JOURNALOS

Volume 9, No. 24, June 2015

ISSN: 219 318 11

JASRI

Journalos of Advanced Scientific Research and Innovation

Germany, 2015

Victorian Perspectives And The Blind Reaction On Women In The XIX Century

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ABSTRACT

The XIX century was not only a turning point for the developing of England and, at the same time it was the most obviously period which was full of much contradictions and inequalities too. The conservative empress, the multidimensional woman's challenges, the different classes layers that people who were applying to all directions to survive themselves.

In this paper will be discussed the women status and the female viewpoint and reasons in the Victorian period, no matter which issues will be reviewed. Likewise, herein, will consider the concept of the women's life and their labour rates on society, and also, will be revealing their passive and obedient thoughts and exposing of women's intensive exploitation in this long historical processes.

Although, the country was ruled by a woman nearly a hundered years, it is an actual fact that, all Victorian women had to live their lives under the brutal living conditions. Society never accepted them according to their women importance and success, but always are used to seeing them because they were born as a woman and, therefore, they were accustomed to see themselves in the lattest row of Victorian period.

Keywords: contradictions, blind reaction, intensive exploitation, historical processes, Victorian Period, brutal living conditions, different classes

I. Introductıon

XIX century was opened a new era in the British history especially, in the field of revolutions and in the industrial sectors, but the more important influence was the in different points of view in respect to the women. In this paper will be discussed the women status and the female viewpoint and reasons in the Victorian period, no matter which issues will be reviewed. Likewise, herein, will consider the concept of the women's life and their labour rates on society, and also, will be revealing of their passive and obedient thoughts and exposing of women's intensive exploitation in this long historical processes.

According to the most of the world's politicians, the Queen Victoria was one of the very serious and authoriative leader in the British history. The most important goal in her life is to own of her country, to keep the monarchy and the state in well, and whatever happenes, she had to raise the country's status on the world level. But, there were so many people even among the government officials, those who never accepted her political personality as the basic condition of the capitalism. And insomuch as, the most of the time, they tried to introduced her as an individual ''who always obeys to her husband and as a mother of good children''. Generally, according such as to these factors, Victoria shows more attention to the problems of marriage and love and in spite of all women problems in Britain, she wanted them to benefit from all women's rights in the female traditions.

But there was also another reason that also has been marked in the XIX century. However, it was the fact that, her coming to Dynasty was the due the noble generation and in these respect, she was obliged to achieve an unprecedented progress and econimic status in the first instance for her country, and then, for her domination. In addition, the Queen has accepted all these responsibilities as in terms of morality and social order.

On the other hand, this period also has covered by the very rigid class distinctions. Women were already obliged only with childbirth and the households. Social irresponsibilities have reached its extremely ironic degree. Religion pressures, inequalities, and unholy marriages all these were even more evil. Whatever happens, these conditions were not enough to keep the people alive in life. There were lots of needs for the making one another alternative changes in order to gain in people's lives, ecpesially for the women. And in this respect, Victoria began to carry out some unprecedented reforms in English history.

And from another perspective, these reforms have led to the preparation of many juridical regulations for the Britain's Middle class. Together with this reforms, Britain's middle class - especially the men won the right to vote. But the voiting was not very effective for women as always, and though still, they also has gained some authority like this in these elections. For example;

1.In a marriage and in divorce the women won the right in the recognition of some basic çivil rights during their marriage;

2. The granting of the giving the equal rights of the use of goods and properties which they won together during their marriage;

3. In ordet to get the high education;

4. The reducing of working hours.

Even so, despite all these improvements, the charges and labor of females strength always has been lower than the men and therefore, the women were exposed to intense exploitation, in spite of they were working under the very extreme conditions.

However, the number of female managers in the UK has never been so much, but Victoria was the honor of being one of the most important and noble in the history of this country. As the result of these assessments values, such as the formation of the economic growth, the protection of family principles, domestic and welfare civilization Victoria has earned the title of" Viktorian spirituality'' by her own people. As a woman she didn't have too encyclopedic knowledge, but as a Queen, was very successful in his post. As a mission as in all matters, the country and the monarchy was standing in front row, and as justly, has chosen only what is right for England. She has been made an internal and external reforms for the formation to the Britain in a large scale and expanded of her own territories. And with thus, she has turned England in a very strong and powerful imperia. At this point, the Queen has created of a female monarch image in an invincible power with this wealth both in England, as well as, in all over the World.

As a result, that said that the concept of women and women's rights has gained the great importance especially in the XIX th century in Britain. Although, this period, is not completely became a legal redgulation of women's struggle in itself in England, on the other hand the female vibration has played a great impulse worthy of its own. But the another reason is the so much spreading of the women ideology during this perod - it was a serious step in the freedom of the Victorian women. However, as to protect the interest in every issues of British people, she also was showing a great interest to the problems of religion, morality and the woman issues. This format was not only the problem for Victoria, if this problem sometimes defined incorrectly in the social life of British society even, the issue of "women's self-rotation" was the main branches of Victoria's domination in the nineteenth century. The British society has reunite of its real and true definition of women only thanks to Queen Victoria. And she tried have to be in a state of democratic eguality of the Britain as her last breath.

In the XIX century, England was not only the strong flow of Realism, it has also been very different period the development of equal rights, a different view of women life and the human realities. Espicially, this period has gone unregulated stages for the women, even though, the women also were trying to show the same services in society as men. This process significantly showed itself in anywhere: in their social life, in literary progresses and, even in political thoughts.

No doubt that, ethics and society, woman and the scandalous queen, all these have been one of the most fundamental principles and the antagonist character of this period: plus fast-changing masses and day after day industrializing England, particularly without being any needs and any missing from somewhere else. But, to live and to see the "women's ugliness" inside the actual realities, which they were available, the women who throwing themselves into the abyss in order to continue their lives and it was the most different and more sailent approaching concept and real status of the period. And without thinking, we can say that postcolonialism regime never be happy with this misery.

II. Blind Reaction

This is an undeniable fact that, the most powerful “women movement” was carried out in England in the mid period, if we valued this period’s conditions and properties from a historical perspectives. But if we analyze the real characteristics of Victoria as Queen, step by step the emergence of a female model is coming into the eyes in various aspect. On the basis of Martyn Bennet’s (1991), thoughts: “… she was both submissively feminine as well as dominant, traits which developed in response to her role as wife and mother on the one hand, and, on the other, her position as the heart of the Empire” (p.261). The women’s status, discrimination and inequalities of women has most developed and more discussed during the Middle Ages. But in this period, especially in a very large scale, British goverment were able to reveal the solution of “ women problem” under the influence of the women’ liberation.

In any case, whether, we actually think the nineteenth century as a bourgeois Britain, the first name comes to our mind that was Queen Victoria who has dominated this era too long a time. Even though, Victoria seemed very simple and fairly ordinry at her first image as a young girl, but she has ownership on the British throne over 64 years as a Queen from 1837 untill her death 1901.

But who was the Queen Victoria?

Why monarchy has preferred her moral than politics?

Indeed, Victoria as the empress, she became the Queen of “revolutions and reforms”during her entire period and she was a symbol of Britain, and with her “England became the world’s wealthiest nation and, through the creation and expansion of the British Empire, its dominant colonial power” (Holt, Rınehart and Wınston, 2004, p. 600). in this historical process. Since she has a very long time to the British throne, Victoria has joined to every conditions and qualifications of the period and in real sense, she also has participated in all rapidly changing legal positions and in various economic activities as a mission. The family had brought Victoria to the rules of British monarchy, how the English people want to see her, and, she was well educated-how to behave with people, with her nation.

However, the nineteenth century Britain was not only the prosperous and good living style for the high layer classes. At the same time, together with the positive aspects of Dynasty there were also the blind reactions and negative sides. Along with other tendencies, people, even were acted more hypocritical, they were considered themselves to be too dependent on money, in any case, some people of the society always criticized of art, people, especially the women.

Most of time, lots of writers and poets, even the upper class of monarchy often criticized these inequalities and moreover, they cruelly try to link all these injustice directly with Queen.

The great British novelist D.H.Lawrence seemed these uglinesses like this “Although perhaps nobody knew it, it was uglines which really betrayed the spirit of man in the Nineteenth Century. The human soul needs beauty more than bread” (Urgan 2003, p. 948). Accordind to Lawrence these troubles were not only for the low people, at the same time it also applies to high classes, as he stated “Victorian England was, in Lawrence's view, unsatisfactory; he regarded the society of that period as lifeless and artificial. He saw the barriers between classes as obstacles to real, living relationships between people, and Christianity” (Goris 2001, p. 68).

However, the others, who had been considered about the moral order and the right of society much earlier than D.H.Lawrence. In Britain Carlyle's achievement has generally been defined by the social critique of "Past and Present".According to Thomas Carlyle (1995), "how in the late 11 th century it was rescued from anarchy by the strong rule of Abbot Samson, caught Carlyle's imagination as he toured the misery and unemployment of that same district in the early 1840s" (p. 16).

III. Brutal Living Condition – Child Labor And Women

As we said above, the first ten years of Victorian throne on British Empire never has been heartwarming for the Britain and the British. The country was completely collapsed, whether economic or in the case of social status. The unemployment rate was the highest level in almost, but Victoria was trying to protect the invardness of the Dynasty and the economic stability of Great Britain both at the same time. Even later, people will remembered this period as a " problems period". The Queen was very conservative in state affairs. She was forced to raise the econımic status of her country, and also, as well as, for her domination. Victoria has achieved an unprecedented progress as in state spectrum; both in economic and in political affairs. She was brought up in royal family, and, the love and the power for her nation has been inhabited her by the descendant of the king. And therefore, her first role was to protect the honor and reputation of monarchy and the British.

In this respect, Victoria began to perform England's industrialization policy in the first instance. Although, in terms of capitalist relations, England, already has made some of its bourgeois and industrial reform in a world, a little earlier. For e.g. After the first railway of Britain in 1825, the railroad industry even more expanded between the years 1838-1848. The using of first cargo ship was in the UK (but first produced in US), the cereals laws were softened, reduced the cost shipping, transportation and together with all these the commercial sector has begun to rise more and more. Even if in other areas according to H.E. Stowell (1970), "In a different sphere, however, the increasing use of steam power and the furher development of machinery were preparing Britain for its own revolution" (p. 110).

Undoubtedly, Britons sees and realizing of their countries rapidly rising and the effects of the financial sectors instantly and they have been very satisfied with this situation in itself, and, therefore, they were approaching to the Queen with admiration.

But despite this, the British still has need for more democratic reforms for a long time. Social conditions and brutal life was ongoing in anywhere. Especially, children's and women's life were too intolerable. Child's labor was exploited by the capitalists. "The working class and lower middle class still did not have the right to vote, and the hardships they suffered in nineteenth-centry industrial society were still waiting for redress"(Holt, Rınehart and Wınston 2004) and in order, to achive the solution of this problem, in 1840s the working class has created the " Chartists" as the political workers party under the extreme conditions and demands, first in the world. After the "People's Charter" in 1867, more recent reforms began to pass one after another against the colonialism. These reforms have already started of their best impact to the people's lives. If the 26% children were working under very severe condition in England in 1840-1861 years, and this number has reduced to 7% in 1871. This rate was taken into consideration the most over the rural children and women. The average age of the children would be between 9-15 ages. It show that,"child workers were employed only in small numbers. After the 1870s the employment of child labour appears to cease altogether" (Verdon, 2002, p. 116).

And from another perspective, these reforms have led to the preparation of many juridical regulations for theBritain's Middle class. Together with this reforms, Britain's middle class - especially the men won the right to vote. But the voiting was not very effective for women as always, and though still, they also has gained some authority like this in these elections. For example;

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IV. The Great Abyss Between Two Sexes

We divided these diferences in two spheres: in Literary spheres and in Social spheres;
In Literary spheres:

In the Victorian England, especially London, has turned into the most advanced science, cultural and industrial city of the world. As a rule, the Literature of this period has measured of its imaginative thoughts under the ruling glance yet, in the beginning of the period. A number of writers, art figures and other different professions didn't want to come up against of monarchy. Why? Because of people were seeing how much authority has gained monarchy since the first quarter of the nineteenth century, whether political, as well as in other areas. And of course, with this mind, some brain – minded were the idea that they created a great support of Britan's the highest level in order.

This movements were descrbed by two public senses;

in optimism and in positivism, " however, the nineteenth century was also a century of paradoxes and uncertainties" (Carter and Mcrae, 1997, p. 272). But although, many Victorian writers named the women even," narrow-minded" or "philistine",in their writings, on the other hand, others did not hesitate to give the values of women in society. "Women writers were expected to write the kinds of novel which Ceorge Eliot was to condemn in an essay as "Silly novels by Lady Novelists"- the sub-genres of romance, fantasy and sensation". (Carter and Mcrae, 1997, p. 289). At the same time, the Bronte sisters, Charlotte, Emily, Anne Bronte, and other figurative writers," not only contributed much to the grows of the novel, but also to the position of women at this time" (Carter and Mcray 1998.). They just did not see the woman as natural, because they were born as a woman and rightly, demonstrate them in order, as an extremly, the most important individuals in society. But Charles Dickens position on these issues was a little different. Dickens scarcely, tried to reveal the specific problem of the bourgeois class in Britain at the beginning of the nineteenth century.

He had made “very crucial references to the government - for the abolition of death penalty and the improvement of living conditions” (Abbasova and Karaca, 2015, p. 13) and sometimes, without doing any hesitation, he sharply criticized the harmful rules of Victorian Period. “The upper class has taken the initiative years ago. It is they who have put their class in opposition to the country, not the country which put itself in opposition to them” (Urgan, 2013, p. 948).

In Social spheres:

When considering the concerns of the period, you can feel a little bit yourself in the case of negative happening of period and the capacity of the women power in society. In all historical processes of the Victorian period, the women status also were played a great role in the public, according to each conditions and qualifications and it has been very impressive and effective sensitivity approach to the period. In real sense, the women have been involved in various economic activities, and began to work together with the industrial Revolution in Britain the first.

But despite all these improvements, the charges of females labor always has been lower than men and, therefore, the women were exposed to intense exploitation, in spite of they were working under the very extreme conditions. Physical superiority of men over the women was a thinking way in both the social and in religious view as well and this preference has been transmitted to nineteenth century as a “heritage” since the Middle Ages. It has been very overrated process in Victorian England.

But on the other sides, the Queen tried to equalize the rights of men and women, in many issues. And with her decision she did not stop the activities of the women's clubs and assosiations in London. She has opened up new possibilities for the women…

Queen was very delicate and extremly principled in the ethical and religious issues too.

Generally in such factors, the Queen shows more attention to the problems of marriage and love and, in spite of all women problems in Britain, she wanted them to benefit from all women’s rights in the female traditions.

As we know, in Victorian period, there was a Puritan attitude against the sexual relation. Sex can be pleasurable and physical intimacy action only within marriage that, if it is a gift from God according to Puritans ethics codex and opinions. As a word “free ethic”was already completely abolished the opinion of which more used by the men in nineteenth century, after the Victorian Revolution, by Queen.

In this regard, sexual ethic restricted too much, wedlock babies were shame in anywhere, their mothers completely being isolated from the society, but the men were considered only “gulty” as always. By Jhon Marx “Such men teach women that desire can be both tasteful and a little bit dirty, while showing other men that tasteful appreciation is not feminizing but rather represents a robust masculinity” (Marx, 2005, p. 147).

On the other hand, all these active and compelling sexual violences were causing a huge scandal in society. Entering into the history of agenda together with capitalism, as Victorian Revolution, it has revealed some important facts in every sense, both men, as well as for the women:

Firstly, with the end of Victorian Revolution, the men were more dependent on their wives in the sense of sexual enjoyment.(it was already not possible to live with the Purtian’s allegations more).At least, it was significantly enough to raise the woman status in society. And so, thereby, there has occurred a serious stage in the liberation of Victorian women and with thus we can say that, it came to the forefront of the women’s solution a little.

On the other side, it has created a desperate situation in a meaningful manner in women’s career and a successful family- both together. If the woman and her role becames in a reality in family, it should be a main requirements to have any economic resources in the family. Bourne insisted that “Nor could women take time to consider their own plight and comprehend how “ squalid” and “neglected” their lives had become” (Bourne, 1955, p. 159). With the revolution, the women for the determination of their own desnity, they wanted to go a way which to put of their own history, at least wanted to be in the hands of these rights. And wanted to take time to their children to teaching domestic skills, did not want to see “ the home became a place to sleep in, to feed in; not a place in which to try to live well” (Verdon, 2002, p. 199).

CONCLUSION

The concept of women and women's rights has gained the great importance especially in the 19th century in Britain. Although, this period, is not completely became a legal redgulation of women’s struggle in itself, on the other hand the female vibration has played a great impulse worthy of its own. But the another reason is the so much spreading of the women ideology during this perod - it was a serious step in the freedom of the Victorian women. However, as to protect the interest in every issues of British people, she also was showing a great interest to the problems of religion, morality and the woman issues. This format was not only the problem for Victoria, if this problem sometimes defined incorrectly in the social life of British society even, the issue of “women's self-rotation” was the main branches of Victoria’s domination in the nineteenth century. The British society has reunite of its real and true definition of women only thanks to Queen Victoria. And she tried have to be in a state of democratic eguality of the Britain as her last breath.

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Perception of University Students on the Influence of Religious Affiliation on Homosexuality Adoption in Universities in Rift Valley Region, Kenya

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ABSTRACT

Homosexuality is a sexual behavior involving sexual attraction to the people of the same-sex. Homosexuality is an unbecoming behavior and unnatural in the African context. The practice is abhorred by many cultures. Homosexuality is prevalent in institutions of higher learning. Perhaps this may be contributed by lack of adequate counseling, mass media, and religion and peer pressure. Therefore, the study aimed at establishing university students' perception on influence of religious affiliation on adoption of homosexuality. The study was carried out among the undergraduate students in Egerton, Moi, Eldoret and Kabianga public universities. Third year undergraduate students were chosen because they had been in the university for long and understood well the factors influencing students to adopt homosexuality. The study adopted a descriptive survey research design. Data collection instruments were questionnaire, an interview schedule and a focus group discussion. The study findings revealed that most of the University students' had a negative perception of homosexuality whose prevalence of adoption was 5.6 %. The findings further revealed that students perceived religious affiliation to have a significant influence on one's tendency to adopt or not to adopt homosexuality. Those who are strongly religious were discouraged from adopting homosexuality while the less religious adopted homosexuality. The study recommends that the university administration ensure that religious institutions are empowered inside the universities to handle homosexuality issues in the universities.

Key Words: Religious Affiliation, Homosexuality, Perception, University Students.

INTRODUCTION

Homosexuality refers to sexual attraction between members of the same sex or gender (Cantor, 2012)**.** The term homosexuality was first coined in the late 19th century by a German psychologist, Karoly Maria Benkert leading to labeling of homosexuals who were defined by their sexuality (Picket, 2011)**.** There is hostile attitude towards same-sex love in most parts of the world. For instance, a report by Human Rights Campaign Foundation and Human Rights First (2014)**,** found out that 37 nations in Africa criminalize same-sex relationships. Such nations include Kenya, Tanzania, Angola, Algeria, Togo, Tunisia and Ethiopia.

A research done by Pew Research Global (2014) found that 88 percent of Kenyans feel that homosexuality is "morally unacceptable". Homosexuality and same-sex marriages have become hot subjects in Africa (Wittgenstein, 2007)**.** Wittgenstein further observes that it has also become an emotional issue to such an extent that some gays have been arrested and beaten up while some heads of state have openly declared gays as of no reason for existence**.** Such heads of state include the President of Uganda Yoweri Museveni who on

February 26th 2014 gave a detailed explanation of why he believes homosexuals should be jailed for life (Harding, 2014). Newcombe (2012) concurs with the above author and asserts that homosexuality issue remains complex and controversial in the African culture.

Homosexuality issue has faced condemnation from visible African leaders from Namibia, Zimbabwe, Uganda and Somalia who are also seeking measures to eliminate it. Newcombe (2012) continues to say that many Africans feel that occurrences of homosexuality in Africa are un-African and stems from Western influence. Studies have been done that support the idea that a person's attitude towards homosexuality is influenced by several factors including religious affiliation, mass media, family, peers, a person's gender and overall contact with homosexual individuals (Raiz, 2006).

A study conducted by Raiz (2006) showed that students who considered themselves to be highly religious were less likely to be supportive of rights for homosexual people. In a survey of 880 heterosexual students on attitudes towards homosexuality at a university in Guateng in South Africa, the study revealed that heterosexual students have negative attitudes towards lesbians and gay men (Pew Research Center, 2013). The study also discovered that gender and religiosity has an influence on attitudes towards lesbians and gay men. This implies that religious affiliation play a role in influencing one's perception to homosexuality.

Universities in Kenya comprise of young people who in most cases may engage in risky sexual behaviors such as homosexuality (The Republic of Kenya, 2010). In Kenya, the topic of homosexuality is a taboo and most of the citizens are against homosexual practices. British Broadcasting Corporation (BBC) (November, 2010) and Africa Review (November 29, 2010) stated that the Kenyan state was extremely intolerant of LGBT (Raiz, 2006). This is illustrated by the Kenyan Prime Minister then Raila Odinga who stated that "men or women found engaging in homosexuality will not be spared and that homosexuals should be arrested and taken to relevant authorities (Newcombe, 2012).

The New Kenyan constitution promulgated on August 27, 2010 Article 45 (2) under the Family section states "Every adult has the right to marry a person of the opposite sex, based on a free consent of the person" (The Republic of Kenya, 2010). This article is interpreted to mean that same-sex marriages (both gay and lesbian) are prohibited in Kenya. Therefore, there is need to establish the perception of university students on influence of religious affiliation on adoption of homosexuality in a country that prohibits the practice. Studies have shown that Men who have Sex with Men (MSM) are vulnerable to Human Immunodeficiency Virus (HIV) infections and experience eating disorders, have highest rates of suicide attempts and are substance abusers compared to heterosexual men (Wakhisi , 2013). Homosexuality is a problem in universities and complaints of existence of homosexuality in universities have been raised. For example, Wakhisi (2013) the People Newspaper reporter points out that Doreen, a 24 year old third year student at a local university in Kenya got involved in lesbianism while in high school in a girls boarding school. On joining university, she continued with the practice as she found lesbianism rampant in university.

LITERATURE REVIEW

Several factors have been found to influence adolescent and young adult sexual attitudes and activity. Research has shown that religiosity and spirituality have an impact on sexual attitudes. College students were surveyed about their views on religion and spirituality as well as their attitudes about sex (Nabwire, 2014). The researchers found that both religiosity and spirituality were related to having less permissiveness attitudes about sex (Beckstead & Morrow, 2004). Baunach (2010) found out that religiosity strongly influences same-sex marriage attitudes in the US. Research has shown that various religious affiliations have categorized homosexuals as "unnatural, ungodly and impure". Such statements forms and encourages people's strong negative attitudes toward homosexuality because of their affiliation to a particular religious group.

Oslon, Cadge and Harrison (2009) observed that active religious involvement, regular exposure to religious literature and frequent interaction with religious friends are likely to encourage anti-homosexual attitudes. Other studies conducted in the United States (US) and Europe has suggested that religious culture of a nation may shape attitudes that people have on homosexuality. A study carried out in Malawi by Malamba (2006) on controversy of homosexuality indicated that the majority of the participants thought that same-sex relationships are not normal and should not be allowed in Malawian society. Those that objected to same-sex relationships gave these reasons; same-sex relationships are against Malawian culture and also against God's will. Sollar and Somda (2011) observed that Africa and other parts of the world have been very hostile to those who practice homosexuality. The respondents of that study felt that homosexuality was against African culture, religion and it is a taboo and does not meet any of their time tested values. Thiroux and Krasemann (2012) observed that those who argue against the morality of homosexuality hold the following views: that it goes against the laws of God, traditional family values and moral laws of nature. This is because the primary purpose of sex is procreation and because homosexuals cannot do this, they are perverting the true meaning of sexuality.

METHODOLOGY

This study employed a descriptive survey research design. Descriptive survey research design is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Thiroux & Krasemann, 2012). The research targeted all student peer counselors, University Counselors and undergraduate university students in Moi, Kabianga, Egerton and Eldoret universities. The four universities had nineteen (19) university counselors, four hundred and eighty (480) peer counselors and 53,000 undergraduate students. The research used stratified sampling to ensure universities are adequately represented. Stratified random sampling provides a more representative cross section of the population (Orodho, 2003). Data was collected using a questionnaire, an interview schedule and a focus group discussion (FGD). The study thus adopted the triangulation technique of data collection. The technique involves collecting data from different sources and checking information collected from different sources for consistency of evidence (Asthana & Bhushan, 2007).

