mr. Ernest Akelo for his guidance, insightful comments, suggestions and corrections.

Finally my heartfelt appreciation goes to my entire family, for their unending support, encouragement and inspiration during my academic pursuit.

DEDICATION

I wish to dedicate this work to my family, Dad, Mum, sisters and brothers for their support and inspiration during this long journey.

ABSTRACT

This research put efforts to establish the influence that operation scheduling has on the quality of service of errand providers in Kenya. To accomplish this, data was collected from a representative sample of institutions within the country from whole population and administering questions to collect data on how the errand service business is carried out, the effects of the different operations scheduling activities and the extent they perceive different aspects covering the study. Data collected was analyzed using SPSS software and the results interpreted. From the study it was found that operation scheduling has a positive impact on the services in ensuring effectiveness and efficiency is achieved. The operation scheduling methods engaged helped in reducing time spent in offering these services, cutting operational costs and meeting the client's demands effectively. This helped businesses capture their loyalty as a long term benefit to the organization.

In conclusion; operations scheduling has a positive impact on service quality among errand service providers. Adoption of operations scheduling would result in customer satisfaction hence creating brand loyalty with clients. The study recommends that since operation scheduling has an impact on the services offered by errand service businesses, operation managers should engage the use of operation research techniques such as Gantt charts, Northwest corridor rule and Vogel's models in solving the transport problems.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Operations scheduling and service quality is critical, not only in the manufacturing firms but also among service providers to be able to offer quality goods or services effectively and efficiently. Errand service providers have long been known to provide essential services specifically personalized service solutions. Some of the services errand providers offer include: messenger services to its clients, utility bill payment service, banking either for a cheque or cash deposits, bank documents collection, in-home personal assistance, cleaning one's residence, parcel delivery within and without state territories.

Courier service is a form of specialized errand, where errand provider ensures that an effective and efficient service is given up to door-to-door. Courier delivers messages, packages, and mail. Their services are either programmed or scheduled; there is also an on demand courier service (Stevenson and William, 2005). Courier services operate on all scales, from within specific towns or cities, to regional, national and global services. Large courier companies include; Associated Air Services, DHL, ESTAFETA, FedEx, EMS International, TNT, UPS, and Aramex. These offer services worldwide, typically via a hub and spoke model.

Faced with increasingly sophisticated clients; market globalization, and evolving technology, professional service firms must evaluate their business models to ensure that they can deliver the greatest value to every client on every project (Finch, 2006). If firms continue to do business as usual, they will face eroding profit margins, increased operational complexity and risk, and underleveraged partnerships. Let's take a moment to look at each of the five fundamental driving forces at work in the professional services marketplace today before we explore how firms can proactively address these trends (Bittner, Booms, and Tetreault, 1990). A service operation is an open transformation process of converting inputs (consumers) to desired outputs (satisfied consumers) through the appropriate application of resources (family, material, labor, information, and the

consumer as well). More simply, services are economic activities that produce time, place, form, or psychological utility (Nitecki, 1997).

Services are not peripheral activities, but are an integral part of society. Except for basic subsistence living, services are an absolute necessity for a functional economy and enhancement of the quality of life. While an industrial society defines the standard of living by the quantity of goods, a service society sees the standard of living through quality of life as measured by health, education, and recreation. The central figure in this society is the professional who can provide information rather than energy or physical strength. In addition, infrastructure services (communication and transportation) are seen as essential links between sectors of the economy.

1.1.1 Errand services in Kenya

An errand is a short journey undertaken in order to deliver or collect something or to convey a message especially on behalf of someone else (Oxford Dictionaries, 2013). There are a number of errand service providers in Kenya. The main services they offer to the clients include: payment of utility bills, renewal/application of permits, collecting and delivering mail, gifts and flowers selection and delivery, registration of business names, transfer of motor vehicles, airport transfer, personal assistants for short term visitors to Kenya and other personal/corporate errands.

Groceries and meal planning, dry cleaning drop-off and pick-up, book store purchases, library pick up and returns, taking your car to be serviced, post office mail pick/delivery, video rental and return, taking your pet to the groomer or vet, notary public are some forms of errands that many people are glad to pay for someone to who offers to do (Bizymoms, 2008).

1.1.2 Operations Scheduling

Operations schedules are short-term plans designed to implement the sales and operations plan. Often, several jobs must be processed at one or more workstation. Operations scheduling can loosely be defined as an act of defining priorities or arranging activities to

meet certain requirements. It has two levels, macro level which include company-wide, factory-wide or those multinational companies.

The other category is the micro level errands including; shop, work stations. Typically, a variety of tasks can be performed at each workstation. If schedules are not carefully planned bottlenecks and waiting lines may develop. When a job order is received for a part, the raw materials are collected and the batch is moved to its first operation. The colored arrows show that jobs follow different routes through the manufacturing process, depending on the product being made. At each workstation, the next job to process is a decision because the arrival rate of jobs at a workstation often differs from the processing rate of the jobs at a workstation, thereby creating a waiting line (Sampson, 2001).

Just as many schedules are feasible for a specific group of jobs at a particular set of workstations; numerous methods can be used to generate schedules. They range from straight forward manual methods, such as manipulating Gantt charts, to sophisticated computer models for developing optimal schedules. One way to generate schedules in job shops is by using priority sequencing rules, which allows the schedule for a workstation to evolve over a period of time. The decision about which job to process next is made with simple priority rules whenever the workstation becomes available for further processing. One advantage of this method is that last-minute information on operating conditions can be incorporated into the schedule as it evolves.

1.1.3 Service Quality

A service is the intangible equivalent of an economic good. Wemmerlov (2000), states that services are mostly produced and consumed by people, therefore, to keep service reliability constant is a real challenge. Defining service quality and their component in a form that is actionable in the workplace is an important endeavor that an organization should not take lightly. Sampson and Froehle (2006) noted that Service quality can be decomposed into two major dimensions. The first dimension is concerned with what the service delivers and is referred to as outcome quality or technical quality. The second dimension is concerned with how the service is delivered, that is, the process that the

customer went through to get to the outcome of the service. This is referred to as process quality or functional quality.

According to Spencer (2004) services must be selected and managed with care to maintain credibility. No total quality initiative can succeed if fear is present. Total quality service culture conducive to continuous improvement is a starting point to continuous improvement or Kaizen according to Japanese culture. Positive ways are identified to acknowledge progress rather than negative ways to punish people for not achieving goals. Kessler advocates for quality champions in any quality improvement initiative. In addition to these champions, steering committees can be formed to monitor continuous quality improvement programs.

1.1.4 Operations Scheduling and Service quality

The main operations anticipated for delivery by errand service provider agencies to the clients include: faster payment of utility bills, renewal/application of permits, collecting and delivering mail, gifts and flowers selection and delivery, registration of business names, transfer of motor vehicles, airport transfer, personal assistants for short term visitors to Kenya and other personal/corporate errands. Other operations include: groceries and meal planning, target, prescriptions, dry cleaning drop-off and pick-up, book store purchases, library pick up and returns, taking your car to be serviced, post office, video rental and return, or taking your pet to the groomer or vet.

These firms also provide professional courier/messenger services. They serve clients errands such as in; government corporations such as KRA, NHIF, NSSF, payment of utility bills such as electricity and water, cable TV, insurance, renewal of driving licenses, motor vehicle transfer, person to person deliveries, any other tailor made errands (legal of course), dispatch of monthly magazines. Nairobi petty errands solution ltd. Company, Pronto errands ltd. Company and Nitume services are some of the main errand service providers in Kenya.

