COMPETENCY TESTS IN THE SELECTION OF RESEARCH SCIENTISTS IN AGRI-BASED RESEARCH ORGANIZATIONS IN KENYA

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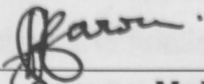*Reg No: D/61/P/7855/99*

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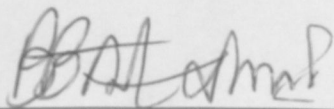
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DECLARATION

This Management Project is my own original work and has not been presented
for a degree in any other University

SIGNED:_____   DATE: 11-11-2006.

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This project has been submitted for examination with my approval as the
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ABSTRACT

The performance of agri-based research organisations can generally be confirmed by the resultant agricultural break through reflected and evidenced by the improved living standards of the majority of farming community. The major agricultural achievements in the use of natural resources, new technologies and improved farming methods new varieties and new knowledge is largely a reflection of the quality and commitment of scientists. This scenario presents serious challenges to Agri-based research organisation in respect to their contribution which must catalyse agricultural growth. In view of this argument the organizations in this sector must be fully committed to taking strategic approach to recruitment and selection process to realize their objectives.

The use of the structured interviews by these organizations has been construed to mean competency testing and this confirms that the use competency testing is new. Competency testing which has high predictive value has not taken root to compliment other selection methods in determining the capability and capacity of the potential job applicants. The capacity to administer the competency testing is lacking and the use of conventional interview is still common. The conventional use of interview has some element of testing and it provides an opportunity for the interviewing panel to physically evaluate the candidate's presentation.

The results of research activities takes considerable period of time to realize as some of crops are perennial and monitoring performance must be consistent to arrive at any meaningful conclusion. Projects may be conceived and designed by one scientist or more but it requires a team of more researchers and support personnel to drive the process. Implementation and realization of results after research process can be linked to capacity and competency of the scientists who undertake research activities. However, the length of time taken to realize research results can be shortened if the teams of scientist are carefully selected during recruitment and employment process.

DEDICATION

To My Family Members

My Wife Susan Muthoni,

Daughters Sarah Nyambura and Milkah Wanja.

Thank you for all the Support, Understanding and Encouragement

And

To all those who have made it possible for me to complete this MBA programme.

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CHAPTER ONE:INTRODUCTION

1.1   Introduction

Organisations are created to achieve certain goals as prescribed in their respective mission statements. The operations of the organisations are therefore focused to realize these goals. Ordinarily planning is consciously done and expected to ensure organisational compliance with the already described business vision. Resources are then combined in the right ratio to ensure optimal output (Luthans, 2000). The result is a pool of applicants who are screened through a selection process, which chooses those people who meet the needs determined by Human resource planning (Davis, 1993). This study will investigate the recruitment and selection practices as being applied by agricultural research organisations within Kenya.

The effectiveness and efficiency of the human resource depends on their personal capability, which should be carefully evaluated during the hiring process. The selection process is influenced by the recruitment approach adopted by the organisation. Poor recruitment process is likely to attract less qualified applicants and therefore leading to selection of persons who barely meet minimum attributes required for the job performance. The selection process provides information for decisions by both the employer and potential employee (Hall, 1995). This implies that the selection is a two way process. Various organisations use different methods of selection.

Different organisations apply different recruitment and selection approaches to attract applicants and offer employment without due regard to competency of the applicant. The calibre of the workforce in a firm largely depends on among other factors how the recruitment and selection process is done (Weightman, 2003). Human predictions about the behaviour of other people are fallible and all recruiters should have the humility to admit that there will be wrong decision sometimes. The risk of mistakes and the probable margin of error can be reduced by systematically collecting and weighing the relevant evidence on potential recruits. Recruitment is more of an art than an exact science, but it calls for a scientific approach (Plumbley, 1985).

The assessment of performance from selection tests must be made on a predetermined set of factors, rather than vague generalization. It is important therefore that for selection tests to provide comparable data, tests must be held under the same conditions for all short-listed candidates (Plumbley, 1985).

Competency-based selection of staff is about using the results of competency analysis to inform and improve the process of recruitment and selection (Armstrong, 2000). Competency concept can therefore be broadly applied in the management of Human resources right from the sourcing to development and reward of the employees. At the onset of competency application the idea is to apply logical discrimination on the basis of competency in the recruitment and selection process.

Standards of competence are benchmarks indicating what people should be capable of doing in specific work place. Competencies typically involve the ability and willingness to perform particular tasks and to transfer knowledge and skills from the performance of one type of work to others (Bennet, 1989).

Employment tests are devices that asses the probable match between applicants and job requirements. Some are paper and pencil tests while others are exercises that simulate working conditions (Davis, 1993).

This range of factors includes personal qualities, motives, experience and behavioural characteristics. Boyatzis defined competency as " A capacity that exists in a person that leads to behaviour that meets the job demands within the parameters of the organisational environment and that, in turn, brings about desired results" (Boyatzis, 1982).

The purpose of a competency tests is to provide an objective means of measuring individual abilities or characteristics. When well designed and applied, they are used to enable selectors to gain greater understanding of individuals so that they can predict the extent to which they will be successful in a job. Before recruitment and selection process the needs and demand for the position should be established. From the foregoing, the following benefits can be realized:

Employers are judiciously able to select a team of high performers. The potential of the recruits is evaluated. This is a rational process whose results can be easily accepted by the recruits and therefore eliminates suspicion and complaints from job seekers.

The skills of the recruits can be evaluated and matched against the job demands. Some jobs require employees who can withstand extreme pressure while others require ability to make tough decisions without jeopardizing the job objectives.

The competency based testing is a more objective approach if validated. The objectivity of the tests can be confirmed only if the test scores significantly relates to the job performance.

Potential employees equally evaluate their own skills. The stronger the relationship between the test results and performance, the more effective the test is as a selection tool (Davis, 1993). However when the scores and performance are unrelated the test is invalid and should never be used for selection. At the individual level it does afford them an opportunity to affirm their work-related strengths. It does measure individual's intelligence, personality, individual motivation among others (Holden, 1995).

In developed countries, Assessment centres are established which employ a range of techniques to determine whether or not candidates are suitable for a particular job or for promotion. Various exercises are used to capture and stimulate the key behavioural aspect of the job. Candidates are rated using the score system for each dimension.

When haphazard recruit and selection is applied the organisations experience the following: Selection of less qualified personnel which candidates who do not meet the rigors of the job; turnover is high particularly when employees cannot match the job requirement; loss of business opportunities; time loses in search of qualified candidates; loss of productivity, loss of revenue; and loss of image, reputation or credibility of the organisation.

The Agricultural Research Scientists have diverse but very specialized areas of research concern. Usually research undertaken is expected to respond to certain

problems and provide solution. Different agricultural research organisations are therefore created to answer these diverse problems facing human population. Provision of sufficient food and sustaining the same requires consistent research work to match the ever-increasing global population. "The global population is projected to be 9.5 billion in 2050 with more than 8 billion in developing countries. To feed this population adequately will require three times the basic calories consumed today, the equivalent of about 10 billion tons of grain a year". United Nations Development Report (UNDP 1998).

Most international agri based research organisations are affiliates of the Consultative Group on International Agricultural Research (CGIAR) while there is links with individual national research organisations. "The CGIAR's research agenda focuses on both strategic and applied research. This agenda includes the entire range of problems affecting agricultural productivity and links these problems to broader concerns about poverty reduction, sustainable management of natural resources, protection of biodiversity, and rural development." CGIARs have more than 8,500 scientific staff who conduct research to improve the productivity of tropical agriculture. This research focuses on higher-yielding food crops and more productive livestock, fish and trees; improved farming systems that are environmentally benign better policies; and enhanced scientific capacities in developing countries. The knowledge generated by CGIAR – and the public and private organisations that work with CGIAR as partners, research associates and advisors pays handsome dividends for poor farmers in terms of increased output, greater incomes and sounder utilization of resources

Generally Agricultural organisations in Kenya address specific areas within their mandates and these are well defined in respective mission statements and regulated by the Science and Technology Act cap 250.

In Kenya the Research workers are scientists trained up to the university level with a minimum of Bachelor of Science degree in diverse fields. Basically Agricultural Scientists carry out research in specialized areas or research projects. (Scheme of service for Science Secretaries and Research officers) DPM:PA/4/71 (31) of 25th July 1994.

1.2   Statement Of The Problem

There is serious need to determine the level or extent of usage of the competency tests in agro based organisations. The most regrettable situation is when organisations hire employees who may turn out to be more of a liability than an asset. Thus it is important to match people to the job and the job to the people.

The majority of Kenya farmers continue to rely on inappropriate technologies, leading to poor yields and low gross margins. Women form 70% of labour force in Agricultural sector/rural yet there seems little is being directed towards developing technologies suitable for improving their productivity and generating incomes to sustain their families (Omiti, 2002)

The extension delivery system from agricultural scientist is poor and as a result many farmers continue to employ poor crop/livestock husbandry. A majority of farmers particularly small-scale holders do complain of not seeing the extension scientists while extension personnel would blame it on inadequate funding (Omiti, 2002).

The Kenya Government pursues the following broad objectives for the agricultural sector: Poverty alleviation and equitable income distribution, food security or self-sufficiency in food production, accelerated promotion of domestic industries, and rapid growth of foreign exchange earnings from export of both industrial and agricultural commodities (4th KARI Biennial Scientific Conference).

Agro-based research should directly benefit the entire nation in terms of food security and generating income to the stakeholders. It is a common knowledge that majority of Kenyan farmers particularly the small scale still prescribes to traditional farming methods (Proceeding of the 4th KARI Biennial Scientific Conference 1994).

The diversity of the Kenyan farming community requires carefully packaged technology suitable to their specific socio–economic environment. Each ecological area is unique and the economical viability of its farming activities should be evaluated differently and singularly. This therefore calls for competently selected

research workers with a drive to see beyond the laboratory and green houses in their respective workstations (Omiti, 2002).

There is no evidence that any research in this area has been conducted in the country. There are complaints regarding lack of appropriate agricultural technologies to farmers.

1.3   Objectives

The objectives of the study are:

(i)   To find out how many agro-based Research institutes use competency tests in the selection of research scientists.

(ii)   To determine whether the extent of use of competency tests in selection of scientists is related to institutional performance

1.4   Importance of The Study

The beneficiaries of findings of this study will include practicing human resource management in the sector; academicians particularly those interested in the human resource management and consultant firms that carry out recruitment and selection of staff in agricultural sector. This study will attempt to expose inherent problems associated with flawed recruitment and selection procedures and establish the extent to which competency testing is applied.

CHAPTER TWO: LITERATURE REVIEW

2.1 Recruitment

Recruitment in the process of procurement of human resources is taken to be overall activity while selection is the decision stage of choosing/identifying the suitable applicants for the job or jobs. Recruitment {Bola – Business open learning Archive} is searching for and attracting candidates – external or internal – for job vacancies. The objective is to attract candidate of the right quality in the right numbers.