The study employed an interview schedule to gather data from the university counselors. Interviews are recommended because they are more personal, allow more control in the order and flow of questions, have higher response rates and help in studying a phenomenon in depth (Mertens, 2005). Focus Group Discussion

(FGD) was used to capture data from the peer counselors. FGD is a qualitative method that involves unstructured group interviews where the focus group leader actively encourages discussion among participants on the topic of interest (Kerlinger, 2000). The FGD targeted forty (40) university peer counselors, ten (10) from each of the four universities. The three tools (students' questionnaire, interview schedule for university counselors and FGD for peer counselors) were subjected to validation by peers and supervisors. The collected data was screened for errors and cleaned before conducting analysis. The researcher explained the nature and purpose of the study to the participants in order for them to make informed decision on whether to participate in the study or not. Best and Kahn (2006) recommend that a researcher should inform all the participants the purpose of the study. Descombe (2005) suggests that the research participants should be allowed to either participate or withdraw from the study. The respondents were informed that data was to be used for intended research purpose only. Respondents were assured of confidentiality, utmost privacy and anonymity of the information provided.

RESULTS AND DISCUSSION

Students' Perception on Influence of Religious Affiliation on Adoption of Homosexuality

The study sought to establish students' perception on influence of religious affiliation on adoption of homosexuality. Data on perception was gathered using a set of 9 closed ended items in the students' questionnaire. Additional data was captured using the university counselors interview guide and FGD for peer counselor and used to supplement the information provided by the students. The students' responses to the close-ended items are summarized in Table below.

Students' Responses to Statements on Perception on Influence of Religion on Adoption of Homosexuality

	N	Percentage				
Statement		SA	A	N	D	SD
Homosexuality is against my religious teachings	220	80.0	17.7	1.4	0.5	0.5
My religious background does not support the right for homosexual people	222	71.6	24.3	3.2	0.5	0.5
People who engage in homosexuality do not belong to any religion	220	8.2	9.1	28.2	26.4	28.2
I cannot engage in homosexuality as it is against my religious teachings	221	75.1	18.1	4.1	1.4	1.4
Strongly religious people are likely avoid homosexuality as it is considered a sin	220	63.2	24.1	5.5	6.4	0.9
Homosexual desires are against God's intention for human beings	221	73.3	21.7	3.2	0.5	1.4
Since homosexuality cannot lead to procreation, it is a sin against God	219	63.0	26.5	5.9	1.8	2.7
Exposure to religious teachings has made me to have negative attitudes towards homosexuality	220	58.2	26.4	7.3	4.1	4.1
I am a proponent of my religion which supports heterosexual relationships as it is the only way to preservation of mankind	213	60.1	24.4	9.9	2.8	2.8

The results posted in Table above reveal that the respondents agreed on all the items except one. This was on; People who engage in homosexuality do not belong to any religion. The results reveal that on "People who engage in homosexuality do not belong to any religion slightly over a quarter (28.2 %) were neutral and a slightly more than a half (54.4 %) disagreed. Majority of the students agreed that homosexuality is against their religious teachings (97.7 %). These results indicate that the students were of the view that one's religious affiliation influence adoption of homosexuality negatively. Those who are strongly religious tend to oppose homosexual behavior because they consider it a sin and against their religious teachings.

These findings are in agreement with those of other researchers. For instance, Raiz (2006) in their study revealed that students who considered themselves to be highly religious were less likely to be supportive of the right for homosexual people. In their study Sollar and Somda (2007) found out that Ghanaian respondents felt that homosexuality was against African culture and religion and also said it was a taboo. Further, Besen and Zicklin (2007) conducted a study and they observed that the more often the respondent attends church services, the less likely he or she is to approve of gay marriage. A survey by Pew Research Center (2013) found out that there is a strong correlation between a countries religiosity and opinions about homosexuality. The survey also revealed that acceptance of homosexuality is particularly widespread in countries where religion is less central in people's lives.

Further analysis was done to determine whether the students' perceptions were affected by their gender or university. This was accomplished by developing the indices of the perceptions. The means of responses to items were computed and then transformed into perception on the influence of religious affiliation on adoption of homosexuality index as depicted in Table below.

Students' Means on Influence of Religion on Adoption of Homosexuality perception index

Statement	N	Mean	SD
Homosexuality is against my religious teachings	220	4.76	0.54
My religious background does not support the right for homosexual people	222	4.66	0.61
People who engage in homosexuality do not belong to any religion	220	2.43	1.22
I cannot engage in homosexuality as it is against my religious teachings	221	4.64	0.75
Strongly religious people are likely avoid homosexuality as it is considered a sin	220	4.42	0.92
Homosexual desires are against God's intention for human beings	221	4.65	0.69
Since homosexuality cannot lead to procreation, it is a sin against God	219	4.45	0.90
Exposure to religious teachings has made me to have negative attitudes towards homosexuality	220	4.30	1.05
I am a proponent of my religion which supports heterosexual relationships as it is the only way for the preservation of mankind	213	4.36	0.97
Influence of religion on adoption of homosexuality perception index	**225**	**4.20**	**0.65**

The means of the items in Table above ranged from 2.43 (SD = 1.22) to 4.76 (SD = 0.54). Most of the means were above 3.5 meaning that majority of the students agreed with the statement. However there was an items such as “People who engage in homosexuality do not belong to any religion (M = 2.43, SD = 1.22)” which had low mean. This means most of the students disagreed with it. An examination of the SD reveals that they were relatively high ranging from 0.54 to 1.22. This is an indication that there was reasonable variation in the students’ responses to the items.

The overall mean, index (M = 4.20, SD =0.65) was quite high, indicating that the respondents were of the view that religion negatively influence adoption of homosexuality. Those who are strongly religious will not adopt homosexuality. The above findings reinforce a study conducted by Oti-Boadi, Agbakpe and Dziwornu (2013) which revealed that religion significantly influences attitude towards homosexuality. In their study, Christian and Muslim students reported more negative attitudes towards homosexuality than those who belonged to the Traditional African Religion. In another study conducted by Sollar and Somda (2014) in Ghana, the respondents felt that homosexuality was against African culture and religion and also said it was a taboo. According to Jaspers, Lubbers and De Graaf (2011), religious persons are generally more prejudiced against homosexuals than non-religious persons. This is an indication that religious people are expected to be less tolerant towards homosexuality than non-religious people. The respondents in the current study perceived religious affiliation as a factor that influences students not to adopt homosexuality.

Further analysis to find if there are significant perception differences by respondents’ characteristics was done. Differences in perception on religious affiliation on Adoption of homosexuality by gender Levenes test of equality of variance F = .329, p = .567. The results are as indicated in Table below.

T-test Results comparing Perception on influence of Religious Affiliation by Gender

Gender	N	Mean	SD	Df	t-value	p-value
Male	121	4.17	0.62	222	1.138	.256
Female	103	4.26	0.58			

The results in Table above indicate that the females had higher scores (M = 4.26, SD = 0.58) than those of the males (M = 5.17, SD = 0.62). The difference between the two means was however not statistically significant t (222) = 1.138, p > .05. This is an indication that the perceptions of the male and female students were comparable. The perception means and the results of the ANOVA test are contained in the two Tables below respectively.

Means Scores and Standard Deviations of Perception on Influence of Religious Affiliation

University	N	Mean	SD
Moi	68	4.27	0.52
Eldoret	64	4.04	0.88
Egerton	73	4.22	0.50
Kabianga	20	4.35	0.65

The results in Table above reveal that the mean scores ranged from 4.04 (SD = 0.88) to 4.35 (SD= 0.65) with Kabianga University attaining the highest and Eldoret University having the lowest. The overall mean score (M = 4.20, SD = 0.65) of the four universities was considered above average given that it was out of a maximum of 5. It was not possible to establish by inspection whether the differences among the means were significantly different. This was established using the ANOVA test. The test results are summarized in Table below.

Comparison of Students Mean Scores on Perception on Influence of Religious Affiliation by University

Scale	Sum of Squares	Df	Mean Square	F-ratio	p-value
Between Groups	2.481	3	.827	1.982	.118
Within Groups	92.23	221	.417		
Total	94.711	224			

The one way analysis of variance in Table above show that the difference among the mean scores of the four universities were not statistically significant, F (3, 221) = 1.982, p > .05. This means that that the students' perception on influence of religious affiliation on adoption of homosexuality among the universities was comparable. The results however do not reveal where the difference are, given that 4 groups were involved in the comparison. This was achieved by conducting further analysis using the Scheffe pairwise test. The results are posted in Table below.

Scheffe Pairwise multiple comparison on Perception on Influence of Religious Affiliation among University

Pairs	Mean difference	SE	p-value
Moi vs Eldoret	0.23	0.11	0.241
Moi vs Egerton	0.05	0.11	0.977
Moi vs Kabianga	-0.08	0.16	0.971
Eldoret vs Egerton	0.23	0.11	0.241
Egerton vs Kabianga	-0.13	0.16	0.890
Kabianga vs Eldoret	0.31	0.17	0.317

The Post hoc analyses using the Scheffé procedure revealed that there were no pairs that were statistically significant; Moi vs. Eldoret (p > .05), Moi vs. Egerton, Moi vs. Kabianga, Eldoret vs. Egerton (p > .05), Egerton vs. Kabianga (p > .05), Kabianga vs. Eldoret (p > .05). After conducting the comparisons, the responses on perceptions were categorized as either negative or positive on the basis of the indices. Indices between 1.00 and 3.00 were considered as negative while any index above 3.0 was considered as a positive perception. The summary of the students' perception on influence of religious affiliation on adoption of homosexuality is given in Table below.

Perception on Influence of Religious Affiliation on Adoption of Homosexuality

Perception n = 224	Frequency	Percentage
Positive	215	96
Negative	9	4

The table above shows that nearly all (96 %) the students were of the view that religious affiliation positively influences their perception on adoption of homosexuality. Those who are strongly religious will not adopt homosexuality. The findings are congruent with Arndt and deBruin (2007) who found out in their study of a sample population of eight hundred and eighty university students of South Africa that the deeply religious groups held the most negative attitudes towards homosexuality followed by the moderately religious group and the non-religious group. The results do not support the third hypothesis which stated that there is no statistically significant relationship between students' perception on influence of religious affiliation and adoption of homosexuality. The hypothesis was rejected on the basis of these results.

To get more information, qualitative data from students open ended questions was analyzed. As shown in Table below, the students gave reasons why religious affiliation has an influence on adoption of homosexuality.

Students' reasons why religious affiliation has an influence on adoption of homosexuality

Reason n = 224	Frequency	Percentage
Influences		
Religion creates awareness/provides knowledge (homosexuality is a sin, ungodly, evil, sex is for procreation, unnatural, immoral, unacceptable)	85	37.9
Religion affects ones belief /behavior (be a true believer, live by the faith)	40	17.9
Religious teachings discourage homosexuality (condemns it, promotes heterosexuality)	38	17.0
Do not influence		
God tells us to love all (sinners, murderers, homosexuals)	7	3.1
Driven by beliefs, consciousness and values	13	5.8
The church hardly talks about homosexuality	4	1.8

The results posted in Table above indicate that 37.9 % were of the opinion that religion creates awareness that homosexuality is a sin, ungodly, evil, unnatural, immoral, and unacceptable and that sex is for procreation. 17.9 % said that religion affects ones belief while 17 % said that religious teachings discourage homosexuality as they condemns and promotes heterosexuality. The findings were consistent with previous study that asserted that homosexuality is a sin (Brittain & Mckinnon, 2011).

The findings also concurred with previous studies that postulated that active religious involvement, regular exposure to religious literature and frequent interaction with religious friends are likely to encourage anti-homosexual attitudes (Oslon, Cadge & Harrison, 2006). Furthermore, Mtemeri (2015) did a research with the purpose of establishing the attitudes and perceptions of university students in Zimbabwe towards homosexuality and found that most of the respondents felt that homosexuality was against Christian values. This is an indication that religious affiliation discourages adoption of homosexuality. Of the respondents who were of the opinion that religious affiliation encourages adoption of homosexuality, 5.8 % said that they are driven by beliefs, consciousness and values, 3.1 % said that God tells us to love all including homosexuals while a small number (1.8 %) said that the church hardly talks about homosexuality.

Interview and FGDs on Adoption of Homosexuality

Interviews and discussions were held to find out the university and peer counselors views about students' perception on the influence of religious affiliation on adoption of homosexuality. Studies have shown that religion and spirituality were related to people's sexual attitudes and practices (Mtemeri, 2015). Most (75 %) of the counselors stated that religion discourages homosexuality through its teachings and religious groups. These groups mostly target the young and focus on encouraging healthy relationship with members of the opposite sex among other activities. They pointed out that the religious background of a student influences his/her sexual orientation. Those who live by the faith do not adopt homosexuality as it is considered as a sin. One of the counselors had a contrary opinion that religion only condemn homosexuality but do not give reasons why it is wrong. In addition, religion does not offer solutions to the vice. And because of this its influence is positive but weak. A study conducted by Oti-Boadi *et al*., (2009) revealed that religion significantly influences attitude towards homosexuality. In their study, Christian and Muslim students reported more negative attitudes towards homosexuality than those who belonged to the Traditional African Religion.

Majority of the peer counselors considered homosexuality a sin as it is wrong before God. And because of this, all religions; Christian and Muslim teach believers not to adopt homosexuality but to embrace heterosexuality. This is consistent with studies by Lubbers, Jaspers and Ultee (2014) who observed that many religious have negativity towards homosexuality. The above findings reinforce a survey conducted by Pew Research Center (2013) which revealed that homosexuality is rejected in Africa and predominantly Muslim countries. Information gathered from the peer counselors indicated that majority (74.3 %) were of the view that a student's religious background had a significant negative effect on his/her tendency to adopt homosexuality. About a quarter (25.7 %) of the peer counselors were of the view that religious affiliation was ineffective in discouraging one not to adopt homosexuality because some of the church leaders practice homosexuality and are its proponents.

SUMMARY, CONCLUSION, RECOMMENDATION

The findings show that majority of the peer counselors were of the view that students' religious background had a significant negative effect on one's tendency to adopt homosexuality. The strongly religious avoided homosexuality as it is considered a sin. The respondents perceived religious affiliation of a person to discourage adoption of homosexuality through its teachings that heterosexual relationships is the only way of preserving mankind. Thus, they perceived one's religious affiliation as a factor that discourages adoption of homosexuality. The study recommends that there is need for religious leaders not only to condemn the vice but also sensitize the youth in their congregation on the effects of homosexuality, the factors influencing its adoption and how to avoid getting engaged in the vice. Thus, the religious leaders should be well trained and equipped on issues of homosexuality. Additionally, the church should have a forum with the young people to discuss openly on the reasons why homosexuality is wrong.

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Motivational Needs among College Students: An Assessment Using Thematic Apperception Test (TAT)

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Abstract

This study aimed to assess the motivational needsof selected students of Jubail University College – Male Branch students using Thematic Apperception Test (TAT). The respondents of the study were the sixty (60) students enrolled in 'Industrial Psychology' class for the second semester of school year 2015-2016.

Descriptive method of research was utilized in this study. With the use of a Thematic Apperception Test (TAT) as data gathering tools, this study identified the predominant needs of the respondents and types of job suited for them.

45 respondents wrote more about achievement-related themes; 32 wrote more on affiliation-related themes; and 28 focus their story on power-related theme. This is an indication that need for achievement is the predominant needs among the respondents. Individuals with high need for achievement are those who love the challenges of work, motivated by the desire to get ahead of job, and outstanding work performers.

Keywords:

Motivational Needs, Thematic Apperception Test, Theory of Motivation, Work Motivation, Motivational Theory, Industrial Psychology

1. RATIONALE AND BACKGROUND OF THE STUDY

Need is something that a person must have. Something that is needed in order to live or succeed or be happy. Need is a motivating force that compels action for its satisfaction. The need theories emphasize that satisfaction of basic human needs are key to motivation.

According to one definition (Steers & Porter, 1991), motivation is a force that serves three functions: it energizes, or cause people to act; it directs behavior toward attainment of specific goals; and it sustains the effort expended in reaching those goals.

Work motivation is a set of energetic force that originate both within as well as beyond an individual's being, to initiate work-related behavior, and to determine its form, direction, intensity, and duration. Understanding what motivates an organization's employees is central to the study of I–O psychology. Motivation is a person's internal disposition to be concerned with and approach positive incentives and avoid negative incentives. To further this, an incentive is the anticipated reward or aversive event available in the environment. While motivation can often be used as a tool to help predict behavior, it varies greatly among individuals and must often be combined with ability and environmental factors to actually influence behavior and performance. David' McClelland's achievement motivation theory is a comprehensive need theory of motivation that deals specifically with work motivation. This theory states that three needs are central to work motivation: the needs for achievement, power, and affiliation. According to McClelland, people are motivated by different patterns of needs or motives.

Need for achievement is the compelling drive to succeed and to get the job done. Individuals with a very high need for achievement are those who love the challenge of work. They are motivated by a desire to get ahead in the job, to solve problems, and to be outstanding work performers. Need for achievement is also associated with being task oriented, preferring situations offering moderate level of risk or difficulty, and desiring feedback about goal attainment.

Need for power is the need to direct and control the activities of others and to be influential. Individuals with a high need for power are status oriented and are more motivated by the chance to gain influence and prestige than to solve particular problems personally or reach performance goals.

Need for affiliation is the desire to be liked and accepted by others. Individuals motivated by affiliation needs strive for friendship. They greatly concerned with interpersonal relationship on the job and prefer working with others on a task. They are motivated by cooperative rather than competitive work situations.

According to McClelland, each individuals possess more or less of each of these motives, although in each individuals a particular need or needs tends to predominate. (Riggio, 2013)

The Thematic Apperception Test (TAT) is a projective test of personality. Christiana Morgan and Henry Murray created the test in the 1930s at the Harvard Psychological Clinic. (Douglas, 1993).

McClelland used the TAT as a tool to measure the individual needs of different people. The TAT is a test of imagination that presents the subject with a series of ambiguous pictures, and the subject is asked to develop a spontaneous story for each picture. The assumption is that subject will project his or her own needs into story. Psychologists have developed fairly reliable scoring techniques for the TAT. The test determines the individuals score for each needs of achievement, affiliation, and power. This score can be used to suggest the types of job for with the person might be well suited.

The TAT is often used in individual assessments of candidates for employment in fields requiring a high degree of skill in dealing with other people and/or ability to cope with high levels of psychological stress— such as law enforcement, military leadership positions, religious ministry, education, diplomatic service, etc.

‘Saudization’, officially known as Saudi nationalization scheme, or Nitaqat system in Arabic, is the newest policy of the Kingdom of Saudi Arabia implemented by its Ministry of Labor, whereby Saudi companies and enterprises are required to fill up their workforce with Saudi nationals up to certain levels. It calls for an increase in the share of Saudi manpower to total employment and for expanding work opportunities for Saudi women and youth. June 11, 2011. From this date, all Saudi companies, estimated to number around 300,000, are required to ‘nationalize’ or fill up their workforce with Saudis or speed up their hiring of Saudis. (http://www.dole.gov.ph/fndr/bong/files/Question%20and%20Answer%20on%20Saudization%20Policy.pdf)

The Ministry of Labor spares no effort in supporting and strengthening the Saudization process and pushing it forward while implementing the directives of Custodian of the Two Holy Mosques King Abdullah. The “Nitaqat” program has so far been able to help 400,000 Saudi citizens get jobs.(http://www.arabnews.com/fakeih-no-going-back-saudization)

Universities and colleges are considered as the training ground for the future leaders of the country. It is where youngsters were being developed to be a professionals and leaders someday in different fields.

Jubail University College, an affiliate of the Royal Commission for Jubail & Yanbu, was established in 2006 to achieve the objectives of the Royal Commission, in developing human resources and to provide the Saudi manpower with high education and training, so that they can properly manage the Kingdom`s growing economy in its various sectors. Jubail University College`s mission is to achieve the following objectives: (a) to contribute to the stability of the local community in Jubail Industrial City and to attract qualified Saudi nationals to work in and manage the city projects; (b)to provide well-trained and qualified Saudi manpower to meet the requirements of industrial development projects and investment in Jubail Industrial City; and (c) to achieve a distinctive level of performance in the applied academic field to prepare professionals who can keep pace with and utilize global technological developments. (www.ucj.edu.sa)

The above-cited thoughts stimulated the researcher to assess the motivational needs among selected Jubail University College – Male Branch students in order to find out their predominated needs and identify types of jobs that could be suited for them.

1.1 Theoretical Framework

In this study, McClelland’s achievement motivation theory was adopted used to assess the motivational needs among Jubail University College – Male Branch students. McClelland’s model of motivation emphasizes the importance of three needs – achievement, power, and affiliation – in determining worker motivation. To assess an individual’s motivational needs, McClelland used variation of the Thematic Apperception Test (TAT). Respondents are instructed to study a fairly ambiguous picture for a few minutes and then write a story it suggest. The brief stories are then scored using a standardized procedure that measure the presence of the three needs to obtain a motivational profile for each respondent. The TAT is known as a projective test; that is, respondents project their inner motivational needs into the content of the story they create.

Utilizing the TAT for the respondents will be able to reveal their predominant needs – achievement, power, and affiliation – thus identifying also the suited types of job for them.

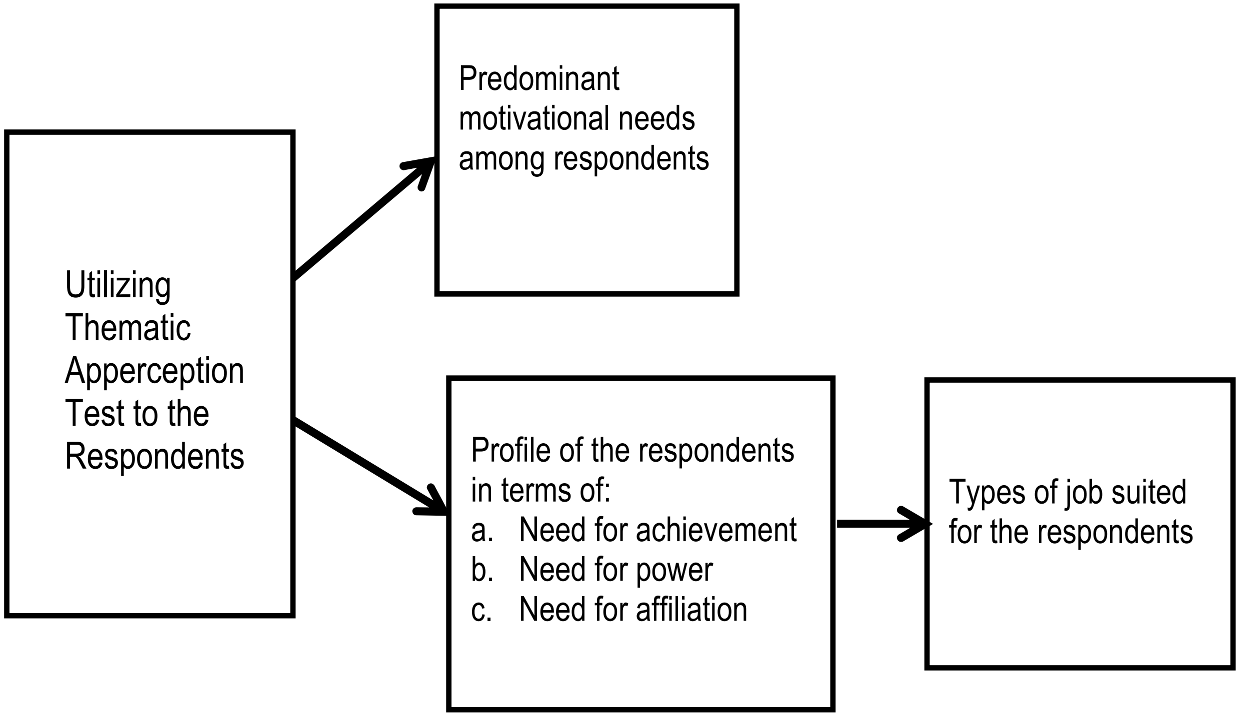

Figure 1.1: Paradigm of the Study

1.2 Statement of the Problem

This study aimed to assess the motivational needs among Jubail University College – Male Branch students during the school year 2015-2016 adopting McClelland's Achievement Motivation Theory using Thematic Apperception Test (TAT). Specifically, it sought to answer the following:

1. What predominant needs could be revealed among the respondents using TAT?
2. What isthe profile of respondents in terms of:
    a. need for achievement;
    b. need for power;
    c. need for affiliation?
3. Based on the findings, what types of jobs could be suited among the respondents?

1.3 Assumptions

1. The TAT will be able to identify the predominant needs of the respondents and their profile in terms of these needs.
2. Based on findings, suitable jobs among respondents could also be identified.

1.4 Scope and Delimitation

The study was conducted to assess the motivational needs style among Jubail University College – Male Branch students adopting McClelland's Achievement Motivation Theory using Thematic Apperception Test (TAT).

This study is limited to students enrolled in ‘Industrial Psychology’ classfor the second semester of school year 2015-2016. During the said semester of the school year, 60 students with different program of specializations participated in the study. These students were the respondents of this study.

