INSTRUCTORS’ PERCEIVED FACILITATION EFFICACY IN OUTDOOR ADVENTURE PROGRAMS IN KENYA. A CASE OF KENYA SCHOOL OF ADVENTURE AND LEADERSHIP

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A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE (RECREATION AND SPORTS MANAGEMENT) IN THE SCHOOL OF HOSPITALITY TOURISM AND LEISURE STUDIES, KENYATTA UNIVERSITY

NOVEMBER, 2018
DECLARATION

This Thesis is my Original Work and has not been presented for a Degree award in any other University.

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I dedicate this work to Kenya School of Adventure and Leadership staff and the disciplined forces of Kenya for the giving me a chance to conduct my research. May the Almighty God continue to bless you abundantly for the gracious work you do.
ACKNOWLEDGEMENT

First and foremost I recognize the Almighty Father for enabling me with good health, robust energy and granting my family the patience they have had as I worked on this thesis. Special regards goes to my wife Lucy, sons Lamek, Ezra, daughters; Bahati, Ruth and Naomi, for their moral support and enduring my long absence from home and in their life when they needed me most. Thanks to my wife Lucy for shouldering most of the family needs and expenses as I paid my school fees, God will reward you immensely. The support, guidance of my supervisors’ Dr. David Muigai and Dr. Nkatha Muthomi will forever be appreciated. Special thanks too goes to Mary Ndua for editing my work, may God bless the works of their hands. I also wish to acknowledge KESAL and Mr. Karobia Nderi for their immense support during my data collection.
# TABLE OF CONTENTS

DECLARATION.................................................................................................................... ii
DEDICATION....................................................................................................................... iii
ACKNOWLEDGEMENT........................................................................................................ iv
LIST OF TABLES................................................................................................................... viii
LIST OF FIGURES............................................................................................................... ix
ABBREVIATIONS AND ACRONYMS................................................................................ x
OPERATIONAL DEFINITION OF TERMS.......................................................................... xi
ABSTRACT............................................................................................................................ xiii

## CHAPTER ONE: INTRODUCTION ................................................................................. 1

1.1 Background to the Study.......................................................................................... 1
1.2 Statement of the Problem......................................................................................... 4
1.3 Purpose of the study.................................................................................................. 6
1.4 Objectives of the study.............................................................................................. 6
1.5 Research Hypotheses................................................................................................. 7
1.6 Significance of the study........................................................................................... 7
1.7 Delimitations of the Study ....................................................................................... 8
1.8 Limitations of the Study............................................................................................ 8
1.9 Assumptions of the Study......................................................................................... 9
1.10 Conceptual Framework............................................................................................ 9

## CHAPTER TWO: REVIEW OF LITERATURE .............................................................. 13

2.1 Introduction................................................................................................................ 13
2.2 Facilitation Efficacy of Outdoor Facilitators ............................................................ 13
2.3 Level of Experience, Education and Facilitation Efficacy ....................................... 18
2.4 Gender and Facilitation Efficacy ............................................................................ 19
2.5 Outdoor Facilitator Evaluation by Program Participants ......................................... 22
2.6 Instructors-Participant Ratio................................................................................... 23
2.7 Summary of the Reviewed Literature...................................................................... 26
CHAPTER THREE: METHODOLOGY .............................................................28
3.1 Research Design ......................................................................................28
3.2 Measurement of Study Variables ..............................................................28
3.3 Study Location ..........................................................................................28
3.4 Target Population ......................................................................................29
3.5 Sampling Techniques and Sample Size ......................................................30
3.6 Research Instrument ...............................................................................30
3.7 Pretesting ..................................................................................................31
3.8 Instrument Validity and Reliability ............................................................31
3.9 Data Collection Procedures .....................................................................32
3.10 Data Analysis and Presentation ................................................................33
3.11 Logistical and Ethical Considerations ......................................................34

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION .........................35
4.1 Demographic Details of Participants ..........................................................35
4.2 KESAL Instructor’s Self Reported Facilitation Efficacy and KDF Perceived Facilitation Efficacy .................................................................39
4.2.1 Relationship between the perceptions of Facilitators and Participants in Various Facilitation Efficacy Constructs ..................................................41
4.3 Influence of Gender on Facilitation efficacy of outdoor Instructors in KESAL .................................................................42
4.4 Outdoor Instructors Level of Experience and Facilitation Efficacy .............44
4.5 Outdoor Instructors’ Level of Education and Facilitation Efficacy ..............46
4.6 Instructor-Participants Ratio .......................................................................47
4.6.1 Outdoor Instructors and KDF Cadets Preference for Participants-Instructor Ratio .48
4.6.2 Preference for Participants-Instructor Ratio According to Gender ..............49
4.7 Qualitative Analysis of Key Informant Interviews ......................................51
4.7.1: Gender influence Efficacy, Experience and Motivation Themes ..........52
4.7.2: Exposure, Knowledge and Proficient Themes ....................................52
4.7.3: Cognitive Engagement and Confidence/ Sobriety of mind Themes ..........53
4.7.4: Ideal observation, Safety and Diversity Themes ..................................55
4.7.5: Team building, hiking and Rock Climbing Themes ..............................55
CHAPTER FIVE: DISCUSSION

5.1 Demographic Details of Participants ..........................................................57
5.2 Facilitation Efficacy of KESAL Outdoor Facilitators .....................................57
5.3 Gender and Facilitation Efficacy ....................................................................61
5.4 Level of Experience, Education and Outdoor Instructor’s Facilitation Efficacy......63
5.5 Instructor-Participants Ratio .........................................................................68

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS ......73

6.1 Summary .......................................................................................................73
6.1.1 Demographic Information .........................................................................73
6.1.2 Facilitation Efficacy of KESAL Outdoor Facilitators ..................................73
6.1.3 Gender and Facilitation Efficacy .................................................................74
6.1.4 Level of Education, Experience and Outdoor Instructor’s Facilitation Efficacy......74
6.1.5 Instructor-Participants Ratio .......................................................................75
6.2 Conclusions ....................................................................................................76
6.3 Recommendations for Policy and Practice .....................................................77
6.4 Recommendations for Further Studies ..........................................................79

REFERENCES .................................................................................................80

APPENDICES .....................................................................................................85

Appendix A: Participants Statement and Informed Consent Form .........................85
Appendix B: IEQ Instrument ................................................................................89
Appendix C: Research Approval ..........................................................................98
Appendix D: Introduction Letter to Nacosti ..........................................................99
Appendix E: Ethical Approval Letter ...................................................................100
Appendix F: Research Authorization (NACOSTI) ...............................................102
Appendix G: Research Authorization County Government ...................................103
Appendix H: Research Permit .............................................................................104
Appendix I: KESAL Map ....................................................................................105
LIST OF TABLES

Table 4.1: Demographic Details of all Participants ................................................................. 35
Table 4.2: KESAL Instructors Demographic Details ............................................................... 37
Table 4.3: KDF Cadets Demographic Details .................................................................... 38
Table 4.4: Means of the Ten Facilitation Efficacy Constructs .......................................... 40
Table 4.5: Independent t-tests of Various Facilitation Efficacy Constructs between
instructors and KDF Cadets .............................................................................................. 42
Table 4.6: Independent t-test Facilitation Efficacy responses Among KESAL Outdoor
Instructors ......................................................................................................................... 43
Table 4.7: Independent t-test Facilitation Efficacy responses Among KDF Cadets .......... 44
Table 4.8: Mean Score for Each Experience Category ......................................................... 45
Table 4.9: Difference between Experience and Instructors’ facilitation Efficacy .......... 45
Table 4.10: Mean Score of Each Education Category ......................................................... 46
Table 4.11: Difference between Outdoor Instructors’ Level of Education and Facilitation
Efficacy .................................................................................................................................. 47
Table 4.12: Mean and Standard Deviation of Participants-Instructor Ratio According to
Gender .................................................................................................................................. 51
Table 4.13: Independent t-test of Participants-Instructor Ratio According to Gender ...... 51
LIST OF FIGURES

Figure 1.1: Conceptual framework of Self Efficacy ................................................................. 12

Figure 4.1: Participants-Facilitator Ratio .................................................................................. 48

Figure 4.2: Outdoor Instructors and KDF Cadets Preference for Participants-Instructor Ratio ................................................................. 49

Figure 4.3: Preference for Participants-Instructor Ratio According to Gender .......................... 50
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBE</td>
<td>Character Building Efficacy</td>
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<td>GSE</td>
<td>Game Strategy Efficacy</td>
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<tr>
<td>IAF</td>
<td>International Association of Facilitators</td>
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<tr>
<td>IEQ</td>
<td>Instructor Effectiveness Questionnaire</td>
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<tr>
<td>KESAL</td>
<td>Kenya School of Adventure and Leadership</td>
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<tr>
<td>SD</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>OAE</td>
<td>Outdoor Adventure Education</td>
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<td>OAP</td>
<td>Outdoor Adventure Programs</td>
</tr>
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<td>OBP</td>
<td>Outward Bound Program</td>
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<tr>
<td>KDF</td>
<td>Kenya Defence Forces</td>
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OPERATIONAL DEFINITION OF TERMS

**Adventure-based research:** Studies that focus on outdoor adventure programs

**Expeditions:** An organized journey for a particular purpose.

**Facilitation competencies:** Skills required in carrying out effective facilitation

**Facilitation efficacy:** Level of effectiveness shown by outdoor adventure instructors during their facilitation experiences.

**Instructor-participant ratio:** the number of learners compared to the number of instructors in an outdoor adventure experiential activity.

**Outdoor adventure programs:** Activities offered during outdoor adventure education, which includes and not limited to; Hiking, Mountaineering, rock climbing, fishing, camping, navigation, kayaking, whitewater rafting, skiing, backpacking, solo night, ropes course, zip line among others.

**Outdoor instructor:** An individual who is employed full time, either seasonally or year round, to lead expeditionary outdoor programming for paying clients

**Personality traits:** Features that define a person’s characteristics, either professional or personal.

**Self-assessment:** A kind of assessment whereby a facilitator self-reviewed his or her own performance.
Self-efficacy: Outdoor adventure facilitators’ self-belief in their capacity to execute behaviors necessary for instructing in the outdoor adventure programs.

Transferable outcomes: Outcomes exhibited by learners as a result of the instructions/lessons received.

Wilderness areas: Areas that have not been inhabited by human beings, mostly forests and mountainous.
Positive outcomes of outdoor adventure programs depend on the efficacy of the facilitation process. This study sought to assess outdoor instructors’ perceived facilitation efficacy in outdoor adventure programs in Kenya – case of Kenya School of Adventure and Leadership (KESAL). The objectives of the study were to establish facilitation efficacy of outdoor adventure instructors, to determine whether there were significance differences in the facilitation efficacy of the outdoor adventure facilitators based on their gender, experience, and education level. The study also set out to find out the perceived effectiveness of instructor-participant ratio as used in facilitation of the outdoor programs in KESAL. A case study research design was adopted for the study. Data for the study was collected using instructors effectiveness questionnaire (IEQ) questionnaire coupled with structured interviews with five key informants. Data generated was analyzed using SPSS version 20.0. A total of 135 KESAL outdoor instructors and KDF cadets successfully completed the questionnaires out of 170 issued. The respondents comprised of 50 outdoor instructors and 85 Kenya Defence Force (KDF) cadets who attended an outdoor education course at Kenya School of Adventure and Leadership. Assessment on the influence of gender on facilitation efficacy indicated male instructors to have high mean compared to female instructors with an independent t-test establishing a significant difference between male and female KESAL outdoor instructors facilitation efficacy \( p<0.01 \). There was no significant difference; ANOVA, \( p>0.01 \), in terms of education levels and outdoor instructors’ perceived efficacy. In terms of experience and facilitation efficacy of KESAL outdoor instructors, there was no significant difference \( p>0.01 \). Instructor- participants’ ratio of 1: (4-6) was preferred by many respondents (KESAL outdoor instructors and KDF cadets) 61\%. Nevertheless, a good number of respondents 18\% supported the ratio 1: 12 which was the current ratio used at KESAL, independent t-test did not establish statistical difference in instructor-participants ratio preference according to gender \( p>0.01 \). The study concluded that KESAL outdoor instructors facilitation efficacy was beyond average. However, there were found to have difficulties in managing stress of participants. The study recommended KESAL to empower females with the aim of appealing to them to enroll in outdoor oriented courses. KESAL to further ensure outdoor instructors maintain outdoor instructors’ motivation through policies that promotes instructors to work long in the institutions and others methods such as positive feedback, appreciation, constructive criticism, tours and occasionally appreciation tokens. It was also recommended that further studies need to explore the technical skills of KESAL outdoor instructors in order to have a comparable literature to affirm conclusions on the efficacy of the instructors.
CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

Outdoor adventure education (OAE) programs need well informed and highly effective instructors to meet the evolving demands in the society. An outdoor Adventure instructor is an individual in charge of managing the groups’ processes to help them achieve intended purposes or goals (Grossman-Thompson, 2010). For effective facilitation of outdoor adventure programs, instructors should have strong work ethics, caring disposition, leadership qualities, and teacher peer influence. They should also be able to design instructional expectations and use positive systems to reinforce appropriate behavior, pace of instruction, and the pre-eminence of instruction (Gordon, 2011). It, therefore, follows that good instructor influence has a direct effect on the quality of instruction and, on self-efficacy to carry through an outdoor adventure program.

Outdoor adventure instructors are also supposed to ensure the safety of participants and teach knowledge and skills applicable to the required learning outcomes. Meyer & Wenger (2008) encouraged instructors to always ensure they declare to their participants their roles and responsibilities during the outdoor program period. Meyer & Wenger (2008) further pointed out that while some decisions might be mutual with the participants; instructions, safety, facilitation, observation, clarifying statements, and raising concerns in the group are the role of the leader/instructor.

Several studies in the field of outdoor instructors have raised varied concerns on the effect of gender in relation to facilitation efficacy. Some have focused in the area of
personality trait between male and female instructors while others were concerned in
terms of coaching differences and effects on instructor’s competence. Hendy (2007),
evaluated trait difference between male and female instructors alluded that personality
traits in both male and female instructors were similar. The only differences identified
were that female instructors were introverted, reserved and serious than their male
colleagues. Schmidt & DeShon (2009) investigated the level of efficacy of female coaches
and male high school coaches using competence information scale and they noted that
there were no significant differences among male and female instructors in terms of the
source competence in coaching. However, female coaches were observed to commit on
the improvement of their athletes than their male counterparts. It is unclear whether the
difference between male and female instructor exist. The question of difference among
gender become more pronounced particularly when it comes to technical skills in
outdoors, for example rock climbing, repelling, navigation among others. Similarly,
there no documented studies in Kenya that have previous investigated this scenario to identify
whether there is a gap between male and female outdoor instructors regarding their
facilitation efficacy.