Philip Plumbley (1985), argues that traditionally recruitment and selection has been thought of as the "finding, assessing and engaging of new employees" This he states is too brief and misleading and argues that recruitment is a matching process, and the capacities and inclinations of the candidates have to be matched against the demands and rewards inherent in a given job or career pattern. It then follows those HR managers undertaking this process must initially have a clear understanding of the job to be filled. A predetermined and purposeful process must be taken to attract the interest of people possessing the attributes demanded of the job (Davis, 1993).

Recruitment and selection should therefore be seen as one in the sense that a well-defined recruitment will obviously lead to self-selection where only those applicants with the attributes demanded by the job will apply. This is a one sided dimension. The other dimension to the recruitment and Selection process is to allow the potential recruit to evaluate what the organisation can offer in return to services and commitment rendered. The most suitable candidate also searches for an opportunity to fully exploit his/her capability to the maximum, enjoy the work and experience satisfaction: In the absence of this scenario, there are high levels of turn over (Lewis, 1984).

Many authors who have dealt with recruitment and selection and agree on the prescriptive and systematic approach; as quoted by Holden (1995) Armstrong (1991) Cole (1991) and Thomason (1976), however Watson (1989) Herriot (1990) and Torrington and Hall (1991) have paid greater attention to this subject. A most

embracing definition of recruitment is: searching for and obtaining potential job candidates i.e. sufficient numbers and quality so that the organisation can select the most appropriate people to fill it's job needs (Schuler, 1990). An effective Human resource management has the objective of attracting, retaining and motivating the staff procured through transparent selection process.

2.2   Selection

This process involves a series of steps with multiple evaluation points which add time and complexity to the process. However the sequence of steps may vary from firm to firm. Testing for various competencies therefore become important selection point to provide information and insight about the candidates which may not be available in the application documents.

The selection process is a series of steps through which applicants pass. However due to certain limitations, organisations do apply their selection process which is convenient to them (Davis, 1993).

The selection process determines the candidates who are likely to succeed and eliminates those likely to fail (Fleishman, 1998). Werther & Davis have summarized the selection process in eight steps as shown in the diagram below.

Hiring decision	Step 8
Realistic job previews	Step 7
Supervisory interview	Step 6
Medical evaluation	Step 5
References and background checks	Step 4
Selection interviews	Step 3
Employment tests	Step 2
Preliminary reception of applications	Step 1
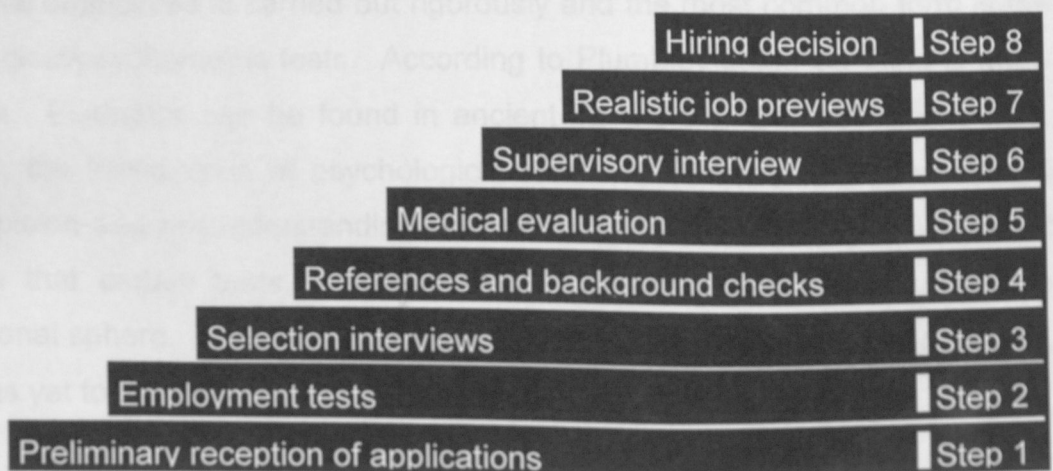
Source: Werther & Davis, 1993: Page 233.

This process starts with preliminary reception of applications. The applications are screened to sort out those which meet the job requirements. Once a pool of

suitable candidates has been formed, the short listed candidates are invited for further selection. Employment tests such as knowledge, aptitude and psychometric tests can be used to further reduce the pool of candidates. The candidates who pass the employment tests can then be subjected to interviews. Interviews, are most popular hence skills of interviewing are important; cross-referencing with institutions and person's etc; analysis of candidate career/life data (application forms); evaluation of candidate's behaviour/performance in group activities; work attachment/experiments-trial periods; skills testing with task/work simulations eg. Typing, computer programming, candidates making presentations etc; group selection method & Assessment centres; work sampling; using consultants; and Self Assessment (realistic job preview).

Recruitment and selection is in most cases taken so casually. In many organisations, the selection process will be improved if data other than that obtained from the CV, reference and interview is available. Selection exercise should be designed to provide information about the ability of short listed candidates to carry out tasks relevant to the duties of the post.

Competency has been broadly equated to mean qualification and experience though it includes also attitudes, capabilities and personality. The qualification in competency refers to academic and the professional qualifications. Assessment of potential employees is carried out rigorously and the most common form is the psychological/psychometric tests. According to Plumbley selection tests is not a new idea. Examples can be found in ancient literature and throughout history. However, the introduction of psychological tests into industry has been fraught with suspicion and misunderstanding. Controversy persists in spite of abundant evidence that certain tests, properly used have high predictive value in the occupational sphere. They are being employed on an increasing scale in the UK, but not as yet to the same extent as in the United States (Bennet, 1998).

According to Armstrong the concept of competency was first popularized by Boyatzis (1982) who argued that a range of factors influenced the successful managers or less successful managers.

In the selection process William Davis argues that employment tests are devices that assess the probable match between applicants and job requirements. Some are paper-and-pencil tests, others are exercises that simulate working conditions (Davis, 1993).

Competency testing must have validity where test scores must relate to job performance. The stronger the relationship between test results and performance, the more effective the test is as a selection tool. To be valid a test must be reliable which means that the test should yield consistent results each time an individual takes it. Tests should be taken before formal interview and are expected to eliminate subjective judgment on the part of the interviewer. It can be useful in measuring some attributes, which are difficult to assess by interview. They can thus help to reduce the areas of subjective judgement and possible human error (Plumbley, 1985).

Competency based criterion attempts to understand or unearth personal traits that are a driving force to efficient performance. Accordingly it has been defined as an underlying characteristic of a person which results in effective and/or superior performance in a job (Boyatzis, 1982). The drives in a person to perform efficiently, explicit control of the situation, self image, understanding of the work and environmental demand are important considerations in competency based criteria.

Boyatzis makes further distinction of competency as: A person's genetic knowledge, motive, trait, self image, social role or skill which is essential to performing a job, but is not causally related to superior job performance. (Hall, 1995). To effectively carry out a competency test and consider it reliable and valid system of selecting the suitable candidate three dimensions are linked – i.e. the Behaviours: (how a candidate will respond to problems, people Activity level of the job and company procedure), Driving values (why a candidate behaves as they do) and finally competencies (Do candidates actually have the skills/competencies needed to do the job) http:www mainalysis.com . This is demonstrated below.

Triangle diagram with labels: *Behaviours*, *Driving Values*, "Defining Performance", "Competencies"

Source: (http://www.mauanalysis.com/pre-employment-assessment.html)
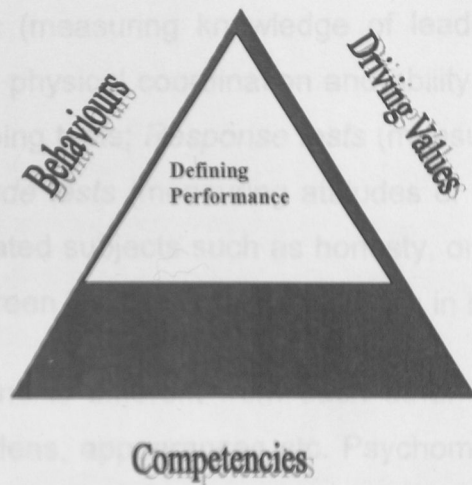
Boyatiz in his study analyzed competency and developed seven thresholds. The first threshold is *Use of Unilateral Power* that is using forms of influence to obtain competence; the second is *Accurate Self-Assessment* which he defines as having a realistic or grounded view of oneself, seeing personal strengths and weakness and knowing ones limitations; the third threshold is *Positive regard* which is having a basic belief in others, that people are good being optimistic and causing other to feel valued; the fourth is *Spontaneity* which he defines as being able to express oneself freely or easily, sometimes making quick or snap decisions; the fifth is *Logical thought* which is Placing events in causal sequence, being orderly and systematic; sixth is *Specialized Knowledge* which is Having useable facts, theories, frameworks or models and seventh threshold is *Developing others* which is demonstrated by helping others to do their jobs, adopting the role of coach and using feed back skills in facilitating self development of others.

The evolving human resources management practice in recruitment and selection process is to provide equal opportunities to the qualified job applicants irrespective of gender minority and physical impairment. Practically this may have been abused due to inadequate legal framework and lack of enforcing agents (Straws, 1989).

There are a wide variety of employment tests, but each type of test has only limited usefulness. Broadly competency tests can be grouped into six categories. These are: *Psychological tests* (measuring personality and temperament);

Knowledge tests (measuring knowledge of leadership practices); *Performance tests* (measuring physical coordination and ability to perform work for which they are hired e.g. typing tests; *Response tests* (measuring physiological responses to questions); *Attitude tests* (measuring attitudes of applicants and employees on a variety of job related subjects such as honesty, on the job behaviour and *Medical tests* (used to screen for the presence of drugs in blood or urine).

Naturally everyone is different from each other in the way they go about their business, their ideas, appearances etc. Psychometric testing does integrate with competency in the selection process. However, from the range of the available tests, organisations may have a way of combining them, apply separately or may not be applying any at all. Essentially these differences may mean that the job or a career a person chooses is successful or not, or the person the organisation employs is the right person for the job or not.

Psychometric testing is a branch of psychology dealing with measurable factors, which can be clearly and specifically added up and the person given score (Jones, 1993). Psychometrics is therefore is about measuring psychological characteristics. 'Psyche' refers to the psychological characteristics and 'metric' refers to the measurement of it (Payne, 1999).

In the field of personnel selection, team building and career development, identifying the way in which an employee differs from others is important. The psychological characteristics that Human Resource professional want to measure most are those related to intelligence, and those related to personality.

Psychological tests are measuring instruments, which is why they are often referred to as psychometric tests. Psychometric literally means mental measurement (Armstrong, 2000).