1.5 Significance of the Study

Assessment of the motivational needs of Jubail University College – Male Branch students would identify their predominant needs that will be helpful to determine the suited job for them. Consequently, the study will serve as a reference or Jubail University College and other institutions.

Result of this study will benefit the following:

Jubail University College. The result of the assessment of the motivational needs of respondents will create awareness about students’ profile that be the basis to create an effective training program or job fair. Based on the result, Jubail University College, could invite companies that offer jobs that will cater on the profile of the students.

Other Universities and Colleges in the Kingdom of Saudi Arabia. The result of the study can be their model to develop or adopt effective training program for the students and other professionals as well.

Respondents. They will be aware of their motivational needs and job suited their personality.

The researcher. This study will give the researcher an opportunity to explore and gain new knowledge.

Other researchers. The present study can be utilized for future study and can serve as reference.

2. METHODOLOGY

This part presents the methodology used. Discussed here are research design, the sources of data that includes the locale of the study and research population, instrumentation and the data collection, and tools used for data analysis.

2.1 Research Design

This study used descriptive method of research in its assessment of the motivational needs among Jubail University College – Male Branch students. With the use of a Thematic Apperception Test (TAT) as data gathering tools, this study will identify the predominant needs of the respondents and types of job suited for them.

2.2 Sources of Data

The researcher adopted McClelland’s Achievement Motivation Theory using Thematic Apperception Test (TAT) to assess the motivational needs of the respondents.The respondents of the study were the sixty (60) students enrolled in ‘Industrial Psychology’ class for the second semester of school year 2015-2016. During the said semester of the school year, 60 students with different program of specializations participated in the study. (Refer to Table 2.1 - Distribution of Respondents)

Table 2.1
Distribution of Respondents

Program of Specialization	Total Number of Students	No. of Respondents	Percentage
Business Administration	11	8	72%
Management Information System	15	10	66%
Civil Engineering	20	15	75%
Mechanical Engineering	22	15	75%
Computer Science	12	12	100%
Total	**80**	**60**	**75%**

2.3 Instrumentation and Data Collection

To answer sub-problem 1 and 2, McClelland's Achievement Motivation Theory using Thematic Apperception Test (TAT) was adopted to identify the predominant motivational needs of the respondents; andtheir need profile in terms of achievement, power and affiliation.

Sub-problem 3 used the data analysis to interpret and analyzed the data gathered from the respondents.

2.4 Tools for Data Analysis

The data that were gathered were collected, tallied and tabulated. These data were presented in tabular forms were analyzed, and interpreted for the readers to understand better the results obtained.

To answer the first sub-problem, meanwas utilized. Mean is more commonly called the average.

To answer the second sub-problem, mode, percentile and Friedman test were utilized. Mode is the most frequently occurring value in a frequency distribution. A percentile (or a centile) is a measure used in statistics indicating the value below which a given percentage of observations in a group of observations fall. Friedman test is a nonparametric test that compares three or more paired groups.

To answer the third sub-problem, findings from sub-problem 1 and sub-problem 2 were interpreted and analyzed.

3. PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This part presents the data gathered, the analysis and their interpretation relative to the different problems raised in this study.

3.1 Predominant needs revealed among the respondents using Thematic Apperception Test (TAT):

Table 3.1 shows the summary of TAT results. To reveal the motivational needs among the 60 respondents, the researcher utilized the TAT to the respondents. (Refer to Appendix A).

Thematic Apperception Test (TAT) is designed to give information about both language and personality assessment. Respondents were asked to write a story regarding the picture. There should be beginning, middle, and ending of the story. The purpose is to see how the respondents reveal parts of their own personalities while looking at the picture. The words that they used were analyzed using the LIWC (Linguistic Inquiry and Word Count) program developed at the University of Texas and University of Auckland in New Zealand.

TAT was originally designed to determine the degree to which people wrote about themes relating to achievement, affiliation, and power. Although there are series of different TAT pictures, the one that was used in this study is somewhat related to each of these themes – although most of the respondents made up the story with achievement themes, such as the story focused on scientific discovery – reflecting the writer's interest in achievement and success; others focused on the nature of the friendship between the two women - interest in affiliation; yet others focused on the status differences of the two women - reflecting the writer's concerns with status and power.

In the need for achievement, the typical person generally scores between 4.5 and 8.5, with an average of 5.7. The higher the score of the respondent, the more he wrote about achievement-related themes.

Because the picture used typically elicits themes associated with achievement, most people don't pay too much attention on human relationship (affiliation) in their story. In fact, the typical person scores around 1.2 on this dimension.

In the need for power, most people score between 0.8 and 2.7, with the average being 1.7. High scores on the need of power dimension hint that the writer is concerned with who is or is not in control and who has the most status.

The table shows that the average of the followings needs: need for achievement = 7.7; needs for affiliation = 1.9; and need for power = 1.7. In comparison to the average marks for typical persons, respondents' score in need for achievement is higher. Need for affiliation of respondents is also higher than the average of typical persons. Also, average of need for power of respondents is also higher compared to most people.

Table 3.1
Summary of Thematic Apperception Test Results

Respondents	McClelland's Achievement Theory		
	Need for Achievement	Need for Affiliation	Need for Power
1	10.8	2.02	1.61
2	9.15	4.27	1.22
3	16.67	0	1.39
4	4.55	0.65	2.6
5	9.09	3.41	1.14
6	8.76	0.73	2.19
7	8.85	4.42	0
8	9.3	0	0
9	11.11	1.23	0
10	11.68	1.46	0.73
11	4.95	2.2	1.1
12	7.22	1.67	3.33

13	6.45	5.91	0
14	4.31	0.96	0
15	8.66	1.18	1.18
16	21.33	0	0
17	8.7	2.61	1.74
18	9.28	7.22	2.06
19	5.37	1.34	0.67
20	8.73	3.17	0.79
21	13	3	1
22	2.2	1.1	3.3
23	8.84	3.87	0.55
24	3.54	3.54	2.65
25	7.18	1.44	0
26	8.57	1.14	0.57
27	5.84	5.11	2.92
28	8.29	0.49	1.49
29	11.35	0.54	0.54
30	6.6	0.94	2.83
31	4.83	2.9	0.48
32	7.08	0.88	3.54
33	6.25	1.79	2.68
34	9.35	1.44	1.44
35	7.41	0	1.85
36	8.7	5.22	3.48
37	6.67	0.67	2
38	12.1	0.81	4.03
39	9.2	1.15	5.75
40	9.28	1.03	5.15
41	6.18	1.12	3.37
42	8.74	0	2.91
43	9.35	0	0
44	7.24	1.32	0.66
45	2.48	1.65	4.13
46	6.01	0.35	1.77
47	5.26	4.21	1.05
48	7.78	3.59	0.6
49	5.08	0	1.69
50	10.07	0.72	2.88
51	3.68	5.88	2.21
52	3.95	1.58	0.79
53	8.29	1.84	0.92
54	2.15	0	3.23

55	8.33	3.21	1.28
56	6	1.2	2
57	5.08	1.69	2.54
58	0.79	0.79	2.38
59	9.8	0.68	0.68
60	5.88	0.53	0.53
Average	**7.7**	**1.9**	**1.7**

3.2 Profile of respondents in terms of the following variables:

a. Need for achievement

Table 3.2 summarized the profile of respondents in terms of need for achievement. Out of 60 respondents, 45 of them or 75% scored 5.7 up in the need for achievement. This means that these 45 respondents wrote more about achievement-related themes. This is an indication that their need for achievement is higher.

Table 3.2
Need for Achievement Profile of the Respondents

Respondents	McClelland's Achievement Theory		
	Need for Achievement	Need for Affiliation	Need for power
1	**5.84**	5.11	2.92
2	**5.88**	0.53	0.53
3	**6**	1.2	2
4	**6.01**	0.35	1.77
5	**6.18**	1.12	3.37
6	**6.25**	1.79	2.68
7	**6.45**	5.91	0
8	**6.6**	0.94	2.83
9	**6.67**	0.67	2
10	**7.08**	0.88	3.54
11	**7.18**	1.44	0
12	**7.22**	1.67	3.33
13	**7.24**	1.32	0.66
14	**7.41**	0	1.85
15	**7.78**	3.59	0.6
16	**8.29**	0.49	1.49
17	**8.29**	1.84	0.92
18	**8.33**	3.21	1.28
19	**8.57**	1.14	0.57
20	**8.66**	1.18	1.18
21	**8.7**	2.61	1.74

22	**8.7**	5.22	3.48
23	**8.73**	3.17	0.79
24	**8.74**	0	2.91
25	**8.76**	0.73	2.19
26	**8.84**	3.87	0.55
27	**8.85**	4.42	0
28	**9.09**	3.41	1.14
29	**9.15**	4.27	1.22
30	**9.2**	1.15	5.75
31	**9.28**	7.22	2.06
32	**9.28**	1.03	5.15
33	**9.3**	0	0
34	**9.35**	1.44	1.44
35	**9.35**	0	0
36	**9.8**	0.68	0.68
37	**10.07**	0.72	2.88
38	**10.8**	2.02	1.61
39	**11.11**	1.23	0
40	**11.35**	0.54	0.54
41	**11.68**	1.46	0.73
42	**12.1**	0.81	4.03
43	**13**	3	1
44	**16.67**	0	1.39
45	**21.33**	0	0

b. Need for affiliation

Table 3.3 summarized the profile of respondents in terms of need for affiliation. Out of 60 respondents, 32 of them or 53% scored 1.2 up in the need for affiliation. This means that these 32 respondents wrote more about affiliation-related themes. This is an indication that their need for affiliation is higher.

Table 3.3
Need for Affiliation Profile of the Respondents

Respondents	McClelland's Achievement Theory		
	Need for Achievement	Need for Affiliation	Need for Power
1	6	**1.2**	2
2	11.11	**1.23**	0
3	7.24	**1.32**	0.66
4	5.37	**1.34**	0.67
5	7.18	**1.44**	0
6	9.35	**1.44**	1.44

7	11.68	**1.46**	0.73
8	3.95	**1.58**	0.79
9	2.48	**1.65**	4.13
10	7.22	**1.67**	3.33
11	5.08	**1.69**	2.54
12	6.25	**1.79**	2.68
13	8.29	**1.84**	0.92
14	10.8	**2.02**	1.61
15	4.95	**2.2**	1.1
16	8.7	**2.61**	1.74
17	4.83	**2.9**	0.48
18	13	**3**	1
19	8.73	**3.17**	0.79
20	8.33	**3.21**	1.28
21	9.09	**3.41**	1.14
22	3.54	**3.54**	2.65
23	7.78	**3.59**	0.6
24	8.84	**3.87**	0.55
25	5.26	**4.21**	1.05
26	9.15	**4.27**	1.22
27	8.85	**4.42**	0
28	5.84	**5.11**	2.92
29	8.7	**5.22**	3.48
30	3.68	**5.88**	2.21
31	6.45	**5.91**	0
32	9.28	**7.22**	2.06

c. Need for power

Table 3.4 summarized the profile of respondents in terms of need for power. Out of 60 respondents, 28 of them or 47% scored 1.7 up in the need for power. This means that these 28 respondents wrote more about power-related themes. This is an indication that their need for power is higher.

Table 3.4
Need for Power Profile of the Respondents

Respondents	McClelland's Achievement Theory		
	Need for Achievement	Need for Affiliation	Need for Power
1	5.08	0	**1.69**
2	8.7	2.61	**1.74**
3	6.01	0.35	**1.77**

4	7.41	0	**1.85**
5	6.67	0.67	**2**
6	6	1.2	**2**
7	9.28	7.22	**2.06**
8	8.76	0.73	**2.19**
9	3.68	5.88	**2.21**
10	0.79	0.79	**2.38**
11	5.08	1.69	**2.54**
12	4.55	0.65	**2.6**
13	3.54	3.54	**2.65**
14	6.25	1.79	**2.68**
15	6.6	0.94	**2.83**
16	10.07	0.72	**2.88**
17	8.74	0	**2.91**
18	5.84	5.11	**2.92**
19	2.15	0	**3.23**
20	2.2	1.1	**3.3**
21	7.22	1.67	**3.33**
22	6.18	1.12	**3.37**
23	8.7	5.22	**3.48**
24	7.08	0.88	**3.54**
25	12.1	0.81	**4.03**
26	2.48	1.65	**4.13**
27	9.28	1.03	**5.15**
28	9.2	1.15	**5.75**

3.3 Types of jobs could be suited among the respondents

Table 3.5 summarized the work motivational needs of respondents based on how they wrote a story using the TAT (refer to appendix A). 45 respondents wrote more about achievement-related themes; 32 wrote more on affiliation-related themes; and 28 focus their story on power-related theme. This is an indication that need for achievement is the predominant needs among the respondents.

Respondents with a very high need for achievement are those who love the challenge of work. They are motivated by a desire to get ahead in the job, to solve problems, and to be outstanding work performers. Individuals with high need for achievement is also associated with being task oriented, preferring situations offering moderate level of risk or difficulty, and desiring feedback about goal attainment.

Respondents motivated by affiliation needs strive for friendship. They greatly concerned with interpersonal relationship on the job and prefer working with others on a task. They are motivated by cooperative rather than competitive work situations.

Respondents with a high need for power are status oriented and are more motivated by the chance to gain influence and prestige than to solve particular problems personally or reach performance goals. Individuals with higher need for power tend to occupy supervisory or managerial positions.

Table 3.5
Summary of Work Motivational Needs of Respondents

Work Motivational Needs	No. of Respondents that wrote on each motivational need related themes	Percentage
Need for Achievement	45	75%
Need for Affiliation	32	53%
Need for Power	28	47%

4 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This part presents the summary of the study, the conclusions drawn and recommendations offered based on the findings and conclusions made.

4.1 Summary

This study aimed to assess the motivational needs among Jubail University College – Male Branch students during the school year 2015-2016 adopting McClelland's Achievement Motivation Theory using Thematic Apperception Test (TAT). Specifically, it sought to find out the following: predominant needs that could be revealed among the respondents using TAT; the profile of respondents in terms of need for achievement, need for affiliation, and need for power; and types of jobs that could be suited among the respondents.

This study was limited to students enrolled in 'Industrial Psychology' class for the second semester of school year 2015-2016. 60 students with different program of specializations participated in the study.

Descriptive method of research was utilized in this study. With the use of a Thematic Apperception Test (TAT) as data gathering tools, this study identified the predominant needs of the respondents and types of job suited for them.

4.2 Findings:

45 respondents wrote more about achievement-related themes; 32 wrote more on affiliation-related themes; and 28 focus their story on power-related theme. This is an indication that need for achievement is the predominant needs among the respondents.

4.3 Conclusions

Based on the findings made, the followings conclusions were drawn:

1. Need for achievement is the predominant need among respondents. It can be concluded majority of the respondents need love the challenge of work and motivated by it. They are task oriented, preferring situations offering moderate level of risk or difficulty, and desiring feedback about goal attainment.
2. Need for affiliation is the second predominant need among respondents. It can be concluded that these respondents who wrote more on affiliation related-themes are greatly concerned with interpersonal

relationship on the job and prefer working with others on a task. They are motivated by cooperative rather than competitive work situations.

3. Need for power is the least dominant among respondents. It can be determined that respondents with a high need for power are status oriented and are more motivated by the chance to gain influence and prestige than to solve particular problems personally.

4.5 Recommendations

Based on the findings and conclusions drawn, the following recommendations are hereby offered:

1. A further study is recommended to determine the validity of this study.
2. Jubail University College, particularly the student admission will design a screening tools to be able to identify the proper program to be enrolled by the students based on their interest and qualification.
3. Based on the result, Jubail University College, could invite companies that offer jobs that will cater on the profiles of the students on their yearly job fair.

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6. APPENDICES

6.1 Appendix A

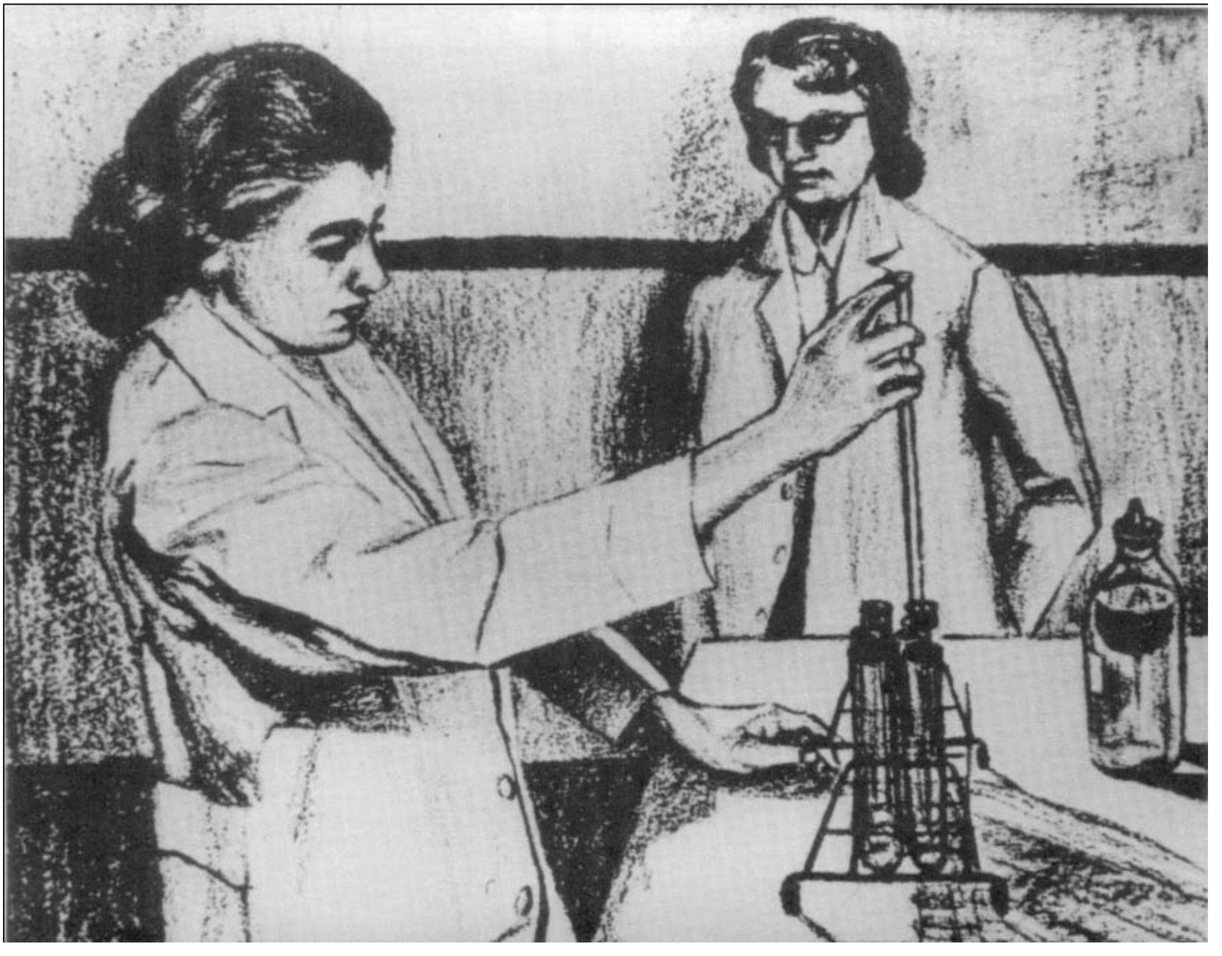
Thematic Apperception Test

What Do You See in the Picture?

Before beginning, please provide the following information:

Are you: ___ Male or ____Female

Date of birth: _______________



Look at the picture. Your task is to write a complete story about the picture you see above. This should be an imaginative story with a beginning, middle, and an end. Try to portray who the people might be, what they are feeling, thinking, and wishing. Try to tell what led to the situation depicted in the picture and how everything will turn out in the end.

*source: http://www.utpsyc.org/TATIntro

6.2 Appendix B

Thematic Apperception Test (TAT) Interpretation

Need for Achievement. The typical person generally scores between 4.5 and 8.5, with an average of 5.7. The higher your number, the more you wrote about achievement-related themes.

Need for Affiliation. Because this picture typically elicits themes associated with achievement, most people don't pay too much attention to human relationships in their story. In fact, the typical person scores around 1.2 on this dimension. Indeed, 30% of participants score 0.00.

Need for Power. Most people score between 0.8 and 2.7, with the average being 1.7. High scores on the need for power dimension hint that the writer is concerned with who is or is not in control andwho has the most status.
One thing that is interesting about this kind of exercise is that language analyses can tell us many things about the writer that go far beyond power, achievement, and affiliation. Look at the table below. In it, you can determine some features of your own writing and can get a sense of your writing style compared with others:

Self-references: People who use a high rate of self-references tend to be more insecure, nervous, and possibly depressed. They also tend to be more honest.

Social words: Social words are words that make reference to other people (e.g., they, she, us, talk, friends). Generally, people who use a high level of social words are more outgoing and more socially connected with others.

Positive emotion words: The more that people use positive emotion words (e.g. happy, love, good), the more optimistic they tend to be. If you feel good about yourself, you are more likely to see the world in a positive way.

Negative emotion words: Use of negative emotion words (e.g., sad, kill, afraid) is weakly linked to people's ratings of anxiety or even neurotic. People who have had a bad day are more likely to see the world through negatively-tinted glasses.

Big words (words with more than 6 letters): Use of big words is weakly related to higher grades and standardized test scores. People who use a high rate of big words also tend to be less emotional and oftentimes psychologically distant or detached.

The Big Picture: The above interpretations should be considered with a grain of salt for your own writing. Your approach to the assignment may have been influenced by people bothering you, concerns about other things in your life, lack of sleep, etc. In addition, it is important to remember that the TAT is generally administered in a highly controlled situation and is always graded by a real-live human being. You will recall from the book that the TAT was devised to tap people's needs for achievement, power, and affiliation. Look at your own writings and see if you can pick up if you were in high in these motives. For example, if you said that one person was thinking about her future career, a TAT expert would probably say that you were higher in a need for achievement than if you said that the person was thinking about her lover (which would hint that you were higher in need for affiliation).

*source: http://www.utpsyc.org/TATIntro

COMMUNITY KNOWLEDGES AND PERCEPTION RATINGS OF ENVIRONMENTAL DETERMINANTS OF THE INCIDENCES OF OCCURANCES OF UNSTABLE MALARIA IN KERICHO COUNTY, KENYA

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Abstract

This study was conducted in Kericho county to represent malaria epidemic prone highlands in western Kenya highlands where incidences of unstable(epidemic) malaria burdens have reemerged and on increasing trend and assuming seasonal patterns of occurrences yearly since 1940s and a leading health burden in Kenya in the 21st century. The purpose of the study was to assess communities' knowledges of the disease and their perception ratings of the listed 39 environmental determinants in questionnaire administered to a sample of 300 household heads purposively chosen from Central Bureau of Statistics estimated at 98678 households in 1999.The respondents were asked to provide information regarding their knowledges of malaria and their perception ratings of significant environmental determinants attributable to the reemergence of occurrences of malaria burdens in their communities.Information obtained was analyzed using Factor Analysis(FA).Majority (75%) of respondents rated malaria as a serious problem in their communities and their knowledges of the disease was based on their own experiences at their household levels and they obtained the information about the disease from radio as the main media. FA classified and ranked in order environmental variables into 3 groups of factors (i) poor accessibility, unaffordability and incorrect use of anti-malarial drugs(ii) social-cultural and household behavioural patterns and(iii) rapid population growth and low Government's role in management and control of malaria, these accounting for 21.192%,14.083% and 2.924% respectively of the variance in the 39 variables attributable to occurrences of malaria, the first factor accounting for 89% of the variance of all variables. This suggests that malaria knowledges and awareness, subsidy of malaria medication cost by Local and Central Governments, improvements of accessibility to low costs health facilities should be stepped up in the county so that Kenya Government Vision 2030 and beyond Millinium Development Goals can be realized .

Key words: Community knowledges, Perception Ratings, Environmental Determinants, Unstable Malaria, Burdens, County,Kericho, Kenya.

1. Introduction

Globally malaria continue and remains in the 21st century the most important and a leading waterborne disease in tropical developing countries of the world in terms of the number of people infected, their reduced working capacity and mortality resulting from the disease estimated by WHO (2001) at least 650 000 cases annualy and a range between 400 to 500 cases and resulting in estimated death toll range of between 2 to 3 million cases annually (WHO, 2001; Lieshout *et al.* 2004;). of which more than 1 million deaths occur in Africa mostly children of less than 5 years old and Sub-Saharan Africa (SSA) accounting for 90% of Africa's malaria death toll which deprives Africa an annual estimated 12 billion United States of America Dollars in the lost Gross Domestic Product (Goodman *et al.*2000; Sachs and Malaney, 2002; Greenwood, 2004; WHO, 2003). The component of malaria burden includes morbidity, mortality, still births, abortions and anemia in non-immune individuals in tropical developing countries (Giles 1995; Lieshout *at al.* 2004). Malaria is transmitted to humans by pathogen infected in *Anopheles (An)* Mosquitoes, *An. Gambiae, An. Funestus and An. Pharoensis* and *An. Gambiae* is the most widely spread transmitter of Malaria in Kenya *(Coetze et al.,* 1999*).*

The increase in incidences of occurrences of malaria in SSA is due to suitable climatic conditions, political instability, poverty, poor accessibility to low cost health facilities, ineffectiveness of health system in malaria control at district level, peoples' perceptions, beliefs and knowledges of the disease (Okenu, 1999;Githeko and Ndegwa, 2001; Sachs and Malaney 2002, WHO, 2003; Lieshout *et al*, 2004; Tonui, 2010).