There are many examples in the instructor effectiveness literature that suggest that
besides focusing on techniques, theories or skills that outdoor instructors may apply, the
facilitator’s individual traits and the interpersonal bond between the group and the
outdoor instructor is also important. Carl Rogers (2011) in the book “Center for Studies
of the Person”, asserts that attitudes and the personal qualities of the outdoor instructor
are essential than any techniques they might employ. Facilitation skills, as emphasized by
International Association of Facilitators (IAF) calls for instructors to develop an awareness that integrates their importance to the facilitation process (Gordon, 2011). Apart from that, the facilitator must formulate individual qualities in order to help the group fulfill their goals.

The facilitator's beliefs in their own abilities to instruct are crucial in the running of programs. Additionally, their perception of their competence influences the outdoor adventure learning outcomes (Gordon, 2011).

It is necessary for instructors to have self-efficacy because it affects their motivation and willingness to perform better (Bandura, 2012). Self-efficacy beliefs control emotions and thought processes that enable actions in which individuals apply substantial effort in hunting for goals (Bandura, 2012). Naturally, individuals feel more comfortable when handling a given task if they feel that they can succeed at that task. Conversely, when people distrust their abilities, productivity weakens.

The quality of outdoor program may also be influenced by the number of the participants assigned to outdoor instructors, that is, instructor to participants’ ratio. Jaspen, (2015) indicated that there is a positive relationship between group size and program effectiveness. Some studies argue that the quality of leadership skills employed by outdoor instructors have more impacts on the program rather than group size alone. There are numerous dynamics that influence the quality of outdoor programs consequently outdoor instructors’ effectiveness besides group size. Outdoor instructors’ experience, their level of education and age and maturity level of participants have a bearing on the
results of the outdoor program. The ability of outdoor instructors to seamlessly integrate these variables when facilitating outdoor activities determines their outdoor efficacy.

Outdoor adventure facilitators are clearly distinguished by existing adventure education frameworks as a central part in participant learning. Davidson, Bloomington,& Bloomington(2016) on their study titled framework of the Outward Bound Process, developed a model for adventure education programs to point out instructors as one of the numerous interactive course apparatus impacting on participant learning. Some of the responsibilities of outdoor instructors include to lead multi-day expeditions in remote wilderness areas, provide direct care to the participants and teach wilderness living and surviving skills while continuously experiencing daily pressure “making decision in a split of a second” (Aguila, 2012).

The idea that outdoor instructors in Kenya relate with outdoor learning and instructing styles are barely known consequently calling for further investigation. There is, therefore, need to establish the self-efficacy of the outdoor adventure instructors in Kenya. KESAL, the only government institution of outdoor education in Kenya combines both soft skills of group dynamics and hard skills in outdoor adventure programs. Thus, this study set to examine outdoor instructor’s perceived facilitation efficacy in outdoor adventure programs in Kenya, the case of KESAL.

1.2 Statement of the Problem

Program outcomes of any adventure-based program highly depend on facilitation efficacy. Bandura(2012) asserts that self-efficacy beliefs have an effect on the action
individuals pursue, amount of effort they exert, perseverance in dealing with obstacles or failures, resilience in the face of adversity, the extent to which thoughts are self-aiding or self-hindering when coping with environmental demands, and ultimately the level of accomplishment attained. Self-efficacy is, therefore, an important construct useful for understanding a broad spectrum of human behavior in various social contexts, especially in extreme environments that involve a lot of risk management. The environmental demands on leading outdoor adventure pursuits in the high altitude at Mt. Kenya are quite high.

There have been reports though on rare occasions where some participants opt to change their group during navigation and rock climbing, similarly a few outdoor instructors declining to take up some roles during some outdoor courses. The reasons for such eventuality were not documented by the institution and such problems are solved internally by the program director.

Therefore, there is need to understand the levels of self-efficacy of facilitators who lead such outdoor programs in Kenya since it has a direct bearing on the outcome of the outdoor adventure programming. This study, therefore, assessed how the outdoor adventure instructors at KESAL perceive their competence in facilitating outdoor adventure learning.
1.3 Purpose of the study

The purpose of the study was to assess outdoor adventure instructors’ perceived facilitation efficacy in outdoor adventure programs at KESAL and how it was influenced by instructor’s level of education, experience and gender.

1.4 Objectives of the study

The study was guided by the following objectives:

1. To find out if there was a significant difference in the perceived facilitation efficacy between instructors and participants.

2. To determine if there was a significant difference in facilitation efficacy of outdoor adventure instructors in KESAL based on gender.

3. To establish whether there was a significant difference in facilitation efficacy of outdoor adventure instructors in KESAL based on instructors’ experience.

4. To establish whether there was a significant difference in facilitation efficacy of outdoor adventure instructors in KESAL based on instructors’ education level.

5. To find out the difference in instructor-participants ratio preference between male and female respondents (KESAL instructors and KDF cadets).
1.5 Research Hypotheses

1. There was no significant difference in the perceived facilitation efficacy between instructors and participants.

2. There was no significant difference in the facilitation efficacy of outdoor instructors between males and females.

3. There was no significant difference in the facilitation efficacy of outdoor instructors at KESAL based on work experience.

4. There was no significant difference in the facilitation efficacy of outdoor adventure instructors at KESAL based on their education level.

5. There was no significant difference in instructor-participants ratio preference between male and female respondents.

1.6 Significance of the study

Case studies establish crucial information that is useful to institutions. The data for this study was collected from KESAL, the main public institution in Kenya which offers outdoor and leadership programs to major corporate institutions and government organizations such as Kenya Navy, Administration Police, Universities and Kenya Revenue Authority throughout the year with participants and instructors from all over the country. The results from this study could be effective to KESAL in developing a thorough outdoor programs based on the data derived from their instructors and clients response which could be helpful in planning more effective programs.
The data on self-efficacy of outdoor instructors also provide information relating to instructors that might be useful to institutions that offers outdoor education and leadership programs to recruit appropriate and skillful instructors in order to optimize client’s satisfaction. In Kenya, there is paucity of information that relates to facilitation efficacy of outdoor facilitators due to limited studies that investigate outdoor instructors’ efficacy. This study therefore, helps in filling the existing gap of knowledge on the efficacy of outdoor adventure practitioners in Kenya.

1.7 Delimitations of the Study

1. The study was delimited to outdoor instructors at KESAL, since this was the only public owned outdoor institution that offers outdoor and leadership programs throughout the year.

2. The study was also delimited to the outdoor adventure instructors (educators) and KDF cadets (learners) at KESAL as the respondents of the study. The data was collected using instructors efficacy questionnaires in order to establish the efficacy of outdoor instructors in facilitation of the programs to the clients.

1.8 Limitations of the Study

1. The study was based on instructors’ self-reported data coupled with participants’ reports on instructors’ facilitation efficacy which may contain bias. The bias was likely to arise due to the study’s utilization of self-reported data. However, the researcher gave appropriate guidelines to the respondents on how to fill the
questionnaires and also ensured all ethical considerations and participants were assured of their confidentiality.

2. The numbers of public institutions that offer outdoor adventure programs in Kenya are limited. Therefore, the findings of this study are applicable to the outdoor adventure facilitators and may not be generalized to other populations.

1.9 Assumptions of the Study

1. That the study instrument would measure all the required attributes on outdoor adventure facilitators’ efficacy.

2. It was assumed that the respondents were able to thoroughly respond to instructor’s efficacy questionnaire without coercion.

1.10 Conceptual Framework

Consistent with qualitative methodology, this study was based upon a conceptual framework, a theoretical model of outdoor instructors’ process that is relevant to self-efficacy. The model was guided by Bandura (2012) self-efficacy theory. According to Bandura (1995) self-efficacy beliefs are integral aspects of human motivation and behaviors which influence the actions that can affect one's life. Self-efficacy is what a person believes he or she can accomplish using his or her skills under certain circumstances. Lunenburg (2011) explains that self-efficacy can be thought as task specific version of self-esteem.
The basic principle behind self-efficacy of outdoor instructors is that they are more likely to engage in activities (technical or interpersonal) that they have high self-efficacy and less likely to engage in those they do not have. According to Gecas and Kaplan (2004), people behave in the way that executes their initial beliefs; therefore self-efficacy operates as self-fulfilling prophecy that is an individual will engage in activities they feel confidence and comfortable with. For example, outdoor instructor ‘A’ has high ability and great deal of experience in providing team building activities, but he lack the confidence that he can facilitate team building activities for an international corporate staff. Outdoor instructor ‘B’ has only average ability and only a small amount of experience to conduct team building activities yet he has great confidence that he can work hard to develop team building activities for the same corporate staff. Because of outdoor instructor a low self-efficacy in facilitating team building, he lacks the motivation and tells supervisor he cannot manage the task. Outdoor instructor B, due to his high self-efficacy, is highly motivated, work overtime to learn how to develop quality activities, facilitate team building to corporate staff, and earn a promotion. Self-efficacy has influence over people’s ability to learn, their motivation and their performance, as people will often attempt to learn to perform only those task for which they believe they will be successful (Lunenburg, 2011).

Outdoor instructors form their self-efficacy beliefs by interpreting information from various sources. However, the most influential source is the interpreted results of one’s previous performance. Therefore, if outdoor instructor facilitated a successful program he/she will be more likely to have high self-efficacy beliefs, in other words, possess
mastery experience. In addition to interpreting results of their actions, outdoor instructors form their self-efficacy beliefs through vicarious experience of observing others; this could be their colleagues or supervisors. Social persuasions from others also play a vital role in developing self-efficacy. Somatic and emotional states such as anxiety, stress, arousal, and mood states also promote self-efficacy of outdoor instructors, they act as constructive criticism. Level of education of outdoor instructors may be observed to act as a precursor of their confidence which in turn reduces their emotional level hence boosting instructor’s competence.

Outdoor instructors’ experience both environmental and technical experience can provide a lee way to facilitators. Experience promotes self-confidence consequently competence of instructors when discharging their duties. Gender plays a subtle role in facilitation efficacy. The only presumed difference exists in relation to type of activities, that is, technical or interpersonal skills. Male instructors can demonstrate competence in activities that require muscular strength compared to female instructors.
Figure 1.1: Conceptual framework of Self Efficacy

- Performance accomplishment i.e. past experience
- Vicarious experience i.e. modeling by others
- Social persuasion, i.e. coaching and evaluating feedback
- Physiological and emotional states
- Experience (environmental & work) and Gender

Developed by the researcher (Adapted by Bandura’s Self efficacy)
CHAPTER TWO: REVIEW OF LITERATURE

2.1 Introduction

Research on the background and competencies of instructors has been well documented. According to McKenzie (2009), there are many studies on outdoor education components that are directed towards instructors but the outcomes vary. These variations come as a result of different conditions encountered, different scales used, and the different objectives generated by the researchers (McKenzie, 2009). For example, on gender, Frauman and Washam (2013) reported that female instructors are highly rated as the best instructors than their male counterparts due to their ability to demonstrate empathy to participants. It is believed that female instructors tend to be more empathetic than their male counterparts. However, some study indicated that participants preferred male instructors (Frauman & Washam 2013). Grossman and Thompson (2010) on the other hand, found constructs such as age, gender, personality, and personal opinions or interests to have less significant correlations to coaching efficacy that is, ability to produce desired results.

2.2 Facilitation Efficacy of Outdoor Facilitators

A substantial research literature has looked into the traits of effective outdoor instructors (Thomas, 2008b; Grossman Thompson, 2010; Frauman & Washam 2013). It provides valuable knowledge on instructor characteristics that determines program outcomes. However, it has only concentrated on supervisors in establishing instructor efficacy. Thomas, (2008b) employed participants’ assessment of outdoor facilitators to connect many biographical traits to facilitator efficacy. These characteristics were: education, age,
gender, experience, and having travelled widely. Thompson (2010), used supervisors’ ratings to develop a connection between instructor efficacy and instructors’ experience and level of education, but did not find striking link between instructor efficacy and instructors’ personality characteristics, leadership opinions, gender, and age. Frauman and Washam (2013), in contrast, found that participants rated male instructors as less effective when compared to their female counterparts.

Hendy (2005) reported that instructors rated by their supervisors as most effective were normally creative, reserved, dominant, bright, forthright, imaginative, tender-minded, and experimenting.

Instructors’ social interactions are also believed to impact the effectiveness of outdoor programs (Thomas, 2008b; Thompson, 2010). Thomas (2008b) and Meyer (2008), asserts that there is relationship between instructor anticipations and participant growth.

Leather (2013), posit that program context and objectives and involvement of instructors in the program are the main determinants of the facilitation responsibilities that outdoor leader should fulfill. They came up with 12 leadership competencies from a meta-analysis of previous studies, whereby facilitation skills are among the core competencies. Büchel (2007) argued that effective facilitators must focus on how they make decisions and what happens inside them and their functions as a whole.

A number of studies that assess outdoor adventure instructor’s competence have devised instruments for defining and measuring characteristics of effective adventure educator. The instruments are intended to identify set of competencies that are integral to
instructional effectiveness. Brackenreg, Luckner, and Pinch (2009) in their survey measured concepts such as communication skills, creating opportunities for processing and providing feedback. The researchers reported that communication skills and feedback are paramount skills required by adventure instructors for competence. Doherty (2011) on the other hand, observed that outdoor adventure instructors’ effectiveness can be regarded in terms of student retention of learning based on three different teaching or facilitation styles such as group, delegate or activity style. Schumann et al., (2009) identified other outdoor instructors’ behaviors that are relevant to student learning: knowledge, empathy, patience, role modeling, providing feedback, coaching skills, and creating a supportive learning environment. Earlier research by Mckenzie (2003) found similar outdoor facilitator qualities for example, empathy, people skills, leadership, feedback and communication skills. These outdoor instructors’ qualities were incorporated in this study to assist in providing framework to evaluate KESAL outdoor instructors’ competence.

Although a significant number of outdoor program professionals will accept the need for highly skilled outdoor adventure instructors, it is evident there exist little agreement as to what skills constitute the minimum accepted competencies for employment as outdoor adventure instructor. Cousineau (2009) surveyed 97 outdoor adventure professionals using a three-round modified Delphi Questionnaire to evaluate 47 standards for outdoor adventure leadership certification. Among the conclusions reported was the desire by all respondents for an outdoor leadership certification system. The respondents also reported
that in order to become certified, an individual should meet a minimum standard of competency in each skill area.