Tests of intelligence, personality, motivation and other aspects of an individual's psychological make up are collectively known as psychometric tests (Bennet, 1989).

According to Payne psychometrics can be divided into two main categories: measures of maximum performance which indicate what an applicant can do (e.g.

ability to type tests); and measures of typical performance, which indicates what an applicant is likely to do or would prefer to do (Personality tests).

Tests normally are applied as means of adding value to the selection process and are integrated in competency-based processes. The tests are then concerned with measuring intelligence, ability, aptitude, achievements and personality. Thus several tests would be used to determine these factors. The choice of the test depends on individual taste.

Intelligence tests consist of a number of questions, which candidates must reply. Generally it is accepted that intellect is sum total of the mental functions of understanding, thinking, learning observing, problem solving and perceptual relationships (mental ability). Ability tests measure job-related characteristics such as number verbal, perceptual or mechanical ability (Armstrong, 2000).

Aptitude tests are job-specific and are designed to predict the potential of an individual to perform tasks within a job. They cover such areas as clerical aptitude, numerical aptitude, mechanical aptitude and dexterity (Armstrong, 2000).

Achievement tests measure abilities or skills that have already been acquired by training or experience. These tests expose those who claim to possess abilities (e.g. keying speeds machine skills etc.), which they actually do not possess. Further achievement tests are directly relevant to the work the successful candidates will have to perform in the job (Armstrong, 2000).

Personality tests attempt to assess the personality of applicants in order to make predictions about their likely behaviour role. The personality is the sum total of the various qualities that are shown in behaviour. The most prominent of all includes emotions, motivation, interests and social qualities (Armstrong, 2000).

There are a wide variety of tests, but each type of test has only limited usefulness. The purpose of a test, its design, the directions for its administration and its application are recorded in the testimonial (Jones, 1993).

It is essential to adhere strictly to the testing conditions laid down in the manual supplied with the tests. Applicants must be introduced to the test situation with

extreme care. If the selector explains why the tests are being used suspicion will be allayed and resistance will diminish (Plumbley, 1985).

Tests should be given when the candidates are mentally fresh and they should therefore form an early part of the selection procedure. Many tests have an initial practice section, which is not scored, to ensure that all candidates are familiar with what is expected of them. Typically test subjects complete a checklist questionnaire which asks them to express their preferences in relation to various issues and situations e.g. by requiring candidates to state which outcome to a problem they find most desirable candidates can also be required to select words and phrases which they regard as describing aspects of their personalities most and least accurately (e.g. persuasive, gentle, innovative etc) (Bolton, 1983).

The test scores are usually interpreted by referring to tables of norms. These enable the candidate's performance be compared with the known performances of hundreds of other people of similar age and education. Plumbley argues that there are three distinct stages in interpreting the candidate's test performance in order to predict suitability. These are: (i) Actual scores are related to the appropriate norms tables; (ii) test performance is compared with career record and (iii) the latter are related to the requirements of the job.

There are issues of concern to the application of the tests and what these tests can really achieve. The selectors applying tests as a process of selection would anticipate this process has no personal preference or influence. On the other hand, applicants taking tests have their own reservations and would be suspicious about this mode of selection.

It is expected that psychometrics would predict future job performance. Issues surrounding the use of tests instead of other conventional methods such as interviews, biodata questionnaires, work sampling etc are acceptability, familiarity and fairness.

There are preferences for other modes of selection such as questionnaires since applicants have feeling of control over the answers. The acceptability of the tests largely depends on the level of intelligence and confidence of the applicants.

Therefore it is advisable to balance tests with other forms of selections to elicit acceptance (Jones, 1993).

Applicants who have had experience in the past or have taken practice lessons may be more confident and less anxious. Obviously then some practice lessons or commercial couching or intensive drilling programmes which teach people how to do particular kinds of questions are to be discouraged since they interfere with validity and generally damage the credibility of testing. To ensure fairness candidates should be warned beforehand that they will be taking tests and the expected minimum score announced. Candidates should be allowed to familiarize themselves well ahead of tests. Familiarity with the tests works to eliminate unwanted sources of error, such as anxiety, which prevent people giving true account of themselves. If candidates prepare themselves, the results will be more valid.

There are however, possible problems or concerns with familiarity, which result from repeatedly taking the same or similar tests. Fatigue may set in as some people may not want to be subjected to yet another personality questionnaire (Can manifest itself in lower test motivation and less insight answers). The feedback results on personality questionnaire can influence the way one answers next personality questions. This is after internalizing what one would consider his/her personality (Jones, 1993).

Tests should be appropriate to the job demand and should be designed to consider natural differences that may occur due to minority, gender etc. Tests then should be objective, and neutral to enable test takers be treated equitably. The administration of tests should recognize the existence of diverse differences and should put in place a strategy to deal with them (Jones, 1993).

Payne recommends that tests should be used conservatively to exclude the clearly unsuitable rather than to identify the top performers. Test predictions have two aspects i.e. predicting who will be successful and who will not be successful (Payne, 1989).

Discrimination tests should be avoided at all costs. Unfairness could be introduced by ill-considered choice of tests or questionnaire or by uninformed

interpretation. The following issues may cause unfairness in tests for lack of opportunity for test preparation or familiarization: Failure to give feedback if promised failure to explain the relevance of the tests or questionnaires to the job applied for; failure to keep results confidential; not explaining how the results will be used; failure to adopt administrative conditions for certain categories of people eg those with disability etc.; and use of tests and questionnaires which are known to disadvantage a particular group (Thornton, 1982).

The validation procedures are very time consuming, but are essential to the effective use of tests (Davis, 1993)

The criteria that are used to define good job performance in developing the tests are often inadequate. They may be subjective (Plumbley, 1985).

Tests are job specific that if the job for which the test is used changes then the test can longer be assumed to relate to job performance in the same way. Further personality tests only measure how individuals see themselves at a certain point in time and cannot therefore be reliably re-used at a later point (Davis, 1993).

Tests may not be fair as there may be a social, sexual, or racial bias in questions and scoring system could be discriminative in some ways (Suzanne, 1988).

Competency tests are easy and cheaper to administer since a single person can give a test to say 30 or 40 people in one sitting and is necessary where a large number of people have to be engaged (Plumbley, 1985). Competency testing enables distinction to be made between candidates with exactly the same academic qualifications and work experience (Davis, 1993). Another advantage is that they can identify people of genuine intellectual ability who nevertheless have received minimal education (Davis, 1993). Further, the tests provide objective information about a candidate's psychological characteristics which can be a valuable adjunct to other selection procedures and they can remove subjectivity (Jones, 1993).

There is little point in training employees who are not mentally capable of absorbing relevant information. It is argued psychometrics can weed out such individuals (Bolton, 1983).

A number of arguments have been advanced against competency tests. A candidate's motivation and state of mind at the time the test is taken (e.g. bereavement) can affect results significantly (Lewis, 1984). Requiring an applicant to take a test can itself cause him/her to feel nervous and to fear the humiliation of possible doing badly. This can be self-fulfilling prophesy, the individual loses self-confidence thus poor performance (Plumbley, 1985). The total worth of a person depends on so many factors that any selection of sub-set of them is bound to be arbitrary (Davis, 1993). Workers may be allocated roles and occupations in direct consequence of inaccurate information about their psychological characteristics (Frasher, 1978). Competency tests can lead to improved test performance; indeed, there exist publications on how to pass psychometric tests (Wood, 1993). Tests may be unfair if ill conceived and poorly validated. Applicants may be labeled as outstanding or mediocre on basis of 20-minute test while ignoring their overall achievements and educational backgrounds (Davis, 1993).

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

This is a census survey

3.2 Population

The population of the study consists of all agri-based research organisations in Kenya (Appendix I).

3.3 Data Collection

The tool used in the collection of the data was a well structured questionnaire divided into three sections namely: Bio-data of the organisation; Recruitment process and Competency testing. The primary data that have been used in this study were collected from the Human Resource managers, chief executives/Directors or senior scientists well versed with recruitment and selection process. The questionnaire had both open and closed ended questions. It was administered through drop and pick later method.

3.4 Data Analysis

Descriptive statistics were used to calculate frequencies, percentages and cross-tabulations. The results of this analysis were used to establish the extent of use of competency testing and the relationship between organisation's performance and the use of competency tests.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Response Rate

Questionnaires were sent to the eighteen research organisations (Appendix I). sixteen organisations returned completed questionnaires giving a response rate of 89% of the selected population.

4.2 Demographic Statistics

The National research organisations surveyed are state corporations funded by the government of Kenya. These organisations receive their funds for operations and personnel emoluments (salaries and allowances) from the government exchequer. However, quite substantial funding for research comes from development partners. The international research organisations are funded by international donor agencies.

Table 1: Type of research organisation

Type of Organisation	Percentage
National	69
International	31
Total	100

These research organisations depend on their research scientists supported by other qualified technical and administrative staff to achieve research outputs. The number of research scientists in the organisations ranges from below 50 to over 300 (Table 2).

Table 2: Number of researchers in the surveyed organisations

Number of Researchers	Percentage
<50	56.3
50-100	31.3
101-150	6.3
Above 300	6.3
Total	100.0

The age of the research institutes ranged from 5 to over 50 years with a mean of 29 years (Figure 1).