Firms with high interaction/customization strive to maintain service quality, react to customer needs in order to satisfy them and gain customer loyalty. Low labor-intensive firms concentrate on capital decisions, technological developments, maintenance of high utilization rate, and scheduling operations geared to service delivery. Highly labor-intensive services emphasize workload scheduling, managing growth, hiring, training, and employee welfare (Nitecki, 1997).

1.2 Statement of the Problem

Service and manufacturing organizations face similar issues that affect the end result of operations including cost control, forecasting demand and staying competitive in the market. Although other organizations combine both service and manufacture industries such as accounting, hotel and catering, universities and other mid-level colleges, transport industries and in hospitals.

Operations scheduling is done to improve on efficiency and effectiveness in such business entities. Much of this is due to the characteristics of; intangibility, variability, perishability, inseparability, and simultaneity of services additionally demand for services is usually random (Stevenson, 2005). Random demand makes the operation scheduling of labor extremely difficult as seen not only in restaurants, movie theaters and amusement parks this also characterize errand service providers in Kenya.

Kenyan errands service providers operate in a business environment that is characterized by an intense competition and high uncertainty. According to Gupta (2004), scheduling and control of transport labor force and material in Nairobi City Council Water department and the results indicated that there was lack of proper work sequencing thus the many challenges the department faced.

Mwamburi (1999) looked at a product scheduling and accounting system for Kenya pipeline; which yielded that scheduling was mainly determined by information system functionalities. The main tasks in operations control are to plan the availability of material, to plan schedules and capacities and to control the shop-floor. The duties involved in operations control revolve around; observation of schedules, minimization of the throughput times of material and capital commitment and to ensure that capacities are fully utilized and that operating resources and labor costs are kept low.

Therefore the main intent of scheduling and capacity planning is deadline-oriented planning and control of manufacturing orders, ensuring at the same time that operating resources are utilized to a permanently high level despite the time, financial and other such prevailing constraints which proper scheduling resolves. Operations scheduling is

said to use a number of different tools and that the rationalization is achieved by systematizing operations scheduling and its tools which can further be increased by use of IT (information technology) components (Schuh, 2003). Hawa (2003) conducted a study on stochastic evaluation of fair scheduling with applications to quality of service in broadband wireless access network. The study is aimed at analyzing the stochastic performance of fair scheduling systems through simulation experiments.

All these studies have been on scheduling and service quality, all have not looked at the effects of operations scheduling and its effect on service quality. This study attempts to fill this gap by establishing the effects of operations scheduling on service quality by errands service providers. The study should answer the questions of; how do operations scheduling in errand service providers influence outcome quality and process quality of service dimensions? What is the relationship between operations scheduling and service quality offered by errand service providers? This study therefore intends to give more insight on operations scheduling and service quality among errand service providers in Kenya, an area which has long experienced a down fall and thought to be as a result of poor operation scheduling among errand service providers.

1.3 Objective of the study

The objective of this study is to establish the effect of operation scheduling on service quality of errand service providers in Kenya.

1.4 Value of the Study

The findings of this study will be useful to the stakeholders in errand service providers in Kenya as they acquire knowledge on the effectiveness operations scheduling as a strategy to improve service delivery in Kenya. It will go a long way in enabling the stakeholders re-examine their role and position in the market and how they can respond to challenges of reliance on scheduling and sequencing.

Finally, the study will be useful to scholars who would use it as a source of literature and empirical references which would provide grounds of further studies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter aims to give a review of documented literature that has been made available by individuals who have been researching on the same area. It also aims to bring forth recent developments that have been made within the scope of this research which may lead to identification of the gaps that are still waiting to be discovered as solutions to these problems. From this literature, sufficient research shall be done in the work related to what has been done by other researchers.

2.2 Empirical Review

Here, the common practices employed to make operations scheduling and service quality among errand service providers are discussed. Service experiences, Service Quality Delivery, Scheduling and Job Shop Sequencing are among the most common practices in ensuring the success of errand service providers effectively and efficiently. Service experiences, emphasizes proper delivery of quality product to the client profitably. This has been expounded on service quality delivery. In other words, meeting customer expectations is the key to success of any business venture. Among the other techniques employed in operation Research, job shop sequencing and scheduling have been mentioned.

2.2.1 Service Experiences

The linkage between a service concept and service delivery is more important in experience centric concepts that according to Kreipl et al, (2002) occur when a customer has any sensation or knowledge acquisition resulting from some level of interaction with different elements of a context created by a service provider. By providing experiences, firms create loyal customers that are eager to share their experience with others. Goldratt and Co (1986), compare these experience-centric operations to theater productions, comparing front-line servers to actors, physical surroundings to stages, and customers to audience members.

Erdem, Demirel and Onut, (2002), examined how adequate planning and scheduling contributes to an increased contribution margin, which they define as revenue minus variable costs. It should be noted that research efforts are not limited to the identification of the best practice. Erdem, for instance, formulate a linear programming model in which the variable costs are maximized in order to determine the worst case scenario. One other evaluation approach is to determine how well operating room planning or scheduling procedures fulfill the preferences of its stakeholders. Cardoen et al, (2004), solve a case sequencing problem in which they try, amongst other, to schedule surgeries of children and prioritized patients as early as possible on the surgery day. At the same time, they want patients with a substantial travel distance to the ambulatory surgery center to be scheduled after a certain hour.

2.2.2 Service Quality Delivery

Customers' expectations of public service are changing, with an increasing comparison to service delivery by the public sector. Citizens and businesses judge the quality of public service they receive with each contact and will compare the ease of access and the level of service offered by the private sector. (Otautahi, 1996) Citizens only have confidence in governments that can provide them with essential services such as internal security and social services in education, health and amenities of life. A key determining factor of the confidence that people place in governments is the extent to which government services delivered meet their own desired quality. Governments unable to meet basic expectations of the people often suffer crises of legitimacy (United Nations, 2007).

A good channel strategy should provide accessibility to services and offer the flexibility that modern day customers have come to expect. Whilst recognizing that citizens have differing needs, certain services may be more suited to specific types of contact channels. There is a need therefore, to understand the essence of quality service delivery. According to Edward and Bvuma (2001), services must be selected and managed with care to maintain credibility. Total quality service culture conducive to continuous improvement is a starting point to continuous improvement or Kaizen according to Japanese culture. Kessler advocates for quality champions in any quality improvement

initiative. In addition to these champions, steering committees can be formed to monitor continuous quality improvement programs (Mitchell, 2007).

Due to poor delivery of services in Kenya, a national conference suggested in 1971 the need to have a bottom up approach to foster development planning and service delivery to develop the rural areas. Therefore, three years later, the Special Rural Development Program (SRDP) was developed. Due to limitations of resources, the SRDP was not well operationalized. In 1983, the District Focus for Rural Development (DFRD) was initiated with the goal of institutionalizing participatory bottom-up approach development. District Development Committees (DDCs) were established with the aim to serve as the forum for all stakeholders in the respective district. In 2008, the DFRD strategy was revised. Its First Medium Term Plan (2008-2012) has a strong emphasis on political decentralization.

2.2.3 Scheduling

Statistics show that OR (operation research) have room for huge improvements in scheduling-related issues, such as start times and turnover rates. The average OR (operation research) starts on time only 27 percent of the time, yet the most efficient ORs hit their mark in 76 percent of their cases. Delays can be attributed to factors that range from simple to complex. For example, in many ORs, the first case of the day often doesn't start on time, causing cases for the remainder of the day to start late as well. Inefficient turnover of the room can cause the next event to be delayed (Mwamburi, 1999).