Buell (2007) during the survey of 300 outdoor adventure professionals in order to define the skill competencies which should be possessed by entry-level and experienced-level leaders demonstrated eight skills, communication, confidence, planner, decision maker, stewardship, teacher, expedition behavior and confidence that deemed essential for entry-level leaders and 60 skills integral for experienced-level leaders. Cosgrove (2010) insisted that outdoor adventure instructors must possess a diversity of interpersonal skills such as, communication, teaching, and group dynamic skills. Cosgrove, (2010) reported unanimous agreement among his survey panel that competencies in interpersonal skills were vital for outdoor leaders to possess.

Gasset et al., (2003) acknowledged the importance of leading people in outdoors. They however, pointed out that it is important for outdoor instructors to have specialized skills such as safety and risk management, first aid, navigation and rock climbing skills. While outdoor leadership competency, program curricula, and effective leader qualities have been studied, there is no empirical data to substantiate the notion of how relationships built in outdoors impact on participant experience. Outdoor education program vary widely in philosophy, methods and activities and hence the difficult to synthesize key factors that determine the effectiveness of an outdoor program. Nevertheless, some factors such as individual differences for example mental, physical, social and cultural differences play an integral role in determining participants’ experience. Experience is basically the individual’s personal history or stored experiences and the motivation,
fitness, goals, readiness for change among others with which the individuals enters the program. Philosophically, this notion of the importance of the individual draws upon John Dewey's principle of continuity which, along with the interaction with the situational circumstances (the program) ultimately determines the quality of an individual's experience (Neil, 2007).

In psychological terms, individual differences refers to psychological constructs which vary amongst people, for example, personality factors such as introversion-extraversion, emotional stability-instability amongst others but also to many other factors, such as motivation, coping, self-efficacy, locus of control, and so on. These factors can impact on instructors’ ability to respond to stressful situations, their creativity and problem solving which all lead to facilitation efficacy. Neil (2007) recommended five areas of individual differences which hold much promises for future investigation. These areas were self-efficacy, coping, and readiness for change, resilience and goal setting.

Njenga (2015), in his study ‘coaching-efficacy and motivation of special Olympics’ volunteer-coaches in community and school-based programmes in Nairobi, Kenya’ observed that intrinsic motivation played a pivotal role in facilitation efficacy of coaches. Njenga alluded that the higher index in character building efficacy and motivation in volunteer coaches over salaried coaches was as result of intrinsic motivation than extrinsic needs. Therefore, motivated outdoor instructors are more likely to demonstrate efficacy while facilitating outdoor activities.
It is clear that facilitation efficacy of outdoor facilitators is a multifaceted construct that is made of a number of traits such as mental acuity, technical skills, attitude, problem solving, creativity and individual awareness.

2.3 Level of Experience, Education and Facilitation Efficacy

Many studies have sought to comprehend the exact impact of facilitators/instructors experience on learning outcomes; similarly, the influence of education is also investigated to assess whether it has significant impacts on outdoor facilitation efficacy. Büchel (2007) suggested that instructor’s travelling history and experience has influence on instructors’ efficacy. In the study of OAE and their superiors, Büchel (2007) found instructor behavior to be crucial. Riggins (2006) and Büchel,(2007) found a link between instructor efficacy and their outdoor facilitation experience. However, he did not find any noteworthy relationship between personality traits and instructor efficacy.

A further look at the outdoor adventure programs studies reveal a conflicting comprehension of instructor influence. For instance, Thomas (2008b) findings differ from those of Aguiar (2006); Thomas (2008b) pointed out being empathetic is a crucial instructor trait that helps participants to grow. Outdoor instructors who demonstrated empathy were observed to be humane, concerned and intrigued by participants.

Both Thomas (2008b) and Meyer (2008) found experience and education both in terms of instructor’s experience and outdoor experience to have a major impact on instructor effectiveness. Instructors’ experience promotes competence as facilitators have confidence in leading outdoor activities they have been leading for years. Outdoor
experience on the other hand influence facilitation efficacy due to instructors mastery of physical environment of the region which in turn help them protect their participants from areas with dangerous terrains, wild animals among other things. Buel (2007) stated that an outdoor instructor should provide a blend of personal and leadership characteristics with experience and training in order to make sound judgment convey a sense of caring for participants and accomplish predetermined goals and objectives.

2.4 Gender and Facilitation Efficacy

A number of studies have been conducted to look at the disparities between the traits of female and male outdoor instructors and their impact on program facilitation. One study applied the Sixteen Personality Factor profiles on a group of instructors from the North West Outward Bound School. It found that personality traits in both male and female instructors were more similar. The only dissimilarities were that female educators were more introverted, reserved, self-directed, and serious than their male counterparts who were extroverted, less profound and friendly (Hendy, 2007).

Research has also singled out differences in coaching efficacy as a function of gender, a variable not originally explored and hypothesized. The study examined the level of efficacy of 14 female coaches and 25 male high school coaches in the context of competence by applying a Perceived Coaching Competence Questionnaire and Sources of Coaching Competence Information Scale that were developed specifically for the study. The study found no significant differences among male and female instructors in terms of the source competence in coaching. However, the female coaches were observed to place greater importance on the improvement of their athletes and their improvement
in coaching skills which they cited as their source of coaching competence than their male counterpart, nevertheless, they all viewed the two as top sources of coaching competence (Schmidt et al., 2008).

O’Brien and Lomas (2016) in their survey, ‘is it really a man’s world?” had 33 male and 19 female outdoor adventure leaders rating their competency levels. There was no significant difference of skill (technical and interpersonal) rating between male and female outdoor leaders. He also reported an intriguing finding that females rated themselves significantly lower than male regarding their level of technical skills, backpacking and rock climbing.

In the context of gender relating to outdoor recreation and wilderness experiences, the influence of culture and ethnicity has received little literature (Henderson & Roberts, 2006; Roberts, 2011). Henderson and Robert (2006) indicated that the way people interpret gender roles and identity is based on their personal experience and socially learned expectations that define behaviors. They recommended outdoor leadership literature to encourage programs designed to help adolescent girls become more confident and seek greater opportunities. Institutions that offer outdoor education program and all involved stakeholders need to question about the relative advancement of males and females through outdoor education hierarchies in order to close the gap between what men and women can do. Ball (2005) indicate that in the Western society, most outdoor organizations still have much progress to be made towards equal gender representation throughout their organizational structures.
There are no clear differences in overall or specific outcomes for males or females or single-sex or co-educational groups; even though gender is a ubiquitously quoted individual difference, it doesn't seem to be a strong or clear determinant of empirically measured effects of outdoor education programs (Neil, 2007).

Jordan (2010) surveyed 113 participants who enrolled in Colorado Outward Bound School courses about their perceptions of outdoor leaders. These prospective participants expressed a preference towards having a male leader. Male respondents were more stereotypical about their perceptions of male and female leaders, whereas female respondents focused more on the competence of the leader and less on the leader’s gender. It is important to note that Jordan’s study was conducted before participation in the OutwardBound program. She recommended that further research needed to be conducted to determine if and how the reported gender biases actually exist the field.

Overall, the findings show that the pre-course preferences for male leaders reported by Jordan (2010) were not in evidence at the end of Outward Bound programs. The differences between participant’s evaluations of male and female instructors were small. The tendency was, if anything, towards higher ratings for female instructors in the areas of Course Value and Instructor/Participant Rapport. However, Neill and Richards (2005) findings contrasted Jordan (2010) report. Powell and Butterfield’s (2011) review of studies on gender and leader evaluations stated: female leaders are not evaluated or perceived differently from male leaders when engaging in the same behavior; differences in ratings of male and female leaders tend to diminish as raters learn more about the leaders and female raters evaluated leaders more highly than male raters.
A study by Njenga (2015) observed that male coaches had high training efficacy than their female counterparts. He further noted male coaches had higher scores in introjected regulations than female coaches. He however reported no statistical significant difference between male and female coaches for motivation efficacy. It was apparent that gender play pivotal role in determining coaching efficacy report, however, the difference could be due to male coaches coming into volunteering with already developed sports skills out of exposure and cultural biases (Njenga, 2015). These studies gave varied opinions about the efficacy of facilitators either in sports activities or outdoor adventure activities. The current study therefore investigated the case of gender differences, in an outdoor centre in Kenya.

2.5 Outdoor Facilitator Evaluation by Program Participants

Outdoor instructors need a set of competences enabling them to meet demands of varying training group. However, there is trivial evident on the importance of outdoor instructor’s competence and the role played by the aspect of communication and leadership. Nonetheless, this study is based on the assessment of outdoor instructors using self-reports and key informant interviews. Mueller and Sand, (2017) evaluated outdoor instructors using participants responses and recorded that participants identified communication skills of outdoor instructors as imperative to facilitating in outdoors. They further indicated the importance of authenticity of trainers, and their ability to interact with the group and aware of group needs as significant to participants. Leadership optimism, decision making ability and judgment are also essential skills highlighted by participants.
Helen, (2017) in her study determining the value of outdoor adventure education for education leaders incorporated participants’ views regarding the outdoor programs and outdoor instructors’ ability to deliver their services. Participants reported that outdoor instructors need to perceive the needs and concerns of others; dealing tactfully with others in emotionally stressful situations or in conflict. Outdoor instructors are also required to know what information to communicate and to whom as well.

Gilbert et al., (2017), referenced the importance tact particularly when participants are in stressful or emotionally charged situations. The authors reported that sensitivity of outdoor instructors promote trust between participants and instructors.

The absolute thing is that outdoor instructors require a set of skills that enable them to deliver their services in a competent way. Certainly, technical and interpersonal skills must be synchronized in order to deliver a flawless and effective facilitation services to participants.

2.6 Instructors-Participant Ratio

Bosworth, (2011) defined instructor-participant ratio (IPR) as the number of learners compared to the number of instructors. IPR is a crucial feature in determining the efficacy of an outward bond program (Willis & Knott 2014). Willis and Knott (2014) in their study recommended that an ideal size of a group should be 10 or maximum of 7-15 learners. The advantage of such size is that, it is enough for conflict and diversity and appropriate to enable easy resolving of conflicts and avoidance of cliques (Willis & Knott 2014). Jepsen (2015) found a positive relationship between small group size and program
effectiveness while studying traditional outdoor setting. The study established that instructors gave more attention to participants, responds quickly to participants needs and managed group conflicts quickly compared to when instructors had a large group size, participants’ complaints of neglect, and divided attention from instructors.

Smaller teacher-student ratios benefits student achievement, with instructors who taught classes with a small number of students paying more attention to the individual needs of each pupil (Bosworth, 2011).

It is not the smallness of classes that really influenced learners’ results in outdoor adventure, but rather smaller teacher-student ratio made it possible for other educational interventions and opportunities to smoothly flow (Jepsen, 2015). In another study it was difficult to identify consistent effects of group size on life effectiveness outcomes in the study on approximately 3000 participants in outward bound and related programs in Australia. The group size in the study ranged between 5 and 26. However, it was noted that this does not imply group size and staff: student ratio does not matter, but the large size study did not identify relationship between group size and personal development outcome. The study suggested that powerful factors appeared to be the type of participant and type of programs (Neil, 2005).

A group size of 10 is ideal for outward bound programs (Sibthorp, 2003). The study observed that the size is not too large so that participants get lost or too small that a group lacks dynamic diversity. It is practical to consider an optimal range for example 6 to 16 besides in the concepts such as enrolments and resources. The group size may be adjusted
according to age, maturity, experience, program goals, experience of instructor and program difficulty (Neil, 2005). It was further pointed out that it’s integral to realize that group dynamics take place regardless of group size and ultimately, its dynamics rather than actual number in a group which is most likely to produce psycho-social outcomes (Sibthorp, 2003). The study suggested that group sizes between about 6 and 16 are likely to experience similar processes and outcomes. There is an assumption that exists that quality of leaders employed by outdoor adventure program determines the quality of the program itself. Buel (1991) suggested that leadership is the single most critical aspect of conducting outdoor adventure programs. Similarly, Fuller et al., (2013) in their discussion of outdoor adventure programming stated that the quality of the small group outdoor instructors can make or break a program. He reiterated that their selection, training, and care are worth careful considerations.

In a study conducted by (Roberts, 2011) identified group composition as vital in achieving the set goal of the group. He lamented that building relationship comprise part of good outdoor leadership. While planning, developing technical skills, making hard decisions, and resolving conflicts are essential, often overlooked is how composition of a group contributes to achieving of these objectives.

There is a clear need for a situated model of group development as it pertains to outdoor education. In the past decade, group size researchers have made numerous pleas for researchers to move beyond laboratory groups that many of the current theories are based on, and study real-life groups that exist outside of the university setting. This study sought to establish the range in size of the instructor participant ratio effectiveness for
desired facilitation outcomes used especially in outdoor adventure programs in the Kenyan context.

2.7 Summary of the Reviewed Literature

There are many studies on outdoor education components that are directed towards instructors, even though there are variations in findings. These variations come as a result of different conditions encountered, different scales used, and the different objectives generated by the researchers (Jepsen, 2015). Willis and Knott (2014) concluded that female instructors were highly rated than their male counterparts. Jepsen (2015) however found that participants preferred male instructors. Bosworth (2011) on the other hand found constructs such as age, gender, personality, and personal opinions or interests to have less significant correlations to efficacy. Studies on facilitation efficacy shows that there are many instructor competency aspects that could impact on program outcomes such as decision making, problem solving, and technical skills. In terms of level of experience, (Jepsen, 2015) found instructor’s travelling history and experience to be influential on instructors’ efficacy. In terms of ratio, Willis and Knott (2014) found that the ideal size of a group should be 10 or 7-15. Focusing on the above review and differences observed by other studies, this study therefore, aimed to examine outdoor instructor’s perceived facilitation efficacy in outdoor adventure programs in Kenya.

Further literature on Outdoor Adventure Education (OAE) is diverse and varied in global populations and locations studied. In spite of this multiplicity, the body of literature heavily lies in the outdoor education programs that have been done outside Africa,
therefore studies focusing Africa’s outdoor education programs contribute significantly to the gap of knowledge that is currently existing.
CHAPTER THREE: METHODOLOGY

3.1 Research Design

The research adopted a case study research design to assess the outdoor instructor’s perceived facilitation efficacy in outdoor adventure programs in KESAL due to small size of the target group. According to Yin (2015), a case study research method is an empirical inquiry that investigates a contemporary phenomenon within its real-life context through an in-depth analysis of the study. The case study was implemented in the study due it ability to stimulate new research hence promoting new and advanced research in the field of outdoor recreation. Case studies a research design was identified as ideal for this study because of its ability question the established ideas or theories.