Figure 1: Age of Research Institutes

Mean = 29.2
Std. Dev. = 14.571
N = 15

AGE OF INSTITUTE
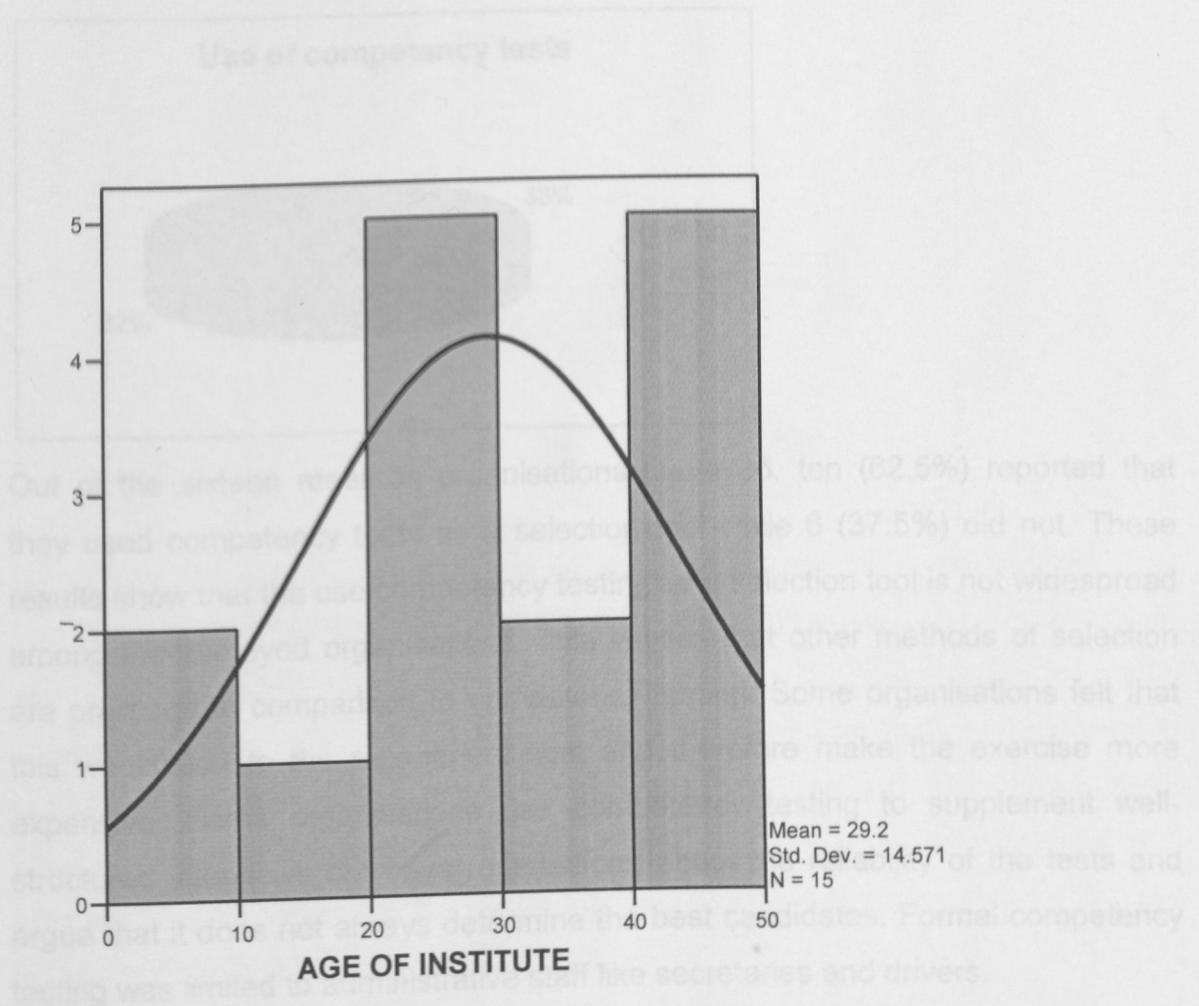
4.3 Competency tests

4.3.1 Extent of use of competency tests

Competency testing is one of the tools at the disposal of organisations to use for purpose of identifying candidates' potential to perform specific tasks and match the same with the job requirements. The level and intensity of application varies from one organisation to another (Figure 2).

Figure 2: Use of competency tests

Use of competency tests

38%

□ No
■ Yes

62%
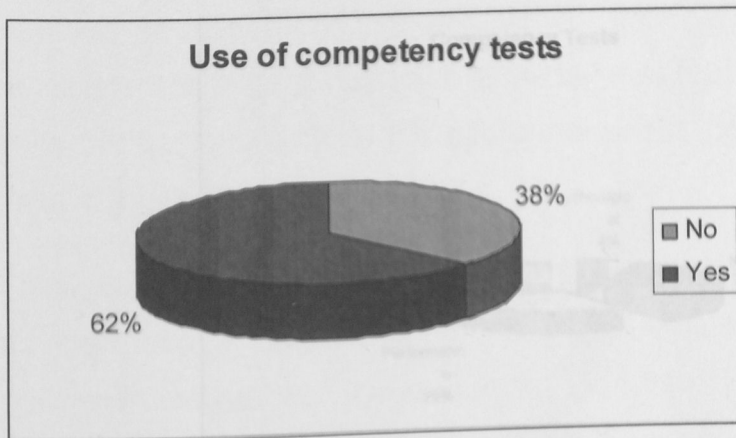
Out of the sixteen research organisations surveyed, ten (62.5%) reported that they used competency tests as a selection tool while 6 (37.5%) did not. These results show that the use competency testing as a selection tool is not widespread among the surveyed organisations. This implies that other methods of selection are preferred in comparison to competency testing. Some organisations felt that this would add to the recruitment cost and therefore make the exercise more expensive. Some organisations use competency testing to supplement well-structured interviews but have reservations about the reliability of the tests and argue that it does not always determine the best candidates. Formal competency testing was limited to administrative staff like secretaries and drivers.

4.3.2 Types of competency tests

Competency testing is broad and measures various important aspects that are either inherent or acquired and are considered critical in the performance of specific jobs. Organisations therefore would select the type of tests that will enable them discover the traits required to undertake certain responsibilities. (Figure 3).

Figure 3: Types of competency tests in use

Competency Tests

- Medical 29%
- Psychological 4%
- Performance 29%
- Knowledge 38%
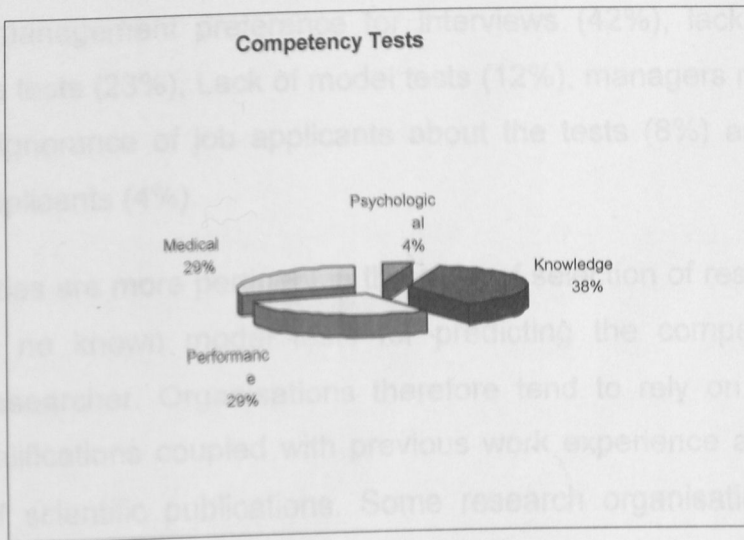
In the ten organisations where competency tests were used, knowledge tests account for 38% performance and medical tests 29% each and psychological tests 4%. Generally all organisations were keen to test candidates' scientific knowledge in the area of specialisation. This is common for both new entrants in to research and the experienced scientists. Performance and achievement tests were restricted to experienced research scientists and were done through review of scientific publications by the applicants and work experience as shown by the applicant's curriculum vitae.

4.3.3 Difficulties encountered in the administration of competency tests

There are many difficulties that the organisations encounter in the administration of competency tests (Table 3 below).

Table 3: Difficulties experienced in administering competency tests

Difficulty	Percentage
Lack of model tests	12
Managers unaware of tests	12
Lack of management support	0
Use of biased tests	0
Selective employment practices	0
Lack of capacity to administer tests	23
Ignorance of job applicants about tests	8
Unprepared ness by the job applicants	4
Resistance from the job applicants	0
Management preference for interviews	42

In this survey, the difficulties experienced in the administration of tests were reported as management preference for interviews (42%), lack of capacity to administer the tests (23%), Lack of model tests (12%), managers not aware of the tests (12%), Ignorance of job applicants about the tests (8%) and unprepared-ness of job applicants (4%).

These difficulties are more pertinent in the case of selection of research scientists as there are no known model tests for predicting the competence of a an agricultural researcher. Organisations therefore tend to rely on the applicant's academic qualifications coupled with previous work experience as evidenced by the quality of scientific publications. Some research organisations use simple tailor made tests and argue that external tests are too general to be applied. Some research organisations felt that the tests were difficult to administer.

4.3.4 Administration of competency tests

In determining candidate's capacity to perform, various research organisations focuses on a range of issues that are considered key to the performance of the advertised job (Table 4).

Table 4: Issues focused on in the administration of competency tests

Issue	Percentage
Customers/clients' needs	9
Continuous learning	14
Self management (time and priorities)	8
Team work	13
Interpersonal skills	8
Goal orientation	6
Creativity/innovation	9
Written communication	6
Analytical problem solving	11
Conflict management	3
Planning/organisation	13

The organisations surveyed have focuses on diverse issues while carrying out competency testing through interview process. The dominant areas of focus are continuous learning 14%, Teamwork and planning, 13% each and analytical problem solving, 11%. To determine these issues through the use of formal competency testing may not be easy especially in the case of research scientists. These issues are best addressed through the use of other methods such as

interviews, seminar presentations, peer recommendations and review of publications by the applicant.

4.3.5 Preparations for competency tests

Organisations have a moral responsibility to bring to the attention of job applicants that they would be expected to sit for some tests during the selection process. Failure to prepare candidates for such eventuality may cause anxiety and therefore poor performance which may not be a reflection of the candidates potential (Figure 4)

Figure 4: Preparation for testing

Processes used to test applicants

Use own tests 24%

Have someone well trained 0%

Provide Material 19%

Psychological preparation 28%

Explain reason for testing 29%
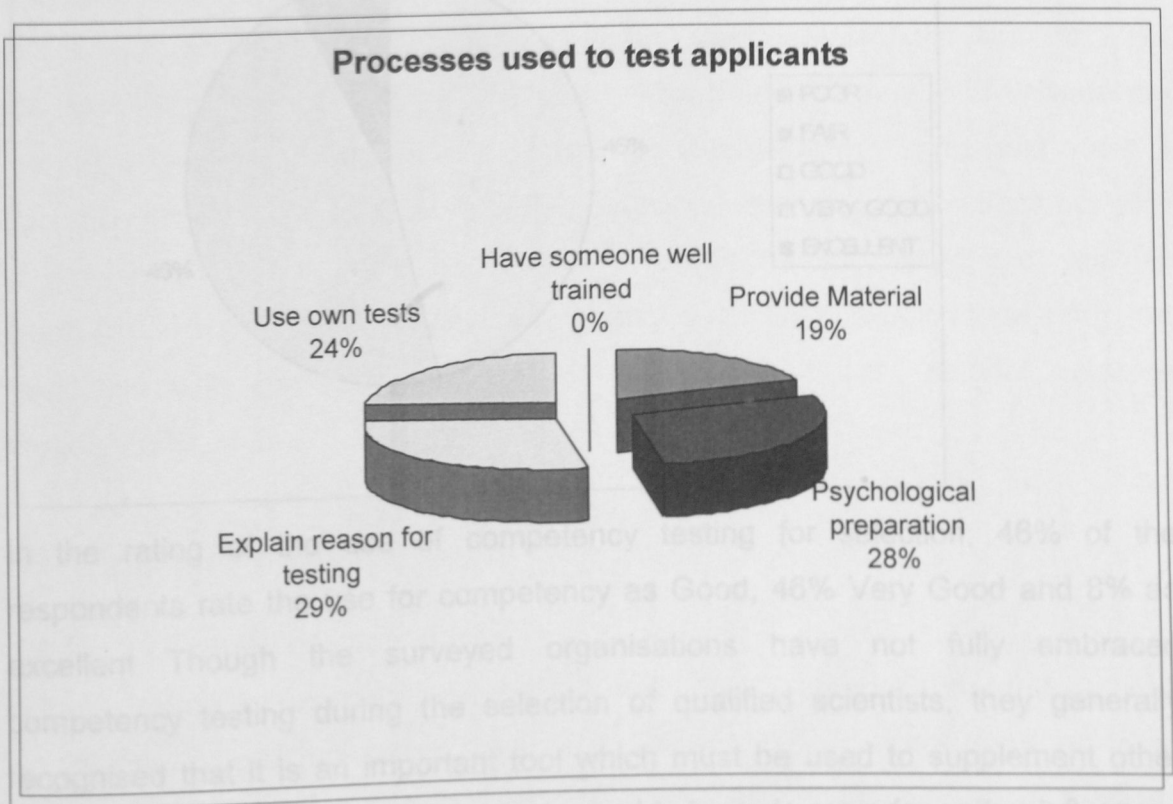
In testing the candidates, 19% of the institutes provided material/information for preparation, 28% provide information that they will be tested (psychological preparation), 29% explained the reason for testing, 24% used own tests and none had someone well trained to handle the test takers. The survey indicates that preparations are inadequate particularly by the candidates who only versed with interview process. The research organisations do not have trained personnel for purposes of coordination administration of competency tests.