An integrated scheduling system can help automate manual steps and eliminate duplication of nursing efforts, freeing nurses to prepare for the next case. Unrealistic scheduling also can cause delays and cost overruns. When there is not enough time allotted in the schedule for the procedure, the case will run overtime, causing subsequent cases in that suite to be delayed and possibly adding additional labor costs for clinician overtime. Sometimes delays are justifiable, but being able to get to the root cause of the variance will help create a cycle of continuous improvement so future delays can be minimized.

2.2.4 Job Shop Sequencing

Just as many schedules are feasible for a specific group of jobs at a particular set of workstations; numerous methods can be used to generate schedules. They range from straightforward manual methods, such as manipulating Gantt charts, to sophisticated computer models for developing optimal schedules. One way to generate schedules in job shops is by using priority sequencing rules, which allows the schedule for a workstation to evolve over a period of time. The decision about which job to process next is made with simple priority rules whenever the workstation becomes available for further processing (Baker, 2002).

The scheduler or software uses the priority sequencing rules to determine the processing sequence of jobs at a workstation and the remaining information for estimating job arrival times at the next workstation, as well as determining whether an alternative workstation should be used when the primary one is busy. Because this information may change throughout the day, computers are needed to track the data and to maintain valid priorities (Pinedo and Michael, 2000).

2.4 Summary of the Literature

Erdem et al, (2002) also coined the term Experience Economy as the next evolution of the service economy. They claim that as services become more and more efficient and effective they become commoditized and indistinguishable in the eyes of consumers. Pine and Gilmore (2005), compare these experience-centric operations to theater productions, comparing front-line servers to actors, physical surroundings to stages, and customers to audience members

A good channel strategy should provide accessibility to services and offer the flexibility that modern day customers have come to expect. Whilst recognizing that citizens have differing needs, certain services may be more suited to specific types of contact channels. There is a need therefore, to understand what the customer preferences are, what the different channels can offer and the cost of service delivery across each of these channels (Brown and Parker, 2000). It is against this backdrop that this research project is being

undertaken with research objective designed to provide answers on operations scheduling and service quality among errand service providers. These answers will help bridge the clearly identified gaps in the literature that have informed this investigation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out work plan and provides the activities and phases that were followed necessary for completion of the study. It was a blue print for the collection, measurement and analysis of data. It therefore gives the plan and structure envisaged to aid the researcher in answering the raised research questions. Specifically, the following subsections were included; research design, target population, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

This is a descriptive study that identifies the specific attributes of the effect of operation scheduling on service quality on errand service providers in Kenya. The research will involve acquiring information about one or more such companies, screening details about their performance and conducting an evaluation to know if service operations scheduling has any impact on their service quality dimensions of; outcome and process dimensions and also if there is a direct relationship between operations scheduling and service quality. The study will look at the; characteristics, opinions, attitudes, or a previous experience among the respondents.

3.3 Target Population

Target population of this study was all errand service providers' agents in Kenya. Kenyan government report session (2013) indicates that there are currently 31,047 errand service providers' agents operating in Kenya.

3.4 Sample Design

The total population of errands service providers' agents in Kenya is over ten thousands and to get a representative population sample, respondents were selected randomly in the country Kenya. The researcher then visited the offices where such services are offered. The method used by the researcher to select respondents was guided by the errands officers, the following sample determination where the population is above 10,000 was used.

The formula for getting sample population for a target population which is greater than 10,000 people is;

$$n = (z)^2 \times p \times q / d^2$$

n = sample population

z = standard normal deviate

p = proportion in the target population

q = 1- p

d = the level of statistical significance set.

Therefore, the proportion of the target population was to be 10% which is 0.1, with q being 1-0.1 = 0.9, the z of the standard deviation is 1.96, and desire statistical significance accuracy of 0.05 level, then the sample population in this research is;

$$n = (z)^2 \times p \times q / d^2$$

$$= 3.8416 \times 0.1 \times 0.9 / (0.05)^2$$

$$n = 138$$

Thus, the sample size will be 138 companies.

In order to obtain reliable results from the study it is necessary to have a representative sample, hence the sample size was 138 which was taken randomly. The researcher then calculated the average and other measures of central tendency basing on the average performance based on books of accounts records. Discussions were also held with each group.

3.5 Data Collection

Primary data was used for the project, and for data collection it adopted the use of questionnaires in collection of data which were administered to the respondents in advance. Questionnaires provided a high degree of data standardization and adoption of generalized information amongst the sample population.

The questionnaires are useful in establishing the number of people who hold certain beliefs and hence possible to gauge public opinion on an issue. The responses are gathered in a standardized way, so questionnaires are more objective, certainly more so than interviews. Generally, it is relatively quick to collect information using questionnaires.

3.6 Data Analysis

Analysis of data was done in order to answer the research question of this study. Data collected was sorted, classified and coded then tabulated for ease of analysis. The data was summarized and categorized according to common themes. The SPSS (version 17) computer software aided the analysis as it is more users friendly and most appropriate for analysis of Management related attitudinal responses (Newton and Jeonghun, 2010).

Descriptive statistics were employed to analyze the data. The mean score for each attribute were calculated and the standard deviation used to interpret the respondents deviation from the mean. The results were presented on frequency distribution tables. Here the interest was focused on frequency of occurrence across attributes of measures.

CHAPTER FOUR: DATA ANALYSIS, DISCUSSION AND PRESENTATION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The results are presented on operations scheduling and service quality among errand service providers in Kenya. The data was gathered exclusively from questionnaire as the research instrument. The questionnaire was designed in line with the objective of the study. To enhance quality of data obtained, Likert type questions were included whereby respondents indicated the extent to which the variables were practiced in a five point Likert scale.

The analysis was focused on meeting the following research objective:

- The objective of this study is to establish the effect of operation scheduling on service quality of errand service providers in Kenya.

The study targeted to sample 150 respondents in collecting data with regard to operations scheduling and service quality among errand service providers in Kenya. From the study, 105 out of 150 sampled respondents filled in and returned the questionnaire contributing to 70%. The response rate was achieved by the researcher making personal visits and constantly in touch to remind the respondent to fill-in and return the questionnaires.

4.2 General Information

In order to capture the general information of the respondents, issues such as age of the respondent, gender, level of education, position in the organization and years of experience were addressed in the first section of the questionnaire.

4.2.1 Age Bracket of the Respondents

Table 4.1 below summarizes the age of the respondents who participated in the study.

Table 4.1: Age Distribution

Age Brackets	Frequency	Percent
Below 20	3	3%
21-25	8	8%
26- 30	20	19%
31-35	17	16%
36-39	10	9%
40- 50	30	29%
Above50	17	16%
Total	105	100%

Source: Survey Data, 2013

From the findings, the majority of the respondents were 40-45 years old as shown by 29% of the respondents, 16% were aged 31-35 and above 50 years respectively, 9% were aged 36-39 years, 8% of the respondents were aged 21-25 years while only 3% of the respondents were below 20 years old. The respondents were mainly managers who were found to be old.