3.2 Measurement of Study Variables

The independent variables of this study were gender, level of education, instructor experience, and instructor-participant ratio. The dependent variable was the outdoor adventure instructor’s facilitation efficacy.

3.3 Study Location

The study was conducted at Kenya School of Adventure and Leadership (KESAL). KESAL is a public institution that offers experiential learning through outdoor programs and activities to government and private institutions. It was established in 1990 to offer experiential leadership courses using outdoor adventure activities.
The institution was established to assist government organization employees and interested private sectors with unique and impactful experiential-based training solutions in order to promote quality of services these organizations deliver to the public.

KESAL offers a number of programs to its clients for example, adventure programs, change management, corporate team building, disaster preparedness, executive retreats, management challenge, leadership development, motivation speaking and expedition to Mt Kenya.

KESAL is located on the Northern slopes of Mount Kenya at an altitude of 9,200 feet above sea level in Meru County (appendix c). Learning at KESAL is delivered through outdoor experiential methodology where all learners must participate in the designed activities. The area was selected due to its ability to pull outdoor facilitators from major institutions that offers outdoor related education and all parts of the country and continuous flow of clients and outdoor programs throughout the year.

3.4 Target Population

The study targeted outdoor instructors from KESAL and participants from Kenya Defence Forces (cadets) who participated in 20 days Leadership and Adventure Course at KESAL. There were 50 outdoor instructors at KESAL who successfully participated in the study. There were 85 participants from Kenya Defence Force (cadets) who were enrolled for Leadership and Adventure Course. The information was based on the minimum number of participants for a particular course to be offered at KESAL and a close interview with Kenya Defence Force and KESAL instructors. The participants
completed IEQ questionnaires which contained questions regarding instructor’s competence.

3.5 Sampling Techniques and Sample Size

According to the information from Kenya Defence Force and KESAL officials there were 85 participants for Leadership and Adventure Course and 50 outdoor facilitators. Due to the small size of the target population n=85(KDF cadets) and n=50(KESAL instructors), the study adopted a purposive census technique in order to have a working sample. This approach used the entire population as the sample. The technique was effective and efficient as it eliminates sampling errors and made data available to all respondents in the population (Yin, 2015).

3.6 Research Instrument

The study used instructor’s effectiveness questionnaire (IEQ) as the main instrument for data collection (appendix B). The questionnaire had two sections, A and B; SECTION A comprised of 4 questions related to background information of the respondents whereas section B consisted of instructor’s self-efficacy scale. The efficacy scale was divided into 10 constructs, that is, leadership, communication, arousal, people skill, motivation, group processing, feedback, action/practice, perception and structure. This instrument was developed by Phipps and Claxton (2004).Section B of the questionnaire also held a place for the last query on instructor-participants ratio. The main purpose of the questionnaire was to assess outdoor instructors’ perceived facilitation efficacy in outdoor adventure. The study also employed structured interviews with five key informants, a group of five experienced and respected KESAL outdoor instructors. The data that was collected
through the instructor effectiveness questionnaire (IEQ) was supplemented with qualitative data from the interviews. The IEQ measured ten efficacy constructs, which were divided into thirty seven questions. The constructs were: communication, structure, perception, arousal levels, motivation, people safety and skills, group processing, feedback, leadership, and action/practice.

3.7 Pretesting

The instrument was pre-tested with 5 outdoor instructors and 20 Administration Police officers who attended similar course at Kenya school of Adventure and Leadership (KESAL) in Meru County. The subjects were briefed regarding the importance of the study and confidentiality of the information they provided before issuing the IEQ questionnaires. The participants did not participate in the actual study.

The response from the pre-test study was scrutinized to check if the subjects understood the questions and interpreted them correctly. The pre-testing helped to establish flaws in language, and length of the questionnaire and its ability to cover the objectives of the study.

The irrelevant, ambiguous, and confusing words were removed to avoid misinterpretation of the questions.

3.8 Instrument Validity and Reliability

The study employed the test retest approach to measure reliability. Reliability refers to the extent to which the results are consistent over a time, accurate representation of the population of the study (Kirk, 1999). The pretest and final study were conducted at
interval of six months, however, the time interval had no relation with the study rather than it was convenient to the investigator.

The study utilized the test retest approach to measure its consistency. The 20 administration police and 5 instructors’ respondents were made to respond to the test questionnaire twice with an interval of 5 days. The Cronbach’s alpha was used to test reliability of the questionnaire from the pre-test. The instrument reliability was evaluated using the Chronbach’s alpha. The questionnaire had a Chronbach’s alpha reliability coefficient of 0.79 which is acceptable.

3.9 Data Collection Procedures

On the day the course ended, the researcher delivered the IEQ questionnaires and distributed them to all respondents. The purpose, importance and scope of the research were explained and when the participants understood the importance of the study, and agreed to participate, they signed the consent form.

The participants were issued with the IEQ questionnaires and requested to answer the questions as honest as possible and returned them to researcher.

Interviews with key informants were scheduled one week later after the course ended. Face to face interviews were used as the in-person interaction allows for naturalistic setting while investigating a social phenomenon (Sarantakos, 1998). The interview with key informants took over one day with the 5 informants each taking between 10-15 minutes. The interviews were audio taped for each key informant. The issue of
confidentiality was discussed before the interview. Informed consent for the interview and audio taping was obtained prior to commencement of the interview and audio taping.

3.10 Data Analysis and Presentation

The data from the questionnaires was recorded, coded and processed into the statistical package for Social Sciences (SPSS) version 20. Descriptive statistics of mean, standard deviation, frequencies and percentages methods were utilized for initial data analysis. Independent t-test was used to establish mean difference between gender and facilitation efficacy as well as gender and instructor-participants ratio preference between male and female KESAL instructors. One way Analysis of Variance (ANOVA) was used to establish the difference between level of education and facilitation efficacy and also experience and facilitation efficacy of KESAL outdoor adventure instructors. One way Analysis of Variance was used to its ability to establish mean difference between variance of more than two groups. The results were presented in tables, charts and graphs.

Qualitative data from the key informant interviews was transcribed from audio to text. It was then coded, analyzed, interpreted and verified (appendix D). The process of transcribing the interviews helped the researcher to gain more understanding of the subject from listening to and reading the transcribed interviews. The codes applied were keywords that were used to categorize or organize text and are considered essential parts of qualitative research (Sarantakos, 1998). The data was then analyzed, categorized and organized into themes which emerged through the coding process. The themes which emerged were assigned a specific code accordingly. The next stage involved interpreting
the data by identifying any reoccurring themes throughout and highlighting any similarities and differences in the data. The final stage involved data verification, this process involves a process of checking validity of understanding by rechecking the transcripts and codes again, thus allowing the researcher to verify or modify hypotheses already arrived at previously (Sarantakos, 1998).

3.11 Logistical and Ethical Considerations

Permission was sought from KESAL and after the permission was granted the researcher proceeded to obtain permission from Kenyatta University, the University Graduate School (appendix E). Ethical clearance was obtained from Kenyatta University Ethical committee. A permit to conduct the study was sought from the National Council of Science, Technology and Innovation (NACPSTI) (appendix J). The researcher sought permission from the participants to have them as respondents of the study. After participants accepted to take part in the study, they signed a consent form (appendix A). The participants were briefed on the importance of participating in the study prior to signing the consent form. They were assured the information they provided was confidential and would not in any way be used for other purposes and withdrawal from the research was allowed without prejudice.
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 Demographic Details of Participants

There were 135 respondents both KESAL outdoor instructors and KDF cadets who took part in the study. There were 50 KESAL outdoor instructors with 36(72%) males and 14 (28%) female outdoor instructors respectively. KDF cadets comprised of 85 participants where 76(89.4%) were male KDF cadets and 9(10.6%) female KDF cadets.

Table 4.1: Demographic Details of all Participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>KESAL instructors and KDF cadets</td>
<td>112</td>
<td>83%</td>
<td>23</td>
</tr>
</tbody>
</table>

KESAL instructors below 25 years 10(52.6 %) were males where 9(47.4%) were females. KESAL instructors ages between 26 and 35 years 15(78.9%) were males and female instructors taking 4(21.1%). There were only male outdoor instructors between 36 and 45 years 7(100%). KESAL instructors with 46 years and above 4(80 %) were males with 1(20%) female instructors.

In terms of KESAL outdoor instructors’ level of education, both male and female instructors had beyond high school education. There were only 3 (100%) male outdoor
instructors with college education at KESAL. A significant number of those with university education 31(70.5 \%) were males while female instructors were 13(29.5 \%). Out of three KESAL instructors with master’s degree 2(66.7 \%) were males while 1(33.3 \%) was a female outdoor instructor.
Table 4.2: KESAL Instructors Demographic Details

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>72%</td>
<td>14</td>
<td>28%</td>
<td>50</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤25 Years</td>
<td>10</td>
<td>52.6%</td>
<td>9</td>
<td>47.4%</td>
<td>19</td>
</tr>
<tr>
<td>26-35 Years</td>
<td>15</td>
<td>78.9%</td>
<td>4</td>
<td>21.1%</td>
<td>19</td>
</tr>
<tr>
<td>36-45 Years</td>
<td>7</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
<td>7</td>
</tr>
<tr>
<td>≥46 Years</td>
<td>4</td>
<td>80%</td>
<td>1</td>
<td>20%</td>
<td>5</td>
</tr>
<tr>
<td>Level of Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High School</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>College</td>
<td>3</td>
<td>100%</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>University</td>
<td>31</td>
<td>70.5%</td>
<td>13</td>
<td>29.5%</td>
<td>44</td>
</tr>
<tr>
<td>Masters</td>
<td>2</td>
<td>66.7%</td>
<td>1</td>
<td>33.3%</td>
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</tr>
<tr>
<td>PhD</td>
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<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>

KDF cadets’ respondents below 25 years 68(89.5 %) were males and 8(10.5 %) females. There was 8(88.9 %) male KDF cadet participants and 1(11.1 %) female KDF participants between 26 and 35 years. There were no KDF cadet participants above 36 years in the study.
Regarding KDF cadets’ level of education, none of KDF cadet respondents had below high school education. Those with high school education 17(85%) were males while female KDF cadets comprised 3(15%). In terms of college education 8(88.9%) were males while female KDF cadets took only 1(11.1%). A number of males KDF cadets 46(92%) had university education compared to their female counterparts 4(8%) with similar level of education. There were 5(83.3%) male KDF cadets participants with masters’ degree with female KDF cadets taking 1(16.7%). There were no KDF cadet participants with PhD who took part in the study.

Table 4.3: KDF Cadets Demographic Details

<table>
<thead>
<tr>
<th></th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondents</strong></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>76</td>
<td>89.4%</td>
<td>9</td>
<td>10.6%</td>
<td>85</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤25 Years</td>
<td>68</td>
<td>89.5%</td>
<td>8</td>
<td>10.5%</td>
<td>76</td>
</tr>
<tr>
<td>26-35 Years</td>
<td>8</td>
<td>88.9%</td>
<td>1</td>
<td>11.1%</td>
<td>9</td>
</tr>
<tr>
<td>36-45 Years</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>≥46 Years</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>High School</td>
<td>17</td>
<td>85%</td>
<td>3</td>
<td>15%</td>
<td>20</td>
</tr>
<tr>
<td>College</td>
<td>8</td>
<td>88.9%</td>
<td>1</td>
<td>11.1%</td>
<td>9</td>
</tr>
<tr>
<td>University</td>
<td>46</td>
<td>92%</td>
<td>4</td>
<td>8%</td>
<td>50</td>
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<td>Masters</td>
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<td>83.3%</td>
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<td>0</td>
</tr>
</tbody>
</table>
4.2 KESAL Instructor’s Self-Reported Facilitation Efficacy and KDF Perceived Facilitation Efficacy

Facilitation efficacy of KESAL outdoor instructors was assessed using an efficacy scale comprising of ten constructs which were subdivided into thirty seven statements. The ten constructs or subthemes were leadership, communication, arousal, people skills, motivation, group processing, feedback, action practice, perception and structure. Mean index of each construct were evaluated and results for KESAL outdoor instructors were compared to those of KDF cadets’ respondents perceived facilitation efficacy of outdoor instructors.
Table 4.4: Means of the Ten Facilitation Efficacy Constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>KESAL Instructors</th>
<th>KDF Cadets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ±SD</td>
<td>Mean ±SD</td>
</tr>
<tr>
<td>Leadership</td>
<td>204.8 ± 3.3</td>
<td>358.8 ± 7.59</td>
</tr>
<tr>
<td>Communication</td>
<td>211.6 ± 3.78</td>
<td>358.6 ± 9.42</td>
</tr>
<tr>
<td>Arousal</td>
<td>197.3 ± 9.07</td>
<td>344.3 ± 8.96</td>
</tr>
<tr>
<td>People skills</td>
<td>204.8 ± 9.18</td>
<td>349 ± 10.74</td>
</tr>
<tr>
<td>Motivation</td>
<td>214.5 ± 5.92</td>
<td>359.8 ± 13.05</td>
</tr>
<tr>
<td>Group processing</td>
<td>209 ± 3</td>
<td>361.3 ± 11.72</td>
</tr>
<tr>
<td>Feedback</td>
<td>206.3 ± 0.5</td>
<td>355.8 ± 8.62</td>
</tr>
<tr>
<td>Action/practice</td>
<td>207.3 ± 6.11</td>
<td>365.7 ± 13.54</td>
</tr>
<tr>
<td>Perception</td>
<td>212.3 ± 3.06</td>
<td>356.3 ± 13.28</td>
</tr>
<tr>
<td>Structure</td>
<td>207.2 ± 6.81</td>
<td>360 ± 10.39</td>
</tr>
</tbody>
</table>

The results indicated that KESAL instructors’ motivational level was high with a mean index of 214.5 ± 5.92. This was closely followed by perception 212.3 ± 3.06, communication with 211.6 ± 3.78, group processing 209 ± 3, structure 207.2 ± 6.81, action/practice 207.3 ± 6.11, feedback 206.3 ± 0.5, leadership 204.8 ± 3.3, people skills 204.8 ± 9.18. Arousal was last with a mean index 197.3 ± 9.07.
KDF cadets on the other hand, reported that KESAL instructors were competent in the following constructs, action/practice with a mean index of 365.7 ± 13.54, group processing 361.3 ± 11.72, structure 360 ± 10.39, motivation 359.8 ± 13.05, leadership 358.8 ± 7.59, communication 358.6 ± 9.42, perception 356.3 ± 13.28, feedback 355.8 ± 8.62, people skills 349 ± 10.74. Similarly, KDF cadets reported KESAL instructors as less competent in arousal with a mean index of 344.3 ± 8.96.