4.3.6 Rating of competency tests

To determine the preference for tests against other conventional method of employee selection, the surveyed organizations had high rating for competency testing (Figure 5).

Figure 5: Rating of competency tests

RATING OF THE USE OF COMPETENCY TESTS

0%
0%
8%
46%
46%

- POOR
- FAIR
- GOOD
- VERY GOOD
- EXCELLENT
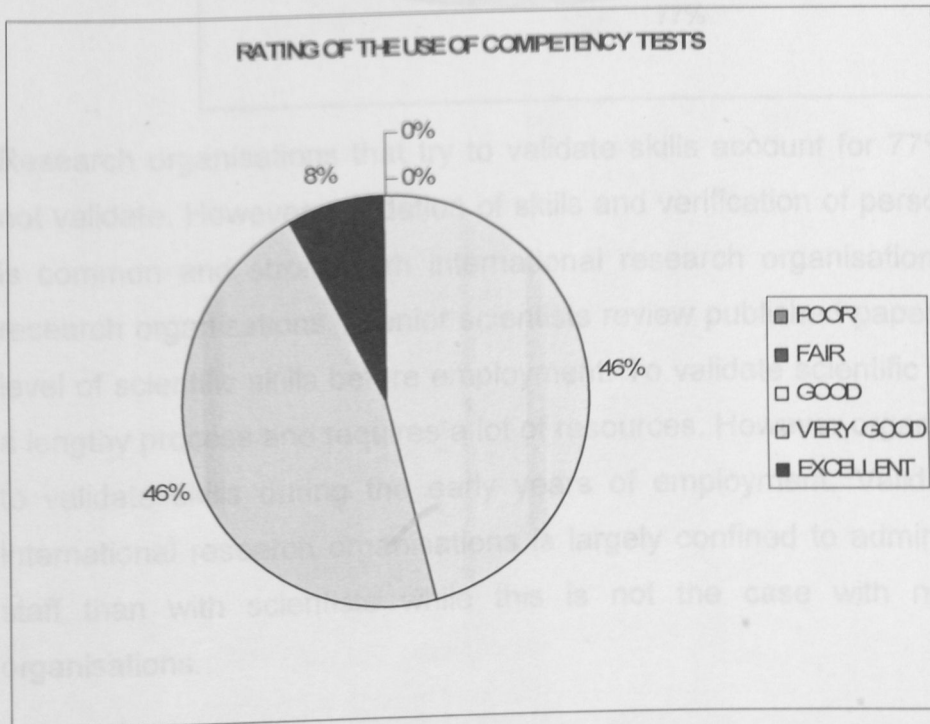
In the rating of the use of competency testing for selection, 46% of the respondents rate the use for competency as Good, 46% Very Good and 8% as excellent Though the surveyed organisations have not fully embraced competency testing during the selection of qualified scientists, they generally recognised that it is an important tool which must be used to supplement other selection methods. Well designed tests would eliminate room for undue influences by some panellists and subjectivity.

4.3.7 Validation of skills on the job

To confirm the skills and knowledge is critical during the employment selection process. This provides an opportunity to ascertain or disapprove what a candidate may have expressed during the interview and testing process (Figure 6).

Figure 6: Validation of skills
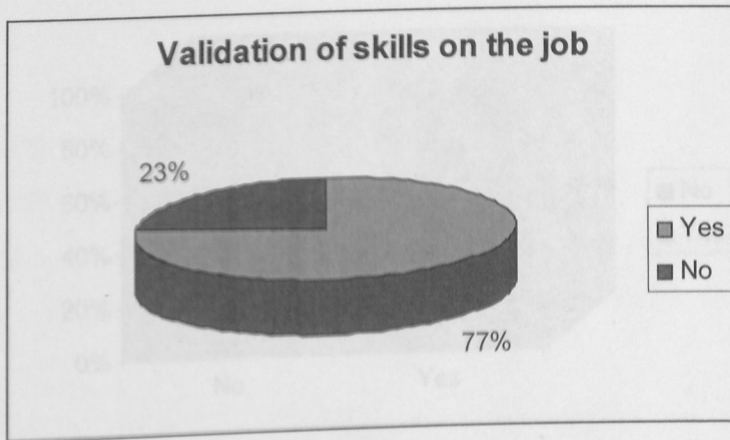
Research organisations that try to validate skills account for 77% while 23% do not validate. However, validation of skills and verification of personal details/traits is common and strong with international research organisations than National research organisations. Senior scientists review published papers to validate the level of scientific skills before employment. To validate scientific research work is a lengthy process and requires a lot of resources. However organisations are able to validate skills during the early years of employment. Validation of skills in international research organisations is largely confined to administrative support staff than with scientists while this is not the case with national research organisations.

4.4   Employment policies

4.4.1 Declaration of vacancies

Human resource is an important integral part of the resources that organisations would require to achieve their objectives. Declaration of vacant positions is an important aspect in the process of employee selection. Failure to declare positions vacant is a recipe for ad hoc and secret employment thus denying the organisation the opportunity to competitively attract highly qualified scientists. (Figure 7)

Figure 7: Declaration of vacancies
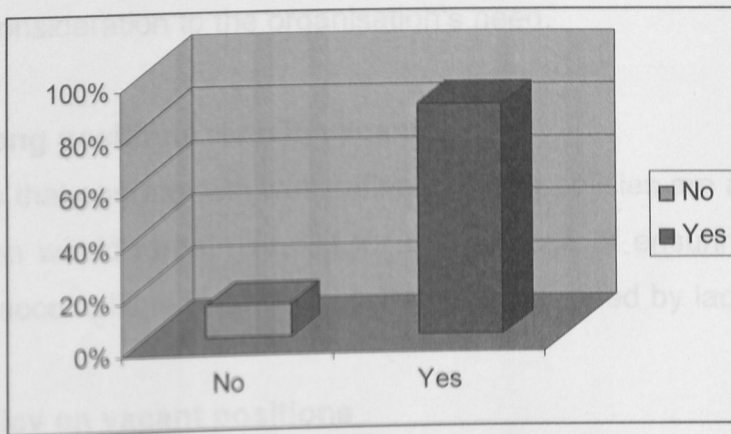
Most of the organisations had policies on employment. 88% of the organisations reported that jobs were declared vacant and advertised while 12% do not declare positions vacant. It is common practice in the surveyed organisations to declare positions vacant and advertise them through the print and electronic media.

4.4.2 Justification for positions

Before employment is undertaken to fill existing vacant positions, serious considerations should be made to determine the merit of such job offers (Figure 8).

Figure 8: Justification for positions
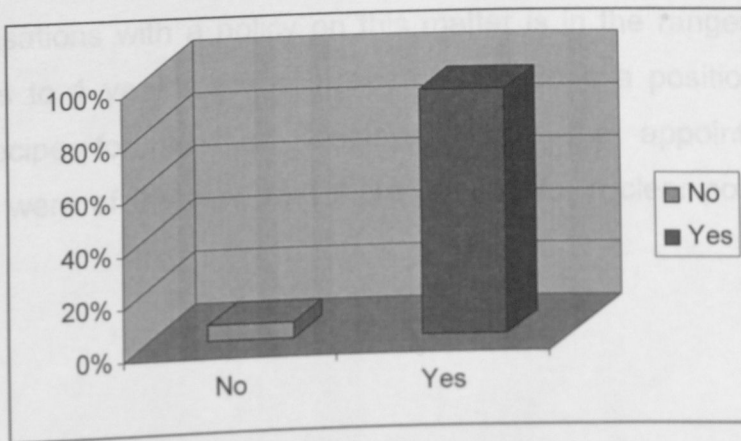
Justification to support request for employment of research scientists was reported in 94% of the cases while 6% did not. Generally it is evident that justifications are made to the appointing authorities in support of the need to acquire scientists with specialised skills and knowledge or those fresh from training institutions but with the right attitude and basic qualifications for purposes of developing them to under study senior scientists. Nevertheless, the

respondents confirmed there are isolated incidences where employment is made without due consideration to the organisation's need.

4.4.3 How long positions remain vacant

Organisations that operate with well defined staffing policies are able to state how long a position would remain vacant for the purpose of ensuring the all project activities are accomplished without constraints occasioned by lack of staff (Figure 9).