4.2.2 Number of Years Worked

Table 4.2 below shows number of years that that the respondents have worked in their organizations;

Table 4.2: Years of experience

Years of experience	Frequency	Percent
0-5	15	14%
6-10	28	27%
11-15	35	33%
Over 16yrs	27	26%
Total	105	100%

Source: Survey Data, 2013

According to the study, most of the respondents as shown by 33% reported that they had been working for 11-15 years, 27% of the respondents had worked for a period between 6 and 10 years, 26% of the respondents had worked for over 16 years, while only 14% of

the respondents said that they had worked for 0-5years.This indicates that most of the respondents were highly experienced with affairs of their organizations.

4.2.3 Level of Education of the Respondents

Table 4.3 indicates the level of education of the respondents

Table 4.3: Level of Education

Level of education	Frequency	Percent
Primary	15	14%
Secondary	25	24%
College	25	24%
University	40	38%
Total	105	100%

Source: Survey Data, 2013

The study found that the majority of respondents 38% were bachelor’s degree holders, followed by 24% of the respondents who had college and secondary as their highest level of education while 14% of the respondents reported that they had primary school as their level. This shows that majority have very high levels of education.

4.3 Scheduling In Dealing with Operations

Table 4.4 shows the respondents suggestion as to whether the service organization utilizes scheduling in dealing with its operations.

Table 4.4: Scheduling in dealing with operations

Response	Frequency	Percent
Yes	80	76%
No	25	24%
Total	105	100%

Source: Survey Data, 2013

From the study an overwhelming majority of 76% were of the opinion that operation scheduling was applied in the organization in dealing with operations, whereas 24% said it was not. Tasks in these organizations are therefore scheduled in meeting customers’ needs.

The study findings are in line with one carried out by Raturi(2005) where he asserts that instead of scheduling labor, service firms frequently try to facilitate their service operations by scheduling demand. This is done through the use of appointment systems and reservations. This trend is particularly evident in service companies such as airlines and hotels which have adopted the increased use of electronic reservations systems to register demand, track cancellations and determine the supply of services. Advance reservations systems enable companies to significantly reduce random demand, customer wait times, and difficulties in scheduling of labor.

4.4 Operations Scheduling Options

The respondents were asked to describe operations scheduling options used to ensure quality of service in organization. From the study they gave the following alternatives: Gantt charts, sequencing and loading as operations scheduling options.

Just as many schedules are feasible for a specific group of jobs at a particular set of workstations; numerous methods can be used to generate schedules. They range from straightforward manual methods, such as manipulating Gantt charts, to sophisticated computer models for developing optimal schedules. One way to generate schedules in job shops is by using priority sequencing rules, which allows the schedule for a workstation to evolve over a period of time. The decision about which job to process next is made with simple priority rules whenever the workstation becomes available for further processing.

4.5 Situations Options Utilized

Table 4.5 indicates the situations the respondents' organizations utilize the various operations scheduling options given above.

Table 4.5: Situations options utilized

Statement	Frequency	Percent
In all situations	10	10%
During peak hours/days	70	66%
Only when the customer demands	25	24%
Total	105	100%

Source: Survey Data, 2013

From the study 66% who are the majority said they do it during peak hours/days, 24% said it's only when the customer demands whereas 10% do it in all situations. It is done mainly in peak hours since necessary steps must be taken to ensure every of the customer's needs are addressed. One other evaluation approach is to determine how well operating planning or scheduling procedures fulfill the preferences of its stakeholders.

4.6 Benchmark of Operations

Table 4.6 indicates how often they do benchmark of operations scheduling.

Table 4.6: Benchmark of operations

Statement	Frequency	Percent
Monthly	10	10%
Half yearly	70	66%
Annually	25	24%
Total	105	100%

Source: Survey Data, 2013

From the study 66% who are the majority do it half yearly, 24% do it annually whereas 10% do the bench mark monthly. This is mainly to ensure that the standards set are met accurately and in a timely manner for efficiency and effectiveness purposes. This study is in line with one carried out by Bogan(1994) where he asserts that benchmarking may be a one-off event, but is often treated as a continuous process in which organizations continually seek to improve their practices.

4.7 Challenges in Operations Scheduling and Service Quality

Table 4.7 below indicates the rating of source challenges faced in operations scheduling and service quality rating.

Table 4.7: Challenges in operations scheduling and service quality rating

Activities	Mean	Std Dev.
Management commitment in operation scheduling influences the level of quality service delivery process	4.5705	0.58528
Quality service represents a customer's assessment of the overall level of service offered by the organization	4.5672	0.77921
Lack of adequate operations scheduling has led to low quality service rendering in the organizations	3.8689	0.57560
There are much efforts by the management in ensuring adequate operations scheduling	3.2738	0.45441
Efficient operations scheduling results to timely operation and service delivery	3.3489	0.77891
There is a pressure driving the organization towards an efficient operations scheduling	3.5734	0.77925
Organizations with an efficient operations scheduling program have a high competence level in quality service delivery	4.5772	0.77931

Source: Survey Data, 2013

From the questionnaire a likert scale of 1-5 was used where: 1 strongly disagrees, 2 disagree, 3 neutral, 4 agree, 5 strongly agree. The scores “very great extent” and “great extent” were represented by mean score equivalent to 3.6 to 5.0 on the continuous Likert scale (<very great extent< 5.0). The scores of ‘Neither agree nor disagree’ were equivalent to 2.6 to 3.5 on the Likert scale (2.6 < neither agree nor disagree <3.5). The score of “No extent” and “Extremely no extent” were equivalent to 1.0 to 2.5 on the Likert Scale (1.0 < No extent < 2.5).

The respondents were asked to give the extent to which: Management commitment in operation scheduling influences the level of quality service delivery process, a mean of 4.5705 was derived showing that they Strongly Agree to a very great extent; Quality service represents a customer's assessment of the overall level of service offered by the organization, a mean of 4.5672 was derived showing that they strongly agree to a very great extent; Lack of adequate operations scheduling has led to low quality service rendering in the organizations, a mean of 3.8689 was derived showing that they agree to a very great extent; there are much efforts by the management in ensuring adequate operations scheduling, a mean of 3.2738 was derived showing that they neither agree or disagree; efficient operations scheduling results to timely operation and service delivery, a mean of 3.3489 was derived showing that they are neither agree or disagree.

There is a pressure driving the organization towards an efficient operations scheduling, a mean of 3.5734 was derived showing that they agree to a very great extent and that organizations with an efficient operations scheduling program have a high competence level in quality service delivery, a mean of 4.5772 was derived showing that they strongly agree to a very great extent. Thus by providing experiences, firms create loyal customers that are eager to share their experience with others, management have the great stake in ensuring that operation scheduling on service offering succeed and it should be understood that organizations with an efficient operations scheduling program have a high competence level in quality service delivery.

4.8 Procedures Taken in Operations Scheduling

The respondents were asked describe procedures taken in operations scheduling to ensure effectiveness and efficiency in provision of quality services in organization. From the study the respondents gave the following: Assessing whether the function or service needs to be performed, develop conceptual “ideal plan” and Evaluating issues that are the most likely to yield significant results.

This procedure mainly assists in setting out priorities, setting out strategies as game plan and making out recommendations from observation made from the results found.

4.9 Information Technology in Ensuring Effectiveness and Efficiency

Table 4.8 below shows the opinion of the respondents on whether information technology employed in operations scheduling plays a key role in ensuring effective and efficient quality service provision.

Table 4.8: Information technology in ensuring effectiveness and efficiency

Response	Frequency	Percent
Yes	84	80%
No	21	20%
Total	105	100%

Source: Survey Data, 2013

From the study 80% who are the majority said it plays the role while only 20% said it does not play any role. ICT helps come up with software relevant for operation scheduling thus making the operations fast and meets desired results.