Nonetheless, when the results of all 135 respondents were tabulated in relation to outdoor instructors’ efficacy, KESAL instructors scored an overall mean of 152.7 ± 13.91 in all ten constructs.

4.2.1 Relationship between the perceptions of Facilitators and Participants in Various Facilitation Efficacy Constructs

The study established statistical difference between perceptions of KESAL outdoor instructors and KDF cadet participants in various facilitation efficacies constructs. The data of the study indicated significant difference between perceptions of KESAL outdoor instructors and KDF cadet participants in various facilitation efficacies constructs with p= <0.001 in all constructs. The hypothesis there was no significant difference in the perceived facilitation efficacy between instructors and KDF participants was therefore rejected.
### Table 4.5: Independent t-tests of Various Facilitation Efficacy Constructs between instructors and KDF Cadets

<table>
<thead>
<tr>
<th>Efficacy Construct</th>
<th>Independent t-test Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>t (6) = -37.21 p&lt;0.001</td>
</tr>
<tr>
<td>Communication</td>
<td>t (8) = -32.37 p&lt;0.001</td>
</tr>
<tr>
<td>Arousal</td>
<td>t (6) = -23.6 p&lt;0.001</td>
</tr>
<tr>
<td>People skills</td>
<td>t (6) = -20.42 p&lt;0.001</td>
</tr>
<tr>
<td>Motivation</td>
<td>t (6) = -20.28 p&lt;0.001</td>
</tr>
<tr>
<td>Group processing</td>
<td>t (4) = -21.81 p&lt;0.001</td>
</tr>
<tr>
<td>Feedback</td>
<td>t (6) = -34.64 p&lt;0.001</td>
</tr>
<tr>
<td>Action/practice</td>
<td>t (4) = -20.99 p&lt;0.001</td>
</tr>
<tr>
<td>Perception</td>
<td>t (4) = -18.3 p&lt;0.001</td>
</tr>
<tr>
<td>Structure</td>
<td>t (4) = -21.24 p&lt;0.001</td>
</tr>
</tbody>
</table>

#### 4.3 Influence of Gender on Facilitation efficacy of outdoor Instructors in KESAL

The study intended to establish the effect of gender on facilitation efficacy of outdoor instructors at KESAL. The mean and standard deviation of male and female KESAL instructors were separately tabulated and means compared in order to establish if there were possible statistical differences. Further, mean score for KDF cadets, males and
females were independently evaluated and their scores tabulated for statistical comparison for means.

The study established that male KESAL outdoor instructors had a higher mean index 155.9± 12.4 than their female counterparts 144.4± 14.62. Independent t-test for means indicated a significant difference between KESAL male outdoor instructors’ facilitation efficacy and KESAL female outdoor instructors t (48) = 2.71 p = 0.008 rejecting the hypothesis there was no significant difference in the facilitation efficacy of outdoor instructors at KESAL according to gender.

Table 4.6: Independent t-test Facilitation Efficacy responses Among KESAL Outdoor Instructors

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.71</td>
<td>48</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Regarding KDF cadets’ report on facilitation efficacy of KESAL outdoor instructors’, male KDF cadets recorded a mean of 161± 18.76 compared to their female counterparts who recorded a mean of 154.7± 25.89 in relation to KESAL outdoor instructors’ outdoor facilitation competences. Nevertheless, independent t-test for mean difference indicated no significant difference between male and female KESAL outdoor instructors according KDF cadets report, t (83) = 0.917 p = 0.362.
Table 4.7: Independent t-test Facilitation Efficacy responses Among KDF Cadets

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.917</td>
<td>83</td>
<td>0.362</td>
</tr>
</tbody>
</table>

**4.4 Outdoor Instructors Level of Experience and Facilitation Efficacy**

To establish possible difference between outdoor instructor’s level of experience and facilitation efficacy, participant’s responses were categorized into four groups in relation to outdoor instructors’ experience. Those below or equal to 5 years, 6-10 years, 11-20 years and 21 and above years of experience.

The mean and standard deviation between each experience category of KESAL instructors the results indicated small variance in mean between different experience categories. KESAL outdoor instructors with over twenty one years of experience (>21 years) recorded the highest mean (4.33±0.577) followed by instructors with 11-20 years’ experience (4.14±0.69), <5 years (4.13±0.67) and instructors with 6-10 years of experience (mean= 4.11±0.601).
Table 4.8: Mean Score for Each Experience Category

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤5 years</td>
<td>31</td>
<td>4.13</td>
<td>0.670</td>
</tr>
<tr>
<td>6-10 years</td>
<td>9</td>
<td>4.11</td>
<td>0.600</td>
</tr>
<tr>
<td>11-20 years</td>
<td>7</td>
<td>4.14</td>
<td>0.690</td>
</tr>
<tr>
<td>≥21 years</td>
<td>3</td>
<td>4.33</td>
<td>0.577</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>4.14</td>
<td>0.639</td>
</tr>
</tbody>
</table>

To establish possibility of significant difference between outdoor instructors’ level of experience to instructor’s facilitation efficacy, one way ANOVA was established and the result indicated no significant difference between instructors level of experience and facilitation efficacy F(3, 46) = 0.095 p=0.962.

Table 4.9: Difference between Experience and Instructors’ facilitation Efficacy

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.123</td>
<td>3</td>
<td>.041</td>
<td>.095</td>
<td>.962</td>
</tr>
<tr>
<td>Within Groups</td>
<td>19.897</td>
<td>46</td>
<td>.433</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20.020</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.5 Outdoor Instructors’ Level of Education and Facilitation Efficacy

To evaluate the impact of level of education on outdoor instructors’ level of facilitation efficacy, researcher clustered outdoor facilitators into four levels in relation to their education, high school, college, university and masters. Participants response was recorded on a five-point likert scale, not at all confident, slightly confident, somewhat confident, confident and very confident to determine outdoor instructors’ facilitation efficacy.

Results for the mean between each level of education demonstrated slight discrepancy between each other. KESAL instructors with college and masters education record highest and equal mean (4.33 ±0.577) while university educated instructors recorded smallest mean score (4.14± 0.632).

Table 4.10: Mean Score of Each Education Category

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>3</td>
<td>4.33</td>
<td>0.577</td>
</tr>
<tr>
<td>University</td>
<td>44</td>
<td>4.14</td>
<td>0.632</td>
</tr>
<tr>
<td>Masters</td>
<td>3</td>
<td>4.33</td>
<td>0.577</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>4.16</td>
<td>0.618</td>
</tr>
</tbody>
</table>

One way ANOVA establish no statistical difference $F (2, 47) = 0.26$ $p=0.772$ between KESAL instructors level of education and facilitation efficacy.
Table 4.11: Difference between Outdoor Instructors’ Level of Education and Facilitation Efficacy

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>0.205</td>
<td>2</td>
<td>0.102</td>
<td>0.260</td>
<td>0.772</td>
</tr>
<tr>
<td>Within Groups</td>
<td>18.515</td>
<td>47</td>
<td>0.394</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18.720</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.6 Instructor-Participants Ratio

In relation to ratio of number of participants per outdoor instructor, participants (KDF cadets and KESAL outdoor facilitators) had different views. Out of 135 participants, 82(60.7%) preferred 4-6 participants to 1 outdoor instructor while 18(13.3%) opted 7-9 participants to 1 outdoor instructor, 24(17.8%) said 10-12 participants to 1 outdoor facilitator is ideal, while 7(5.2%) indicated 13-15 participants to 1 instructor as okay with a small number 4(3%) preferring > 15 participants to 1 outdoor facilitator.
Figure 4.1: Participants-Facilitator Ratio

4.6.1 Outdoor Instructors and KDF Cadets Preference for Participants-Instructor Ratio

Comparing KESAL outdoor facilitators (n=50) and KDF cadets’ (n=85) preference for participants-instructor ratio, researcher observed that 72% (n=36) of KESAL instructors preferred (4-6):1 where 46(54.2%) KDF cadets opted for similar participants-instructor ratio. In the case of (7-9):1, 7(14%) of outdoor facilitators were recorded and 11(12.9%) KDF cadets. Further 7(14%) of outdoor facilitators identified the ratio (10-12):1 as their optimum and 17 (20%) KDF cadets recorded on the same ratio. A significant number 7(8.2%) of KDF cadets reflected (13-15):1 ratio while a few 4(4.7%) of KDF cadets noted >15:1 ratio as ideal. There was no outdoor instructor favored (13-15):1 and >15:1 ratio.
Figure 4.2: Outdoor Instructors and KDF Cadets Preference for Participants-Instructor Ratio

4.6.2 Preference for Participants-Instructor Ratio According to Gender

The study inquired whether there was preference for participants-instructor ratio among gender in the study. Based on the subject, it was documented that from all twenty three female participants from KESAL and KDF cadets 17(73.9%) of female participants preferred 4-6:1 ratio compared to 65(58%) of their male counterparts, KESAL instructors and KDF cadets (n=112). However, only 2 (8.7%) of female participants liked the ratio 7-9:1 while 16(14.3%) male participants favored it. There were a considerable number of both female and male participants 13.1% (n= 3) and 18.7% (n= 21) respectively who fancied the ratio 10-12:1. Small number 4.3% (n= 1) and 5.4% (n=6) female and male participants identified 13-15:1 ratio as optimum. Only 3.6% (n= 4) of
male participants indicated to prefer >15:1 ratio with no female participants noted to chose it.

**Figure 4.3: Preference for Participants-Instructor Ratio According to Gender**

To establish the mean difference in instructor-participants ratio between male and female respondents, independent t-test for mean differences was assessed. Results indicated that, male respondents (n=112) had the mean of 22.4±24.825 while female respondents (n=23) had mean of 4.6±7.021.
Table 4.12: Mean and Standard Deviation of Participants-Instructor Ratio According to Gender

<table>
<thead>
<tr>
<th>Respondents</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>5</td>
<td>22.4</td>
<td>24.825</td>
<td>11.10225</td>
</tr>
<tr>
<td>Females</td>
<td>5</td>
<td>4.6</td>
<td>7.021</td>
<td>3.14006</td>
</tr>
</tbody>
</table>

Results further demonstrated no significant difference in preference of instructor-participant ratio between gender, t (8) = 1.543 and p = 0.161.

Table 4.13: Independent t-test of Participants-Instructor Ratio According to Gender

<table>
<thead>
<tr>
<th>T</th>
<th>Df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.543</td>
<td>8</td>
<td>0.161</td>
</tr>
</tbody>
</table>

4.7 Qualitative Analysis of Key Informant Interviews

Qualitative data analysis revealed fourteen nodes. The nodes were subcategorized into five key themes which emerged from the key informant interviews. They included, ideal observation, safety, diversity, experience, motivation, gender influence efficacy, exposure, proficient, knowledgeable, cognitive management, confidence/sobriety of mind, teambuilding, hiking and rock-climbing.
4.7.1: Gender influence Efficacy, Experience and Motivation Themes

Four out of five key informants noted that gender does not influence facilitation efficacy. However, some indicated it might affect facilitation efficacy of an outdoor instructor in a positive way. They indicated that, a female outdoor instructor motivates participants where they feel if a female can do it, then they can. They further reported that experience is paramount over gender and the latter would only influence efficacy if the activities involved require a great deal of physical energy.

“Gender doesn’t influence facilitation efficacy, it is about self-belief and experience you have had. Gender is non-issue when it comes to facilitators in my opinion.” (KI 1)

“Gender to some extend influences facilitation efficacy. Gender motivates participants especially females instructors and for so doing, the ladies efficacy is boosted.” (KI 2)

4.7.2: Exposure, Knowledge and Proficient Themes

The role of experience concerning facilitation efficacy of KESAL outdoor instructors was discussed during the interview with the aim of capturing the views of the facilitators on the importance over the same.

The key informants expressed the imperativeness of experience to facilitation efficacy of outdoor instructors. They described the importance of the knowledge of both the outdoor environment and ones area of expertise. They believed that years of experience in
outdoor environment together with facilitating outdoor activities exposes an individual to a magnitude of information that cannot be obtained in class.

“Experience is everything; experience is the best teacher, the more experience the more proficient and easy you are with your facilitation. There are things you learn in the field than in class, some of them are documented and some not document. The real school is out there, in fact in outdoor, school is experience and is serious in outdoor.” (KI 1)

They further noted that experience enables outdoor instructors to handle different participants, anticipate situations and promote preparedness of outdoor instructors both psychologically and physically in case of any eventuality.

“Experience matters most as it means more years of exposure to different participants or difficult character of people and environment. It makes instructors understand different kind of participants and environment for example Mt. Kenya working for 3 years you are able understand routes of interest which gives your confidence in the areas you are in case of any incident. It also builds your knowledge immensely at times when challenged by participants you become tactful and incase of such issue in subsequent incident you will know how to handle the situation.” (KI 3)

4.7.3: Cognitive Engagement and Confidence/ Sobriety of mind Themes

There were varied views regarding the effects of education on outdoor instructors’ facilitation efficacy. Three of the key informants observed that education is vital in
outdoor facilitation as it help the outdoor instructors to handle participants of different caliber. It also promotes outdoor instructors confidence, interrogative ability as well as cognitive engagement.

“You must be schooled to be able to interrogate cognitively and apply the principles that are academic in the field, so level of education is key, this is about human behavior, so the more educated you are, the more conscious you will be about the business you are in. The levels of cognitive engagement are higher and you are able to deduce situations and circumstances and the more polished you in your mind, anyone saying level of education doesn’t matter needs to schooled properly!” (KI 3)

However, two of the key informants indicated that education without experience will impede facilitation efficacy of outdoor instructors. Experience is needed to tackle every problem in the right manner. They observed that an outdoor instructor with experience and education possesses a greater advantage as he/she can probe and answer participants’ queries with ease and facilitate outdoor activities with optimum confidence.

“Level of education is key concept in outdoor facilitation. It has correlation with experience, it makes instructors have easy time when dealing with participants who are learned, for example when they ask question out of the context, if you are equally educated you are likely to handle the question tactfully than instructors who are less educated whom asked the same question, they might answer it
emotionally or unprofessionally, the higher educated the higher the sobriety of mind.” (KI 5)

4.7.4: Ideal observation, Safety and Diversity Themes

Four of five key informants indicated that a small group size is preferable in outdoor facilitations. Although they differed in the exact number regarding the size of the group, it was clear that a small group of participants with at least two outdoor instructors was favored. They noted that a small group was easy to control, interact with participants and to ensure safety while having more than one outdoor instructor assist in diversification and sharing of knowledge and ideas.