Unstable (epidemic) malaria cases have been reported in the highlands situated at attitude of 1600m-3000 meters Above Sea Level (AsL) and Arid and Semi- Arid areas of the horn of Africa and incidences in Kenya highlands situated at attitude ranging between 1600m – 3000m AsL and in the Semi Arid areas of North Eastern Kenya and incideces of occurrences have been on increasing trend and assuming seasonal patterns of occurrences annually (Garnham, 1945; Fogh et *al el*., 1979; Githeko and Ndegwa, 2001; Hay *et al.,* 2002, GOK, 2001-2010; *Tonui et al., 2013*)

In 2001 Government of Kenya (GOK) declared 15 districts in western Kenya highlands to include :- Tranzoia, Kakamega, Vihiga, Kisii, Uasin Gishu, Transmara, Narok, Bomet, Nandi and Kericho as malaria epidemic prone areas and requiring attention regarding its control and management is in line with the National Malaria Control Strategy (NMCS) of 2001-2010 and GOK vision 2030 and beyond regarding poverty reduction. There is therefore a need to assess community knowledges of malaria and their perceptions ratings of environmental determinants at attributed to the occurrences of the disease at household and community levels so that so it controls and management can be addressed.

As a component of malaria control and management strategy al local level the objective of this study therefore was to assess community's knowledges and perception ratings of environmental determinants attributable to the occurrences of malaria in Kericho county classified by GOK in 2001 as malaria epidemic prone County in Western Kenya Highlands and requiring priority in Malaria Control programs.

2.Material and methods

2.1 Study area

The study was conducted in Kericho district in SSA to represent Kericho County and a subset of 15 districts in western Kenya highlands classified by GOK in 2001 as malaria epidemic prone district (MOH, 2001) is located between longitudes 35^{o} 02'and 35^{0} 40'E and between latitudes 0^{0} and 0^{0} 23'S and covered an area of 2110.6 $Km^{2}$and purposely the study, targeted the 7 administrative divisions Ainamost, Belgut, Chilchila, Kipkelion, Londiani, Soin and Sigowet (CBS, 2001) to represented Kericho County.

Kericho county lies at an altitude of 1600-3000m AsL which characterises it as epidemic (unstable) malaria prone highland area where fatal cases of malaria cases have reemerged and patterns and trends of malaria burdens have been on the increase since 1940s, through 1960s to 1980s and in the 21^{st} century and have assumed seasonal patterns of occurrences yearly and blamed on suitable environmental conditions particularly local climatic change particularly local temperature rise and peoples' beliefs, perceptions and knowledges of the disease which influence transmission of malaria among population with little acquired immunity (Gamham 1945;Fogh *et al*.,1979 Lindsay, 1998; Some, 1994; Hay *et al*., 2002; Shanks *et al,*.2005; Tonui, 2010).

Kericho county is endowed with rich fertile loam and clay soils, good rainfall distribution (range 157 – 250mm)and monthly temperature (range 16.8^{0} C – 18.6^{0} C) is a relatively rich county that supports both small and large scale tea plantations, horticulture, coffee, pyrethrum, sugar cane, vegetable as well as livestock keeping (KDPP 1997 – 20001; Tonui,2008)
The estimated population in the seven administrative divisions in the county in 1999 was 456768 (CBS, 2001); and the main language spoken is Kalenjin. Kiswahili and English are also spoken in the county and traditional African and Christian religions. among others are widely practiced in the County (KHDS, 1998); KDPP, 1997 – 20001)

2.2 Data types, sources, methods of data collection and samping procedure

Qualitative data on communities knowledges of malaria and their perception ratings of significant environmental factors attributable to incidences of occurrences of (unstable) epidemic malaria were collected from household heads (respondents) in administrative divisions of Kericho county purposively chosen to represent epidemic malaria prone district in western Kenya highlands.
The estimated population of 456768 residing and distributed in 98867 household (CBS 2001) in the county's 7 administrative divisions in the county in 1999 formed the target population. Purposely the 7 divistions were chosen to represent the county. Using stratified and random to sampling, the 300 purposely chosen households from 98867 households were apportioned to the divisions according to their respective number of households out of the total households in the county. The household heads formed the respondents who provided information on their knowledges of malaria and their perception ratings of a list of 39 enviromental determinants (Table 1) provided in the questionnaire as attributable to incidences of reemerging incidances of occurances of unstable malaria.

2.3 Data analysis, results and discussions

Information obtained from respondents (n=219) regarding their knowleges of malaria and their perception ratings of 39 environmental determinants (Table 1) were asked to rank the perceived causes of (epidemic) malaria in Kericho county and information provided was analyzed using Factor Analysis (FA).

The ranking was based on 5-point scale; very important (10), important (8), Fairly important (6) ,Less important(4),Least important (2). The first step in the analysis of significant factors perceived by respondents of malaria involved the presentation Table 1 showing total scores.

Table 1. Perceived ratings of environmental determinants of incidences of occurrences of unstable malaria (sample, n=219)

No	Variable (Factor)	Very important	Important	Fairly important	Less important	Least important
V1	Lack of appropriate use of anti-malaria drugs	108	47	22	10	3
V2	Lack of knowledges of malaria	87	47	22	17	12
V3	Lack of knowledges of physical environment causes of malaria	104	34	30	20	4
V4	Lack of malaria control funding by government	62	46	39	18	18
V5	Poor roads to low cost health centers	62	30	27	24	40
V6	Lack of rural anti-malaria education programs	113	45	19	7	3
V7	Lack of general accessibility to health facilities	54	66	39	20	9
V8	Long distance to low cost health facility	62	38	34	28	21
V9	Lack of malaria personnel in rural areas	89	44	20	11	13
V10	Lack of prompt medical treatment of malaria	115	46	13	5	9
V11	Lack of diagnostic kits for malaria detection	59	42	40	28	13
V12	Lack of use of local herbs for malaria treatment and medication	17	23	35	46	61

V13	Low education standards in households	52	41	44	26	23
V14	Uncleared bushy vegetation	64	35	36	20	23
V15	High temperature after long night rainfall	34	22	49	38	47
V16	Lack of use of ITNs	65	36	34	22	15
V17	Lack of money to purchase ITNs	67	36	22	19	26
V18	Crowded sleeping rooms	23	15	35	38	71
V19	High rates of migration of people to and from malaria endemic areas	19	27	34	46	61
V20	Lack of appropriate sources of anti-malaria drug	80	49	22	13	9
V21	Lack of malaria information from Ministry of Health	57	43	36	21	19
V22	High level of poverty in households	72	30	37	17	31
V23	Lack of knowledges and of new anti-malaria types and their use	95	36	21	7	8
V24	High population density-crowding	23	39	33	38	48
V25	Poor nutritional habits in households	33	44	24	36	33
V26	Lack of political will by government	30	34	37	35	47
V27	Inefficient low cost health facility personnel	67	37	38	22	10
V28	Unaffordable anti-malaria drugs in low cost health facilities	87	37	19	13	17
V29	Lack of consultation from a qualified health personnel in the health centers	78	40	21	11	05
V30	Lack of appropriate sourcing and policy guidelines of anti-malaria drugs	57	64	24	15	4
V31	Role of kiosks and shops	19	11	22	40	59
V32	House types	13	12	33	38	71

V33	Effect of HIV/AIDS	71	16	21	29	25
V34	Lack of serious malaria education schools	71	34	23	17	9
V35	Lots of pools of stagnant water	81	27	20	12	14
V36	Presence of many used plastic material scattered in many places	82	20	24	13	16
V37	Worships/devil worship, witchcraft etc	6	08	8	16	107
V38	Lack of free supply of ITNs and prophylactic medication for children and expectant mothers.	79	36	18	13	6
V39	Reemergence of anti-malaria drug resistance by malaria parasites	67	41	24	13	6

The results depicted in Table 1 are in total scores for each variable on the specified rating scales; the variable with the highest score is 115 followed by 113, 108, 104, and 95 in order. On the scale of important (8), the variable with the highest score is 66 and the variable with the lowest score on this scale is (6). On the fairly important scale the variable with the highest score is 49, and the lowest on this scale is the variable 8. On the least important scale variable V37 and V6 have scores of 107 and 3, the highest and the lowest scores respectfully. From Table 1 above it is not easy to quickly to group significant factors attributable to cause incidences of malaria thus the second step to determine this was to calculate zero correction coefficient among factors (variables)as depicted in Table 2.

Table 2: Zero correlation matrix of perceived environmental determinants attributable to cause incidences of occurrences of malaria.

	V_1	V_2	V_3	V_4	V_5	V_6	V_7	V_8	V_9	V_{10}	V_{11}	V_{12}	V_{13}	V_{14}	V_{15}	V_{16}	V_{17}	V_{18}	V_{19}	V_{20}
V_1	1																			
V_2	.99	1																		
V_3	.98	.96	1																	
V_4	.93	.92	.89	1																
V_5	.80	.79	.80	.63	1															
V_6	.99	.99	.98	.92	.83	1														
V_7	.72	.74	.62	.87	.23	.69	1													
V_8	.99	.97	.99	.93	.75	.98	.72	1												
V_9	.99	.99	.96	.92	.83	.99	.71	.97	1											
V_{10}	.99	.99	.96	.89	.86	.99	.66	.96	.99	1										
V_{11}	.90	.89	.91	.95	.50	.88	.84	.95	.86	.84	1									

V_{12}	-86	-86	-82	-94	-39	-83	-95	-88	-83	-08	-97	1								
V_{13}	.85	.82	.84	.97	.50	.83	.83	.89	.81	.78	.96	-92	1							
V_{14}	.96	.94	.97	.94	.82	.97	.66	.97	.96	.95	.89	-81	.90	1						
V_{15}	-49	-56	-35	-48	-11	-47	-75	-43	-51	-48	-47	.65	-32	-28	1					
V_{16}	.98	.96	.98	.95	.73	.97	.73	.99	.96	.95	.89	-81	.92	.98	-39	1				
V_{17}	.97	.97	.93	.85	.91	.98	.59	.92	.98	.99	.77	-72	.72	.93	-43	.91	1			
V_{18}	-65	-.66	-.60	-.75	-.07	-.61	-.92	-.69	-.60	-.56	-.85	.93	-.76	-.56	.74	-.69	-.46	1		
V19	-.85	-.85	-.83	-.94	-.39	-.83	-.92	-.89	-.82	-.78	-.98	-.99	-.94	-.83	.58	-.90	-.70	.92	1	
V20	.99	.99	.94	.95	.74	.98	.80	.96	.99	.98	.90	-.90	.85	.93	.60	.96	.95	-.71	-.88	1
V21	.95	.94	.91	.99	.63	.93	.87	.95	.93	.91	.96	-.95	.96	.95	-.51	.96	.86	-.77	-.95	.95
V22	.90	.87	0.91	.84	.92	.91	.46	.89	.90	.91	.75	-.63	.79	.96	-.09	.90	.92	-.32	-.65	.84
V23	.99	.99	.98	.92	.85	.99	.66	.98	.99	.99	.87	-.81	.83	.98	-.41	.97	.98	-.57	-.81	.97
V24	-84	-.81	-.92	-.82	-.54	-.83	-.59	-.92	-.78	-.93	.82	-.87	-.87	.20	-.93	-.72	.68	.86	.90	-.79
V25	.13	.21	-.03	.05	-.05	.12	.37	.03	.17	.16	.01	-.21	-.15	-.11	-.88	-.03	.15	-.35	-.12	.24
V26	-.75	-.75	-.77	-.74	-.25	-.73	-.76	-.81	-.67	-.67	-.90	.90	-.75	-.66	.60	-.80	-.58	.92	-.76	-.76
V27	.95	.93	.96	.95	.64	.94	.76	.98	.92	.90	.98	-.92	.95	.96	-.38	.99	.85	-.47	-.88	.93
V28	.99	.98	.97	.88	.89	.99	.62	.96	.99	.99	.82	-.77	.77	.95	-.43	.94	.99	-.52	-.90	.96
V29	.99	.99	.97	.95	.77	.99	.76	.99	.99	.98	-.87	-.89	.87	.96	-.53	.98	.96	-.69	.94	.99
V30	.81	.83	.70	.88	.38	.79	.97	.78	.81	.77	-.91	-.94	.79	.71	-.83	.78	.96	-.89	.94	.88
V31	-.64	-.65	-.59	-.82	-.09	-.61	-.96	-.69	-.60	-.55	.62	.94	-.86	-.62	.62	-.71	-.46	.96	.96	-.71
V32	-.75	-.96	-.71	-.83	-.20	-.72	-.93	-.78	-.71	-.67	.92	.97	-.82	-.67	.72	-.78	-.58	.99	-.48	-.80
V33	.82	.80	.89	.60	.89	.84	.20	.82	.81	.84	.83	-.46	.53	.81	-.09	.79	.86	-.22	-.86	.73
V34	.99	.99	.99	.92	.79	.99	.70	.99	.99	.98	.79	-.86	.85	.96	-.47	.99	.95	-.66	-.74	.98
V35	.98	.96	.98	.86	.90	.98	.56	.96	.98	.98	.83	-.74	.78	-.33	.95	.95	.98	-.48	-.69	.94

V36	.94	.92	.97	.82	.91	.95	.47	.94	.93	.95	.97	-.67	.96	-.19	.93	.93	.95	-.40	.84	.88
V37	-.51	-.50	-.55	.62	.07	-.48	-.73	-.61	-.44	-.40	-.81	.82	-.71	-.47	.47	-.62	-.29	.92	.84	-.54
V38	.99	.99	.98	.92	.80	.99	.70	.99	.99	.99	.90	-.85	.83	.96	-.50	.97	.97	-.65	.84	.98
V39	.99	.99	.95	.97	.70	.98	.83	.98	.98	.96	.94	-.93	.90	.95	.57	.98	.92	-.75	-.92	.99

From correlation matrix (Table 2) the correlation among the variables is generally high and some with set of generally high and some with low correlation, thus the need to classify variables into groups of related factors. Classification of variables into groups of related factors was obtained by varimax rotation (Table 3) which yielded 4 important factors. These factors were determined using nature of eigen values and factor scree plot technique (Figure 1). The varimax rotation retained only those factors (variables) with an Eigen value of 1 and above. This is because those factors with eigen values less than one are significant i.e. their contribution to the overall explanation of the cause of occurrence of malaria is low.

Table 3: Loadings of rotated factor matrix.

Rotated Loading Matrix (VARIMAX, Gamma = 1.0000)

Variable(V)	**1**	**2**	**3**
V1	0.867	0.474	0.152
V2	0.853	0.467	0.230
V3	0.874	0.468	- 0.022
V4	0.701	0.665	0.082
V5	0.990	- 0.126	0.033
V6	0.888	0.436	0.148
V7	0.316	0.888	0.369
V8	0.827	0.577	0.032
V9	0.887	0.412	0.207
V10	0.911	0.360	0.200
V11	0.609	0.793	- 0.016
V12	- 0.495	- 0.847	- 0.118
V13	0.590	0.757	- 0.134
V14	0.878	0.457	- 0.072
V15	- 0.148	- 0.494	- 0.851
V16	0.811	0.584	- 0.020
V17	0.947	0.245	0.204
V18	- 0.183	- 0.936	- 0.284
V19	- 0.496	- 0.862	- 0.097
V20	0.806	0.526	0.268
V21	0.711	0.669	0.106
V22	0.948	0.217	- 0.165
V23	0.909	0.406	0.092
V24	- 0.654	0.664	0.292
V25	- 0.068	0.078	0.983
V26	- 0.381	- 0.836	- 0.109

V27	0.739	0.670	.074
V28	0.932	0.327	0.155
V29	0.836	0.520	0.173
V30	0.451	0.724	0.495
V31	- 0.195	- 0.953	- 0.162
V32	- 0.319	- 0.908	- 0.259
V33	0.932	0.056	- 0.132
V34	0.858	0.498	0.103
V35	0.947	0.316	0.032
V36	0.957	0.263	0.102
V37	- 0.071	- 0.959	0.047
V38	0.869	0.465	0.160
V39	0.776	0.599	0.191

"Variance" Explained by rotated components

1	2	3
21.192	14.083	2.924

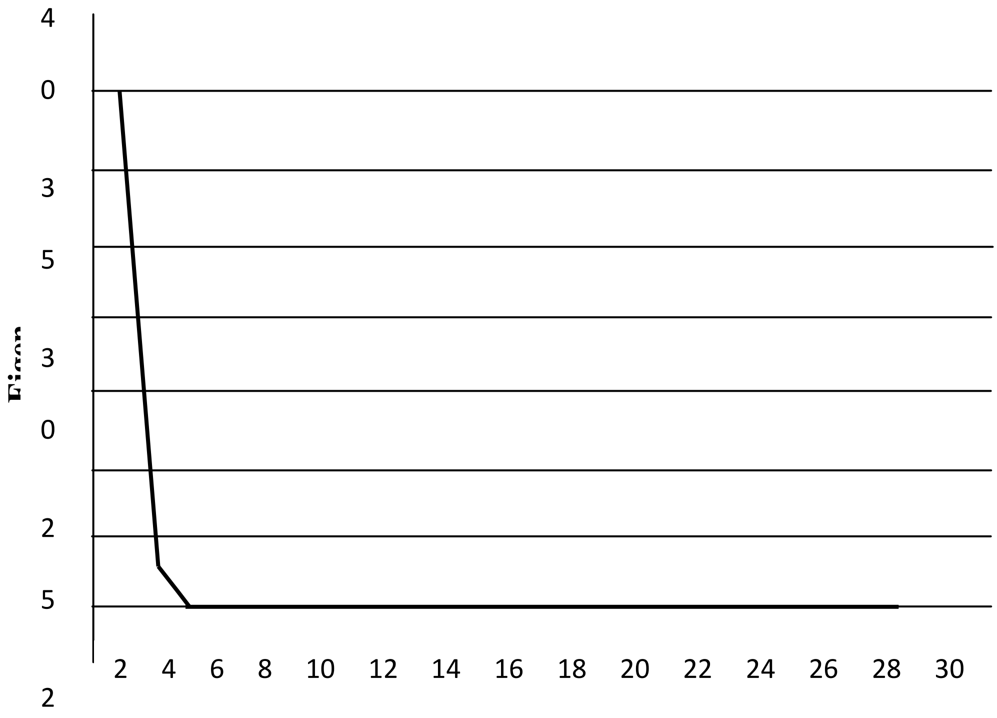

Figure 1: Factor Scree Plot Technique For : Classification of Variables into related Factors.

From Figure 1 the break in the slope is identified after factor 3. This implies that the cut-off is at Factor 3. The variables that loaded lowly with factor 3 having values ranging between 0.2 to 0.4 are labeled as low accessibility to professional advice on malaria and population growth as related to limited to health personnel and health facilities in the district and this factor explains at only 2.294% of the total variance in the rating of the factors that cause the occurrence of malaria in the county.

Overall above analysis has classified and ranked environmental variables into 3 groups of factors. The first significant factor is poor accessibility, unaffordability and incorrect use of anti-malaria drugs which accounted for 21.192% of the variance in variables attributable to the incidences of occurrences of malaria in the county.

Factor 2 identified as attributable to incidences of occurrences of malaria was socio-cultural and households' behavioural patterns which accounted for 14.083% of the variance in variables attributable to the incidences of occurrences of malaria in the county and Factor 3 identified was population growth and Governments role in management and control of malaria which accounted for 2.924% of the variance in the variables attributable to the incidences of occurrences of malaria.

3. Conclusion and Recommendation

The above analysis has shown significant environment environmental factors attributable to reemergence and upsurge in incidences of occurrences of malaria in the county as; deteriorating , socio-economic development health delivery services, environmental degradation, limited use of ITNs, poor knowledges of malaria and environmental sanitation , unregulated sourcing and distribution of anti – malaria drugs and high cost of malaria drugs medication.

Deterioration of socio – economic factors is related to poor knowledge of malaria due to inadequate health education by health providers to communities. Household behavioral patterns such as poor environmental sanitation, beliefs perception s and increasing poverty levels among communities constraints accessibility to timely diagnosis and medication of the disease. Poor knowledge of environmental sanitation and deforestation lead to local climate change and indicated by small increase in temperature both create suitable environments for mosquitoes breeding sites thus enabling increased malaria transmission. The ongoing unregulated sourcing, distribution and in appropriate use of anti- malaria drugs are real challenges to the county and central Governments health ministries regarding control management of increasing malaria burdens in the county

It is evident from the above results that strategies to control and manage increased cases of malaria burdens in the county include; improvement of accessibility (transport) networks systems to link all low cost health facilities and rural areas , regulation of sourcing and distribution of anti – malarial drugs by concerned Governments ministries of health to minimize and eliminate distribution and the sell of counterfeit anti – malaria drugs by Quacks and Shopkeepers, good governance and improvement of socio – economic status of the communities by provision of health education and environmental health education in primary schools so as that children know about malaria and its control as they grows and economic empowerment of community to enable them access to health services and other related services.

Furthermore, the Local and central Governments can consider provision of free ITNs, malaria medication starting with vulnerable population strata, infants, children, expectants mothers and people with special needs and furthermore indoor residential spraying of houses should be timely and widespread particularly in high risk areas of the county.

With all the above strategies affected, poverty reduction can be realized and is in line with Kenya Government's Vision 2030 and beyond poverty reduction Millennium Development Goals.

Acknowledgement

This study was part of Doctoral Thesis (PhD). We thank Kenyatta University and Ministry of Education, Science and Technology (**MOEST**)for all that entailed PhD programme and provision of research permit respectively to facilitate accomplishment of the PhD programme . We also thank respondents of Kericho County who actually participated in provision of information related to this study**.**

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PROPOSED MEASURING MODEL ON THE FACTORS OFVIETNAMESE STUDENT'S ENTREPRENEURSHIP INTENTION OF

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Abstracts

Nurturing and promoting entrepreneurship motivation play a center role in the economy, especially in the economics trend of transforming from the economy based on energy to innovative one. It is increasingly important to thoroughly research the factor clusters affecting the entrepreneurship intention to develop the active entrepreneur. This paper therefore aims to contribute to the understanding of major source of inspirational triggers that impact on entrepreneurial intention, how the effecting level of each factor and propose a measuring model accordingly. The research is implemented on students of Vietnam who are going to choose the life career and join the creative human force of the society. Theory of planned behavior - TPB (Ajzen, 1991) is applied to propose a model to measure the effects. A qualitative analysis method is utilized. The findings of the study provide 36 item scales belonging to 07 factor clusters which directly or indirectly affect the entrepreneurship intention of Vietnamese students, including (1)Expected value, (2)Attitude toward the action, (3)Normative beliefs, (4)Subjective norms, (5)Perceived self-efficacy, (6)Perceived Feasibility and (7)Perceived risks. Implication of these results on how to facilitate an environment, in which inspirations on entrepreneurship intention are triggered and limitation of the study are discussed.

Keywords*: entrepreneurship, entrepreneurship intention, theory of planned behavior – TPB*

1. INTRODUCTION

On the transforming trend from the economy based on energy and capital to innovative one, promoting entrepreneurship motivation in order to facilitate firm creation has been increasingly recognized as engines to foster an entrepreneurial culture, driving forward socio-economic development (Carayannis et al., 2003; EC, 2008, 2010; Wilson, 2008; OECD, 2011; Kuratko, 2012). Linan and Chen (2009) are of the opinion that entrepreneurial intention is one among the key important motivation methods for transmitting message of value entrepreneurship can add to the people. In fact, entrepreneurship is not a single action but a long period and entrepreneurship intention could be considered as the "root" or the "beginning step" of this long way. Thus, the study of entrepreneurial intentions is considered very promising, because researchers get a better understanding for background factors as well as accompanying environment factors such as the availability of resources and the final consequences of the behavior such as the decision for a specific career without having to observe the transformation of intentions into action (Richard et al. 2009). This explains why it is important and crucial to research the factors affecting this "root" point of entrepreneurship roadmap (European Commission, 2008 & 2010). This paper therefore will study which factors affecting the entrepreneurship intention, how the effecting level of each factor and propose a measuring model accordingly. The research is implemented on students of Vietnam who are going to choose the life career and join the creative human force of the society. The research results could support in encouraging regulation and policy frameworks towards promoting entrepreneurship intention of young people in Vietnam.