An integrated scheduling system can help automate manual steps and eliminate duplication of nursing efforts, freeing nurses to prepare for the next case. Unrealistic scheduling also can cause delays and cost overruns. When there is not enough time allotted in the schedule for the procedure, the case will run overtime, causing subsequent cases in that suite to be delayed and possibly adding additional labor costs for clinician overtime. Sometimes delays are justifiable, but being able to get to the root cause of the variance will help create a cycle of continuous improvement so future delays can be minimized.

4.9.1 Reasons against Roles of Information Technology

The ones who would say no were asked to give reasons. From the study they said it doesn't from the following reasons: the equipment used in terms of the whole system component being very expensive and that most of the employees are not competent with the technology thus inefficiency in terms of compromised work quality and time wastages comes in. Therefore cost of equipment and incompetence of employees are major hindrances of ICT in operation scheduling.

4.10 Effectiveness and Efficiency in Service Quality

Table 4.9 indicates the rating of effectiveness and efficiency in service quality.

Table 4.9: Rating Effectiveness and Efficiency in Service Quality

Activities	Mean	Std Dev.
The main purpose of operations scheduling is to enhance effective and efficient service delivery procedure in the organization	4.7805	0.58528
In services, customer orientation is particularly important	4.9672	0.77921
The management has an efficient mode of service supervision to ensure effective and efficient service delivery	3.8459	0.57560
Staff commitment has a great influence on the effectiveness and efficiency in the organization	3.5738	0.45441
Operations scheduling has a direct effect on the effective performance, survival and longevity of an organization	3.3489	0.77891

Source: Survey Data, 2013

From the questionnaire a likert scale of 1-5 was used, where: 1 strongly disagrees, 2 disagree, 3 neutral, 4 agree, 5 strongly agree. The scores “very great extent” and “great extent” were represented by mean score equivalent to 3.6 to 5.0 on the continuous Likert scale ($<\text{very great extent} < 5.0$). The scores of ‘Neither agree nor disagree’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 < \text{neither agree nor disagree} < 3.5$). The score of “No extent” and “Extremely no extent” were equivalent to 1.0 to 2.5 on the Likert Scale ($1.0 < \text{No extent} < 2.5$).

The respondents were asked to comment the extent to which effectiveness and efficiency in service quality in the errand service providers in respect to the following statements: The main purpose of operations scheduling is to enhance effective and efficient service delivery procedure in the organization, a mean of 4.7805 was derived showing that they strongly agree ; in services, customer orientation is particularly important, a mean of 4.9672 was derived showing that they strongly agree to a very great extent; the management has an efficient mode of service supervision to ensure effective and efficient service delivery, a mean of 3.8459 was derived showing that they agree to a very great extent; staff commitment has a great influence on the effectiveness and efficiency in the organization, a mean of 3.5738 was derived showing that they agree to a very great extent and finally whether operations scheduling has a direct effect on the effective performance, survival and longevity of an organization, a mean of 3.3489 was derived showing that they are neither agree nor disagree.

Therefore it can be said that staff commitment has a great influence on the effectiveness and efficiency in the organization, in services, customer orientation is particularly important, the management has an efficient mode of service supervision to ensure effective and efficient service delivery and the main purpose of operations scheduling is to enhance effective and efficient service delivery procedure in the organization whereas operations scheduling doesn’t always have a direct effect on the effective performance, survival and longevity of an organization.

The study finding are in line with one carried out by Franc (2010), where he asserts that facilities management is a necessary function and its importance on operations management for Guinness Ghana is needed. Effective operations

management in the company's activities depends on a great deal of effective management of facilities, such as buildings, computer systems, signage, lighting and plants and machinery.

Facilities management in Guinness Ghana is very important since the company may be engaged in a batch or mass production depending on the demand circumstances on the market. In a case high demand which could necessitate higher or mass production, facilities needs to be managed in producing large quantities of products which must be standardized to meet the market demand at specific period. Well managed facilities like plants and machinery in the company help in production speed, lower per unit cost, ease of manufacture and control and the efficiency in the company's production process.

4.11 Operations Scheduling Options for Quality Service Outcome

The study aimed at identifying organizational operations scheduling options employed to ensure quality service outcome in organization. From the study the following was found: sequencing, queuing game theory use of Vogel's approximation model and North West corridor rule in transport problems to enhance efficiency and effectiveness desired. This is in line with studies done by Erdem (2002), who formulate a linear programming model in which the variable costs are maximized in order to determine the worst case scenario.

4.12 Rating of Service Outcome

Table 4.10 shows the rating of the service outcome quality of operations scheduling in service quality in organization.

Table 4.10: Rating of service outcome

Response	Frequency	Percent
Good	70	67%
Average	20	19%
Not worthwhile	15	14%
Total	105	100%

Source: Survey Data, 2013

From the study 67% indicated that it is good, 19% said it is average whereas 14% indicated it is not worthwhile.

4.13 Service Quality Outcome

The respondents were asked to comment the extent on the service quality outcome in the errand service providers. The comments and rating was as in table 4.11 below.

Table 4.11: Service quality outcome

Activities	Mean	Std Dev.
All employees should be empowered and participate in the development of quality service outcome	4.7805	0.58528
Service quality outcome is accessed through the overall customer satisfaction	4.9672	0.77921
Where service is customized, there results a high quality service outcome	3.8459	0.57560
High service quality outcome ensures that there is a high customer turn up rate	3.5738	0.45441
Employees with a strong affective satisfaction ensures a high quality service outcome	3.3489	0.77891
Continuance customer satisfaction their dissatisfaction is due to efficient service quality outcome	3.3758	0.67580
Continuance service quality outcome ensures that clients remain customers of the organization for a longer period	3.5749	0.56561

Source: Survey Data, 2013

From the questionnaire a likert scale of 1-5 was used where: 1 strongly disagrees, 2 disagree, 3 neutral, 4 agree, 5 strongly agree. The scores “very great extent” and “great extent” were represented by mean score equivalent to 3.6 to 5.0 on the continuous Likert scale (<very great extent< 5.0). The scores of ‘Neither agree nor disagree’ were equivalent to 2.6 to 3.5 on the Likert scale (2.6 < neither agree nor disagree <3.5).

The score of “No extent” and “Extremely no extent” were equivalent to 1.0 to 2.5 on the Likert Scale (1.0 < No extent < 2.5).

The comment on the extent of the service quality outcome in the errand service providers Guide on the these statements was as follows: All employees should be empowered and participate in the development of quality service outcome, from the study a mean of

4.7805 was derived showing that they strongly agree to a very great extent that they should; Service quality outcome is assessed through the overall customer satisfaction, from the study a mean of 4.9672 was derived showing that they strongly agree to a very great extent it does; Where service is customized, there results a high quality service outcome, from the study a mean of 3.8459 was derived showing that they agree to a very great extent it does.

High service quality outcome ensures that there is a high customer turn up rate, from the study a mean of 3.5738 was derived showing that they agree to a very great extent it does; employees with a strong affective satisfaction ensures a high quality service outcome, from the study a mean of 3.3489 was derived showing that they neither agree nor disagree; continuance customer satisfaction their dissatisfaction is due to efficient service quality outcome, a mean of 3.3758 was derived showing that they agree to a very great extent and that continuance service quality outcome ensures that clients remain customers of the organization for a longer period, from the study a mean of 3.5749 was derived showing that they agree to a very great extent.