“It is ideal to have small number, 2 – 15 maximum so as to have proper observation, If they are more, the instructors' observation is compromised, you need maximum observation of participation. Another reason is that activities in outdoors are risky and therefore the smaller number will enable instructors to manage the team and in case of injury one instructor evacuates the injured as the other continuous with the team.” (KI 5)

4.7.5: Team building, hiking and Rock Climbing Themes

Out of five, three key informants preferred teambuilding, hiking and rock climbing. They attributed the choice of a few activities to lack of time. However, some noted to have height phobia hence opted for soft skills, presentation and teambuilding.
“I enjoy facilitating rock climbing, team building activities, hiking, and mountaineering. No activities with less interest but lacking time to engage in them like swimming, and diving.” (KI 2)

Although some key informants preferred different outdoor activities, their choice were guided by their ability to use the activities to engage and learn from participants. They use such activities, rock climbing, high ropes, repelling etc, to motivate participants and examine their strength or weakness.

“I enjoy facilitating psychomotor activities, rock climbing, hiking, repelling, and ropes course than theory lessons. It makes me motivate the students and assess them better because they expose themselves for scrutiny than when in classroom situation. Am less interested to facilitate theory activities like first aid, camp craft and map reading because concentration span of students and terminologies used are complex” (KI 5)
CHAPTER FIVE: DISCUSSION

5.1 Demographic Details of Participants

The study comprised of 135(100%) respondents who participated in the study. Out of total subjects 112(83%) were males and 23(17%) females. The small number of female participants was associated to the societal ideologies that outdoor adventure career and serving in army is a man world. KESAL outdoor instructors were 50 where 36(72%) were males and 14(28%) females. The difference between males and females was more pronounced with KDF cadets where only 9(10.6%) were females where the rest 76(89.4%) were male cadets.

Results indicated that a considerable number of respondents (KESAL instructors and KDF cadets) were 25 years and below 95(70.4%). This is due to fact that most of KDF cadets who attend adventure training program at KESAL are KDF recruits which mostly constitutes of youth. Similarly, a considerable number of KESAL instructors are immediate graduates from university and others are interns’ hence large number of participants in 25 years and below age category.

Participants between 26-35 years followed with 28(20.7%), a small number 5(3.7%) were between 36-45 years. Additionally, participants above 46 years were 7(5.2%) out of the total 135 respondents.

5.2 Facilitation Efficacy of KESAL Outdoor Facilitators

This study was based upon a conceptual framework model which was of the view that instructors’ self-efficacy is influenced mostly by internal locus point that control individuals perception, confidence and motivation to perform in outdoor environment.
Generally, KESAL outdoor instructors rated themselves competent on facilitation efficacy scale.

The findings indicated high motivational level of KESAL outdoor instructors; they recorded a motivation. The notable high competence scores of KESAL outdoor instructors can therefore be attributed to a number of factors asserted in the efficacy frame work of this study. First, KESAL outdoor instructors recorded high mean score for motivation questions, focus on the safety of individuals and groups, facilitate or instruct with enthusiasm, motivate your participants by way of doing demonstrations, and provide level ground for each participant to lead the group. Second, closely high scores were recorded in relation to KESAL instructors’ perception, that is, Set time aside for reflective observations on the reasons why certain activities were done; Teach at the students level (wave length) and process learning at higher cognitive levels through debriefing and develop judgment skills. Communication level also recorded a high mean score during the study. It was clear that KESAL outdoor instructors’ facilitation efficacy was above average. Nevertheless the overall high mean score observed during the study was associated to self-rating of KESAL instructors. McKenzie (2009), made similar observations that instructors are more likely to rate themselves high compared to when their supervisors rate them and noted that variation in the study on the background and competence of outdoor instructors may occur due to different conditions encountered by researchers such as use of supervisors.

However, KESAL outdoor instructors recorded low mean scores on the constructs, arousal, people skills and leadership. The reported low scores were ascribed to different
experience and education level amongst outdoor instructors that could influence how individual instructors manage their stress level, handle participants and assign responsibilities to respondents during outdoor facilitation activities.

Regarding KDF cadets assessment of KESAL outdoor instructors’ facilitation efficacy, it was apparent that competence level of instructors was commendable. KDF cadets reported instructors as competent in constructs action/practice, group processing and structure. Similarly, KDF cadets noted that KESAL outdoor instructors were less competent in arousal and people skills.

This study, however, identified statistical difference between perception of KESAL outdoor instructors and KDF cadets report regarding outdoor facilitation competence across all ten constructs with p < 0.001. The statistical disparity was attributed to deferent sample sizes of KESAL instructors (n=50) compared to KDF cadets (n=85) hence different mean scores across all ten constructs. Additionally, participants have been observed in other studies like those of Mueller and Sand, (2017) that authenticity of trainers and their ability to interact with the group was essential part of facilitation competence. This was prevalent through KESAL outdoor instructors’ low scores in relation to people skills and arousal that may influence their decision making and judgment abilities. Helen (2017) made similar assertions where she indicated that participants require tactful and empathetic outdoor instructors with ability to distinguish how and when to deliver particular information in relation to stress situation of participants. Gilbert et al., (2017) also added the importance of sensitivity of outdoor instructors as it promotes trust between participants and instructors.
The findings of this study demonstrated that KESAL outdoor instructors possessed above average interpersonal skills that are relevant indicators of their competence in facilitating outdoor activities. The findings of this study were similar to that of Cosgrove (2010), who insisted that outdoor adventure instructors must possess a diversity of interpersonal skills. The skills that were identified as vital for outdoor instructors to facilitate outdoor activities were communication skills, teaching skills and group dynamics. Comparably, Gassett et al., (2003) acknowledged the importance of leading people in outdoors. They reiterated that outdoor instructors require specialized skills which are integral components of competence. However, Neil (2007) connoted the role of individual differences in determining efficacy of outdoor instructors. He termed individual differences as physiological constructs that vary amongst individual, for example, personality factors such as introversion-extraversion. Though this study did not address variables on individual differences, their ability to influence findings of this study should not be overlooked. Overall, KESAL outdoor instructors demonstrated high motivation in the study which can be translated to high efficacy rating on the efficacy scale. A recent study by Njenga (2015), also noted a relationship between motivation and facilitation efficacy. The study reported that intrinsic motivation played a pivotal role in facilitation efficacy of coaches. It therefore clear those interpersonal skills together with technical skills that were not assessed in this study are fundamental in determining efficacy of outdoor instructors.
5.3 Gender and Facilitation Efficacy

The study intended to establish if there were discrepancies in facilitation efficacy according to genders. The mean scores of male and female KESAL outdoor instructors were computed and compared for possible statistical differences. The male instructors had a relatively high mean compared to their female counterparts. A significant difference between KESAL male and female outdoor instructors’ facilitation efficacy $p = 0.008$ which led to rejection of the null hypotheses there was no significant difference in the facilitation efficacy of outdoor instructors at KESAL according to gender. The difference was alluded to exist due to male instructors giving themselves high scores compared to their female counterparts. This is supported by the fact that KDF cadets indicated there was no significant difference between male and female KESAL instructors.

In relation to KDF cadets’ perspective on facilitation competence of KESAL outdoor instructors, male KDF cadets reported a high mean score than female KDF cadets who recorded a relatively low mean index. However, KDF cadets indicated that there was no differences between male and female KESAL instructors’ regarding their facilitation efficacy $= 0.362$.

Throughout the study, the female instructors rated themselves low on instructor efficacy scale compared to their female counterparts who rated themselves relatively high. A similar finding by Jordan (2010) reported that female respondents focused more on competence of the leaders and less on the leader gender hence rating female instructors lower compared to male respondents who were more stereotypical about their perception of male and female leaders. A similar observation by Hendy (2007) support the findings
of this study regarding low mean scores when female instructors rate themselves and reported that female instructors were more reserved, introverted, serious, and self-directed than their male counterparts.

A notable difference was observed throughout respondents rating where female respondents scored low on efficacy scale compared to their male counterparts. Related findings were reported by Tim (2010) who observed that there was no significant difference of skill (technical and interpersonal) rating between male and female outdoor instructors and females rated themselves significantly lower than male regarding their level of technical skills, backpacking and rock climbing. Results from the five key informants’ interview demonstrated almost related findings. The informants indicated gender barely influence outdoor facilitation efficacy except in activities that demand physical power or excessive energy. One of key informant indicated that;

“Gender doesn’t influence facilitators efficacy except in some activities which needs energy to be used may limit lady facilitators but generally it doesn’t affect efficacy but the exposure of the instructors does. Gender doesn’t influence facilitation efficacy, it is about self belief and experience you have had. Gender is non-issue when it comes to facilitators in my opinion.” (KI 1)

Two of the key informants stated that gender influences facilitation efficacy, however, in positive ways. They observed that, a female outdoor instructor acts as motivator to participants who feel challenged by female outdoor instructor particularly male participants. They observed that;
“Gender to some extent influences facilitation efficacy. Gender motivates participants especially females instructors and for so doing, the ladies efficacy is boosted.” (KI 5)

“Gender influences facilitation efficacy somehow, in outdoor it is challenging but also as a lady I may build my confidence more because I motivate my participants, that if madam can do he/she can also do it.” (KI 4)

The results of this study contradicted several studies like those of Hendy (2007), Tim (2010), Schmidt and DeShon (2009) and a more recent study by Njenga (2015) who found no significant difference between male and female instructors. The differences in views between these studies were ascribed to different approach, designs and methods employed by this study.

5.4 Level of Experience, Education and Outdoor Instructor’s Facilitation Efficacy

Experience in outdoor adventure facilitation is among the imperative elements in demonstrating outdoor instructors’ efficacy. The conceptual model of this study highlighted the importance of experience whether on previous success or failures to facilitation efficacy of outdoor instructors. Therefore, when the level of experience and facilitation efficacy of KESAL outdoor instructors were compared, the data indicated that KESAL outdoor instructors with over twenty one years of experience (>21 years) recorded the highest mean in facilitation efficacy followed by instructors with 11-20 years’ experience, those with less or 5 years and instructors with 6-10 years of experience respectively. Noticeably, outdoor instructors with more experience demonstrated
competence in facilitation. This implied that experience plays a pivotal aspect to instructor’s efficacy when it comes to facilitation of outdoor activities.

However, one way ANOVA did not establish statistical link between experience and facilitation efficacy in this study \(p=0.962\) and \(f=0.095\) hence upholding the hypothesis of this study, there is no significant difference in the facilitation efficacy of outdoor adventure instructors at KESAL based on experience level. The probable reason for these findings would be highly motivated but less experienced outdoor instructors who tirelessly work hard to achieve competence and be on the same level with experienced outdoor instructors who were over 21 years’ experience in outdoor facilitation. A close relationship of these findings were reported by Njenga (2015) where he observed that volunteer coaches with only one year of experience demonstrated high efficacy index compared to experienced coaches who were on salary. He concluded that the higher index in character building efficacy and motivation in volunteer coaches over salaried coaches was as result of intrinsic motivation than extrinsic needs. A related observation was made by one of the key informant where they stated that;

"Experience plays major role in influencing facilitation efficacy, experience is everything but to some extent years of experience without passion doesn’t influence facilitators’ efficacy, so it depends on the person’s interest." (KI 4)

The findings of this study contrast those of Butchel (2007), Thomas (2008b), and Meyer (2008) who found experience in terms of instructors’ experience and outdoor experience to have a major impact on instructor effectiveness. Similarly, interviews from the key informants’ emphasized importance of outdoor instructors experience both environmental
experience and outdoor facilitation experience. One of the key informants supported this by asserting that;

“Experience matters most as it means more years of exposure to different participants or difficult character of people and environment. It makes instructors understand different kind of participants and environment for example Mt. Kenya working for 3 years you are able understand routes of interest which gives your confidence in the areas you are in case of any incident. It also builds your knowledge immensely at times when challenged by participants you become tactful and in case of such issue in subsequent incident you will know how to handle the situation.” (KI 1)

Another key informant confirmed the role of experience regarding outdoor instructors’ efficacy by indicating that;

“Experience influences facilitation efficacy because the more you get exposure the more you will know how to handle emerging issues in outdoors. Experience is the best teacher, there is more in experiencing things in reality than reading books and therefore the more you are composed when handling the situations.” (KI 4)

Some informants observed that experience enables outdoor instructors to anticipate situations and prepare them to deal with any eventuality based on previous circumstances.
“Years of experience come in handy as you are able to anticipate problems, make judgment and decision based on previous incidences or experience as opposed to someone experiencing the incident for the first time, previous experience makes you more knowledgeable in handling situations.” (KI 2)

As concerns the outdoor instructors’ level of education and facilitation efficacy, the findings did not find significant differences, $p=0.772$ therefore, upholding the null hypothesis of this study there is no significant difference in the facilitation efficacy of outdoor adventure instructors at KESAL based on education level. Lack of significant difference between education and facilitation efficacy of outdoor instructors proofed that instructors efficacy is multifaceted and education alone cannot guarantee facilitation efficacy in outdoor facilitation.

Some informants believed education have little impact on the facilitation efficacy of outdoor instructors. However, it was clear that education provides an advantage to outdoor instructors particularly in handling participants of different education level as two of key informants reported.

“Level of education in my opinion could only help a little bit, but experience and being hands on plays more role than being just knowledgeable. It is about knowledge of your environment as what to do than just education level.”(KI 2)

“You must be schooled to be able to interrogate cognitively and apply the principles that are academic in the field, so level of education is key, this is about human behavior, so the more educated you are the more conscious you will be
about the business you are in. The levels of cognitive engagement is higher and you are able to deduce situations and circumstances and the more policed you in your mind, anyone saying level of education doesn’t matter needs to be schooled properly!” (KI 1)

Education boosts outdoor instructors’ confidence, communication skills and people’s skills. The more educated outdoor instructor is the higher his/her ability to deal with different outdoor participants.

“Level of education influences Facilitators efficacy, someone who is more educated can be able to answer more questions with level of confidence to relate with any education level of participants. The way you debrief and tackle questions is pegged on level of education.” (KI 4)

“Level of education is key concept in outdoor facilitation it has correlation with experience, it makes instructors have easy time when dealing with participants who are learned, for example when they ask question out of the context, if you are equally educated you are likely to handle the question tactfully than instructors who are less educated whom asked the same question, they might answer it emotionally or unprofessionally, the higher educated the higher the sobriety of mind.” (KI 5)

KESAL instructors with college and masters education record highest and equal mean while university graduate instructors recorded smallest mean. The findings of this study differ with those of Thomas (2008b) and Meyer (2008) who reported experience and
education both in terms of instructor’s experience and outdoor experience to have a major impact on instructor effectiveness. The difference in respondents and geographical location of the study could be the reason for the difference as most western countries place education in high regards compared to most developing countries like Kenya.