2. LITERATURE REVIEW

2.1 Entrepreneurship Intention

Using the widely recognized definition of Bird's (1988, p. 442) on intention, Richard et al. (2009) reconfirmed intention as a state of mind directing a person's attention (and therefore experience and action) toward a specific object (goal) or a path in order to achieve something (means). Bagozzi and Yi (1989) defined that intentions encompass motivational aspects influencing the behavior in question and they are important indicators for how much effort individuals have to exert to execute this behavior. In psychological literature, intention is assumed to capture the motivational factors that influence the behavior, so that, it is an indicator of how hard people are willing to try in order to behave in a specific manner to achieve a goal (Anna Lanero et al. 2011). For this reason, intention appears as a good predictor of planned behavior in the module of Ajzen (1991), especially if this is difficult to perform and demands a great amount of resources. In the field of social psychology, intention is the single best predictor of any planned behavior (Bagozzi and Yi 1989) even when this behavior is rare, hard to observe or involves unpredictable time lags between intention and action (Ajzen 1991). Compared to the actual behavior, intentions are measurable without delay and unaffected by distorting influences. In addition, intentions are not subjected to any ex-post rationalization of the observed individual. In general: the stronger the intention, the higher is the probability that the intention predicts an actual execution of the behavior in questions (Ajzen 1991).

Derived from the previously mentioned definition by Bird (1988), Krueger (1993) defines entrepreneurial intention as the commitment to starting a new business. According to Armitage and Conner (1998: 1430), intention represents the motivation that a person affords as the planned action, so that entrepreneurial intention is definitely a motivation to make a plan running an enterprise. Thompson (2009) defines entrepreneurial intention is the confirmation of a person on establishing a new company and his or her plan to run this action in the future. Thus, entrepreneurial intention is not only a simple question of yes or no, it should be considered as the degree of level from low point to high and very high level. This definition is totally fit with the ideal of Ajzen (1991) that is the stronger the intention to engage in a behavior, the morelikely should be its performance. Intention is thus assumed to be the immediate antecedent of behavior tế (Fayolle et al., 2006). In summary, almost international researches confirm that entrepreneurial intention is a planed behavior and this requires the strong afford of a person to carry out the behavior. Thus entrepreneurial intention plays a central role in forming the start ups, especially in the case of students because they are on the period of deciding the life career.

2.2 Models on Entrepreneurship Intention

Until the current time, there are four most applicable entrepreneurship intention models widely used in researches (Souitaris et al., 2007), as follows:

2.2.1 Shapero Model of Entrepreneurial Intention (1982) and further developed by Krueger and Brazeal (1994) as the Model of Entrepreneurial Potential. Shapero stated that desirability, feasibility and a propensity to act are the most crucial factors influencing an individual's intention to start a venture. He identified two classes of important variables: (1) one dependent variable, entrepreneurial intentions (EI), which represents the expected entrepreneurial behavior of the university students who are the respondents in this study, (2) three independent variables which represent personal attitude of the respondents including perceived desirability, perceived feasibility and propensity to act.

2.2.2 Bird's Model of Intention (1988)

This model highlights the importance of intentions for organizational development and for the implementation of entrepreneurial ideas (Bird, 1988). Intentions are assumed to be a blend of rational, analytic, cause-effect thinking and intuitive, holistic, contextual thinking. The model was further developed by Bird & Jelinek (1988), Boyd &Vozikis (1994); however, according to Fayolle et al., (2006), it lacks empirical validation.

2.2.3 Shapero & Sokol's Entrepreneurial Event Model (EEM) (1982)

As soon as being introduced in 1982, EEM was quickly used in the literature with an aim to provide an explanation for the processes that lead to an entrepreneurial event, that is, the moment of launching a new business (Kollmann & Kuckertz, 2006). The model assumes that inertia guides human behavior until some event "displaces" that inertia and unblocks previously undesired behaviors. For example, a displacement, such as job loss, might alter the perception of the desirability to become self-employed. There are three categories of life path changes in EEM, including negative displacements, between things and positive pulls

2.2.4 Icek Ajzen's theory of planned behavior (1991)

The theory of planned behavior consists of three attitudinal antecedents of intentions 1) attitudes toward the behavior, 2) subjective norms and 3) perceived behavioral control. The stronger the positive attitudes, the social norms and the perceived behavioral control toward a behavior, the stronger the behavioral intention is. If the intention is high, the individual is likely to perform the specified behavior.

2.3 Factors ofEntrepreneurship Intention

Ajzen (1991) approved the ideal that there are two factor clusters impacting the entrepreneurship intention, including (1) inside factors as attitudes toward the behavior and perceived behavioral control; (2) outside factor as subjective norms. According to Richard et al. (2009), there are two factor clusters impacting the entrepreneurship intention, that are (1) background factors and (2) accompanying environment factors. Alain Fayolle and Benoit Gailly (2015) concentrated on students' entrepreneurship intention and divided impacting factors into 2 groups: (1) entrepreneurship training courses such as training content, training methods, training location, etc... and (2) experiences on entrepreneurship activities or demographic characteristics. This paper inherits the factors developed by Ajzen (1991) and proposes one more factor relating to risk because the real nature of a traditional entrepreneur is the comparison between the benefits gained and the risks faced. In addition, many modern researches stress the importance of perceived risk to entrepreneurship intention (Hisrich & Peters, 2002; Leong, 2008). In summary, the paper proposes 07 factor clusters which directly or indirectly affect the entrepreneurship intention of Vietnamese students, including (1) Expected value, (2) Attitude toward the action, (3) Normative beliefs, (4) Subjective norms, (5) Perceived self-efficacy, (6) Perceived Feasibility, (7) Perceived risks.

Among these 7 factors, there are 4 factors directly affect the entrepreneurship intention, including Attitude toward the action, Subjective norms, Perceived feasibility and Perceived risks. Ajzen (1991) briefly defines attitudes toward the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question; subjective norm refers to the perceived social pressure to perform or not to perform the behavior and Perceived feasibility refers to people's perception of the ease or difficulty of performing the behavior of interest. In the case of entrepreneurship, the constructs of the above factors are defined as follows: 'Attitude towards self-employment' is the difference between perceptions of personal desirability in becoming self-employed and organizationally employed. Therefore, 'high' attitude towards self-employment actually indicates that the respondent is more in favor of self-employment than organizational employment (Kolvereid, 1996a). 'Subjective norm' refers to perceptions of what important people in respondents' lives think about them becoming self-employed, weighted by the strength of the motivation to comply with them (Krueger et al., 2000). Finally, 'perceived behavioral control' reflects the perceived ability to become self-employed (Kolvereid, 1996a). The last direct factor of Perceived risks or Risk-taking propensity has been defined in the entrepreneurship literature as the willingness to take moderate risks (Begley, 1995). In the definition of Leong (2008), perceived risk is a personal trait and personal viewpoint on unstable incidents. The other 3 factors which indirectly affect the entrepreneurship intention include Expected values, Normative beliefs and Perceived self-efficacy. These factors are defined by researchers as follows: Expected value is the expectation of a person on his or her ability to successfully implement an action (Krueger et al, 2000); Normative beliefs refer individuals' beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviors (Ajzen, 1978; Krueger et al., 2000); Perceived self-efficacy is the extent or strength of one's belief in one's own ability to complete tasks and reach goals (Linan & Chen, 2009; Leong, 2008). In turn, 'intention' is defined as a state of mind directing a person's attention and action towards self-employment as opposed to organizational employment (based on Bird, 1988).

2.4 Proposed model and research hypothesis

In the field of entrepreneurial intention and entrepreneurship education, many researchers stated that that the most often used theory is Icek Ajzen's theory of planned behavior (Fayolle et al. 2006; Gelderen et al. 2008; Gird & Bagraim 2008; Krueger Jr& Reilly 2000; Souitaris et al., 2007). Following the theory of planned behavior, the entrepreneurial event model by Shapero &Sokol is used in a number of studies: (Krueger Jr et al. 2000; Peterman et al. 2003; Linan&Javier Santos 2007, Michael 2011). This paper is based on the Icek Ajzen's theory of planned behavior to propose a model for measuring the effect of antecedences and factors on entrepreneurship intention of students in Vietnam (See Finger 1)

Thus, seven hypotheses are stated as bellows and figures will provide a visualization of the conceptual relationships that will be tested in the paper.

Expected value is the expectation of a person on his or her ability to successfully implement an action (Krueger et al, 2000). The expected value has strong influence to the attitudes with actions. The greater the expected values, the more positive attitude toward the action. Thus, this paper proposes the first hypothesis as follows:

Hypothesis 1: The expected values positively influence the attitude toward behavior.

Normative beliefs refer individuals' beliefs about the extent to which other people who are important to them think they should or should not perform particular behaviors (Ajzen, 1978; Krueger et al., 2000. This could be the comment of other people on the creation of a new venture. Normative beliefs directly impact to the subjective norms (Ajzen, 1978; Krueger et al., 2000), so this paper proposes the next hypothesis as bellows:

Hypothesis 2: The normative beliefs positively influence the subjective norms.

Perceived self-efficacy is the extent or strength of one's belief in one's own ability to complete tasks and reach goals (Linan & Chen, 2009; Leong, 2008). Perceived self-efficacy expresses confidence level of an individual while performing a certain task. Researches on entrepreneurship showed that perceived self-efficacy have effect to the perceived feasibility (Krueger et al., 2000; Linan & Chen, 2009; Leong, 2008). Basing on this point, the paper gives the third hypothesis as bellows:

Hypothesis 3: The perceived Self-Efficacy positively influences the perceived feasibility.

The empirical results in entrepreneurship broadly confirmed the theory's predictions regarding the relationship between attitudes (attitude towards self-employment, subjective norm and perceived behavioral control) and intention towards self-employment (Kolvereid, 1996a; Krueger et al., 2000; Luthje and Franke, 2003). However, Krueger et al. (2000) failed to find a link between subjective norm and intention and called for more studies with more reliable measures. Kolvereid (1996a) called for more research to confirm whether his results from a relative small sample of Norwegian undergraduates can be generalisable to other contexts. Therefore, to replicate and confirm early results linking self employment attitudes with intentions, we suggest the next 3 hypothesis as follows:

Hypothesis 4: The greater the attitude toward behavior with regards to self-employment, the stronger is the students' intention to become self-employed.

Hypothesis 5: The greater the subjective norm with regard to self-employment, the stronger is the students' intention to become self-employed.

Hypothesis 6: The greater the perceived behavioral control with regard to self-employment, the stronger is the students' intention to become self-employed.

The last hypothesis refers to the relationship between perceived risks and entrepreneurship intention. Perceived risk is a personal trait and personal viewpoint on unstable incidents (Linan & Chen, 2009; Leong, 2008). Perceived risk can be accessed through the personal perception about the likelihood of success at work, the autonomy or the notion of luck or fate affecting the last results (Linan & Chen, 2009; Leong, 2008). As such, it is possible that individuals with pessimism or perception about the risk or uncontrolled chance tend avoidance and lack of initiative with adventurous activities such as business start-up. Thus, this paper proposes the last hypothesis as follows:

Hypothesis 7: The perceived risks negatively influences the entrepreneurship intention

3. METHODOLOGY

Face-to-face and semi-structured interviews were employed as the primary qualitative analysis method for proposing the research model, building up measuring item scales and gaining deep insights on the impacts of factors in developing entrepreneurial intention of students. Semi-structured interviews allowed for individual variations and identification of the non-preconceived responses and experiences of the students (Hoepfl, 1997; Souitaris et al., 2007). Moreover, semistructured interviews have been proposed as a relevant data collection technique to study entrepreneurial leadership learning and development (Kempster & Cope, 2010; Swiercz & Lydon, 2002). At the first step, the research applies face to face discussion with a small group of 10 experienced experts in the field of entrepreneurship and start-up. The discussion concentrated on entrepreneurship intention and entrepreneurship motivation of students. The opened questions are applied which all focus on the literature frameworks of personal mind towards entrepreneurship behaviors, key factors affecting entrepreneurship intention of a person as well as the inner meaning of each concept study. This discussion help us to make a decision in choosing the theory of planned behavior developed by Ajzen (1991) combining with the factor of perceived risk to build up the research model.

At the following step, a semi structural face to face discussion is applied to evaluate and finally choose the most appropriated item scales for each factor in the proposed model. A list of 15 students selecting from Hanoi University of Science and Technology, Ho Chi Minh City University of Technology, National Economics University and the 10 experienced experts who have involved in the first step discussion are invited to participate in the discussion to evaluate the item scales. The proposed item scales are inherited and referred from international researches. To make sure the validity andreliability of the referred researches, the paper refers to sciencemetric point of google cited with the number of citation not below 30 papers. The questions are translated from English to Vietnamese and vice versa to guarantee the original meaning of each item scale. Experts and students are invited to study in turn conduct interviews with semi-structured questions orientation. The authors directly interview the invited experts and students with semi-structured and oriented questions and discuss on choosing the item scales. The selected indicators will form the first draft questionnaire.

Next, the first draft research questionnaire is then modified and approved on the testing basic with a mall class of 48 students at Foreign Trade University in order to make sure the reliability and consistency of research concepts

Finally, on the evaluation results of the above testing survey with the small groups of students of Hanoi Foreign Trade University, we conduct further adjustment and refinement of the criteria necessary for each factor in the model. The result is a construction of the final item scales are established for proposed evaluation model.

4. RESULTS AND DISCUSSION

The face to face discussions help us to build up the research model with 7 factors which directly or indirectly affect the entrepreneurial intention of Vietnamese students, including (1) Expected value, (2) Attitude toward the action, (3) Normative beliefs, (4) Subjective norms, (5) Perceived self-efficacy, (6) Perceived Feasibility, (7) Perceived risks *(the paper's conceptual model can be viewed in Fig. 1)*

The semi structural face to face discussion with experts and final year students from some universities in Vietnam help us to structure 38 item scales belonging to these 07 impacting factor clusters and 5 item scales belonging to entrepreneurial intention of Vietnamese students. By applying Cronbach Alpha and correlation variable, the pilot survey with a small group of students at Foreign Trade University Overall has eliminated 2 among 38 item scales. The final result is the remaining 36 item scales assessed for 07 indicators of the model, as follows:

Expected Values: 5 items adopted from Krueger et al. (2000)

1. Knowing how to develop a business plan
2. Having preparation to establish a new venture
3. Believing in the success of the new venture
4. Having ability to catch up with business opportunities
5. Having ability to solve business issues

Attitude toward the self-employment: 5 items adopted from Krueger et al (2000), Linan & Chen (2009)

1. Being interested to become an entrepreneur
2. Going to establish a new venture if having opportunities, financial resource and relationship
3. Desiring to become an entrepreneur
4. Becoming entrepreneurs brings personal satisfaction.
5. Becoming an entrepreneur brings more benefits than disadvantages.

Normative Beliefs: 4 items adopted from Krueger et al (2000) and Linan et al (2009

1. The support of friends in establishing business idea.
2. The closest family promote the pursue of a career as self-employed.
3. The closest friends promote the pursue of a career as self-employed.
4. Comments by family members and friends on starting a business are admirable.

Subjective Norm: 5 items adopted Krueger et al (2000), Kolvereid & Isaksen (2006) and Linan et al (2009):

1. The initiative encourages the pursuit of ideas from universities.
2. Many opportunities to meet people with good business ideas at university.
3. Entrepreneurship training is possible.
4. At the university, there are many successful people in establishing a new venture
5. The university has supporting facilities for start up

Perceived Self-Efficacy: seven items adopted from researches of Linan (2005), Krueger et al (2000) and Dyssanayake (2014):

1. Being self-employed would be very easy
2. As self-employed would have complete control over the situation
3. Having ability to control the establishment of a new company
4. Starting a new venture brings developing opportunities
5. Being aware of what is needed to create a business.
6. Only unexpected events prohibit the creation of new business.
7. Being easy to trigger a business ideal

Perceived Feasibility: 6 items adopted from Linan (2005), Krueger et al (2000) and Dyssanayake (2014):

1. Believing in the viability and growth of the new venture
2. The high feasibility of the new venture
3. Enough qualities to become entrepreneurs
4. Knowledge and experience gained motivate the creation of a new venture
5. Having relationship network for the creation of a new venture
6. Easy access to information to support business startups.

Perceived Risk: 4 items adopted from Hisrich & Peters (2002), Leong (2008):

1. The awareness of the success does not depend on the ability.
2. Life is determined by the people in power.
3. Success is depend on lucky
4. Success in business is due to luck rather than ability.

Entrepreneurship Intention: 5 items adopted from Krueger et al (2000), Linan & Chen (2009):

1. Willing to do anything to become entrepreneurs of a start-up.
2. Having strong goals to become entrepreneurs
3. Trying to create and maintain the own business.
4. Having plan to establish a new ventures in the near future.
5. Having great willpower to start the own businesses.

By applying a wide range of qualitative analysis methods, this paper has developed a model focusing on factors impacting the entrepreneurship intention of Vietnamese students. The face to face discussions with experience experts in the field of entrepreneurship have suggested us in building up 7 factors which may have key affect to the entrepreneurship intention of students Vietnam. Among these 7 factors, there are 3 factors indirectly impacting the entrepreneurship intention (Expected value, Normative beliefs, Perceived self-efficacy) and the last 4 factors directly affect the entrepreneurship intention of students in Vietnam Attitude toward the action, Subjective norms, Perceived Feasibility, Perceived risks). The semi structure interview, group discussion and pilot survey help us to develop and modify a 41- item measure of entrepreneurship intention and affecting factors.

5. CONCLUSION

This 41-item measure would support to the theoretical contribution and implications of entrepreneurship emotion and inspiration. The study also contributes to the evaluation criteria for universities in Vietnam on how to trigger and promote the entrepreneurship awareness, entrepreneurship emotion and the actions to start a new venture of their students. From the government point of view, this research could benefit the policy framework on how to increase the number of entrepreneurs from the student population.

Although the paper has initially developed the measuring model and a set of item measure of Vietnamese students' entrepreneurship intention, it has not tested the validity of the model with the wide data at the universities in Vietnam. Thus, the paper has not found out the impacting level of each factor in the model on the entrepreneurship intention. This would require a further research design, which continuously improves the measuring scales and bases on a large number of students at universities in Vietnam to assess the impact of each factor to entrepreneurship intention

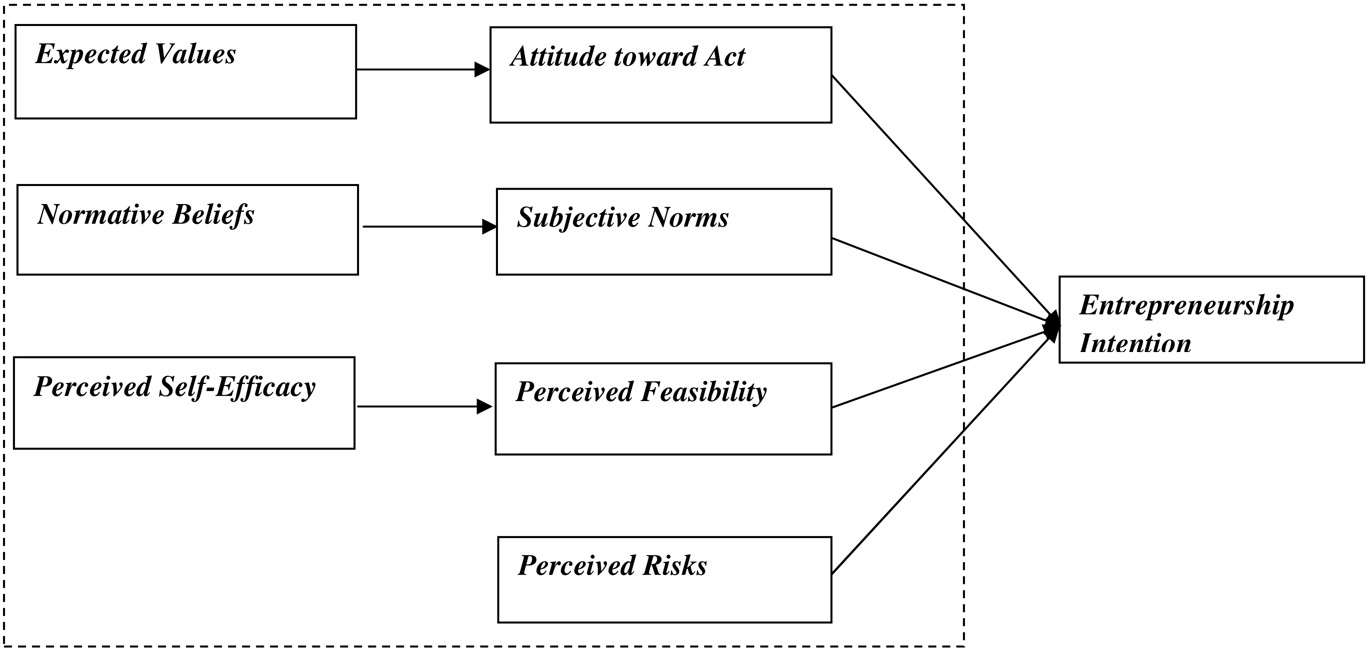

Fig. 1 The paper's conceptual model

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DEMAND FOR TECHNICAL EDUCATION AND THE STRUCTURAL CHANGES INTRODUCED TO THE SYSTEM OF TECHNICAL EDUCATION IN SRI LANKA

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Abstract

Technical education, the academic and vocational preparation of students for jobs involving applied science and modern technology. It emphasizes the understanding and practical application of basic principles of science and mathematics, rather than the attainment of proficiency in manual skills that is properly the concern of vocational education. Technical education has as its objectives the preparation of graduates for occupations that are classed above the skilled crafts but below the scientific or engineering professions. People so employed are frequently called technicians. Since 1893 Department of Technical Education and Training (DTET) has played an integral role as the pioneer in the field of technical education. Accordingly under DTET there are 9 College of Technology (COT) and 29 Technical Colleges (TECH) all over the Island. In 2005, the DTET introduced the National Vocational Qualifications (NVQ) framework which was an important milestone for the education, economic and social development of Sri Lanka. The NVQ system seeks to resolve the perceived mismatch between training offered and the requirements of the labor market, the duplication of training provided by institutions and the lack of consistent training standards and delivery. In this research the researcher has tried to identify the effectiveness of the NVQ system and to increase the demand of the technical courses by introducing new NVQ courses and converting existing courses to NVQ system. Accordingly this study utilized both Inductive method and Deductive method to assess the demand for technical education and the recent structural changes introduced to the system of technical education in Sri Lanka. According to the results obtained from the survey conducted regarding the courses, by the view of the 98% of respondents, it has been evident that the technical education can be expanded in accordance with the NVQ system. The students those who are and were engaged in for their career development hope to continue degree level and therefore all the existing courses may be organizes according to NVQ system , and it is a bounden duty of the government to introduce relevant courses to enable them to follow the courses in the respective field to obtain a degree.

Key Words: *Technical Education and Training, Technology, Technical Colleges, National Vocational Qualification, Tertiary Vocational Education.*

1. Introduction to the study

To accelerate economic growth, it is compulsory to design technical education and vocational education in order to fulfill the demand of labor market in the country. According to the statistics of year 2010, the unemployment rate has decreased up to 4.9% in Sri Lanka (Central Bank Annual Report 2010). Therefore, through organizing the technical education and vocational education under the formal plan, above unemployment rate could be reduced further. Similarly in this situation economic growth was 8% in 2010. And further increasecan be expected in the future. (Explained clearly Tertiary and vocational Education Commission 2010) Therefore the technical education has been developed to supply the qualified workforce needed for our economy.

According to Education, Man power and Economic Growth (2007) Alamreportedthathuman capital theory has powerful influence on the analysis of labor market. Alamnoted that the investment in education and training produces benefit both to the individual and to society as whole. The return on investment for society will be a skilled workforce that will enable global competitiveness and economic growth, while the return of the individual will be a better career path, increased earning and a better quality of life

The government perceives increase demands for skills when the labor supply shows rapid growth, when employment grows quickly or when employment increases significantly. (Education, Man power and Economic Growth 2007, Alam).

2. Background of the Study

The first Institution for formal Technical Education in Sri Lanka was established in the latter part of the year 1893. This Institution was known as Government Technical School and was housed in a renovated coffee store situated at close proximity to the Ceylon Railway Terminal building at Maradana in the Central Colombo. (Gnanalingam committee report-1979)

Until 2004 the number of Technical colleges in existence was 38, but after 2005, 29 of them were categorizedas TechnicalColleges and 9 were categorized as Colleges of Technology for each province.

Now technical education is developing under a vision and a mission. *Thevision is to be the most trusted leader in providing technological and technical education and competencies to the global market. And mission is to produce competent and productive manpower for better livelihood through quality and relevant technological education and occupational training to meet the challenges of changing global socio economic and technological needs.* (Technical education &training, statistical handbook on technical education 2010)

Today these institutions are managed by the Department of Technical Education Training which functions under the Ministry of Youth Affairs.