Figure 9: policy on vacant positions
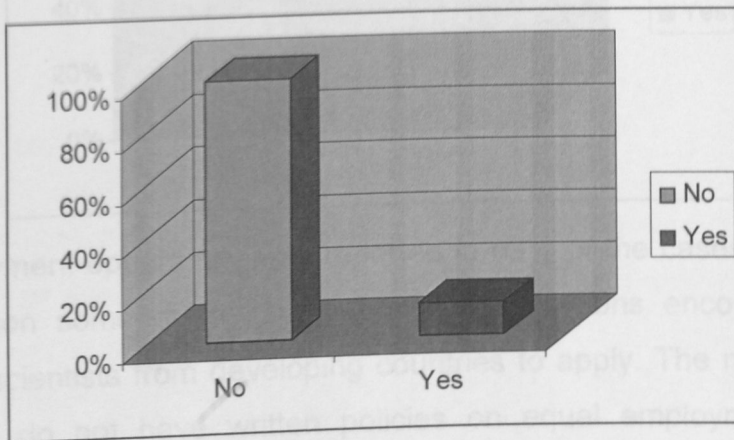
A policy on how long a position remained vacant existed in only 13% of the surveyed institutes while 87% had none. The period a position can remain vacant for the organisations with a policy on this matter is in the ranges of 0-3 months and 6 months to 1 year. Lack of policy on how long a position would remain vacant is recipe for ad hoc employment by the appointing authorities. Respondents were of the view that there is need for a clear policy guideline on this matter.
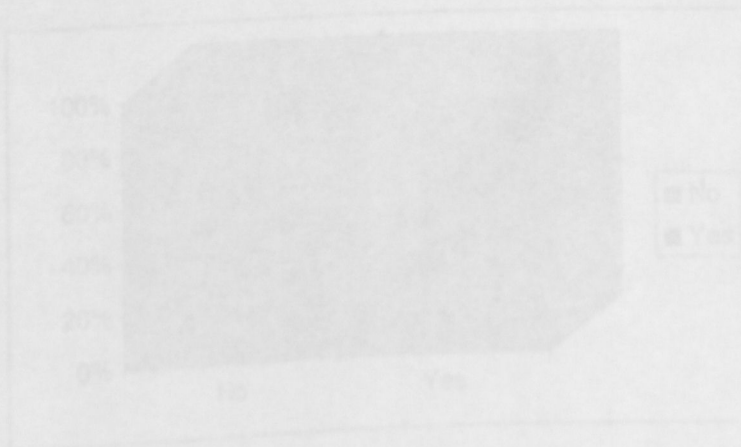
4.4.4 Equal employment opportunity

Organisations that secure the best qualified scientists should encourage all potential candidates without discrimination in terms of gender, race, nationality, religion, tribe, or physical disability. (Figure 10).

Figure 10: Equal employment opportunity
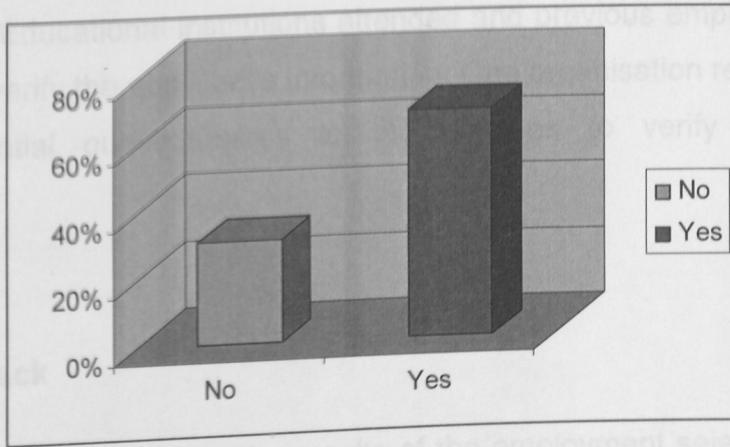
Equal employment opportunity was reported in 69% of the cases while 31 % did not. In addition some of the international organisations encouraged qualified women and scientists from developing countries to apply. The national research organisations do not have written policies on equal employment opportunity although the same is implied in practice. There is therefore need to entrench this practice in the institutional policy documents.

4.4.5 Cross-referencing

Cross referencing for purposes of confirming the information provide is critical before any employment is offered (Figure 11).

Figure 11: Cross-referencing
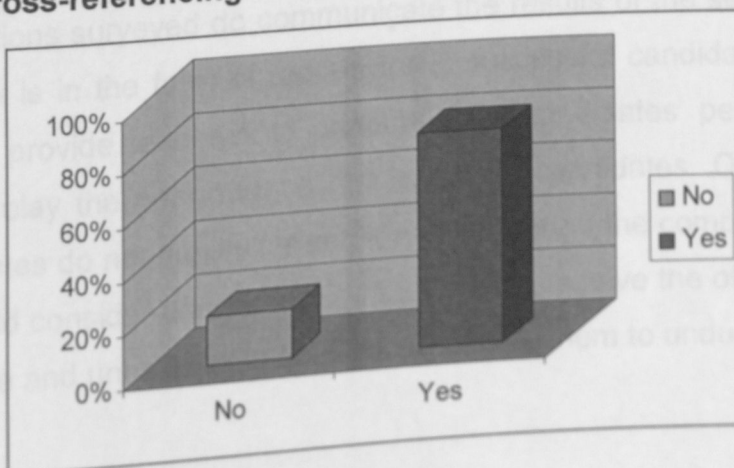
Among the respondent organisations, 81% reported that they did verify the information about the applicants' abilities by contacting the referees and/or previous employers while 19% did not. In this survey, cross-referencing was done by contacting the referees either in writing or through phone calls. During the interview process the copies of certificates and testimonials were verified against the originals. Educational institutions attended and previous employers were also contacted to verify the applicant's information. One organisation reported that they sent confidential questionnaires to the referees to verify the applicants information.

4.4.6 Feedback

It is important to always relay the results of the employment selection process to avoid anxiety and speculations amongst the competing candidates (Figure 12)

Figure 12: Feedback
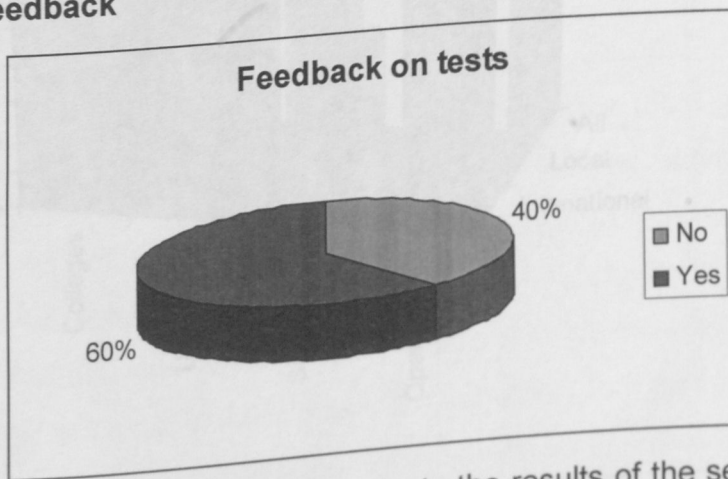
The organisations surveyed do communicate the results of the selection process. This feedback is in the form of regrets for unsuccessful candidates. 60% of the organisations provide feedback to announce the candidates' performance while 40% do not relay the performance results to the candidates. Organisations felt that if candidates do not qualify for employment through the competency selection process should consider unsuccessful if they do not receive the offer. Others felt it was expensive and unnecessary as it would expose them to undue pressure.

4.4.7 Sources of Recruitment

Organisations are at liberty to source for qualified research scientists in their areas of preference. The universities are a source of new graduates with no research experience who are usually employed due to their good academic qualifications so that they can be further trained to become successful researchers. Similar research institutions and the open market provide more experienced scientists who are usually recruited to fill senior positions in the organisations (Figure 13).

Figure 13: Sources of Recruitment

The international research organisations prefer to recruit from the open market (50%), similar research institutes (30%) and universities (20%) while the local institutes have the preference for open market (45%), universities (23%) and other research institutions (18%) and colleges 14%. Overall the sources of recruitment for the organisations were 47% from open labour market, 22% universities, 22% similar research institutes and 9% colleges. International research organisations have preference for highly qualified experienced scientists whom they are able to recruit from other research institutions or from the open market.

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4.4.8 Methods of recruitment

Research organisations have a host of methods to apply while recruiting candidates for selection as research scientists (Figure 14).

Figure 14: Methods of recruitment
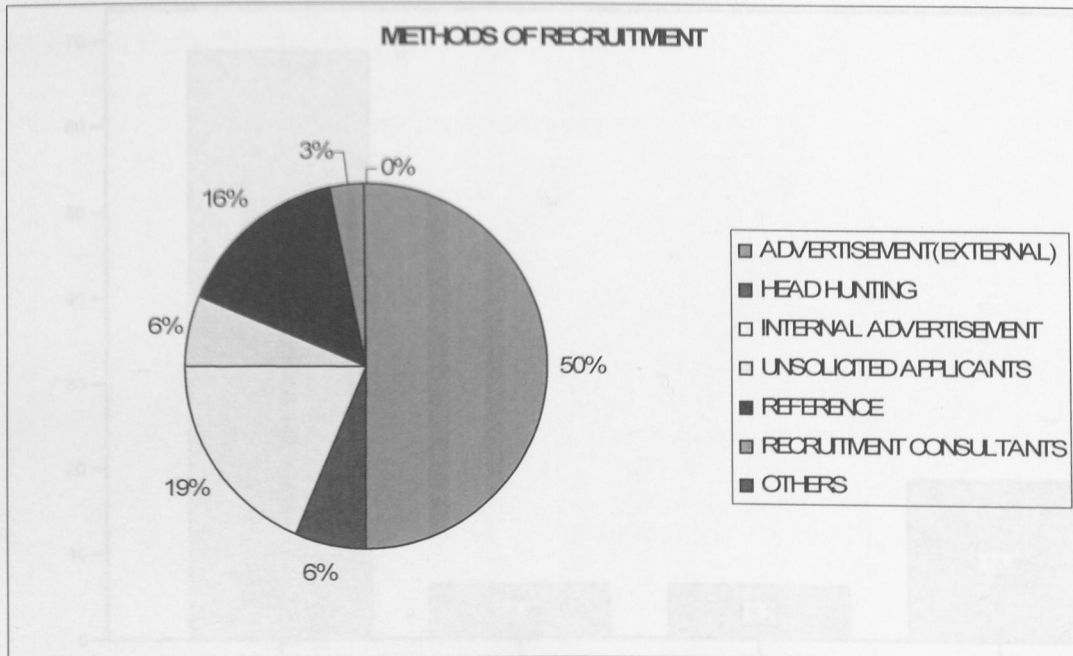
Basically, all methods are used at different times but the most preferred of all is the external advertisement 50%, followed by internal advertisement 19%, reference or recommendation by known persons 16% head hunting and unsolicited application with 6% each and recruitment consultants 3%. Respondent organisations felt that advertising vacant positions is more effective, is open and can reach many potential scientists and it minimises room for biases as only the confident and qualified candidates would take the initiative to apply for consideration.

4.4.8 Other methods of employees selection

There are various methods of employee selection other than competency testing which the surveyed organisations apply either singly or to supplement competency testing (Figure 15).

Figure 15: Other methods of selection

Other Methods of Selection

Other Methods of Selection

Plain interviews are the most preferred other method of selection accounting for 68.8%, Interviews combined with review of dossiers and seminar presentations 6.2%, Interviews and review of published scientific papers 6.2% while 18.8% did not indicate use of other methods. Interviews were mostly done in a panel but at times one on one interviewing was also done. The organisations preferred the interview method for selection of scientists as it can help them probe candidates to divulge pertinent information than can be provided for in a formal test. Performance appraisal reports were used for internal recruitment and management successions.