5.5 Instructor-Participants Ratio

The findings of this study observed that majority 82(61%) of respondents (KESAL instructors and KDF cadets) preferred a ratio of 1 : (4-6) instructor to participants ratio. This could be ascribed to ideology that small class contributes to effective participation as participants are provided with optimum attention they require. Additionally, unending pressure and need for safety in outdoor environment could possibly trigger respondents to opt for a small instructor-participants ratio as inferred by two key informants.

“The smaller the instructor participant ratio the better: 2:8 – 12 for expedition based, if it is residential 2:10-18: reason is effectiveness and should be small as practical to allow personalized interaction (safety, management etc)” (KI 3)

“I prefer 2:12, because in outdoor, there are risks for example in mount Kenya, 2 instructors for back up and assist participants and colleague. Diversity of instructors’ knowledge is to share with participants and expand their way of seeing things.” (KI 1)

Similar findings were reported by Jepsen (2015) who suggested that smaller instructor-participants ratio benefited participants’ achievement as instructors paid attention to individual needs of each participant. Jepsen (2015), reiterated that it was not the
smallness of the class that influenced participants to results in outdoor activities, but rather than smaller instructor-participants ratio made it possible for other educational interventions and opportunities to smoothly flow. Some key informants also reiterated the value of a small group size in terms of quality services and safety precautions. They recorded that;

“I prefer 2:12 instructor – participant ratio. Am comfortable with that ratio as it makes assessment easy and writing of reports of participants, it being experiential each participant will learn something, management becomes easier, resource allocation, but for mountain phase the smaller the ratio the better because of extreme weather and terrain.” (KI 4)

“I:10, Ten is a good number so that you can learn their group dynamics and have a chance to show their abilities as opposed to more. In mountain 2:10 because outdoor is unpredictable, so you need to consult or seek second opinion, also two instructors is for company, security and safety issues, in case of anything one instructor can take casualty and another continues with the rest of expeditions and for professional judgment.” (KI 2)

The findings indicated significant number of respondents preferred the ratio of 1: (10-12). A considerable number of participants supported the ratio perhaps because it was the current ratio employed at KESAL (1:12) and at the last week into learning a ratio of 2: 13 was engaged. Nevertheless, the ratio was observed as ideal to promote critics and learning within the group. A group size of 10 participants has been suggested as an ideal for outdoor activities facilitation. Sibthorp (2003) reported that a group of ten participants
is not too large so that participants get lost or too small so that the group lacks dynamic diversity. He however, added that group size may be adjusted according to age, maturity, experience, program goals, experience of instructor and program difficulty (Neil, 2005). Willis and Knott (2014) in their survey recommended that an ideal size group should be 10 or 7-15 participants. The advantage of such size is that, it is sufficient for conflict and diversity to take place as indicated by one of the key informant.

“It is ideal to have small number, 2 – 15 maximum so as to have proper observation, If they are more the instructors’ observation is compromised, you need maximum observation of participation. Another reason is that activities in outdoors are risky and therefore the smaller number will enable instructors to manage the team and in case of injury one instructor evacuates the injured as the other continuous with the team.” (KI 5)

Contrasting KESAL outdoor instructors and KDF cadets’ instructor-participants ratio preference, the findings demonstrated that there was difference in ratio preference where majority of KESAL outdoor educators favored the ratio 1: 4-6 as compared to KDF cadets had a smaller number on similar ratio. Interestingly a number of KDF cadets supported the ratio 1: >15 where the highest ratio KESAL facilitators preferred were 1: 10-12. The difference in KESAL outdoor instructors and KDF cadets’ preference in ratio could be as a result of KESAL outdoor instructors’ fondness with their normal facilitating methods and the need to ensure safety of participants in outdoor environment. Conversely, the outgoing nature of KDF cadets and the need to explore of soldiers could possibly explain their desire for a large group size in outdoor adventure.
The research also intended to establish possible gender difference in instructor-participant ratio preference. The findings of this study established that female respondents, KESAL outdoor instructors and KDF cadets preferred 1:4-6, 73.9% instructor participants ratio compared to 58% of their male counterparts on the same ratio. Only male respondents selected the ratio 1: >15, 3.6%. The results of this study also indicated varied mean score between male and female respondents where male respondents, KESAL instructors and KDF cadets indicated a high mean and with a relative high standard deviation which demonstrated that male respondents’ preference for instructor-participant ratio spread across the various provided ratio choices in the study. Female respondents on the other hand indicated a low mean and a higher standard deviation indicating their choices for instructor-participants ratio preferences spread across the provided choices in study. However, unlike their male counterparts their preferences were among the small group size ratio hence a low mean score. Independent t-test, however, demonstrate no significant difference between male and female respondents in instructor-participant ratio preference $p= 0.161$. The literature of outdoor participants and group sizes has broadly been reviewed and studies indicate diverse views where some such as Neil (2005), could not identify consistent effects of group size on life effectiveness outcomes in his study on approximately 3000 participants in outdoor facilitation and related programs in Australia. The group size in the study ranged between 5 and 26. Neil (2005), however, noted that this does not imply group size and staff: student ratio does not matter, but in his large size study did not identify relationship between group size and personal development outcome. He suggested that powerful factors appeared to be the type of participant and type of programs. Sibthorp (2003) stressed the importance of group dynamics over group
size. He reported that group dynamics take place regardless of group size and ultimately its dynamics rather than actual number in a group which is most likely to produce psycho-social outcomes. He further suggested that group sizes between about 6 and 16 are likely to experience similar processes and outcomes.

Female respondents’ preference for small group sizes in this study was attributed to their sensitive nature and need for optimum attention. Further, females function well where they feel safe, cared and treasured elements that can be afforded in a small group. Contrarily to their female counterparts, male exudes opposite traits, risk takers, explorers and relaxed hence their preference for medium to large group size.

Buel (1991) suggested that leadership is the single most critical aspect of conducting outdoor adventure programs. The competence of outdoor instructors is more effective to participants over the size of the group. The equivocal impact of group size should not seem that surprising, after all, a brilliant person can facilitate change in many people, while millions of people can fail to change one person - what ultimately matters is the nature of experience/process - and this may or may not be related to group size or staff: student ratio (Neil 2005).

On the same note Metcalfe (Fuller et al., 2013) in his discussion of outdoor adventure programming stated that the quality of the small group outdoor instructors can make or break a program. He reiterated that their selection, training, and care are worth careful considerations.
CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

6.1.1 Demographic Information

The study constituted 135 respondents, 85 KDF cadets and 50 KESAL outdoor instructors. Generally, there were less female compared to male participants in the study, a factor that was related to the nature of careers that is armed forces and outdoor adventure facilitation that are viewed as reserved for men. Majority of respondents in the study were below 25 years. The reason was most of participants were recent university grandaunts and some interns who work as KESAL instructors. Equally, most of KDF cadets were recruits who mostly constitutes of youth.

6.1.2 Facilitation Efficacy of KESAL Outdoor Facilitators

The first objective of this study was to establish facilitation efficacy of outdoor adventure instructors in KESAL. The finding indicated that KESAL outdoor instructors had above average competence level. High efficacy scale was attributed to observed high motivation, their concerns for participants’ safety and instructing with enthusiasm. However, KESAL outdoor facilitators demonstrated low performance in constructs arousal when leading outdoor activities a fact that signified by their insufficient abilities to manage stress level of participant. A statistical difference between perception of KESAL outdoor instructors and KDF cadets report regarding outdoor facilitation competence was established across all ten constructs.
6.1.3 Gender and Facilitation Efficacy

The second objective of this study was to determine the influence of gender on facilitation efficacy of outdoor instructors in KESAL. The male outdoor instructors had a higher mean index compared to their female counterparts. There was a statistical significant difference between KESAL male and female outdoor instructors’ facilitation efficacy.

The null hypothesis there was no significant difference in the facilitation efficacy of outdoor instructors at KESAL according to gender was rejected.

Throughout the study, the female instructors rated themselves low compared to their female counterparts who rated themselves relatively high.

6.1.4 Level of Education, Experience and Outdoor Instructor’s Facilitation Efficacy

The third objective of the study was to demonstrate whether there was influence of outdoor instructor’s level of experience on facilitation efficacy in KESAL. The findings indicated that outdoor instructors with over twenty one years of experience (>21 years) recorded the highest mean followed by instructors with 11 to 20 years’ experience where KESAL outdoor instructors 6 to 10 years of experience indicated lowest mean. However, one way ANOVA did not establish statistical link between experience and facilitation efficacy in this study. The investigator upheld the null hypothesis; there is no significant difference in the facilitation efficacy of outdoor adventure instructors at KESAL based on experience level.
The fourth objective of this study was to determine the influence of KESAL outdoor instructors’ level of education on outdoor facilitation efficacy. The investigator observed that outdoor instructors with master’s degree and those with college education recorded high and equal mean score. The findings indicated that outdoor instructors who were university graduates recorded lowest mean score. The findings of this study did not establish a significant difference when one way ANOVA was run; therefore, upholding the null hypothesis of this study there is no significant difference in the facilitation efficacy of outdoor adventure instructors at KESAL based on education level.

**6.1.5 Instructor-Participants Ratio**

The fifth objective of this study was to find out the effectiveness of instructor-participants ratio as used in KESAL. The findings indicated that majority of respondents preferred a ratio of 1: (4-6) instructor-participants ratio. It was also observed that the current ratio 1:12 used in KESAL also had a noteworthy support by all respondents (KESAL outdoor instructors and KDF cadets).

The findings also indicated that majority of KESAL outdoor instructors preferred the ratio 1: (4-6) compared to KDF cadets on the same ratio. Only KDF cadets preferred a large class size ratio 1: >15, where the maximum group size KESAL outdoor instructors preferred was 1: (10-12).

Results of this study demonstrated that female respondents both KDF cadets and KESAL outdoor instructors preferred a small group size during outdoor activities compared to their male counterparts who preferred a larger group size. Independent t-test, however,
demonstrated no significant difference between male and female respondents in instructor-participant ratio preference.

6.2 Conclusions

Based on the findings of this study, it can be concluded that KESAL outdoor instructors were competent in outdoor adventure facilitation. However, there were areas that KESAL outdoor instructors need to improve such as arousal, management of stress level of participants and improve their patience with others that is level head in stressful situation which were observed as their primary weakness in this study.

Further, Gender differences had significance influence on outdoor instructors’ competence at KESAL. In terms of education level and outdoor instructors’ competence, there was no considerable difference; a parallel finding was made when outdoor instructors experience was compared to their facilitation efficacy. KESAL outdoor instructors with over 21 years of experience were the most competent according to this study followed by instructors with 11 to 20 years’ experience where KESAL outdoor instructors 6 to 10 years of experience recorded the lowest mean.

Instructor- participants’ ratio of 1: (4-6) was preferential for many respondents (KESAL outdoor instructors and KDF cadets). Nevertheless, a good number of respondents 18% supported the ratio 1: 12 which was the current ratio used in KESAL.

Although a considerable number 72%of KESAL outdoor instructors favored the ratio 1: (4-6) a striking difference was noted as less number 54.2% of KDF cadets preferred the same instructor-participant ratio.
Female respondents both KESAL outdoor instructors and KDF cadets preferred a small group size during outdoor activities compared to their male counterparts who opted a larger group size. Nevertheless, there was no significant difference established for instructor-participant preference according to gender.

6.3 Recommendations for Policy and Practice

Work/ on Job Training and Exchange Programs

This practice is based on the results of the study; KESAL outdoor instructors were competent in outdoor facilitation. However, it would be important to take note of their areas of weakness such as managing stress level of participants and being patient with others as indicated in their responses. This calls for KESAL management to ensure on job training particularly in interpersonal skills such as patience, communication, and stress management among others in order to advance outdoor facilitators experience, confidence and consequently their outdoor facilitation competence.

KESAL should liaise with other organizations such as Lewis and Clarke College in Portland’s, UN Environmental Education and Training, Middlebury College in USA among best other institutions to foster outdoor educators experience, knowledge and competence. This is because the study noted a weak relationship between experience, education and competence and the only way to bridge the gap is to expose outdoor instructors to different environment, culture and education.

Policy on Recruitment and Group Sizes

This study established that there was significant difference in facilitation efficacy based on gender. The difference could have been slightly influenced by a small number of
female instructors in the study compared to a significant number of male instructors in the study. Based on these findings, KESAL should afford equal recruitment opportunities without gender prejudices in order to eliminate gender disparity that is currently witnessed during this study.

KESAL should empower females with the aim of appealing to them to enroll in outdoor oriented courses. This coupled with good working policies and on job training will entice women to become outdoor instructors and gender discrepancies observed during this study will gradually reduce in future.

In relation to education of outdoor instructors, this study recommends an average recruitment of college educated and above outdoor instructors but possess a considerable experience both in outdoor experience and facilitation experience during recruitments.

Regarding group sizes, this study recommend KESAL to establish ideal guidelines for group sizes based on age, occupation, maturity and experience of participants. This is after the study establishing varied preference of group sizes ranging from a small size of 1: (4-6) instructor-participant ratio 72% to 1 :> 15 instructor-participant ratio 3.6%.

**Incentives and Promotions**

Motivation has been observed as one of necessary element that promote efficacy of outdoor instructors. Although KESAL outdoor instructors were established to be highly motivated it would be important for KESAL to ensure outdoor instructors maintain it through policies that promotes instructors to work long in the institutions and others methods such as positive feedback, appreciation, constructive criticism, tours and
occasionally appreciation tokens. The aim would be to boost both intrinsic and extrinsic motivation.

6.4 Recommendations for Further Studies

1. This study focused more on interpersonal skills of KESAL outdoor instructors to assess their facilitation efficacy. It is recommended that technical skills to be assessed in order to have an overview instructors’ competence and make firm conclusion on the efficacy of KESAL outdoor instructors.

2. The efficacy scale utilized in this study did not evaluate outdoor instructors’ personalities a concept that may have an impact on facilitation efficacy of outdoor instructors. It is recommended that outdoor instructors traits to be evaluated alongside competence as human characteristics can have strong bearing on their performance.