These Technical colleges and colleges of technology are conducting 127 courses under the categories; National Diploma, National certificate, National craft certificate, College certificate. (Statistical hand book on technical education 2009).

There is considerable requirement for techniciansdifferent fields for the development of the country, and such skilled persons are not provided by the formal GeneralEducation system.

Asian Development Bank introduced improving technical education and vocational training strategies for Asia. The environment for technology should facilitate its passage through four stages of absorption. One is learning by doing, learning by adapting, learning by design,and learning by innovation (Asia Development Bank 2004)

“Economic growth at this stage witnesses acceleration in demand for skills. Particularly at the higher levels and a corresponding decline in demand for unskilled or low skilled production workers and craftsman as stated in the project document for a recent ADB TEVT project in Nepal (Ashton and Coreen,1996) .

In comparison with the number of student getting admission to grade one in schools with the number of students getting admission to universities is very less about 6%.According to the statistics in 2009, the number of students admitted to grade one in schools was 323422, whereas the number of student got admission universities and technical and vocational education was182306.The number of students passedthe G.C.E.O/L examination in 2009 was 150583, and the number of failures was 224430, The failures have joined the workforce without technical and vocational training but they can be produced to the workforce with much productivity after Technical and Vocational training. The number of students who were eligible for University entrance after the G.C.E.A/L examination was 125146 in 2009 and those who got admission to

University was 21547 but the number of those who were unable to get admission to University was 103599 and they could be directed toTechnical and Vocational Education.
According to the statistics it is proven that the need for the supply of skilled workers and technicians in Sri Lanka is significantly large. In this context and therefore technical colleges Education system play a vital role in producing such skilled workers and technicians in the country.
The existing of Technical Education and Vocational Education can be distinguished evidently. In addition to the theoretical and practical process of technical education in the field of English, Mathematics andSciences are included.But Vocational Education in Sri Lanka focuses only on theoretical and practical part of the courses in Sri Lanka. The courses under Department of Technical Education are organized under the categories of commerce, trade and engineering. After thatin 2005 NVQ frame work was introduced in Sri Lanka to make a change in the field of Technical Education. The demand for the technical courses must be increased as it directly influences to increase the productivity of the country. (Department of committee reports-2009)
The development of science and technology and more appropriate scientific and technical education have become the key factors of economic growth in course of time. (Mohammed 1980)
A society, in economic terms, it may be called an accumulation of human capital and its effective investment for the growth of a society. This implies that the economy not only require a rise in capital investment but it is also a higher rate of supply of scientific and technical man power i: e: the human capital in this context technical and scientific education enjoys an envious position as a major input factor to economic growth.
The field of Technical Education includes industrial training. Accordingly, Technical Education is offered in technical colleges, college of technology and UNIVOTECHare to train technicians, supervisors and managers under the NVQ framework. Therefore large number of students must be directed to Technical Education. This indicates that there should be a big demand for their courses. However, the demand for technical courses has been continuously reducing due to various shortcoming of the education system. Therefore to fill up the gap through modification of former courses or introducing new courses according to NVQ sustainable for the country are being surveyed.

3. Statement of the Problem

Technical Education in Sri Lanka has been poorly organized although the opportunities are available to develop Technical Education System in Sri Lanka. There is less demand for technical education. Itshows the demand increased by moderate existing courses and introduce new course to match the industry demand.
The present education system of the country does not produce skilled technical persons although there is a greater demand for such people. To fill this gap the policy makers have taken several steps to promote technical education in the country. Irrespective of these measures the growing need for technical education and more job prospects available for technical areas (Department of National Policy Planning). The number of students registered for technical courses conducted by the technical colleges in the country has been reducing.
In this context, the main question is whether the demand for technical education in Sri Lanka can be increased by moderating courses existed and introducing new courses through NVQ system?

4. Objectives of the study

The main objective of this study was to examine how recent structural changes introduced to the system of technical education in Sri Lanka influenced its effectiveness. Accordingly researcher is supposed to examine the productiveness in National Vocational Qualification (NVQ) system.

Specific objectives

1. To identify how the courses must modify in order to satisfy the demand in society.
2. To examine how recent carrier development paths influenced to increase the demand for technical education.
3. To evaluate how physical and human resources and current management environment influenced to increase the demand for technical education.

5. Research Questions

1. Whether the demand for Technical Education in Sri Lanka can be increased through NVQ system?
2. Whether the students are satisfied with the relevant physical and human resources, the Modification of courses?
3. Whether the students like the future career development and Management environment?

6. Significance of the study

The hope of this research is to find out as to how the demand of current courses are in existence? It is the researcher's main objective to see how the introduction of newcourse affects the existing processes and modernizing of the existing courses affect the demand.

The technical education is very important for uplifting the economy of the country. But there is an unsatisfactory impression about technical and vocational education within students, school leaders and their parents. Therefore Department of technical education & training, started career guidance and counseling unit in 2002. This,introduces career and job opportunities in the country. Some technical colleges carry out this unit successfully. Not only that but also they supply information regarding courses and also help the students engage in different training and find out job opportunities for them. Finally the researcher says according to courses in technical colleges and college of technology, the demand for their courses have increased.

Although a number of researcheshave been done in this regard, there is no research done regarding the demand for current courses in the Technical colleges and college of technology. As the researcher found it necessary and timely to have a research regarding the above matter the researcher under took this research.

7. Definition of terms

Technical Education:

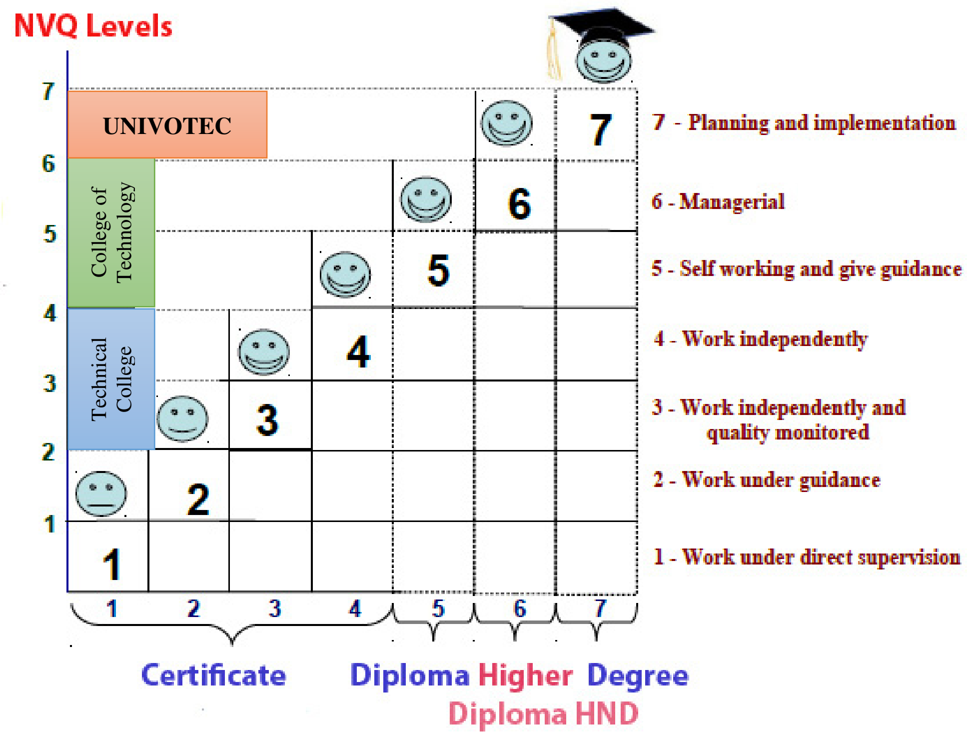
The term technical education will be used to represent the type of education which aims at the training of technicians or supervisory personal and managers in industrial occupations.

Vocational Education:

Vocational education will identify the vocational industrialeducations which aim at the education of skilled workers and trade men in industry. It may be worth nothing that the terms technicians and managers and skilled workers have different scope in different economic situation.

NVQSL: (National vocational qualification framework of Sri Lanka)
Provides the opportunity for sustainable, strategic solution for national training needs as well as for the employment mismatch for both the formal and the informal sectors. The NVQSL will easily be able to achieve international recognition for qualifications, skills and knowledge of Sri Lanka in an increasingly globalized and competitive world.

Figure: 1 NVQ framework



Change of period for Admission:
Student enrolment period, generally the admission period for technical courses was in January in each year but since 2006 it has been July.
Changing of study path:
Established study path for technical education by structural change in technical education, technical colleges student can study for a certificate course according to NVQ and from there She/He can gain admission to college of technology for NVQ level five or six and from there She /He can gain admission to university of vocational technology for degree or post graduate.
Management decision:
The decision of technical college and COTs are taken by the director general and other directors of department of technical education and training as acting managers, the principal and directors of COTs are responsible for implementing those decision successfully.

Structural change:
Namely technical college and college of technologycategorizedthe level of courses according to NVQ after 2005. Earlier all colleges were namely technical colleges.
Demand for technical education:
Tendency and inclination of school leavers and employees to have technical education from the courses which are conducted in Tech and Cots.

8. Research Methodology overview

The data collection through the questionnaire was analyzed with the help of SPSS Minitab packages. Researcher follows a questionnaire to handle the study as primary data. Questionnaires are cented to current students and passed out students for gathering data. Published annual reports and progress report of Department of Technical Education and Training (DTET), Ministry of Youth Affairs, Tertiary Vocational Education Commission (TVEC), Department examination and evaluation, Ministry of education Central bank are used as secondary data. The four provinces have six districts each and there college of technology and technical colleges are Maradana Colleges of Technology(COT), Kandy COT, Kurunegala COT and Gampaha Tech, Kegalle Tech, Kalutara Tech Technical Colleges and College of technology conduct 127 courses under the categories of National diploma, National certificate, National craft certificate and college certificate. Researcher selected ten courses from above courser. Questionnairesdeliver for each institution. A probability sampling technique of convince judgment quota sampling will be used.All together 270 sample elements will be there and from each sample element of three colleges of technology and three technical colleges will be taken from different courses.

9. Limitation of the Study

When designing the whole research project following several limitations will be found by which that raise some problems to some extent when the outcomes are considered in the context of generalization. Results of the study were limited to a numerical presentation Therefore it limits persecuting student’s feeling and attitudes
The researcher has considered the Technical colleges (TECH) and College of Technology (COTS) by representing districts such as Colombo, Kurunagala, Kandy,Kegalle, Gampaha, and Kalutara. In addition to that Researcher has chosen colleges of Technology and Technical colleges representing four provinces namely: Western, North West, Sabaragamuwa, Central For the review of the demand of technical education. Only ten full time and part time courses of colleges of Technology and technical colleges have been selected and considered students are currently studying and passed out. Here the researcher did not pay any attention to other institutes such as other technical colleges and other vocational institutes ,Vocational Training Authority of Sri Lanka, National Apprenticeship and Industrial Training Authority, National Institute of Business Management, National Youth Services Council, University of Vocational and Technical Training (UNIVOTECH)Youth Corps, National Institute of Fisheries and National Engineering (Ocean University),Ceylon German Technical Training Institute and other Vocational Institutes.
However this study mainly attempts to discuss the problem Demand of Technical Education under the Department of Technical education and training, only.

10. Literature survey

As Sri Lanka is a developing country there is an approach to implement NVQ system in order to fulfill the demand for skilled labor force. In Australia they have introduced a Vocational Education Training (VET) system which is correspondent with NVQ system to overcome the above matter. As investigation of Hoeckel, et.al (2008) has found that as a strength, Australia has a very well developed VET system, which enjoys a high degree of confidence. In particular, the engagement of employers is strong, the national qualification system is well established andunderstood, the VET system is flexible and allows for a fair amount of local autonomy and innovation to adapt learning to local circumstances, the data and research on most VET issues are good.

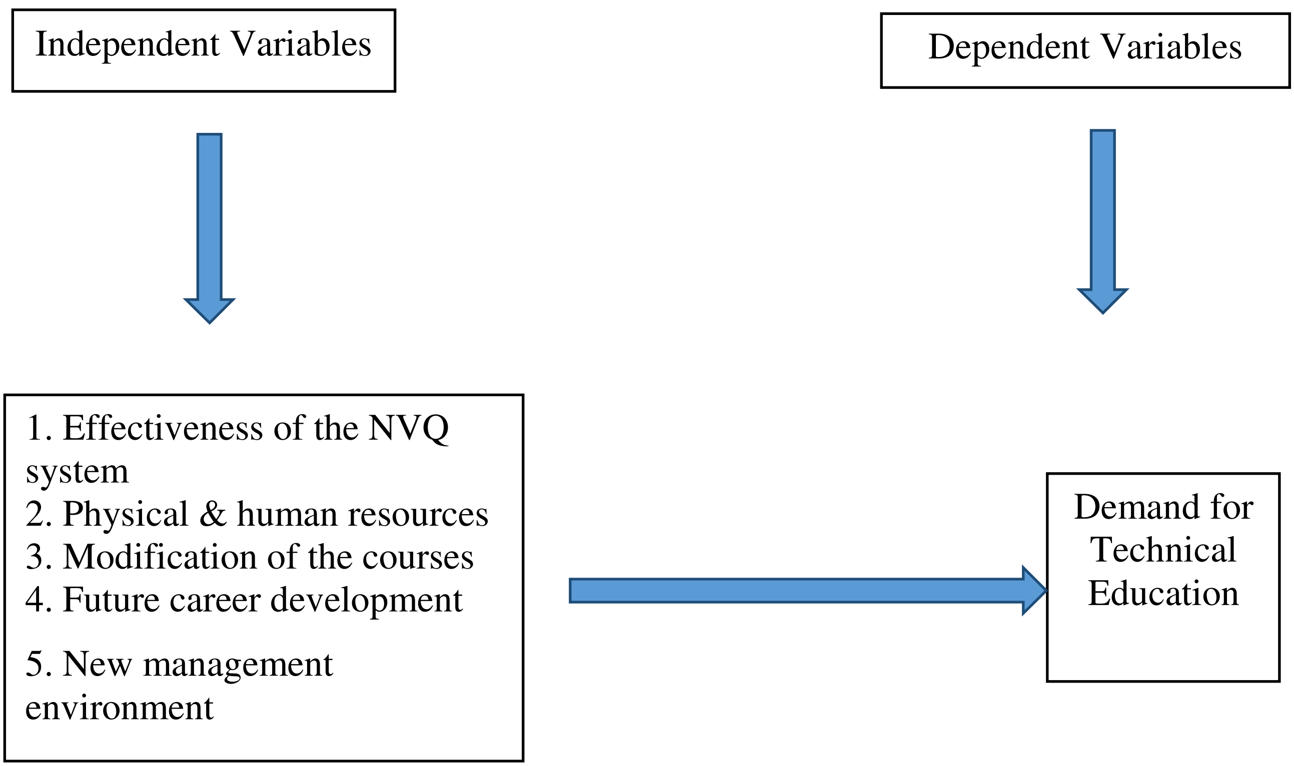
Jayalath et.al. (2011) revealed, NVQ course content practical and industrial training the theory content is useful for their vocation or higher qualification. NVQ certificate is useful for the job training receivers and training is very useful for NVQ holders to get higher vocational qualification.Jayalath et.al. (2011) reveled, there was a higher tendency of looking National Vocational Qualification at young ages. In the age distribution of NVQ certificate holders, the average age of the NVQ certificate holders is 26 years. It was clear identification that the ICT diploma courses are female dominated in order to assess the job training (OJT) status of the certificate holders.Piyasiriet.al (2010), both qualitative and quantitative data collected by using the questionnaires, and observation schedules and at focus group discussions have revealed that male participants dominate the trainee population of NVQ5/6 Diploma Programmes.For some NVQ5/6 programs, there is a high demand but for these high demanding coursescomparatively less students are taken. In some courses student's attendance capacityis comparatively lower than required intake capacity. Teaching learning process is mostlyinspected by internally. External infection iscarried in low level. There are no teacher guides or trainer guide published up to date.According to the student's view allocations for stationaries and Field visit are not sufficient.On the other hand, raw materials required for practical classes are not supplied on time &inadequate but Multimedia Facilities are adequate. The majority of Academic staff in Diploma Programs are newly recruited & has lessteaching experiences. Not only them but also well experienced staff members are also involve in teaching in these courses.There is not sufficient Registered Assessors for these technological areas.Employers suggested to training providers to focus more on practical training within thetraining period, Attitude development of trainees as punctuality & team work andtraining on modern technology. Though the information Management system exists, the system does not providerequired information like employability data when taking decision in different courses.

Sabellariou (2006), has found while the pattern of returns to an additional year of education for general educator followed that of other high income countries habiting increasing retunes countries habiting increasing retunes to education as one goes form lower to higher income quintiles the returns to vocational education exhibit much lower heterogeneity. Based on the findings the vocational education system in Singapore has served women with secondary vocational qualification parties lonely well.

Afect(2006), has found that the primary objective of all technical and vocational education and training programs is the acquisition of relevant knowledge, practical skills and attitudes for gainful employment in a particular trade or occupational area. The need to link training to employment (either self or paid employment) is at the base of all the best practices and strategies' observed world-wide.

Yildirim(2009),reveal the effectiveness and efficiency of the curriculum development process in selected local vocational schools in Turkey through individual and group interviews. The participants included administrators, school industry coordinators, teachers and students in selected secondary vocational high schools and managers and workers in selected companies. Relevance of the vocational curricula to industry, needs assessment, curriculum development efforts, school industry relations, and on the job.Hartl(2007),has found that technical and vocational education and training (TVET) as well as skills development in rural areas, TVET has suffered from a focus on basic and especially primary education,which led to the neglect of post basic. The study of Kumar (2008), has found that Technical education plays a crucial role in the growth of human resources by generating skilled man power, enhancing industrial productivity and the quality of life. The study of Nyerere (2009) has found that Kenya's general election crisis of December 2007 highlighted the problems of a large population of unskilled, unemployed youth amidst growing poverty. To address some of the underlying causes of the restlessness among youth, the government made initiatives for skills development. This includes investment within the framework of the Kenya Education sector Support Programme 2005-2010(KESSP). The historical development of vocational education in the 20^{th} century reveals two distinct visions on its role in preparing students for occupational and social life. Concerned with the present popularity of instrumental skills curricula in vocational education, this paper proposes an alternative approach that protects democratic ideals while still preparing students for future career challenges.Mir Mohammed (1980), reveled Educational structure is a well-established fact that the requirements of technical manpower differ at various levels. At the lower level of technical skills there is a big need for skilled and semi-skilled workers. Whereas it gradually decreases at the intermediate and higher levels. We need more skilled workers than technicians.

11. Figure: 2 Conceptual framework



Source: Prepared by the Researcher

12. Findings and Discussions

This part presents the statistical analysis of the data gathered, including the sample size and characteristics and demographic data of the respondents. The purpose of this study was to examine the demand for Technical education .This study could help five specific research objectives and answer the research questions and this study measured the, percentage of frequencies, chi square value, Descriptive statistics and frequencies.

As there are no other previous researches about “Demand for the Technical Education and structural changes Introduced to the system of Technical Education in Sri Lanka.” The researcher has utilized researches about Technical education and Vocational education to have an idea about it. Therefore the researcher couldn’t be able to compare findings with literature.

Two hundred and seventy students participated in the survey; 138 were non NVQ students, 132 were NVQ students. The researcher selected three colleges of technolog;Maradana, Kurunagala, Kandy and three technical colleges;Kegalle, Kalutara, Gampaha while representing most population areas.

According to questionnairethe researcher hoped to review the awareness of the new courses which are categorized according to NVQ system. The percentage of awareness of the new courses by students were respectively, 63%, 34%, 49% in Advance diploma in information technology, Advance diploma in mechatronics, and Advance diploma in welding from the total sample.

It was very evident that the rate of awareness of the new courses of the students was very poor. Awareness programmes regarding NVQ system must be launched to increase the demand for the existing courses in COTs and TECHs. Therefore it is necessary to make the entire students, parents and school teacher population aware of the NVQ system at all levels.

It is hoped that demand for the NVQ courses will be increased as a results of the above awareness programs. Consequently the demand for all courses on the whole will be increased. As a sub question the researches endeavored to find out whether the students recognized the NVQ system. It was found that 66% of the non NVQ students were willing to have their courses categorized according to NVQ system. There for it is necessary that the conversion of non NVQ courses into NVQ system of courses must be done rapidly.

Out of the 10 selected courses, six have been categorized according to NVQ system, and the rest must be categorized according to the NVQ system. Then consequently the demand for all courses can be increased.

Thirty out of 132 of the students those who were already following courses according to NVQ system were ignorant if they were following the courses according to NVQ system.

The reason for less demand for these courses may be due to lack of awareness of courses and therefor the demand for the courses can be increased by making others aware of these courses.

Similarly in surveying if the students were aware of the advantages of the NVQ courses it was revealed that the majority of the samples who were aware of the advantages of the courses will be helpful to increase the demand for the courses.

The students were examined to see whether the categorization of technical colleges in to COTs and TECHs according to NVQ levels was good or bad, 260 out of 270 were of the opinion that it was good. It was revealed that the demand for theirs courses can be increased as a result of this categorization.

Students gain the opportunity for admission to COTs after following and passing levels 3 and 4 of courses at technical colleges.

According to theseNVQlevel 3 and 4 certificatecourses at technical colleges must be further namely introduced and diploma courses NVQ level 5 and 6 must be introduced in parallel to same in COTs, and there by demand for technical colleges can be increased.
In surveying a possibility of expanding technical and vocational education according to NVQ, 256 were responded of the possibility of the total sample. Among the above number of the agreed the non-agreed were of the opinion that the management was not aware of the courses, and therefor it is necessary tomake the management aware of the courses.
In surveying the availability of number for the courses according to NVQ level 5, it was revealed the number following level (4 four) out of 4, 5, 6 was high. It is further revealed consideration with the above survey that effectiveness to NVQ system is very high and therefore this system of education should be improved.
In surveying whether the students are satisfied with the relevant physic and human resources, it was revealed, particularly whether the lectures or instructors were competent and satisfactory, 242 out of the total respondents were of the opinion that they were competent and satisfactory.
257 students were of the opinion that the dedication and teaching methods of the instructors and lectures were highly satisfactory.The attendance of the students is likely to decline for lack of competency and dedicated service of lectures or instructors proposed target of any institute can be attained if there is capable, efficient and resourceful human resources.
Similarly the availability of physical resources is as important as human resources for fruitful achievement of the proposed goals, a substantial amount of the national revenue, must be allocated to enhance the physical resource and human resource in the field of technical education.
In surveying in the availability of physical resources such as science laboratory, library, computers and computer laboratory and other, it was revealed that 254 of total sample were of the opinion that they were inadequate and unsatisfactory.
A purchasing method of raw materials for practical of student has been centralized, and in survey if this method courses delay in the supply of materials, it was revealed that 169 responded to have delay and 101 to have no delay.
If the purchasing process is decentralized to COTs and TECHs the cost of transport and delay in distribution can be minimized and reduced to ease the regularity and punctuality of practical process of the students.
The punctual and regular supply of raw materials will be helpful for the increase of demand for courses and in the absence of regular and punctual supply of raw materials students may be forced to dropout rapidly.
In the process of surveying the possibility of increasing the demand for the courses by modification of the exiting courses and introducing new courses, it was revealed that 66% of the respondents were of the opinion that some subjects must be amended and 16% of the responds were of the opinion that the entire curriculum must be amended. So it was revealed that with the amendment of some subject the technical courses can be continued to conduct perfectly.
In surveying the willingness and the choice of medium of instruction 77% of the respondents were of the opinion and willingness was to continue the courses in their mother tongue. As majority of the students among them were Sinhalese, even if it is so the candidates can be prepared for the international and local labor market by giving them English technical education. As the rate of sending persons for foreign employment is in the increase, they should be given comprehensive knowledge of the language if they are supposed to work. Skill persons are sent to countries like Korea, Italy, etc.Under the state sponsorship, they should be given sound knowledge of the language to increasethe utility of the surveys.