Therefore all employees should be empowered and participate in the development of quality service outcome, Customers' expectations of public service are changing, with an increasing comparison to service delivery by the public sector. Citizens and businesses judge the quality of public service they receive with each contact and will compare the ease of access and the level of service offered by the private sector. (Otautahi, 1996) Citizens only have confidence in governments that can provide them with essential services such as internal security and social services in education, health and amenities of life. A key determining factor of the confidence that people place in governments is the extent to which government services delivered meet their own desired quality. Governments unable to meet basic expectations of the people often suffer crises of legitimacy (United Nations, 2007).

According to Edward and Bvuma (2001), services must be selected and managed with care to maintain credibility. Total quality service culture conducive to continuous improvement is a starting point to continuous improvement or Kaizen according to

Japanese culture. Kessler advocates for quality champions in any quality improvement initiative. In addition to these champions, steering committees can be formed to monitor continuous quality improvement programs (Mitchell, 2007).

4.14 Influence of Operations Scheduling

Table 4.12 below shows suggestions on whether operations scheduling influence service process quality.

Table 4.12: Influence of operations scheduling

Response	Frequency	Percent
Yes	84	80%
No	21	20%
Total	105	100%

Source: Survey Data, 2013

From the study 80% who are the majority indicated that its influence on service process quality whereas 20% said it will not influence.

Robert (2009) suggests that the use of operations checklist is an effective system for ensuring that all the activities of a business organization are run according to planned sequence and set limits. For example, an operations checklist in a restaurant business facilitates the identification of daily activities, general activities, and special events of the restaurant. Subsequently, it enables employees to execute assigned duties according to the set guidelines, thereby eliminating probabilities of customer delays or wastage of resources.

4.15 Measures for Continuous Service Process Quality

The study aimed at determining the measures that the organization has taken in ensuring continuous service process quality. From the studies taken some of the measures include; continuous monitoring and evaluation of the system and evaluation of feedbacks from the customers on the service quality provided. These measures are necessary in ensuring that there is compliance with the standards.

4.16 Rating Service Providers and Continuous Improvement

The rating of aspects that relate to errand service providers and continuous improvement on service process quality is as shown in table 4.13 below.

Table 4.13: Rating Service Providers and Continuous Improvement

Activities	Mean	Std Dev.
Reliability of the operation scheduling services offered by the management and staffs is recommended	4.5805	0.56528
The management and staff competence level in service process quality is high compared errand service providers in Kenya	4.5172	0.78921
Access to organization for service process quality and information is easy in terms of infrastructure and technology	3.8688	0.58560

Source: Survey Data, 2013

From the questionnaire a likert scale of 1-5 was used where: 1 strongly disagrees, 2 disagree, 3 neutral, 4 agree, 5 strongly agree. The scores “very great extent” and “great extent” were represented by mean score equivalent to 3.6 to 5.0 on the continuous Likert scale ($<\text{very great extent} < 5.0$). The scores of ‘Neither agree nor disagree’ were equivalent to 2.6 to 3.5 on the Likert scale ($2.6 < \text{neither agree nor disagree} < 3.5$). The score of “No extent” and “Extremely no extent” were equivalent to 1.0 to 2.5 on the Likert Scale ($1.0 < \text{No extent} < 2.5$).

The study found the following on rating aspects that relate to errand service providers and continuous improvement on service process quality on areas such as: reliability of the operation scheduling services offered by the management and staffs is recommended, a mean of 4.5805 was derived showing that they strongly agree to a very great extent; the management and staff competence level in service process quality is high compared errand service providers in Kenya, a mean of 4.5172 was derived showing that they strongly agree to a very great extent and that access to organization for service process quality and information is easy in terms of infrastructure and technology, a mean of 3.8688 was derived showing that they agree to a very great extent.

Therefore it is clear that access to organization for service process quality and information is easy in terms of infrastructure and technology, the management and staff competence level in service process quality is high compared errand service providers in

Kenya and reliability of the operation scheduling services offered by the management and staffs is recommended.

4.17 Challenges in Ensuring Provision of Quality Services Processes

The study aimed at determining the challenges that are experienced in endeavors of ensuring provision of quality services processes. From the study the following were listed as the challenges faced: inconsistency of government policies in relation to services quality, malpractice of the employees hindering the effectiveness of policies in place, Security threats and high cost of operation. Therefore a key determining factor of the confidence that people place in governments is the extent to which government services delivered meet their own desired quality. Governments unable to meet basic expectations of the people often suffer crises of legitimacy.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides the summary of the findings, discussion on the findings of the research, and also it gives the conclusions and recommendations on operations scheduling and service quality among errand service providers in Kenya. It also gives an overview of areas for future research.

5.2 Summary of the Findings

The purpose of the study was to determine the operations scheduling and service quality among errand service providers in Kenya. The study was guided by the following objective:

- The objective of this study is to establish the effect of operation scheduling on service quality of errand service providers in Kenya.

The type of research design adopted was a descriptive study approach. The organization studied were all errand service providers' agents in Kenya. The population of errand service providers' agents is 31,047 operating in Kenya. Stratified sampling was done from which a sample of 105 was selected. The data was collected through self administered questionnaires. The drop and pick up approach was used for those employees that were working in the organization .The data analysis method was quantitative in nature. Descriptive statistics based on frequency distribution to analyze the data. The data was analyzed using SPSS and the findings were presented using frequency tables. The study found that: organizations do operations scheduling, said that Gantt charts, sequencing and loading were used in ensuring customers demands were met efficiently and effectively as available operation scheduling options. The findings were consistent were consistent with ones carried out in developed nations.

The study also found that the organization utilizes the available options of scheduling during peak hours/days and only when the customer demands are very high. The organizations were also found to be doing their bench mark of the operations half annually and monthly. When asked to give the challenges in operation scheduling the respondents said that management commitment in operation scheduling influences the level of quality service delivery process thus lesser commitment will compromise efforts of operation scheduling, quality service represents a customer's assessment of the overall level of service offered by the organization thus a low service indicates poor operation scheduling services, lack of adequate operations scheduling has led to low quality service rendered in the organizations.

There are little efforts by the management in ensuring adequate operations scheduling, there is a pressure driving the organization towards an efficient operations scheduling, that organizations with an efficient operations scheduling program have a high competence level in quality service delivery. Thus there is need to have an operation scheduling mechanism in place that is efficient and effective in curbing all this obstacles.

The study found that the respondents perceive description of procedures taken in operations scheduling to ensure effectiveness and efficiency in provision of quality services in organization. as: Assessing whether the function or service needs to be performed, Develop conceptual "ideal plan" and Evaluating issues that are the most likely to yield significant results. The study also found that information technology plays a critical role in operations scheduling in ensuring effective and efficient quality service provision. Others were of the opinion that it doesn't play any key roles with the following reasons to justify their stand: the equipment used in terms of the whole system component being very expensive and that most of the employees are not competent with the technology thus inefficiency in terms of compromised work quality and time wastages comes in.

The study further found that: the main purpose of operations scheduling is to enhance effective and efficient service delivery procedure in the organization, in services, customer orientation is particularly important in ensuring effectiveness and efficiency, the management has an efficient mode of service supervision to ensure effective and

efficient service delivery and that staff commitment has a great influence on the effectiveness and efficiency in the organization. The respondents are also off the view that organizational operations scheduling options employed to ensure quality service outcome in organization include: sequencing, queuing game theory use of Vogel approximation model and North West corridor rule in transport problems to enhance efficiency and effectiveness desired.