3. This study recommends a survey to assess the need for a minimum entry point requirement of outdoor instructors and need for certification to ensure efficacy of outdoor instructors.
REFERENCES


Hendy, C. M. (2005). *Outward Bound and personality: 16 PF profiles of instructors and IPSATIVE changes in male and female students 16-19 years of age* (Doctoral


APPENDICES

APPENDIX A: PARTICIPANTS STATEMENT AND INFORMED CONSENT FORM

To:________________________________________________________________________

Title of Study:
Instructors’ Perceived Facilitation Efficacy in Outdoor Adventure Programs In Kenya- A Case Study of Kenya School of Adventure and Leadership

Principle Researcher: JONATHAN KIMTAEI ROTICH

Participant Consent
You have been invited to participate in a master thesis study. The purpose of the study is vividly explained and all the procedures involved are well outlined to enable you make an informed decision regarding the participation in the study.

You are advised to read the statement carefully and if you do not understand, feel free to ask. Once you read the statement and understand what the study is about and agree to take part, you will sign a consent form as an agreement that you accept freely to participate in the study.

You will be given a copy of a full informed consent form.

Purpose of the Study
The purpose of the study is to assess how outdoor instructors’ perceived facilitation efficacy in outdoor adventure programs at KESAL and how it is influenced by instructor’s level of education, experience and gender.
Participant Selection

All those who have signed the consent form have been selected to participate in this study based on your participation in the outdoor education program at KESAL. Your involvement in this study is voluntary and you are free to withdraw if you feel necessary.

Possible Risks

There might be uneasiness and discomfort with answering some questions and the length of time that will take to fill the questionnaires. However, there is no physical risks associated with the study. You are requested to terminate your participation in the study if you feel uncomfortable with the raised issues.

Confidentiality

The information provided will be treated with privacy and confidentiality throughout the study process. The data provided will be used for the intended purposes only and in case publication is made there will be no identity used.

Voluntary Participation

Your participation in this study is voluntary, if you do not want to participate feel free to decline.

Further Information and Queries

If you have questions or require more information contact the principle researcher using the contact below:

jkswach@gmail.com        Cell: 0721 113 971
KENYATTA UNIVERSITY
CONSENT FORM

NAME........................................................................................................................................

Study Title

INSTRUCTORS’ PERCEIVED FACILITATION EFFICACY IN OUTDOOR ADVENTURE PROGRAMS IN KENYA- A CASE STUDY OF KENYA SCHOOL OF ADVENTURE AND LEADERSHIP

I have read and understood the attached statement. I have agreed to take part in the study freely according to the conditions in the statement. I have been issued a copy of the statement to keep and the researcher has agreed to conceal my identity and personal details where the information about the study is presented to the public or published.

Participant’s

Name........................................................................................................................................

Signature........................................................................Date.........................................................
KENYATTA UNIVERSITY

REVOCATION OF CONSENT FORM

(To be used for participants who wish to withdraw from the study)

Name: ________________________________________________________________

Study Title

INSTRUCTORS’ PERCEIVED FACILITATION EFFICACY IN OUTDOOR
ADVENTURE PROGRAMS IN KENYA- A CASE STUDY OF KENYA SCHOOL
OF ADVENTURE AND LEADERSHIP

I hereby wish to withdraw my participation in the above named study and understand that
such event will not jeopardize my relationship with the researcher, KESAL and Kenyatta
University.

Participant’s Name…………………………………………………………………………………

Signature………………………………………..Date………………………………………

Kindly mail this form to;

Rotich Jonathan
P.O Box 43844-00100
Nairobi
Appendix B: IEQ Instrument

The following is a self-assessment questionnaire that requires you to complete as truthfully as possible.

SECTION A: BACKGROUND INFORMATION

Respondent’s gender

□ Female

□ Male

Respondent’s age

<table>
<thead>
<tr>
<th>Age Range</th>
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<tbody>
<tr>
<td>25 yrs and below</td>
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<tr>
<td>26-35 yrs</td>
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<tr>
<td>36-45 yrs</td>
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<tr>
<td>and above</td>
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</table>

For how long have you worked as an instructor?

5 yrs and below □  6-10 yrs □  11-20 yrs □  21 yrs and above □

What is your highest level of education?

Primary □

High School □

Technical School □

Some College, no degree □

University □

Masters Degree □

PhD □
SECTION Bi (instructors): INSTRUCTORS’ SELF-EFFICACY SCALE

Rate your confidence for each of the constructs below by ticking the most appropriate (√). (1=not at all confident 2=slightly confident 3=somewhat confident 4= confident 5=very confident)

How confident are you in your capability to…

<table>
<thead>
<tr>
<th>Item</th>
<th>Not at all confident</th>
<th>Slightly confident</th>
<th>Somewhat confident</th>
<th>Confident</th>
<th>Very confident</th>
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<tr>
<td>LEADERSHIP</td>
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<tr>
<td>Focus on the group or individual participants than yourself</td>
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<td>Treat participants fairly and equally</td>
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<td>Establish a relaxed and positive learning environment.</td>
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<td>Be composed in complex situations</td>
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<td>COMMUNICATION</td>
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<td>Give participants information in understandable ways by not using semantics</td>
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<tr>
<td>Give appropriate amounts of new information to participants</td>
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<td>Persuading participants to listen to your ideas</td>
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<td>Engage participants in a degree of spontaneous dialogue</td>
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<td>Be audible and with clarity in giving instructions</td>
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<td>AROUSAL</td>
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<td>Manage stress level of participants</td>
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<td>Maintain students’ interest</td>
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<td>Build the self-confidence of your participants</td>
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<td>Manage fear levels of participants</td>
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<tbody>
<tr>
<td>Focus on the safety of individuals and groups (physiological and physical)</td>
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<tr>
<td>Facilitate or instruct with enthusiasm</td>
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<tr>
<td>Motivate your participants by way of doing demonstrations</td>
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<tr>
<td>Provide level ground for each participant to lead the group</td>
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<tr>
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<tr>
<td>Give every participant equal opportunity to share their opinions during debriefing.</td>
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<tr>
<td><strong>FEEDBACK</strong></td>
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<tr>
<td>Give accurate feedback to participants.</td>
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<td>Be open to feedback from individuals and group.</td>
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<tr>
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<td>Correct individuals or group</td>
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<td><strong>ACTION/PRACTICE</strong></td>
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<tr>
<td>Emphasize on safety of the participants</td>
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<tr>
<td>Give instructions at the pace sufficient for learning according to activity or program goals</td>
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<td>Make participants understand the “whys” behind the learning.</td>
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<tr>
<td><strong>PERCEPTION</strong></td>
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<tr>
<td>Set time aside for reflective observations on the reasons why certain activities were done</td>
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<tr>
<td>Teach at the students level (wavelength)</td>
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<tr>
<td>Process learning at higher</td>
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</table>
cognitive levels through
debriefing and develop judgment
skills

**STRUCTURE**
Make participants learn at an
appropriate level of difficulty
Give clear program goals
Give focused instructions so as to
promote individual and group
learning

What is your opinion of the most effective facilitator-participant ratio as used in
facilitating outdoor adventure programs? (TICK ONE)

4-6 participants to 1 facilitator

7-9 participants to 1 facilitator

10-12 participants to 1 facilitator

13-15 participants to 1 facilitator

Above 15 participants to 1 facilitator
SECTION B ii (Participants): INSTRUCTORS’ SELF-EFFICACY SCALE

Rate the confidence of your outdoor instructor for each of the following constructs below by ticking the most appropriate (√). (1=not at all confident 2=slightly confident 3=somewhat confident 4= confident 5=very confident)

How confident was your instructor’s capability to…

<table>
<thead>
<tr>
<th>Item</th>
<th>Not at all confident</th>
<th>Slightly confident</th>
<th>Somewhat confident</th>
<th>Confident</th>
<th>Very confident</th>
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<tr>
<td>LEADERSHIP</td>
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<tr>
<td>Focus on the group or individual participants than yourself</td>
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<td>Treat participants fairly and equally</td>
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<td>Establish a relaxed and positive learning environment.</td>
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<td>Be composed in complex situations</td>
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<tr>
<td>COMMUNICATION</td>
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<td>Give participants information in understandable ways by not using semantics</td>
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<tr>
<td>Give appropriate amounts of new information to participants</td>
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<td>Persuading participants to listen to your ideas</td>
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<td>Engage participants in a degree of spontaneous dialogue</td>
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<td>Be audible and with clarity in giving instructions</td>
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<td>Manage stress level of participants</td>
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<td>Maintain students’ interest</td>
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<td>Build the self-confidence of</td>
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Provide teambuilding activities to promote positive group climate

Give every participant equal opportunity to share their opinions during debriefing.

**FEEDBACK**

Give accurate feedback to participants.

Be open to feedback from individuals and group.

Be timely in praising and acknowledging participants’ deeds.

Correct individuals or group

**ACTION/PRACTICE**

Emphasize on safety of the participants

Give instructions at the pace sufficient for learning according to activity or program goals

Make participants understand the “whys” behind the learning.

**PERCEPTION**

Set time aside for reflective observations on the reasons why certain activities were done

Teach at the students level (wave
Process learning at higher cognitive levels through debriefing and develop judgment skills

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APPENDIX C: RESEARCH APPROVAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

FROM: Dean, Graduate School

TO: Retich Jonathan Kimtai

C/o Recreation Management and Exercise Department.

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

DATE: 24th May, 2017

REF: H60/CE/27672/2013

This is to inform you that Graduate School Board, at its meeting of 17th May, 2017, approved your Research Proposal for the M.Sc. Degree entitled “Instructors’ Perceived Facilitation Efficacy in Outdoor Adventure Programs in Kenya- A Case of Kenya School of Adventure and Leadership”.

You may now proceed with your data collection, subject to clearance with the Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

Thank you.

JACKSON LUVUSI
FOR: DEAN, GRADUATE SCHOOL

CC. Chairman, Recreation Management and Exercise Science Department

Supervisors:

1. Dr. Nkatha Muthomi
   Department of Recreation Management and Exercise Science
   Kenyatta University

2. Dr. David Muigai
   C/o Department of Recreation Management and Exercise Science
   Kenyatta University

jl/rwm
APPENDIX D: INTRODUCTION LETTER TO NACOSTI

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: H60/CE/27672/2013
DATE: 24th May, 2017

Director General,
National Commission for Science, Technology
& Innovation
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR ROTICH JONATHAN KIMTAI – REG. NO. H60/CE/27672/2013

I write to introduce Mr. Rotich Jonathan Kintai who is a Postgraduate Student of this University. He is registered for M.Sc degree programme in the Department of Recreation Management and Sports Science.

Mr. Kintai intends to conduct research for an M.Sc. Proposal entitled, “Instructors’ Perceived Facilitation Efficacy in Outdoor Adventure Programs in Kenya-A Case of Kenya School of Adventure and Leadership”.

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL
APPENDIX E: ETHICAL APPROVAL LETTER

KENYATTA UNIVERSITY
ETHICS REVIEW COMMITTEE

Fax: 8711242/8711575
Email: kuerc.chairman@ku.ac.ke
          kuerc.secretary@ku.ac.ke
          secretariat.kuerc@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: KU/ERC/APPROVAL/VOL.1 (85) Date: 27th September, 2017

Rotich Jonathan Kimtai
Kenyatta University
P.O. Box 43844-0100
NAIROBI.

Dear Kimtai,

APPLICATION NUMBER PKU/693/1767 “INSTRUCTORS' PERCEIVED FACILITATION EFFICACY IN OUTDOOR ADVENTURE PROGRAMS IN KENYA - A CASE OF KENYA SCHOOL OF ADVENTURE AND LEADERSHIP”

1. IDENTIFICATION OF PROTOCOL

The application before the committee is with a research topic Application Number:

APPLICATION NUMBER PKU/693/1767 “Instructors’ Perceived Facilitation Efficacy in Outdoor Adventure Programs in Kenya - A Case of Kenya School of Adventure and Leadership”


2. APPLICANT

Rotich Jonathan Kimtai

3. SITE

Kenya

4. DECISION
The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (Section 7.2.1.3) and the Kenyatta University Review Committee Guidelines AND APPROVED that the research may proceed for a period of ONE year from 27th September, 2017.

ADVICE/CONDITIONS
i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.
ii. Serious and unexpected adverse events related to the conduct of the study are reported to this committee immediately they occur.
iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.
iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.
If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

DR. TITUS KAHIGA,
CHAIRMAN ETHICS REVIEW COMMITTEE

* I, Jonathan Winna Rotich, accept the advice given and will fulfill the conditions therein.

Signature: Dated this day of 28/09/2017.
APPENDIX F: RESEARCH AUTHORIZATION (NACOSTI)

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Ref: No. NACOSTI/P/17/29504/19525
Date 30th October, 2017

Jonathan Kimtai Rotich
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Instructors perceived facilitation efficacy in outdoor adventure programmes in Kenya. A case of Kenya School of adventure and leadership” I am pleased to inform you that you have been authorized to undertake research in Meru County for the period ending 30th October, 2018.

You are advised to report to the County Commissioner and the County Director of Education, Meru County before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a copy of the final research report to the Commission within one year of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Meru County.

The County Director of Education
Meru County.
THE PRESIDENCY
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

COUNTY COMMISSIONER
MERU COUNTY
P.O. BOX 783-60200
MERU.

When replying please quote
Ref: ED.12/3 VOL.II/81

24th November 2017

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION – JONATHAN KIMTAI ROTICH

This is to inform you that Jonathan Kimtai Rotich of Kenyatta University has reported to this office as directed by the Commission for Science, Technology and Innovation and will be carrying out Research on “Instructors perceived facilitation efficacy in outdoor adventure programmes in Kenya. A case of Kenya School of adventure and leadership”.

Since authority has been granted by the said Commission, and the above named student has reported to this office, he can embark on his research project for a period ending 30th October, 2018.

Kindly accord him any necessary assistance he may require.

Maina George
For: County Commissioner
MERU
APPENDIX H: RESEARCH PERMIT

CONDITIONS
1. The Licence is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

RESEARCH CLEARANCE PERMIT
Serial No.A 16275
CONDITIONS: see back page

THIS IS TO CERTIFY THAT:
MR. JONATHAN KIMTAI ROTICH of KENYATTA UNIVERSITY, 43844-100 NAIROBI, has been permitted to conduct research in Meru County

on the topic: INSTRUCTORS' PERCEIVED FACILITATION EFFICACY IN OUTDOOR ADVENTURE PROGRAMS IN KENYA- A CASE OF KENYA SCHOOL OF ADVENTURE AND LEADERSHIP

for the period ending:
30th October, 2018

Applicant’s Signature

Permit No : NACOST/P/17/29504/19525
Date Of Issue : 30th October, 2017
Fee Recieved : Ksh 1000

Director General
National Commission for Science, Technology & Innovation
APPENDIX I: KESAL MAP

KESAL BASE CAMP
Location

Nanyuki - Meru

Forest Gate

9 KM

KESAL BASE CAMP