In surveying the adequacy of the syllabus of the courses 215 were of the opinion that the syllabus was sufficient and 14 were of the opinion that the syllabus was more than the necessity and some other were of the opinion that addition of the subjects must be made to the existing curriculum like information technology, architecture, electronic, macaronic, landscaping, English, auto cad, visual basic, hardware, mobile phonerepair, LCD LED technology, CNC machines, software development, PIC programming, satellites, foreign languages, computer typing, modern technology, costing and estimating and construction.
When the respondents were surveyed as to what they expect with addition of new subjects to the curriculum they were of the opinion that they could be convinced to be creative, to be flexible to modern technology, to be working with the machines in the industry, getting rid of the problem at work place of modern technology, setting the qualification for the modern world of work, getting new job, setting the English knowledge relevant for the field, because of using computer technology in all activities, operating all the modern vehicles automatically, becoming a multitalented person, developing the skill and knowledge for job. It is therefore necessary that the designers of the curriculum must pay special attention to include the suggestion in formulating for the betterment of both students and the country to increase the demand for the courses in COTs and TECHs.
In survey in the frequency of introduction of new course and modification of existent courses in TECHs and COTs 112 were of the opinion that they were rare chance for changes and amendments, and 42 were of the opinion that there was hardly any change or modification.
According to this a deficient in the process of introduction in new courses and modification of exciting courses must be done as it is necessary for them to be revised once in three years or four years and there by the demand for the courses in TECHs and COTs can be increased.
By future carrier developments the demand for the courses can be increased in surveying the tendency for following the subsequent level of the courses. The respondent for theopinion that they were willing and hopeful to go to next level.
As followers 05 non NVQ courses were willing to following NVQ coursesIt is necessary to transform non NVQ courses in to NVQ courses.
When students were surveyed whether they were willing to continue their studying up to degree level, 225 were intending to follow the degree courses.
When they were surveyed as to why they followed these courses they expressed that they could get occupation and high education knowledge, 17% were responded that they followed the courses with the hope of getting opportunity for higher education.
When they were surveying of the availability of job opportunities, it was revealed that the knowledge they gain by the course will be helpful to get an employment
The knowledge and the practices they gain through this will help them to be employed in an industry. This information was from the passed out students of the courses.
When the employed ones among the passed out students were surveyed, it was revealed that 43 were in private company and 17 were in government departments, 13 were in board and state companies.
When the nature of their employment was surveyed, it was revealed that 34 were employed as trainees, 17 were employed as draftsmen, 8 were in teacher service, 9 were supervisors, 2 were in Forman, and 4 were in reception.
They were surveyed of the wages they gain and most of them were satisfied with what they were paid (Rs.500 per day). Accordingto current economic situation of the country, amount paid for them must be increased.

When they were surveyed of the measures taken by the head of institutes to increase the number of applicants for courses, it was revealed that 196 were of the opinion that the step taken to increase the number of applicant was highly satisfactory.

Further they were surveyed as to what step has been taken by the department to increase the number of applicant and they said that the situation was of good condition.

The respondents were surveyed if they were aware of the changes and measure taken by the department to improve the courses, and it was revealed that 65% were not aware of the changes done by the departments. It is obvious that if the students are aware of the changes made and taken from time to time by the department, it will be helpful and important toincrease the demand for the courses.

In the matter of increasing the quality of the courses a survey was made to know if the suggestion and complains made by the students to the administration were properly conveyed to the department and it was revealed that 75 respondents express that the suggestions were not conveyed to the department by college management and 122 express that the measures have been taken by the college management to convey their suggestions and complain to the department. If the suggestions and the complains are properly and punctually conveyed to the department through college management , it will be of great help and importance for the decision makers in the department to make further important amendments in the matter of preparing the courses.

When the students were surveyed their views about the categorization as COTs and TECHs, most of respondents were of the view that almost all the TECHs may be nominated as COTs.Besides, 94 respondents were of the view that exiting structureis better and therefore the surveyor is of the view that the structure of allthe TECHs must be nominated as COTs. As a result of the survey made regarding the academic year, 250 of the total sample were of the view that commencement of the academic year of the institute must be in January. It is therefore very obvious and effective that the commencement of the academic year must be in January.

13. Suggestions

1. Students and the parents must be made aware of advantages and performances of the NVQ system by making an island wide propaganda.
2. The existing physical recourses must be increased in accordance with the courses and the necessity of the students.
3. The enrolment of the academic staff, human recourses must be doubled.
4. Introduction of new courses and amendments for existing courses at the COTS and TECHS must be done.
5. Decision makers of the management must be recruited on merits.
6. The human resources must be trained from time to time.
7. All courses must be categorized according to NVQ system
8. The commencement of academic year must be January.
9. All TECHs must be converted as COTs.
10. Courses must be organized according to the availability of ethnic groups in the area of the TECHs and COTs.

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Current Trend in Water Supply and Consumption, and Associated Health Implications in Port Harcourt, Nigeria.

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ABSTRACT

This paper briefly discussed potable water situation in Port Harcourt, Nigeria, from the 1950s, and then highlighted major factors preventing the implementation of water projects. Due to the inability of government to provide water, and the regulatory agency to monitor the quality of water, entrepreneurs are marketing all sorts of packaged water. Analysis of sachet water from 30 manufacturers showed that all the sachets had neither date of production nor expiry. Furthermore, 26.7% of the sachet water had E-coli ranging from 10 to 110 MPN/100ml, while 33.3% had total coliform ranging from 10 to 530 MPN/100ml. These values are outside those recommended by WHO. Records from Braithwaite Memorial Specialist Hospital between 2010 and 2014 revealed that the mortality rates, mainly among children, for gastroentritis, diarrhoea, and dysentry were 9.46, 4.62, and 11.59% respectively. It was therefore suggested that government should accept its social and moral responsibilities.

KEY WORDS: Water supply, consumption, health problems, Port Harcourt, Nigeria.

INTRODUCTION

The Millennium Development Goals have just ended. In that Report, produced in 2008, World leaders agreed to halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation. This is 2016, and it is obvious that the situation today in Nigeria is not better than that in 2000 when the decision was taken. For Nigeria, it has been a mission unaccomplished.

Port Harcourt is the only city in Rivers State, an oil-producing state in the Niger Delta region of Nigeria. Most developmental efforts have therefore been concentrated in Port Harcourt. The problem of potable water in Port Harcourt cannot, however, be extricated from that afflicting the whole of the Niger Delta region because Port Harcourt is a microcosm of the Niger Delta cities.

UNDP (2006) described the Niger Delta as a region that is richly endowed with water resources but paradoxically is host to communities with poor human development status, partly as a result of perennial lack of potable water and basic sanitation services. This is in spite of the fact that it also hosts huge deposits of oil and gas, the exploitation of which provides over ninety-five percent of the foreign exchange earnings of Nigeria. It must however be stated that the woes bedeviling the Niger Delta are as a result of the cumulative abandonment and neglect by governments at all levels.

Port Harcourt, as an oil city, has witnessed tremendous growth in population arising from rural-urban migration. The city has therefore grown at a phenomenal rate in physical size and population, with at least six slum settlements, resulting in a huge safe drinking water deficit. Efforts by successive governments to bridge the gap between supply and demand for this resource have not yielded the desired result. This is evidenced by the large number of women and children that roam the streets of Port Harcourt with buckets and jerry cans in search of potable water.

Today, water supply in Port Harcourt has become a free-for-all affair with no regulations. Private individuals and companies have taken advantage of government's inability to provide potable water by marketing all sorts of bottled and sachet water. Most bottled water, produced by multi-national companies such as Coca-cola and Nestle, conform to WHO drinking water standards. The main problem is with the sachet water, commonly called "pure water", produced by small business entrepreneurs, and consumed mainly by the low-income group. The purity of this water has been a source of concern to the public. The main focus of this paper, therefore, is to highlight most of the factors contributing to the near-collapse of the water sector in Port Harcourt, and the attendant implications for health.

HISTORICAL PERSPECTIVES OF WATER SUPPLY IN PORT HARCOURT

According to Akoko (1995), the population of Port Harcourt in 1952 was 79,634, and water supply was through hand dug wells, with water lifted by steam driven pumps. As at 1958, the supply was from two separate boreholes located at the Airport Works and in the Ministry of Works Yard in the north and South of Port Harcourt respectively. The total capacity was 43,000 m^3/day, thus giving a per capita consumption of 0.54 m^3/day

By 1963, the population of Port Harcourt had increased to 179,563, thus necessitating the establishment of two booster stations. Between 1963 and 1972, three additional pumping stations were established.Water supply in Port Harcourt started becoming problematic from the mid '80s. By 1992, the population of Port Harcourt had reached 406,738. Apart from the population growth, there was also an increase in economic activities, with most oil companies establishing their headquarters in Port Harcourt instead of moving to the new Federal Capital, Abuja. This created additional pressure on existing facilities. Studies have shown that in 1992, most of the public taps (standpipes) installed on the streets were no longer functioning (Ayotamuno, 2015). Thus, it had become obvious that the cost of pumping, treatment, and distribution of piped water had overwhelmed the Government. However, Government, in its bid to continue supplying water, introduced an "innovative" scheme called the Neighbourhood Water Scheme in 1992. Under this scheme, boreholes were sunk at strategic locations in the city and its environs. Each borehole, driven by a 1.5hp electric pump, also had provision for two overhead tanks and six wall taps (Figure 1). Inhabitants obtained untreated water free from these locations. The boreholes were operated from 7 am to 7 pm daily. Each had a design capacity of about 10 m^3/day. At the end of 1994, there were twenty-six schemes functioning. However, by 1998, the scheme had virtually collapsed mainly due to mismanagement.

As at 2015, Port Harcourt had four major pumping stations and four substations with total installed capacity of 104,400 m^3/day. If all the pumping stations were to work at full capacity, then the per capita consumption would be 0.08 m^3/day, based on a population of 1,382,592 according to the 2006 Nigerian census. It is worth mentioning that in the '50s and early '60s, house connections were only made in areas called "European Quarters", where the whites and a few highly placed Nigerians lived. However, every public tap was functioning.

CURRENT SITUATION

When, in 1972, Landlords in Port Harcourt were instructed to install septic tank systems in their buildings, those, especially in the city centre, complied. However, as water became scarce due to government's inability to provide this commodity, Landlords resorted to drilling boreholes in their premises. Because of the small, fragmented nature of landholdings, boreholes were drilled in close proximity to septic tanks and soak-aways. For example, Isabu (2013) found out that many boreholes were drilled less than 9m from septic tanks in contrast to the recommended distance of 30m by WHO. No form of treatment is given to the borehole water.

Some landlords use it for personal consumption and/or commercial purposes. As Pickford (1981) rightly points out, without water there is no life. But bad water can be almost as harmful as no water – it too can result in disease and death. According to Napacho and Manyele (2010), improper management of water, especially treatment and disposal of solid and liquid wastes are the major contributors of urban area water pollution.

Government's inability to meet consumers' water demand gave rise to the booming sachet water business. This assertion is corroborated by Akunyili (2003), who stated that the inability of Government to consistently provide adequate water contributed to the proliferation of the so called 'pure water' manufacture in Nigeria. Numerous outlets are springing up all over Port Harcourt on a daily basis. The sachet water pack is very cheap and, when refrigerated, is enjoyed by consumers under the scotching humid tropical sun, thus creating a high demand by the majority low-income group. This development is not peculiar to Port Harcourt or Nigeria. It has become a West African problem as asserted by Stoler et al., (2012), who insist that despite scientific interest in microbiological quality of sachet water that dates back to at least the mid-1990s, there is still a striking paucity of research on the topic.

HEALTH PROBLEMS

In 2015, sachet water from 30 different manufacturers were analysed by physical inspection of the sachet, and in the laboratory for the physico-chemical and microbiological properties of the liquid contents. Table 1 shows the result of the physical inspection of the sachet.

It can be seen that 86.7% of the sachets had no labels of the National Agency for Food Drug Administration and Control(NAFDAC), which is the regulatory agency, even though all the sachets had NAFDAC numbers. Furthermore, there was no date of manufacture on any of the sachet but 30% of the manufacturers indicated two months after production as the expiry date without date of production. This is unacceptable and cannot therefore be regarded as expiry date. Thus, no manufacturer had either date of production or date of expiry.

Table 2 presents the result of the physico-chemical and microbiological analysis of the sachet water. Although most of the parameters analysed conform with WHO(1971) standards, there were some sachet water that did not meet very critical parameters such as E-coliform and total coliform. The table shows that 26.7% of the sachet water investigated had E-coli ranging from 10 to 110 MPN/100 ml, while WHO recommended zero. For total coliform, WHO recommended between 0 and 2, but 33.3% of the sachet water had total coliform ranging from 10 to 530 MPN/100 ml. Consumption of such unwholesome water is bound to have devastating consequences.

Iyaye (2013) revealed that records collated from some medical facilities by the Rivers State Ministry of Health, Port Harcourt, indicated that between 2009 and 2012, there were 305 cases of cholera outbreak, with 23 deaths. There were also 1,074 cases of typhoid and paratyphoid, resulting in 12 deaths. Furthermore, 2,856 cases of amoebiasis were recorded, with a total of 128 deaths. Records from the Braithwaite Memorial Specialist Hospital (BMSH), Port Harcourt, between 2010 and 2014, are presented in Table 3. This table shows that for the five-year period between 2010 and 2014, the mortality rates for gastroenteritis, diarrhoea, and dysentery were 9.46, 4.62, and 11.59% respectively. The victims were mainly children. Although there is no direct link between these reported cases of water-borne diseases and the sachet water investigated, research findings have implicated sachet water in the spread of these diseases (Edema et al., 2001; Okonko et al., 2008; Dada, 2009).

SUGGESTIONS FOR IMPROVEMENT

For any water project to succeed, the government must show high sense of commitment by accepting the fact that it has both social and moral responsibilities in the provision of this facility. Akinyili (2003) asserts that packaged water especially the sachet (pure water) production is good poverty alleviation programme and should be encouraged, adding that it is an industry that has immense potential for job and income generation. Agreed. However, the health of consumers, not economy, should be most paramount.

It is now obvious that the National Agency for Food and Drug Administration (NAFDAC) whose statutory responsibilities include the regulation of sachet water production has been overwhelmed by the enormity of the problem. NAFDAC is no longer in a position to effectively control the production, and hence the quality of sachet water.

Potable water has always been a political issue in the Niger Delta. Ukiwo (2008) stated that without exception, the position papers of all ethnic and pan-delta groups have included demands for water. For example, in 1966, Isaac Adaka Boro, the leader of the Niger Delta Volunteer Service, revolted and declared the Niger Delta Republic. One of the grievances was water. Also, the Movement for the Survival of Ogoni People (MOSOP) stated in the Ogoni Bill of Rights that the Ogoni people have no pipe-borne water. Every government in the Niger Delta must therefore accept that it is inevitable and politically expedient to solve the water problem.

Funding of water projects is always a thorny issue. The various pumping stations in Port Harcourt are in derelict conditions. They need to be revamped. Funds must be provided to (1) purchase equipment and spares; (2) recruit and train personnel because old staff are retiring without replacement; (3) improve and expand facilities especially old and worn-out pipes that were installed in the '70s.

It is not only enough to inject funds into water projects. Proper management of funds has always been the bane of most central governments in developing economies. This brings to the fore the vexed question of private participation. Although many arguments have been made for and against private involvement, the current emphasis is on Public Private Partnership (PPP). It is widely acknowledged that the private sector is more efficient than the public sector. Government must therefore be encouraged to induce private entrepreneurs to participate in the water sector.

Another important aspect is public enlightenment. Consumers must be made to understand that the provision of water services costs money, and that they should be prepared to pay for such services. This will take a lot of effort because of years of apathy but if consumers observe that water has started flowing, they will make the necessary sacrifice to keep the project going. After all, they spend money on a daily basis for sachet water whose quality cannot be guaranteed.

It has been estimated that in Nigeria, over two-thirds of the diseases affecting the people and in particular the under-five age group can be attributed to poor water supply and unsanitary conditions (Agberemi, 2003). Government cannot, therefore, at this point, throw in the towel in the fight against water-borne diseases.

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Fig. 1.Neighbourhood Water Scheme

Table 1. Physical inspection of the sachet water

Serial numbers of sachet Water	NAFDAC Label	NAFDAC Number	Date of Manufacture	Date of Expiry
1	X	01-3239	Nil	Nil
2	X	A1-4834L	Nil	Nil
3	X	B1-3701L	Nil	Nil
4	X	D1-0552L	Nil	Nil
5	X	A1-6433L	Nil	Nil
6	X	C1-3087L	Nil	Nil
7	X	C1-4728L	Nil	Nil
8	X	A1-1039L	Nil	Nil
9	X	C1-6457L	Nil	Nil
10	√	01-40161L	Nil	2 months after production
11	X	B1-5467L	Nil	2 months after production
12	X	B1-0104L	Nil	Nil
13	X	01-3060L	Nil	2 months after production
14	√	A1-2722L	Nil	Nil
15	X	C1-2746L	Nil	Nil
16	X	01-4240L	Nil	2 months after production
17	X	B1-3102L	Nil	Nil
18	X	01-8864L	Nil	Nil
19	X	01-2882L	Nil	Nil
20	X	*A1-2669L*	Nil	Nil
21	X	B1-2176L	Nil	2 months after production
22	X	B1-0059L	Nil	Nil
23	X	01-2348L	Nil	2 months after production
24	X	01-0160L	Nil	Nil
25	√	A1-4854L	Nil	2 months after production
26	X	B1-4299L	Nil	Nil
27	X	B1-2285L	Nil	Nil
28	√	B1-8035L	Nil	2 months after production
29	X	C1-5500L	Nil	2 months after production
30	X	B1-1174L	Nil	Nil

X = Without NAFDAC label

√= With NAFDAC label

Table 2. Physico-chemical and microbiological analysis of sachet water.

Serial numbers of sachet water

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	WHO Standard
Parameters																															
P^H	6.12	6.02	5.55	6.37	6.52	7	5.98	6.25	7.26	6.06	6.24	6.27	5.89	5.7	6.04	6.25	6.18	5.28	5.12	6.8	6.48	5.33	5.6	5.06	6.04	6.73	6.36	6.6	6.76	6.78	6.5-8.5
Sulphate (mg/l)	<1.0	<1.0	1	<1.0	<1.0	<1.0	<1.0	1	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	250
Nitrate (mg/l)	0.18	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.2	0.17	0.19	0.19	<0.05	0.18	0.22	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	<0.05	<0.05	<0.05	<0.05	50
Total Dissolved Solid (mg/l)	32	15.8	8.65	13.5	25.7	79.9	8.98	9.07	66.1	39.1	29.2	23.1	14	25	12.7	28.7	10.3	23.2	20.4	59.3	70.1	10.5	2.83	35.6	22.6	45.6	26.2	20.7	40.1	43.4	600-1000
Turbidity (NTU)	1.31	1.31	1.21	0.56	0.91	1.04	0.49	0.88	1	0.76	0.44	1.08	1.06	1.2	1.53	1.22	0.95	1.03	0.95	0.86	1.19	1.03	0.66	0.71	1.73	0.91	1.4	0.9	1.43	1.3	5
E.Coliform (MPN/100 ml)	20	Nil	Nil	Nil	110	80	20	Nil	Nil	Nil	30	Nil	80	Nil	Nil	Nil	Nil	Nil	Nil	Nil	10	Nil	Nil	Nil	Nil	10	Nil	Nil	Nil	Nil	Nil
Total Coliform (MPN/100 ml)	90	50	Nil	Nil	530	80	0	Nil	Nil	Nil	230	Nil	110	Nil	Nil	Nil	10	Nil	Nil	20	10	Nil	Nil	Nil	Nil	30	Nil	Nil	Nil	Nil	0-2
THB (cufu/ml)	14.8	1.7	Nil	0.4	27.2	8.1	6.3	0.1	Nil	0.1	23.2	5.9	3.4	0.9	0.1	0.2	2.2	4.9	3.8	1.1	4.5	3.3	0.2	0.1	5.6	16.4	Nil	2.2	9.1	Nil	<100/100
Electrical conductivity (µs/cm)	49.7	25.1	14.8	21.6	40.2	121.1	14.7	15.1	100.6	60.1	5.5	36.4	22.4	13	20.6	44.6	16.7	36.3	32.2	90	107	17.2	5.59	55	35	69.6	40.7	32.6	61.6	67	1500

Table 3. Recorded water-borne diseases from Braithwaite Memorial Specialist Hospital (BMSH) between 2010 and 2014.

	Diseases							
	Gastroentritis		Diarrhoea		Cholera		Dysentry	
	NR	ND	NR	ND	NR	ND	NR	ND
Year								
2010	87	27	8	3	-	-	14	4
2011	160	14	13	1	-	-	14	2
2012	65	6	6	1	-	-	8	1
2013	105	4	66	-	1	-	24	-
2014	143	2	37	1	-	-	9	1
Total	560	53	130	6	1	-	69	8

NR = Number of cases reported ; ND = Number of deaths

INFLUENCE OF INSTITUTIONAL FACILITIES ON ADOPTION OF FOREST INNOVATIONS IN KENYA

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ABSTRACT

Institutional facilities relates well with performance. This study assessed the interactive influence of institutional facilities on adoption of forest innovations across relevant institutions in Kenya. 51 main institutions involved in, or support conservation activities were surveyed, of which 33 were public, 14 non-governmental, and 4 private. Purposive sampling was used due to heterogeneity of the institutions involved. Primary data were collected using a structured questionnaire. Quartile graph-based quantitative model was used to establish the differences in capacity variation. Statistical analysis involved Levene's Test of Equality of Variances. Embracing both approaches confirmed provision of appropriate facilities ($P>\alpha$) is key to influencing adoption of forest innovations, and model used as an appropriate quantitative analytical framework for assessing and articulating elements of institutional capacity. The study reiterates, to respond to conservation paradigm shift, status and condition of facilities was relevant, but not imperative.

Key words: Institutional facilities; Institutional capacity; Adoption; Forest; innovations

1. INTRODUCTION

Kenya's forest resources directly and indirectly support economic growth, other productive sectors and sustainable rural development. These resources are important components in strategies for adapting to climate change, which is a cross-cutting issue and therefore, requires special institutional arrangements (FAO, 2013; GoK, 2013a). Kenya's forest cover is about 6.99% (KFS, 2015). However, the cover is still below the recommended 10% minimum international standard and constitutional requirement (FAO, 2010).

Sentiments on the dismal, dispersed and degraded (DDD) status of Kenya's forest/tree cover and biodiversity in state, county and private land are a well-documented national concern (MENR, 1994; UNEP, 2001; GoK, 2003; KEFRI, 2005; GoK, 2005; MENR, 2006; UNEP, 2006; GoK 2010a; Act!, 2015). Evidently, the low forest cover is manifested and constrained by a combination of factors, which have created forest resource gaps and inadequate opportunities for synergies.

Most of these challenges are familiar and linked to adequacy of institutional facilities to influence adoption of forest innovations (KARI, 2005; Kowero *et al*., 2006; Nair, 2006). The challenges continue to undermine initiatives to achieve sustainable management and conservation of the country's forest resources. The current paradigm shift embraces a need for pragmatic and participatory approach to forest conservation and management beyond the mandate, scope and capabilities of any single institution. This realisation suggests a need to: i) understand past and prevailing facilities characteristics; ii) use an objective analytical framework to assess and link capacity to pragmatic forest conservation development and adoption mechanisms across relevant institutions, and iii) promote incentives that inspire invest in institutional facility needs for enhanced adoption of forest innovations.

1.1. The concern

Institutional facility needs is one of the core factors that operationalises resource use towards influencing to adoption of forest innovations. Different levels of institutional facility needs and use have propelled the need to analyse the knowledge gaps and to quantify the interactive influence of institutional facility needs on adoption of forest innovations in Kenya. The knowledge gap is also partly constrained by lack of a quantitative analytical framework to assess and link institutional capacity data to influencing adoption of forest innovations. This inability continues to constrain the potential synergies and efficiencies of relevant institutions as avenues for expansion and conservation of Kenya's diverse but dismal, dispersed and degraded forest resources. The purpose of this study was to assess the facilities status within and across institutions that influence their ability to enhance adoption of forest innovations.

1.2. Study objectives and hypothesis

The broad objective of the study was to assess the influence of institutional facility needs on adoption of forest innovations in Kenya. It focused on the adequacy of institutional facilities involved in influencing adoption of forest innovations, as the specific objective. Conceptually, the facilities context was linked to the hypothesis that adequacy of institutional support facilities have no influence on adoption of forest innovations (H_o). The alternative hypothesis was that adequacy of support institutional facilities, have influence adoption of forest innovations (H_1).

1.3. Significance of the study

Availability and adequacy of appropriate institutional facilities is a pre-requisite to an enabling environment for influencing adoption of forest innovations. The knowledge generated will inform policy to improve in allocating adequate resources to influence adoption of forest innovations in Kenya.