Further the studies revealed that the respondents would rate the service outcome quality of operations scheduling in service quality in organization as both good or average. The study also found that: all employees should be empowered and participate in the development of quality service outcome, service quality outcome is accessed through the overall customer satisfaction, where service is customized, there results a high quality service outcome, high service quality outcome ensures that there is a high customer turn up rate and that continuance service quality outcome ensures that clients remain customers of the organization for a longer period

It was also found from the study that operations scheduling influence service process quality. The measures that the organization has taken in ensuring continuous service process quality include; continuous monitoring and evaluation of the system and evaluation of feedbacks from the customers on the service quality provided. Further the study found that; reliability of the operation scheduling services offered by the management and staffs is recommended, access to organization for service process quality and information is easy in terms of infrastructure and technology and that the management and staff competence level in service process quality is high compared errand service providers in Kenya.

From the study the following were listed as the challenges experienced in endeavors of ensuring provision of quality services processes: inconsistency of government policies in relation to services quality, malpractice of the employees hindering the effectiveness of policies in place, Security threats and high cost of operation. Finally the study found the following suggestions for overcoming the challenges experienced in organization in provision of quality services: There should be adoption of ISO certification in the organization to give a framework on how the offering of service should be approached,

documentation of service provision responsibilities in terms of flow charts should be incorporated, policies and rules should be documented to guard against malpractices.

5.3 Conclusions

Operations scheduling has a positive impact on service quality among errand service providers. Adoption of operation scheduling would result in more customer satisfaction by creating brand loyalty with clients. Management and supervision of activities in the organization becomes easier thus avoiding haphazardness in carrying out activities of prioritizing events since most urgent activities are prioritized. It has also been learnt that managers have a stake in ensuring commitment to adoption of operation research scheduling tactics. Thus if they commit themselves the organization will be more efficient and effective.

The primary purpose of operations scheduling in organization can be said to be enhancement of efficiency and effectiveness. Efforts such as use of linear programming in solving transport problems enhances efficiency and effectiveness of operations this comes from the fact that the best route in terms of cost and appropriateness is chosen.

5.4 Recommendations

The studies aimed at identifying the recommendations that should be put in place for overcoming the challenges experienced in organization in provision of quality services. Some of the recommendations suggested included that: There should be adoption of ISO certification in the organization to give a framework on how the offering of service should be approached, documentation of service provision responsibilities in terms of flow charts should be incorporated, policies and rules should be documented to guard against malpractices.

A good channel strategy should therefore provide accessibility to services and offer the flexibility that modern day customers have come to expect. Whilst recognizing that citizens have differing needs, certain services may be more suited to specific types of contact channels. There is a need therefore, to understand the essence of quality service delivery.

The study recommends that since operations scheduling has a positive impact on service quality among errand service providers, the organization headed by able management should strategize on embracing these systems to cut on organization costs and remain effective in services delivery; since operation scheduling affects the growth of organizations, the government should intervene creating awareness of new technology, unfamiliarity with new technologies and the new technology not being affordable by maybe subsidizing on the cost of adoption.

The study further recommends that the government should take critical legislative measures in ensuring that information systems are given a priority in the establishment of such facilities like fiber optics, cost of acquiring the software and hardware are kept as low as possible also VAT on these infrastructural project should be removed or minimized. The government should have the primary responsibility of advocating incorporation of information system aimed at customizing scheduling of activities in organization to enhance effectiveness and efficiency in their daily operations.

5.5 Suggestions for Further Research

The study has explored the impact of operation scheduling on service quality among errand service providers in Kenya and established that operation scheduling enables employees to carry out activities in a standardized and easier manner, makes it the best practice of doing the process of activities, flexibility-automation of business process and enables organizations to tap on clients who maintains loyalty with the organization thus enhancing long term profits and accuracy.

The business however in Kenya differs from the fact that there are countries where scheduling is perceived differently. This warrants the need for another study which would ensure generalization of the study findings for all the scheduling conduct and hence pave way for new policies. The study therefore recommends another study be done with an aim to compare benefits on organizations that have adopted operation scheduling on service delivery and those that have not.

Further a study should also be carried out to investigate the factors influencing the adoption of scheduling of operations in organizations.

REFERENCES

- Baker, K. R. (2002). *Elements of Sequencing and Scheduling*. Hanover, NH: Baker Press.
- Bittner, M., J., Booms, B., & Tetreault, M., (1990). "The service encounter: Diagnosing favourable and unfavourable incidents." *Journal of Marketing*, pp 54, 71-84.
- Bizymoms [Def. 1]. (n.d.). *Errand services: Bizymoms carrier kit on errand services*. Retrieved from <http://www.bizymoms.com/cart/careers/e-books/ErrandService.pdf>
- Cardoen et al, (2004). Modernizing the NHS: booking patients for hospital care. Health Services Management Centre, University of Birmingham, Birmingham
- Chandran, D.R (2004). "Designing Conferences to Improve Resource Utilization and Participant Satisfaction." *The Journal of the Operational Research Society*, 47(2), 297-314. Doi: 10.2307/2584349
- Edward and Bvuma (2001). "Advanced access: reducing waiting and delays in primary care." *Journal of the American Medical Association*, 289, 8, 1035-1040
- Naylor, C.D. (1991). A different view of queues in Ontario. *Health Affairs*, 10, 3, 110-128.
- Errand [Def. 1]. (n.d.). *Oxford Dictionaries*. Oxford University Press, Web. Retrieved 21 September 2013. from <http://oxforddictionaries.com/definition/english/errand>.
- Erdem, H.I.; Demirel, T. & Onut, S. (2002). An efficient appointment system design for outpatient clinic using computer simulation. *The Proceedings of the 2002 Summer Computer Simulation Conference*, pp. 299-304.
- Flick. (2007). *Simulation Modeling & Analysis*, McGraw-Hill, New York.
- Flynn, B.B., Sakakibara, S., Schroeder, R.G., Bates, K.A. and Flynn, E.J. "Empirical Research Methods in Operations Management." *Journal of Operations Management*, Vol 9 (2), 1990, 250-283.
- Gardiner, S.C., Blackstone, Jr., J.H. and Gardiner, L.R., "The evolution of the Theory of Constraints. *Industrial Management* 36 (3), 1994, 13-16.

- Goldratt, E.M. and Fox, R.E., *Critical Chain*, North River Press, Croton-on-Hudson, New York, 1987.
- Goldratt, E.M. and Fox, R.E., *the Race*, North River Press, Croton-on-Hudson, New York, 1986.
- Goldratt, E.M., "Computerized Shop Floor Scheduling", *International Journal of Production Research* Vol 26 (3), 1988, 443-455.
- Gupta Veena (1981). "Scheduling and control of transport labor force and material in Nairobi city council water department" *Unpublished MBA Project University of Nairobi*
- Gupta, S., "Supply Chain Management in Complex Manufacturing", *IIE Solutions*, Vol 29 (3), 2004, 18-21.
- Harvey, J. (1998). "Service quality: A tutorial." *Journal of Operations Management* 16(5), 583-597 672
- Hawa, M. (2003). Stochastic evaluation of fair scheduling with applications to Quality of service in broadband wireless access networks *Unpublished doctoral dissertation, university of Kansas.*
- Inman, R.A. and Mehra, S., "JIT Applications for Service Environments", *Production and Inventory Management Journal*, Vol 32 (4), 1991, 16-21.
- Kotler, P., & Keller, K. (2006). *Marketing management, Twelfth edition*. Prentice-Hall, Upper
- Kreipl, Stephan and Michael Pinedo. "Planning and Scheduling in Supply Chains: An Overview of Issues in Practice." *Production and Operations Management* 13, no. 1 (2004): 772.
- Mabin and Balderstone (2000). First report on 30-day and operative mortality in risk model of isolated coronary artery bypass grafting in Japan. *Annals of Thoracic Surgery*, 86, 6, 1866-1872