4.4.10 Authorization for employment

The powers to effect employment are vested in certain offices and this largely depends on the practices of each organisation, which are enshrined in the terms and conditions of employment (Figure 16).

Figure 16: Authorisation for employment

FINAL AUTHORITY IN HIRING NEW STAFF

- BOARD OF DIRECTORS
- CHIEF EXECUTIVE/MANAGING DIRECTOR
- HUMAN RESOURCE MANAGER
- LINE/PROJECT MANAGER

5%
0%
42%
53%
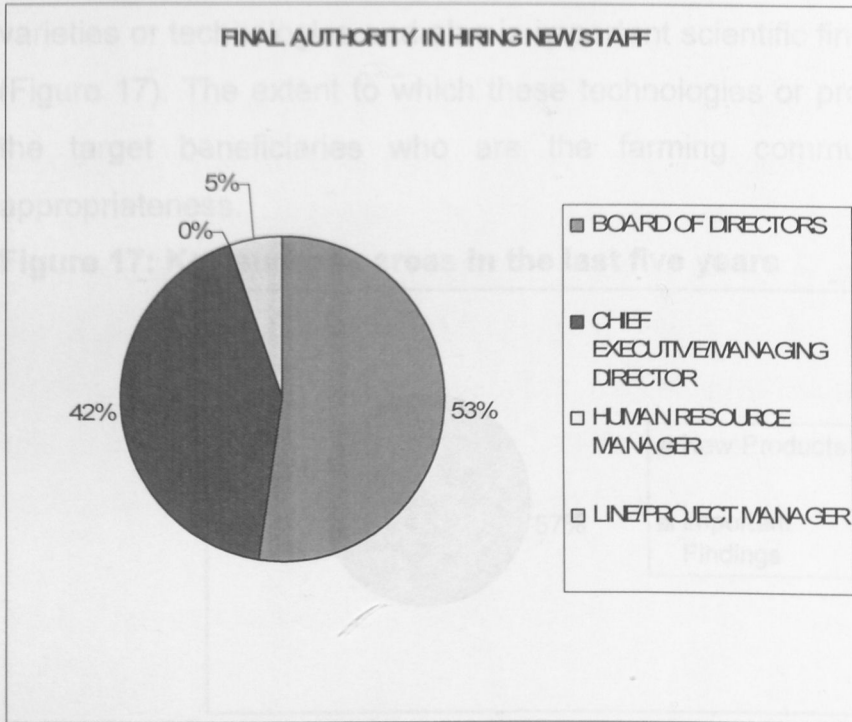
In most of the organisations, the Board of Directors account for 53%, the Chief Executives 42% while Project Managers are responsible for only 5% of the authorizations of employment. For consistency organisations should have a policy on who is is vested with the final authority to recruit. The surveyed organisations indicate various authority centres which largely reflects the calibre or level at which scientists are recruited. Recruitment at senior levels tend to involve the Board of Management.

4.5 Institutional performance and use of competency tests

The results presented in this section will seek to answer the second objective of the study which is to determine whether the extent of use of competency tests in selection of research scientists is related to institutional performance.

4.5.1: Key success areas in the last five years

The success of research organisations depends on production of new products, varieties or technologies and also in important scientific findings or breakthroughs (Figure 17). The extent to which these technologies or products are taken up by the target beneficiaries who are the farming community determines their appropriateness.

Figure 17: Key success areas in the last five years
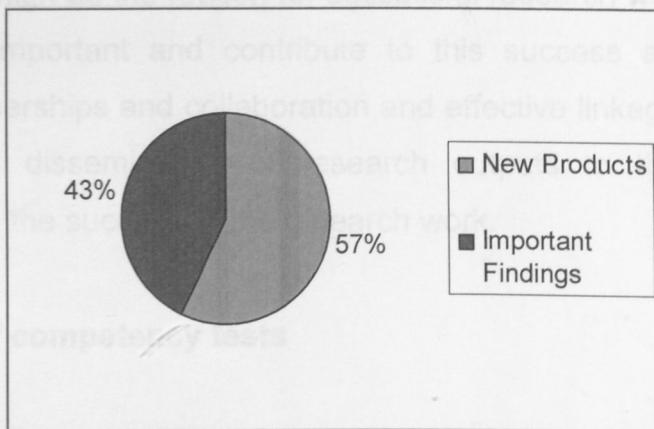
The results of this study show that 57% of the key successes is in the new products, varieties and new technology, 43 % in important findings. This finding is consistent with the main objective of agricultural research organisations which is the generation of new technologies and products..

4.5.2 Quality of research scientists

For any research organization to be able to produce innovations and relevant technologies which will increase agricultural productivity requires a team of highly qualified and dedicated research scientists (Figure 18).

Figure 18: Success due to quality of research scientists
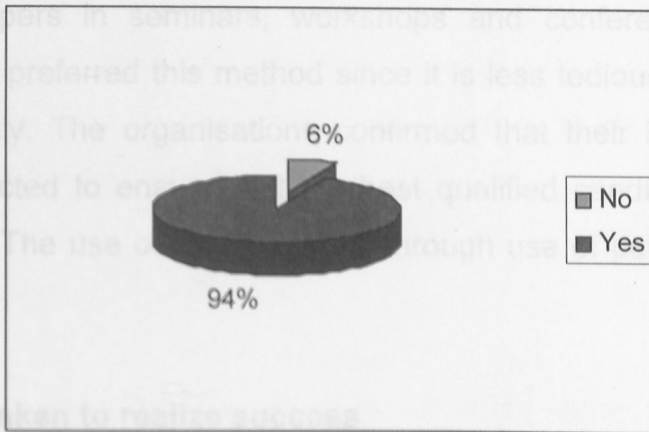
Among the organisations surveyed, 94% reported that their success was due to the quality of research scientists while 6% do not. Though quality of scientists has been ranked high as the reason for successful research work, other factors which are equally important and contribute to this success are adequate research funding, partnerships and collaboration and effective linkages. Effective extension linkages and dissemination of research outputs to the clients has further contributed to the success of the research work.

4.5.3 Use of competency tests

The cross-tabulation of rate of adoption of technology and use of competency tests is shown in table 5 bellow.

Table 5: Use of competency tests

		Use competency testing		
		No	Yes	Total
Rate of	Fair	12.5%	.0%	12.5%
adoption of your	Good	18.8%	37.5%	56.3%
technology	Very Good	6.3%	18.8%	25.0%
	Excellent	.0%	6.3%	6.3%
	Total	37.5%	62.5%	100.0%

One measure of institutional performance is the adoption rate of the technologies or products they produce by the clients. In this study, 63% of the institutes reported that they used competency testing in employee selection. The same organisations rated the adoption of their technologies as good in 56% of the cases, very good in 25% excellent in 6%. Organisations carry out testing through a rigorous interview process to determine their technical competence and

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knowledge of the subject. Candidates are required to provide evidence of published papers in seminars, workshops and conferences. The responding organisations preferred this method since it is less tedious and decisions can be made promptly. The organisations confirmed that their interview panellists are carefully selected to ensure that the best qualified candidates are identified for employment. The use of formal testing through use of pen and paper was found missing.

4.5.4 Time taken to realize success

Figure six below shows whether the time taken to realize success was long or not as reported by the different organizations surveyed.

Figure 20: Time taken to realize success
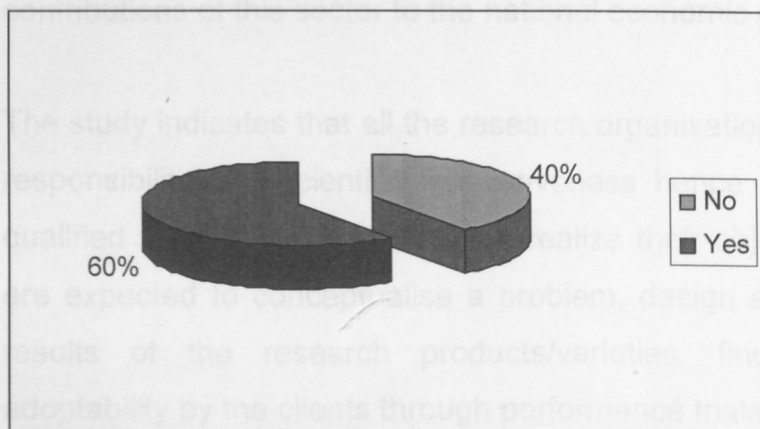
The time taken to realize success of the research findings was long in 60% of the cases, not long in 40% of the cases. This can be explained by the fact that some research experiments like breeding for new varieties of crops or animals take a long time to realize while some like testing for adaptation may take a shorter time. There are numerous factors that inhibit quicker realization of research outputs such us unfavourable and erratic weather patterns, inadequate funding and poor research and extension linkages.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes and discusses the results and findings of the study as it relates to objectives of the study.   It looks at study limitations and makes suggestions for further research work.

5.1   Summary

The research organisations involved in this study comprises part of the National Agricultural system.   The mandates of these organisations are to carry out research relevant to the enhancement of agricultural development.   Their input to the agricultural production systems greatly influences the performance and contributions of this sector to the national economic growth (GDP).

The study indicates that all the research organisations are aware of the enormous responsibilities of scientific innovativeness hence the need to recruit the most qualified scientists to enable them realize their objectives and goals.   Scientists are expected to conceptualise a problem, design an investigative research; test results of the research products/varieties, findings and technologies for adoptability by the clients through performance trials.

The performance in terms of breakthrough in developing new varieties/products accounts for 48% while the new technologies in agricultural productions is 36%. However, the patenting of new varieties and technologies summarizes the performance, which is only 16%.   This clearly indicates that the performance is not quite impressive since only 16% of these organisations have patented their new findings and this leaves about 84% of the research work/products as unpatented. This however is explained by the fact that breeding of new crop and livestock takes several years.   Secondly, many of the organisations may not be aware of the legal requirement to register their products in order to patent individual property rights.   Thirdly, others may have done some work which is already in existence or have only been used to test adaptability or efficacy of products developed elsewhere.

Fourthly, some may have done very little research, which cannot be reflected by patenting of new crops varieties and livestock breeds, products and technologies. Some organisations have indicated that funding of research is quite expensive.

The success of the performance of research organisations is demonstrated by:
- Development and registration of new varieties.
- Dissemination and transfer of the new technologies.
- Documentation of procedures/guidelines in research activities and use of such products as bio-pesticides, fertilizers etc.
- Training of National and agricultural research system scientists.

The performance of these organisations is directly related to the quality of research scientists, long research experience and sustainable research funding. However, it is worth noting that the selection process does not clearly apply competency testing particularly for young and inexperienced research scientists.