2. LITERATURE REVIEW

Specific institutional capacity assessment and adoption of innovation theories and concepts within internal and external environment have been undertaken and described by different authors. Most of these studies are related to production system and limited to selected local communities. Despite the works, a feature of the adoption literature is its disciplinary fragmentation, which Pannell *et al.,* (2013), attempted to harmonise. However, the combination of literature review provided the necessary framework for this study. They include: Sustainability concept (Anderson and Farrington, 1996; FAO, 2012); Conservation paradigm**;** Forest conservation innovation needs Wanjiku *et al.,* (2013); Operational and adaptive capacities (MENR, 1994; Anderson and Farrington, 1996; Cohen and Wheeler, 1997; GoK, 2005; MENR, 2005; World Bank, 2005; Muyangu and Jayne, 2006; Nair, 2006; FAO, 2009; GoK 2010a; FAO, 2013); Institutional dilemma (MENR, 1994; Annan, 2002; Koech, 2006; Kowero *et al*., 2006; Odera, 2006; Owino, 2007; MFWL, 2012; Pannell *et al.,* 2013); Capacity assessment initiatives (Likert, 1932; Osgood *et al.,* 1975; Kowero and Spilsbury, 1997; Spilsbury *et al*., 1999; Thornton *et al*., 2000; Rollinson and Broadfield, 2002; Ngesa *et.al*., 2003; Spilsbury *et al*., 2003; EuropeAid, 2005; Mulwa, 2005; Ragasa *et. al.,* 2010; USAID-CDIE 2011; Cheung, 2012; KEFRI 2013). The methodology by Kowero and Spilsbury (1997), Spilsbury *et al*., (1999) and Spilsbury *et al*., (2003), is preferred as quantification of variables is at the core of institutional capacity assessment. The output is informed by simple, concrete and measureable data and information, hence comprehensive data underpins realisation of the model's potential (Cheung, 2012).

2.1. Theoretical framework

The processes linking institutional facility needs and characteristics to actions are critical to enhancing adoption of forest innovations. The same facilities in different circumstances can produce different effects. Within the context of adoption decision theories (Ndah *et al.,* 2010), knowledge of the influences is central to understanding what happens, why it happens and how to make desirable events happen, when we need to (Anderson and Farrington, 1996; Honadle, 1999).

Practical implications of the non-intellectual capital theory are examined as the infrastructural, governance and financial capital. The human, social and organisational capital, are also examined within the intellectual capital theory (Rollinson and Broadfield, 2002; Armstrong, 2005). The theories as illustrated in Fig 1, generate three practical institutional questions: What facilities has it got?, Which facilities does it need now and in the future?, How is it going to attract, develop and sustain these facilities to effectively influence adoption of forest innovations?

2.2. Conceptual framework

The conceptual framework reiterates that impacts from adoption of forest innovations emanates from effective and efficient institutional settings. The impact which is enriched by the interactions are therefore, visualised as aggregate of influence of adoption of forest innovations. Consequently, the conceptual framework in Fig 2, underscores the growing realisation that facility needs that influence conservation must be inclusively planned, coordinated and implemented to enhance adoption of forest innovations.

3. RESEARCH METHODOLOGY

3.1. Basis of framework

Forces driving adoption of forest innovations are complex and require an equally complex analytical framework. Drawing from Bengston *et al.*, (1988) and improvements by Kowero and Spilsbury (1997); Spilsbury *et al.,* (1999); Thornton *et al.*, (2000); Spilsbury *et al.,* (2003); and Armstrong, (2005), a similar but improved framework was used to determine the influence of facilitieson adoption of forest innovations in Kenya.

3.2. Study area

The study area is limited to Kenya, whose location, socio-economic and biophysical environment has been described by different authors (Wass, 1995; Maundu and Tengnäs, 2005; FAO, 2010). Kenya's provisional population as at 2012 was 40.7 million people comprising about 8.8 million households (GoK, 2013b; KNBS, 2013). GoK (2013a) projects a population density of 80.3 people km^2 by 2017, which is likely to put more pressure on depletion and degradation of natural resources, hence demand on institutional facilities to respond as appropriate.

3.3. Research design

The unit of study was an institution. A cross-sectional comparative design was used to collect and analyse data from which logical conclusions were drawn (Fankfort-Nachmias and Nachmias, 2004; KIPPRA, 2005). The study duration was in line with the Government of Kenya's financial years 2002/2003 to 2010/2011. Triangulation technique was used to indicate the contribution of each capacity indicator described by mathematical expression (1) and used in data analysis and presenting the results. Methodological flow adopted the conceptual framework in Fig. 2.

3.4. Population and Sampling design

Apopulation of 71 legislated or registered institutions, which are directly or indirectly involved in conservation activities, was used as a sample frame. According to Neuman (1997), a minimum of 10 % sample size is recommended as a standard for a population of less than 100 under investigations. To minimise sampling error and achieve a higher response, the study sample size consisted of 51 institutions.

Purposive sampling was used due to the heterogeneity and difference in the number of institutions in each category. Casely and Kumar (1988) observes that above 20 % sampling ratio, the sampling error remains relatively constant. A sampling ratio of 68 % was purposively used for this study. Sample sizes were stratified by category as follows: 32 public; 15 NGOs; and 4 private, all of which were surveyed. The stratification indicates that the public sector still dominates provision of conservation services in Kenya.

3.5. Data collection

Data collection involved the administration of a structured questionnaire taking cognisant of validity and reliability (Neuman, 1997; Frankfort-Nachmias and Nachmias, 2004; Phelan and Wren, 2007).the main elements included; name of institution, vision, mission, mandate and governance, functional categories and internet and non-internet based physical facilities and equipment. Prior mail contacts, visits and discussions were made with the respective heads or senior officers of relevant institutions, to obtain quantitative and qualitative information. Although attempts were made to obtain the full complement of data required, the study observed that poor record keeping, bureaucracy, and reluctance to provide particularly data on financial resources were evident.

3.6. Data analysis

EXCEL was used for data entry and as a framework for the analytical quantitative model. SPSS involving Levene's Test of Equality of Variances was used for comparative data analysis to establish the institutional facility needs, show the general trends and significant associations in the variables under investigation (*http://academic.udayton.educ/gregelvers/psy216/spss.ttests.htm*). The model was used to process data into values, tables and graphs to show the trends and normalised quartile values for the indicator. Each indicator value was also plotted against the sample quartile values. Quartile based-graphs were used to establish the differences in capacity variation

In this study, institutional facility (FA) needs was reflected by their status, availability and how it was planned to influence adoption of forest innovations. The indicator was expressed as:

$$FA=\sum_{i=1}^{10} h \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

Where:

i=ith conservation-related institution;

h=measure of the condition of facilities in the ith institution.

Quartile graphs were interpreted by the following criteria: i) an indicator value at the top of the 1st quartile reflected the maximum value or the expected highest level (absolute value = 16.0) and region of excellence for that indicator in the survey sample; ii) the value on the boundary of the 2nd and 3rd quartile reflects the median value, which corresponds to the expected variation or common cause region, where institutions are expected to have adequate the capacities necessary for adoption of forest innovations unless a change occurs; and iii) the bottom of the 4th quartile reflected the minimum value expressed as the unexpected variation or special cause region, whose variability should be investigated and acted on. Thus, the model attempts to provide evidence of capacity gaps, which must be identified and addressed to allow adoption of forest innovations to thrive. However, a nil value does not necessarily imply low capacity or absence of value, but also the reluctance and uncertainty among the respondent institutions to provide data.

4. RESULTS AND DISCUSSION

Institutional characterisation

The study notes that the quantitative analytical model is sensitive to requirement for comprehensive data and for informed decision (Cheung, 2012). Of the surveyed institutions, 62.7% were public, 29.4% NGOs and 7.8% private, respectively. The distribution shows that public institutions are the major players involved in, or are supporting conservation activities in Kenya.The responses represented six different institutional functional categories, namely; provision of service (PS) 33.4%, training and research (TR) 9.8%, higher and tertiary education (HT) 17.6%, regional development (RD) 11.8%, local authorities (LA) 17.6%, and commercial

(COM) at 9.8% (Fig 3). This implies that an overarching feature of the institutions was their complementary and mutually reinforcing mandates in relation to environmental conservation (Koech, 2006; UNEP, 2006).

Of the 51 surveyed institutions, 45 comprising 88.2% indicated the presence of instruments of governance. This translated to majority of the sampled institutions having set down rules that seek to define and inspire actions, and verify performance (Johnson *et al.,* 2011).

4.1 Distribution of facilities among institutions

Facilities grid in Fig. 4 indicates the presence of equal strength, described as adequate to influence adoption of forest innovations.The upper and lower indicator values are about 10, respectively, whose variation region lies within the quartile of "common cause" or "expected" variation region. Within this quartile region, there was no facilities gap or limitation to warrant investigation and that inform actions to be taken. The study established thatnone of the institutions had any facilities gap or limitations that warrant investigation to inform actions to be taken. However, proficient communicative processes, is an important complement to favourable institutional facilities to influence adoption of appropriate innovations.

Facilities survey included office buildings, on-station and on-farm conservation facilities; library facilities such as publications, digital and audio-visuals materials; internet/LAN computers and accessories, sharing resources;ASK showground stand: transport fleet; and communication (phone, e-mail). The results also show that of the 51 surveyed institutions, only one had realised the highest level of performance excellence under this indicator. Therefore, adequate supportive facilities are a fundamental component in enhancing adoption of forest innovations.

4.2 Adequacy of support facilities in enhancing adoption of forest innovations

Testing the adequacy of support facilities was linked to the hypothesis: adequacy of support facilities have no influence on adoption of forest innovations across relevant institutions (H_0) and adequacy of support facilities have no influence on adoption of forest innovations across relevant institutions (H_1). Two extreme variables none and good were used. None denotes a zero (0) score, while good denotes three (3). In this example, zero score means there are no facilities to influence adoption of forest innovations while three means there are good facilities to influence adoption forest innovations.

Table 1 presents the perception of the respondent institutions of their support facilities on a score of 0 to 3 (M).

Now, $\sum Mf/\sum f$ is 882/460 = 1.917. Since the numbers are absolute values, 1.917 < 2. Thus, the rating is relatively below adequacy, despite availability. The results of the distribution of the mean score and comparison of the mean of the variables are as presented in Table 2.

The t-test result in Table 2, clearly indicate that $p > \alpha$ value. Thus, the study fails to reject the null hypothesis (H_o) and observe that adequacy of support facilities have no influence on adoption of forest innovations.

Hence, the study rejects the alternative hypothesis, which proposes that adequacy of support facilities have influence on adoption of forest innovations across relevant institutions.

Table 3 presents the perception on conservation investment in relation to adequacy of support facilities based on a score (m) of 0 to 1.

Now, $\sum mf/\sum f$ = 141/437=0.323.Since the numbers are absolute values, 0.323 < 1. Thus, the rating is relatively below adequacy, despite funding allocation. This implies that most of the institutions do not allocate adequate funds as conservation investments (CIN).

Combining the facilities (1.917) and conservation investment (0.323) values indicate that FA and CIN are below adequacy we fail to reject the null hypothesis (H_0) –that the adequacy of support facilities have no influence on adoption of forest innovations across relevant institutions.

Thus, combining the results within this test hypothesis, it is observed that the value of $p>\alpha = 0.05$, so we fail to reject the null hypothesis (H_0) that adequacy of support facilities have no influence on adoption of forest innovations across relevant institutions. This implies we have failed to observe a statistically reliable difference in the adequacy of support facilities to influence adoption of forest innovations. Hence, we reject the alternative hypothesis (H_1) that adequacy of support facilities have influence on adoption of forest innovations across relevant institutions.

Since, the results are consistent with the null hypothesis (H_0), they confirm that across and within institutions in Kenya, the adequacy of institutional facilities, have no influence on adoption of forest innovations.

5. CONCLUSION AND RECOMMENDATIONS

Institutional facilities are important because of their relationship with performance. The study suggests that institutions and systems that integrate different types of facilities should be strengthened to enhance the relative influence of available facilities on adoption of forest innovations and improve quality of service delivery. Although the hypothesis indicated that available facilities have no influence on adoption of forest innovations ($P>\alpha$), all institutions attribute adoption of innovations to available facilities. Across institutions, ICT presents conservation initiatives with opportunities for enhancing awareness on adoption of forest innovation processes. However, the challenge is how to ensure efficient use and management, optimise resource requirements and invest in ICT infrastructure for sustained growth and influence on adoption of forest innovations. The main beneficiaries include forest-related institutions in Kenya. The study contributes directly to their vision, mission, and activities as well informing policy.

The study recommends the following added value to influence adoption of innovations:

1. **Improve capacity:** Linking institutional facility needs and conservation characteristics to actions are critical to influencing adoption of forest innovations.
2. **Embrace the capacity model:** Institutions should embrace the objective quantitative analytical model (Spilsbury *et al.,* 2003; Mukolwe, 2015) to link human capital data with institutional capacity as a

source of positive influence on adoption of forest innovations. However, availability comprehensive data underpins the realisation of the model's potential.

3. **Invest in institutional facilities:** Ensure that institutional systems of investment in facilities compares with the best elsewhere to influence adoption of forest innovations.
4. **Inform policy on adequacy of institutional facility needs:** Inform policy at national, county and institutional level of the need to avail adequate and appropriate institutional facility needs.

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6. TABLES AND FIGURES

6.1 Tables

Table 1: Perception of adequacy of support facilities

Rating	Score (M)	F	Mf
None	0	54	0
Poor	1	77	77
Adequate	2	182	364
Good	3	147	441
Total		**460**	**882**

Table 2: Comparison of mean of two variables on available facilities as *none* or *good*

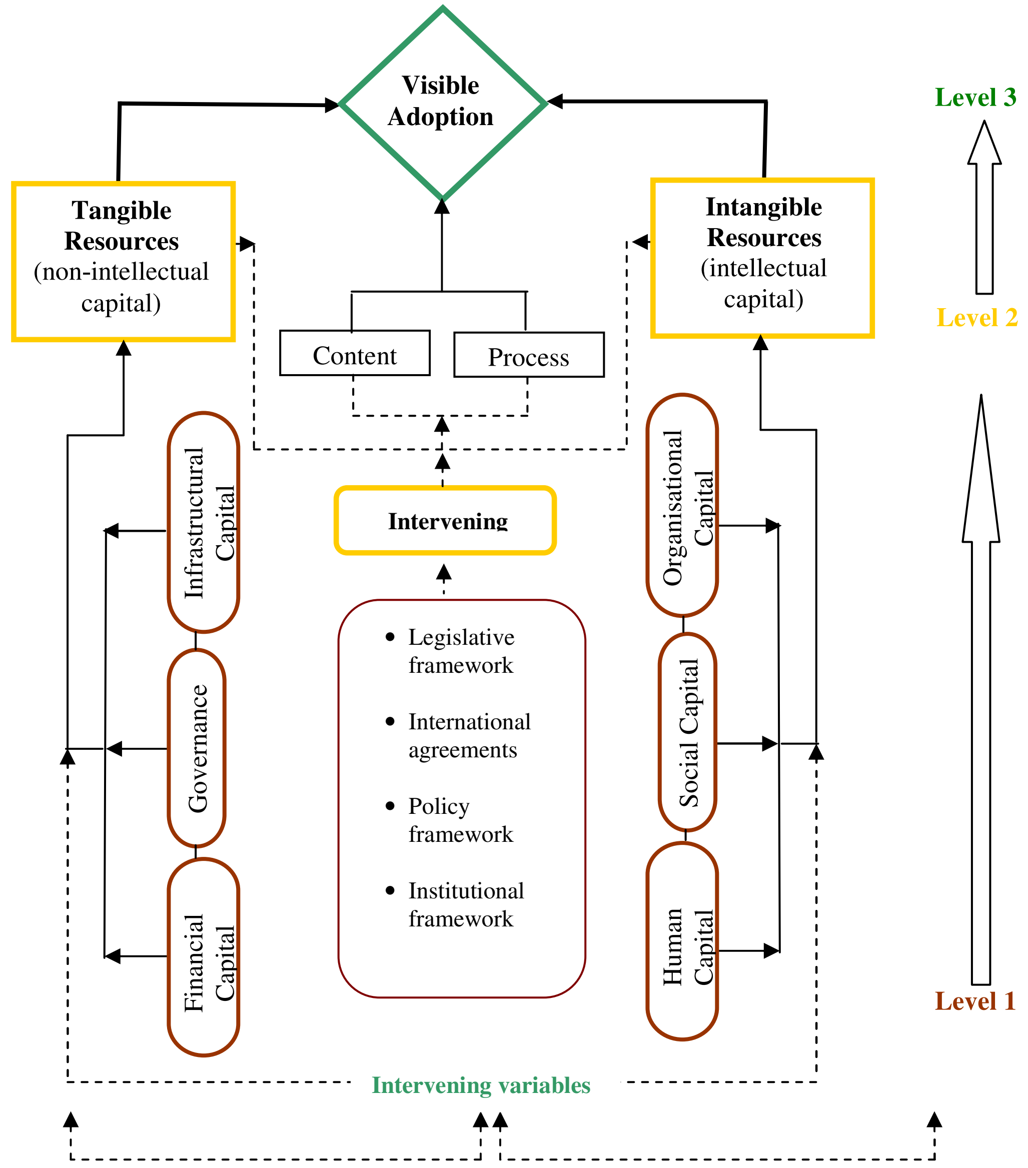
Indicators		N	Mean	SD	t	df	sig
Is there institutional budget allocated to conservation /extension/ technology dissemination?							
On-station conservation	None	5	1.00	0.71			
activities	Good	17	0.76	0.44	0.92	20	0.37
On-farm conservation	None	27	0.80	0.43			
activities	Good	27	0.93	0.48	0.84	26	0.41
ASK Show ground	None	32	0.88	0.49			
	Good	32	0.88	0.34	0.50	31	0.96
Transport fleet	None	22	0.67	0.56			
	Good	22	0.95	0.22	-1.65	21	0.11

Table 3: Perception on conservation investment for support facilities

Rating	M	F	mf
No	0	296	0
Yes	1	141	141
Total		**437**	**141**

6.2. Figures

The figures presented are drawn from Mukolwe (2015).



NB: Level 1 – Empirical Level 2 – Operational Level 3 – Theoretical

Fig. 1: Theoretical framework of institutional capacity

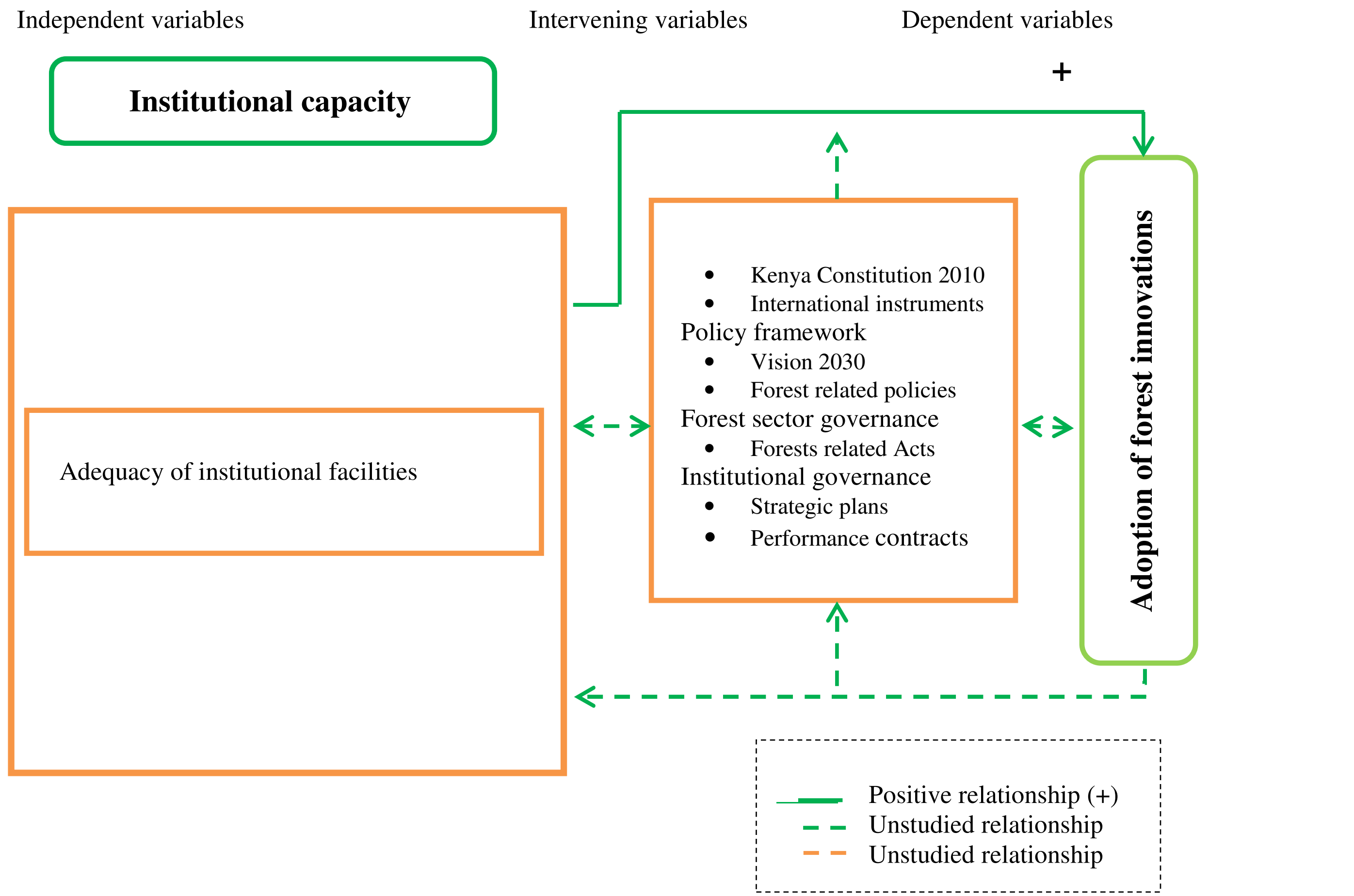


Fig. 2: Conceptual framework of institutional capacity

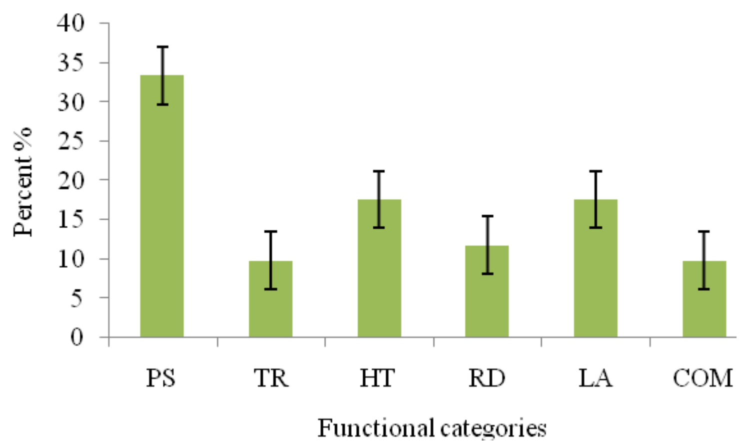


Fig. 3: Distribution of institutional facilities by functional categories

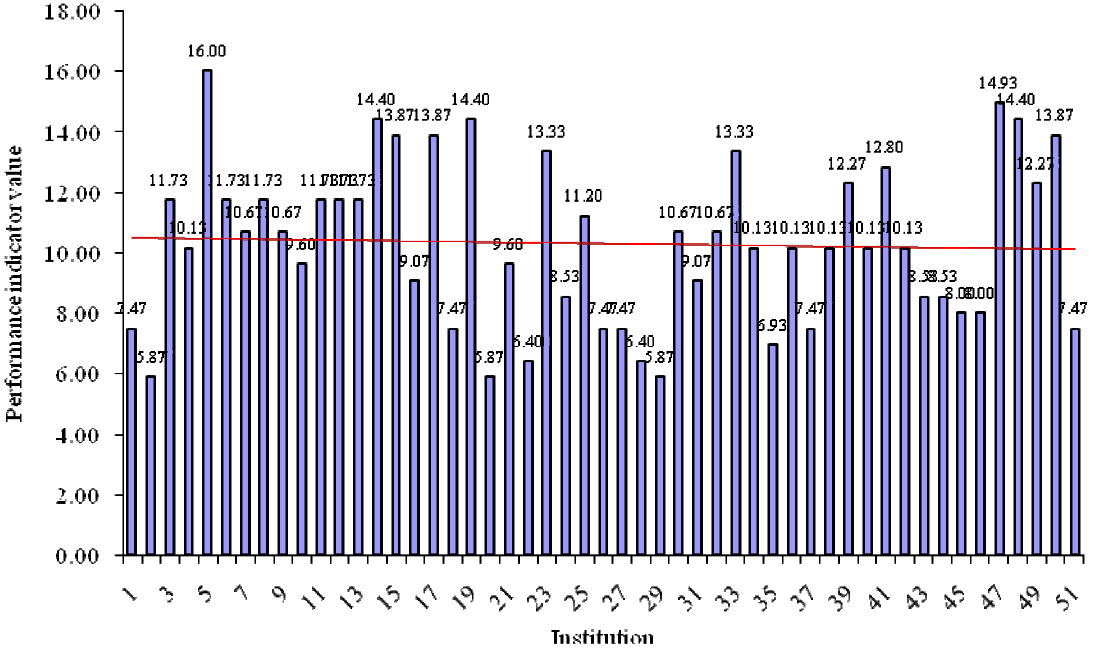


Fig.4: Distribution of facilities among institutions

Declaration

This submission has not been previously published nor before another journal for consideration.