- Mitchell. (2007). *How to report statistics in medicine*, American College of Physicians, Philadelphia.
- Mugenda and Mugenda, (2003). "A simulation study of scheduling clinic appointments in surgical care: individual surgeon versus pooled lists." *Journal of the Operational Research Society*, 58, 202-211.
- Mwamburi C. (1999). "A product scheduling and accounting system for Kenya pipeline" *Unpublished MBA Project University of Nairobi Department of School of Computing & Informatics*.
- Nitecki, D.A. (1997). Measuring Service Quality in Academic Libraries. Retrieved from <http://www.arl.org>
- Otautahi, (1996). *Workflow Analysis, Just-in-Time Techniques Simplify Administrative Process in Paperwork Operation*, Industrial Engineering Vol 20 (1),
- Pinedo, Michael. *Scheduling: Theory, Algorithms, and Systems*, 2nd ed. Upper Saddle River, NJ: Prentice Hall, 2002.
- Prof.Schuh, (2003). "Simulation and planning of an intermodal container terminal." *Simulation, Special Issue on Harbour and Maritime Simulation*, no. 71, vol. 2: 107–116.
- Rahman (1998), *Consumers Services New York*: John Willey & Sons Inc
- Robson, H. (2002). Practical Implications of Preference-Based Conference Scheduling. *Production and Operations Management*, 13(3), 205-215. doi:10.1111/j.1937-5956.2004.tb00506.x
- Sale, M.L. and Inman, R.A., "Survey-Based Comparison of Performance and Change in Performance of Firms Using Traditional Manufacturing, JIT and TOC", *International Journal of Production Research*, Vol 41 (4), 2003, 829-844.

- Sampson, S. E. & Froehle, C. M. (2006). Foundations and implications of a proposed unified services 730 theory. *Production and Operations Management*, 329-343
731
- Sampson, S. E. (2001). *Understanding service businesses: Applying principles of the unified services 732 theory* (2nd Ed.). John Wiley & Sons, New York, New York
733
- Saunders R., (2003). Increasing Service Levels in Conference and Educational Scheduling: A Heuristic Approach. *Management Science*, 41(11), 1816-1825.
- Schönsleben P., Hieber R. (2004). Gestaltung von effizienten Wertschöpfungspartnerschaften im Supply 735 Chain Management. *Busch A., Dangelmaier W., Integriertes Supply Chain Management, Wiesbaden.* 736
Dargahi et al. Agent-Based design for Service Scheduling.
- Spencer, M.S., (2004)"Using "The Goal" in an MRP system", *Production and Inventory Management Journal*, Vol 32 (4), 1991, 22-28.
- Stevenson, William J. (2005). *Production and Operations Management*. 8th ed. Boston: Irwin/McGraw-Hill.
- Sureshchandar, G.S., Rajendran, C. and Anantharaman, R.N., "A Conceptual Model for Total Quality Management in Service Organizations", *Total Quality*, Vol 12 (3), 2001, 343-363.
- Walker, II, E.D and Cox, III, J.F., "Generic Airlines Reservation Sales Office", *Journal of Systems Improvement*, Vol 2 (1), 1998, 9-16.
- Wasco, W.C., Stonehocker, R.E. and Feldman, L.H., "Success with JIT and MRP II in a Service Organization", *Production and Inventory Management Journal*, Vol 32 (4), 1991, 15-21.
- Wemmerlov, U. (2000). "A taxonomy for service processes and its implications for system design." 759 *International Journal of Service Industry Management* 1(3), 13–27 760.

APPENDIX

Appendix: Questionnaire

SECTION A: BIO- DATA

1. Name of the respondent (optional).....
2. What is your gender?
Male Female
3. Age
Below 20years 21-25 years 26- 30years
30-35 years 36- 40 years 40- 50 years
Above 50 years
4. How long have you been in this organization?
0-5 yrs 6-10 yrs 11-15 yrs Over 16yrs
5. Level of education
Primary Secondary
College University
6. Does your organization utilize scheduling in dealing with its operations?
.....
.....
7. Kindly describe operations scheduling options used to ensure quality of service in your organization?
8. In what situations do you utilize these options? (In all situations, during peak hours/days, only when the customer demands?).....
.....
9. How often do you benchmark of operations scheduling?
 Monthly half yearly Annually
10. The following are statements on challenges in operations scheduling and service quality. To what extent do you agree with these statements? Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Management commitment in operation scheduling influences the level of quality service delivery process					
Quality service represents a customer's assessment of the overall level of service offered by the organization					
Lack of adequate operations scheduling has led to low quality service rendering in the organizations.					
There are many efforts by the management in ensuring adequate operations scheduling.					
Efficient operations scheduling results to timely operation and service delivery.					
There is a pressure driving the organization towards an efficient operations scheduling.					
Organizations with an efficient operations scheduling program have a high competence level in quality service delivery.					

11. Kindly describe procedures taken in operations scheduling to ensure effectiveness and efficiency in provision of quality services in your organization?

.....

12. Do you think information technology employed in operations scheduling plays a key role in ensuring effective and efficient quality service provision?

Yes [] No []

If not give your reason(s),

.....

13. Comment on the following issues on the effectiveness and efficiency in service quality in the errand service providers? Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
The main purpose of operations scheduling is to enhance effective and efficient service delivery procedure in the organization.					
In services, customer orientation is particularly important.					
The management has an efficient mode of service supervision to ensure effective and efficient service delivery.					
Staff commitment has a great influence on the effectiveness and efficiency in the organization.					
Operations scheduling has a direct effect on the effective performance, survival and longevity of an organization.					

14. Kindly describe organizational operations scheduling options employed to ensure quality service outcome in your organization.

.....

15. How would you rate the service outcome quality of operations scheduling in service quality in your organization?

- Good Average
 Not worthwhile

16. The following are statements about the service quality outcome in the errand service providers Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
All employees should be empowered and participate in the development of quality service outcome.					
Service quality outcome is accessed through the overall customer satisfaction.					
Where service is customized, there results a high quality service outcome.					
High service quality outcome ensures that there is a high customer turn up rate.					
Employees with a strong affective satisfaction ensures a high quality service outcome					
Continuance customer satisfaction their dissatisfaction is due to efficient service quality outcome.					
Continuance service quality outcome ensures that clients remain customers of the organization for a longer period.					

17. Does operations scheduling influence service process quality?
.....

18. Which measures has organization taken in ensuring continuous service process quality?
.....

19. How can you rate the following statement that relate to errand service providers and continuous improvement on service process quality?

Guide: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5)

	Strongly disagree(1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)
Reliability of the operation scheduling services offered by the management and staffs is recommended.					
The management and staff competence level in service process quality is high compared errand service providers in Kenya.					
Access to our organization for service process quality and information is easy in terms of infrastructure and technology.					

20. What are the challenges that you experience in your endeavors of ensuring provision of quality services processes?

i.

ii.

iii.

iv.

21. Kindly suggest some possible recommendation of overcoming the challenges experienced in organization in provision of quality services.

i.

ii.

iii.

iv.

THANK YOU FOR TIME AND PARTICIPATION