Interviewing of candidates is only common form of selection that is dominant followed by the medical testing. Interviews are thorough and take care of critical issues such as research knowledge, personal traits, performance etc. The international research organisations recruitment and procedures are founded on the principles of fairness, equity, open competition and merit.

The research scientist turnover is higher in national than in international research organisations.

5.2   Conclusions

This study has revealed that research organisations are aware of the need to engage the services of highly qualified and competent scientists in order to realise important research outputs. To secure the services of such calibre of scientists, various methods have been applied in the recruitment and selection of suitable candidates. The most common of this the interview method which has been effectively applied though there has been limited review of publications of potential scientists at higher positions by senior managers.

The use of formal competency test has been quite negligent other than in lower job positions where skills are validated. This is also limited to very few research organisations. The use interview has been construed to mean competency testing by many respondent organisations. The organisational performance has largely been attributed to the quality of scientists. This then confirms that selection of scientists is carefully done in order to secure competent, qualified and committed scientists through interview and other methods.

5.3 Recommendations

1. Research organisations to develop code standards to harmonize the job specifications, skills, traits etc. that will guide each individual institute in the hiring process. This will undoubtedly be useful in inter-institutional staff movements.

2. Each institute to develop appropriate employment policies to guide in the employee selection process. This will inevitably eliminate the favoritism in employment practices in local research organisations.

3. Develop the competency test details and materials that can be circulated to the potential job seekers (those short listed). This will enhance confidence and create awareness on what candidates would be expected to encounter as part of the selection process. While declaring vacant positions, the job specifications should allow for self-assessment and therefore reduce number to only those who meet the stringent requirements to compete for the few available job opportunities.

4. Distinguish between competency tests and the oral interviews. Institutionalize competency testing and blend it with interviews to get the best candidates.

5. Train test administrators or involve the services of consultants to administer the tests designed by research organisations in accordance with agreed standards of competency.

6. Design mechanism for skills validation that will be friendly. This may include simple laboratory analytical work and interpretation of research data, research design and project proposals to attract grants and funding.

7. Managers entrusted to administer tests, as a means of identifying the best candidates, should be well versed with use of tests and requirements of effective application of tests.

8. Organisations to have employment policies that would expressly guide the skills testing process.

9. The results of the selection process should be useful to job applicants by enumerating their weaknesses or strengths as exhibited during the test. Research organisations have a moral responsibility to communicate the results of the selection process to the prospecting candidates.

5.4 Limitations of the study

The use of competency testing as one of the various selection methods is quite limited and inconsistently applied. Many of the respondents did not seem to fully grasp the idea of competency. Data on records on organisations breakthrough in respect to new varieties, technology adoption/uptake levels was not easily available. This caused considerable delay in the process of filling in the questionnaire.

The literature relied on is specifically from authors from Europe (UK) and America. The local scholars, Human Resource Practitioners or professional bodies do not seem to have researched or written on this subject. This limited the scope of references available for consultation on this subject.

5.5   Suggestions for further research

The results of the study has aroused interest for research in the application of competency testing as one of the effective and reliable tools to predict the possible job performance by potential job seekers.

Further studies should be carried out to determine what role the consultants can play in administration of tests. A well-structured competency testing can be used to eliminate mistrust and suspicion between the interviewees and interviewers. Study should seek ways to therefore create a free environment for skills competition in the labour market.

The study should further seek to establish and verify the link or the impact created by the technological innovativeness to the clients or users of agricultural research outputs. Research findings that do not reach the target beneficiaries may not be useful. Research is considered meaningful if it is designed to respond and address critical and pertinent concerns or to fill in some perceived gaps.

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APPENDIX 1

LIST OF ORGANISATIONS TO BE SURVEYED

CIP   - International Potato Centre

CIMMYT   - International Maize and Wheat Improvement Centre

ILRI   - International Livestock Research Institute

ICRAF   - International Centre for Research in Agro-forestry

IPGRI   - International Plant Genetic Resources Institute

ICRISAT   - International Crops Research Institute for the Semi-Arid Tropics

ICIPE   - International Centre of Insect Physiology and Ecology.

KEMFRI   - Kenya Marine and Fisheries Research Institute

KARI   - Kenya Agricultural Research Institute

KEPHIS   - Kenya Plant Health and Inspectorate Service

KEFRI   - Kenya Forestry Research Institute (Karura & Londiani)

CRF   - Coffee Research Foundation - Ruiru

CIAT   - International Centre for Tropical Agriculture

PCPB   - Pest Control Products Board

TRFK   - Tea Research Foundation of Kenya (Kericho)

KESREF   - Kenya Sugar Research Foundation

KIRDI   - Kenya Industrial Research & Development Institute

KSC   - Kenya Seed Company

UNIVERSITY OF NAIROBI

FACULTY OF COMMERCE
MBA PROGRAM – LOWER KABETE CAMPUS

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P.O. Box 30197
Nairobi, Kenya

DATE. 30ᵗʰ JUNE 2006.

TO WHOM IT MAY CONCERN

The bearer of this letter SAMMY MAINA NDEI

Registration No: D/61/P/7855/99.

is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report on some management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate if you assist him/her by allowing him/her to collect data in your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

JACKSON MAALU
CO-ORDINATOR, MBA PROGRAM
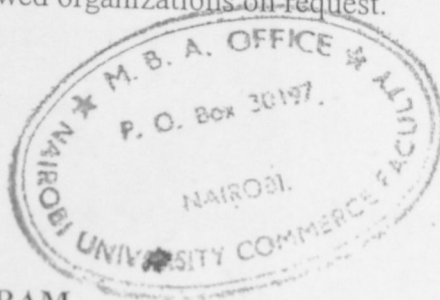
APPENDIX 3

QUESTIONNAIRE

SECTION A

Biodata (Description data)

Name of the Organization ....

Nature of the Organization ....

Title of respondent ....

Number of Research Scientist ☐ ☐ ☐ ☐ ☐

                                          <50,   50-100, 101-150, 151-300 >300

Age of the organization .... Years

SECTION B
(Please tick in the box)

1. What are the key successes in the last five years (research break throughs)?

      New products/varieties, new technology ☐
      Important findings ☐
      Patented findings ☐
      Others (Please specify) ....

      ....

2. How many of the above have been patented. Please state in Numbers

      Patented_____ (Nos.)   Unpatended _____ (Nos.)

3.   What is the rate of adoption/consumption of your technology or products by theclients?.

      Poor   ☐
      Fair   ☐
      Good   ☐
      Very Good ☐
      Excellent ☐

Would you attribute the success of your organisation to the quality of your scientists. (innovativeness)?.

    Yes   ☐

    No   ☐

Comment

_____

_____

_____

4. In your view has it taken longer to realise (1) above?

    Yes   ☐

    No   ☐

Comment on your response

_____

_____

_____

5. What is the turnover in the last five years (% of the total establishment of researchers in the organisation)?

    0.00-1.00% ☐

    1.01-5.00% ☐

    5.01-10.00% ☐

    >10% ☐

SECTION C
(please tick your answer in the box)

6. Are jobs in the organisation declared vacant and advertised?

    ☐   ☐

    Yes   No

7. Are justifications provided in support of employment request for Research Scientists?

    ☐   ☐

    Yes   No

9. **What are your sources of recruitment?**

    1.   **College /technical/ middle level colleges** ☐

    2.   **Universities** ☐

    3.   **Similar Research Institutions** ☐

    4.   **In the open market** ☐

10. **What methods do you use to recruit?**

    1.   **Advertisement (external)** ☐

    2.   **Head hunting** ☐

    3.   **Internal Advertisement** ☐

    4.   **Unsolicited applicants.** ☐

    5.   **Reference/recommendation by known persons** ☐

    6.   **Recruitment consultants** ☐

    7.   **Others: Please specify**_____ ☐

11. **Is there a policy on how long a position should remain vacant?**

    ☐ **Yes**   ☐ **No**

    If yes what is the policy position?

....

....

....

    Specify the time frame. **0-3mths** ☐

                           3-6mths ☐

                            6mths-1yr ☐

12. **Does the organisation have a policy on equal employment opportunity integrated in the recruitment and selection process?**

    ☐ **Yes**   ☐ **No**

    If yes, please provide details

....

....

....

13. Is there a reference check to verify information about applicant's abilities, skills or knowledge?

Yes ☐   No ☐

If yes, please explain ....

....

....

SECTION D
(Please tick your answer in the box)

14.   Does your organization use competency testing as a selection tool?.

Yes_____   ☐

No _____   ☐

If yes, what types of competency tests does your organisation use most?.

1. Psychological tests _____   ☐
2. Knowledge tests _____   ☐
3. Performance tests _____   ☐
4. Graphic response tests ____   ☐
5. Medical tests _____   ☐
6. All _____
7. Combination of _____&_____

15. What difficulties does your organsation experience in the administration of competency tests

1.   Lack of model tests   ☐
2.   Managers are unaware of existence of tests   ☐
3.   Lack of management support in the use of tests ☐
4.   use of biased tests (unvalidated tests)   ☐
5.   Selective employment practice (secretive)   ☐
6.   Lack of capacity to administer tests   ☐
7.   Ignorance of Job applicants about tests   ☐
8.   Unpreparesness by the applicants   ☐
9.   Resistance from the Job applicants   ☐
10.   Management preference for interviews   ☐

16. Which of the following issues do you focus on in the administration of competency

	Yes	No
• Customers/clients' needs	☐	☐
• Continuos learning	☐	☐
(Learning and implementing new concepts		
• Self management (time and priorities)	☐	☐
• Tam work	☐	☐
• Interpersonal skills	☐	☐
• Goal orientation	☐	☐
• Creativity/innovation	☐	☐
• Written communication	☐	☐
• Analytical problem solving	☐	☐
• Conflict management	☐	☐
• Planning/organization	☐	☐

17. Are skills validated (on the job)?.

Yes ☐   No ☐

18. What process does your organization use to subject applicants to the test?

	Yes	No
• Providing material/information for preparation	☐	☐
• Information that they will be tested (psychological preparation)	☐	☐
• Explain the reason for testing	☐	☐
• Does your organisation use own tests or use those in market	☐	☐
• Do you have someone well trained to handle test takers	☐	☐

19. Please rate the use of competency tests against other methods of selection

Excellent	☐
Very Good	☐
Good	☐
Fair	☐
Poor	☐

20. Do the test takers receive the results (feedback)?.

Yes ☐   No ☐

21. Give comments on the use of competency tests in your organizations.

....

....

....

22. Who is the final authority in hiring new staff?

☐ Board of directors

☐ Chief Executive/ Managing Director

☐ Human resource manager

☐ Line /project manager

23. Please provide any other relevant information you wish to give.

....

....

....

Thank you for your Co-operation.